POLITECNICO
MILANO 1863

SCUOLA DI INGEGNERIA INDUSTRIALE
E DELL'INFORMAZIONE

The role and influence of stakeholders in digital transformation projects

The experience of cultural institutions on "Bando SWITCH"

TESI DI LAUREA MAGISTRALE IN MANAGEMENT ENGINEERING - INGEGNERIA GESTIONALE

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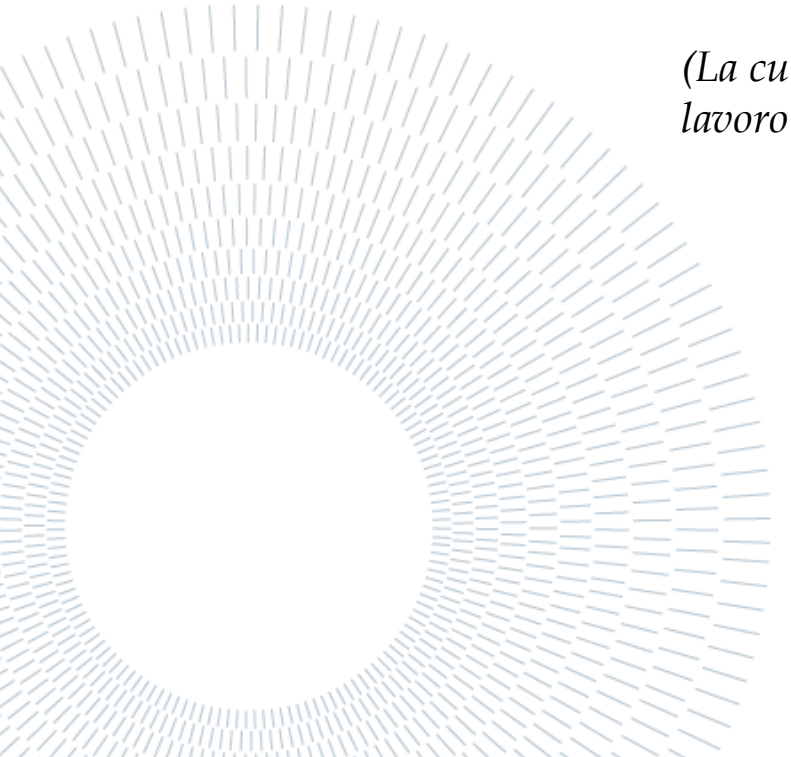
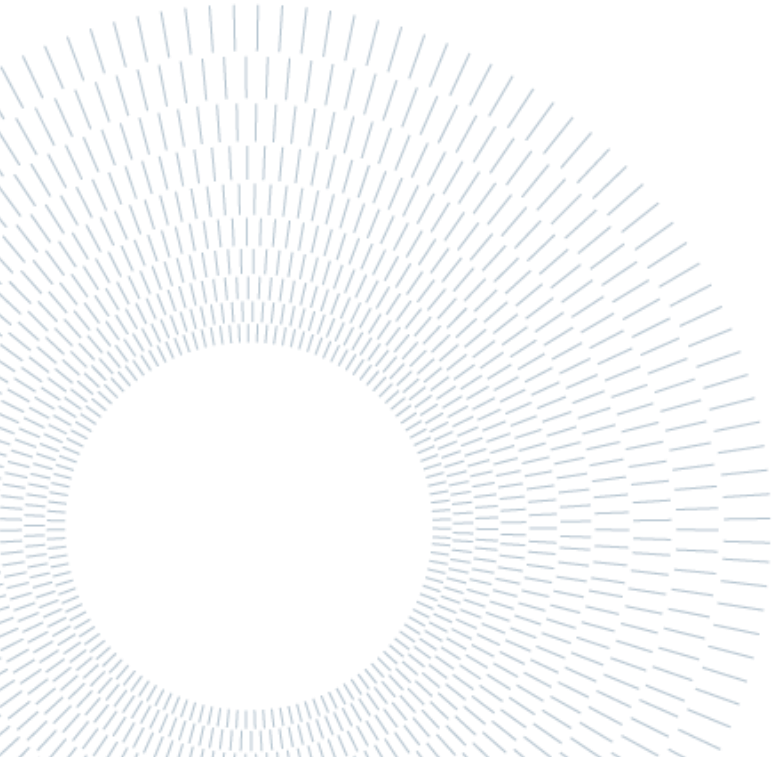
Academic Year: 2021/2022

La culture est ce qui fait d'une journée de travail une journée de vie

(La cultura fa si che una giornata di lavoro diventi una giornata di vita)

Georges Duhamel





Acknowledgments

Desidero iniziare ringraziando la Professoressa Agostino che ci ha dato l'opportunità di sviluppare un progetto di tesi in cui in cui la ricerca accademica è stata affiancata di pari passo da un continuo arricchimento personale.
Un grazie anche a Giulia che durante tutta la stesura della tesi è stata per noi un saldo punto di riferimento, dandoci fiducia e permettendoci un continuo miglioramento.
Un grazie profondo a Sofia, amica e compagna di tesi. Sei il mio primo ricordo in quelle aule universitarie con cui ho avuto la fortuna di poter iniziare e concludere questo percorso. Grazie per la tua sensibilità ed ironia e per la passione coinvolgente che metti in tutto quello che fai, rendendoti una fonte di ispirazione costante.
Il grazie più grande è per mamma e papà che hanno creduto in me più di quanto io abbia mai fatto. A papà per avermi insegnato ad apprezzare le sfumature della vita e a mamma, per la tua pazienza e comprensione, e per tutte quelle volte in cui, anche il solo sentire la tua voce, mi ha dato la forza per reagire. Ai miei fratelli che mi hanno ispirato, protetto e guidato e a tutta la mia famiglia, lontana e vicina.
Alle Divine, le mie amiche di una vita. Grazie per essere state vicino a me in ogni momento, anche se a distanza. Continueremo a spronarci, stimarci e accompagnarci ad ogni nostro traguardo ovunque saremo, perché casa è dove si trova il cuore.
Ad Elena, che sei stata costantemente al mio fianco. Grazie per essere cresciute insieme e per aiutarmi ogni giorno ad affrontare le mie fragilità ed insicurezze. E grazie perché te e Giovanni mi avete regalato una convivenza inaspettata e meravigliosa di cui non sapevo di aver bisogno.
Alle Carmè, grazie per tutti i nostri momenti, per avermi fatto entrare nelle vostre vite e per essere la mia certezza in questa città.
A tutti i miei amici dell'università, grazie perché che mi avete insegnato a non prendermi sempre sul serio e ad affrontare la quotidianità con più leggerezza.
A questa università, che mi ha aiutato a trasformare ogni ostacolo in un'opportunità.
Infine, un ultimo ringraziamento a tutti coloro che mi hanno trasmesso la forza ed il coraggio di inseguire il mio sogno anche se questo a volte ha significato andare contro corrente.

Grazie a tutti,
Irene

A conclusione di questo percorso, desidero ringraziare tutte le persone che mi sono state vicine e che mi hanno accompagnato in questi anni per il raggiungimento di questo importante traguardo.
Innanzitutto, desidero ringraziare la Prof.ssa Deborah Agostino per la grande disponibilità dimostratami e per la passione trasmessa durante la stesura della tesi. La ringrazio per avermi fatto incuriosire al mondo della Digital Transformation in un contesto di interesse personale come quello culturale.
Ringrazio anche a Giulia Maragno per aver supervisionato costantemente l'elaborato, per essere stata d'esempio e per avermi supportato con entusiasmo e professionalità.
Un grazie poi ad Irene, compagna di studi sin dal primo giorno di magistrale. Poter lavorare con te è stata una grande opportunità di crescita personale e professionale: mi hai permesso di imparare molto e di migliorarmi sempre.
Un grazie speciale alla mia famiglia senza la quale questo traguardo oggi non sarebbe stato possibile.
Grazie mamma per il costante incoraggiamento e i preziosi consigli.
Grazie papà per avermi insegnato a sognare in grande, a pensare alle sfide come opportunità.
Grazie Chiara e Giacomo che mi hanno sempre sostenuta in ogni mia scelta e hanno gioito con me per ogni piccolo traguardo.
Grazie ai nonni e agli zii che hanno sempre un'attenzione e un pensiero nei miei confronti.
E poi un ringraziamento dal cuore a Matteo per la sua capacità di essere sempre al mio fianco, in ogni circostanza e per la pazienza infinita.
Grazie alle mie amiche di Ancona, le amiche di sempre. Siete state in grado di farmi sentire il calore di casa anche a distanza.
Infine, un grazie speciale a tutti gli amici conosciuti a Milano durante questi due anni con cui ho avuto la possibilità di condividere questa importante esperienza: grazie per le call infinite del progetti, grazie per i momenti di divertimento e per ogni istante trascorso insieme che mi ha permesso di crescere come persona, prima di tutto il resto.

Grazie davvero a tutti,

Sofia

Abstract (English version)

Nowadays, in the Digital Era, the phenomenon of Digital Transformation attracts an increasing interest to those organizations that desire to preserve their competitive position and to embrace growth's opportunities. To this date, academics emphasize how the centrality of people represents a key driver for a Digital Transformation. In this complex phenomenon, it is crucial the integration between digital technologies and the stakeholders involved.

Digital Transformation has left no one indifferent, and this trend has affected organizations operating in multiple sectors. Among them, a context that is experiencing the pressure of this transformation is the world of cultural institutions, of primary importance in the Italian scenario. Therefore, they represent the empirical context of this research.

A demonstration of the growing interest to promote Digital Transformation in cultural entities is the "Bando SWITCH" supported by Fondazione Compagnia di San Paolo that, in the first round of funding, selected five Italian cultural institutions.

From the academic literature, the domain between Digital Transformation and cultural institutions mainly concerns the impacts generated by this transformation, and recognizes the pivotal role of people, without considering the managerial implications and the influence of the stakeholders involved.

Therefore, to drive our research and cover the literature gap, the Stakeholder theory has been adopted as a theoretical lens.

The first academic contribution highlights the main stakeholders of a Digital Transformation project, and those actions and attitudes that may positively affect the development of it.

The second academic contribution concern the role of the digital provider that is labeled by scholars as an external stakeholder. However, its role can be distinguished, according to the relationship established with the organization, as "digital supplier" and "digital partner". The former plays an external role, while the latter can be considered an internal stakeholder.

Furthermore, our work offers to practitioners a managerial-oriented framework to provide strategic and organizational guidelines that can support the development of a Digital Transformation project in those contexts where the role of people wants to be valorized.

The centrality of people that has emerged from academia and practitioners' fields allow to extend our contributions into those contexts in which a Digital Transformation project is developed and requires a managerial attention.

Abstract (Italian version)

Le dinamiche relative alla Trasformazione Digitale sono sempre più di interesse sia, per le organizzazioni che desiderano mantenere il proprio vantaggio competitivo e cogliere le opportunità di crescita, sia per il mondo accademico che pone specifico accento sul ruolo delle persone come elemento chiave per la Trasformazione Digitale. In questo contesto, l'integrazione tra le tecnologie digitali e gli stakeholder coinvolti nel loro utilizzo risulta essere fondamentale. La Trasformazione Digitale sta impattando le organizzazioni di tutti i settori, e tra questi, le istituzioni culturali si stanno mostrando particolarmente recettive alle opportunità date dalle tecnologie. Dal momento in cui tale settore risulta essere di primaria importanza nello scenario italiano, è stato selezionato come contesto empirico di questa ricerca.
Per quanto concerne l'ambito culturale, il bando SWITCH assume una posizione di rilievo. Tale iniziativa è promossa da fondazione Compagnia di San Paolo ed è volta al finanziamento di progetti di Trasformazione Digitale da parte di enti culturali operanti tra Piemonte, Valle d'Aosta e Liguria: cinque istituzioni culturali italiane sono state selezionate, nella prima tornata di finanziamento, come enti beneficiari. L'analisi della letteratura ha evidenziato come il tema della Trasformazione Digitale nel contesto delle istituzioni culturali sia affrontato principalmente focalizzandosi su: i) l'impatto generato da questa trasformazione e ii) il ruolo delle persone. Ciò nonostante, negli studi accademici, non viene posto particolare accento sulle implicazioni manageriali e sull'influenza degli stakeholder coinvolti in una trasformazione di tale natura. Partendo da queste premesse, la Stakeholder Theory (Freeman, 1984) è stata adottata come lente teorica per analizzare le evidenze empiriche raccolte.
Il primo contributo individua i principali stakeholder di un progetto di Trasformazione Digitale, evidenziando quelle azioni e atteggiamenti che possono influenzare lo sviluppo del progetto stesso. Il secondo contributo riguarda il ruolo del provider tecnologico, che viene identificato da precedenti studi come stakeholder esterno. Tuttavia, i dati raccolti mostrano come il suo ruolo possa essere distinto, in base al rapporto instaurato con l'organizzazione come "fornitore digitale" o "partner digitale": il primo svolge un ruolo esterno mentre il secondo può essere considerato uno stakeholder interno. La nostra ricerca fornisce, in ultimo, alcune linee guida strategiche e organizzative che i manager possono utilizzare nello sviluppo di un progetto di Trasformazione Digitale. In tal senso, il modello può essere esteso anche a contesti al di fuori di quello culturale.

Executive summary

Introduction

The current business landscape, characterized by fast evolving and breakthrough technologies, is forcing organizations to seek innovative approaches to the Digital Transformation (DT). This allows organizations to embrace growth opportunities, boost productivity and respond to the constant stimuli of the digital age (Schiuma et al., 2021). DT has left no one indifferent and this trend has involved organizations operating in multiple sectors. Over the past 10 years both at the European and Italian levels initiatives to support DT have arisen. Among the various contexts, it is worth to pay attention to the cultural one. As a matter of fact, the spread of COVID-19 has had an inexorable impact on cultural institutions such as museums, theaters, and galleries. The majority of them have gone digital, giving virtual tours, concerts, and performances online, boosting global access to creative activities that would otherwise be out of reach (Agostino e Arnaboldi, 2021; Massi et al., 2022).

Literature review

This section outlines the literature review that was developed by considering the current academic knowledge of two main domains: i) DT and ii) Cultural Institutions. The thesis focuses on the intersection between the two areas.
Even though the literature proposes several definitions of DT, the one that has been selected for our research is offered by Hinings et al. (2018: 53). *"Combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations, ecosystems, industries or fields".*
This definition has been chosen due the emphasis on the notion of "novel actors" that introduces the key role that stakeholders can play in a DT. Moreover, the definition highlights the concept of "practices" which involves a reflection on what are the processes that characterize the journey.
Since the DT phenomenon is gaining momentum, it is worth to cite the main opportunities that it can bring. Indeed, it allows organizations to maintain competitive advantages thanks to a quicker innovation process, and, to enlarge the ecosystem of stakeholders involved, establishing new kind of relationship.
Beside these new prospects, DT also brings challenges that organizations have to face. A continuous consistency between the strategy creation and its implementation is required. Moreover, to ensure an effective outcome of this transformation,

organization should engage those people who can drive and affect the development of a DT.
Hammer (2016) emphasizes that technology alone cannot produce "magical outcomes," and that the adoption of it depends on how people utilize the technology, particularly if they can use it to enhance long-standing skills and experience. In this regard, the role of digital providers (Kraus et al., 2021) emerged, thus those external entities that support the organizations providing new data, competences, capabilities and skills.
Overall, the available literature addresses the DT on three main streams of research: a) DT and the organizational impact, b) DT and the managerial implication, c) DT and people.
The second domain of research are the cultural institutions that have been taken as empirical context for this research. Considering the Italian scenario, the cultural world has a primary importance, as underlined by article 9 of the Constitution and by the presence of large number of cultural sites and institutions.
In this context, it has emerged the essential role of DT on preserving and valorizing cultural assets. Even though cultural institutions are often considered as traditional entities, in recent years the pressure to "become digital" has increased (Agostino e Costantini 2021).
This boost is creating several opportunities that cultural institutions could leverage on, allowing to increase new ways to access the cultural heritage. Another opportunity is the enhancement of attractiveness of cultural assets thanks to the improvement of user experience with innovative digital technologies. For example, visitors can appreciate artworks through virtual museums' visits and digital supported representations in theatres.
The main challenge that cultural institutions should be aware of is the need to change their business models to achieve and maintain their competitiveness. For instance, one of the major shifts could be the one "from partners collaboration to actors' integration" (Russo Spena e Bifulco 2021). The diffusion of new technologies involves a broader spectrum of partners and stakeholders in the development, for example, of apps, tools, and integrated solutions.
Overall, the current academic debate in the field of DT in cultural institutions is summarized by three main streams of research: a) DT and impact and assessment in cultural organization, b) DT impact on user experience, c) DT and people in cultural sector.
The relevance of the DT phenomenon and the increasing pace of its diffusion within cultural institutions in the Italian territory, led us to deepen the topic.
The literature review allowed us to find out that one of the major gaps in the analysis of the two domains concerns the lack of managerial implications of DT in cultural institutions.
Furthermore, the centrality of people, not only in the cultural context, but also in other domains where the DT is implemented, and the importance of the topic at a managerial

level, have prompted us to understand the influence of the stakeholders involved in a DT project.
In this context, a first Research Question (RQ) has been formulated:

RQ1: *"Which are the stakeholders involved in a DT project and how do they influence its development in terms of enabling factors?"*

Even though the literature mentions and recognizes the presence of providers in the context of DT, an in-depth analysis is missing of their role.

Therefore, with the aim to provide a managerial support for the development of a DT project and taking into consideration the role of all the stakeholders involved, the second RQ has been formulated:

RQ2: *"Which is the role played by a digital provider?"*

Furthermore, the importance of leaders for DT management emerges from the literature. This aspect is analyzed by defining the key competences that leaders must have to support the development of DT (Schiuma et al., 2021).
Therefore, a missing aspect is related to the practical suggestions about steps and actions that the management should consider enabling an effective DT project.

RQ3: "*What are the steps for the development of a DT project considering the various stakeholders involved under a managerial perspective?"*

Our contribution is not limited to highlight the role and the kind of influence of the stakeholders involved, but it provides a practical-oriented contribution that can be applied at a managerial level first in the cultural, but also within other domains.

Stakeholder theory

The choice of the theoretical lens to perform our research has been carried out analyzing the main organizational theories: among them, the Stakeholder Theory (ST) proposed by Freeman (1984) has been selected. It is a managerial theory which aims to identify and describe those stakeholders that deserve or demand a managerial attention. The author provides a broad definition of stakeholders as *"any group or individual who can affect or is affected by the achievement of the organization's objectives" (1984:46).*

Throughout the years, several academics provided reinterpretations of the ST: for the aim of this study, it is worth to mention the contributions of Donaldson e Preston (1995) and Mitchell et al. (1997)

Donaldson e Preston (1995) highlight the change of paradigm between the conventional "Input-Output model" and the "Stakeholder model". In the former suppliers, investors and employees provide input that are transformed into output just for the customer benefit, passing by the firm's "black box". The latter, instead, suggests how all the stakeholders can impact or being impacted by the firm. This is graphically represented by bidirectional arrows that connect each actor with the firm.
Regarding Mitchell et al., they introduced the "Theory of Stakeholder Identification and Salience" (TSIS) (1997). The intention of TSIS is to define *"those entities to whom managers should pay attention"* (1997:854).
Once the stakeholders that interact with the firm are identified, the TSIS suggests how to prioritize and classify them based on their salience. The salience is defined as *"the degree to which managers give priority to competing stakeholder claims"* (1997:854) and it is characterized by three attributes: power, legitimacy, and urgency. The more attributes the stakeholder possesses, the greater will be its salience.
Furthermore, the level of salience allows to classify stakeholder in three different classes.
"Latent stakeholders" are those that possess just one of the three attributes. Three typologies of stakeholders belong to this class: dormant, discretionary, demanding stakeholders. "Expectant stakeholders" are those that possess two out of three attributes. Three typologies of stakeholders belong to this class: dominant, dangerous and dependent stakeholders.
Finally, "definitive stakeholders" are those that possess all three attributes, having the highest level of salience.
To successfully achieve organizational goals, it is worth to recognize the different salience of the stakeholders involved.

Methodology

The methodological approach that has been followed allowed us to respond to the previously stated research questions. In the following paragraphs, it is presented the literature review methodology and the case study approach.

Literature review methodology

A "pure" narrative review methodology has been applied to conduct the literature review. This non-systematic approach was pursued through two distinctive phases: the search phase and the review one.
For the search process, we have adopted a "snowballing sampling" approach (SB). The term "snowballing" refers to the practice of identifying further publications by leveraging a paper's reference list or its citations (Wohlin 2014).

The SB was carried out by first constructing a start set and then iteratively performing both Backward Snowballing (BSB) and Forward Snowballing (FSB) of the start set.

The start set was created considering two sources: i) academic papers provided by our supervisor and co-supervisor regarding DT and DT in cultural institutions; ii) on Scopus based on the papers found after multiple search strings attempts considering several keywords. Then, the identification of the definitive starting set has been performed by selecting only those articles aligned with the aim of the research.
The BSB consisted of examining the reference list of each paper belonging to the start set in order to find other articles to include in the study (Wohlin, 2014).
The FSB refers to the process of discovering papers based on articles that cite the paper under examination (Badampudi et al., 2015)

Case study methodology

The empirical context of our research was the cultural domain. Our unit of analysis was represented by DT projects undertaken by cultural institutions. Specifically, five cultural entities have been selected to explore the DT in the Italian Cultural domain.
A qualitative approach was chosen as being particularly appropriate for investigating a novel subject such as the one under examination (Yin 1984). Therefore, to explore the stakeholder's role in a DT project, a multiple case study has been applied (Eisenhardt e Graebner 2007).
The five cultural institutions were selected as winners of "Bando SWITCH" promoted by Fondazione Compagnia di San Paolo (FCSP) in conjunction with Links Foundation and Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan. The aim of the presented call was to create attractiveness and to promote the development of strategies and tools for the DT in culture.
The data have been collected through two rounds of semi-structured interviews, each lasting four months. The stakeholders involved in both the interviews phases were project managers (PMs), employees, and digital providers.
Additionally FCSP, Links Foundation, the Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan have been interviewed to have a broader perspective of the phenomenon.
The data that have been collected includes primary and secondary data. The former consisted of 47 formal interviews with 52 respondents for approximately 50 hours for the entire period under analysis.
The secondary data consisted of those documents provided to apply the call: multi-year innovation plan, executive project, work breakdown structure (WBS), organization breakdown structure (OBS) and the request form.
The data gathered were analyzed by adopting the theoretical lens of the ST. First, the stakeholders involved in the five DT projects were identified according to the Stakeholder Identification approach. Second, to each stakeholder the three attributes

of power, legitimacy and urgency have been allocated to define their salience according to the qualitative approach of Stakeholder Salience.
From the analysis carried out emerged that:

- Project manager and funding entity are definitive stakeholders (all three attributes);
- Employees are dominant stakeholders (class of "expectant stakeholders", two out of three attributes);
- Digital provider, and research and monitoring center are Discretionary stakeholders (class of "latent stakeholders", one out of three attributes).

To support this process a data structure has been created. It is characterized by i) 1st order concepts; ii) 2nd order concepts; iii) aggregate dimensions. Adopting a grounded theory approach, the latter represent the classes of stakeholders cited in the Stakeholder salience with which are associated patterns (2nd order) and actions (1st order) that will be explained in the findings section.

Findings

The data analysis of the five cases selected in the cultural context allowed us to recognize the class of stakeholders involved in the DT project under examination. The kind of stakeholders found out are definitive, dominant, and discretionary. Moreover, is worth to underline the relationship established between discretionary and dominant.
The main finding concerns the different patterns (2nd order concepts) and the related actions (1st order concepts) through which definitive, dominant and discretionary stakeholders can influence a DT project. Each stakeholder could influence the transformation exerting tangible and/or intangible actions. The set of actions that belongs to the same aspect constitute a pattern.
The evidence shows that PMs and the funding entity – *definitive stakeholders* – influence the project by:

- Promoting and managing training activities;
- Taking care of the design of organizational activities and team management;
- Manage resources and capabilities inside and outside the organization;
- Empowering and defining a strategic vision;
- Offering availability and fostering a reciprocal trust.

The employees of the cultural entities – *dominant stakeholders* – influence the DT project by:

- Being prepared to be engaged (employee engagement);
- Embracing orientation toward innovation;
- Scheduling and managing frequent update and alignment between peers and other stakeholders involved.

Digital providers, and research and monitoring centers – *discretionary stakeholders* – can influence and support a DT project by:

- Monitoring activities;
- Providing a technical support.

Analyzing the role of digital provider, a dichotomy between those who served as simple technology providers and those who supported organizations as project partners, offering organizational and strategic support emerged. The former are labeled as "digital suppliers" (Chapter 5, secondary contribution), while the latter are labeled as "digital partners" (Chapter 5, secondary contribution). Digital partners play a facilitators' role for a DT project.
The identification of "digital partners" has driven our attention to the relationship that could be established between them and employees, affecting the development of the whole DT project. The influence that they can exert depends on:

- The sharing of a common language;
- Nurturing reciprocal trust and contamination;
- Identifying a digital-cultural mediator.

Discussion

First contribution

From the academic standpoint, this thesis overcomes a relevant literature gap concerning the managerial acknowledgment of the stakeholders involved and their influence in a DT project. Indeed, even if it is recognized the pivotal role of people (Musa, 2019; Schneider and Kokshagina, 2021), the literature does not specify the stakeholders' actions and attitudes to positively affect the DT.
By leveraging on the ST, the cases examined allowed us to identify those stakeholders involved in a DT project, and the different degree of influence they exert according to their salience.

Second contribution

Thus, the first contribution involves a redesign of the Stakeholder Model proposed by Donaldson and Preston (1995) in which at the center is represented the DT project and no longer the firm. Around it, stakeholders involved and the related class of belonginess are represented (Definitive, Dominant and Discretionary).
Moreover, in our model (green and red) arrows connect unidirectionally the stakeholders to the DT project, to emphasize how each of them could influence a DT's project, and not on the other way around.

Therefore, the more the stakeholder implements and enables certain actions, and consequently the related pattern, the more the stakeholder will positively influence the DT project (green arrow).
Conversely, if the positive stakeholder's influence is lower or absent the arrow highlight the negative effect generated (red arrow).
Eventually, to clarify and explicit the degree of influence exerted by stakeholders, we have proposed a tachometer chart. At a managerial level, this tool may be adopted, throughout the DT project, to monitor the influence of the stakeholders and, as a result, to further implement and enable those actions that would improve a DT project.

Third contribution

The literature offers useful frameworks that organizations can adopt to pursue DT projects. For instance, Schiuma et al. (2021) provide a model that describes the necessary leadership skills to help firms move toward a DT.
However, our third contribution consists of a framework that differs from the others identified in the literature, since it outlines the tangible and intangible actions that make up the whole DT process.
Additionally, it is a practitioner-oriented model that recognizes the central role covered by people. Indeed, it provides a set of strategic and organizational guidelines that can support the development of a DT project in those contexts where the role of people wants to be valorized.
The circular model that we propose is characterized by four steps:

1. **Strategic Planning phase**: it indicates the starting point for an effective DT plan execution in which the organization should claim its strategic objectives.
2. **Design phase**: it consists mainly of defining the capabilities and roles available within the organization and those that need to be integrated while pursuing a DT project.
3. **Implementation phase**: it entails the translation of the previously formulated digital strategy into a concrete plan and set of several actions.
4. **Monitoring & refining phase**: it involves a tracking of achievements to enable organization to reformulate its priorities and directions.

Conclusions

Our research provides an understanding of the extant debate at the intersection between the DT and cultural institutions. Specifically, it provides useful insights at the academic level and at a managerial level to better approach a DT project considering the role and the influence of the stakeholders involved.

The first academic contribution covers the gap that emerged from the literature concerning the absence of managerial contributions to cultural institutions when dealing with a DT project. Even if this contribution covers the gap for the specific cultural context, it can be extended also in other domains. This is due to the central presence of people that characterize each transformation, independently from the empirical context. In concrete terms, the theoretical contribution made it possible to apply the Stakeholder Model of Donaldson and Preston (1995) to our empirical context. This was useful to provide an overview of the stakeholders involved and of the set of actions, labelled as "patterns" that, if implemented by the stakeholders, can influence a DT project.

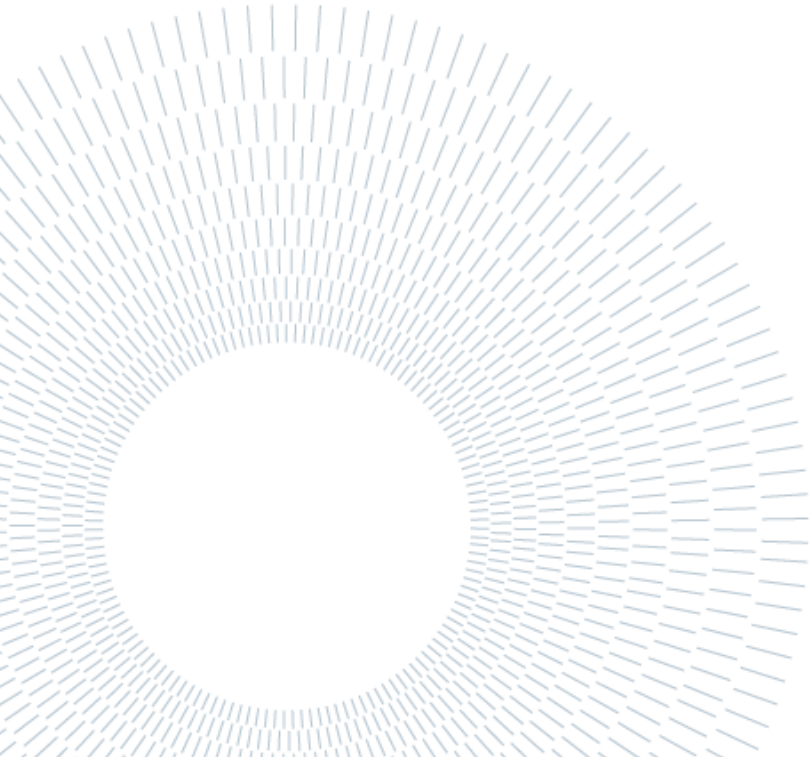
The second academic contribution is related to the role of digital provider, who can act as "digital supplier" or "digital partner".

Besides these contributions, also a managerial one emerged. In particular, the practical framework characterized by the four phases is a managerial tool that allows to understand the stakeholders involved and the actions that enable the DT project. Indeed, it provides a practical guideline to distinguish the various roles and contribution of the stakeholders involved.

Although the research provides these contributions, the study presents some limitations that leaves various avenues open for scholarly investigation. Our thesis analyses how stakeholders influence the DT project and not on the other way around. Therefore, future studies could analyse how a DT project influences the actions of the stakeholders involved.

Second, this research does not consider the role of HR department which could enhance the centrality of people within a DT project. Thus, future research could integrate the enabling actions implemented by this kind of stakeholders.

Lastly, in our sample, just one case (Case E) is a public organization, while all the other have a private nature. Therefore, this acknowledgment did not allow us to compare the enabling factors considering the different type of governance characterizing the five cases. Future research could further investigate this stream.



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Acronyms

BSB = Backward snowballing

DT = Digital Transformation

EU = European Union

FCSP = Fondazione Compagnia di San Paolo

FSB = Forward snowballing

HR = Human Resources

ICCROM = International Centre for the Study of the Preservation and Restoration of Cultural Property

ICOM = International Council of Museums

IT = Information Technology

OBS = Organizational Breakdown Structure

PM = Project Manager

PND = National Plan for Cultural Heritage Digitization

PNRR = National Recovery and Resilience Plan

RQ = Research questions

SB = Snowballing sampling

ST = Stakeholder theory

TSIS = Theory Stakeholder Identification and Salience

WBS = Work Breakdown Structure

Introduction

Nowadays, organizations are evolving to adapt to the rapid development of technology. This reflects the intention to chase a Digital Transformation (DT) project to preserve a leading position in a competitive scenario and to boost the organization's performances which are essential aspects for survival and growth (Uvarova and Pobol, 2021).

Moreover, the challenges associated with the COVID-19 pandemic have increased organizations' awareness of the need to accelerate DT.
Therefore, the commitment of organizations to undertake a DT in the national and international scenario highlights the relevance and interest to delve into such a topic.

Aim of the research

The purpose of our research is to investigate the phenomenon of DT which attracts increasing interest in the academic and practitioner fields. Specifically, the aim of this study is to examine how a DT project is performed within organizations, what are its implications, and which are the stakeholders involved. In particular, among different sectors, this research is grounded in the empirical context of cultural institutions.

The reasons for choosing cultural institutions as empirical domain are many.
A primary reason is the relevance that the DT debate is having in the cultural sphere since it allows the preservation and the valorization of the cultural heritage. The demonstration of the growing need for cultural institutions to approach DT is the commitment of funding bodies in supporting such projects. A significant example of the effort employed by funding institutions is the "Bando SWITCH", promoted by Fondazione Compagnia di San Paolo (FCSP). In particular, five Italian cultural institutions, selected and funded by FCSP, have been analyzed.
In this context, the need to develop DT projects has been made more evident with the spread of COVID-19 pandemic.
Therefore, considering the widespread interest in this theme and possible further contributions to the current literature, we decided to delve the DT and its connection with cultural institutions.

In particular, analyzing how the DT subject is treated by the literature, three main streams have been identified:

- The impacts generated by DT on the organizations
- The DT and its managerial implication
- How DT involves people

Then, from an investigation of the DT in the cultural domain, other three streams of literature came out:

- DT and impact and assessment in the cultural institutions
- DT impact on the user experience
- How DT involves people in the cultural sector

In light of this, one of the major gaps that the literature review pointed out is the lack of managerial implications in the development of DT projects within cultural institutions. Nevertheless, recognizing that DT requires profound change from an internal and organizational perspective, the cross-cutting aspect that emerges is the centrality of the stakeholders involved.

Specifically, the following open points have been identified:

- Lack of definition of those actions performed by the stakeholders involved in a DT project and their roles and influence exerted on it;
- Lack of an analysis of the digital provider's role;
- Lack of the steps that from a managerial perspective should be performed during the implementation of a DT project.

Therefore, considering these open points, our thesis achieves its goals by answering the following Research Questions (RQs):

- RQ1_ *Which are the stakeholders involved in a DT project and how do they influence its development in terms of enabling factors?*

- RQ2_ *Which is the role played by a digital provider?*

- RQ3_*What are the steps for the development of a DT project considering the various stakeholders involved under a managerial perspective?*

The first two questions have driven our work toward two academic contributions, allowing us to disentangle which are the stakeholders involved, their roles and how they influence a DT project.

Additionally, the final output of our research has been an actionable model to drive organizations to pursue a DT project. Specifically, we created a circular framework which aims to provide a useful guide to managers, showing the steps and actions that may facilitate a DT project.

Thus, the thesis aims to provide academic contributions that address the literature gaps and a managerial support.
Since the role of people is fundamental and transversal, independently from the empirical context, the contributions can be applied first in the cultural sector, but also within other domains in which a DT project is developed.

Before moving to the core of our master thesis, we recognize the importance to provide a general presentation of the current landscape in which organizations, that want to undertake a DT project, need to navigate. To this end, the sections below aim to propose the main commitments and practical activities in the European and Italian scenario.

European outlook

As previously introduced, even if our research has specifically involved Italian cultural institutions, it is interesting to offer an overview of what happens in terms of DT in a broader European context (Table 1). Actually, the decisions and reforms introduced at the European level, influence and have a cascading effect in the Italian dimension that cannot be overlooked.

In light of this, a first interest in the DT theme was pursued by the European Union with the publication of a "Digital Agenda" in 2010 and then, with the release of the second version in 2020. The former focuses on providing the EU with a cutting-edge framework of user rights and protection for consumers and businesses in order to improve access for consumers and organizations to digital goods and services across Europe. The latter focused, instead, on the significant changes established by digital technology, the critical function that digital services and markets play, and new EU technological and geopolitical goals (European Parliament, 2020).

Moreover, from 2007 to 2013, the EU deployed as the main instrument for funding research, the EU's Seventh Framework Research Programme (FP7) including Challenge 8 about "Digital Culture". The FP7 was created to address Europe's requirements for employment, competitiveness, and quality of life, also including research on the culture sphere (UNESCO, 2022).

With similar intentions, under the Horizon Europe program, a specific measure has been introduced for 2023-2025. The aim is to create a European Collaborative Cloud for Cultural Heritage, which continues and consolidates the many European actions for digitalization.

All these initiatives, promoted by European Commission, has been designed to support research effort and applications to turn digital cultural content into a valuable resource.

Furthermore, the interest of DT in the cultural world has become increasingly concrete through the efforts of entities worldwide. Beyond the EU, the States, and public bodies, also other institutions have demonstrated a commitment to this direction, such as Europeana Foundation. This is an independent and non-profit organization that inaugurated the platform in 2008. The start of the project was made possible by the collaboration of three interconnected specialist organizations that share the same vision of a cultural heritage sector, powered by digital. Their work is oriented to develop expertise, tools, and policies to embrace digital change and encourage partnerships that foster innovation. The Europeana initiative promotes the use of digital technology that makes cultural heritage online accessible, traceable, and trustworthy.

Particularly relevant is the Europeana project that directly involves the Italian context with the portal "CulturaItalia" (2005). It constitutes a national aggregator of the Italian cultural heritage managed by the Central Institute for the Union Catalogue of Italian Libraries and Bibliographic Information (ICCU) of the Italian Ministry for Cultural Heritage and Activities. It aims to provide access to over 3.4 million digital objects from more than 600 Italian cultural heritage institutions that make up the country's vast cultural spectrum (EuropeanaPro).

However, this is only a partial contribution to the enhancement of Italy's cultural heritage. Indeed, most of the effort is exerted by state bodies that aim to create new value scenarios and new forms of cultural heritage function.
Here below, an attempt has been made to present the main reforms involving the Italian cultural landscape issued by Italian governments from 2014 until now (Table 2).

European Initiatives	Period	Objectives
Digital Agenda	2010 (first version) 2020 (second version)	First version: Framework of user rights and protection to improve access for consumers and businesses to digital goods and services across Europe Second version: concrete measures to support the development of secure digital services and marketplaces
Seventh Framework Research Program (FP7)	From 2007 to 2013	Research and technological development to enhance employment, competitiveness, and quality of life
Europeana Foundation	Started in 2008	Supporting research efforts and applications to turn digital cultural content into a valuable and accessible resource
Horizon Europe program	From 2023 to 2025	Creation of a European Collaborative Cloud for Cultural Heritage

Table 1. European initiatives about DT

Italian outlook

The systematic digitalization of cultural assets began in the late nineteenth century even though a significant turning point occurred in 2014 with the Franceschini reform (Legislative Decree No. 83 of 31 May 2014 and subsequent legislation), named after the Minister in office at that time.

The measure affected the core of the Italian cultural heritage's organizational structure. The assets' governance was designed to be more efficient, effective, and economical (MIBAC, 2014). The main objectives were related to i) a modernization of the central structure and simplification of the peripherical one; ii) an integration of culture and tourism; iii) an improvement of Italian museums (20 museums and archaeological sites of national interest endowed with full managerial and financial autonomy); and iv) revitalization of innovation and tradition.
In particular, one of the reform's aims was to convert the role of cultural institutions, specifically museums, from being entities of preservation to that of participation, putting the public at the center of every strategic decision (Agostino and Arnaboldi 2021)

Furthermore, the importance of digital technology in further promoting the transformation and valorization of cultural institutions marked the entrance of a new period, the Digital one. Over this period, following the Franceschini reform, there have

been continuous ministerial efforts such as the Three-Year Plan for Digitization and Innovation of Museums (2019-2021). The plan mostly contributed to enable the adoption of digital solutions in all Italian museums, and it has been constructed with the participation and involvement of various public and private stakeholders. It was created to describe the approach, rules, platforms, and services that the General Directorate of Museums developed during the three-year period 2019-2021 to build the Digital Ecosystem of Italian Museums .

However, without expectation, all the world had to face the tragic spread of Covid-19 at the beginning of 2020. Thus, in response to a drastically decreasing in physical interactions with cultural heritage, it has highlighted the need to accelerate the DT processes already underway in cultural venues.
In that sense, digital was not just a conjunctural alternative. It represented a great opportunity to create an ecosystem of culture capable of increasing potential demand and broadening accessibility for different audience segments, reaching generational and geographic targets that are difficult to engage, and weaving new relationships between cultural heritage and people.

To achieve this result, it has been introduced the National Plan for Cultural Heritage Digitization (PND). It was created by the Ministry of Culture's Central Institute for the Digitization of Cultural Heritage, namely the Digital Library. It was established to coordinate and promote the Ministry of Culture's cultural heritage digitization programs (Articles 33 and 35 of Prime Ministerial Decree No. 169 of Dec. 2 2019; Digital library).

PND offers a strategic vision with which the Ministry of Culture intends to promote and organize the DT process over the five years 2022-2026. Moreover, it constitutes the strategic and methodological framework for achieving the objectives of the National Recovery and Resilience Plan (PNRR), under the investment M1C3 1.1 “Digital strategies and platforms for cultural heritage”. It is the product of a process of sharing and comparing with many cultural institutions and, as such, may serve as a methodological and operational reference for all cultural institutes, public and private.

Italian Initiatives	Period	Objectives
Culturaitalia	Started in 2005	National aggregator of the Italian cultural heritage
Franceschini reform	From 2014 to 2017	Modernization of the central structure and simplification of the peripherical one; an improvement of Italian museums and transform cultural institutions from preservation to participation center
Three-Year Plan for Digitization and Innovation of Museums	From 2019 to 2021	Strategic document for the adoption and integration of digital solutions in the Italian museums
Digital library (under the National Plan for Cultural Heritage Digitization (PND))	From 2022 to 2026	Coordination and promotion of the Ministry of Culture's cultural heritage digitalization programs

Table 2. Italian cultural initiatives about DT

In this context, the Ministry of culture recognizes that the management of the difficult situation caused by the ongoing pandemic necessitated, a greater emphasis on the role of stakeholders working in sectors relevant to our economy. For instance, entertainment, cinema, and museums have addressed difficulties due to the ongoing health emergency.

As a result, all representations of collective, social, institutional, and cultural stakeholders, as well as the Organizations unions, remain the subject of constant listening in order to develop effective government measures to counter the risk of economic recession in the country and, in particular, in the sectors under the Ministry's jurisdiction.

Thesis structure

In Chapter 1, it is provided a deep literature review on two main macro areas: DT and Cultural institutions. Specifically, the attention will be dedicated to the intersection area where DT is applied to cultural entities. This area of interest will be subsequently analyzed through the theoretical lens of Stakeholder theory (ST), as shown in Figure 1.

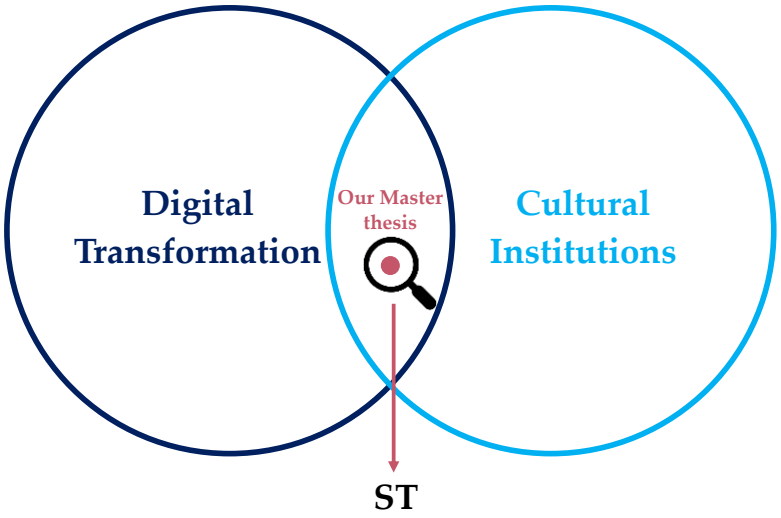

Figure 1. Literature framework of the two research domains

The literature review's chapter opens with an investigation of the broad phenomenon of DT considering the respective opportunities and challenges faced by organizations that decide to undertake such a transformation. After that, main current academic streams of research about DT are presented.

Then, the chapter continues with an analysis of Italian cultural institutions and their relationship with the theme of DT. Also for this dimension, opportunities and threats have been offered and, moreover, the key literature streams about DT in the cultural field have been identified.

After that, the cross-study of these two domains led us to define the research questions based on the gap that our thesis work seeks to address.

Subsequently, Chapter 2 reports the theoretical lens that has been selected to drive our research toward the analysis of DT's phenomenon in the cultural sphere: the Stakeholder theory.

Next, in Chapter 3 it is reported the methodological approach that has been followed throughout the writing of this thesis (Figure 2). Specifically, it is clarified how the literature review has been conducted and how the case study approach was carried out.

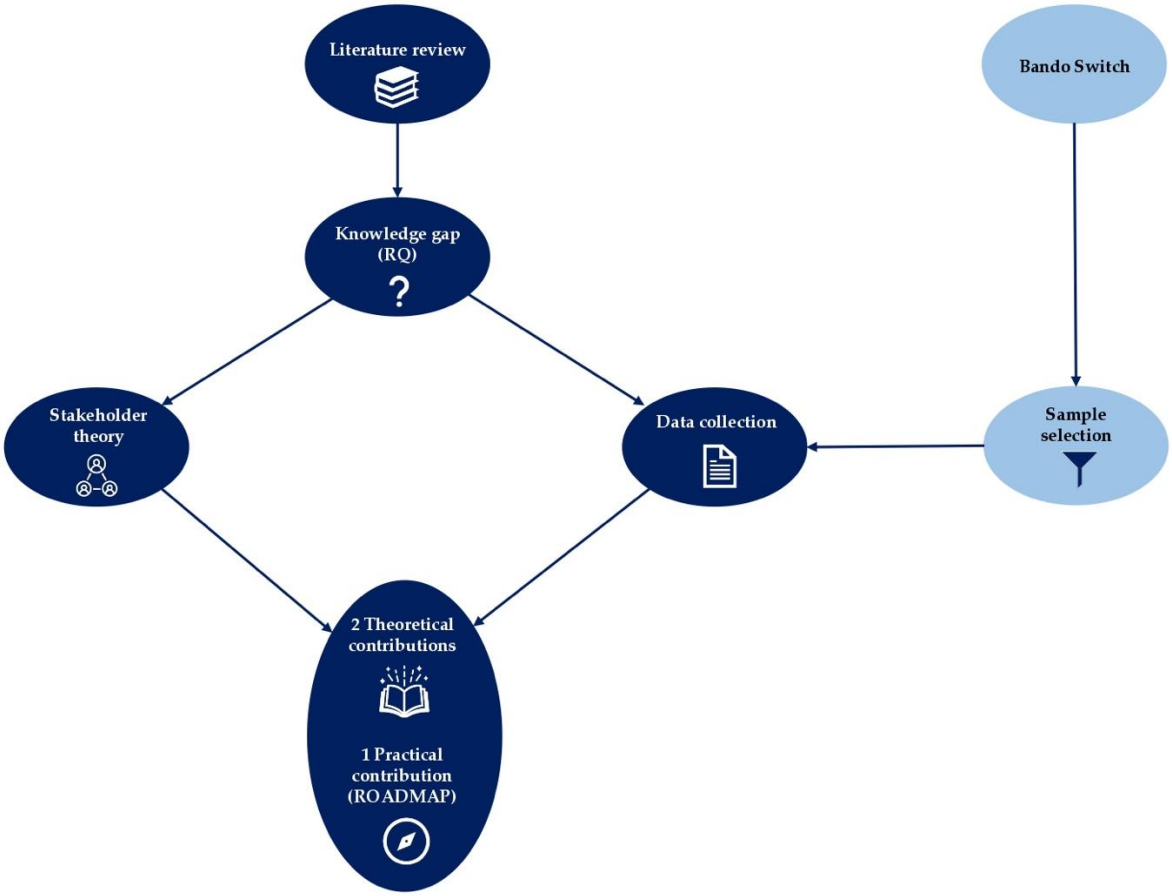

Figure 2. Methodology framework

Then, in Chapter 4, we reported the findings obtained by data collection. This part has been performed starting from several interviews which involved different stakeholders working with and for the cultural institutions under investigation.
Specifically, the cases that we have involved in our exploratory research were those selected by "Bando SWITCH", a call launched by Fondazione Compagnia di San Paolo (FCSP).

From these data, we have systematically identified some aggregate dimensions providing a clear and detailed explanation of each of them and the reason behind the creation of the related data structure.

In, Chapter 5 the discussion of the results is presented. Here, two theoretical contributions and one practitioner are provided to the reader.
The theoretical contribution concerns:

- The identification of the stakeholders involved with their respective roles and the influence that they can exert in a DT project
- A contribution to the literature regarding the role of the digital provider that can be distinguished both as a "digital supplier" and a "digital partner"

The practitioner contribution, instead, is a roadmap characterized by four phases which provides guidelines for the management of processes and people involved in a DT project.

To conclude, the Chapter 6 presents key messages and final considerations highlighting the main strengths and limitations of this research together with some insights for future studies.

1 Literature review

This chapter describes the literature review which is made up by considering the extant academic knowledge of two main areas: i) Digital Transformation (DT) and ii) Cultural Institutions, as shown in Figure 3.
The first part presents the literature related to DT's phenomenon, exploring the state of the art.
The second part, instead, explores the cultural field, focusing the attention on the DT within Cultural Institutions.

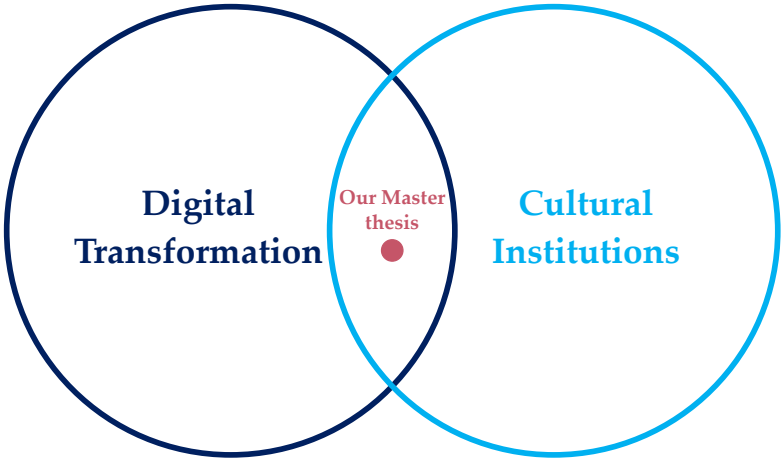

Figure 3. Literature framework of the two research domains

1.1. Digital Transformation

1.1.1. The context

Modern organizations must deal with significant changes as technology advances rapidly (Colbert et al., 2016).
Indeed, the variety of forces, trends, and the digital technologies' development that shaped the modern business scenario, is forcing businesses to create new goods and services (Schiuma et al., 2021). These might better boost organizational productivity and consumer satisfaction, to respond and adapt to the business landscape's evolution (Schiuma et al., 2022).

Present businesses that are not implementing DT risk becoming outdated as a result of quick or disruptive breakthroughs in digital technologies (Kraus et al., 2021). Therefore, these changes cause a great deal of uncertainty, and businesses strive to adapt to these new surroundings in various ways.
To preserve their positions in competitive marketplaces, innovative agile organizations should include transformation requirements into their strategy. The potential disruptive impact of DT on innovation is clear looking at the changes in the five biggest listed corporations in the United States in recent years. Apple, Microsoft, Amazon, Alphabet (Google), and Facebook are just a few examples of companies that have used digital technology to innovate in a wide range of sectors, providing them with more scalability, a larger market reach, and speedier strategic moves (Appio et al., 2021). This allows them to adapt to new possibilities while also working to become risk-averse (Kraus et al., 2021).

COVID-19 has spurred significant changes that prompt businesses to more widely embrace digital technology in times of pressure (Uvarova and Pobol, 2021). Specifically, the pandemic has accelerated, quicker than ever before, the digital change of work styles throughout the world, and the intrinsic value of digitalization was commonly recognized. Indeed, in the COVID-19 epidemic, digitalization has provided a variety of new prospects in domains such as e-working, e-education, and e-delivery (Nousopoulou et al., 2022). Actually, the DT of organizations was already regarded as one of the biggest trends altering the global economy before COVID-19 widespread (Uvarova and Pobol, 2021).

Therefore, in the latest years, DT has become today's business imperative (Schiuma et al., 2022).

1.1.2. Terminology

In this section, various terminologies and their respective definitions are offered to clarify to the reader the differences between the central concepts of our study.

The selection of the key notions to be explored in depth was made taking into consideration the results of a word co-occurrence analysis conducted by Appio et al. (2021). It has been performed on titles, abstracts, and keywords between a set of papers identified by the literature search conducted by the authors.

The analysis identifies nine clusters: digital transformation, digital innovation, digital entrepreneurship, digital platforms, digital technologies, algorithms and other enabling technologies, innovation management, business model innovation, and open innovation. The relationship among them represents the existing and interconnected research stream in the field of DT and innovation management. The presence of these different clusters allows us to recognize the level of fragmentation of the topic that may lead to some confusion since some of the terms are often used interchangeably.
For clarity, we have decided to describe just some of the clusters identified from the aforementioned study to have a better understanding of the context of the research.
In particular, the focus was on digital technologies, digital innovation and digital transformation. This choice was dictated in line with the most prominent themes that will be further analyzed in the following chapters.

The three clusters proposed by the cited study were a starting point to deepen the three subjects, considering also other sources that deal with the topics from the current literature.
A final clarification between "digital transformation", "digitalization" and "digitization" term is provided with a comprehensive overview of the different terminologies.

The term "digital technologies" is composed of two words, "digital" and "technologies". The first term, digital refers to the conversion of analog data into the binary code recognized by computers (Hinings et al., 2018). The second term, technology, according to most English-language dictionaries', stresses practical utility

and application of knowledge to a specific topic (Leonardi 2013). Technology is derived from the Greek words techne (skill, craft, cunning of the hand) and logia (knowledge, study), and currently, it refers to not just tools, devices, and machines, but also processes and modes of operation, sets of practices and skills, and ways of thinking that are associated with and formed by such tools, devices, and machines (Beyes et al. 2022).
Digital technologies have grown ubiquitous and play an increasing role in our lives (Colbert et al., 2016). The spectrum of digital technologies is extensive, and it continues to develop through time as affirmed by Schneider and Kokshagina (2021). The same authors offered some examples of "digital technologies" such as robotic process automation (RPA) that can execute back-office tasks more quickly and accurately. Other examples are extended reality (XR), reality-blending solutions, and among others, augmented reality which helps organizations to accelerate processes by putting information into context. Thus, digital technologies can support achieving a competitive advantage by reshaping the organization, leveraging on current core competencies, or establishing new ones (Verhoef et al., 2021).

The "digital technology" concept is useful to define the notion of "digital innovation". According to Nambisan et al. (2017), the use of digital technology in a wide range of innovations is referred to as digital innovation.
The latter may also be used to indicate the consequence of innovation, wholly or partially. New value creation and value appropriation paths have been created as a result of digital innovation, which has fundamentally altered the form and structure of new goods and services.
In other words, digital innovation is the coordinated orchestration of new goods, processes, services, platforms, or even new business models in a specific setting (Hinings et al., 2018).
To be precise, digital innovation does not only consider the new digital solution, but also, innovation in terms of knowledge and cultural attitudes (Verhoef et al., 2021).

Therefore, in an evolving and unpredictable context, digital innovation helps to create a significant amount of data, information, and knowledge. If formalized and properly exploited, they might support organizations in making decisions, and match their produced outputs with market demands.

The introduction of "digital technologies" and "digital innovation" concepts allows us to better understand the third and last notion of "digital transformation" to which we will give more emphasis below. The DT phenomenon is the focus of our thesis since DT is widely viewed as a change agent in all settings, most notably business, and impacting all aspects of human existence through the use of technology (Kraus et al.,

2021). Indeed, the debate in public and academic discourse is increasing (Matt et al., 2015).

Although there is widespread attention on investigating and understanding DT, no common definition of the phenomenon has been outlined. It is difficult to provide a comprehensive explanation of DT since it is a multifaceted and multidimensional phenomenon that interests organizations at many levels and in various forms (Appio et al., 2021). However, to provide an overview of the topic, in the following passage, some of the definitions provided by different authors are discussed.

A notable author in the DT field, Vial (2019), presents this concept as a process that seeks to enhance an entity by causing major changes in its attributes via the use of information, computation, communication, and networking technologies. According to this perspective, as a result of the opportunities and risks presented by digital technology, DT is defined as a procedure that causes both operational and strategic changes in businesses.
Moreover, other contributors such as Fernandez-Vidal et al. (2022), described DT as the practical application of digital technologies to enhance user experience and engagement, streamline processes, support business models, or create new business prospects. Therefore, from this description, the DT does not just change the dynamics of the marketplace, but it also has a significant impact on customer behavior and expectations.

Moreover, according to Matt et al. (2015), a DT strategy is a road map that assists firms in managing both the changes that occur from the integration of digital technology, as well as those that arise in their operations after a changeover. The authors expressed the inherent complexity of DT and its ability to alter a firm from an organizational, operational, and business model viewpoint. However, DT involves more than just the purely achievement of a predefined object. Indeed, according to (Schiuma et al., 2022) a transformation is an unpredictable, iterative, and experimental process to reinvent the enterprises and discover a new or revised business model based on a new vision for the future.

Among the various definitions presented in the literature, the one offered by Hinings et al. (2018) is taken into consideration for our study since it is a comprehensive description of the main aspects relevant to our research. They define the DT as:

"*Combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace or*

complement existing rules of the game within organizations, ecosystems, industries or fields" (Hinings et al., 2018: 53)

Specifically, three aspects worth mentioning transpired.
Firstly, DT is defined as the outcome of numerous digital innovations. Thereby, a clear connection between the keywords "DT" and "digital innovation", often mistakenly considered interchangeable, is illustrated.

Secondly, the concept of "novel actors" deserves to be emphasized, as it introduces the role played by individuals along the DT journey.
The third aspect that emerges is the concept of "practices" that is correlated with the processes through which digital innovations and strategies are effectively implemented. Indeed, DT's scope and objectives should be carefully carried out. However, business reality demonstrates that this is not always the case. Companies may fail to reap the benefits of DT because of a divergence between strategy creation and plan accomplishment. In this sense, top executives will not gain from DT programs if they are not implemented successfully (Correani et al., 2020).

Table 3 reports a list of the definitions that were previously presented.

Terms	Definitions	Sources
Digital transformation	"Digital transformation is the use of new digital technologies such as social media, mobile technology, analytics, or embedded devices to enable major business improvements including enhanced customer experiences, streamlined operations, or new business models."	Fitzgerald et al. (2014)
Digital transformation	"Digital transformation as a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies"	Vial G. (2019)
Digital transformation	"Digital transformation is the combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace, or complement existing rules of the game within organizations, ecosystems, industries, or fields"	Hinings, Gegenhuber, and Greenwood (2018)
Digital transformation	Digital transformation strategy is a blueprint that supports companies in governing the transformations that arise owing to the integration of digital technologies, as well as in their operations after a transformation."	Matt et al. (2015)
Digital transformation	"Digital transformation as a change in how a firm employs digital technologies, to develop a new digital business model that helps to create and appropriate more value for the firm."	Verhoef et al. (2021) Kane, Palmer, Philips, Kiron, & Buckley (2015); Liu, Chen, & Chou (2011) ; Schallmo, Williams, & Boardman (2017)
Digital transformation	"The best understanding of digital transformation is adopting business processes and practices to help the organization compete effectively in an increasingly digital world."	Kane (2017c) Kane et al. (2017)

Table 3. Definitions of DT

To provide a complete and precise overview of the definitions presented in the literature, a final clarification that has to be done is between three terms that are very often interchanged: digitization, digitalization, and DT.

"Digitization" refers to the process of converting information from analog to digital form and automating activities using information technologies (Horlacher and Hess, 2016).

Whereas, the term "digitalization" describes the use of IT or digital technology to change current business procedures (Li et al., 2016). Through digitalization, businesses use digital technologies to streamline their current organizational practices by enabling more effective coordination between procedures and by upgrading user experiences to offer value to their customers (Pagani and Pardo, 2017). Therefore, it is evident that DT affects the entire business and its methods of operation, and it goes beyond the digitalization concept (Verhoef et al., 2021).

According to the current literature, digitization and digitalization represent two phases that firms need to experience before embracing the DT journey (Verhoef et al., 2021).

Among the many keywords presented, our focus would be on the DT phenomenon, even aware of the current fragmentation. Our interest will be in the overall approach adopted by organizations to shift and move towards a revised set of practices, routines, and procedures (Agostino and Arnaboldi, 2021).

1.1.3. Relevance of the topic

The need to support further study on DT and innovation management arises from the topic's significance and from the fact that this theme is still in its infancy (Schwarzmüller et al., 2018). Nevertheless, it is gaining momentum and it has entered a period of ferment that may lead to discoveries and deeper understandings.

Beyond unpredictable external factors that may intensify the transition to digital, such as the epidemic crisis, other numerous reasons express why an organization should embrace DT.
The desire to digitalize processes is motivated by a firm belief that doing so would boost overall organizational performance and provide competitive advantages, both of which are crucial for survival and growth (Uvarova and Pobol, 2021). DT is essential for public and private organizations of all sizes, particularly for those companies that would be in danger of going out of business without it (Hai et al., 2021).

In this vein, the Digital Darwinism notion has been introduced (Goodwin, 2018). It is described as a process of natural selection that excludes companies that are unable to embrace digital and that fail to follow up with society and technology. Conversely, according to (Witt, 2008), the evolution course, more than being a natural selection, is a process embraced and pursued by individuals, groups, and organizations that continuously alter it by their actions. As a result, businesses are constantly forced to examine and formulate products and services, adjust internal procedures, adopt new technologies, and apply digital solutions (Schiuma et al., 2021).

Another reason for which this phenomenon is generating interest is the increasing amount of investments dedicated to DT projects. As reported in a recent study published by Appio et al. (2021), DT accounts for 40% of all technology spending globally, with businesses investing over $2 trillion in 2019.

Moreover, demonstrating the growing commitment by enterprises to this trend is the percentage of investments addressed in DT plans during such a dramatic moment as COVID-19. Indeed, despite 52% of businesses have planned to reduce their investments in response to the pandemic spread, only 9% of businesses have cut back on DT initiatives. The reason behind this decision is the emergence of COVID-19 which has triggered DT into a critical matter that must be addressed immediately (Hai et al., 2021).

In this context, all organizations focus their attention on the implementation of DT considering many factors that contribute to this result. DT is not just a technological shift, but it involves other factors such as strategy, organization, management, and people. Managing these aspects, we must consider the role of individuals that belong to the organizations. According to the available studies on digital innovation, one of the principal key factors in defining and implementing a DT initiative is people (Agostino and Costantini, 2021). In this perspective, Frankiewicz and Chamorro-Premuzic (2020) state that DT is not simply about technology, but it directly involves human beings. Indeed, according to the authors, the ability of organizations to adapt to the digital world relies on developing new capabilities and balancing talent supply and demand.
DT may need the creation of new professional jobs in addition to the redesign of an organization's operations and business models. Organizations may designate on one hand a new managerial role to lead the transition (e.g., Chief Digital Officer) and on the other hand, people may need specialized skills and capacities to fully capitalize on the potential created by digital technology (Correani et al., 2020).
Therefore, this thesis recognizing the importance of people as a source of competitive advantage will further analyze the role of the actors involved in a DT process.

1.1.4. Opportunities and challenges of DT

DT has a large-scale impact on how businesses are connected and how industries are organized. It presents both opportunities and challenges that depend on the specific context's conditions (Verhoef et al., 2021).
Therefore, the following section discusses the main opportunities and most imminent difficulties that organizations need to be aware of when undertaking a DT process in Table 4 are summarized the key concepts.

1.1.4.1. Opportunities

Overall, firms may benefit significantly from pursuing a DT journey for several reasons. At a macro level, scholars have verified the benefits of businesses' DT on performance and productivity (Hai et al., 2021). From this perspective, the adoption of new digital technologies may allow companies to generate more efficient and consistent goods and services. For instance, the introduction of AI could provide opportunities to automate internal processes and work, thereby supporting humans (Schneider and Kokshagina, 2021).

Furthermore, DT assists in the development of more effective and consistent goods and services that meet consumer expectations promotes. This creates new opportunities for producing and appropriating value through digitization and connectivity (Correani et al., 2020). An example of how DT breaks down boundaries across industries is that businesses like Google, Apple, and Uber are focusing more on the automotive industry to produce self-driving cars.

According to some academics, companies should adopt a DT process for the necessity to maintain competitive advantages, to establish a quicker innovation process, and fast time to market, in a world that is becoming more and more globalized (Schiuma et al., 2022). Indeed, the call for DT mainly involves those existing companies that may need to radically transform themselves to succeed in the emerging digital world (Nambisan, 2017). Of the same opinion are Verhoef et al. (2021), who affirm how the DT process is particularly significant for incumbent firms. Specifically, they may encounter difficulties and barriers while looking for and implementing innovative business models for the digital transition. They can overcome industry barriers, promoting linkages, exchanges, and collaborations among firms operating in various sectors; and assisting enterprises in gaining access to continuous, timely, and accurate data streams (Correani et al., 2020).
Moreover, the adoption of digital technologies unlocks prospects for new kinds of relationships and interactions between colleagues and stakeholders. This may improve coordination for a complex project, and new cross-functional collaboration occasions (Schneider and Kokshagina, 2021). Consequently, it enhances flexibility and ability to respond to customers' demand and to become more competitive in the market.

Furthermore, by modifying the contemporary and professional working paradigm, DT may enhance the spiritual well-being of employees (Hai et al., 2021). For instance, new opportunities for autonomous work could arise for employees. In this circumstance, they may increase their interest in their job, they may feel more motivated to perform certain tasks and also, enhance their personal skills.

1.1.4.2. Challenges

DT presents great advantages and opportunities, however, the implementation of DT methods is fraught with challenges. Indeed, due to the disruption in activities, procedures and skills, DT projects often fail (Correani et al., 2020). According to current estimates, 66% to 84% of DT programs do not succeed (Libert et al., 2016): the current literature highlights different reasons behind these numbers.

One important problem is ensuring consistency between strategy creation and strategy implementation, which are identified as different aspects despite their interconnectedness (Correani et al., 2020). In particular, digital strategy formulation refers to the definition of a guiding policy for the creation and appropriation of value through the use of digital technologies. This allows us to achieve long-term objectives considering several factors such as the external environment, technological potential in the current competitive scenario, and market evolution. As a result, the creation of a digital strategy should identify the parts of the firm's business model that must be adjusted in accordance with the new strategy, as well as the extent of the DT. Digital strategy implementation, on the other hand, refers to how organizations transform their digital strategy into a tangible plan and set of actions (Correani et al., 2020).

A second important challenge is the capability of companies to engage employees in the process, comprehending its significance and potential, as well as showing overall alignment with the company's strategic direction. Therefore, this issue that companies could face, both in the public and private sector, is related to the lack of awareness about the role of DT, firstly experienced by managers and then reflected on employees. Indeed, one of the biggest barriers to a successful DT is the change in leaders' minds and perceptions about the importance of DT (Hai et al., 2021).

Lastly, a persistent challenge to enhancing businesses' digital performance is finding the right frontline tech skills (McKinsey & Company, 2022). According to the McKinsey Global Survey (2022), there is a lot of discussion regarding whether corporations should hire all of their IT talents internally or collaborate with others to acquire top expertise. High-performing businesses often employ both strategies. Hence, from this result, attracting and developing tech-savvy executives and ensuring an overall integration, are significant obstacles that businesses have not yet properly understood.

To conclude, it should be emphasized the manager's responsibility on understanding the influence of current or future digital technologies awareness and implementation.

This allows to identify opportunities and threats and adjust the company's strategy as necessary (Fernandez-Vidal et al., 2022).

Opportunities	Challenges
Automation of internal processes through AI	Ensuring consistency between strategy creation and strategy implementation
Generation of more efficient and consistent goods and services	Establish employees' engagement and alignment with the company's strategic direction
Establishing exchanges and collaborations among firms in various sectors	Identification of the right frontline tech skills
Transformation of cultural institutions in place of learning	Managerial attention to the potential of digital technologies

Table 4. Opportunities and challenges of DT

1.1.5. How DT is mainly addressed

The relevance of the DT and the analysis of the opportunities and challenges allow having a better understanding of the reasons why it is interesting to go in-depth in the analysis contributing to the existing literature.
From this perspective, it is crucial to thoroughly comprehend how the available literature approaches this issue. As most of the existing studies were conducted during earlier stages of the DT, the current literature is highly fragmented (Schwarzmüller et al., 2018) and, due to this, it is challenging to precisely delineate the various approaches with which this topic is treated.

However, based on the literature review carried out, it is possible to identify some recurring themes that have been clustered in order to acknowledge the research gap and our contribution to the existing published works. This way of proceeding is in line with many academics who believe that comprehending the numerous study streams on the subject enables them to conduct more research over time and get a deeper understanding of the topic (Verhoef et al., 2021).

We identify and summarize the key findings along three thematic themes (Table 5), discussed then in the following sections (§ 1.5.1. - § 1.5.3.):

a. **DT and the organizational impact**: most of the official documents and major experts' studies on this notion, place a greater emphasis on the impacts generated in organizations across multiple dimensions. This supports companies and managers to acknowledge the importance of implementing a DT process within their organizations.

b. **DT and the managerial implications**: another direction proposed by the current literature is related to the managerial-level implications that emerge during a DT of enterprises.
c. **DT and people**: a final stream that has been identified considers the impact generated by DT on people that belong to and interact with the organization.

How DT is addressed in the literature		
DT and the organizational impact	DT and managerial implication	DT and people

Table 5. DT literature streams

1.1.5.1. Digital Transformation and organizational impact

The available literature devotes a substantial percentage of its body to shed light on the implications of an organization's DT pathway (Table 6).
Indeed, the organizational and strategic changes brought on by DT are innumerable (Westerman and Bonnet, 2015), leading frequently to a complete redefinition or reconfiguration of an organization's business model.
Naturally, this has a significant impact on the organizational structure and the responsibilities, competencies, and requirements needed by top executives and staff (Fernandez-Vidal et al., 2022). Indeed, the reshaped of operations and business models, led to substantial changes in their activities, processes and capabilities to transform the way they create and appropriate value. A significant necessity for organizations undertaking DT is to rebuild their business models so that it becomes compatible with their strategy (Correani et al., 2020).

Nevertheless, organizations are driven by DT not only to make substantial changes to their strategy and organizational structure (Matt et al., 2015), but also in the distribution of power (Hai et al., 2021). As a result, organizations must redesign their strategy, organizational structure, and power distribution, and start an innovation process related to new leadership methods. This requires each leader and organization to go through a challenging learning process to adapt to DT (Hai et al., 2021).

From Pagani and Pardo's (2017) study, the adoption of digital technologies inside the firm's boundaries leads to the discussion around the derived endogenous impact. Innovative digital solutions produce as effects, the enhancement and coordination of existing operations within the organization.

Furthermore, research offered by Reuschl et al. (2022), insists on the importance of organizational elasticity, defined as an organizational capability that enables short-term adoptions to internal or external changes. Therefore, a DT process becomes effective whenever companies achieve high flexibility under three different dimensions simultaneously: structural, technological and social dimensions. Consequently, to acquire this degree of elasticity, organizational elements should be adapted. Regarding this, the necessary adjustments and the repercussions from a work design perspective turn out to be a significant internal challenge (Reuschl et al., 2022).

DT and organizational impact	
Main topics from the literature	**Sources**
Reconfiguration of organizational business model: organizational structure, capabilities, resources	Westerman and Bonnet (2015); Fernandez-Vidal et al. 2022
Transformation of the value creation chain	Correani et al. (2020)
Re-distribution of power and application of new leadership methods	Hai, Van, and Thi Tuyet (2021)
Need for organizational elasticity: structural, technological and social	Reuschl et al. (2022)

Table 6. Key contributions from the literature about DT and organizational impact

1.1.5.2. Digital Transformation and managerial implications

Another significant literary contribution discusses how management must address the vital issue of DT, which calls for new managerial paradigms (Horlacher and Hess, 2016) (Table 7).

Even though digital technologies are increasingly used in every aspect of management, an ever-increasing number of businesses have chosen to select an executive leader, often referred to as the company's Chief Digital Officer (CDO), to oversee their digital agenda (Schneider and Kokshagina, 2021). As a result, this current tendency has attracted a lot of academic attention by encouraging researchers to examine the phenomena at the managerial level. However, this scholarly attention is still at an early stage. Indeed, even while a significant number of studies have helped us understand the effect and role of top executives within organizations, very few studies in this field have specifically addressed the digital aspect (Wrede et al., 2020). Particularly, this phenomenon has been neglected by the academic debate for a multitude of reasons. Certainly, one aspect is related to the fact that DT is a relatively recent challenge, and that rapid technological improvement makes it difficult to timely

and comprehensively investigate contemporary circumstances (Schwarzmüller et al., 2018).

Despite the lack of formal resources, it is widely acknowledged that the application of some management best practices can become a strategic resource that gives businesses a truly sustained competitive advantage. Indeed, in the DT environment, managers are in charge of determining the strategic direction of the company's transformation. They are accountable for directing and managing the numerous organizational and operational changes brought by the adoption of new technology (Wrede et al., 2020). Enabling a sustainable DT involves more than just implementing digital technology. Most significantly, management action is needed (Reuschl et al., 2022). This is stated in the work of Wrede et al. (2020), in which they offer a deeper knowledge of top executives' roles. A primary contribution of their research is a theoretical framework for the role and the supporting actions of senior managers in organizations' DT process. Particularly, they defined three main actions that should be performed by CDOs: "Understanding digitalization", "Setting the formal context for digitalization", and "Leading change". The first one is a reflection of top managers' efforts to have a deeper comprehension of the opportunities and difficulties that the DT implies, as well as the role of businesses therein. The senior managers must first make sense of the DT themselves due to the novelty of the phenomenon. The second action involves establishing formal organizational structures, procedures, and resources to allow the DT to take place. Lastly, the third suggestion introduces a key responsibility for top executives which is encouraging acceptability among employees to gradually acquire their loyalty.

DT and managerial implications	
Main topics from the literature	**Sources**
Introduction of a Chief Digital Officer (CDO) to pursue and oversee organizations' digital agenda	Schneider and Kokshagina (2021)
Managerial effort to pursue competitive advantage and to drive organizational strategy transformation	Wrede et al. (2020)
Managerial best practises for an organizational DT process	Wrede et al. (2020)

Table 7. Key contributions from the literature about DT and managerial implications

1.1.5.3. Digital transformation and people

As emerged in the previous sections, DT is not just about technology, but also about people (Schiuma et al., 2021)(Table 8). It is typically an iterative process that frequently calls for quick adaptation through a participatory approach (Schneider and Kokshagina, 2021). In this perspective, for the organizations that accept and nurture a DT journey, it is certainly important to ensure a strong commitment of top managers, even though, this is not enough.
Emphasis also needs to be placed on all those people who are involved in the DT process and who can affect its outcome. This concept is manifested in the extant literature: for instance, according to Hammer (2016), technology alone cannot generate "magical results" and the reality depends on how people use it, and mainly if they can employ it to amplify longstanding skills and expertise.

It is acknowledged that integrating people and technology is crucial for organizational growth (Schiuma et al., 2022). However, this combination proves to be successful only with the presence of appropriate digital capabilities and a continuous commitment toward people reskilling. Indeed, the term people is related to the presence of digital skills and how the know-how is managed inside the organization. This dimension is often called "Human Capital".
The development of new digital capabilities, knowledge and competencies are crucial elements that can be supported by agreements with external actors labeled by academics as "partners" (Correani et al., 2020).

In addition, many scholars concentrate on the role of promulgating transformative leadership to establish a people-centric approach (Reuschl et al., 2022), focused on bringing humans to the center of business's priorities. Through this, employees would be encouraged to properly act and commit to a digital revolution. A similar people-oriented attitude is mentioned by Schiuma et al. (2021) for which managerial actions reflect a commitment to communication, respect for others' perspectives, and consideration for the feelings of subordinates.

However, managing a DT requires a combination of both a people-oriented and task-oriented approach since the high complexity of the digital landscape. This aspect is highlighted also by Satya Nadella, Microsoft's CEO who believes that companies, in order to remain relevant and competitive by embracing the DT, should define priorities. Within these aspects of greater importance, companies must empower their own staff in the new digital world of work by enabling higher and more mobile productivity and cooperation (Correani et al., 2020).

The empowering effort within organizations also emerges from the study of Schiuma et al. (2021) who emphasize the necessity to assist the acquisition of power by people and strengthen their capacity to actively take charge of their own lives.

DT and people	
Main topics from the literature	**Sources**
People engagement and their integration/ combination with digital technologies	Schiuma et al. (2022)
People-oriented attitude vs task-oriented attitude	Schiuma et al. (2021); Reuschl, Deist, and Maalaoui (2022)
People empowerment on the adoption of digital tools	Schiuma et al. (2021); Correani et al. (2021)

Table 8. Key contributions from the literature about DT and people

1.2. Cultural institutions

1.2.1. The Cultural Heritage context

As shown in the previous paragraph, in the last decade the phenomenon of DT has increasingly become a central issue that is attracting growing interest in multiple fields. Within the possible domain where a DT process can be implemented, our study takes as the empirical context the cultural institutions.

Before analyzing the reasons for the choices of this empirical context, it is worth providing an overview of what is meant by "cultural heritage" and "cultural assets".

Analyzing its etymology, "heritage" derives from the Latin term patrimonium which comes from the union of pater, "father", and the suffix -monium, which refers to alimonium, "nourishment" and was used to denote the set of things owned by the pater familias (the "father of the family") that were later destined to become nourishment, in a broad sense, for his heirs. So, certainly, history is being passed on to the children and future generations.
The term "culture" is also of Latin origin, and it may be traced back to the verb colere, "to cultivate" from which the word cultus arises, which covers, certainly, the "cultivation of fields" on one side and the 'cult' in religious sense on the other, but also the "way of life" the "civilization". Associating these terms, the formal explanation proposed by UNESCO defines Cultural heritage as the collection of tangible artifacts and immaterial social values that have been transmitted through the years, preserved in the present, and conferred for the benefit of future generations. Therefore, it represents the people's legacy, tangible and intangible memory of what humans have produced and conveyed and continue to create and transmit over time. We must not be willing to lose our cultural legacy that constitutes unique and unrivaled source of inspiration.

Furthermore, any heritage is characterized by "assets". Thus, cultural heritage may legally be defined as a country's collection of cultural assets (MIC, 2004).
According to the Italian Legislation, cultural assets are immovable and movable things that have artistic, historical, archaeological, ethno-anthropological, archival and bibliographic interests and other things identified by law or based on the law as evidence of civilization value (art. 2, comma 2, del D.Lgs. 42/2004, "Codice dei beni culturali"; Ambiente diritto).

The field of Cultural Institutions has been taken as an exemplary field of study for two main reasons.
The first reason lies in the importance of cultural heritage in the Italian territory. Indeed, it is not a marginal context, but rather a dimension of primary interest to the Nation which is proven also by Article 9 of our Constitution states.

"*The Republic promotes the development of culture and scientific and technical research. It preserves the landscape and the historical and artistic heritage of the Nation*" (Art. 9).

In this sense, supporting "scientific and technical research" is becoming a priority to guarantee continuous progress and preservation of cultural heritage.
The valorization of cultural heritage presupposes, first of all, its protection, which lies in its recognition, preservation, protection and restoration. The physical preservation

of the cultural heritage is certainly the first step, but the possibility of the fruition of these artistic assets should certainly not be lacking.
From this perspective, we cannot ignore the unstoppable change brought by technologies. Whether culture serves as a tool for social integration and territorial cohesion, technologies are viewed as catalysts for the economic and social potential, that underpins the growth of the cultural economy (Li, 2020).
Therefore, the role of *cultural heritage institutions* is to preserve, research, improve, and make cultural property accessible to society for its education and enjoyment.

The relevance of the Cultural and Heritage domain in Italy is also demonstrated by a large number of cultural sites and institutions (Table 9). According to UNESCO, Italy holds the majority of the European cultural legacy, including artistic, archaeological, architectural and environmental heritage (Benedikter, 2004). The UNESCO World Heritage List in Italy is rich in sites of different types and sizes, which contributes to illustrate the long and extraordinary history of humanity throughout the country.
Specifically, with about 5,000 institutions, including museums, archaeological sites, and monuments, Italy is second in the world in terms of UNESCO-certified sites. (ISTAT, 2019).

Italian cultural heritage sites – certified by UNESCO		
58	53 Cultural sites	Monuments, groups of buildings, and sites (including archaeological sites)
	5 Natural sites	Natural features (consisting of physical and biological formations), geological and physiographical formations
14	14 Intangible Cultural Heritage sites	Food custom, food preparation and food resources, cultural celebrations

Table 9. Italian cultural heritage sites (UNESCO, 2022)

The second reason is related to the opportunity to develop our master's thesis in conjunction with the issuance of financing through "Bando SWITCH" by Fondazione Compagnia di San Paolo (FCSP). This initiative has been supported by the Observatory of Digital Innovation in Cultural Heritage and Activities of the Polytechnic University of Milan.
The call aims to initiate and nurture a DT process for cultural institutions in three regions of the Italian landscape. This allowed us to study and gather data and

information regarding the phenomenon of DT in this specific context. Therefore, the first reason for choosing such an empirical context is mainly a practical one.
For the purpose of this research, it is important to clarify that, the cultural field context taken into consideration does not include only museums, but also other cultural assets.

A museum, in accordance with the new definition approved by the International Council of Museums (ICOM) on August 24th 2022 is "*a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing*". This new definition is consistent with some of the fundamental shifts in museums' roles, such as the emphasis on diversity, community involvement, and sustainability (ICOM, 2022). Moreover, in this assertion, the society and the value created by museums are acknowledged as essential components of cultural institution, since it is defined as a "permanent institution in the service of society". In this way, museums are in charge of disseminating to the public the knowledge embedded within the cultural assets. Therefore, a portion of the mission of the museum would be lacking without the spreading and appreciation of the cultural treasures it holds.
Nowadays, the importance of museums is connected to their growing international diffusion (Raimo et al., 2021). In this regard, a recent report drawn up by UNESCO (2020) estimated the presence of about 95.000 museums in the world with an increase of almost 60% in the number during the past decade.

A theatre, instead, to the Collins dictionary, is "a building with a stage in it, on which plays, shows, and other performances take place". The word is derived from the Greek *theatron*, "a place of seeing".
The theatrical institutions consist of the collection of private and public entities engaged in the production and distribution of goods and services of an artistic and cultural nature (Guerzoni, 1998). Overall, theaters are those organizations in which there is a coincidence between the production phase and the phase of delivery to the public.

Lastly, another cultural entity that deserves to be mentioned is the conservation center. The research activities carried out by such institutions are regulated by ICCROM (International Center for the Study for the conservation and restoration of cultural heritage). This organization operates at the international and governmental level, in collaboration with institutions and professionals in the field, and it aims to engage and

inform new generations of professionals and the general public interested in heritage (ICCROM).

In the following Table 10, the definitions of the main typologies of cultural institutions are summarized.

Term	Definition	Sources
Museum	A not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing	ICOM (2022)
Theatre	It consists of the collection of private and public entities engaged in the production and distribution of goods and services of an artistic and cultural nature	Collins dictionary
Conservation center	his organization operates at the international and governmental level, in collaboration with institutions and professionals in the field, and it aims to engage and inform new generations of professionals and the general public interested in heritage	ICCROM

Table 10. Definitions of the main cultural institutions

1.2.2. Relevance of DT in the cultural domain

In the last ten years, the Italian cultural content debate has become more critical than ever to ensure everyone accessibility and equal opportunity in the digital era (Palmieri et al., 2023). With reference to this idea, the theme of DT has also been addressed in the cultural heritage sector with the aim to support conservation and advancement in that field. Therefore, in this section, our attention has been directed to grasp the relevance of DT in the cultural world

All facets of human life are being transformed by digital technology and cultural institutions are not an exception. Cultural organizations are becoming a vital component of society and their role is changing as a result of information and communications technologies and technological advancements.

Overall, it is possible to affirm how the cultural and heritage industries are particularly interested in digital change as it emerges from the academic literature that we are going to present.

Over the last decade, institutions have sought to digitalize their processes, and operations to become more efficient (Bertacchini and Morando, 2011).

Indeed, the promotion, communication, and distribution of cultural content have undergone a significant transformation as a result of digitization in the context of legacy conservation or reproduction (Russo Spena and Bifulco, 2021).

Technologies are seen as critical engines for integrating cultural, artistic, symbolic, social, historical, and economic values. Technology applications foster an awareness of cultural heritage and encourage users to cherish and appreciate that heritage by enabling various sorts of engagement with heritage content. For instance, museums should go beyond a curatorial-oriented strategy and toward a visitor-centered approach, strengthening the visitor's active engagement. The study of Marini and Agostino (2021) provides evidence that museums are reinventing their relationships with visitors by utilizing digital technology.

Ultimately, the commitment toward DT projects represents the finest long-term investment for cultural asset protection and valorization (Russo Spena and Bifulco, 2021). In this perspective, DT is becoming essential for preserving culture between and within generations, improving their reputation, and eventually increasing revenue (Agostino and Costantini, 2021).

In order to suit the needs of new types of consumers, such as new generations, it is also required to change the ways that cultural items are organized and delivered. In such a view, technology is perceived as a resource that offers a new platform for users to participate in the process of creating cultural value. Moreover, it offers the possibility for systemic integration in terms of the chances of interactivity among various service providers (arts, ICT media sectors, etc.) and market actors (public and individual actors) (Russo Spena and Bifulco, 2021).
In contrast to other technological-based sectors, which generally adopt digital advancements first, cultural institutions are often thought of as more conventional enterprises. To guarantee long-term survival, there has also been intense pressure on the cultural area to "become digital," particularly in recent years (Agostino and Costantini, 2021).

Therefore, the preservation of cultural history and the willingness to bring cultural institutions into the digital era are currently the main priorities.
Moreover, the topic has received increasing attention with the spread of COVID-19 and the transformation it has generated in today's society.
Indeed, the pandemic has significantly quickened the pace of change throughout our digital ecosystem, while bringing forth significant computing improvements and increasing the virtuality of art and identity at the same time (Giannini and Bowen, 2021).

Moreover, the customer and the audience are transitioning to a new type of digital fulfillment, and many cultural institutions have immediately begun to answer these particular requirements (Russo Spena and Bifulco, 2021).

1.2.3. Opportunities and challenges in the cultural domain

The increasing pace of the DT is affecting cultural entities experiencing this transition. However, this phenomenon is posing several opportunities and challenges that should be investigated for the future of the cultural sector (Table 11).

1.2.3.1. Opportunities

To value and protect their cultural legacy, organizations must embrace the opportunities that digitization, digitalization and DT have to offer. Below we discuss some of the opportunities that cultural institutions can embrace by leveraging on DT.

Firstly, visitors can appreciate the new way through which cultural heritage information are provided (the method in which users can interact with the content). As collections are posted online on the institutional website, numerous portals, or other social media platforms, innovation occurs in the presentation of the information (i.e. Flickr, Facebook and Wikipedia). In particular, the archival and library collections, and museum domains innovate in the way collections may be consumed, broadening audiences and offering new value. Digitization of library holdings mostly constituted of scannable books, has usually occurred inside universities and national libraries. Technical advancements in library digitization have focused on providing optimal full-text search access to massive collections of books across institutions by constructing networked infrastructures with enhanced usability and usefulness. The concept of a digital library has evolved to signify a collection of digital material regardless of form or origin (Borowiecki and Navarrete, 2017).

Looking the theatrical sector, the adoption of digital solutions, such as business management software, may support the planning and control of all materials needed to bring a theater project to life. An example can be the ERP (Enterprise Resource Planning) that would increase the resource management and theatres' performances.

For what concerns museums, instead, visitors can enjoy artifacts or locations that are not open to the general public, as well as, see artwork that is located in various locations (Russo Spena and Bifulco, 2021).

As a result, the open access and flexible reuse of digital images of artworks in the public sector may produce social benefits in making such digitized information available to the public for both commercial and non-commercial purposes. Such a transition would trigger the users' demand and their online engagement with art and culture.

Another opportunity for cultural institutions regards the increasing engagement provided by digital media and technology. This will allow them to fulfil its participatory purpose, utilizing the digital world in addition to their conventional physical locations.
In this perspective, the move to digital collections opens up new avenues for online participation with arts and culture. Such a shift has created a need for people to exchange, collect, and link digital material beyond institutional borders (Bertacchini et al., 2011).
Moreover, the interest on engaging and involving users may be addressed by introducing specific tools oriented to manage customer relationships, to build personalized long-term relationships. A concrete example are CRM software that both theatres and museums may adopt to answer to the very differentiated and widespread public.

Cultural institutions have also the opportunity to be a place of learning. As noted by Chang (2006), the new technologies for entertainment on-site, give visitors the chance to truly experience the cultural offering of the museums. The latter can provide content and explanations of their history to enhance the visitor's learning since it is becoming one of the major roles of these cultural institutions.
For instance, 3D representations of the exhibits or artifacts like videos, e-databases, and digital museum collections (Raimo et al. 2013), could create a museum experience that goes beyond the traditional one. The visitor's involvement and participation with the exhibit, which has a significant impact on their experience and learning, is progressively being highlighted (Su and Teng, 2018).

In order to achieve this learning purpose, museums have begun utilizing audio guides and smart guides, or wireless and mobile devices that let visitors navigate the artworks with the help of a verbal aid. These expositive gadgets, which are used in museums to promote cultural communication, have been included into the entire display and go beyond their educational function. They give the museum the opportunity to improve the content's educational and communicative value while fostering engagement with its visitors.

1.2.3.2. Challenges

Cultural organizations are progressively facing the issues and demands posed by today's world's complexity and hyper-competition. It should be highlighted that organizations in the cultural heritage sector are particularly challenged by the speed at which their operations and the surrounding competitive environment are changing. The complexity that DT has added to businesses operating in the field of cultural heritage, can be analyzed by considering how DT impacts the way organizations provide, deliver and capture value.
Most cultural organizations provide cultural, social, and economic value and these organizations are finding new business models (Russo Spena and Bifulco, 2021). For this reason, the main shifts related to the business models of the cultural institution are highlighted to understand how they could achieve and maintain their competitiveness.

Specific contribution in the current literature is provided by Russo Spena and Bifulco (2021), with their work about new business models in the emerging cultural digital context.
The aim of their elaboration is to understand and propose a new kind of sustainable business model considering the effects generated by DT during its implementation in a cultural entity. According to the authors, the digital transition requires a deep change along all the blocks that constitute the digital business model. Thus, they have proposed a new version of each building block, identifying the following seven pillars: "actors integration," "content and users resources generation," "experience proposition," "personas and crowd actor," "social customer relationship management" "omnichannel strategy," and "economic, social, and cultural outcomes".
Among these blocks, we are going to consider just a few of them whose content will be relevant to our research purpose. These considerations will help to define the main challenges that a cultural institution must face.

The first change is related to the need to shift "from partners collaboration to actors' integration"(Russo Spena and Bifulco, 2021). As technology transforms our daily lives, businesses must focus on acquiring more heterogeneous resources and employing a broader range of partners to develop the applications, software platforms, tools, and services required to create integrated solutions. These external partners that could support cultural institutions on the management of digital activities are also labeled as "external consultant" (Agostino and Costantini, 2021).

Integration between regional organizations, local communities, and companies must be taken into account within the framework of cultural heritage owing to their influence on the local ecosystem (Li, 2020).
For instance, partnerships and networks between museums, as well as between museums and universities, libraries, archives, or community organizations, offer a great deal of promise for leading novel activities and expanding outreach and public participation in such practices. Such collaborations and networks provide chances for knowledge sharing and cross-fertilization, but they also pose difficulties since they go beyond customary procedures and practices. This motivates organizations to explore uncharted territory (Bertacchini et al., 2011).

The other change which represents a challenge for cultural institutions is the capability to shift "from the Value Proposition to the Experience Proposition". The organization's business approach replaces the conventional competitive viewpoint with a more comprehensive and experience-based one (Russo Spena and Bifulco, 2021).
According to Campos et al. (2018), the cultural experience is the culmination of all the occasions in which a visitor actively engages, either physically or mentally, with others in the experience setting. The shift from a collection focus to a visitor focus is challenging cultural institutions that need to move beyond just "being there", to more actively and dynamically interacting with visitors (Bonet and Négrier, 2018). Moreover, the level of complexity grew as experiences began to be enhanced via the use of interactive and digital media (Vermeeren et al., 2018).

Eventually, the complexity of implementing DT and innovative initiatives in cultural institutions is held by the existence of several important goals, which could clash if resources are scarce, or priorities are unclear. The administration of theaters, for instance, may have managerial or artistic training, with the former being less innovative than the latter. Multiple organizational objectives relating to providing access, protecting the collection, and increasing value via research are also presented by archives, libraries, and museums (Borowiecki and Navarrete, 2017).

These shifts pose numerous significant challenges and dangers to museums and other cultural institutions' roles. The profitability of digital collections and the adoption of new criteria to measure their social effect and public mission are just some of them.

Opportunities	Challenges
New ways of interactions with the cultural heritage (e.g. online collections)	Deep change along the blocks of the digital business model
Social benefits thanks to the open access and flexible reuse of digital images	Acquisition and engagement of a broader range of partner to develop applications, software, digital tools
Increasing engagement provided by digital media and technology	Shift from value proposition to experience proposition focus
Transformation of cultural institutions in place of learning	Identification of right amount resources and clarification of priorities

Table 11. Opportunities and challenges for DT in the cultural domain

1.2.4. How DT in the cultural world is mainly addressed

As was done in Section §1.5 for the DT phenomenon, it is crucial to deepen the current debate related to DT in the context of the cultural domain.

Overall, much of the debate on this topic is still in its infancy. The common aspects that emerged, have been classified into three parts. This analysis allows us to recognize the literature's research gap and, consequently, to define how to contribute to the extant debate. We summarize the main results under the following three headings (Table 12):

a) **Digital transformation and impact and assessment in the cultural organization**: a consistent part of the available literature shows how the phenomenon of DT affects routines, procedures and internal practices of cultural institutions. Some academic contributions are suggesting tools to assess the level of DT in cultural entities.
b) **Digital transformation impact on user experience**: a significant literature stream focuses on the enhancement of user engagement through digital technologies and how cultural institutions are encouraging digital engagement through an interactive website, mobile apps, guide devices and social media.
c) **Digital transformation and people in the cultural sector**: further attention by academics is devoted toward the introduction of new digital roles and competencies during the implementation of a DT project in cultural organizations.

How DT in the cultural world is addressed in the literature		
DT and impact and assessment in the cultural organization	DT impact on user experience	DT and people in the cultural sector

Table 12. DT in cultural institutions streams in the literature

1.2.4.1. Digital transformation and impact and assessment in cultural organizations

The first stream is dedicated to the impact generated by technologies on organizational processes and strategy within cultural institutions (Table 13). Therefore, an important area of investigation addresses digital technology implementations and their effects (Vial, 2019).
As stated by academics, the development and use of increasingly effective digital technologies over the past few decades have had a dramatic impact on company operations and on how firms run and generate value (Salvi et al., 2021). Especially in conventional organizations, changing business models is an extremely hard process (Rubino et al. 2020), and this aspect does not disappear when referring to cultural institutions.

For example, Agostino and Costantini (2021) proposed a digital framework for the quantification of digital readiness at the organizational level to support the understanding and evaluation of DT in specific cultural entities, namely museums.
The assessment of the impact has been highlighted also by Bertacchini et al. (2011) who affirmed that the shift to digitization has made it possible to track and closely examine how users access and consume online content. In this way, museums understand how much the content used can be a valuable resource to gauge the social impact and accomplish their core public missions.
In this sense, the process of DT constitutes a significant step for cultural institutions, requiring adjustments to every function that is typically carried out according to established procedures (Volkoff et al., 2007). In other words, it signifies a critical juncture for cultural entities as institutions.

As Navarrete (2019) states, museums have embraced digital technologies to innovate throughout the organization. This has involved all staff members and operations, including human resources, the education division, tracking object mobility, and remote exhibition of collections.
However, without the ability to assess digitalization at the organizational level, the internal decision-making and the consequent improvement of the company's results

come to lack. For this reason, in the last few years, some academics have devoted their attention to this direction.

Looking the theatrical reality, the development of computer technologies and the adoption of digital solutions have affected both productive and creative process both at managerial and, more specifically, at operational level. For instance, by leveraging on digital tools, for theaters has become easier to modify design and technical features without spending a ton of time, tape, or trips (Luckhurst, 2006).

Digital Transformation and impact and assessment in cultural organizations	
Main topics from the literature	**Sources**
Impact of digital technologies on human resources and operations (e.g. the education division, tracking object mobility, and remote exhibition of collections etc)	Navarrete (2019)
Digitization for tracking and examination of how users' access and consume online content	Bertacchini et al. (2011)

Table 13. Key contributions from the literature about DT and impact and assessment in cultural organizations

1.2.4.2. Digital transformation impact on user experience in the cultural sector

Digital technologies spur many businesses to rethink how they serve customers in new, faster, and better ways. This involves, also, the cultural institutions.
Indeed, the role of the museum has traditionally been to store and conserve artifacts of cultural heritage, while also allowing visitors to interact with them. The proliferation of various digital technologies has changed the role of museums as well as how visitors engage with and experience their journey through cultural heritage (Amitrano, Russo Spena and Bifulco, 2021)(Table 14).

The disruptive potential of the new immersive experiences being offered by cultural organizations to engage with users, includes augmented reality, virtual reality, and context-aware exhibition guides.
According to some studies, videogames, virtual tours, and social media are strong methods to improve online involvement without consumers physically visiting the museum. At the same time, online engagement drives curiosity about the "real" museum, leading to "traditional" onsite museum visits (Agostino and Arnaboldi, 2021).

As result, now visitors have a more active role in developing meaning and content than they ever did as an audience (Tallon and Walker, 2008), which encourages new forms of visitor engagement. In light of this, in the digital age, the customer journey is embracing both physical and virtual contexts and includes several interactions, channels and touchpoints (Lemon and Verhoef, 2016).
In this view, customer experience emerges more dynamically and the visitor's engagement improves from the condition of being just a static process (Russo Spena and Bifulco 2021).

Moreover, the accessibility of online collections enables customers to enjoy a museum visit in bigger numbers, including those who are unable to physically attend during the physical event, and with more personalized service (Navarrete, 2019).

Additionally, many academics have become interested in digital technologies due to their growing significance and the growing amount of data that customers are producing through the use of digital platforms and mobile apps. This highlights the benefits of customer engagement for both parties with value creation and feedback loops of dynamic interactions (Lemon and Verhoef, 2016). In the company's perspective, this effect will favor the creation of a sustainable competitive advantage.

However, the increasing integration of new technologies has not only attracted the museum world but also that of other cultural institutions such as theaters. In this line, Voldere and Romainville (2017) affirm how the new digital solutions have brought new opportunities for innovative practices and new ways of interaction with audiences. The desire to enhance customers' engagement have driven theaters to introduce online tools such as mobile app, personalized website and social network accounts. However, this effort overcomes the online boundaries directly involving the audience during performances thanks to augmented realities tools and digital scenography.

Digital Transformation impact on user experience in the cultural sector	
Main topics from the literature	**Sources**
Impact of digital technologies on human resources and operations (e.g. the education division, tracking object mobility, and remote exhibition of collections etc)	Navarrete (2019)
Digitization for tracking and examination of how users' access and consume online content	Bertacchini et al. (2011)

Table 14. Key contributions from the literature about DT impact on user experience in the cultural sector

1.2.4.3. Digital transformation and people in the cultural sector

From the previous analysis of the literature in the DT field, it has been shown the role of people is a key element in driving a DT journey. Similarly, when DT embraces cultural institutions, digital roles and new competencies should be introduced (Table 15).

In the empirical context of museums, the need to define new positions such as the curator of digital collections and the manager of digital strategy has been shaped by DT (MuSa, 2019).
The necessity of the introduction of new figures within cultural organizations has been confirmed by the analysis developed by Agostino and Costantini (2021).
The results collected have shown a lower score on the presence of digital skills in museums, an aspect already acknowledged by both practitioners and scholars (MuSa, 2019). Although the museum's staff members are informed about the history and cultural legacy, there is a severe lack of hard skills, such as digital abilities, which are not given enough credit.

Therefore, what emerges from the current literature is that for cultural institutions' employees, ongoing professional development is seen as essential.
Technology advances much faster than most museums can cope with. Thus, this issue needs to be resolved, especially given that many museum professionals are now expected to do a variety of jobs and are more likely to work in small teams (MuSa, 2019).

However, when it comes to museology or cultural heritage programs, hard skills like digital skills tend not to be sufficiently valued. In light of this, the research

demonstrates the importance of designing training courses to provide to professionals a mixed interdisciplinary knowledge, going from cultural to scientific/technical subjects.

Digital Transformation and people in cultural sector	
Main topics from the literature	Sources
Need to introduce new figures such as the curator of digital collections and the manager of digital strategy	MuSa (2019); Agostino and Costantini (2021)
Central role of employees in the value creation within cultural institutions	MuSa (2019)

Table 15. Key contributions from the literature about DT and people in the cultural sector

1.3. Gap in the literature and research questions

The literature review of the widespread DT phenomenon and of the DT in cultural institutions focuses on the impacts generated. In the former, the main streams of research focus on organizational impact, managerial implications and people involvement. Whereas, the latter analysis shows a greater focus on user experience, the assessment of DT and, again, the people's participation and inclusion.

Overall, from the academic papers analyzed, two main considerations turned out.

Firstly, the current literature focuses attention on the impact generated by the DT process (Schwarzmüller et al., 2018; Correani et al., 2020) without precisely emphasizing those drivers that can enable or obstruct the transformation.

Secondly, a recurring stream that appears from the literature, it is represented by the role of employees and actors of the ecosystem as a key resource for the organization to define and implement a DT project (Agostino and Costantini, 2021; Appio et al., 2021). This aspect is observed independently from the empirical context in which the DT is applied.

Even though the impact and the role of people are commonly treated in the DT and DT in the cultural field, some discrepancies between these research domains emerge. The discrepancies can be better understood if we look at the different streams of DT and DT in cultural institutions, as shown in Table 16.

Comparison between how the current literature addresses DT and DT in cultural institutions	
DT	**DT in the cultural institutions**
Digital transformation and organizational impact	Digital transformation and impact and assessment in cultural organizations
Digital transformation and managerial implications	/
/	Digital transformation impact on user experience in the cultural sector
Digital transformation and people	Digital transformation and people in the cultural sector

Table 16. Literature streams for DT and DT in the cultural domain

On the one hand, the academic papers on the DT phenomenon do not deal with the theme of user experience. This aspect can be explained by the fact that in the digital era, the transition can be both external and internal to the boundaries of the organizations. Indeed, the implementation of a DT does not involve necessary the customers or users. It may involve, for example, the simple adoption of digital systems to make internal processes more effective.
On the other hand, in the cultural domain, in order to maintain competitiveness and economic sustainability, cultural institutions give primary importance to enhance user engagement.
The second discrepancy interests the topic of commitment at the managerial level. Indeed, even if there are studies discussing the managerial implications of DT (Schwarzmüller et al., 2018; Wrede et al., 2020), the cultural context lacks research focused on this theme.

Considering that the current studies do not focus on how different stakeholders embrace the DT project, we formulate the following research question:

> **RQ1:** *Which are the stakeholders involved in a DT project and how do they influence its development in terms of enabling factors?*

Moreover, it is interesting to highlight that from the literature review that we have performed, the majority of the academic papers analyzed focus the attention just on museums. Indeed, most of the examples that we have provided deal with them. The added value of our study is that we also go to investigate other cultural institutions, such as theaters and preservation centers.

In this context, the analysis of the literature showed that there is a specific stakeholder, the digital provider, which plays a crucial role when referring to a DT project.

This stakeholder has been defined by academics as an "external partner" or an "external consultant" (Correani et al., 2020; Agostino and Costantini, 2021).
Even though this actor is clearly mentioned by scholars, its specific role is not deeply examined. Thus, the subsequent RQ has been formulated:

RQ2: *"Which is the role played by a digital provider?"*

Moreover, the literature review performed highlighted the interest of academics to investigate the process needed to implement a DT project.
For instance, Schiuma et al. (2021) have proposed a descriptive and practical model to drive companies toward a transformation. In particular, they have provided a transformative leadership compass to comprehend what influences organizational culture and behaviors that lead to DT. Therefore, this model has been designed to outline the essential leader's competencies to drive organizations toward DT. However, this is specifically focus on the leadership shift required when dealing with a DT project.

Another contribution is from Correani et al. (2020) who proposed a framework which businesses may employ to successfully achieve their DT plans. Specifically, the framework organizes and depicts the building blocks associated with a firm's value proposition and market segments, such as the scope and customer blocks. When top executives perform a digital strategy, the checklist proposed by the authors ensures that none of the critical parts characterizing the strategy are overlooked.

Nevertheless, what seems to be missing in the academic field is an in-depth study of the stakeholders involved and the necessary steps that they should be accomplished to properly implement a DT project, especially from a managerial perspective.

These considerations lead us to formulate the following research question:

RQ3: *What are the steps for the development of a DT project considering the various stakeholders involved under a managerial perspective?*

2 The Stakeholder theory

2.1. Premises

2.1.1. Overview

The theoretical lens that has been taken as a reference within our Master thesis is the Stakeholder theory (ST). As anticipated in the Chapter 1, this framework allowed us to analyze the phenomenon of DT in the cultural sphere.
In this paragraph, it is worth providing to the reader a brief overview of the potential examined theories that could be applied to our empirical study.

Subsequently, a detailed description of the theory and its features will be presented. The theoretical framework's characteristics will be useful to analyze the data gathered in our research field, namely the cultural domain.

2.1.2. Main organizational theories

Since Adam Smith introduced the first theory of organization in the late 18th century (Mary Jo Hact, 2018), a plethora of organization's theories have grown both in management literature and in other pieces of literature on related subjects.

Theorists understood that intra-organizational level theories, which rely primarily on internal organizational structures and processes, and point to these internal arrangements as the sole cause of success and failure, are insufficient. This understanding prompted organizational theorists to include external impacts on organizations as well. The environment refers to these external factors that existed outside of the organization. Customers, suppliers, rivals, partners, industry norms, government, labor, culture, political economy, and other environmental variables may affect a business. As a result, everything outside of an organizational border can have

an impact on the organization, and an organization is a subsystem of its environment (SeçkiN ÇeliK, 2020).

The link between the environment and organizations can be examined using four common theories that are typically adapted to current thinking.

In this paragraph will be shown the basic concepts that emerge from each of the four theories:

a) Environmental contingency theory
b) Resource dependency theory
c) Population ecology
d) Institutional theory

Although we will not go in-depth about the four theories, a short explanation of each of them will be useful to clearly define the choice behind the selection of the Stakeholder Theory.

a) **Environmental contingency theory**: the basic tenet of the theory is that for an organization to thrive and survive, it must adapt to its environment. Organizational effectiveness is impacted by how well the structure and contingency factor fit together (Donaldson L., 1995). When most people think of contingency theory, they think of Burns and Stalker (C. Freeman et al., 1969), who established two fundamental organizational approaches: mechanical and organic. Mechanistic management systems are better suited to stable industries and are distinguished by specialized repetitive duties, exact delineation of formal responsibilities, a highly hierarchical organization, vertical communication, and a strong emphasis on loyalty and compliance. On the other hand, organic structures are well suited to continually changing unstable conditions. They are distinguished by a high proportion of mental labor, individual task adjustment, and redefinition through interaction. Mechanistic organizations are preferred in stable circumstances due to the efficiencies created by consistent procedures and the formalization of routine work. In contrast, because uncertain settings necessitate flexibility to develop and adapt, organic architecture should be preferred if success is sought. Although organic and mechanical management systems appear to be dual, it is highlighted that they reflect a polarity rather than a dichotomy (SeçkiN ÇeliK, 2020).

a) Resource dependency theory: organizations require resources to function. The theory focuses on the management of the resources necessary to operate, such as raw materials and technological innovations (SeçkiN ÇeliK, 2020). It also

addresses those input and output resources and the flow and exchange of these resources between the environment and the organization to ensure its survival (SeçkiN ÇeliK, 2020). However, the flow of these resources, which are required for transactions between companies, is frequently unclear and unexpected. The ability to obtain and keep resources is critical to organizational survival (Pfeffer et al., 1978). Every organization, without exception, must trade with its surroundings in order to get resources. According to Greening and Gray (1994), the power accrues to those who control resources needed by the organization, creating differences in terms of power distribution among the parties involved. Indeed, when a resource starts to diminish, then other actors (both external and internal) become more powerful. Thus, organizations are viewed as proactive entities in coping with environmental restrictions, rather than passive spectators.

b) **Population ecology**: organic evolution's natural selection mechanisms are applied to the population of organizations. While biology is concerned with changes in species genotypes, social sciences are concerned with changes in a social organization when utilizing the natural selection paradigm. This view downplays adaptability, in contrast to other theories that consider organization's survival if they adjust to environmental changes (SeçkiN ÇeliK, 2020). Although population ecologists are not entirely opposed to creating and implementing plans to respond to environmental changes, they contend that not all differences across organizations can be solely attributable to adaptive behavior. Therefore, organizations are prevented by structural inertia from changing their structures as frequently as their environments do. Consequently, inertia is a result of natural selection (Michael T. Hannan and John Freeman, 1984).

c) **Institutional theory**: according to the theory, an organization becomes isomorphic with its surroundings to the point that it accepts the established institutions (Gomes and Gomes, 2007). The domain of the analysis of the Institutional theory is the institutional fields or institutional sectors. The organizations operating in this context are in the same line of business where the actors involved must conform to precise rules and practices. Particularly, the theory aims to understand the reasons why organizational structures and their implementation have some similarities in structured fields (SeçkiN ÇeliK, 2020). According to the theory, organizations alter their structural features to better meet broader environmental needs, and organizations have less choice owing to strong conformity pressures. Organizations may modify their internal structural features to the degree permitted by the institutional context, although

the goal is often to fulfill legitimacy needs rather than efficiency and effectiveness goals (SeçkiN ÇeliK, 2020).

2.1.3. Comparison of organizational theories

From the academic paper of SeçkiN ÇeliK (2020) emerges some reflections on the parallels between the theories that we are going to summarize in the current section. The unifying concern about environmental factors shaping organizations is present in all four theories; the environment is crucial to comprehend how organizations behave. In that spirit, they all concur that a certain match between the organization and the environment is necessary for survival and prosperity. But aside from these core concepts about the environmental limits that they all share, their underlying philosophies significantly disagree.

Their unit level of analysis is the initial distinction between these four theories. Institutional theory and Population ecology are both formulated at the level of the environment (the former in institutional fields and the latter in population of organizations). The Contingency theory and Resource Dependency theory are both formulated at the level of organization.

The foundations of organizational performance differ sharply between these various models as well. The key to organizational performance, according to contingency theory, is to ensure a fit between organizational structure and contingency elements. According to resource dependency models, the key to success is to maximize organizational power by obtaining and retaining the necessary resources. On the other hand, isomorphism, according to the Institutional theory and the Population ecology of organizations, dictates the success and the very existence of the latter through time.

Furthermore, these theories' approaches to adaptation diverge fundamentally in terms of paradigm from one another.
According to the contingency hypothesis, high performance and success are produced by adjusting important work contingencies, and frequent structural adaptability is also provided. It focuses more on the internal environment and emphasizes managerial adaptability to find the right match.
Instead, according to the Resource dependency theory organizations may reciprocally influence their environments because of the interaction that exists between them. Organizations may respond to environmental demands proactively and have more alternatives than just responding to every eventuality.

Institutional theory asserts that organizations modify their structural components to better comply with broader environmental demands and that organizations have fewer options as a result of intense conformity constraints. To the extent that the institutional framework permits, organizations may modify their internal structural components.
Eventually, population ecology theory completely rejects adaptation by de-emphasizing it.

The following Table 17 shows the core differences.

	Contingency theory	Resource dependence theory	Institutional theory	Population ecology theory
Level of analysis	Organization	Organization	Institutional fields	Population
Change focus	Changing internal tasks for effectiveness	Changing power relations to acquire resources	Changing structural elements for legitimacy not for efficiency	Change achieved through differential selection to survive
Success criteria	Fit between structure and contingency factor	Maximizing organizational power by acquiring needed resources	Institutional isomorphism & legitimacy	Competitive isomorphism & differential survival
Key concepts	Organization must adapt to its environment to survive	Obtain and keep resources is critical to organizational survival	Population-level change results from a process of organizational selection and replacement	Institutional environment can influence the development of formal structures in an organization

Table 17. Comparison of the theories (from An Overview of Four Fundamental Theories of Organizations, Dr. Tutku Sec□ki□n C□eli□k; personal elaboration)

Before analyzing the ST in detail, the following section provides an overview of the main reasons why the other theories previously mentioned were not considered for the research.

2.1.4. Critics of the theories

In this section are presented the main criticisms of the theories previously shown.

a) **Environmental contingency theory**: since the 1970s, when there was a wave of paradigm multiplication, there has been substantial criticism directed toward contingency theory (Donaldson and Preston, 1995). Pfeffer, J. and Salancik, G.R.

(2003), for example, criticize it for its overemphasis on internal structure. Moreover, some organization theorists claim that it is not even a theory. The use of the ambiguous verb "should" and ambiguous terms such as "suitable for," "consistent with", "conform", and "fit" results in a lack of clarity concerning the theory's substance, despite the explicitness of the theory's general method. Researchers are further prevented from testing the original model as it has been proposed by imprecise hypotheses, which instead depend on the interpretation of the person (SeçkiN ÇeliK, 2020).

The ambiguity and lack of clarity of the contingency theory which has no managerial appeal, led us to exclude it.
This vagueness implies the low consideration of those factors that may impact the long-run persistence of the firms. Particularly, the unmentioned role of people within the organization is relevant for us to exclude this theory.

b) **Resource dependence theory** has received significant attention in management literature and other relevant fields. As a result of its fit with the social environment and empirical correctness, even the theory's founders have admitted that the theory's success has damaged it. The most significant issue in this theory is its overemphasis on power. It is acknowledged that it will primarily serve as a political model rather than an organizational one. Pfeffer and Salancik (2003) frequently portray organizations in their well-known book, as though their primary function is to manage power relationships with political players in the environment by distorting reality. Although it is true that operating an organization necessitates controlling power dynamics, they also engage in important tasks such as production and sales. Managers are also viewed as essentially passive and symbolic actors; even in the most powerful sense, they just operate in accordance with environmental expectations.

This perspective is in contrast with our literature review carried out in the DT context. Indeed, managerial commitment plays a key role to embrace a DT process. This lacks in the aforementioned theory that considers managers as passive actors.
Since the emerging aspect is related to power, the theory attracts the political interest rather than the organizational one and this seems to be misaligned with our context which focuses on organizations.

c) **Population ecology theory**: this theory has been criticized since it does not offer any managerial implication and neither its creators nor proponents have made significant efforts to gather empirical data and confirm their idea. Since the establishment, there has been a minimal effort, with most endeavors focusing

on the influence of population size on birth and mortality rates. However, the creation and death of organizations within a given population need more explanation than just population number. The fundamental defense of adaptability has a significant flaw. According to population ecology, inertial forces drive organizations to become incapable of adapting or to quickly react when it is necessary. However, there are some situations when adaptation is conceivable, which further turns the idea useless (SeçkiN ÇeliK, 2020).

The fact that the theory operates just under some circumstances and the lack of managerial implication led us to not consider this theory for our research.

d) **Institutional theory**: the main limitations are related to the fact that theory is not characterized by standard variables, nor by a standard research methodology. Moreover, the theory is "limited to positivist approach rather than interpretive methods that would be better suited in understanding the subjective experiences of institutions and institutional actors" (SeçkiN ÇeliK, 2020: 738). The theory distinguishes two types of organizational environments: the institutional environment (the environment where institutions have to conform to established rules) and the technical environment (an environment where organizations are evaluated according to efficiency and effectiveness).

Despite this distinction, there is not a sharp differentiation between the variables related to the institution or the technical context (SeçkiN ÇeliK, 2020) and this generates difficulties for the researchers.
Moreover, another concern is related to the specific attention on the environment at the expense of the lack of attention of the stakeholders involved.

Acknowledging the limitations of the four theories and further investigating the literature on organizational theories, we found the contributions of further authors such as Oliver (1991) and Greening and Gray (1994). These scholars have proposed the Stakeholder theory (ST) to analyze the interactions between an organization and its surroundings.
Both writers developed their theoretical frameworks from the views of Resource Dependence and Institutionalism, and they supported their decision by stating that the ST provides an alternative theoretical bridge connecting the two perspectives.
The Institutional Theory and the Resource Dependence Theory can be considered complementary since they both recognize the relationship of the organization with the environment.

However, the ST represents a more comprehensive organizational theory since it comprises institutional aspects, competitive aspects, and interrelated forces in a unique theory (Gomes and Gomes, 2007).

Specifically, ST is defined as a general, comprehensive managerial theory (R. E. Freeman 1984). The theory not only describes what a corporation is and the existence of stakeholders within the organization, but it also focuses on stakeholder management procedures and the recommended attitudes to take into account (Donaldson and Preston, 1995)
This is aligned with our intention to investigate the role and attitude of multiple actors, and their influence while implementing a DT project.

2.2. Introduction to Stakeholder theory

2.2.1. The origin and evolution of the theory

The ST has been selected with the aim to identify and describe those actors that, as stakeholders, deserve or demand management attention.
The first author to offer a description of the stakeholders' role is Edward Freeman, considered the father of this theory. Specifically, the first article in which has appeared the stakeholder concept was published in the California Management Review by Freeman and Reed (1983). They referred to the frequently cited definition proposed by the Stanford Research Institute (1963) in which stakeholders are "*those groups without whose support the organization would cease to exist*" (SRI, 1963; quoted in Freeman and Reed, 1983: 89; quoted in Freeman, 1984: 31). This notion suggests that business managers must persuade their stakeholders to contribute positively to the organization to achieve their own intended goals (e.g., perpetuation of the organization, profitability, stability, and growth).

Then, the following year, Freeman published the book "Strategic management: A stakeholder approach" (1984) in which he offered a first formalized explanation of stakeholders as: "*any group or individual who can affect or is affected by the achievement of the organization's objectives*" (1984:46).
Therefore, employees, suppliers, public interest organizations, local communities, government agencies, corporate associations, competitors, and the press fall under this umbrella term.

As a consequence, Freeman's groundbreaking theoretical contribution offers a clear outgrowth of the long-held Friedman's Shareholder theory (1970). This latter claims the superior attention that companies should devote toward those who provide only financial support to the organizations, namely shareholders. Specifically, the American economist asserted that an entity's highest duty resides in the satisfaction of its shareholders. This means that the other stakeholders, including the community, the employees, and the consumers, are not ends in themselves, but rather, a means to the final goal of maximizing shareholder wealth (Friedman, 1970).

By contrast, according to Freeman's proposal (1984), the company environment is an ecosystem of multiple groups all of which must be considered and satisfied to maintain the long-term health and prosperity of the business. Indeed, the firm has a fiduciary duty and must protect the interests of all of its stakeholders, not only shareholders (Goyal, 2020).

Thus, the reason behind the overcoming of the Shareholder theory lies in the limiting choice to prioritize and offer a voice only to shareholders, neglecting the influence that other actors may exert on the firm.
Therefore, even though the Shareholder theory served as the foundational premise for most businesses, Freeman's ST has become the new norm in the business and project management disciplines.

Following Freeman's research, many academics such as Clarkson (1995), Donaldson and Preston (1995), Jones (1995), Jones and Wicks (1999), Sundaram and Inkpen (2004) have dedicated themselves to questioning the stakeholders' identity, although most of them have departed from the author's description. In this sense, other reinterpretations of this concept have been proposed in the literature throughout the years.

Among the academics mentioned above, particularly widespread is the stakeholder's description provided by Clarkson (1995). They are defined as "*persons or groups that have, or claim, ownership, rights, or interests in a corporation and its activities, past, present, or future*" (1995: 106). Therefore, according to this definition, stakeholders with similar interests, claims, or rights might be classified as belonging to the same group such as employees, shareholders, and customers.

Another noteworthy piece is the one of Donaldson and Preston (1995). Two main concepts that emerge from the theory are worth attention.
The first contribution is related to the change of paradigm between the Input-output model (Figure 4) and the Stakeholder model (Figure 5).

To understand this first contribution, it is needed to refer to the stakeholder's definition presented by Freeman, according to which they are any group of people that influence or are influenced by the success of the organization's goals.
Thus, it becomes clear how the influence between stakeholders and the organization is two-way.
These aspects lead the authors to put in contrast the Stakeholder model with the conventional Input-output paradigm.
In the latter model, investors, workers, and suppliers are portrayed as providing inputs that are transformed into outputs for the advantage of customers through the firm's "black box" (Donaldson and Preston, 1995).

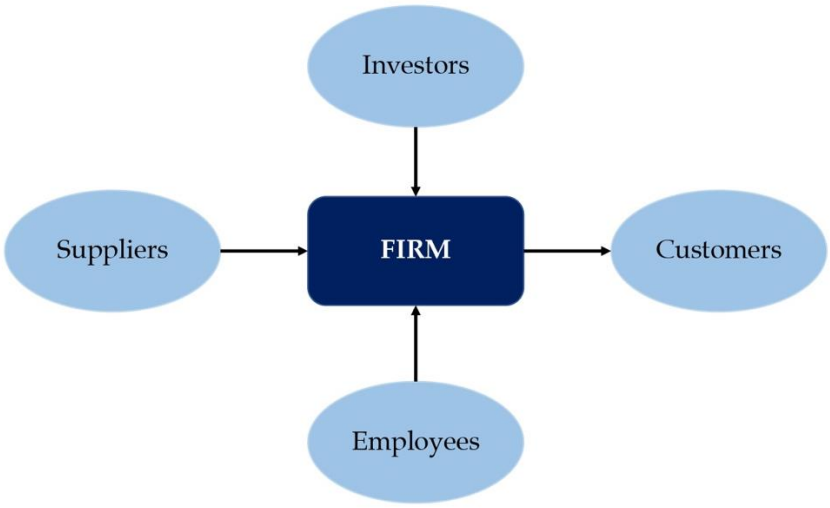

Figure 4. Input and Output model (Donaldson and Preston, 1995)

According to stakeholder analysts, all individuals or organizations with genuine interests, participate in a business to get advantages. Moreover, the arrows connecting the company and its stakeholders are in both directions since the benefits are not just for the customers, but for all the stakeholders involved.
As a result, the arrows connecting the company and its stakeholder constituents point in both directions. All stakeholder connections are the same size and form and are equidistant from the firm's "black box" in the middle (Donaldson and Preston, 1995).

From this perspective, it is interesting to analyze the role played by each stakeholder involved in a transformation within a company or entity.

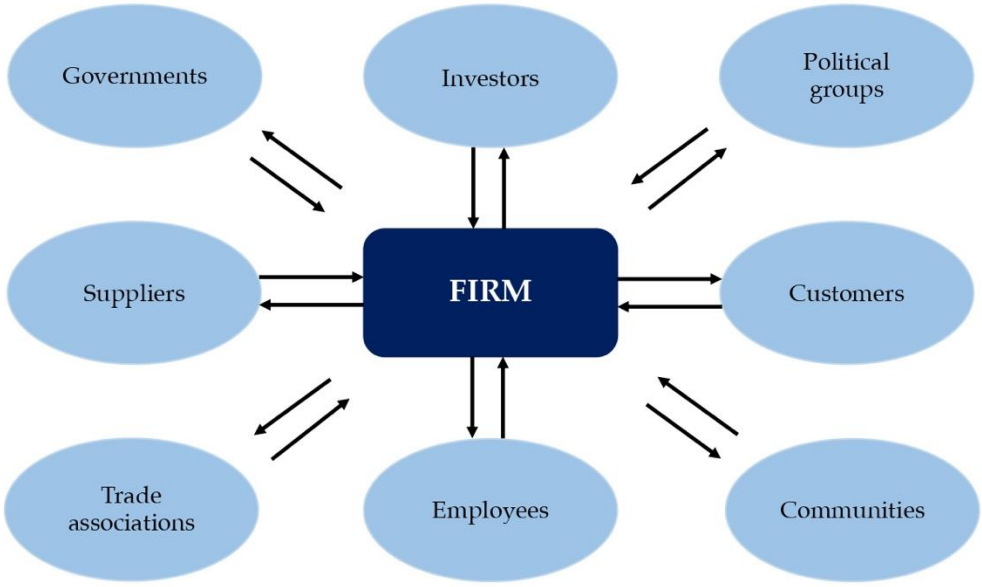

Figure 5. The Stakeholder model (Donaldson and Preston, 1995)

The second contribution provides a division of the post-1984 literature into alternative ways in which a company can approach and interpret ST. Particularly, they identify three different streams (Figure 6):

a) **Descriptive**: in this approach, the theory is used to describe and explain specific firm characteristics and behaviors, and it examines the importance of each stakeholder group for a company. Moreover, it acknowledges that every stakeholder group has its own interests that affect the company in various ways.
b) **Instrumental**: the theory is employed to determine the relationships, or lack thereof, between stakeholders' management and the accomplishment of conventional business objectives when descriptive or empirical data are available (e.g., profitability, growth).
c) **Normative**: this approach adheres to the principle that the interests of all stakeholder groups have value outside of benefiting the company and shareholders' interests. The approach, which establishes corporate ethical guidelines, is the one that most closely resembles the first Freeman ST's description.

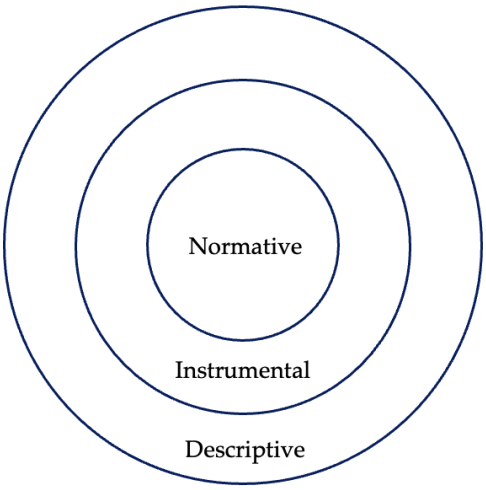

Figure 6. Three aspects of Stakeholder theory (Donaldson and Preston, 1995)

Moreover, the two authors offer a new definition of stakeholders as "*persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity*" (1995:85).
From the point of view of the two scholars, a particularly interesting concept arises, that of legitimacy. This concept underlines how stakeholders, who retain the ability to affect the organization, are defined as legitimate to take or influence decisions concerning the company.

Even though the legitimacy notion remains imprecise within the stakeholder literature (R. Phillips 2003), it is important to better understand its meaning due to its central role within other stakeholder studies in the strategic management field.

Indeed, according to Phillips and Reichart (2000), the legitimacy concept is of primary importance as well as controversial, since the theory often fails to distinguish those individuals and groups that are stakeholders from those that are not.
In this regard, the work "Theory of Stakeholder Identification and Salience" by Mitchell et al. (1997), which will be further explained in the following sections, addresses this issue by providing a framework for stakeholder identification.

In light of this, considering the contribution previously mentioned by different authors on the topic, the following paragraphs will go further in detail in analyzing the framework.
Specifically, the current chapter is divided into three main parts.
In the first one, several possible ways to categorize stakeholders are presented.
Secondly, it is discussed the role and the attributes to identify different stakeholders within the ecosystem.

Lastly, considering the aforementioned attributes, multiple stakeholders' classes are illustrated.

Before moving to the core of the chapter, a distinction between a broad and narrow interpretation of the theory should be provided to highlight our position while developing this work.

2.2.2. Broad and narrow perspective

From the literature, it has emerged a discrepancy between those who have presented a broader formulation of the stakeholders' concept and those who have stated a narrower definition.
It is undoubtedly conceivable to include in the first stream Freeman, who has offered one of the broadest views. As mentioned previously, he defines stakeholders as entities that could impact or be impacted by the corporation. In this perspective, the stakeholders' field is potentially inclusive for any individual (Mitchell et al., 1997). Moreover, in this direction is clear that Freeman's view does not require necessary a mutual impact between the organizations and their stakeholders, since the unidirectional or bidirectional nature of the stake.

By contrast, according to a narrow perspective, stakeholders are an essential group for the firm's survival and success since their direct relevance to the organization's core economic interest. In this dimension, the main author of the narrower definitions is suggested by Clarkson (1994). He affirmed that "*voluntary stakeholders bear some form of risk as a result of having invested some form of capital, human or financial, something of value, in a firm. Involuntary stakeholders are placed at risk as a result of a firm's activities. But without the element of risk there is no stake*" (1994: 5).
The emerging idea is to consider stakeholders as individuals who can, voluntarily or not, put the organization in danger.

However, to not limit the analysis, it has been decided to keep as a core reference the broader version of the stakeholder concept.
Indeed, Freeman and Reed (1983) who advocate a broad definition, emphasize the power of stakeholders to influence the behavior of the firm, whether or not there are legitimate claims.

Thus, the perspective provided by the two authors is in line with our previously formulated. Indeed, our interest is to analyze how different types of stakeholders can influence the DT process.

Therefore, our focus is precisely on the concept of influence. This means that the perspective adopted in our research is broad and inclusive to any actor within the ecosystem.

2.3. Stakeholder classifications

After having presented the ST and its evolution through the years, it is important to raise attention toward two well-known and pervasive classifications that are employed to cluster those people into primary and secondary, as well as internal and external groups.

2.3.1. Primary and secondary stakeholders

The first author to claim the distinction between primary and secondary stakeholders was Clarkson (1995). Although his narrow definition of stakeholders has not been taken as a reference, the contribution provided for stakeholders' classification deserves attention. Therefore, the two categories are presented below (Figure 7).

2.3.1.1. Primary stakeholders

Clarkson (1995) defines primary stakeholders as individuals without whose continued involvement, the corporation cannot continue to operate and survive in the long run. In other words, they are those actors "*who have formal and economical relationships with the organization*" (Savage et al., 1991).
In line with this perspective is what affirms Clement (2005). According to the author, a primary stakeholder is someone whose continued involvement is essential to the existence of a firm and who is obviously capable of having a significant, and immediate impact on the corporation.
Indeed, the public sector, shareholders, employees, customers, and suppliers are the key members of this category, and a significant interdependence should be highlighted between the organization and its major stakeholders.

Moreover, Clarkson (1995) emphasizes the significant management contribution on creating value and satisfaction for each stakeholder group in order to maintain and enhance the connection and retention of them.
In accordance with this viewpoint, and coherently to the overall ST, management is accountable for fulfilling responsibilities toward key stakeholders. Therefore, limiting

the attention toward the shareholder returns and neglecting primary stakeholders' interests, is no longer an option.

2.3.1.2. Secondary stakeholders

The stakeholders' classification of Clarkson (1995) includes the category of secondary stakeholders. Those are defined as individuals who can influence or be influenced by the organization but without being essential for the company's survival.
Parmar et al. (2010) affirm how there is no formal claim made by stakeholders against the company and management has no specific obligations to them.
More specifically, they represent those actors who are not directly related to the organization and its businesses' enterprises (Savage et al., 1991) such as media, communities, activists, supporters, and special interest groups. For example, the latter may involve environmental groups for sustainability practices; political groups for election campaigns; charity associations for social responsibility initiatives.
Simultaneously, the company has no specific obligations concerning them (Parmar et al. 2010)

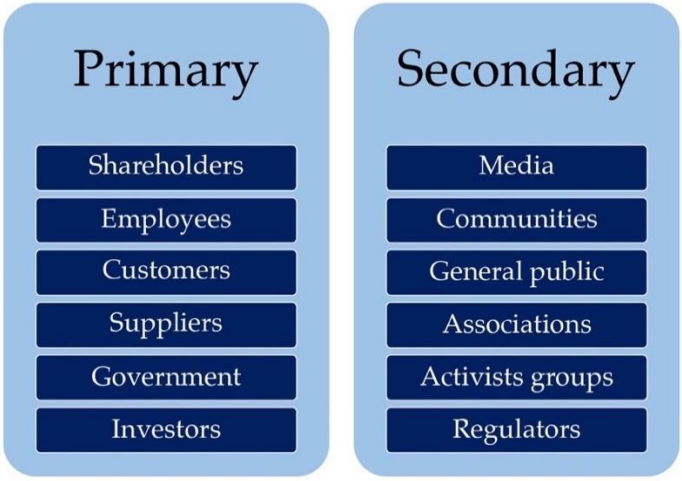

Figure 7. Primary and Secondary stakeholders (personal elaboration)

2.3.2. Internal and external stakeholders

Another relevant classification for stakeholders was initially introduced by Mitroff (1984) and Freeman (1984). Both authors offer the distinction between internal and external agents (Figure 8). Over time, additional academics have adopted and better defined this categorization.

2.3.2.1. Internal stakeholders

Internal stakeholders are groups or individuals within the organization such as managers, board of directors, and employees, that closely interact with it (Nilsson and Fagerström, 2006).
Since their proximity to the company's business, this category of actors might be considered more influential than the group of external stakeholders.
As a result, businesses should be interested in identifying and effectively engaging these internal actors (Rivenburgh, 2014) to properly guide their contribution to the firm's value creation.

2.3.2.2. External stakeholders

External stakeholders are people or groups of people that are not affiliated with a company or project, but who may have an impact on it or be affected by it. Generally, this category includes final users, customers, distributors, governments, suppliers, communities, laws, and regulations (Karim et al., 2007).

According to the distinction proposed by this classification, some connections between primary-secondary stakeholders and internal-external ones, are noticeable. Indeed, the influence exerted and the strong closeness between internal actors and the organization are aspects also identifiable in the primary stakeholders' role. However, when dealing with the latter, there is not a definite distinction between those who are inside or outside the business boundaries. While considering the external stakeholders, also these entities seem relatable to secondary ones due to their loose relation and influence with the firm's business. However, also for this association, the secondary stakeholder category lacks in identifying the agents that belong to or do not to the organization.

For the purpose of our research, the classification adopted is the second one (internal-external). In our opinion, embracing this classification allow us to overcome personal biases in clustering the stakeholders involved. Indeed, the distinction between internal and external is more straightforward and clearly applicable.

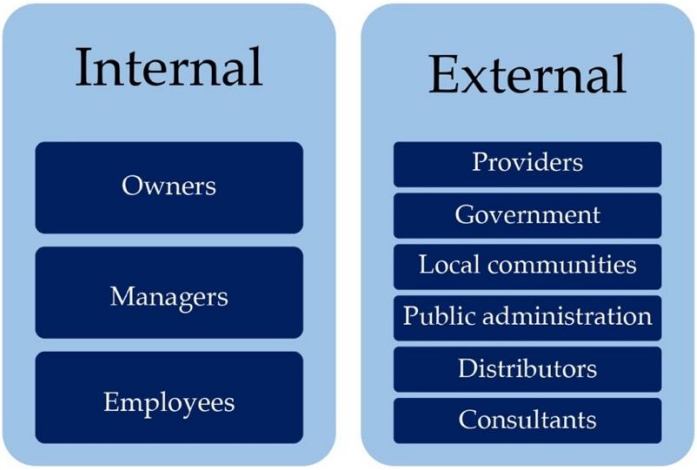

Figure 8. Internal and external stakeholders (personal elaboration)

2.4. Theory of stakeholder identification and salience

The Stakeholder model, as previously shown, explains the multitude of stakeholders that can bidirectionally interact with the organization.
However, expecting all groups of actors to be treated equally is impractical and unsustainable (Terry Beckman, 2016). Thus, managers are continually weighing stakeholders' claims. Indeed, correctly identifying the organization's stakeholder set and, properly prioritizing stakeholder claims, are critical processes in the successful management of organizations. As a result, the company might suffer significant financial and brand loss if stakeholder claims are not accurately assessed (Neville, Bell, and Whitwell 2011).

The Theory of Stakeholder Identification and Salience (TSIS) (Mitchell et al., 1997) has shown to be a beneficial management tool in this situation. It has made one of the most significant contributions to the development of stakeholder research (Whitwell, 2011). The TSIS has the intention of defining "*those entities to whom managers should pay attention*" (Mitchell et al., 1997: 854).
The theory helps the company to focus its efforts and resources and it adds structure to the process of managing stakeholder relationships (Beckman et al., 2016).

According to this theory, managers assess stakeholders and prioritize them based on their importance. The level of power, legitimacy, and urgency assigned to the stakeholders, determines its salience. The more of these attributes a stakeholder possesses, the more visible the stakeholder is in terms of managerial attention (Parent

and Deephouse, 2007). Indeed, salience is defined by Mitchell et al. as "*the degree to which managers give priority to competing stakeholder claims*" (1997: 854).
In other words, they hypothesized that stakeholders will be seen as increasingly salient by managers if they acquire any combination of the three attributes: power, legitimacy, and urgency (Whitwell, 2011).
These three characteristics provide the foundation of the TSIS framework (Beckman et al., 2016).

It should also be mentioned that this framework has a dynamic component (Terry Beckman, 2016): a stakeholder's salience level may alter over time, based on the changes occurring in the environment (Savage et al., 1991).

2.5. Stakeholder attributes

According to the Theory of Stakeholder Identification and Salience (Mitchell, 1997), managers assess stakeholders and prioritize them based on their importance. Indeed, according to the presence of the three attributes (power, legitimacy, and urgency) (Figure 9), stakeholders become salient to managers (Benn et al., 2016).
In this section, each of the aforementioned notions will be described.

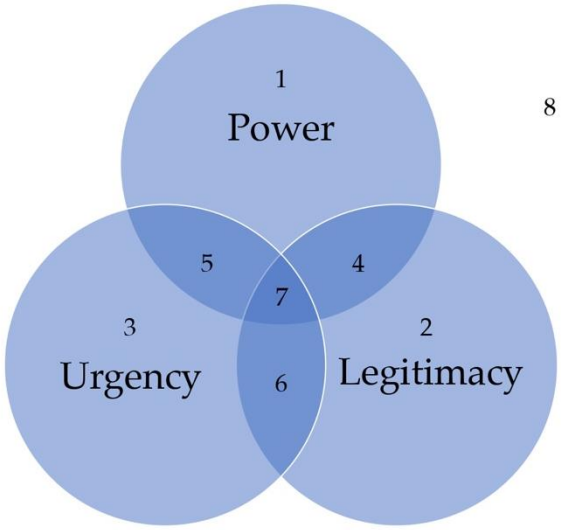

Figure 9. Stakeholder classes (Mitchell et al., 1987)

2.5.1. Power

Most modern definitions of power are based on the early Weberian concept. Power consists in the likelihood that one actor in a social relationship will be able to carry out his own will against opposition (Weber, 1947). Pfeffer reinterprets Dahl's (1957) definition of power as "*a connection between social actors in which one social actor, A, may persuade another social actor, B, to do something that B would not have done otherwise*" (1981: 3).
Power may be difficult to describe, but it is not difficult to recognize: *"[it is] the ability of individuals with power to bring about the outcomes they desire*"(Salancik, G.R. and Pfeffer, J. 1977:3)

According to Mitchell et al. (1997), power is most likely the outcome of three contextual dimensions: normative power, coercive power, and utilitarian power.
Laws and obligations, over which the organization has no authority, result in normative power. Physical means provide coercive power. Instead, utilitarian power arises when an organization acts against its own willingness in order to get resources (Gomes and Gomes, 2007).
Mintzberg (1983) proposed five bases of power to establish it: control of resources, control of technical competence, control of a body of knowledge, power from legal prerogatives, and access to individuals (Gomes and Gomes, 2007).

Eventually, power is a variable and not a steady condition by definition. As such, it is transient, it may be gained or lost (Benn et. al., 2016).

2.5.2. Legitimacy

Legitimacy is a notion that an entity's acts are desired, appropriate, and socially accepted (Mitchell et al.,1997).
Specifically, legitimacy refers to socially recognized standards and behaviors that are linked with the concept of power.
Many researchers who strive to define a firm's stakeholders, narrowly make the implicit assumption that legitimate stakeholders are always powerful. However, this is not always the case (e.g., minority investors in a closely held corporation) (Mitchell, 1997).

Indeed, we accept Weber's (1947) claim that legitimacy and power are different characteristics that can be combined to generate authority (defined by Weber as the legitimate use of power) but can also exist independently.

An actor may have valid standing in society or a legitimate claim on the business, but it will not attain salience for the firm's management. This occurs unless it has either the authority to impose its will in the relationship or the idea that its need is urgent.

To conclude, the definition considered for our research is offered by Suchman (1995). According to him, Stakeholder legitimacy is "*a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions*" (1995: 574).
This choice is dictated by the wide comprehensiveness and clarity of the statement.

2.5.3. Urgency

This dimension expresses the extent to which stakeholder claims require rapid consideration and attention. The dimension urgency has two characteristics: *"(1) Time sensitivity – the degree to which managing delay in attending to the clamor relationship is unacceptable to the stakeholder, and (2) Criticality – the importance of the claim or the relationship to the stakeholder*" (Mitchell, 1997:876).

According to Neville, Bell, and Whitwell (2011), urgency is a crucial component for prioritizing considering stakeholder salience, but not in identifying stakeholders.
Anyhow, in terms of salience, the urgency feature is relevant since it may encourage claimants to act if they have the authority or a real claim on the corporation (Neville et al., 2011).

In Table 18, the definitions of the key notions previously introduced are summarized.

Term	Definition	Sources
Stakeholder	Any group or individual who can affect or is affected by the achievement of the organization's objective. Persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity	Freeman, 1984 Donaldson and Preston, 1995
Identification	Classes of stakeholders can be identified by their possession or attributed possession of one, two, or all three of the following attributes: (1) the stakeholder's power to influence the firm, (2) the legitimacy of the stakeholder's relationship with the firm, and (3) the urgency of the stakeholder's claim on the firm	Mitchell, 1997
Power	A connection between social actors in which one social actor, A, may persuade another social actor, B, to do something that B would not have done otherwise.	Dahal, 1957; Pfeffer, 2891
Legitimacy	A generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions	Suchman, 1995; Weber, 1947
Urgency	The degree to which stakeholder claims call for immediate attention	Mitchell, 1997
Salience	The degree to which managers give priority to competing stakeholder claims	Mitchell, 1997

Table 18. ST terminology

2.6. Stakeholder classes

The various classes of stakeholders (Figure 10) may be distinguished based on the presence, or attribution of possession, of one, two, or all three of the attributes described above: power, legitimacy, and urgency.
In other words, the typology of stakeholder classes is determined by the various combinations of attributes included in a claim (*i.e.*, one, two, or three attributes present).

From the analysis of the ST, emerged that Mitchell et al. (1997) in the paper "Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts" distinguished three different classes of stakeholders and defined each class based on their features. Each class is shown in the following section.

The first class is the low salience stakeholders (areas 1, 2, and 3), the second class is the moderately salient stakeholders (areas 4, 5, and 6) and the last class is one of the highly salient stakeholders (area 7). Specifically:

1) **Low salience stakeholders** which we refer to as "latent" stakeholders (Mitchell et al. 1997) are distinguished by the possession or attribution of only one of the

attributes. Stakeholders that possess only the power attribute are dormant stakeholders, who possess only the legitimacy attribute are discretionary stakeholders and, finally, demanding stakeholders possess only the urgency attribute.

2) **Moderately salient stakeholders** are defined as "expectant" since they are those who "expect something" (Mitchell et al. 1997). Dominant stakeholders are those who possess or attributed the possession of power and legitimacy, dangerous stakeholders are those who possess or attributed the possession power and urgency, while dependent stakeholders possess or attributed the possession of urgency and legitimacy.
3) **Highly salient stakeholders** are defined as "definitive stakeholders" (Mitchell, et al. 1997) and they possess or attributed possession of all three attributes: power, legitimacy and urgency.

According to this model, entities with no power, legitimacy, or urgency are not stakeholders (area 8). Therefore, they will be seen as having no salience by the firm's management (Mitchell et al. 1997).

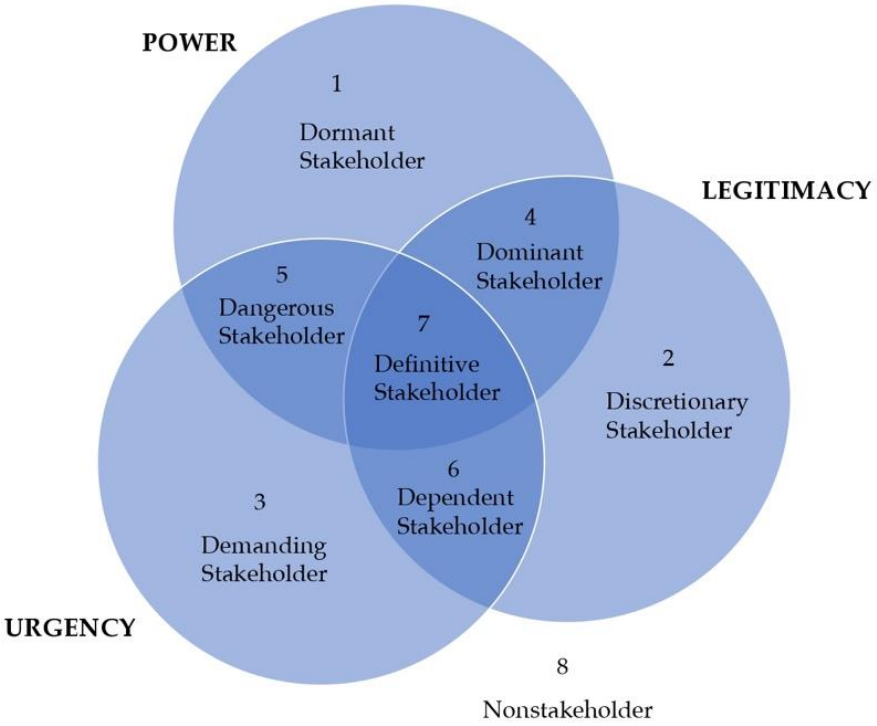

Figure 10. Stakeholder classes (Mitchell et al., 1997)

2.7. Managers role and managerial implication

As previously mentioned, the ST is a managerial framework.
Managers may not explicitly refer to the ST, but the great majority of them appear to conform in practice to one of the stakeholder theory's basic premises. Particularly, their purpose is to please a broader collection of stakeholders, not just shareowners (Donaldson and Preston, 2022).
Managers should accept the legitimacy of varied stakeholders' interests and seek to respond to them within a mutually supportive framework, since this is a moral need for the management function's legitimacy (Donaldson and Preston, 2022). In this perspective, in order to successfully achieve the organization's goals and legitimize its presence, the managers should consider all the stakeholders involved.

The acknowledgment of different stakeholders' classes, according to their salience, enables to effectively recognize their role and presence within the organization from a managerial perspective to achieve expected goals. In this sense, it is interesting to analyze what are the managerial implication of each class of stakeholder.
The following tables (Table 19, Table 20, Table 21) are our personal elaboration and summarize the features of the various classes of stakeholders that emerged from the analysis of Mitchell et al. (1997) contribution.

2.7.1. Low salience stakeholder

	STAKEHOLDER TYPOLOGY	ATTRIBUTES	MANAGERIAL IMPLICATION
CLASS LATENT STAKEHOLDERS (LOW SALIENCE STAKEHOLDERS)	DORMANT	• "Power" is the relevant attribute • The power they have is not used since they lack of legitimacy and of an urgent claim • They have low interaction with the firm	• Due to the dynamic nature of stakeholder manager relationships Management should be aware of such stakeholders because of their potential to gain a second attribute (legitimacy or urgency)
	DISCRETIONARY	• "Legitimacy" is the relevant attribute • They have no power to influence the firm and no urgent claim	• There is no compulsion on managers to participate in an active relationship with such a stakeholder in the absence of power and urgent requests, yet managers might choose to do so
	DEMANDING	• "Urgency" is the relevant attribute: urgent claims but having neither power nor legitimacy	• Annoyance but no danger actors, they create irritation but not warranting more than passing management attention, if any at all

Table 19. Latent stakeholders' class (Mitchell et al., 1997; personal elaboration)

2.7.2. Moderately salience stakeholders

	STAKEHOLDER TYPOLOGY	ATTRIBUTES	MANAGERIAL IMPLICATION
CLASS EXPECTANT STAKEHOLDERS (MODERATELY SALIENT STAKEHOLDERS	**DEPENDENT**	• Stakeholders that have legitimacy and urgency • These stakeholders rely on others (either other stakeholders or the firm's managers) for permission to carry out their wishes	• Powerful stakeholders or the firm's management's benevolence and voluntarism allow that kind of stakeholder to satisfy their needs
	DOMINANT	• Stakeholders are both powerful and legitimate • They influence the firms thanks to the validity of their claims against the corporation, as well as their capacity to enforce these claims	• These stakeholders "matter", therefore, they expect and receive attention from managers • It may be expected that dominant stakeholders have some kind of formal system in place that recognizes the significance of their relationship with the company
	DANGEROUS	• Stakeholders that have both urgency and power	• These stakeholders' actions are not only illegal, but also harmful, both to the stakeholder-manager relationship and to the persons and businesses involved. • It is critical to identify these risky stakeholders to limit the risks.

Table 20. Expectant stakeholders' class (Mitchell et al., 1997; personal elaboration)

2.7.3. High salience stakeholders

	STAKEHOLDER TYPOLOGY	ATTRIBUTES	MANAGERIAL IMPLICATION
CLASS HIGHLY SALIENT STAKEHOLDERS	**DEFINITIVE**	• Stakeholders that have "legitimacy", "urgency" and "power" • Any expectant stakeholder can become a definitive stakeholder by acquiring the missing attribute	• Managers have a quick and obvious mandate to attend to and prioritize that stakeholder's demand.

Table 21. High stakeholders' class (Mitchell et al., 1997; personal elaboration)

This classification is useful to cluster the different stakeholders according to their attributes, pointing out the dynamism which characterizes the manager-stakeholder relationship. Indeed, managers should never forget that stakeholders alter in salience, needing varying degrees and types of attention based on their imputed possession of power, legitimacy, and/or urgency, and that levels of these traits (and hence salience) can shift from problem to issue and from time to time.

3 Methodology

This chapter presents the methodology used in the deployment of the current work (Figure 11).

The structure includes the literature review approach, the design of the case study methodology, and its empirical application.
The aim is to enhance the understanding of the method employed, and the rationale for these decisions in order to respond to the previously stated research questions.

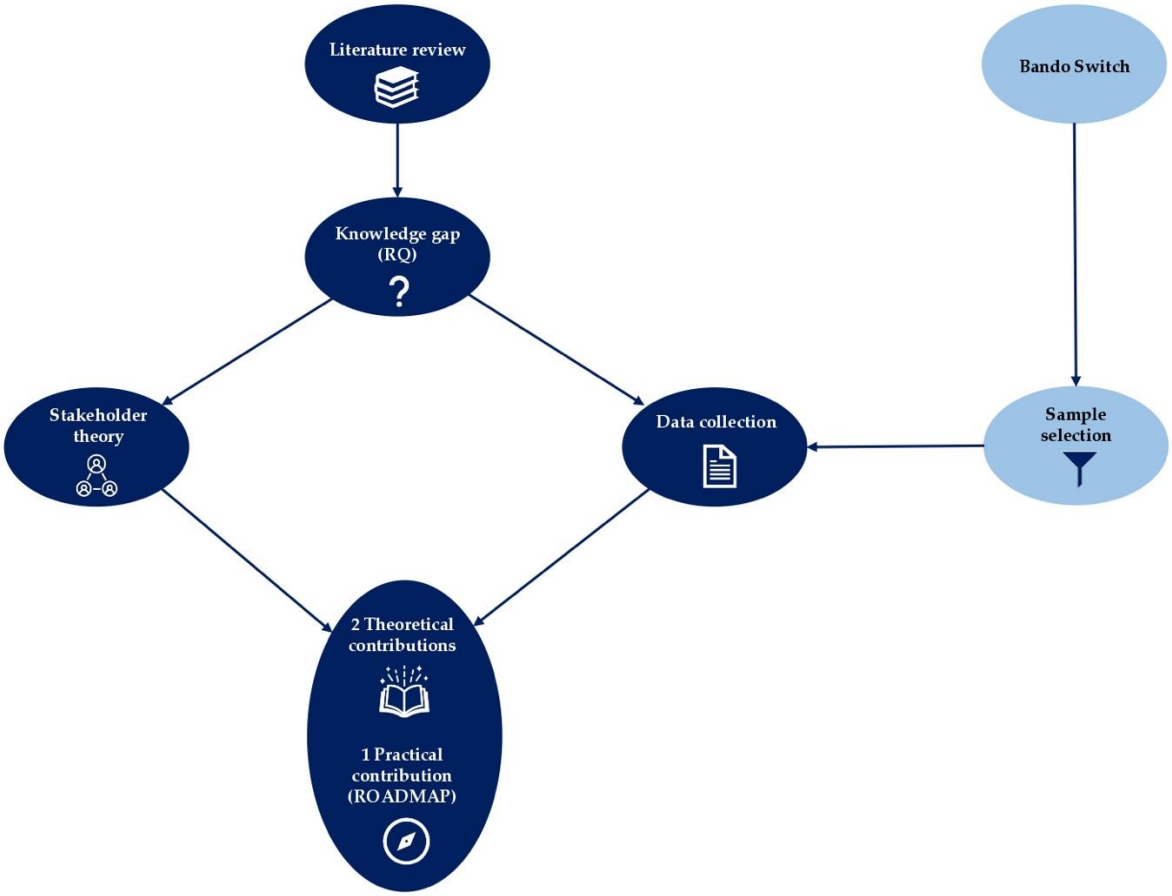

Figure 11. Methodology framework

3.1. Literature review methodology

The methodology applied to conduct the literature review of our research was that of "pure" narrative review. This criterion aims to find the written material available about a certain subject (Paré et al., 2015). In particular, a narrative literature review focuses mostly on recent or current material that is easily accessible to the researchers. The comprehensiveness and completeness of the search and the analysis phase might vary substantially and they are different for each narrative literature review (Grant and Booth 2009).

This pure narrative criterion represents one of the alternatives through which a non-systematic review can be pursued. In particular, a pure narrative review has been selected rather than a systematic one given the diversity of the themes and the scope of the subject under analysis. Indeed, this approach allowed us to offer an overview of the huge and diverse body of literature related to a broad topic such as the DT area and the DT for cultural institutions.

Therefore, this decision offered us the opportunity to gather theoretical knowledge about the different fields of study that we have covered. Moreover, this narrative process allowed us to demonstrate the presence of research gaps that represent starting elements that have driven our work.

As reported in Figure 12, a pure narrative review is carried out through two distinctive phases.
Firstly, for the search activity, we have adopted a snowballing approach. Thereafter, the specific review of the literature has followed a conceptual approach.
Both phases are deeply explained in the following paragraphs.

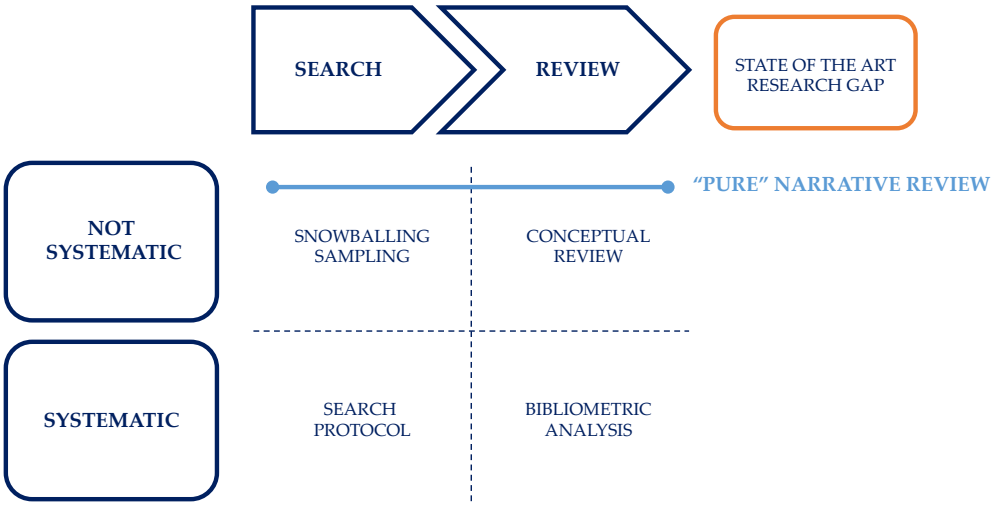

Figure 12. Search and review process

To assure the quality of our sample and of our analysis, it is crucial to emphasize that we focused on peer-reviewed related to scientific journal articles. The peer-reviewed approach has been used both in the search phase, in order to decide the sample of literature review papers, and in the review phase for the definition of research questions.

3.1.1. Search - Snowballing sampling

The search phase has been developed by adopting a snowballing sampling approach (SB). The term "snowballing" describes the process of finding more publications by leveraging a paper's reference list or its citations (Wohlin, 2014).

The SB search was conducted by first creating a start set and then, conducting both backward snowballing (BSB) and forward snowballing (FSB) of the start set in an iterative way (Wohlin, 2014).
This approach has been adopted for both the broader theme of DT and the specific one of DT for cultural institutions.

3.1.1.1. Creation of a start set

The first step for applying a snowballing approach is to define a start set. In this sense, in order to identify a starting set of papers for the snowballing procedure, we analyzed papers from two different sources: i) papers provided by our supervisor and co-supervisor concerning DT and DT in cultural institutions; ii) Scopus through the definition of some keywords and the formulation of several search strings (Table 22, Table 23). The identification of the latter has required several tentative through which a definitive starting set has been defined, containing only those papers aligned with the aim of our research.
The criteria to include or exclude the articles found in Scopus were based by applying some filters defined by us.
Specifically, the papers were selected considering:

- **Publication year**: from 2019 until now
- **Subject area**: Computer science; business, management and accounting; social sciences
- **Document type**: article, conference paper, review, report
- **Language**: English, Italian

Once we gathered these papers (5 provided by supervisor and co-supervisor and 3 through the search strings applied in Scopus), we proceed with the reading the abstract of the paper and a subsequent in-depth analysis of the full text.

Here below, the search strings that have brough us to define the final start set for both DT and DT for cultural institutions.

Search strings used by SB in the starting set
Digital transformation; innovation
Digital transformation; innovation; digital technologies
Digital transformation; innovation; evolution

Table 22. Search string for start set about DT

Search strings used by SB in the starting set
Digital transformation; cultural institutions
Digital transformation; digital technologies; cultural institutions
Digital transformation; digital technologies; museums

Table 23. Search string for start set about DT in cultural institutions

To be precise, the number of papers that have been found through the start set is:

- For DT: 12
- For DT in cultural institutions: 8

Once this phase was accomplished, we created an Excel file in which we have distinguished in one sheet the papers regarding the DT theme and another sheet with a list of papers related to the DT in cultural institutions. These lists enabled the iteration of backward and forward snowballing.

3.1.1.2. Backward snowballing

The procedure of backward snowballing is also defined as "Reference tracking".
It consists of finding additional papers to be included in the study by researching in the reference list contained at the end of each article. Thus, the first step is to review the list of references and remove any articles that do not meet the filters previously presented, such as subject area and document type (Wohlin, 2014).

Furthermore, considering these criteria and removing those papers that have already been examined based on previous findings, the remaining papers are legitimate contenders to be contained in the literature review.

In particular, the candidate paper has been considered suitable, whether analyzing the abstract, a correspondence of theme with the object studied was noted.
Consequently, if the abstract attracted our attention, we proceeded by reading the entire article.

Then, once the paper was included, new potential papers were sought by looking its reference list. This iterative process has been conducted until no more articles were found to be added considering the starting ones.

3.1.1.3. Forward snowballing

The forward snowballing refers to the process of finding new papers based on the articles that cite the paper under examination. This approach is commonly known as "Citation tracking".
To support this type of research an online database like Google Scholar should be used (Badampudi et al., 2015).

Thus, we searched through Google Scholar those papers citing the one under analysis and mostly all the candidates have been examined. The selection has been done similarly to the approach used for the backward snowballing. Indeed, the inclusion or exclusion of the candidate paper has been dictated by the subjects treated in the articles that emerged from the abstract or a deeper analysis of the text.
Also in this case, the process was repeated until no more possible articles could be included.

To conclude, by following the SB approach, the final number of articles that have been selected throughout the literature search is:

- For DT: 47
- For DT in cultural institutions: 26

Once this phase was accomplished, we created an Excel file in which we have distinguished in one sheet the papers regarding the DT theme and another sheet with a list of papers related to the DT in cultural institutions. These lists enabled the iteration of backward and forward snowballing.

Along the entire searching process, we have created an Excel document in which we have in which we have distinguished in one sheet the papers regarding the DT theme and another sheet with a list of papers related to the DT in cultural institutions. Starting from the papers identified in phase 1.1.1., the iteration of backward and forward snowballing has been performed. This allowed to have all the definitive articles in a single document.

Specifically, for each paper the Excel file shows:

- Paper features: Title, author/s, date, DOI
- Methodology used in the paper
- Research questions
- Research gap
- Keywords of the author/s
- Main concepts

This way of preceding has supported the examinations of the material throughout the review phase, described below.

3.1.2. Review – Conceptual review

The decision to perform a conceptual literature review was aligned with our intent to discover key factors, concepts or variables and the presumed relationship between them. Indeed, the aim of the conceptual review approach is to categorize and describe concepts relevant to the study and delineate their relationship, including relevant theory and empirical research (Frederiksen et al., 2018).

In this phase, the whole amount of literature collected in the search phase has been analyzed and revised to grasp the theoretical points and contributions offered by academics, both for the broad phenomenon of DT and the DT in the cultural institutions. The theoretical background allowed us to identify the state of art, the research gap and the scope of our analysis with the respective research questions.

3.2. Case study methodology

After having performed a literature search and review, the ultimate purpose was to address the research questions by investigating the phenomenon of DT. In particular, considering the extension of the latter phenomenon, the research has been developed employing a single unit of analysis, namely the DT project undertaken by each cultural institution.
Indeed, the cultural field was selected as the empirical context of analysis. This context has been chosen due to the relevance that the cultural domain has in Italy as shown in the literature review.
A qualitative approach was chosen as being particularly suitable to explore a complex issue like the one under examination (Yin, 1984).

According to (Heath, 1997: 4)"*qualitative researchers attempt to describe and interpret some human phenomenon, often in the words of selected individuals (the informants). These researchers try to be clear about their biases, presuppositions, and interpretations so that others (the stakeholders) can decide what they think about it all*". A qualitative analysis aims to assess the potential effects of the phenomenon under investigation, the mechanisms underlying such effects, and the factors that enable to accomplish specific predefined objectives using in-depth interviews (Khandker et al., 2010).
A qualitative approach yields results findings that cannot be quantified by statistical approaches or other methods of measurement.
Qualitative research represents an alternative to the logical, quantitative, and rational approach.

Since the qualitative approach detects how changes occurs rather than what and how much is the change, we have selected it because it allowed us to explore how the stakeholders' influence the DT projects and which are the steps of an effective implementation of a DT project.

Precisely, to investigate the stakeholders' role in DT project, a multiple case study has been considered the most appropriate research strategy (Eisenhardt and Graebner, 2007). The reason behind this choice is dictated by the key aspects that differentiate a multiple case study from a single case study. Indeed, the former allows to understand the differences and the similarities between the cases under analysis and it enables the analysis of data within and across various settings. On the other side, single case represents a straightforward criterion chosen because the phenomena occurred in the selected sample are revelatory, extreme exemplars, or opportunities for unusual research access (Yin, 1984). Therefore, the analytic power of theories or concepts is greater when there are multiple cases since it is possible to compare them and determine whether an emerging discovery is consistent across many cases or peculiar to one of them (Eisenhardt, 1989).
Lastly, multiple case studies may be used to predict either differing results for anticipated causes or comparable findings in the studies (Yin, 2003).

3.2.1. Case selection

The analysis developed was part of a larger project promoted by Fondazione Compagnia di San Paolo (FCSP) in conjunction with Links Foundation and Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan.
Specifically, FCSP has demonstrated a willingness to delve the topic of new technologies and digital solutions in relation to the cultural world. This commitment

has been concretized by drafting "Bando SWITCH" for which numerous Italian institutions (from Piemonte, Liguria and Valle d'Aosta) applied. Three specific objectives were set for the project: i) to foster and support the DT of cultural institutions in the areas of management and the enhancement of cultural heritage and activities; ii) to encourage and support the relationship between the technological ecosystem of the territory targeted by the call and the cultural heritage sector and iii) to promote the development of a multi-year innovation plan by each of the participating institutions.

Referring to "Bando SWITCH", the selection of beneficiary entities was made by FCSP in two consecutive phases, phase 1 and phase 2. Among the various applicants, nine entities were selected according to a set of specific criteria defined by FCSP itself.
Among them, the five entities that firstly passed both phases were the subject of our analysis. All these passages are outlined in the timeline below (Figure 13).

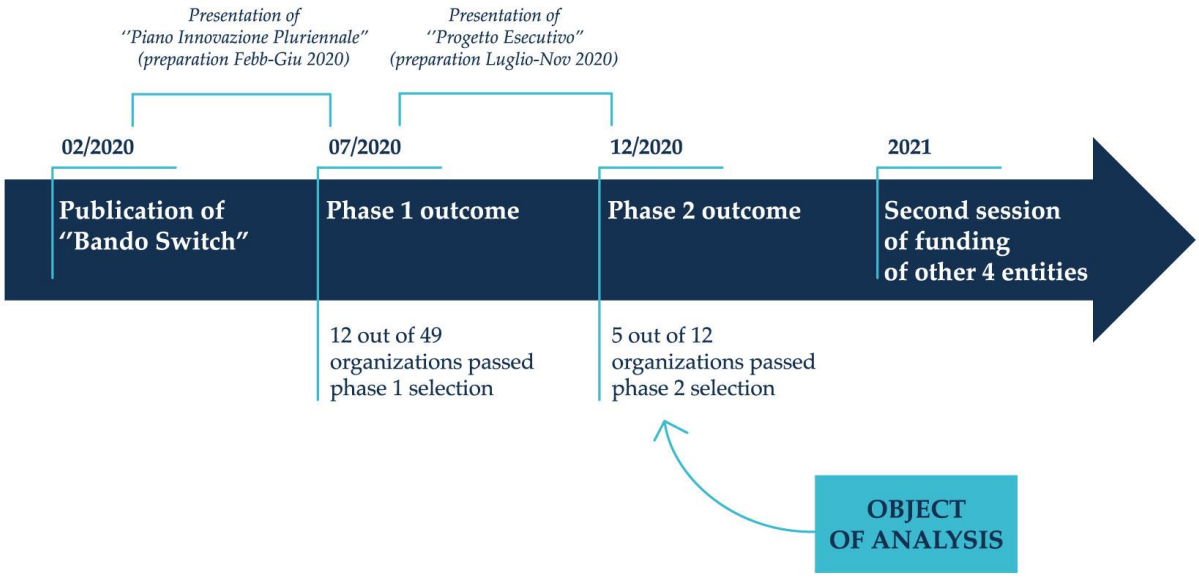

Figure 13. Bando SWITCH timeline

For confidentiality reasons, the entities participating in the interview's process have been labeled as case A, B, C, D, E.
To ensure the reader's understanding of the actual context and the nature of the cultural entities involved, a brief description of them is provided below. Each case firstly describes what the cultural institution is about and then a brief overview of the DT project in which it is involved. The main organizational characterizes of the selected cases are reported in Table 24.

Case A

The first cultural entity is a private, non-profit foundation. The center promotes and implements conservation and restoration interventions in relation to interdisciplinary programs of research, restoration and education. The aim is to preserve the territory cultural legacy.
The institution is home to several professionals from several intervention sectors: art historians, cultural heritage diagnosticians and restorers. The activities are focused on the creation of national and international research and training projects.

The executive project for the digital transition responds to the need of placing the institution in national and new international arenas as a reference in the field of conservation and restoration of heritage cultural. The themes of training, education and fruition represent the common thread linking the goals defined within the strategic plan.

Case B

The second private organization that has been selected is a museum. It is dedicated exclusively to the art and culture of ancient history, and it consists in a set of collections that have been accumulated over time.
The museum operates within the field of cultural heritage, and it was established primarily to ensure greater public experience of the museum activities and of the acquired cultural assets, while ensuring their proper preservation. Moreover, the center represents a cross-cutting entity that embraces a very wide audience, both national and international.

The strategic plan aims to create a digital ecosystem capable of integrating work process management and organization tools with archiving scientific tools. The main aim is to make the management of the institution more efficient to achieve this an internal DT is performed.
The three main themes addressed by the DT plan are the management of collection's data, the security of the data stored and exchanged, and the internal coordination. In conclusion, this cultural institution has focused on an internal DT and not aimed at the final consumer.

Case C

The third entity is also private in nature and represents the smallest of the cultural institutions under analysis. The organization was established to preserve and disseminate its archival heritage in order to keep alive the memory of historical facts connected to the territory. The entity has also developed extensive and varied research projects including an educational initiative for schools of all levels. The DT plan expects to promote digital valorization of archives that is able to facilitate accessibility to the heritage by the broad public, researchers and other cultural institutions with a special focus on new ways of interaction between schools and cultural entities.

Case D

The fourth entity is a public theatre characterized by a private nature. It performs public functions of permanent cultural presidium overcoming barriers of access and promoting the theater as an instrument for social and civic engagement. Indeed, it is distinguished by a relevant interest toward accessibility theme. The organization manages festivals, collaborates and co-produces with renowned Italian and European theatres, and takes part in local and national networks as part of the territory's trend of internationalization.

The executive project intends to enhance customer care and audience caring in order to achieve a proportional increase in the audience and build a more direct dialogue with viewers. Moreover, it purposes to optimize the inventory management and sound equipment making it traceable, to maximize internal procedures and technologies, and, finally, to ensure greater accessibility to performances.

Case E

The last selected institution is the only one characterized by a public nature. It represents a large museum complex including museums, library, gardens and historic buildings. Inside, it is preserved a remarkable collection of artifacts from different periods, with masterpieces of great historical and artistic value.
The DT's main project goals are to develop a digital culture across all organizational areas of the museum, optimize services and processes, and adopt public relations tools through omnichannel digital solution and, lastly, increase the economic sustainability.

		Case A	Case B	Case C	Case D	Case E
Organizational Characteristics	**Institutional type**	Conservation center	Museum	Conservation center	Theatre	Museum
	Form of governance	Private	Private	Private	Private	Public
	Number of employees	54	52	3	51	188-199
	Number of visitors (per year 2019)	840000	850000	9600	242107	594601
	Italian region	Piemonte	Piemonte	Piemonte	Piemonte	Piemonte

Table 24. Summary of five cases[1]

As clearly understandable, several elements are present across the five institutions of our analysis. From the geographical point of view, all the five cases selected for the first phase of "Bando SWITCH" are in Piemonte. Moreover, all the cultural entities have defined a specific mission related to the enhancement of public attractiveness through a DT process. However, some distinguishable characteristics could be identified, enabling to underline a quite heterogeneous nature of the sample. Particularly, some differences emerge with regards the nature of the entities and the size. Indeed, their dimension differs in terms of extension of the heritage owned, and the number of employees involved. These distinctions are summarized in Table 24.

3.2.2. Data collection

The data gathered was characterized by an exploratory investigation.
Specifically, they have been collected in two rounds of interviews.
The interviews were carried out both in the initial (first round) and in the final phase (second round) of the project (Figure 14).

The first round of interview allowed the identification of the critical and enabling factors in the implementation of the project interviewing the actors involved.

In the second round the referees previously contacted have been interviewed to understand and analyze the evolution of the projects in the time.
The choice of conducting the interviews in two distinct moments, within the time frame of interest of the call for bids, made it possible to monitor the role of the stakeholders involved and the choices that enabled or hindered the DT project.

[1] For case C: the number of employees has been taken by its Executive project in which are reported 3 employees and 6 volunteers. For the number of visitors (per year 2019) an approximate value of them was assumed by knowing the number of monthly visitors

Figure 14. Two rounds of interviews

During the two rounds, all the stakeholder involved - both internal and external - have been interviewed.
Table 25 identifies the stakeholders interviewed, highlighting their nature as internal or external actors.

Stakeholder identification	Class
PM	Internal stakeholder
Employees	Internal stakeholder
Digital provider	External stakeholder
Funding entity	External stakeholder
Research and monitoring center	External stakeholder

Table 25. Stakeholder identification

Specifically, the project managers, the employees and the digital providers have been interviewed twice both in the initial round and in the final round.
While, FCSP, LINKS and the Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan have been interviewed just once during the two rounds since their role was predefined and it would not change during the period. FCSP represents the funding entity, while LINKS and the Observatory are the research and monitoring centers.

Project manager

The aim of the PMs' interviews was to investigate their role on managing the digital shift within their organization. The main themes covered during the interviews were related to the evolution of the digital project (processes, activities, resources), the relationship with all the actors involved and their personal involvement and growth along the DT plan actuation.

Employees

The questions addressed to employees focus on the impact of the project on their activities and competencies. Specifically, the topics investigate concerned the know-how acquired and their specific influence in the project development. Moreover, precise questions were addressed to understand the relationship established with internal actors and external ones as the digital providers.

Digital provider

The interviews for the digital providers help to understand firstly the contexts in which they operate, and the services offered.
In particular, the focus was on the activities pursued and the competencies acquired to be able to interface with a cultural entity. Specific attention was dedicated to the relationship between them as digital providers and their relationship with the cultural organizations and the other stakeholders involved.

Furthermore, the attention was focused on other external stakeholders that have been involved in "Bando SWITCH" and whose role was taken into account in analyzing a DT project.
These players participated in various activities alongside the cultural institutions providing different kind of contributions. Specifically, FCSP, Links Foundation and the Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan have been examined.

Funding entity: FCSP

The interview with FCSP aimed firstly to investigate the motivations behind the drafting of this project and secondly to explore the impact generated by "Bando SWITCH" on FCSP.
The central part of the interview involved the role of Foundation in the single digital projects of institutions and the collaborative relationship established with them.

Research and monitoring center: Links Foundation

The interview was structured by including general questions to understand the Links's involvement in the project management of the FCSP-allocated call
Then, it was investigated the role that this actor played, and the relationship created with the various entities, from the cultural entities to FCSP and the Observatory.

Research and monitoring center: Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan

The questions addressed to the Director of the Observatory of Milan concern the research activities and monitoring role of the Observatory.
The interview has started by investigating the established relationship with the funding entity, FCSP. Moreover, additional questions concerned enabling and hindering factors that the organization has faced while supporting the monitoring activities of the institutions' DT projects.

In the context of an organization, we recognize the presence of other stakeholders, both external and internal, who can potentially be involved in a DT project. This was also confirmed by the interviews conducted in which other stakeholders were mentioned and who, in the context of the SWITCH call, indirectly influenced the project. Although for the purpose of our research the interviews were conducted for the stakeholders mentioned above, it is worth to introduce who these other stakeholders are. For example, among the external we recognize the role of the ministry, government, while among the internal the board of directors, HR department and employees in charge of some areas, namely team leaders.

A brief presentation of each stakeholder type and its role is provided below:

- **Ministry:** it fulfills several objectives such as the promotion of knowledge within cultural heritage, the development, authorization and evaluation of internal training activities. Moreover, it coordinates research programs in the field of cultural heritage. However, this body was not involved in the interviews since we prioritized stakeholders directly involved in the SWITCH call.
- **Board of directors**: the board oversees the corporation or organization, setting management policies, defending the interests of shareholders, and coming to judgments on crucial matters. A corporate board of directors serves as a fiduciary for shareholders in a wide sense. These were not included in the interviews since they were not directly and operationally involved in the specific DT process unlike PMs. However, we totally recognize the essential role they cover for the strategic dimension of the organization.
- **HRs**: people working in the HR department are ordinarily involved in the human resource management that in our work will cover a relevant role. Therefore, we understand the distinctive features that characterize those stakeholders even if their function is across any internal project and not peculiar to one of DT's.
  For this reason, but also for reasons dictated by the structure of the SWITCH call, this category was not interviewed.
- **Team leaders**: those stakeholders are in charge of each team of working. Although for some cases analyzed the presence of the head of department

emerged (such as IT responsible), this category of stakeholder, due to organizational reasons related to the SWITCH call, was included within the "employees" category. Therefore, we have decided to focus our attention on the broader class of employees. Nevertheless, this decision does not preclude to recognize the leadership role they can play within the team.

3.2.2.1. Data source

The information has been gathered from a variety of sources (Eisenhardt, 1989).
the data source has been constituted mainly on primary data, namely semi-structured interviews, but also secondary data including executive projects, OBS and WBS, follow-up e-mails, and archive material such as internal papers, press announcements, websites. This allowed us to perform a data triangulation, enhancing the accuracy of information (Martin and Eisenhardt, 2010).

Table 26 and Table 27 summarize all data sources, including primary data, additional information on respondents, as well as secondary data employed for both five cases and the other three entities involved.
The primary data consisted of 47 formal interviews for approximately 50 hours during which 52 informants were listened (Table 28). Specifically, we conducted two rounds of semi-structured interviews with 46 different informants, between October 2021 and September 2022.

For what concern the secondary data, among the extensive documentation collected, particularly noteworthy were:

- Application to the call
- Multi-year innovation plan – Apply Phase 1
- Executive project – Apply Phase 2
- Work breakdown structure (WBS)
- Organization breakdown structure (OBS)

During the research period we also participated in three extra events to get further insights and information on the role of different stakeholders and better understand the context of “Bando SWITCH”.

1. We attended an online workshop in December 2021 held by FCSP on the theme of “Strategic planning for cultural institutions”. The meeting was directed by the PM of the Foundation, responsible for the mission of “creating attractiveness”. The event has involved, as attendees, various actors from the

institutions participating to Bando SWITCH. During the discussion, several guidelines for outlining functional and effective strategic planning were presented. The event allowed us to have an overview of the context in which FCSP operates and to grasp the importance of strategic planning.

2. In January 2022, we attended the online event organized by the Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan. It was a moment of data return related to the qualitative and quantitative evidence collected from September to December 2021. From a qualitative point of view, the analyzes related to the first round of interviews were provided to the cultural entities and to FCSP. It was perceived as a valuable moment for the cultural institutions which received both a numerical detection of the impact of DT generated (quantitative analysis) and the analysis of the enabling and critical factors that can support, or hinder, innovation projects (qualitative).

3. In July 2022, we attended in presence, in the headquarter of one of the cultural institutions involved in "Bando SWITCH", an event led by Links Foundation. There was an initial moment of data restitution based on the evaluations and analysis carried out during the past months. Subsequently, we actively took part in two discussion tables in which representatives of the entities were placed. One of us followed the workshop in Table 1 regarding the issues of management and fruition while the other took part in the workshop in Table 2 regarding management and customer engagement. In both sessions, important moments of debate between the various entities were created. The meeting was an opportunity for all the participants to create a direct dialogue with other institutions with similar objectives, but also to discuss the criticalities and the best practices that emerged during the DT process. For our perspective, the event was also a useful moment to understand why cultural institutions innovate, what are the areas of technological application, the opportunities and critical issues of cultural organizations in a DT project. This information allowed us to corroborate the validity of our preliminary findings.

Case	Primary data	# Interviews		# Informants	Secondary data
		1st round	2nd round		
A	• 2 interviews with PM • 1 interview with digital provider • 6 interviews with employees	4	5	9	• Application to the call • Multi-year innovation plan • Executive project • WBS • OBS
B	• 2 interviews with PM • 2 interviews with digital provider • 5 interviews with employees	3	6	10	• Application to the call • Multi-year innovation plan • Executive project • WBS • OBS
C	• 3 interviews with PM • 2 interviews with digital provider • 3 interviews with employees	4	4	5	• Application to the call • Multi-year innovation plan • Executive project • WBS • OBS
D	• 2 interviews with PM • 2 interviews with digital provider • 5 interviews with employees	4	5	9	• Application to the call • Multi-year innovation plan • Executive project • WBS • OBS
E	• 2 interviews with PM • 5 interviews with digital provider • 2 interviews with employees	5	4	10	• Application to the call • Multi-year innovation plan • Executive project • WBS • OBS
Total		44		46	

Table 26. Data source of five cases

Entity	Primary data	#Interviews	#Informants	Secondary data
FCSP	• 1 interview with PM/Responsible	1	2	• Strategic plan • Guidelines for Switch call • Multi-year innovation plan
Links Foundation	• 1 interview with PLs	1	2	• Strategic plan
Observatory	• 1 interview with director	1	2	/
Total		3	6	

Table 27. Data source of additional stakeholders

Cases and entities (1st and 2nd round)	
Total # interviews	**Total # informants**
47	**52**

Table 28. Total number of interviews and informants

3.2.2.2. Interviews process

The interviews performed have constituted the primary source of information (Eisenhardt and Graebner, 2007) for our thesis.

A few days before each interview, the protocols were sent by e-mail to the interviewees to provide them an overview of the main issues that would be addressed. Each interview, with the consent of the interviewer, has been recorded and then, transcript verbatim.
On average they lasted an hour each and they were conducted by one of us using Microsoft Teams, with the constant supervision of our thesis co-supervisor.

Potential biases have been reduced in different ways. First, interviews were conducted by the two of us with our supervisor and we constantly confronted each other for both transcription and analysis of interviews. Second, we listened several stakeholders with different perspectives and roles, and it allowed us to have a greater understanding of the phenomena. Third, anonymity has been guaranteed for all informants (Eisenhardt 1989). Fourth, in addition to the interviews, we relied on many source of evidence (Eisenhardt and Graebner, 2007) such as the archival data. Related to this last point, a preliminary study of secondary data was crucial to understand the DT projects of the entities involved and to define the interview's protocols.

Interviews have been conducted by asking informants to respond to predetermined questions to drive the discussion regarding their personal and professional experiences concerning the DT project pursued.

The set of questions proposed were different between the first and second round of interviews. This decision has allowed to assess the multiple aspects influencing the DT process, both in the initial phase and in the final phase.
In this round the questions were similar for all the entities and the data gathered allow us to have an overview of various stakeholders involved and their influential position during the early stage of the DT.
In the second round of interviews, instead, the questions were related to the specific characteristics of each project. We obtained data related to the DT path of institutions under investigation.

Considering the interview process, the protocol was used as a starting point and a guideline. Thereafter, having decided to conduct semi-structured interviews, the participants were offered the chance to share any additional information to further enhance the insights. Indeed, when descriptions were brief or new narrative threads appeared, we asked informants for more details for the purpose of gathering complete information (Eisenhardt, 1989).

More specifically, following Yin (2003) recommendations, all the documents collected have been inserted within an organized database containing recordings, final transcripts, notes, and other kind of documents for each entity involved.
This step was a necessary to properly facilitate and optimize the evidence's analysis.

3.2.3. Data analysis

Before moving to the coding part, we applied the ST concepts to our cases. In particular, once we identified who are those stakeholders involved in DT projects (stakeholder identification shown in Table 23), we have allocated to each stakeholder the attributes to define their salience (stakeholder salience).

The allocation of each attribute to the stakeholder identified has done through a qualitative approach, comparing the data collected and taking into consideration the definitions of each attribute. According to Mitchell et al. (1997), the presence of one, two, or all the three attributes allows to define to which class each stakeholder belongs to.
The stakeholder salience is shown in the following Table 29.

	Power	Legitimacy	Urgency	Class
PM	X	X	X	Definitive
Employees	X	X		Dominant
Digital provider		X		Discretionary
Funding entity	X	X	X	Definitive
Research and monitoring center		X		Discretionary

Table 29. Stakeholder salience (personal elaboration)

These classes to which each stakeholder belong can be represented also with the model with the three circles (Figure 15).

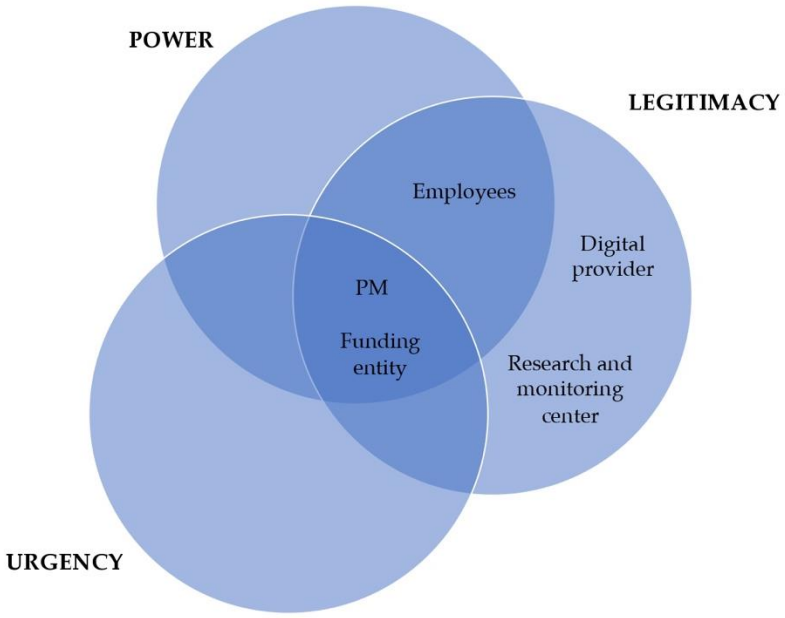

Figure 15. Stakeholder typology based on individual stakeholder attributes (Mitchell et al., 1997; personal elaboration)

Even though the ST introduces 8 classes of stakeholders, this representation highlights just three of them (definitive, dominant and discretionary) according to our empirical context. With reference to the above figure, the allocation displayed that:

- Definitive stakeholders are: PM, funding entity
- Dominant stakeholders are: employees
- Discretionary stakeholder are: Digital provider and research and monitoring center

Subsequently, we performed the analysis and the interpretation of the data to build up a discussion for our results employing the procedure provided by Gioia et al. (2013).
In accordance with the suggestions for multiple case study theory, the construction within and cross-case analyses were carried out (Eisenhardt, 1989; Eisenhardt and Graebner, 2007).
We began by individually analyzing primary data and triangulating it with secondary sources to hypothesize the labels (codes) of the data structure. Specifically, we began our investigation by finding and categorizing key ideas among data (open coding) (Gioia et al., 2013).
Then, the two of us discussed our various points of views and we started coding using an inductive technique (Saldaña, 2009).
We used replication logic across cases and clustered codes together in second order themes to do a cross-case analysis. Indeed, homogeneous code were grouped to define growing abstract categories which then have been interpreted in the light of the ST.

In order words, we investigated whether it was possible to refine the emergent 2nd-order themes even further into 2nd-order "aggregate dimensions" where the connection with the theoretical lens comes out.

In those cases where we had different opinions, we revisited the data and we had mutual debates in order to reach consensus on interpretations (Gioia et al., 2013).

The iterative analysis produced the data structure which shows how we have moved from a particular and real word code to general and abstract theory. The final outcome is presented in Figure 16.
It represents the data analysis procedure and the development of conceptual categories (Suddaby, 2006).

The linkages between the three levels of the data structure are related with our first RQ which asks how stakeholders influence a DT project.

- In the first order those "actions" that are those aspects that enable a DT project by a stakeholder. Actions are both tangible aspects, such as meeting organization and planning, and intangible aspects, such as innovation readiness, mindset etc. It is worth to mention that the first order labels are expressed with positive meaning. Obviously, this is just one side of the coin. Indeed, each action may be stated with a negative meaning.
- In the second order we defined the "patterns" that represent the conceptual ideas to which several aspects of the first order belong. In other words, a set of actions in the first order constitutes a pattern in the second order.
- The aggregate dimensions represent the class of stakeholders involved pinpointed through the stakeholder salience. At this level emerges the connection with the theoretical lens selected for our research.

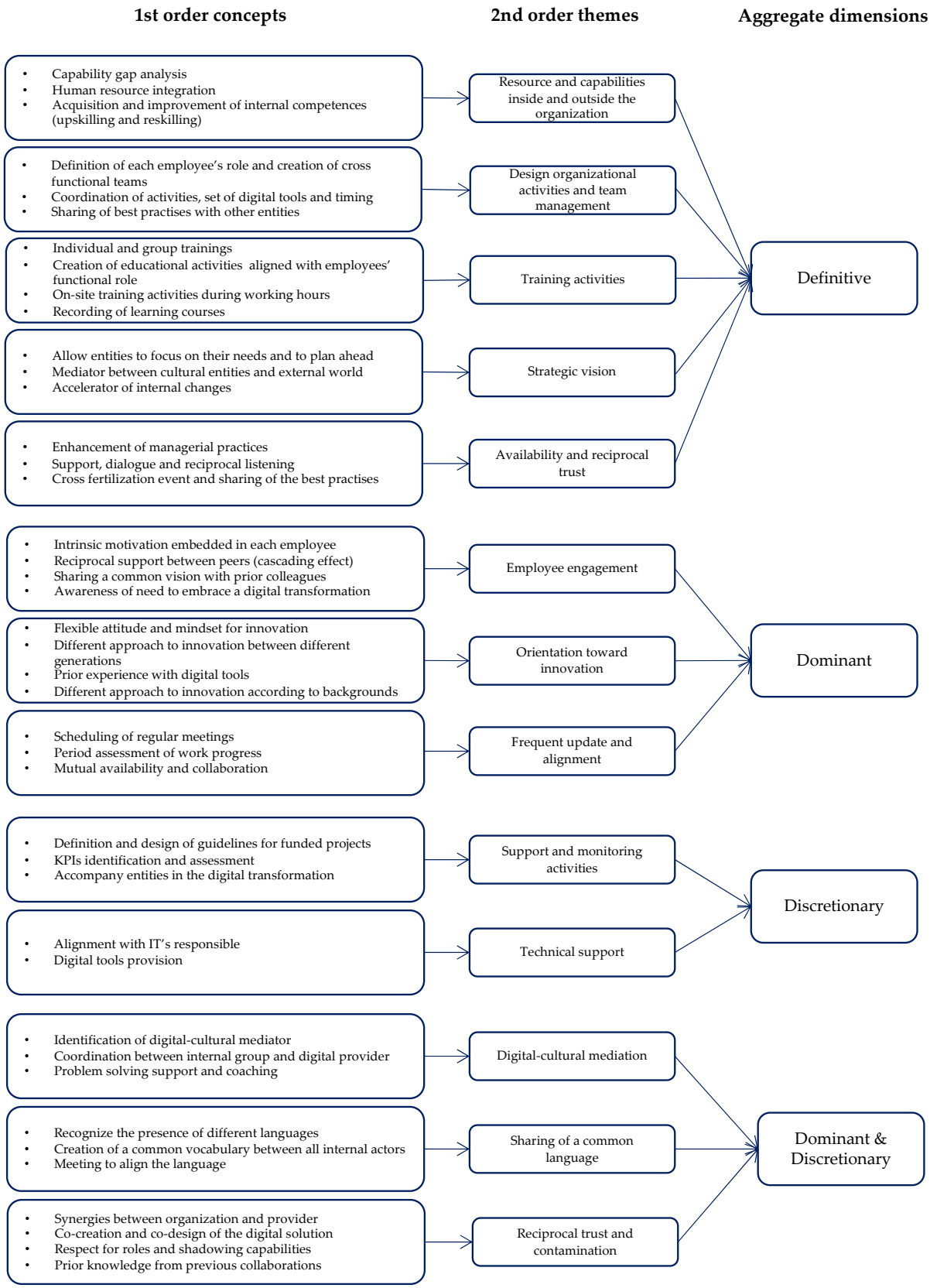

Figure 16. Data structure

4 Findings

The research pursued reveals that in a DT project i) different stakeholders are involved, as shown by the Stakeholder Identification (Table 25), and, ii) each stakeholder has different salience that "*depends on the amount of power, legitimacy, and urgency attributed to the stakeholders and their situation*" (Beckman et al., 2016: 2) as represented in Stakeholder Salience (Table 29).
Since, by definition, stakeholders are "*any group or individual who can affect or is affected by the achievement of the firm's objectives*" (Freeman, 1984:46), the research highlights how the different classes of stakeholders influence a DT project based on their roles.

Tables from 30 to 33 provide examples of quotes that helped with the solutions' identification. Specifically, based on our analysis, the classes of stakeholders' typology that were found to be relevant to the research are: definitive, dominant, discretionary, and the relation between discretionary and dominant.
Although class identification is not the primary objective of our research, this classification allowed us to distinguish the roles of each and how each actor influences through its actions a DT project.

The definitive stakeholders' class has more managerial, organizational, and strategic roles within a DT project.
The dominant stakeholders have more operational roles and manage day-to-day activities.
Finally, the discretionary stakeholders are involved periodically throughout the project by working alongside and monitoring the entity involved.
To these classes mentioned above, we also wanted to bring out the relationship between the discretionary class and the dominant, as it turns out that the relationship between these two typologies of stakeholders is a key factor in the development of a DT project.

4.1. Definitive

Since "*the more attributes a stakeholder has, the more salient it is*" (Myllykangas et al., 2010), the definitive stakeholders are those that have demonstrated to possess the highest level of salience. Indeed, they possess all three attributes envisaged by the ST: power, legitimacy, and urgency.
In particular, the key stakeholders belonging to this class are PMs and the funding entity.

PMs play a pivotal role in many activities, including the management of the resources inside and outside the organization, the design of organizational activities, and the training activities for employees.

One of the most relevant abilities that have emerged from the data collected is their capability to allocate the resources needed to achieve goals. Therefore, what was raised was a salient position of the PMs in, firstly, identifying the skills requested, and then making a capability gap analysis. For instance, the PM of Case A noted:

> *"The center in this transformation realized from multiple perspectives that there were many more resources to be integrated."*

Once the need to expand the workforce was recognized, PMs were able to integrate new resources within the working groups enhancing the efficiency of the entire human organizational structure.
This is explicated by a digital provider involved in the project of case E, who stated:

> *"I appreciated the manager's decision to hire two new people within this area who are very young, and they are helpful to drag things a little bit more within the center."*

The same consideration was also expressed by the PM of case A:

> *"One thing we may not have been aware of is that the workload on the IT department was significant, so we decided to hire a new IT figure"*

However, PMs were not only identified as those responsible for internal expansions of human resources, but also as those in charge to enhance and grow everyone's skills. This specific managerial ability was affirmed by the PM of Case A:

> *"We undertook two paths, one related to the growth of skills of existing staff and one related to skills that needed to be totally integrated within the team"*

Furthermore, the PMs' role as definitive stakeholders arises with their contribution on designing organizational activities and managing working groups.

In this sense, one aspect that favored the development of the DT project was the choice by PMs to define each employee's role and the creation of cross-functional teams. For instance, the PM of case A stated:

> *"We built an interdisciplinary working group, composed of people belonging to different areas that are affected by the transformation process"*

Of the same perspective was the PM of case E who added:

> *"The project has forced us to organize working groups, to work in teams, to confront each other elsewhere, it's a different way of working. These cross-cutting groups work on different things, but very often, they intersect since one person maybe knows more things than another"*

Such DT projects, also required PMs to coordinate various activities, set time schedules, and choose the most suitable technological tools.
This is demonstrated, for instance, by an employee of case E who affirmed:

> *"The project manager kept everyone on track and aligned, giving us timely deadlines and checking the right achievement of predefined objectives"*

Another aspect that emerged in relation to the planning and coordination of various activities was the openness promoted by PMs toward sharing best practices with other directors and managers working in the same field. This emerged from the words of the PM of case E:

> "*Together with our director, we have fostered interaction with other cultural institutions, which is a must. When we don't know what to do, we spur to hear from other institutions to understand what they are doing. So, it has become our modus operandi to ask our non-competitors, our peers*"

Moreover, it is not only about the ability to design and coordinate resources, but also to effectively prepare and train the established employees and the newly hired resources. This capacity-building approach represents a concrete response to a previous gap detection in terms of skills and competencies. Therefore, PMs are those responsible for the training activities which were targeted to both individuals and teams.

Indeed, as the PM of case B stated:

> "*We did one-to-one coaching about the migration system, plus training sessions for all employees on the use of the tools. Moreover, we have performed focus groups to optimize the use of the same tools for each specific department because everyone makes personal use of the digital solution*"

In the same vein, the PM of case A stressed:

> "*We have precisely produced an internal and broad cross-center training program for all components of the center*"

Additionally, PMs have enabled the development of educational activities aligned with the functional roles of the employees to tailor each one's personal and professional growth. This concept emerged from the words of an internal employee of case E who affirmed:

> *"The training was effective because it was not something theoretical or improvised, but it was designed by the managers to fit well with the reality of my work"*

However, many of these activities were planned through online deliveries outside of working hours. This choice, undertaken by the PMs, has aroused relevant criticism from many employees. It emerges from the words of one of the employees in case C who has noted that:

> "*These online training activities were done with a huge expenditure of time because there were so many hours of online training. Often, we participated outside our working hours, so it was an additional commitment*"

To mitigate negative perceptions of online training activities outside working hours, and to allow employees to replay lectures or parts of them, PMs have provided the possibility of recording such courses and making them available to all staff. Doing this, PMs have promoted inclusivity of training moments. Indeed, the PM of case B has affirmed:

> *"With this method of providing the recordings of training courses, we had a caring attitude for individual departments and people*"

Another distinguishable aspect of PM as a definitive stakeholder is the ability to identify and clearly communicate the path to undertake.

Nevertheless, this aspect has not only emerged from managers, but also from another actor involved in the DT project, namely the FCSP (funding entity). The latter has held a prominent position in providing a strategic key by becoming a beacon, a light to follow. Although the presence of a funding agency is not a necessary condition for the effective implementation of a DT process, an external leading role of this kind may greatly benefit.
This also emerges from the words of the PM of case A, who clarified that:

> *"The funding entity is not a satellite, it is not a sporadic errant action, but it is part of a much broader strategic plan of building the values and meanings of the center. Let's say in terms of accompaniment, we had the utmost trust from their side, and we maintained constant contact since our coordinator was constantly informed of our activities."*

In the words of an employee of case B:

> *"FCSP promoted and enabled a digital transformation project. I also believe that the funding entity had the enlightenment to understand the goodness of a project that was aimed internally. Moreover, they help us facilitate our communication processes with external"*

And, as another employee of case E recognized:

> "*The relationship with Compagnia di San Paolo served mainly to keep the focus on the final outcome of the project and continuously renew mutually shared goals*"

Furthermore, the funding entity, with its interest in funding such kind of projects, enabled an acceleration of internal changes concerning the adoption of digital solutions. This aspect has been highlighted by the digital provider of case C, who stated:

> *"Company's interest in promoting these projects represented a mojor opportunity for an institution like them that needs to embark on new digital trajectories"*

Moreover, the establishment of such a solid relationship ensured an exchange and enhancement of managerial practices.
For instance, the PM of case C reported that:

> *"The meeting with the Foundation necessarily let's say forced us to approach skills we didn't have. There was certainly growth at the management level, we learned a lot working with Foundation"*

As a consequence, the funding entity has continuously supported the organization in developing the DT project by nurturing constant dialogue and reciprocal listening and trust.

For instance, a PM of case A noticed that:

> *"Let's say that we really believed in the project, we saw on the other side [funding entity] a team that was very interested in what was coming at this stage of development, and so it was really a fruitful collaboration"*

A final aspect characterizing the role of the funding entity is the attention to provide and organize events where entities involved in similar projects have the opportunity to share their experiences and best practices. This was highlighted by the words of PM of case C:

> *"The data return meeting that was organized by FCSP allowed us to understand how other entities are approaching their DT projects. It was a good moment to share our experiences and best practices."*

Comprehensively, Table 30 summarizes our findings.

2nd order themes	Supporting quotes
Training activities	The capacity building project, desired by the PMs, went to hook on previous training experiences, in work management, group management professional relationships including interpersonal ones. This training activity had immediate application allowing me to learn new things to improve the operational and management aspect of the work. *Case E, employee* We have precisely produced an internal and broad, cross-center training program for all components of the center. *Case A, PM* We did One to One coaching at the time of the system migration, plus training sessions for all employees on the use of the tools. Plus, we have performed Focus Groups to optimize the use of the same tools for each specific department because everyone makes their own use of the tool related to the activity. *Case B, PM* The training was effective because it was not something theoretical or improvised, but it was designed by the managers so that it fits well with what was the reality of my work. *Case E, employee* It is very important and so is the frequency of the meetings we have to follow the project step by step. We believe that the training course can assist the whole group to become familiar with the tool by breaking down handbrakes pulled. *Case B, PM* These online training activities were done with a huge expenditure of time because they were so many hours of online training. Often, we participated outside our working hours, so it was an additional commitment. *Case C, employee*

	With this method of making the recordings of training courses available, we had a caring attitude toward individual departments and people. *Case B, PM*
Design organizational activities	We built an interdisciplinary working group, composed of people belonging to different areas that are affected by the process transformation. *Case A, PM* The project has forced us to organize working groups, work in teams, to confront each other elsewhere, it's a different way of working. These cross-cutting groups, work on different things but very often they intersect since one person maybe knows more things than another. *Case E, PM* The project manager kept everyone on track and aligned checking the right achievement of predefined objectives. *Case E, employee* Within the museum, there was a division of roles, so there was a group of people who managed communication among stakeholders and communication among museum employees. *Case B, employee* Together with our director, we have fostered interaction with other cultural institutions, which is a must. When we don't know what to do, we have spurred to hear from other institutions to understand what they are doing. So, it has become our modus operandi to ask our non-competitors, our peers. *Case E, PM*
Resource and capabilities inside and outside the organization	The center in this transformation realized from multiple perspectives that there were many more resources to be integrated. *Case A, PM* I appreciated the manager's decision to bring in two new people within this area who are very young and are dragging things a little bit more within the center. *Case E, digital provider* Within the project, the need arose to implement the working group with additional skills other than our own. *Case A, PM* One thing we may not have been aware of is that the workload in the IT department was significant, so we decided to hire a new IT figure. *Case B, PM* The center worked and created a very good internal, initially with external and contracted professionals, let's say part-time, and then instead structured an office of internationalization development. *Case A, PM* We undertook 2 paths, one related to the growth of skills of existing staff and one related to skills that needed to be totally integrated within the team. *Case A, PM*
Strategic vision	FCSP promoted and enabled a digital transformation project. I also believe that the funding entity had the enlightenment to understand the goodness and a project that was aimed internally. Moreover, they help us facilitate our communication processes with external. *Case B, employee* The funding entity is not a satellite, it is not a sporadic errant action, but it is part of a much broader strategic plan for building the values and meanings of the center. Let's say in terms of accompaniment, we had the utmost trust from their side, and we maintained constant contact since our coordinator was constantly informed of our activities. *Case A, PM* The meeting with the Foundation necessarily let's say forced us to approach skills we didn't have. There was certainly growth at the management level, we learned a lot working with Foundation. *Case C, PM* Let's say that we really believed in the project, we saw on the other side [funding entity] a team that was very interested in what was coming at this stage of development, and so it was really a fruitful collaboration. *Case A, PM*

Availability and reciprocal trust	Let's say that we really believed in the project, we saw on the other side [funding entity] a team that was very interested in what was coming at this stage of development, and so it was really a fruitful collaboration. *Case A, PM* the reaction with Compagnia di San Paolo served mainly to keep the axis in the center and to renew in an ongoing way goals shared by both. *Case D, employee*

Table 30. Supporting quotes - Definitive stakeholders

4.2. Dominant

Another class of stakeholders identified is the one of the dominant stakeholders. To this class belong those who possess both power and legitimacy. In the empirical context analyzed, those that have been associated with this category are the employees of cultural entities.

The factors related to employees that favor the development of a DT project are employees' engagement, orientation toward innovation and frequent updates and alignments.

As it is shown in this part, there are some aspects that, even if intangible, should be considered by the management because they can enable the DT project.
A first result shows how the level of engagement of employees has positively amplified the expected outcomes of the DT process undertaken. This has been achieved by leveraging different aspects.
First, one of the aspects is the intrinsic motivation of employees that has enabled them to develop a DT project. Intrinsic motivation is the driver to perform thanks to a pleasure of acting, since it is the collection of pleasant emotions connected to successfully complete an activity or task.

In contrast to external drives and incentives, intrinsic motivation stems from the inside and is a form of personal devotion. It triggers the emotions of curiosity, pleasure, and self-reward. Indeed, some employees, as one of case A, have recognized that:

> *"It was quite encouraging to see how enthusiastically everyone involved in the initiative embraced these opportunities, seeing them as chances for both professional and personal growth."*

This concept is also supported by the words of an employee of case D, who stated:

> *"The project has been accepted in a very positive way by colleagues. They are working on it with great passion certainly with the intent of achieving at least those results initially set"*

Then, in many cases, the interest of each employee to contribute to bringing value, during the DT project development, has been translated into the desire for supporting surrounding colleagues. As reported by one employee of case A:

> *"I really want to make myself available to the center to see how you can possibly change things, how you can help people who need precisely counseling from this point of view right now, and so it's just very challenging for me"*

This has enabled the acquisition and adoption of know-how and allowed the sharing of best practices among employees. The result, indeed, has been the generation of a cascading effect by which people share their knowledge with peers, giving rise to contamination of knowledge. This is described by one of the employees of case B, who noted:

> *"With a cascade approach, a colleague who begins to adopt a new method of working slowly proposes it to others who then must adopt this tool as well"*

Finally, another aspect is related to the fact that in those cases in which certain employees found themselves working together after prior collaborations, the sharing of a common vision was facilitated. As mentioned by an employee of case C:

> *"The team of our foundation is already run-in over time, in the sense that now we all know each other more or less for four years. We have a shared vision, a great enthusiasm and passion, and having a solid base is important"*

Moreover, the individual commitment was increasingly supported by the employees' awareness of the unique opportunity for growth, both professional and personal, brought by the project.
This finding was provided by the words of an employee working within entity D, who stated:

> *"There was a strong sense of adaptability from all employees who recognized the need to embrace new digital solutions"*

The second factor that has to be taken into account by managers consists of openness toward innovation that may be embraced by employees.

For instance, mindset flexibility is a condition that cannot be taken for granted, as shown by the words of case A's PM:

> *"We realized that many of them are distant from what the content of the project is. In a way, they are quite reticent to see a transformation of their own content and their own experiences. Perhaps they do not even consider themselves that close to this perspective of developing our center. There is a difficulty in understanding the potential that this technological development, this knowledge of contexts can bring."*

A confirmation of this claim is provided by a digital provider who collaborates with case E, according to whom:

> *"People's mindset is the biggest obstacle to digital transformation, more so than technical inabilities because you can fill those with targeted activities."*

Again, the digital provider of case C stated:

> *"On the side of the institution staff, we found no resistance, but rather a sizable openness for change that, when coupled with familiarity with technology, albeit lacking specific knowledge, encouraged learning and progress."*

Furthermore, the different approaches that people may have toward the DT project could vary depending on the generation of the employees involved, and, on the potential digital distance in terms of technology and innovation background.
An example is provided by an employee of case A has reported that:

> *"Those who are a few years younger, so they are a little bit more familiar with digital media, have been a little bit more responsive."*

Beyond age-related reasons, difficulties emerged looking at the differences in terms of backgrounds. As reported by other employees of case B:

> *"Resistance developed not only from employees with older age, but also those with humanities backgrounds were also more reluctant to change in terms of mail systems, management, and task management. While those with more hybrid or more business backgrounds, with more digital skills adapted to change more quickly"*

Even though having humanistic background may represent an obstacle, it is also noticeable that, if the working team is formed by young people, the propensity toward innovation is raised. This was noticed by the digital provider of case C:

> *"In the foundation, they have non-technology related skills, but they have the advantage of having a group of young people who at least for age reasons are accustomed to the use of technologies"*

Nevertheless, employees are more receptive and open to the technological world when they have prior experience with digital tools.
This concept is expressed by an internal collaborator of case A:

> *"Those who were more accustomed to using digital media were more responsive to the changes needed to move the project forward"*

Eventually, findings show how the implementation of a DT within cultural institutions have prompted employees to concur with frequent updates and alignments between peers. This was done, firstly, with the scheduling of regular meetings.
In the words of an employee of case A:

> *"We have tried, and we are trying, to have regular meetings at a regular pace with respect a little bit then to the office commitments and concerning the activities"*

In these moments of discussion, the purpose was to understand and verify the progress of the work in order to correct future actions. Indeed, another employee of case B claimed:

> *"I know that a lot of meetings were done. They were done regularly because I was hearing from my colleagues about the need to schedule meetings to understand the progress of the work"*

All of this was possible due to the cohesiveness and collaboration established among colleagues who always offered to be available for discussion.
As reported by the IT responsible for case B:

> *"I gave my utmost willingness whenever they had to do a new activity and did not know whether they should go one way or the other. They understood that they could stop, think, pick up the phone and ask"*

All the findings presented in the current sections have been reported in the following Table 31.

2nd order themes	Supporting quotes
Employee engagement	The project has been accepted in a very positive way by colleagues. They are working on it with great passion certainly with the intent of achieving at least those results initially set. *Case D, employee* It was quite encouraging to see how enthusiastically everyone involved in the initiative embraced these opportunities, seeing them as chances for both professional and personal growth. *Case A, employee* There was a strong sense of adaptability from all employees who recognized the need to embrace new digital solutions. *Case D, employee* On the side of the institution staff, we found no resistance, but rather a sizable openness for change that, when coupled with familiarity with technology, albeit lacking specific knowledge, encouraged learning and progress. *Case C, digital provider* I really want to make myself available to the center to see how you can possibly change things, and how you can help people who need precise counseling from this point of view right now, and so it's just very challenging for me. *Case A, employee* With a cascade approach, a colleague who begins to adopt a new method of working slowly proposes it to others who then must adopt this tool as well. *Case B, employee* There is a great willingness on everybody's part to find the right solutions since it was a totally new subject. I see from my colleagues this willingness, this attempt to try to find solutions together with the company. *Case D, employee* I was willing to take advantage of the extra time we had, and so since project management is a subject that interests me, I started studying it and took two certificates. *Case A, employee* The team of our foundation is already run in over time, in the sense that now we have all know each other more or less for four years. We have a shared vision, great enthusiasm and passion, and having a solid base is important. *Case C, employee* So, there was a little beating heart that kept the goal of the project alive is that it was a little spokesperson for solutions, for alternative strategies that could be created to achieve the ultimate goal. *Case A, PM* I chose the training courses for my colleagues because compared to the preparation of my colleagues from a technological point of view, I turned out to be the one who was a bit more trained. And then because coming from studies involving technology and teaching, they asked me for help in identifying these courses, especially based on what might be the unexpressed needs of colleagues. *Case D, employee*
Orientation toward innovation	We realized that many of them are distant from the content of the project. In a way they are quite reticent to see a transformation of their own content and their own experiences. Perhaps they do not even consider themselves that close to this perspective of developing our center. There is a difficulty in understanding the potential that this technological development, this knowledge of contexts can bring. *Case A, PM* People's mindset is the biggest obstacle to digital transformation, more so than technical inabilities because you can fill those with targeted activities. *Case E, digital provider* Those who are a few years younger, so they are a little bit more familiar with digital media, have been a little bit more responsive. *Case A, employee*

	Resistance developed not only from employees with older age, but also those with humanities backgrounds were also more reluctant to change in terms of mail systems, management, and task management, while those with more hybrid or more business backgrounds with more digital skills adapted to change more quickly. *Case B, employee* There is a great open-mindedness in museums for the technological evolution of museums themselves, and this greatly favors those in our profession because we don't have to convince our interlocutors that this is something the director wanted, but we always find interlocutors who tend to be well-disposed toward us and share our goals. *Case E, digital provider* In the foundation, they have non-technology related skills, but they have the advantage of having a group of young people who at least for age reasons are accustomed to the use of technologies. *Case C, digital provider* Those who were more accustomed to using digital media were more responsive to the changes needed to move the project forward. *Case A, employee* Because it is clear that a digital transformation starts especially with a different way of people's attitude, therefore with an ability to interact and to work in teams. *Case E, digital provider*
Frequent updates and alignments	We have tried, and we are trying, to have regular meetings at a regular pace with respect a little bit then to office commitments and with respect to activities. *Case A, employee* I know that a lot of meetings were done. They were done regularly because I was hearing from my colleagues about the need to schedule meetings to understand the progress of the work. *Case B, employee* I gave my utmost willingness whenever they had to do a new activity and did not know whether they should go one way or the other. they understood that they could stop, think, pick up the phone and ask. *Case B, digital provider* Within the project, the need arose to implement the working group with additional skills other than our own. *Case B, employee*

Table 31. Supporting quotes - Dominant Stakeholder

4.3. Discretionary

The third category that has been identified by the analysis is one of Discretionary stakeholders. Those are characterized by the lowest level of salience since they possess just one of the three attributes intended by the ST (*i.e.* legitimacy or power or urgency).

In our research context, the entities that have been appointed in this class are the Research and Monitoring centers and the digital providers.

Firstly, the role of Links and of the Observatory Milan Polytechnic as the entities that managed the monitoring of the call will be shown, followed by the role of the digital provider that, instead, provided technological support to the project.

As reported by one responsible of Link Foundation:

> *"We wanted to identify a structure that would accompany them throughout the project"*

Links supported the entities to define the guidelines for the DT projects as reported by a responsible:

> *"We helped them to understand how to start a project and carry it out in the most desirable way. And so, we have provided guidelines and monitoring tools to have a design that is not only complete and correct but also able to change the course of action when they realize that they are not on the right path"*

Moreover, Links assisted cultural institutions to identify KPIs and assess their results. As reported by a responsible of Link Foundation:

> *"We identified KPIs that would be used by Compagnia di San Paolo to assess the project objectives defined by each entity"*

In addition, a supporting and monitoring effort for the activities promoted by FCSP, was also pursued by another stakeholder involved, the Observatory of Milan Polytechnic. As emerged by the interview with the director:

> *"We update according to the set schedule. It can be once a week, once a month to see the evolution of the project is, becoming an opportunity for doing some brainstorming activity and proceed to other goals"*

Within this class of stakeholders belongs also digital providers. The role they have developed has been as a supplier of digital solutions for cultural organizations. This is highlighted by the PM of case A:

> *"Our digital provider is precisely a pure supplier. What they did could have been done by other suppliers as well"*

However, they were recognized not only as those stakeholders who provided specific digital solutions but also as those who offered continuous support and technical assistance. For instance, the PM of case E claims:

"In this project, 4-5 technology providers were involved. Some of these participated by offering the product in which they are specialized and consequently, their own support."

The support has been delivered through periodic alignment meetings as emerged by a digital provider of case A:

"There have been moments called retrospective. Once the project comes out after a while, even at intervals of 2-3 months, we have a meeting to do a review of how the implementation and realization of what was planned is going"

In this context, another driver for developing the DT project was the respectful relationship that the digital providers established with other providers in those cases where multiple of these stakeholders are involved in the same project. The smooth coexistence occurred while respecting the roles and assignments for which they were selected by the cultural institution, without interfering with each other's work, but rather, supporting it.

As a provider of case E affirmed*:*

"We did things professionally as we should without interfering with each other's work"

Table 32 summarizes the key findings for this aggregate dimension:

2nd order themes	Supporting quotes
Support and monitoring activities	We wanted to identify a structure that would accompany them throughout the project. *Link foundation* The third partner of this project was the Polytechnic of Milan, and of course the dialogue went well with them. Until a month ago, once a week, for almost two years we talked. *Case B, employee* We helped them to understand how to start a project and carry it out in the most desirable way. And so, we have provided guidelines and monitoring tools to have a design that is not only complete and correct but also able to change the course of action when they realize that they are not on the right path. *Link foundation* We identified KPIs that would be used by Compagnia di San Paolo to assess the project objectives defined by each entity. *Link foundation* There have been moments called retrospectives. Once the project comes out after a while, even at intervals of 2-3 months, we have a meeting to review of how the implementation and realization of what was planned is going. *Case A, digital provider* We have supported FCSP in evaluating the impacts of the call. *Observatory of Polytechnic of Milan* Our digital provider is precisely a pure supplier. What they did could have been done by other suppliers as well. *Case A, PM* We update according to the set schedule. It can be once a week, once a month to see the evolution of the project is, becoming an opportunity for

	doing some brainstorming activity and proceed to other goals. *Observatory of Polytechnic of Milan*
Technical support	We did things professionally as we should without interfering with other providers' work. *Case E, digital provider* Our digital provider is precisely a pure supplier. What they did could have been done by other suppliers as well. *Case A, PM* In this project 4-5 technology providers were involved. Some of these participated by offering the product in which they are specialized and consequently, their own support. *Case E, PM*

Table 32. Supporting quotes - Discretionary stakeholder

However, to conclude the findings' presentation about the discretionary class, it is worth highlighting a specific result concerning the digital provider. Even though from the aforementioned quotes has emerged only their supporting role in the technical field, the results have also demonstrated a dichotomy between those who served as simple technology providers (that we have defined in the Chapter 5 – second contribution - as "digital suppliers") and instead, those who served as project partners, supporting organizations from an organizational and strategic standpoint as well (that we have defined in the Chapter 5 – second contribution - as "digital partners"). The latter plays a facilitator role in a DT project.

4.4. Dominant and discretionary

Based on the above findings, in this section, we present the data showing the relationship established between employees and digital providers who have played the role of facilitators ("digital partners"). From a managerial perspective, it is worth considering this relationship between these two classes since it influences the development of a DT project.

Specifically, three elements result to facilitate and enable a DT project: the digital-cultural mediation, the sharing of a common language and the reciprocal trust and contamination. These aspects, though distinct, turn out to be closely related to each other.

Firstly, what turns out to be a facilitating element is the creation of mediation between the cultural and digital worlds. This can occur by identifying a digital-cultural mediator working for the cultural institution or the digital provider. Its role is the one of facilitator, creating a bridge between the two worlds.

This has been highlighted by one of the collaborators of the digital agency of case D who reported that:

> *"Thanks to the provider's ability to translate the concepts, to bring them into a theatrical context, I didn't see any difficulties on anyone's part, in learning or understanding what the proposed functionalities were and the needs related to the proper functioning of the system"*

This concept is also affirmed by the PM of case C:

> *"The figure of the innovator did some mentoring, which was very important for us because it accompanied the cultural institution toward language acquisition for cultural institutions. This mediation work has been crucial."*

Thus, the presence of this facilitator enabled coordination between the internal working groups and the digital provider. Indeed, the PM of case A has recognized that:

> *"She has been the element that has united everyone, because coordinator of the project and responsible for connecting the internal group with the technology partner."*

Finally, this mediating role has entailed a reciprocal consulting and problem-solving opportunity. As mentioned by an employee of case C:

> *"We have identified a digital consultant who is the one we contact for all issues related to digital instrumentation, and for anything we know we need to ask him."*

Also, from the words of the provider of case A, it emerges that:

> *"We anticipate all projects with a few months of assistance. After a digital product is released and published, a project never goes away. So, if anyone needs any advice, we are available."*

Nevertheless, findings show that digital-cultural mediation could not be possible if the actors under scrutiny were not able to share a common language and vocabulary. Indeed, this aspect has been stressed by many as a key requirement to boost the DT project's development.

In this context, real adaptability arose when employees and digital providers were able to accept the coexistence of different languages and open themselves to embed new terminology. This result has been collected by analyzing the words of an employee of case D:

> *"They had technical expertise, specific to the field that we realized was crucial to developing our project. So, as we became more and more guided by them, they were instrumental in outlining and building the project together, especially in the second phase"*

Of the same opinion was the employee working in the IT department of case B:

> *"We speak in computer science, they speak in cultural term, we find a way to speak the same language. That's where the big advantage of working with cultural actors lies: there are people on the other side who listen to you, and we do the same thing"*

The importance of the creation of a common vocabulary between these actors emerged from the digital provider of case E:

> *"A work had to be done from a language point of view. In the sense that it was necessary to come up with a language agreeable by everyone."*

This concept has been highlighted also by the PM of case C who brought out the challenges that an alignment of language entailed:

> *"Although it was necessary to create a new language, we had a lot of resistance from the board who did not want us to use a certain language. In fact, it suffered from the use of technical terms of a certain kind."*

She also added the necessity to overcome those internal resistances through punctual alignments:

> *"For the language issue, there was a moment of friction with the board. We had to spend time aligning, because there was a need to spend time creating a vocabulary."*

In this context, another element that enables the relationship between employees and "digital partners" is the reciprocal trust and contamination embedded between them.

This generated a synergy that transpires from the world of the PM of case E:

> *"Our provider is very enthusiastic, has a great eagerness to learn, to integrate, so there is not a relationship of actual counseling as much as ordinary collaboration. so, he is there as in any internal person who comes in the morning and does what needs to be done, as if he were an internal person."*

The collaboration established permitted these two actors to co-design and co-create the digital solution according to their specific needs. As claimed by the provider of case A:

> *"Fundamental is the collaboration; I always emphasize and say this. We are indeed a supplier, but we don't pose as one: we collaborate to develop the idea and try to make it real, concrete for the center, the customer, but also the users who will use it."*

The relationship has become mutually beneficial thanks to the accompanying ability of the provider, who has been able to work alongside the institution without ever imposing itself. Indeed, the PM of case B affirmed that:

> *"A great deal of listening skills which is no small thing, a great deal of ability to implement within an allocated and dedicated budget. So, they had a fundamental ability to come alongside while always respecting our way of working"*

Finally, it is noteworthy that this mutual trust and this respect for roles was nurtured in those cases where the digital provider already worked with cultural entities.

The relevance coming from previous collaboration, specifically in the theatrical sector, arises from the words of the PM of case D:

> *"The digital provider had the sensitivity and the great ability to collaborate because of previous experience with entities in the theater world"*

To this point it can be added the claim of an employee of case E:

> *"We have basically earned a little bit of trust from the client that, thanks in part to our own experience in other museum settings, we are often approached to ask for their opinion on what we might propose depending on the circumstances of the museum setting."*

Moreover, also the prior knowledge between employees and providers has incremented the value generated from their relationship. As reported by the PM of case B:

> *"They are not suppliers for us, but they are technology partners. When we presented the project at FCSP: we asked to be able to choose the technology partner, because we have already worked with them, and we know that they can match our needs."*

All the findings concerning the relationship between employees and digital providers have been synthesized in the following table:

2nd order themes	Supporting quotes
Reciprocal trust and contamination	Our provider is very enthusiastic and has a great eagerness to learn, and to integrate, so there is not a relationship of actual counseling as much as ordinary collaboration. so, he is there as in any internal person who comes in the morning and does what needs to be done, as if he were an internal person. *Case E, PM* Fundamental is collaboration; I always emphasize and say this. We are indeed a supplier, but we don't pose as one: we collaborate to develop the idea and try to make it real, and concrete for the center, the customer, but also the users who will use it. *Case A, digital provider* A great deal of listening skills which is no small thing, a great deal of ability to implement within an allocated and dedicated budget. So, they had a fundamental ability to come alongside while always respecting our way of working. *Case B, PM* In the case of our technology partner, on the other hand, it was a hybrid and also new to us, so we required that it should not just be a vendor, but someone who would put themselves on the line with us for growth. *Case E, employee* The digital provider had the sensitivity and the great ability to collaborate because of previous experience with entities in the theater world. *Case D, PM* We have basically earned a little bit of trust from the client that, thanks in part to our own experience in other museum settings, we are often approached to ask for their opinion on what we might propose depending on the circumstances of the museum setting. *Case E, employee* They are not suppliers for us, but they are technology partners. When we presented the project at CSP: we asked to be able to choose the technology partner, because we have already worked with them, and we know that they can match our needs. *Case B, PM* We became curious about their world and they did the same with ours, so let's say something was born that went beyond just providing technology, but a real partnership. *Case C, digital provider* The center, not knowing about technicalities, and digital processes, they had to adapt and learn new things from us. The exchange in these cases between the institution and provider is absolutely equitable. *Case A, digital provider*

Sharing of a common language	Work had to be done from a language point of view. In the sense that it was necessary to come up with a language agreeable to everyone. *Case E, digital provider* Although it was necessary to create a new language, we had a lot of resistance from the board who did not want us to use a certain language. In fact, it suffered from the use of technical terms of a certain kind. *Case C, PM* We were dealing with a world that was really very far away. Getting to understand to digital agency's employees and what we were up to was difficult; they spoke a completely different language. Case A, employee For the language issue, there was a moment of friction with the board. we had to spend time aligning, because there was a need to spend time creating a vocabulary. *Case C, PM* They had technical expertise, specific to our field that we realized was crucial to developing our project. So, as we became more and more guided by them, they were instrumental in outlining and building the project together, especially in the second phase. *Case D, employee* We speak in computer science, they speak in cultural terms, and we find a way to speak the same language. That's where the big advantage of working with cultural actors lies: there are people on the other side who listen to you, and we do the same thing. *Case B, employee* There was an exchange between people and that was perhaps the most beautiful thing because we were comparing each other and this really gave the feeling that we were all speaking more or less the same language. *Case D, employee* We have enough experience to be able to adapt to the language used by our customers. As a result, we attempt to adapt, we speak differently according to the clients. *Case E, digital provider*
Digital-cultural mediation	Thanks to the provider's ability to translate the concepts, to bring them into a theatrical context, I didn't see any difficulties on anyone's part, in learning or understanding what the proposed functionalities were and the needs related to the proper functioning of the system. *Case D, digital provider* The figure innovator did some mentoring, which was very important for us because it accompanied the cultural institution toward language acquisition for cultural institutions. This mediation work has been crucial. *Case C, PM* She has been the element that has united everyone because coordinator of the project and is responsible for connecting the internal group with the technology partner. *Case A, PM* We have identified a digital consultant who is the one we contact for all issues related to digital instrumentation, and for anything we know we need to ask him. *Case C, employee* We anticipate for all projects a few months of assistance. After a digital product is released and published, a project never goes away. So, if anyone needs any advice, we are absolutely available. *Case A, digital provider* We developed a very good relationship with them, and we definitely understood better what tools they could naturally in a way that was also sustainable, and made available to us. I think it was very fruitful to engage with them. *Case A, PM* It was very nice and interesting to envision a project that could be useful on both sides. It was a very nice training with weekly meetings and mutual intentions in operational terms. *Case A, PM*

Table 33. Supporting quotes - Dominant and discretionary stakeholder

5 Discussion

According to the literature review conducted, we acknowledge that the role of people is a key element in driving a DT project (Schiuma et al., 2021; Palmieri et al., 2022; Agostino and Costantini, 2021; Wrede and Dauth; 2020).

In this perspective, considering the current literature, the ST, and the data collected from the empirical context, we offer the following contributions.

- **First theoretical contribution**: an identification of the stakeholders involved in a DT project and the influence they can exert in pursuing it. This contribution highlights the different patterns and, the related actions, that each stakeholder can adopt and implement to enable a DT project.
- **Second theoretical contribution**: the distinction of the digital provider into digital supplier and digital partner.
- **Third practical contribution**: a managerial-oriented framework to pursue a DT.

5.1. First contribution

The review of the literature highlights both the central role of people in DT (Schiuma et al., 2021; Hammer, 2016; Schneider and Kokshagina, 2021) and, specifically, the importance of DT within cultural institutions (Musa, 2019; Agostino and Costantini, 2021).
For instance, scholars acknowledge how the integration between people and technology requires the development of new digital capabilities and know-how to effectively pursue a DT project (Kraus et al., 2021). Linked to this concept, the literature stresses the importance of the management caring for people through personal and professional training courses and trust.
At the same time, it is recognized how much the management of a DT project within any organization requires not only an attention towards people, but also towards the tasks that the latter have performed (Schiuma et al., 2021). Indeed, the implementation and execution of these tasks, and the attitude embraced by people, influence the outcome of the DT project. How this happens, however, is not made explicit by the literature.

In other words, management and leaders need to combine people-oriented and task-oriented approaches, but to pursue this, they need to know which the people are involved, which are their roles, and, consequently, how they can influence a DT project. Our contribution goes in this direction.

The cases analyzed allowed to identify not only the stakeholders involved (stakeholder identification) in a DT project and the different influence they exert based on their salience (stakeholder salience), but also those actions that, if implemented can enable and foster the transformation.

To answer the first question and fill the gap providing also managerial implications, the managerial framework of ST has been adopted as a theoretical lens.

In particular, we have considered the Stakeholder model proposed by Donaldson and Preston (1995) that contrasts the traditional input-output paradigm (Figure 4). According to the authors, the connection between the stakeholders and the firm's "black box" in the middle are of the same size, form and are equidistant.

According to the data gathered, our focus is not on the firm itself, but it is specific to the DT project which represents the center of our model. Around it, there are all the stakeholders involved that are grouped in classes based on their salience.
Unlike the Stakeholder model (Figure 5) in which the arrows connecting the company to stakeholders are in both directions, in our model the arrows go from the stakeholder to the DT's project (Figure 17). This is explained by the fact that RQ1 aims to analyze which are the stakeholders and how they influence a DT's project, and not on the other way around.

The green arrows symbolize the enabling factors. They represent the set of actions (both tangible and intangible) that constitute a patter. Those are implemented and empowered by stakeholders, thus, enabling a DT project.
The red arrows represent, instead, those cases where not all the actions are put in place by stakeholders, hence hindering a DT project.

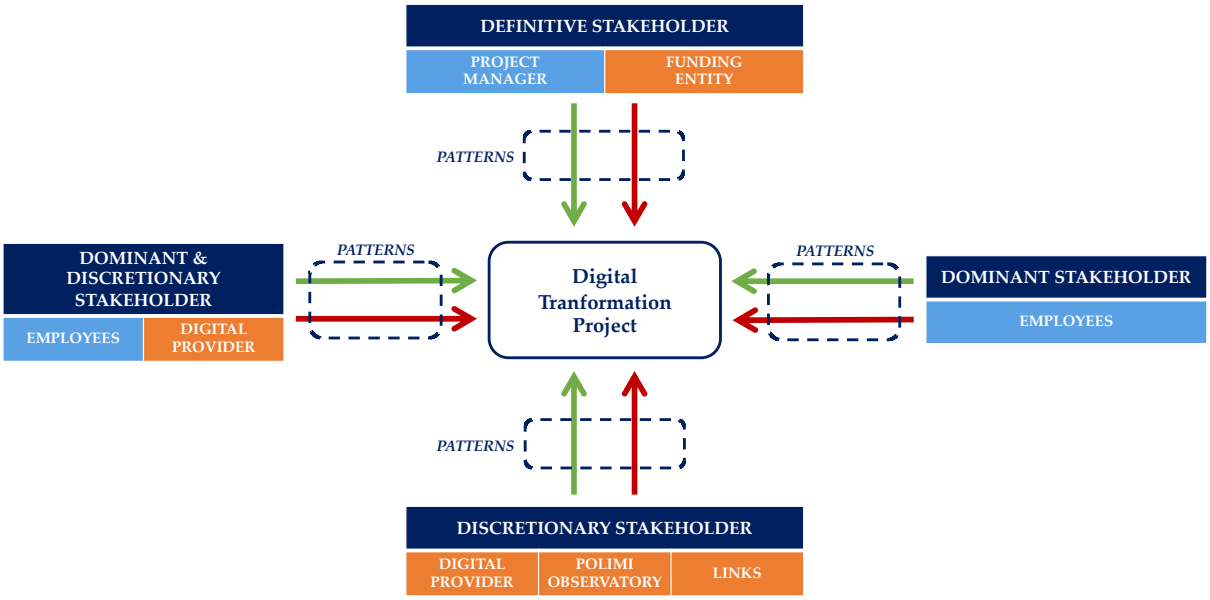

Figure 17. Our elaboration of the Stakeholder model

In other words, the more the stakeholder implements and enables certain actions, and consequently the related pattern, the more the stakeholder will positively influence the DT project. The less these actions will be carried out or favored by the involved stakeholder, the more the stakeholder will negatively influence the project. In other words, in the latter case, the positive influence carried out by stakeholders will be low.

Figure 17 represents a high-level visualization of the stakeholders involved and the related class to which each stakeholder belongs (Definitive, Dominant and Discretionary) in relation to the DT project.
As the findings presented in Chapter 4 pointed out, each stakeholder could enable a DT project through several actions that belong to different patterns.

For this reason, we go in depth in making explicit what patters each stakeholder may pursue to enable the transformation. The main findings are discussed below.

Definitive stakeholders can drive and influence the design and execution of a DT project by embracing the following patterns (Figure 18):

- Promoting and managing training activities
- Taking care of the design of organizational activities and team management
- Resources and capabilities inside and outside the organization
- Empowering and defining a strategic vision
- Offering availability and fostering a reciprocal trust

Therefore, higher the willingness to commit on these activities, higher the positive influence that definitive stakeholders can generate while performing a DT. On the other hand, if their attention to these patterns diminishes, given the salience they hold, the DT project may suffer in its development and completion.

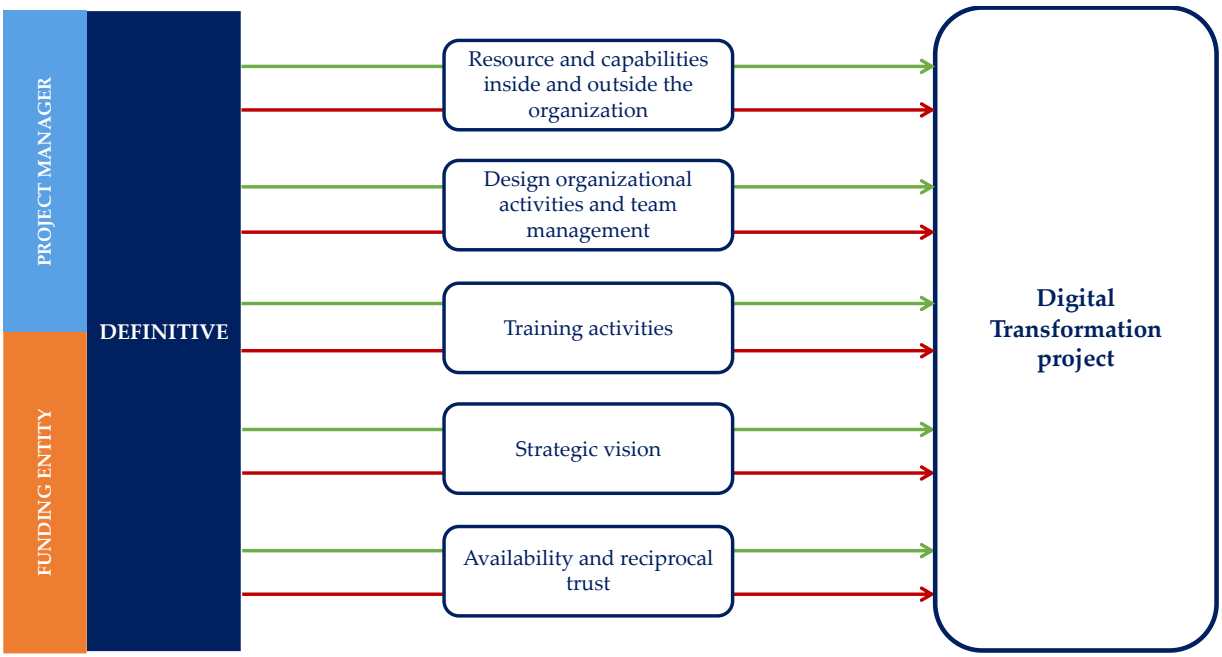

Figure 18. Influence of definitive stakeholders in a DT project

Dominant stakeholders can affect the advancement of a DT by (Figure 19):

- Being prepared to be engaged (employee engagement)
- Embracing orientation toward innovation
- Scheduling and managing frequent update and alignment between peers and other stakeholders involved

Similarly, to what previously presented for definitive stakeholders, if dominant stakeholders commit to the three patterns, they can positively impact the DT project, enabling it.

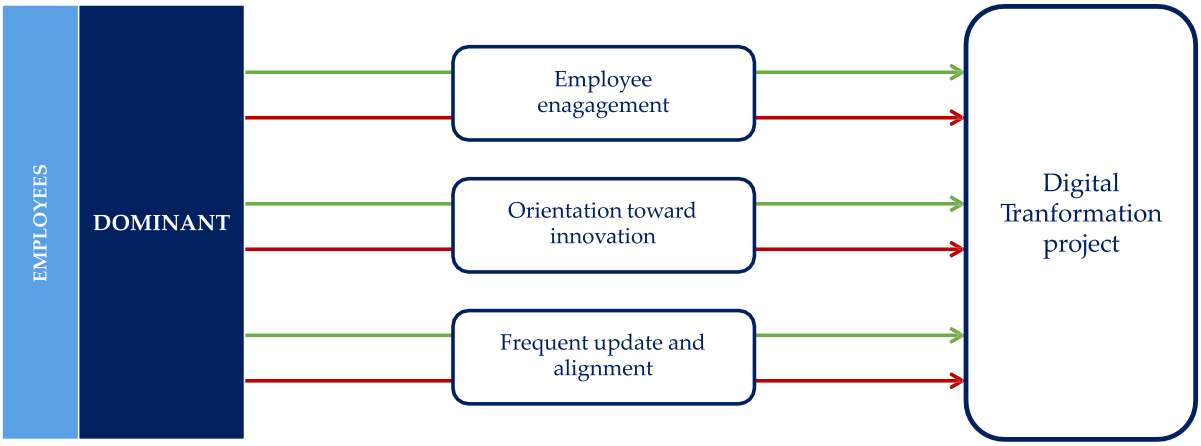

Figure 19. Influence of dominant stakeholders in a DT project

Discretionary stakeholders can influence and support a DT project by (Figure 20):

- Monitoring activities
- Providing a technical support

For this type of stakeholders, the same logic is applied even if the level of salience is lower compared to the other stakeholder classes.
In that case, while pursuing a DT project, if they dedicate their attention on monitoring and providing technical support, the influence they can produce will affect in a positive way the DT. On the other way round, neglecting the supporting and assessing activities, they could determine a slower and weaker DT.

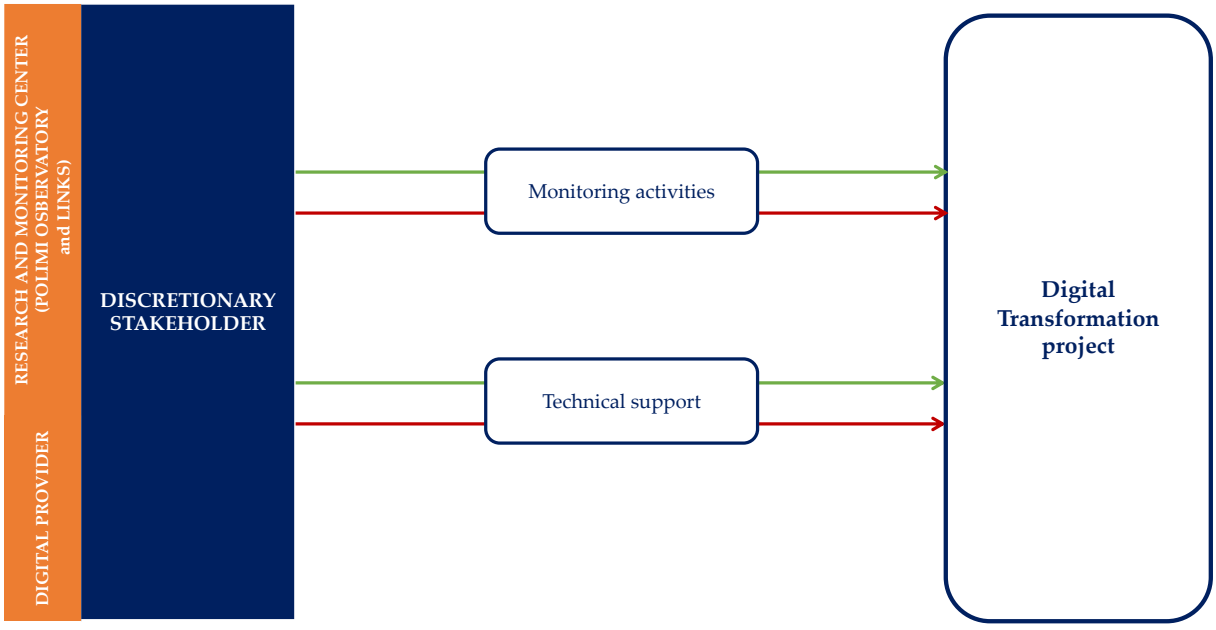

Figure 20. Influence of discretionary stakeholders in a DT project

Discretionary and dominant stakeholders could collaborate on the effective implementation of a DT project by (Figure 21):

- Sharing a common language
- Nurturing reciprocal trust and contamination
- Identifying of a digital-cultural mediator

This last finding aims to outline the strength that the relationship between these two types of stakeholders can generate on a DT project. Indeed, the complementarity of their roles and the proper pursuit of the indicated patterns, can induce and amplify a DT.

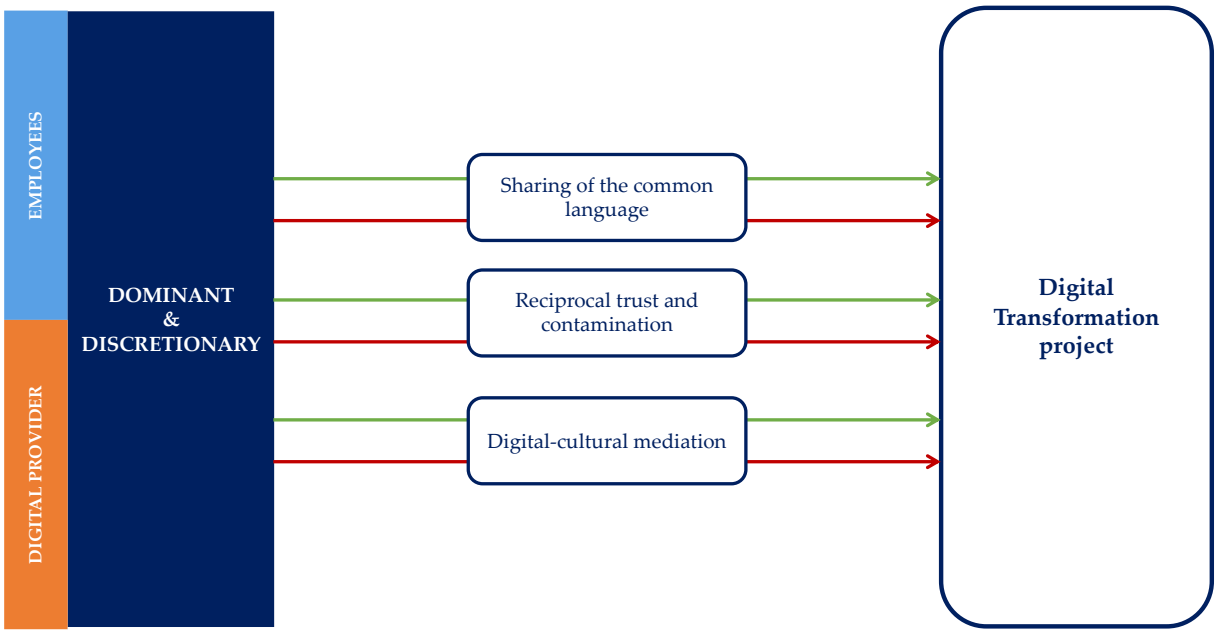

Figure 21. Influence of the relationship between dominant and discretionary stakeholder in a DT project

To better understand the degree of influence exerted by stakeholders, we provide a tachometer chart (Figure 19). This tool may be employed throughout the DT project to monitor the influence of the stakeholders and, consequently, to further put in place actions that would improve a DT project.

Figure 22 shows a generic representation of the tachometer in which four degrees of positive influence exerted by stakeholders are represented:

- Red: low positive influence;
- Orange: low-medium positive influence;
- Light green: medium-high positive influence;
- Green: high positive influence

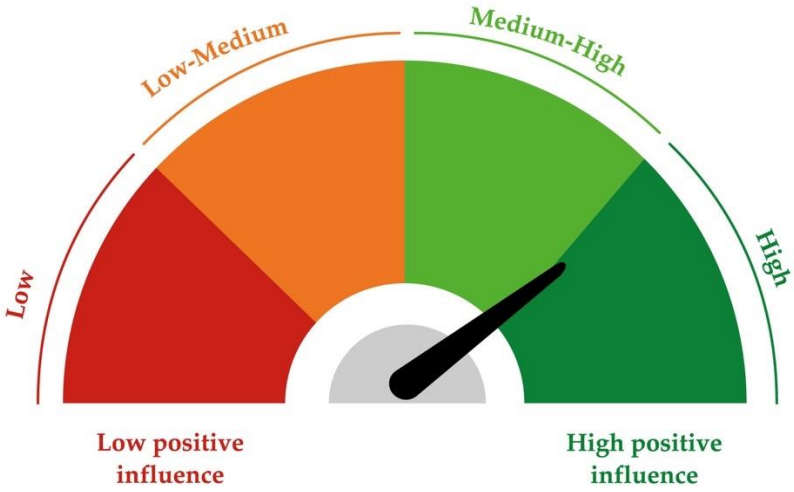

Figure 22. Qualitative tachometer for the level of influence of stakeholders in a DT

Here below, we offer an example of the application of the tachometer chart for the "Training activities" which is a distinctive pattern for definitive stakeholder (Figure 23).

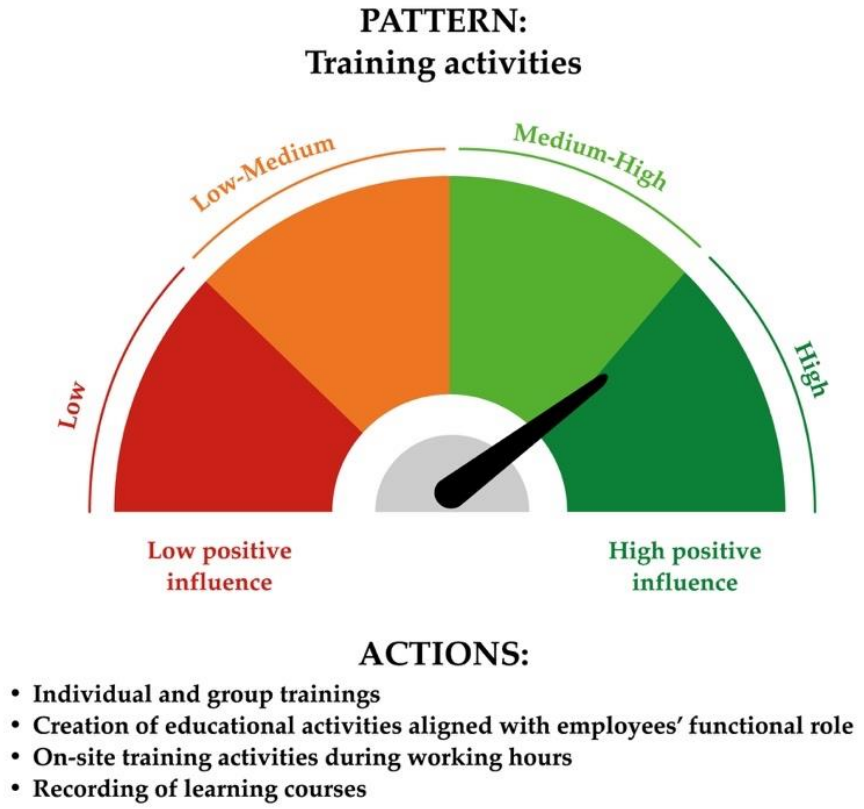

Figure 23.Example of application of qualitative application of tachometer

5.2. Second contribution

One stakeholder that cannot be ignored while discussing a DT project is the digital provider.

In particular, previous studies related to both DT phenomenon and the DT in the cultural institutions, define the "digital providers" as "partners" (Correani et al., 2020; Appio et al., 2021; Russo Spena and Bifulco, 2021) or "external consultant" (Agostino and Costantini, 2021).

Specifically, the partner label refers to those external stakeholders that accompany and assist other organizations in getting new data, capabilities, expertise, and competencies that are critical for the DT journey.

Considering the current literature and data collected from the analysis performed, our contribution aims to outline how the category of digital providers is not necessarily always an external stakeholder.

Indeed, the following passage demonstrates how those external stakeholders, that we named "digital providers", can be distinguished into "digital supplier" and "digital partner" and how these two groups of stakeholders have different roles.

In this perspective, it is possible to distinguished:

(i) those digital providers who simply provide the technology and are "external stakeholders", namely "digital supplier"

(ii) those digital providers that, even though at the beginning of the partnership were considered as "external stakeholder", then, thanks to the interpersonal relationships created, mutual esteem and concrete help to the organization, are considered as "internal stakeholders". We define these stakeholders as "digital partner".

This clear distinction is supported by the quotes gathered from data analysis that are visualized in the following table:

Cultural organization	Digital supplier	Digital partner
Case A		"Not just a supplier but a partner who would get involved with the growth entity"
Case B	"The digital supplier is precisely a pure supplier, that is, what they did could have been done by other suppliers as well"	"They are not suppliers to us but are technology partners" "It is a strategic partner that brings a contribution of concept and vision on what we are doing"
Case C	"The thing that really worked is finding a digital partner who really was not a supplier"	"We were very fortunate to meet a technology partner who was very aligned about us, about culture"
Case D	"The dialogue with the provider was much more complicated since he generally operates in the commercial or industrial sector"	"The provider has a great ability to collaborate because of previous collaborations with entities in the theater world"
Case E		"With respect to the three partners there was already a prior relationship of collaboration, an acquaintance, and so we really chose them as a partner"

Table 34. Distinction between digital supplier and digital partner

Therefore, our contribution leads to a new stakeholder identification that comprehends both internal stakeholder such as PM, employees and digital provider, and external ones as digital supplier, funding entity and research and monitoring center, as shown in Table 35.

Stakeholder identification	Class
PM	**Internal stakeholder**
Employees	**Internal stakeholder**
Digital partner	**Internal stakeholder**
Digital supplier	**External stakeholder**
Funding entity	**External stakeholder**
Research and monitoring center	**External stakeholder**

Table 35. New Stakeholder identification

Moreover, the digital partner acquires another attribute, the power one (Table 36).

Taking back the Pfeffer reinterpretation of Dahl's (1957) definition of power, the attribute is described as "*a connection between social actors in which one social actor, A, may persuade another social actor, B, to do something that B would not have done otherwise*" (1981: 3). Indeed, the digital partner supports and has the authority to drive the accomplishment of a DT plan through its robust competencies and knowledge in the technology and innovation field.

Therefore, the allocation of the power attribute to the digital partner's category brings an increase in the level of salience. As a consequence, digital partner does not belong anymore to the discretionary class, but to the dominant one in which both legitimacy and power are present. This result shown the concrete dynamism that may characterize stakeholders' role overtime, previously mentioned in the ST.

	Power	Legitimacy	Urgency	Class
PM	X	X	X	Definitive
Employees	X	X		Dominant
Digital partner	X	X		Dominant
Digital supplier		X		Discretionary
Funding entity	X	X	X	Definitive
Research and monitoring center		X		Discretionary

Table 36. New Stakeholder salience

5.3. Third contribution

The literature provides practical frameworks that can help organizations to implement a DT project. Schiuma et al. (2021), for instance, provide a model that outlines the essential leader's competencies to drive organizations toward DT. Also Correani et al (2020) proposed a framework that can assist businesses in putting their DT plan into practice and subsequently updating their business model.

Our framework stands out from the others since defines the steps that characterize the entire DT process. Moreover, it is a managerial framework that, recognizing the role of people at the center, clearly defines which stakeholders are involved in each phase and what are the actions performed by them that allow to facilitate the DT project.

DT affects and challenges managers in a variety of businesses and environments. The literature review highlights that talking about "the management of a DT project" does

not concern just the definition of the core competencies that leaders should embrace or the redefinition of the business model. Indeed, a DT project entails strategic and organizational implications that need to be managed as organizations must transform their operations and processes for a digital advancement.
In this context, managerial interest is growing (Hanelt et al., 2021). As a consequence, a number of actions must be taken and closely monitored by management in order to conduct a DT project without overlooking the role of the stakeholders involved.
Therefore, in this paragraph we provide a practical model that outlines the necessary steps to be implemented for pursuing DT projects.

The shape of the model that we have developed is circular, as the evidence shows that a DT process is not linear. As a matter of fact:

- The management of a DT project is a "work in progress" and it requires developing new capabilities, creating new infrastructure, and new ways of working. These aspects necessarily require continuous improvement which does not end but is iterative. Therefore, a circular model appears more suitable.
- The strategic choices (see phase 1 of the model) for implementing a DT project should be flexible during the entire process. The turbulence of the context where the organizations operate requires a continuous adaptation and redesign of the DT plan. This is an essential requirement for any kind of transformation, but it increases its relevance when organizations adopt digital technologies. Indeed, the latter can rapidly evolve asking for a continuous redefinition of the strategy set and pursued. Moreover, the COVID-19 pandemic's changes and challenges highlight the volatile nature of digital business ecosystems in which organizations are embedded.
- The DT project must be regularly reviewed. The alignment between the actions that have been completed and those that still need to be finished enables to identify critical issues, avoid repeating them and find improvement solutions.

As a result of the evidence gathered through primary and secondary data, and workshops that we attended, it was possible to design a punctual structure of the model. The core of this latter is the DT project which is composed of four phases:

1. Strategic Planning phase
2. Design phase
3. Implementation phase
4. Monitoring & refining phase

All these four stages will be clearly comprehended in the following paragraphs. However, before moving ahead, it is crucial to stress a final aspect.

Among all the considerations and points that have emerged from the stakeholders' words, a common aspect appeared from the data, which confirmed what is stated by today's literature, namely the essential role of people. The latter will be a shared feature throughout the four steps explained here below, as shown in Figure 24.

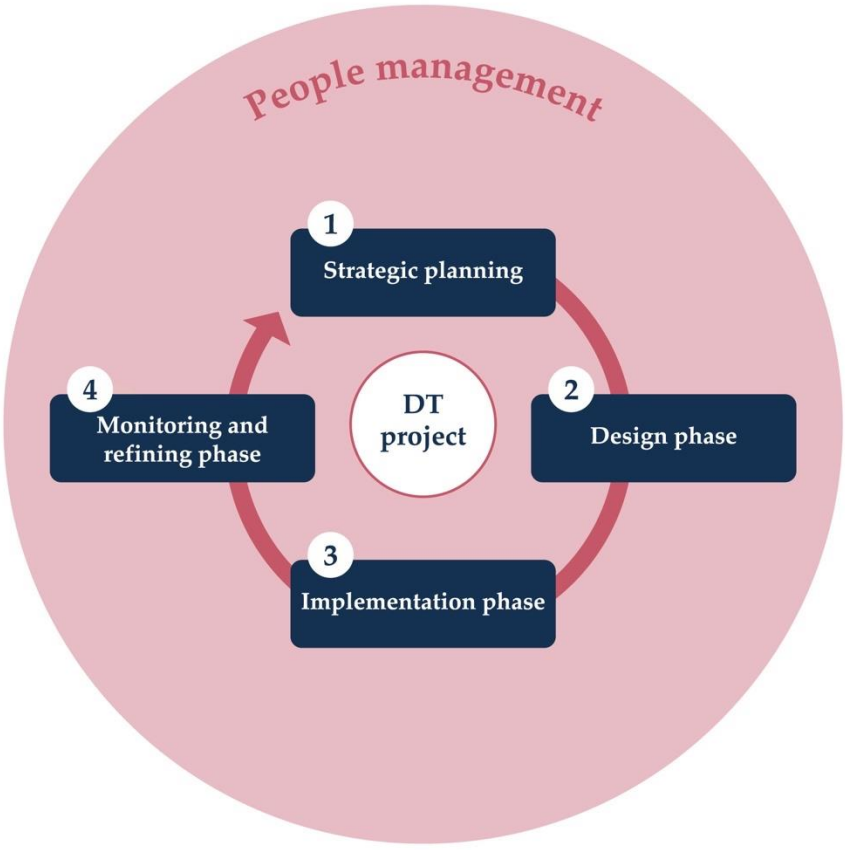

Figure 24. Circular model to DT

5.3.1. Strategic phase

The establishment of a good strategy is critical in a DT project for the development of the organization (Schiuma et al., 2022). This aspect is confirmed by our studies that indicate the starting point for an effective DT plan execution is the strategic planning.

The goal is to identify the organization's strategic objectives, guarantee they satisfy the demands and needs of the customers, and define the technological solutions and digital knowledge that characterize its products and services.

Generally, in this phase, the stakeholders involved are those who belong to the board of directors. This category of stakeholder was not interviewed. They were not intentionally involved in the data collection because we preferred to concentrate on those internal stakeholders who followed the entire DT project from a strategic and operational perspective.

As a consequence of this choice, we gathered information about the strategic phase thanks to the presence of the funding entity. The latter requested to each organization interested to apply to the call, to provide a multi-year innovation plan that would outline a strategic direction. Moreover, the entities were also asked to provide an executive project defining the implementation of the digital technologies. Concerning this, the PMs of each entity have been involved in the strategic planning to draft the documents required.

The information gathered from FCSP and the plenary session organized on this topic, allow us to recognize the importance of three main steps belonging to this phase (Figure 25):

1. **Perform the external analysis**: it consists of an analysis of the external context outside the organization to define the opportunities and threats. A tool that can be used is the PEST framework (Political, Economic, Social, Technological).
2. **Perform the internal analysis**: it is performed to analyze the strengths and weaknesses of the organization. A strategic tool that can be used is the SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. In this respect, already at this stage, it is worth paying attention to the strengths and weaknesses regarding the management of projects, processes, and people.
3. **Definition of the objectives** to be achieved as a result of the analysis carried out.

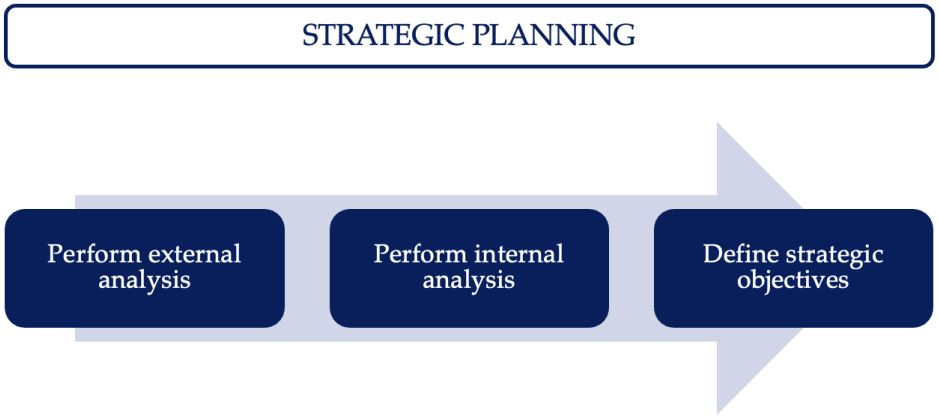

Figure 25. Strategic Planning phase

5.3.2. Design phase

DT has a direct influence on organizations' internal processes for producing output and, ultimately, their organizational architecture (Kretschmer and Khashabi, 2020). For this reason, it is worth introducing a second phase which is the organization design phase where mainly the PM is involved. These decisions can be also the result of an exchange of thoughts with other stakeholders involved in the DT project, for instance team leaders. This phase allows to prepare the necessary activities to achieve the set goals.
According to the data gathered, in this phase the focus should be on (Figure 26):

1. Define the resource and capabilities inside and outside the organization
2. Setting and organizing the training activities
3. Design the team management
4. Define the digital supplier and the digital partner
5. Define the digital mediator

In the following paragraphs, attention will be dedicated to each of the listed aspects.

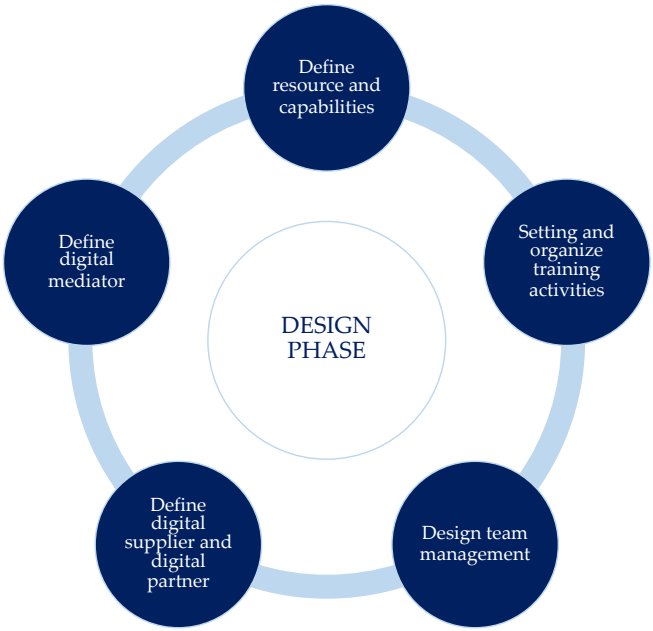

Figure 26. Design phase

1. **Define the resource and capabilities inside and outside the organization**

The definition of the available digital skill set within an organization is the starting point to understand the extent to which the current situation (AS-IS) deviates from the desired situation (TO-BE). This allows to define whether a skills adjustment is needed and whether this skills gap can be filled by training current employees or enrich the workforce with new resources with specific digital skills.
The stakeholder in charge to perform this activity are PMs, who are aware of the capabilities and attitudes of internal human resources.

Practical suggestions to conduct this part are:

- AS-IS mapping related to the available digital skill set inside the organization
- Skill gap Analysis comparing the AS-IS map with the TO-BE map
- Understand how to bridge the gap: training existing resources or deciding to allocate new resources

2. **Setting and organizing the training activities**

To take decisions, the PM could be supported by other stakeholders, such as employees, who have already experienced DT projects. Another actor with whom the PMs has to interface is the digital partner.

Obviously, considering the organizational structure of an entity, the implementation of a DT project is supported by the HR department. Even though, the latter has not been interviewed, we recognize the role within a DT when training activities need to be addressed.

Practical suggestions to conduct this part are:

- **Define the aim of the training activities**: PMs are in charge to define the training activities' objectives and clearly explain them to the people involved.
- **Define to whom the training activities are addressed**: for this activity, the PMs should describe the recipients of the training activities. To perform this task, they may rely on the support of team leaders who know the individual competencies of team members, thus, they are aware of which skills each employee should acquire or increase.
- **Outline the modalities of the training activities**: planning and scheduling of the training activities.
  In particular, the possibilities to address these training activities could be:
  - One-shot training: conduct training at the beginning, before starting activities or at the beginning of activities;
  - Carry out training throughout the project in parallel with the activities performed

The setting and organization of the training activities should be done considering also the choice related to the first point. Indeed, the objectives, the recipients, and the modalities could vary if they are targeted to people with already some background notions or people with no previous experience or expertise.

3. **Design the team management**

Organizations seeking to conduct a DT project focus on outputs and the processes required to attain them. This has significant consequences for task definition, assignment, and completion (Kretschmer and Khashabi, 2020).
In this context, the role of PMs is also related to the definition of work teams and the allocation of employees to each of them, considering their skills, expertise, and attitude toward innovation. In this phase, the PM could think to organize cross-functional teams as they turn out to be an important driver for the success of a DT project.

Practical suggestions to conduct this part are:

- Map the employee skills and expertise
- Creation of cross-functional teams
- Plan meetings to share and discuss best practices with other teams to set the teams' activities

4. **Define the digital supplier and digital partner**

In the literature emerges that external partners (Trischler and Li-Ying 2022; University of Wisconsin–Milwaukee et al. 2017) are part of the ecosystem that supports the organizations in reaching their goals. As shown in our second contribution, the concept of digital provider is broad, and according to our research, each organization should recognize the different roles and values brought by the digital supplier and the digital partner. Both aim to support the company in their operations but offer two different types of collaborations. The former provides support to the organization for the technical side thanks to their IT expertise and skills and generally, this kind of provider works closely with the organization's IT referent. The latter, instead, is a provider that supports the organization in managing strategic decisions beyond the technology's provision.

Practical suggestions to conduct this part are:

- Definition of needs in terms of:
  - Technological support (Digital supplier);
  - Technological and strategic support (Digital Partner)
- Choice of digital supplier and digital partner taking into consideration:
  - whether there have been previous collaborations (whether there is a trusting relationship that allows them to achieve further goals together);
  - although there have been no previous collaborations there is an understanding in terms of values, approach and mindset

5. **Define the mediator**

According to our research, in all cases emerged the important role of the "digital-cultural mediator". Actually, this role could be identified in other contexts rather than cultural one.
This person is responsible to manage the relationship between those leading the DT and all other stakeholders involved.
In particular, this person should mediate and facilitate between those who are more reluctant to transformation (due to their non-digital background, their reluctance to change, and their not-innovation-oriented mindset) and the DT project.

The facilitator position can be employed either by an external person such as the digital partner, or it can be a person within the organization such as a team leader.

Practical suggestions to conduct this part are:

- Mapping the main digital resistances to change considering that possible reasons may be related to:

  - background of a more humanistic and less technical nature;
  - older age of the people involved in the DT project;
  - lack of a mindset opened to innovation
- Collaborate with the PM to properly communicate the purpose of a DT project and plan workshops or training activities targeted to these reluctant people

5.3.3. Implementation phase

From the literature, it is important to recognize how all the effort employed to define a DT strategy brings no value if not properly executed (Correani et al., 2021).
Indeed, the formulation and design phase should be developed without neglecting the relevance of the implementation stage.
For this reason, a second phase that we have identified within our practical contribution is the implementation step. The aim is to translate the digital strategy previously formulated into a concrete plan and set of several actions.

More specifically, the actions that have been included and that are expected in such phase are (Table 27):

1. Educational activities
2. Reorganization of human resources
3. Nurture internal collaboration
4. Nurture the collaboration with digital provider
5. External sharing of best practices

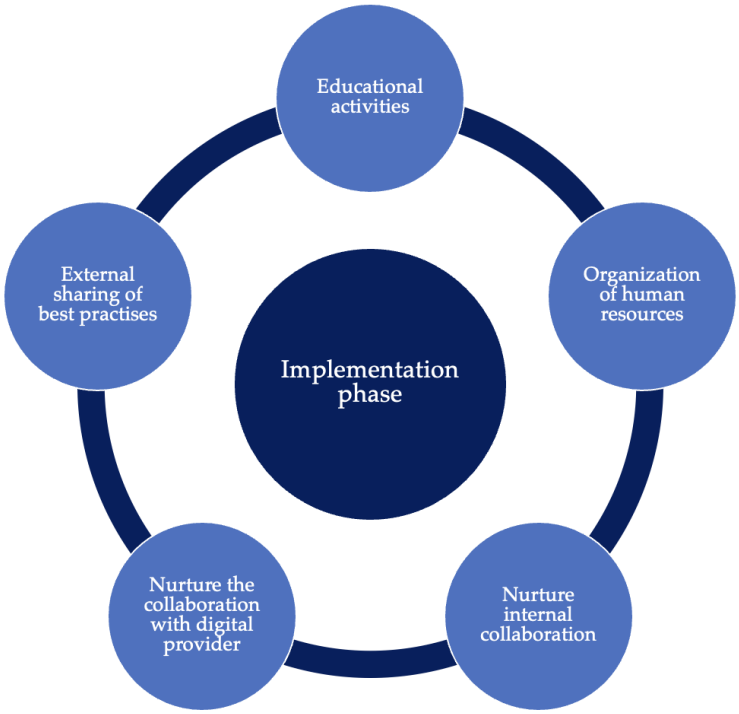

Figure 27. Implementation phase

In the following paragraphs, attention will be dedicated to each of the listed aspects.

1. **Educational activities**

Educational activities have been highlighted as one of the critical aspects to which attention should be dedicated throughout the whole process.

Concerning this, the key stakeholder that we expect to oversee training is the PM in collaboration with HR. Specifically, their role is to organize and manage ongoing educational activities that, subsequently, are assigned under the responsibility of department's heads.
The management of training activities during the life of the project aims to re-plan and reorganize training based on the needs of the project and the individuals involved. Indeed, during the project, new needs may emerge that were not identified at the beginning while performing the design phase.

For the training issue during the implementation stage, we propose some functional suggestions.

Practical suggestions to conduct this part are:

- **Implement training options for the stakeholders involved**: providing courses during working hours allows employees to avoid overload and better embrace

training times. In this respect, one-site or hybrid training activities during working hours are preferred. The interviews revealed how online format should not totally replace in-person training. For this reason, it is good for training to be conducted in a blended mode that enables greater involvement and overcomes barriers that can be established in a full remote mode. The PM must organize both individual courses (one-to-one meetings) and group courses (group training meetings):

  - **One-to-one meeting**: enabling individual meetings between digital providers and the stakeholders involved. These learning one-to-one meetings can be carried out by the organization's internal IT contact employee or by the technology provider. Moreover, these meetings could also increase the commitment and personal involvement to the project undertaken;
  - **Group training meetings**: these can foster the exchange of thoughts between the trainees, beyond the increase of fellowship among team members;
  - **Training on the job:** leverage on the training that is acquired by carrying out daily activities

- **Recording of learning courses**: for both in-person meetings and online courses, it can be very supportive for employees to provide recordings of learning moments. This can ensure a continuous access to the material at any time to solve concerns or better understand the technical functionality of the tool integrated.
- **Guidelines for the digital solutions' integration**: after initial training, it can be offered a guidebook with all the necessary guidance to have a reliable and accessible source at any time. This material should contain all the functional steps that may reveal helpful for employees when executing future DT processes. Moreover, they could also be useful for those people who joined the project when it was already started.

2. Reorganization of human resources

The data collected showed the importance to question organizational choices considering the people involved. This flexible attitude from the management perspective allows to respond to requests and needs that arise as the project progresses. Therefore, maintaining the internal structure, exactly as it was intended, could drive to excessive rigidity of the entity. This is also true for choices related to the allocation of people to teams work or departments.

In this context, the PM should investigate whether the teams need to be reorganized in terms of human resources involved. For instance, new needs may result in the demand to expand work teams and add new resources.

Practical suggestions to conduct this part are:

- **Analysis of the teams' needs through continuous updates**: PMs can grasp directly from the team members' specific needs related to the organic reorganization. Through these alignments, the PMs can easily detect how to intervene. Practical actions may involve the shift of internal resources or acquisition from outside
- **Prepare and provide an integration program for new human resources**: performing this, hired people, even if not involved from the beginning to the DT project, will understand the purpose of the transformation and the related procedures. Give to them guidelines (*i.e.*, book, guide) and individual instructions could facilitate their integration into a project already underway.

3. **Nurture internal collaboration**

When translating the DT plan into practice, another relevant aspect is to enhance internal collaboration to maximize the value generated by each human resource.
To reach this aim, it is important to leverage on the internal sharing of know-how enabling, as one of the referees pointed out, a "cascade effect" that can spur the adoption of new digital solutions. Indeed, we found that the ripple effect turns out to be a great enabling factor in getting as many people involved as possible.
In addition, encouraging these internal collaborations can help to overcome organizational resistances that might develop because of individual struggles in embracing new technological tools.

The main actors involved in this part are PMs and the employees. This collaboration ensures everyone keeps pace with the transformation and is prepared for the achievement of fixed objectives.

Practical suggestions to conduct this part are:

- **Schedule frequent updates within the working team**: this can allow employees to understand each peer's needs and requirements by making themselves available to those who need support. Within an age-varied team, the younger ones can help those who have greater resistance to digital tools. In addition, mutual collaboration between people with different backgrounds enhance the overall involvement;
- **Creation of channel communication**: offer platform or alternative programs through which employees can smoothly communicate and share daily information. For instance, the usage of Teams or Skype group where employees can easily chat with others of the same or other departments could enable inter-functional communication.

4. **Nurture the collaboration with digital provider**

Another aspect peculiar to the implementation of a DT process is the management of the relationship with the digital provider considering both the digital supplier and digital partner.
It is clear that the stakeholders mostly involved in this aspect are both employees and digital partners.

Practical suggestions to conduct this part are:

- **Schedule meetings between the organization and the digital supplier**: to understand and offer the right technical support;
- **Schedule meetings between employees and digital partners**:
  - Establishment of a common language;
  - Understanding the functional criticalities that employees could face every day with the adoption of new digital solutions;
  - Internalizing the digital partner to facilitate the adoption of employees' perspectives reduces the possible gap that could arise since the different backgrounds and languages possessed;
  - Providing an internal perspective to digital partners, it can enable the improvement of the technological solutions and their adaptation according to the specific requirements.

5. **External sharing of best practices**

The collaboration and comparison should not be limited exclusively to an internal dimension within the organization. It is therefore important to find moments for the sharing of best practices and know-how with external stakeholders.
Even if these moments can be performed during the organizational design phase, they are particularly crucial in the implementation one. They can represent work-in-progress comparisons to solve common issues that can be experienced by those pursuing a DT.

The result would be the creation of synergies with digital partners and external entities, thus enabling a knowledge-sharing culture.

Practical suggestions to conduct this part are:

- **Attend workshops, roundtables or conventions** with organizations embracing a similar DT project. These represent moments in which some entities can

suggest to others possible ways to overcome difficulties previously addressed. For instance, if an organization is facing some criticalities with the adoption of new digital tools, they can receive support and suggestions from other organization that have already integrated that tool into their operations. These meetings could be:

- Organized by the organization itself inviting other entities;
- Organized by external entities such as universities and public or private associations. These can offer unique opportunities to enter in contact with national or international inspiring subjects.

5.3.4. Monitoring and refining phase

The purpose of continuous monitoring is to assess how the organization is progressing against the set goals and to understand if there are new objectives that can be integrated. As a result, the monitoring phase would allow the organization to redefine its priorities and direction.
Therefore, distinguishing features about the development of a DT process are agility and flexibility, so the capacity and readiness to change in response to outcomes.

The stakeholders that should take care of this phase are PMs whose role is to clearly communicate the measures of monitoring previously set and how the results are going to be displayed. The choices of PMs can be supported by the activities of research and monitoring employed by external actors.

The following list outlines the steps that have been identified relying on the evidence gathered. Specifically, monitoring and refining should include (Figure 28):

1. Team and personal achievement;
2. A fine-tuning new moment of planning and design

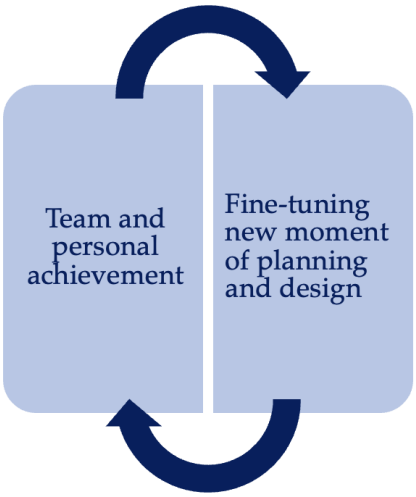

Figure 28. Monitoring and refining phase

1. **Team and personal achievement**

Given that the DT process is a circular long-term journey, it is worth having a continuous improvement through interim milestones.
Milestones have several benefits: firstly, they enable to detect problems and make any corrections before it is too late. Secondly, they can increase the involvement of individuals, especially those more reluctant to change. Indeed, the latter will be asked to proceed in small steps having a way to understand more gradually the transition undertaken.

The direct stakeholders involved in this are PMs who have all the attributes to set and manage the milestone itself.

Practical suggestions to conduct this part are:

- **Interim milestones**: provide feedback to improve the next steps. Team members can rely on specific dashboards to visualize their results and their areas of improvement.
- **Final milestones**: chance to gather qualitative data, through presentations and interviews, as well as quantitative data through KPIs.

2. **A fine-tuning new moment of planning and design**

The monitoring activity will reveal useless without a proper organizational attitude to refine the strategy to pursue a DT plan.
This step concerning the sharing experience with other actors in the same field can offer important insights to refine their future strategy and opportunities.

Practical suggestions to conduct this part are:

- Sharing of best practices and collaboration:
  - Internal: between internal stakeholders;
  - External: with other external organizations pursuing DT projects. On these occasions, organizations may find inspiration for the new path to undertake and trends to be aware of.

In the model that we have presented, the attention toward people should drive managers in any sector to properly plan, implement and refine a DT undertaken.

We have highlighted from the first contribution, how actions performed by stakeholders involved, influence a DT.
In this context, the capability of managers to properly recognize the different phases of the process and the actions required by the stakeholders, results to be essential in an implementation of a DT project.

To sum up, the unique cross-cutting element that emerges in each phase is people management. In particular, our results point out that:

- For the strategic phase, it emerges in the internal analysis where each organization should focus on its strengths and weaknesses. Among these, for a DT project it is essential to consider the strengths and weaknesses related to human resources in terms of skills and attitude toward innovation.
- For the organizational design phase, the relevance for people management has been raised for all the actions presented. Indeed, the role of PMs should consider both the employee and the kind of relationship to establish with the digital supplier and digital partner.
- Also for the implementation, the management of the people emerged to be a key aspect. Indeed, in this phase, it is relevant to oversee that what was defined in the planning phase is actually carried out.
- Lastly, for the monitoring and refining step, there should be a commitment to recognize the results achieved by the stakeholders involved, but at the same time favor and encourage new objectives.

All these considerations are summarized and visualized in the Figure 29. Specifically, for each phase, the actions related to people management are those written in orange.

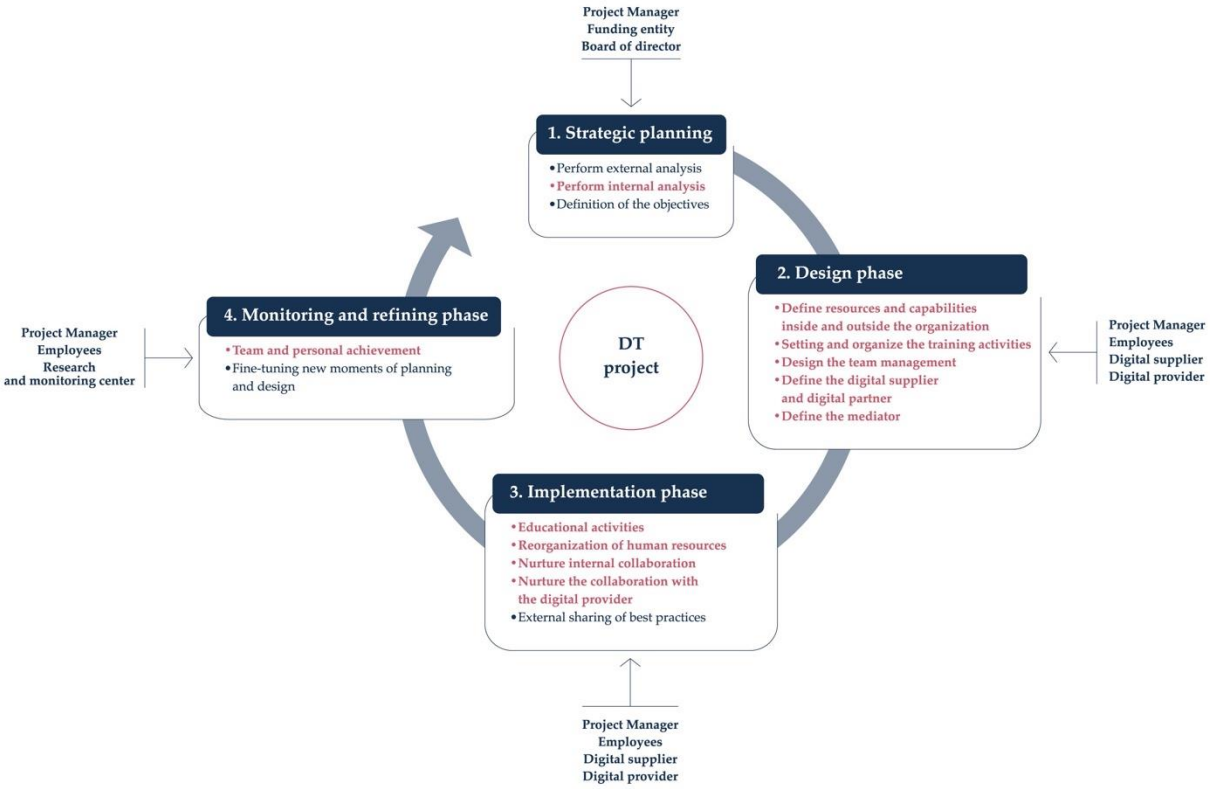

Figure 29.Circular model for DT

6 Conclusion

This Chapter aims to outline the conclusion of our research.
In the first part of this chapter, the main messages and the academic and practitioner contributions are illustrated.
In the second part of this chapter, we discuss research limitations as well as the main directions for further studies.

6.1. Key messages

Our research sheds light on a variety of complex phenomena. The primary aim was to delve into and expand the theoretical understanding of the extant debate at the intersection between DT and cultural institutions.

The study's contributions, given the centrality of people's role in a DT project, bring value not only for cultural institutions, but also for organizations operating in other sectors.

As reported in Chapter 1, this research answers to three main Research Questions:

- RQ1: *Which are the stakeholders involved in a DT project and how do they influence its development in terms of enabling factors?*
- *RQ2: "Which is the role played by a digital provider?"*
- *RQ3: "What are the steps for the development of a DT project considering the various stakeholders involved under a managerial perspective?"*

By leveraging on the Stakeholder Theory, once we identified the stakeholders involved in a DT project, we focused on the influence they exert on it. The evidence gathered allow us to formalize a set of actions that stakeholders should implement to enable the DT project. The set of actions can be both tangible or practical (i.e. definition of each employee's role and creation of cross-functional teams) and intangible or attitudinal-oriented (i.e. flexible attitude and mindset for innovation).

Subsequently, the research focused on a specific kind of stakeholder: the digital provider, which appears to be particularly relevant. Previous literature cites this stakeholder, but it is considered as "external" to the organization. The evidence gathered allows us to distinguish its role between those agents who are "digital suppliers", hence external stakeholders, and those that, instead, are consider internal stakeholders and we labeled as "digital partners" due to the close relationship established with the organization that pursue the DT project.

Lastly, the third contribution is a practitioner-oriented model that could support the DT project under a managerial perspective. It provides the main phases of the process, the stakeholders involved in each phase and the set of actions (pattern) that they can implement to enable the DT process.

6.1.1. Academic Contributions

From the literature review emerged that, even if there are studies concerning the management aspects about DT (Schwarzmüller et al., 2018; Wrede et al., 2020), there

is a scarcity of study on this topic in the cultural institutions. Therefore, taking as empirical context the cultural institutions that implement a DT project, through our research, we provide a managerial support for this domain. At the same time, recognizing the key role of people that is transversal to all contexts where a DT project is implemented, this has allowed us to extend the contributions from the cultural domain to others.

A first theoretical and academic contribution has been developed by leveraging on the ST which is a managerial theory selected to identify and describe those stakeholders that deserve or demand a management attention. Indeed, according to the level of salience, managers are able to recognize those stakeholders that have a greater influence on the DT development and, thus, require managerial priority.

Indeed, we have applied the ST model (Donaldson and Preston, 1995) to the data gathered. This has been carried out by placing the DT project as the central part of the model, instead of the firm itself.
While the arrows represented in the ST model are in both directions with the same shape, size and equidistant to the firm, in our model the arrows provided are unidirectional, only from the stakeholders to the DT project. This reworking is in line with the RQ1 since it allows us to graphically identify who the stakeholders involved are and how they influence a DT project in a cultural context.
In particular, how they influence a DT project is shown by the presence of "patterns" placed between the stakeholders and the DT project.
On the one hand, the positive stakeholder's influence is represented by a green arrow, on the other hand a low or absent degree of positive influence is represented through red arrow.

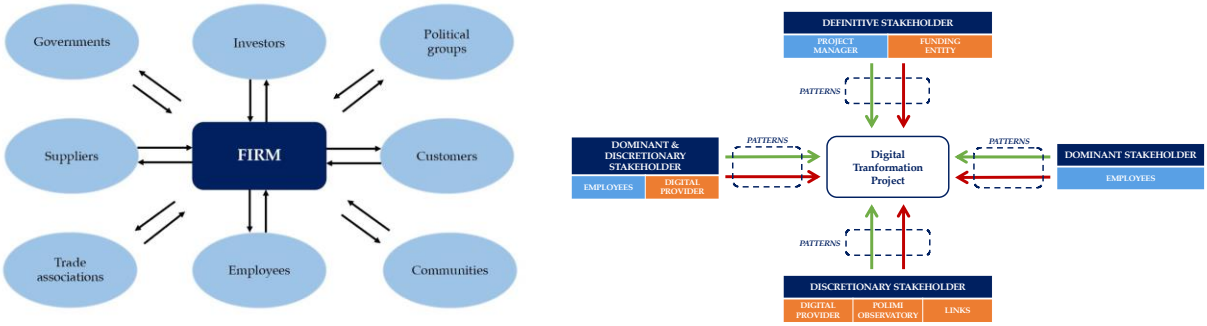

Figure 30. Comparison between Stakeholder Model (Donaldson and Preston,1995) and our elaboration

The second academic contribution of our thesis is related to the role of digital provider. From the data gathered, this stakeholder does not necessary categorized as an external one, but it can also be an internal stakeholder. This depends on the type of relationship established with the organization. Indeed: i) those cases where the stakeholder is just

a supplier of the technology is named as "digital supplier", thus an external stakeholder; ii) those stakeholders initially defined as external one, thanks to mutual trust and reciprocal contamination, they become internal stakeholders defined as "digital partners" and not anymore "digital suppliers".

This contribution leads to a new stakeholder identification and stakeholder salience that are compared in the following tables.

Stakeholder identification	Class
PM	Internal stakeholder
Employees	Internal stakeholder
Digital provider	External stakeholder
Funding entity	External stakeholder
Research and monitoring center	External stakeholder

Stakeholder identification	Class
PM	Internal stakeholder
Employees	Internal stakeholder
Digital partner	Internal stakeholder
Digital supplier	External stakeholder
Funding entity	External stakeholder
Research and monitoring center	External stakeholder

Figure 31. Comparison between old and new stakeholder identification

	Power	Legitimacy	Urgency	Class
PM	X	X	X	Definitive
Employees	X	X		Dominant
Digital provider		X		Discretionary
Funding entity	X	X	X	Definitive
Research and monitoring center		X		Discretionary

	Power	Legitimacy	Urgency	Class
PM	X	X	X	Definitive
Employees	X	X		Dominant
Digital partner	x	x		Dominant
Digital supplier		X		Discretionary
Funding entity	X	X	X	Definitive
Research and monitoring center		X		Discretionary

Figure 32. Comparison between old and new stakeholder salience

6.1.2. Managerial Contributions

The managerial contribution that we provide is not strictly related to the cultural context, but it offers a broader scope of application also in other fields where a DT project is developed. Indeed, it consists of a managerial framework – roadmap – that guide and support the progress of a DT project.
It is characterized by a circular path composed by four phases (Strategic phase, Design phase, Implementation phase, Monitoring and refining phase) in which the people management plays a cross-cutting role.

Overall, after having clarified the academical and managerial contributions of our research, a final output is offered to the reader.
As mentioned in the Chapter 2, the theory provides different managerial implications based on the kind of stakeholder under analysis (Table 19, Table 20, Table 21).

Therefore, we have decided to deploy the theoretical lens to stress the managerial attention toward different classes and typologies of stakeholders that are specifically involved in a DT project.
Indeed, once the stakeholders involved and the degree of influence they exert are identified, managers have a way to understand the priorities related to each of these actors and then, valorize the contribution that each of them could offer to the organization and to the DT project pursued.

In the following tables (Table 37, Table 38, Table 39, Table 40), it is emphasized the different managerial attention that should be placed according to the type of influence that the stakeholder exert. Indeed, only by recognizing and respecting each individual's role, managers could enhance and maximize their value, bringing people to the center of any organizational interest.

STAKEHOLDER CLASS	STAKEHOLDER TYPOLOGY	MANAGERIAL IMPLICATIONS
CLASS HIGHLY SALIENT STAKEHOLDERS	DEFINITIVE	This class of stakeholders owns all the three attributes. Therefore, a managerial attention should prioritize them. For instance, both PMs and the funding entities of a DT project have a high influence due to their strategic and organizational roles.

Table 37. Definitive managerial implications

STAKEHOLDER CLASS	STAKEHOLDER TYPOLOGY	MANAGERIAL IMPLICATIONS
CLASS EXPECTANT STAKEHOLDERS (Moderately Salience)	DOMINANT	The presence of both legitimacy and power leads managers to give attention to the role played by these stakeholders given the significance of the relationship with the organization. Indeed, employees should be actively involved in the design and development of DT project playing a central role in the whole journey.

Table 38. Dominant managerial implications

STAKEHOLDER CLASS	STAKEHOLDER TYPOLOGY	MANAGERIAL IMPLICATIONS
CLASS LATENT STAKEHOLDERS (Low Salience)	DISCRETIONARY	The absence of power and urgency attributes leads managers to decide whether or not to establish and active relationship with such stakeholders. For instance, Research and Monitoring centers have a supporting role in the development of a DT project and it's a managerial choice the level of involvement of such stakeholder.

Table 39. Discretionary managerial implications

STAKEHOLDER CLASS	STAKEHOLDER TYPOLOGY	MANAGERIAL IMPLICATIONS
CLASS EXPECTANT STAKEHOLDERS AND LATENT STAKEHOLDERS (Moderately and Low Salience)	DOMINANT and DISCRETIONARY	Even though the theory does not provide the relationship between the two classes, our contribution goes in this direction. Indeed, from the data emerged the necessity to give managerial attention to this relationship by nurturing and valorizing it. This collaboration could boost the successful development of a DT project.

Table 40. Dominant and discretionary managerial implications

6.2. Limitations and future research

This section aims to emphasize the wide scope for development and further improvement.

Despite this research provides contributions at the academic, practitioner and managerial level, it has some limitations that leaves and suggests various further avenues of scholarly investigation.

First possible future research is related to the analysis of how a DT project influences the stakeholders involved.
As explained in the discussion section of our first theoretical contribution (§ 5.1, Figure 18), the arrows that link the stakeholders involved in the DT project are unidirectional. Indeed, our study investigates how stakeholders influence a DT project and not the other way around. The reason is based on the fact that we interviewed different stakeholders at the beginning and during the development of the projects, and not at the end. Therefore, how the implementation of a DT project affects stakeholders may allow us to complete our contribution. Thus, the updated model would be characterized by bidirectional arrows that go from the stakeholders to the DT project, but also from the DT project to the stakeholders.

Furthermore, with the aim of providing a model as complete as possible, an investigation of the HR role in enabling a DT project can bring added value to the managerial contribution of the framework.
Even though this thesis focuses on people and recognizes them as a key driver in developing a DT project, what this research does not address is the role of the HR department. Indeed, an HR department is made up of groups of work that support the development of a career path for their employees for what concerns the learning part, the rewards, the talent development, and performance measurement.
In this context, the research could focus on the actions that HRs may implement to enable a DT project.

Lastly, another possible path for future research is related to the stream of analysis that aims to compare the enabling factors that influence a DT project in private organizations and in public ones. In our research, as shown in Table 24, we have as sample of analysis organizations with both a public and private governance. Our decision to not follow this stream was due to the nature of the five cases selected. In particular, just one organization (Case E) belongs to the public category, while all the others are private organizations (Case A, Case B, Case C, Case D). Therefore, the comparison between these two categories (public and private) would not be homogenous and, thus, the results would be unbalanced.

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Appendix

Interviews protocols

PM (Figure 1, Figure 2)

Parte 1 – Domande di carattere generale

- Potrebbe descrivere brevemente come sta andando il progetto?
- Quali sono le attività su cui vi state focalizzando?

Parte 2 – Impatto del progetto sull'ente

- Potrebbe descrivere gli impatti che il progetto sta avendo sui processi?
- Quali invece sulle risorse umane?

Parte 3 – Fattori Critici e Abilitanti

- Quali ostacoli/difficoltà avete incontrato?
- Quali sono invece i fattori che stanno abilitando e facilitando l'implementazione?
- Quali benefici state riscontrando? Quali sono i benefici che vi aspettate nel futuro?

Parte 4 – Relazioni con soggetti terzi e impatti sul territorio

- Come sta andando la collaborazione con il provider?
- Il progetto ha abilitato collaborazioni con altri enti?
- Quali sono le ricadute del progetto sul territorio?

Figure 1. Project manager interview - first round

Parte 1 – Domande di carattere generale

- Potrebbe descrivere brevemente come si è sviluppato il progetto, anche rispetto agli obiettivi individuati inizialmente?
- Quali sono le attività che vi hanno impegnato maggiormente?

Parte 2 – Impatto del progetto sull'ente

- Potrebbe descrivere gli impatti che il progetto ha avuto/sta avendo sui processi e sulle risorse coinvolte (nuovi ruoli e/o processi, riallocazioni ...)?
- Come avete strutturato la diffusione di competenze all'interno dell'ente (es: workshop e incontri formali, momenti informali...)?
- Il progetto ha comportato una ridefinizione della struttura organizzativa?

Parte 3 – Relazioni con soggetti terzi

- Qual è stato il ruolo di CSP e del finanziamento nel processo di digital transformation dell'ente?
- Quanto la relazione con il provider ha influito (es: conoscenze tecniche, supporto nello sviluppo...) nel processo di digital transformation?
- Il progetto ha abilitato collaborazioni con altri enti e/o ricadute sul territorio?

Parte 4 – Fattori Critici, Abilitanti e sviluppi futuri

- Quali ostacoli avete incontrato e come li avete affrontati?
- Quali fattori hanno invece abilitato lo sviluppo e quali benefici state riscontrando?
- Quali sviluppi vi immaginate dopo la conclusione del progetto?

Figure 2. Project manager interview - second round

Employee (Figure 3, Figure 4)

Parte 1 – Domande di carattere generale

- Potreste descrivere brevemente il vostro ruolo all'interno del progetto?
- Che percentuale del vostro orario lavorativo è dedicata al progetto?
- Che impatto sta avendo il progetto sulla struttura e sulle attività del Teatro?
- Quali invece sui ruoli e sulle competenze delle risorse umane dell'ente?

Parte 2 – Progetto X

- Come stanno andando le attività di implementazione e su quali vi state concentrando?
- Come sono andata le prime restituzioni dei due spettacoli accessibili?
- Come sono andate le attività di formazione?
- Come sta andando la relazione con i partner di progetto (tecnologici e non)? Quali elementi stanno facilitando e/o ostacolando il rapporto?

Parte 3 – Fattori critici e abilitanti

- Quali sono le difficoltà che state incontrando in questo processo di trasformazione? Come le state approcciando?
- Quali sono le leve (es: valori condivisi, momenti di incontro, legami con i colleghi...) su cui state agendo per rendere effettiva l'implementazione del progetto?
- Quali benefici state già riscontrando? Quali sono quelli che vi aspettate per il futuro?

Figure 3. Employee interview - first round

Parte 1 – Domande di carattere generale

- Potrebbe descrivere brevemente come si è sviluppato in questi mesi il progetto, anche rispetto agli obiettivi e alle attività previste inizialmente?
- Che impatto ha avuto, e sta avendo, il progetto sulle attività del Centro?
- Quanto la relazione con gli stakeholder esterni (CSP, enti, provider...) ha influito nel processo di digital transformation?

Parte 2 – Impatto del progetto su attività e competenze

- Potrebbe descrivere gli impatti che il progetto ha avuto nello svolgimento delle sue attività quotidiane?
- Potrebbe descrivere gli impatti che il progetto ha avuto sulle sue competenze?
- Come le attività che ha svolto durante il progetto hanno influito (ruoli, attività, momenti di confronto...) sulle relazioni con i colleghi?
- Come il progetto ha cambiato il modo di lavorare all'interno dell'ente?
- Come sono andate le attività di formazione?

Parte 3 – Fattori Critici e Abilitanti

- Quali sono le difficoltà che avete incontrato in questo processo di trasformazione?
- Quali fattori hanno abilitato lo sviluppo e quali benefici state riscontrando?
- Quali sviluppi si immaga dopo la conclusione del progetto (nuove attività, competenze da acquisire, ...)?

Figure 4. Employee interview - second round

Digital provider (Figure 5, Figure 6)

Parte 1 – Domande di carattere generale

- Potrebbe descrivere brevemente le attività e il contesto in cui opera la vostra agenzia (es: servizi offerti, dimensioni e mercato di riferimento, ...)?
- Come siete entrati in contatto con l'ente e quali sono le ragioni che vi hanno spinto a partecipare al bando SWITCH?
- Quali sono le peculiarità del rapporto con un ente come Fondazione?

Parte 2 – Specifiche del progetto

- Potrebbe descrivere brevemente come sta andando il progetto?
- Come sono andate le attività di formazione?
- Come la partecipazione al bando e l'implementazione del progetto sta impattando sulla vostra organizzazione? Quali ricadute vi aspettate nel futuro?

Parte 3 – Fattori critici e abilitanti

- Quali ostacoli/difficoltà state incontrato? (es. progettazione a distanza, difficoltà a fare sopralluoghi frequenti, ...)?
- Quali sono invece i fattori che stanno abilitando e facilitando l'implementazione (es. coesione del team di progetto, parlare lo stesso *linguaggio* in termini di approccio al mondo teatrale, ...)?

Figure 5. Digital provider interview - first round

Parte 1 – Domande di carattere generale

- Potrebbe descrivere brevemente come sta andando il progetto, anche rispetto agli obiettivi individuati inizialmente?
- Quali sono le attività che vi hanno impegnato maggiormente?

Parte 2 – Progetto "X"

- Come sta andando il dialogo e il confronto con il Museo?
- Come sta andando il dialogo e il confronto gli altri partner tecnologici coinvolti?
- L'implementazione del progetto "X" ha ulteriormente impattato sulla vostra organizzazione?

Parte 3 – Fattori Critici e Abilitanti

- In questa seconda fase, quali ostacoli avete incontrato e come li avete affrontati?
- Quali fattori hanno invece abilitato lo sviluppo e quali benefici state riscontrando?
- Quali sviluppi vi immaginate dopo la conclusione del progetto?

Figure 6. Digital provider interview - second round

FCSP (Figure 7)

Parte 1 – Domande di carattere generale

- Un concetto che emerge nel "Documento Programmatico 2021-2024" è quello di "Gruppo Compagnia", in questo contesto ci sono "Fondazione 1563 per l'Arte e la Cultura" e "Fondazione LINKS", potreste parlarci maggiormente di questi enti non commerciali e indipendenti?
- Che tipo di legame hanno questi due enti con il bando SWITCH?

Parte 2 – Bando SWITCH: motivazioni e impatto su Compagnia

- Quali sono i riscontri che state avendo dopo questo primo anno rispetto alle motivazioni che hanno portato FCSP a sviluppare il bando?
- Quali attività svolgete e ritenete importanti per raggiungere le finalità che il bando SWITCH si propone? In che modo la vostra presenza influisce nell'ottenimento degli obiettivi preposti?
- Il bando SWITCH ha comportato una riorganizzazione delle risorse interne?
- Quali sono i risultati che, all'interno di FCSP, state raccogliendo a oggi e quali quelli che vi aspettate alla conclusione del bando?

Parte 3 – Bando SWITCH, Ruolo FCSP e relazione con attori coinvolti

- Nel contesto di bando SWITCH, avete momenti di confronto con gli enti coinvolti? In caso affermativo, ogni quanto sono programmati?
- Quali sono i vantaggi che evidenziate dal confronto con gli enti, anche rispetto all'implementazione di bandi futuri?

Parte 4 – Fattori Critici, Abilitanti

- Quali sono i fattori che pensiate abbiano favorito gli obiettivi da voi preposti per il bando SWITCH?
- Quali sono le principali criticità che hanno ostacolato il raggiungimento degli obiettivi da voi preposti per il bando SWITCH?

Parte 5 – Sviluppi futuri

- Quali sono le prospettive dopo il bando SWITCH?
- Avete intenzione di implementare ulteriori bandi sul digitale?
- Avete intenzione di implementare ulteriori bandi che utilizzino il metodo applicato per il bando SWITCH?
- Ci sono risorse che si stanno occupando degli sviluppi futuri? Da quanto tempo?

Figure 7. FCSP interview

Links Foundation (Figure 8)

Parte 1 – Domande di carattere generale

- Quali sono le ragioni per cui siete coinvolti nel bando SWITCH? Quali obiettivi vi siete preposti?
- È la prima volta che LINKS è coinvolto nel project management di un bando in ambito culturale?

Parte 2 – Bando SWITCH: impatto su LINKS

- In riferimento al bando SWITCH quali sono le attività su cui vi state concentrando?
- Il bando SWITCH ha comportato una riorganizzazione delle risorse interne?
- Il bando SWITCH ha avuto un impatto sulle vostre competenze?
- Quali sono i risultati che, all'interno di LINKS, state raccogliendo ad oggi?

Parte 3 – Bando SWITCH, Ruolo LINKS e relazione con attori coinvolti

- Il bando SWITCH ha abilitato relazioni con nuovi enti?
- Rispetto al bando SWITCH, qual è il tipo di relazione con Compagnia di San Paolo?
- Nel contesto di bando, avete momenti di confronto con gli enti culturali coinvolti?
- Quali sono i vantaggi che evidenziate dal confronto con gli enti culturali, anche rispetto all'implementazione di bandi futuri?

Parte 4 – Fattori Critici, Abilitanti

- Quali sono i fattori che pensate abbiano favorito l'implementazione del bando SWITCH?
- Quali sono le principali criticità che avete riscontrato?

Parte 5 – Sviluppi futuri

- Quali sono le prospettive dopo il bando SWITCH?
- Ci sono risorse che si stanno occupando degli sviluppi futuri?

Figure 8. Links foundation interview

Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan (Figure 9)

Parte 1 – Domande di carattere generale

- Potrebbe descrivere brevemente come sta andando il progetto?
- È la prima volta che l'Osservatorio collabora con FSCP?

Parte 2 – Impatto del progetto sull'ente

- Potrebbe descrivere gli impatti che il progetto sta avendo sull'Osservatorio?

Parte 3 – Fattori Critici e Abilitanti

- Quali ostacoli/difficoltà avete incontrato?
- Quali sono invece i fattori che stanno abilitando e facilitando l'implementazione?
- Quali benefici state riscontrando? Quali sono i benefici che vi aspettate nel futuro?

Parte 4 – Relazioni con soggetti terzi e impatti sul territorio

- Com'è andata la collaborazione con i vari stakeholder coinvolti (FCSP, enti)?
- Il progetto ha abilitato collaborazioni con altri enti?

Figure 9. Observatory of Digital Innovation in Arts, Heritage and Culture of Polytechnic of Milan interview