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Scuola di Ingegneria Industriale e dell'Informazione

Master of Science in Management Engineering

Objectives and Key results as a tool for organizational agility: the case of digital start-ups

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ABSTRACT (English)

The environment in which companies are immersed represents features of continuous change and hyper-competitiveness. Organisations in this context have been trying to adopt an agile approach for two decades now. The agile approach has been, and still is, a working model that many organisations are trying to adopt. At the same time, in the last ten years, a new tool has emerged, initially implemented by Intel and Google, but quickly spreading to companies all over the world; the 'Objectives and Key Results' (OKR)". The aim of the research is to identify if, and what kind of link there is between agile methodology and OKRs. Trying to understand how the agile working method can be influenced and enriched by a tool, which was born far from the agile logic but could have some affinities. The research was based on a qualitative study of 5 digital start-ups based in Milan. The qualitative results of the research showed how organisations have changed since the introduction of OKRs. The introduction of OKRs brought a new working model within organisations, which was perfectly implemented with agile methodologies. Members of organisations, through the use of OKRs, have developed greater flexibility of individual action, increased empowerment and alignment between employees, and have developed an agile mindset. The process triggered by OKRs has led start-ups to fully embrace the agile model, thus succeeding in developing agility in organisations in its most holistic vision. On the one hand, this research studies the OKR tool on a theoretical level, thus enriching the knowledge about this working model. While from another perspective, it assumes how OKRs may have an unexpected intrinsic value, i.e. the ability to lead organisations to organisational agility. The research could be useful for managers of organisations who have a desire to achieve adequate agile capabilities but find it difficult to approach such a working model. The introduction of OKRs combined with the use of the agile approach may bring benefits to those organisations that have only partially succeeded in adapting to today's competitive environment.

ABSTRACT (Italiano)

L'ambiente in cui sono immerse le aziende rappresenta dei tratti di continuo cambiamento e di iper competitività. Le organizzazioni in tale contesto da ormai due decenni cercano di adottare un approccio agile. L'approccio agile è stato, ed è ancora, un modello lavorativo che molte organizzazioni cercano di adottare. Contemporaneamente negli ultimi dieci anni è emerso un nuovo strumento implementato inizialmente da Intel e Google, ma che velocemente si sta diffondendo tra le aziende di tutto il mondo; gli "Objectives and Key Results" (OKR). L'obiettivo della ricerca è riuscire ad individuare se, e che tipo di legame, può intercorrere tra la metodologia agile e gli OKR. Cercare di capire come il metodo di lavoro agile può essere influenzato e arricchito da uno strumento, che nasce lontano dalle logiche agili ma potrebbe avere delle affinità. La ricerca si è basata su uno studio qualitativo di 5 startup digitali con base a Milano. I risultati qualitativi della ricerca hanno fatto emergere come le organizzazioni siano cambiate dopo l'introduzione degli OKR. L'introduzione degli OKR ha portato un nuovo modello di lavoro all'interno delle organizzazioni, che si è andato perfettamente ad implementare con le metodologie agili. I membri delle organizzazioni, attraverso l'utilizzo degli OKR, hanno sviluppato una maggiore flessibilità di azione individuale, un aumento dell'empowerment ed un maggiore allineamento tra i vari dipendenti; facendo sviluppare negli individui una mentalità agile. Il processo innescato dagli OKR ha condotto le start up ad abbracciare completamente il modello agile, riuscendo in questo modo a sviluppare nelle organizzazioni l'agilità, nella sua visione più olistica. Questa ricerca da una parte studia a livello teorico lo strumento degli OKR, arricchendo di conseguenza la conoscenza riguardo questo modello di lavoro. Mentre da un'altra prospettiva, si suppone come gli OKR possono avere un valore intrinseco inaspettato, cioè la capacità di portare le organizzazioni all'agilità organizzativa. La ricerca potrebbe risultare utile ai manager delle organizzazioni che pur avendo il desiderio di raggiungere adeguate capacità agili, riscontrano delle difficoltà con l'approccio a tale modello lavorativo. L'introduzione degli OKR combinati all'utilizzo dell'approccio agile può portare vantaggi a quelle organizzazioni che sono riuscite solo parzialmente ad adattarsi al contesto competitivo odierno.

EXECUTIVE SUMMARY

INTRODUCTION

In recent decades, the advancement of technology and innovation in many sectors has led to both opportunities, such as more effective methods of customer contact, and to major challenges for organisations.(Cooper, 2016)

The result of this phenomenon is that traditional organisations, such as large corporations in regular and static markets, have been faced with strategic changes to reduce costs and time to develop products and services capable of competing in a changing market. For several years now, organisations have needed to change their structure, their working methods and their approach to an increasingly competitive market, thus needing to be increasingly flexible and agile (Dingsøy, 2012). The concept that has been particularly prevalent in the strategy of many organisations is to create an adaptable business model, i.e. a model that allows companies to adapt to ever-changing circumstances and stay ahead of the competition. In the context of large organisations, this adaptability has generally been determined by their ability to change: change strategy, change processes, change products. (Cascales and Camps 2019)

The hypercompetitive environment formed in the last decades led to the development of a methodology, which would eventually be called "agile". The term 'agile' is commonly used to describe companies that are able to adapt and function well in rapidly changing environments. The concept of agile organisations and agile methodologies has been dealt with for many years and under various different aspects and contexts of application. (Cooper, 2018)

At the same time, a new tool has emerged in the last decade that was initially implemented by Intel and Google, but is fast spreading to companies all over the world. The tool in question is 'objectives and key results' (OKR). Literature studies on this working method are very limited. An increasing number of digital organisations, which work using agile methodologies, are also simultaneously introducing OKRs. The constant interest and increase in the use of this tool, may lead to reasoning about whether OKRs can also be useful tools in today's competitive environment.(Doerr, 2019)

The research, starts with the premise of understanding how two working methodologies such as Agile and OKR, can be useful to organisations today. Trying to understand how the agile working method can be influenced and enriched by a tool, which is far from the agile logic but could have some affinities. The aim of this thesis is to understand how the use of OKRs can provide agility benefits to organisations. The research question of my thesis concerns the understanding of how OKRs achieve organisational agility.

LITERATURE REVIEW

The agile approach

The use of the term "Agile" comes from the Manifesto for Agile Software Development, published in 2001 by a group of software developers (Beck et al., 2001). The drafting of the document stemmed from the increasingly evident difficulties in effectively managing software development using traditional approaches. When seventeen Agile advocates met in early 2001 to discuss new methods of software development, what emerged was the Agile 'Software Development' Manifesto. (Lisca, 2019)

The agile manifesto then became a synthesis of all the thoughts on how to be able to cope with the new ones in a turbulent environment. The manifesto is made up of 4 values and 12 principles that have represented the very essence of all agile methodologies since 2001. The four points of the agile manifesto state: Individuals and interactions over than processes and tools, Functioning software over than exhaustive documentation, Customer collaboration over than contract negotiation, Responding to change over than following a plan (Beck et al., 2001). As we can see, these are quite concise and simple statements that make it very clear what the founders wanted to promote. Usually, traditional methods are rigid and emphasise procedures and timeframes, whereas the agile manifesto emphasises exactly the opposite: people-product and communication-reaction. (Cooper, 2016)

Since the Agile Manifesto, many companies have changed or are trying to change their processes to a more dynamic way of working. Organisations and workers have found

some difficulties in trying to put the 4 basic principles of the Agile Manifesto into practice in their everyday work (Cohen, 2004). The abstract concepts of the agile manifesto have to be made more concrete and usable for all operators who face challenges without a tool. The agile tools were born for this reason, they try to translate the theory of the agile approach into concrete tools that if used correctly lead to the pursuit of the principles of the agile manifesto. According to the 14th Annual State of Agile Report and the State of Scrum Report (Scrum Alliance Organisation), among companies that have decided to go agile, Scrum is the most widespread methodology (Cascales and Camps 2019). The peculiarity of these types of tools is that due to their very flexible nature they are able to adapt to different types of sectors and teams. Some of the most used agile tools are: Kanban, Scrum, Extreme Programming, Dynamic Systems Development Method, DevOps, BusDevOps. (Dybå, 2008)

Over the years, the scope of agile methodologies has expanded: first used in IT development projects, then in project management (Zasa, 2021) (in different business areas, from product development to marketing, operations and finance projects). Today, many organisations are trying to implement a more holistic approach to the concept of agility, establishing practices and structures that make these companies agile organisations. Agile organisations are made up of a network of teams within a people-centred culture, offering rapid learning and decision cycles, enabled by technology and driven by a powerful common purpose of co-creating value for all stakeholders. Such operating models enable rapid and efficient reconfigurations of strategy, structure, processes, people and technology towards creating value and securing opportunities. Agile organisations thus add speed and adaptability to stability, creating a critical source of competitive advantage in volatile, uncertain, complex and ambiguous conditions. (Harraf, 2015)

By now it is undeniable that in 2021 agile methodologies are seen as one of the best ways to work and meet the challenges of our decade. In recent years there has been a huge increase in the use of agile in organisations, According to the 14th Annual State of Agile Report in 2020, in 52% of organisations more than half of the teams adopt Agile, and only 2% do not have Agile teams (Cearns, 2020) . However, there is some research that shows some pitfalls and problems that some employees may experience when using some agile methods. Some studies conducted on organisations using agile methods have shown

that individuals, despite using agile methods, in some cases have behaviours that conflict with the statements of the agile manifesto. We can find a lack of communication and trust within Scrum teams, tasks that are perceived as individual and not as a set of actions to reach a common goal, the inability of many members of the organisation to give or receive feedback, project managers dictating from above goals that have not been planned and shared before within the team and perceiving the client not as an entity that must be part of the development process but as a sort of antagonist. As I have already said, agile methodologies and tools have been created for a specific purpose, namely to help the members of the organisation to embrace agile values. Despite this, some people use these methodologies but their behaviour is not agile. Today there is a problem with the agile approach, and that the methodologies designed to pass on to people the concepts of the agile manifesto are no longer sufficient, at least not for everyone. (Moe, 2009; Moe and Dingsøyr, 2010; Carew and Glynn 2017)

The "Objectives and Key Results" tool

A tool that has had a very wide adoption in recent years, starting from big tech companies like Intel and Google to new and small innovative start-ups. This new protocol is the Objectives and key results (OKR). To give a clearer idea of what an OKR is, we will analyse the structure of this tool. As you can guess from the etymology of the acronym, an OKR is divided into two parts: an objective and key results that are linked to that objective. An objective is simply what has to be achieved. By definition, objectives are meaningful, concrete, action-oriented and motivating. If properly identified and implemented they are the key against confusion in thinking and acting. Key results keep an eye on how we get to the goal. Effective KR are simple and time-limited, aggressive but realistic. Above all, they are measurable and verifiable; there is no key result if it is not expressed in a numerical metric. At the end of a fixed period, it is declared whether the KR is satisfied or not. A definition, which describes the OKR protocol well, can be found in the book "Objectives and Key Results" by Paul Niven. "OKRs are a critical thinking framework and ongoing discipline that seeks to ensure that employees work together, focusing their efforts on making measurable contributions that move the company forward." (Niven, 2016)

Writing good OKRs is not an easy task, Google gives some general but very useful guidelines to be able to set effective OKRs. One of the first rules is to select no more than five objectives with no more than four related key results per OKR setting session. In addition, more than 60 per cent of the objectives must come from the bottom up, which means that front-line operational employees dictate most of the objectives. All OKRs must be chosen and shared by all team members and no one can impose a top-down objective without consulting the other team members. OKRs should not be weapons that team leaders use to assess the performance of individuals. A percentage by which an individual can consider an OKR to have been a useful OKR is when an objective is 60-70% achieved, while below 40% achievement is not. However, this does not mean that the OKR was not useful, but that most likely there was either a mistake in some operational action at KR level or that the target was too ambitious for that particular period. OKRs have four basic characteristics. The characteristics are focus, alignment, tracking and aspiration; they were cognised by John Doerr within his book, he dubbed them "the four superpowers of OKRs", noting that these characteristics are the four cornerstones of the OKR methodology. (Doerr, 2019)

Combinate analysis between OKR and Agile

Agile methodologies and the OKR have been analysed separately as if they were two distant topics. The initial aim of the thesis is to understand how the OKR tool and the agile approach could interact with each other, and in what way. The intention is to be able to analyse the benefits that an organisation can gain from the links between OKR and agile methodologies. In order to compare the agile approach and the OKR, we start by analysing how the fundamentals of these methodologies can be compared. The foundations of the agile approach to which I refer are the four pillars of the Agile Manifesto of 2001 (Beck et al., 2001). These four concepts are the foundations to which the agile methodologies refer. As far as OKRs are concerned we refer to the four characteristics analysed one by one, they have been named by Doerr "the four superpowers of OKRs".

In the texts dealing with OKR, there is a large number of agile organisations using this tool. (Doerr, 2019; Niven, 2016). The objective of today's organisations is to have the necessary capabilities to cope with the external environment. It would seem that OKRs,

like the agile approach, promote the development of these characteristics. In fact, OKRs, like the agile approach, drive organisations towards a culture of collaboration, innovation and continuous improvement. (Doerr, 2019; Cohen, 2004) What is still unclear is how OKRs can interact with agile organisations, and whether and how these two methodologies can be complementary.

Research objective

The objective of these two types of tools ,OKR and Agile, is to transform workers into agile individuals; by agile individuals we mean people who, within their working environment, think and act according to the statements of the agile manifesto (Sidky, 2007). However, as analysed above, some individuals despite using agile methodologies have behaviours that are far from an agile working approach. (Moe, 2009; Moe and Dingsøy, 2010; Carew and Glynn 2017). The causes that trigger these behaviours are unknown to organisations. There are factors that go beyond the use of agile methodologies and hinder workers from developing agile behaviours. If we analyse the literature concerning OKRs, it can be said that, at least on a theoretical level, this tool may be able to promote the adoption of agile (Doerr, 2019). It would be interesting to analyse what factors allow OKRs to develop characteristics suitable for agile working. The end of the literature review leads to the definition of a thesis question that may be useful to organisations seeking to achieve robust organisational agility. However, it is not clear how OKR affects the agile dynamics of organisations. The aim of this thesis will be to understand how the use of the Objectives and Key Results tool leads to organisational agility.

METHODOLOGY

The research methodology used was a qualitative research of multiple case studies, to understand how OKRs are used in conjunction with agile methodologies. The sampling strategy to identify the organisations that will be part of the analysis of the thesis was done by following a process. Starting with a very large set of organisations, gradually adding constraints related to the research, I arrived at a set of organisations that had characteristics that would be useful in answering the research question. Starting by looking for organisations that were already established in the approach to agile working,

then from this set of organisations those that did not use the OKR tool were eliminated. From the remaining companies, only those organisations that had implemented the use of OKRs throughout their workforce were selected. Finally, only those organisations were selected that were not in the initial stages of introducing OKRs, but had been independently formulating and using their own OKRs for at least two quarters, i.e. without the help of external consultants. The combination of these constraints led me to identify the Google for Startups programme as the perfect sample of organisations for the research. At the end of the programme it is in fact the same organisations that spontaneously decide to adhere to the use of OKRs in their future. Therefore, it is interesting to analyse how the situation in the organisations changed before and after the implementation of OKRs. Within the Google acceleration programme based in Milan, I contacted several start-ups. The decision of this specific geographical area was dictated by the possibility of being able to have personal contact with these organisations. Five start-ups were selected and analysed.

ORGANIZATION	ORGANIZATION INFORMATION	INTERVIEWS AND DOCUMENTS
1	Food tech - Delivery of fresh foods	INTERVIEWS: <ul style="list-style-type: none"> • Head of Product • COO and Founder • Head of IT
2	Food tech - App to fight food waste	INTERVIEWS: <ul style="list-style-type: none"> • CEO and Founder • Head of Marketing
3	Software Development - SaaS platform for data management in manufacturing companies	INTERVIEWS: <ul style="list-style-type: none"> • Senior Operations Manager • Senior Software Developer DOCUMENTS: <ul style="list-style-type: none"> • Kanban Board, a sprint with the integration of OKR
4	Virtual Reality - Augmented reality for marketing	INTERVIEWS: <ul style="list-style-type: none"> • Founder and Head of Marketing
5	Virtual reality - App for developing photos and videos in 3D	INTERVIEWS: <ul style="list-style-type: none"> • CEO and Founder

Figure 15. Data collection summary

The information gathered about the interviewed start-ups comes from a number of different sources; direct testimonies gathered during interviews with some members of the start-up, documents I had the opportunity to have in confidence (Kanban board screens, end and beginning of quarter alignment presentations) and information freely found from the web.

EMPIRICAL RESULTS

After coding the interviews, two different code lists were distinctly defined. The first list collects all codes that deal with the topic of issues arising from the use of agile practices, while the second list collects codes that deal with the OKR topic. Once these concepts were defined, the next step was to try to aggregate them according to common themes. So from the two lists of concepts, several themes were formed. Themes are created from a set of concepts that analyse the respondents' behaviours that have similarities in common. The themes created during the data analysis are in turn divided into two lists, presented below.

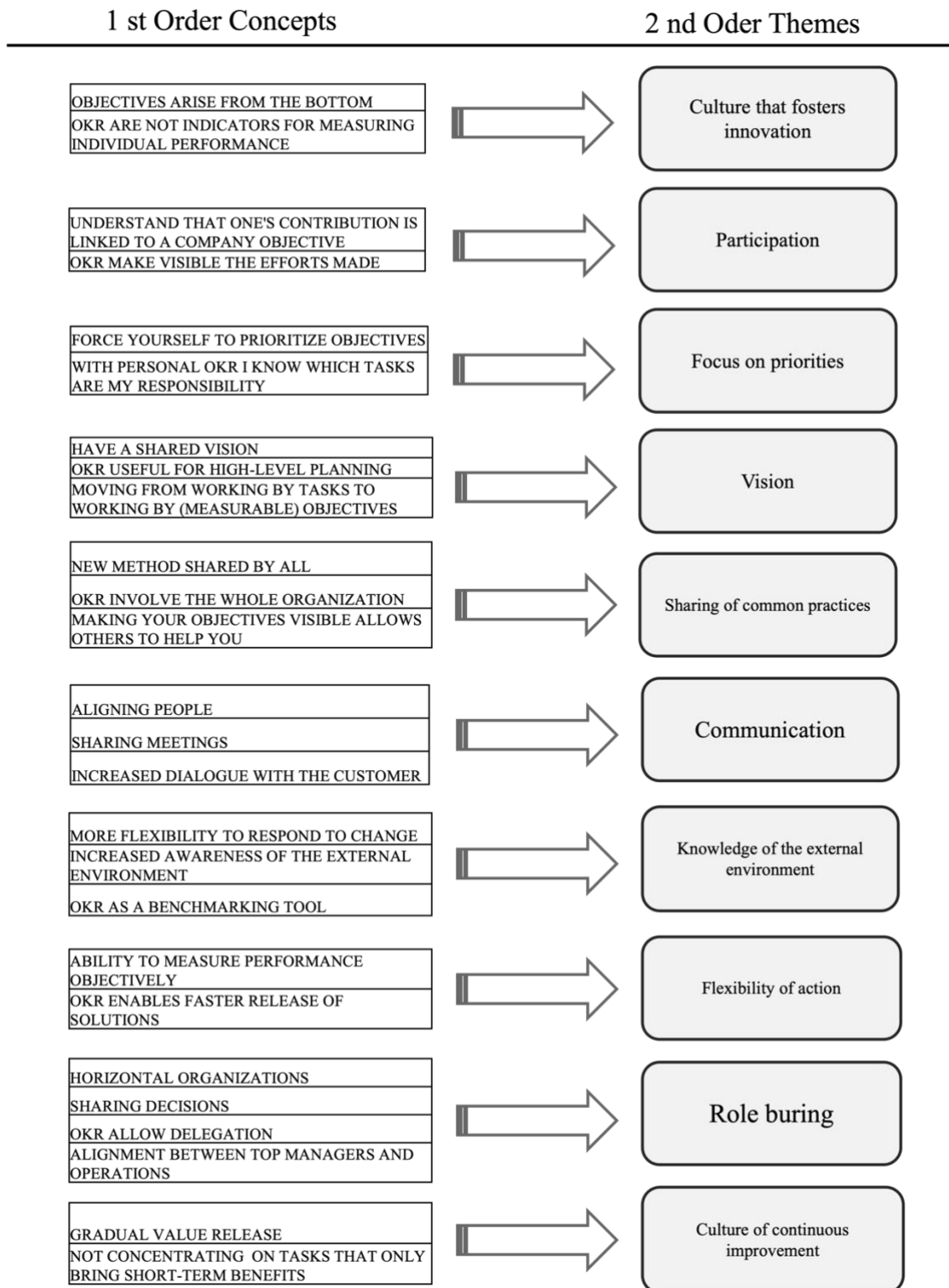


Figure 16. List of concepts on OKR usage

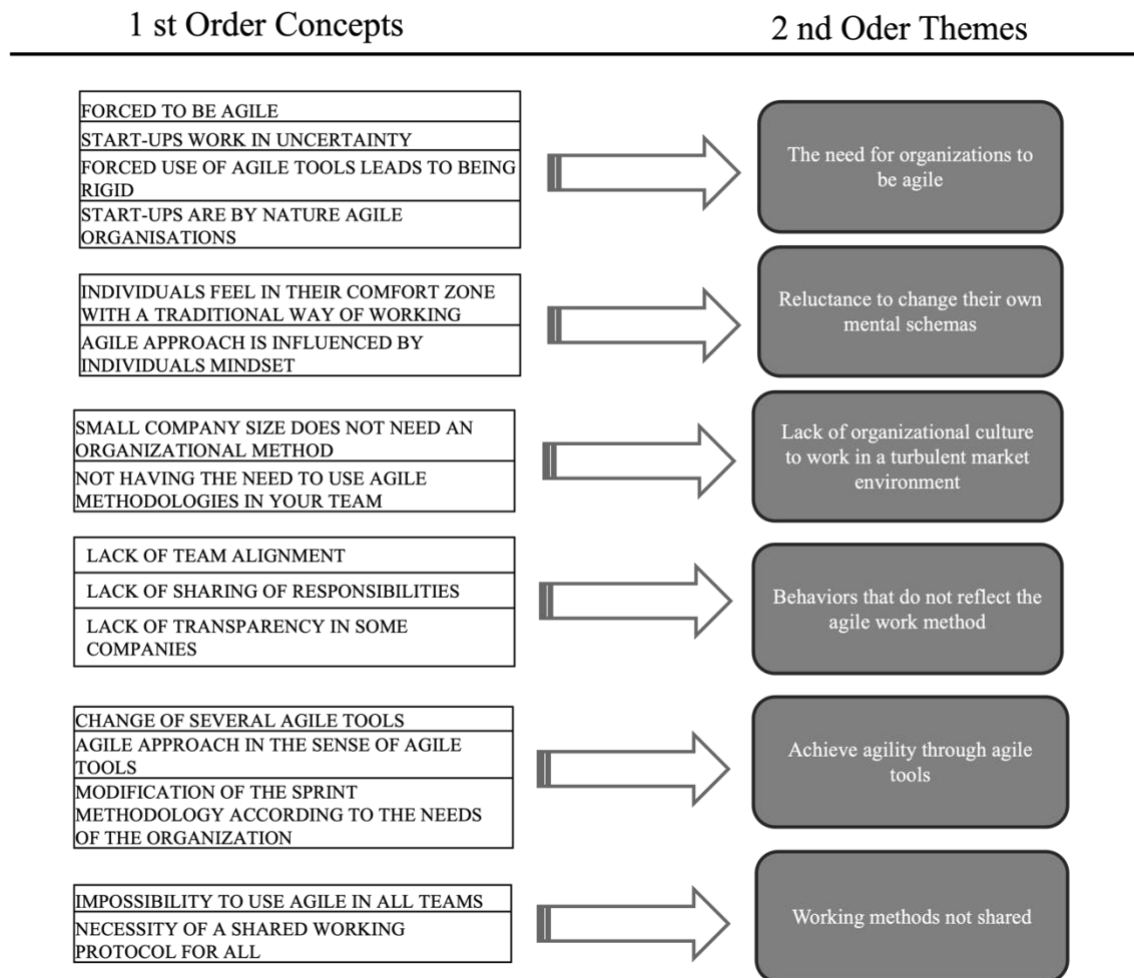


Figure 17. List of concepts on the limits of the Agile approach

Starting from the themes dealing with agile methodologies, they bring out difficulties within the organisations under analysis. These are not direct criticisms of the agile approach, but are problems encountered by the start-ups interviewed, thus related to their working context and how agile methodologies are used. Because of these limitations, organisations find it difficult to fully embrace the agile approach. To summarize what are the main problems expressed by the interviewed organizations regarding the agile approach we can state that: first of all, individuals have behaviours and mentalities that do not reflect the theory of the agile approach (A), the need for flexibility leads organizations to use agile methodologies without fully understanding them (B), the introduction of agile methodologies is not shared by the whole organization and therefore leads to misalignments among individuals (C). The use of OKRs introduced a new working method, capable of developing capabilities that work against the limitations of the agile methodologies analysed above. Considering then the issues raised by the agile

methodologies and the OKR issues, three different aggregate dimensions can be created. The creation of the three aggregate dimensions is formed by the contraposition of two opposing forces, represented by the two lists of themes. They arise from a problem raised by the analysis of agile methodologies and how the new approach to work given by OKRs can solve them. It has been identified that the OKR tool is strongly linked to the behaviour of individuals. In order to identify the first aggregate dimension, we have to start from the limits of the agile approach that analyse how individuals lack the capacity to work flexibly (B). This limitation, as analysed above, derives from the fact that the start-ups interviewed stated that they have an extreme need for agility and the way they try to achieve it is through the use of agile practices, but without understanding the underlying theory. In order to solve these problems it is possible to analyse which topics, from the list concerning the use of OKRs, can be useful. Thanks to the introduction of OKRs, organizations have developed a different corporate culture. This new corporate culture promotes innovation and continuous improvement. Thanks to OKRs, individuals feel more comfortable setting ambitious goals with a high failure rate. This type of practice has led to the development of a culture oriented towards being flexible and reactive in order to be able to respond to the changing environment, so as to be able to constantly improve. OKRs allow the individuals who use them to have more individual flexibility. The flexibility is a fundamental capability that before the introduction of the OKRs was missing in the interviewed start-ups. (Robles, 2012)

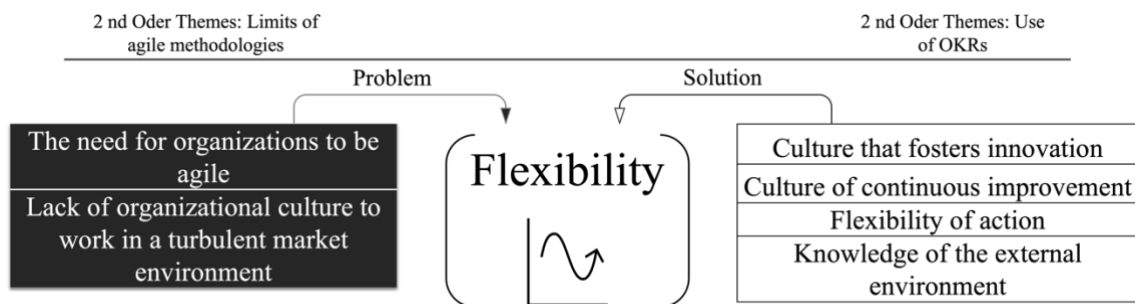


Figure 37. Aggregate dimension: 'Flexibility'

Thanks to greater flexibility, individuals have more freedom of action but must at the same time be able to bear that responsibility. By the use of OKRs lead to the creation of greater personal empowerment in individuals. OKRs directly influence the behaviour of individuals, thus stimulating empowerment, which in other words means that each employee feels responsible for his or her own OKRs, because every employee is aware that he is part of the creation of value for the company. (Grass, 2020)

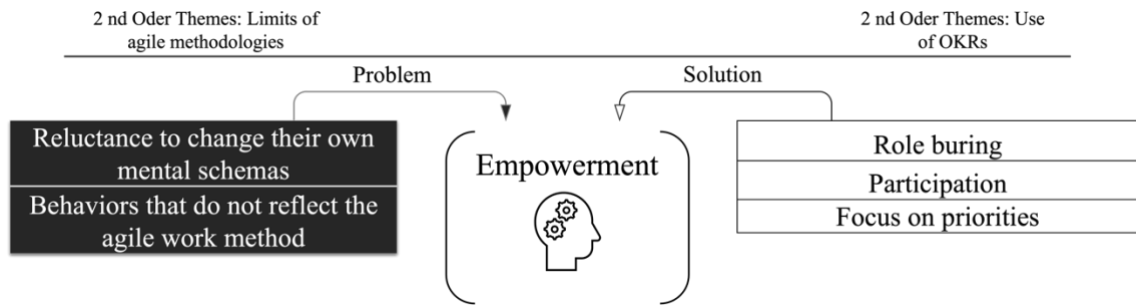


Figure 38. Aggregate dimension: 'Empowerment'

At this point, after allowing individuals flexibility of action and empowerment, it remains to be defined how manages to coordinate the various action within the organisation. OKRs have made it possible to create a working method that synchronises each employee. The various employees feel they are part of a common vision and the organisation works in unison without misalignment. Ultimately, the third aggregate dimension is that of alignment. This expresses how OKRs are able to give a common working method to the organisation, and that therefore all employees are able to think following a model that is common to that of a colleague, without creating misalignment in the company. (Tallon, 2011)

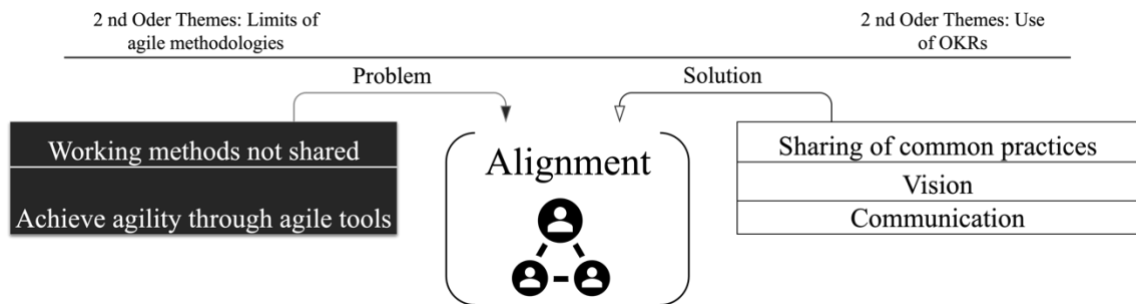


Figure 39. Aggregate dimension: 'Alignment'

The three aggregate dimensions found clearly show how OKRs act at the level of: individual flexibility, increased empowerment and greater alignment between individuals. Now referring to the research question, it is not clear how changing working behaviours and methods leads to an agile organisation. The empirical results show that OKRs act directly on the behaviour of individuals, starting from the limitations of using the agile approach.

DISCUSSION

Analysing the results of the research, it can be seen that OKRs are perfectly linked to the context of agile organisations. The characteristics of OKRs are able to develop the capabilities of individuals (described by the aggregate dimensions), which are able to overcome some of the limitations of agile methodologies. In order to illustrate how OKRs and Agile methodologies are so closely linked, we return to their theoretical foundations. The foundations of the agile approach to which I refer are the four pillars of the 2001 agile manifesto. These four concepts are the foundations to which agile methodologies refer (Dingsøy, 2012). As for OKRs instead we refer to the four characteristics analysed one by one in chapter four, they have been named by Doerr "the four superpowers of OKRs". (Doerr, 2019) This jargon refers to the fact, that as with the pillars of the agile manifesto, of what are the main benefits that OKRs bring. In the following we will analyse how these components are linked to each other.

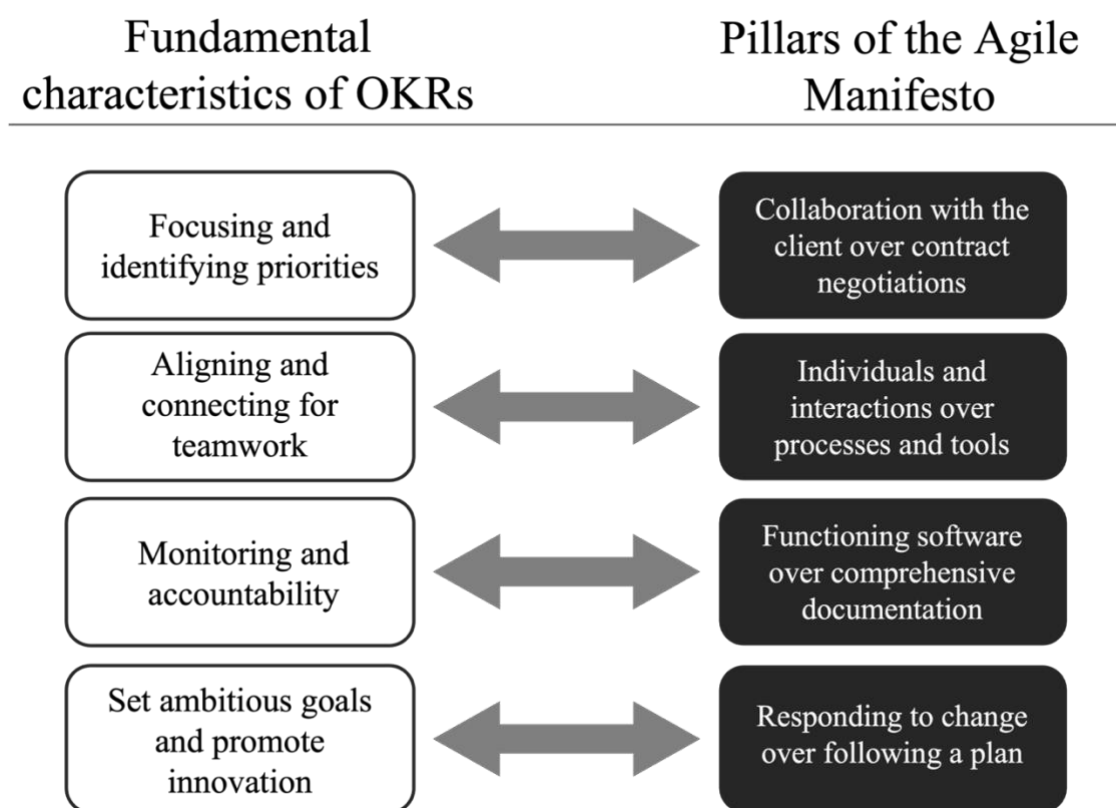


Figure 40. Link between OKR and Agile

The characteristic of 'alignment and connection' in an OKR system perfectly reflects the concept of the statement 'individuals and interactions over than processes and tools'. In

an OKR system, even the last employee entering the company can see everyone's goals and criticism and corrections are shared publicly (Moe, 2010; Doerr, 2019).

The agile statement of having a working software (product) rather than an exhaustive documentation highlights the development dynamics that take place within teams. Being able to monitor and be accountable for the performance of a product is also reflected in the characteristics of OKRs. As already analysed, OKRs can be modified and deleted at any time in their cycle. Sometimes the right key results surface weeks or months after a target has been set. OKRs, due to their structure, are able to accurately monitor performance trends. Being very flexible tools they are adapted to be modified, following new specifications and changes in the course of the work (Dybå, 2008; Doerr, 2019).

When negotiation is mentioned in the agile manifesto, it means that the details of the project, which were previously defined a priori, are now, according to agile principles, more open to collaboration. External customers are not seen as antagonists but as collaborators. The same principle is also found in OKRs; these tools lead organisations and their members to select and focus their efforts on certain objectives. The selection of objectives is guided by what really creates value for the organisation and its customers and, as the agile approach proposes, is an action that is achieved through collaboration between the parties (Gregory, 2017; Doerr, 2019).

Experience teaches us that changes are mostly inevitable and instead of running away from them we should try to embrace and plan for them or at least take into account that they will be there and be ready to manage them. Agile allows us to make this transition. Change very often relates to innovation, organisations must not only be able to change but also be able to create, seek and collect innovation. Thanks to OKRs the promotion of innovation becomes an indispensable benefit. Organisations that set ambitious goals are the ones that are able to create innovation and consequently compete better in a changing market. Again, it is very clear that the principle of being able to respond to change, addressed by the agile manifesto, is the theoretical foundation for which OKRs push towards the creation of ambitious goals (Pavlou, 2006; Doerr, 2019).

The reason why OKRs are so compatible with the agile approach is because the fundamental characteristics of OKRs are based on the same principles on which the whole agile world is based. As we have analysed above, there is an unequivocal correspondence

between agile pillars and OKR superpowers. This is because OKRs are also born to solve problems in today's organisations. The characteristics of OKRs echo the agile principles perfectly, thus creating a point of contact (Nerur, 2007, Niven 2016).

Below there is a model that represents an interpretation of how the organisations interviewed have changed since the introduction of OKRs. Within this representation it is shown how the use of OKRs causes the effects between the various elements.

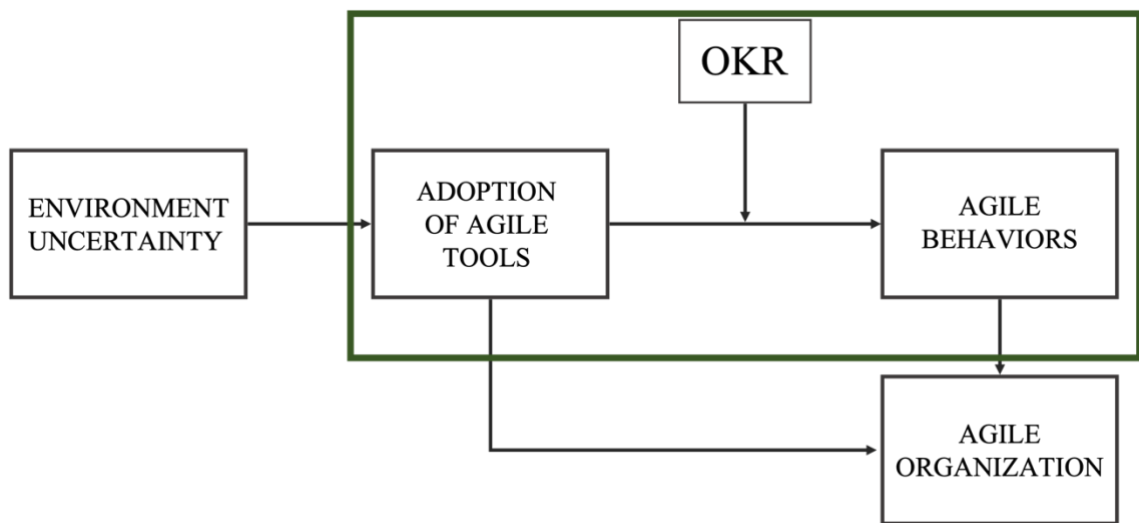


Figure 43. Block model of organizations after the introduction of OKRs

Within the interviews all organisations pointed out that start-ups find themselves working in a very uncertain environment. As an interviewee from organisation E stated, start-ups work in an environment that goes from chaotic to complex (French, 2013). The uncertain environment therefore leads organisations to adopt agile tools to work. In fact, greater complexity of the work environment leads to greater adoption of agile practices by organisations. The adoption of agile tools manages the influence on organisational agility (Hoobs, 2017). Now let us focus on the elements enclosed in the green box. OKRs start to act as a moderating relationship between the implementation of the agile tools and the development of agile behaviours. OKRs go on to develop an agile mindset in the individuals who use them. The process that guides individuals to embrace the agile mindset goes through the three aggregate dimensions identified above. Therefore, through the use of OKRs, individuals are able to have greater flexibility of action within their own organisation, they feel more empowered because they are able to select and identify

objectives autonomously, thus feeling more responsible and, finally, the work between the various individuals is more aligned and transparent.

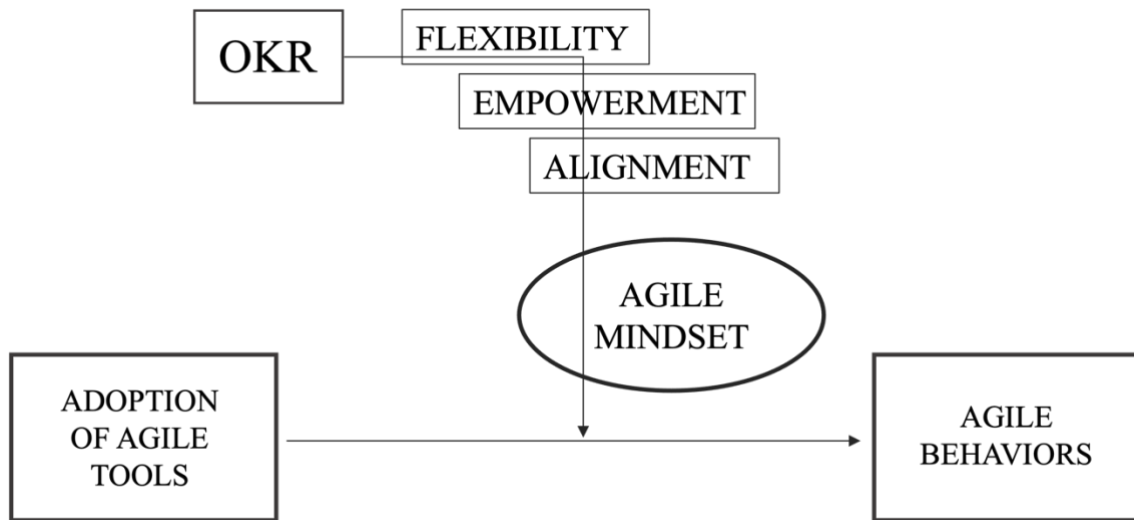


Figure 44. Aggregate dimensions influence the agile mindset

The agile mindset of individuals is able to mediate the use of the agile approach. Individuals through the development of the agile mindset are more aware and able to understand how to correctly use the agile approach at work (Sidky, 2007). This has a positive effect on individuals who previously had difficulties with agile methodologies, now have behaviours that are suitable for this type of working model. In conclusion, by managing to have all the members of the start-ups presenting positive behaviours that are consonant with the agile approach, the organisation, in a holistic sense, is positively influenced (Hoobs, 2017). On the one hand, the pattern does not change, those individuals who, even before the OKRs, were able to exploit agile methodologies to their full potential, continue to do so, contributing positively to the development of organisational agility. Whereas individuals who previously had difficulties with the agile methodologies, now also manage to have a positive effect on the creation of an agile organisation through their behaviour. Organisations started from a situation of uncertainty and ambiguity, arrived through the implementation of OKRs to solve the problems that had arisen concerning the limits of the agile approach. Workers who were in difficulty with the use of agile methodologies were accompanied by the OKRs to a change of mentality. The development of the agile mindset in each individual has enabled start-ups to aim to be agile organisations. The research led me to propose this kind of hypothesis: the

implementation of the OKR tool in the start-ups interviewed led, through a greater flexibility of action of the workers accompanied by an increase in empowerment and alignment among individuals, to the formation of an agile mindset in each member of the organisation. The direct consequence of having developed such a mentality in each individual of the same company is that the organisation, in its most holistic view, has managed to achieve the agility required for the competitive context where the start-ups analysed are located. (Dingsøy, 2012)

In conclusion, OKRs have their own intrinsic value. A tool that was born far from the agile logic and methodologies has been able to involve organisations that have failed, or only partially succeeded, allowing them to reach agility. At the beginning of the research I would not have expected to find this positive effect in using OKRs, in the organisations analysed, to make them fully embrace the agile working approach.

CONCLUSIONS

At the beginning of the research, the aim was to understand how agile methodology could interact with the OKR tool. After analysing the literature on these two topics, I came to formulate a research question that would be interesting and useful for today's business context. Starting from the difficulty of some organisations to exploit the advantages of the agile approach, I analysed how OKRs and Agile had some features in common. In fact, the main characteristics of OKR can be summarised by the agile principles of the manifesto. Based on this, it can be said that both agile methodologies and OKRs seek to develop agility and flexibility within companies. The thesis question seeks to understand how OKRs, a new and young tool in the business landscape, born after and far from the logic of agile methodologies, could help organisations where agile methodologies had partially failed. The data collection started keeping the focus on how OKRs are able to lead to organisational agility. During the research and data collection, five different start-ups in the digital space were examined. In the data analysis I tried to understand how OKRs had changed organisations since their introduction. From the data collected, some critical issues emerged regarding the use of the agile approach for some individuals, but at the same time concepts emerged that expressed how the use of OKRs can respond to the critical issues found. Thanks to the clusterization of the themes, which dealt on the one hand with the limits of agile methodologies and on the other hand with the use of

OKRs, I was able to identify three aggregate dimensions. What I was able to hypothesise is that individuals through the use of OKRs are able to develop characteristics that are represented by the three aggregate dimensions (empowerment, flexibility, alignment). Through the development of these individual characteristics, workers in the start-ups interviewed were able to develop an agile mindset, i.e. a series of behaviours that are the basis for succeeding in working using an agile approach. The development of such a mindset, even in individuals who had difficulties in using the agile approach, led all members of the organisation to have behaviours that reflect the agile philosophy. The set of virtuous behaviours of all the workers in the organisation inevitably leads to positive effects on the organisation itself. The direct consequence of having developed such a mentality in each individual of the same company is that the organisation, in its most holistic view, has managed to achieve the agility required for the competitive context where the start-ups analysed are located. Finally, an agile organisation is the most favourable environment in which to use OKRs; in this way, the organisation itself influences the potential of OKRs, creating a virtuous circle that positively influences the process of agility development in the organisation.

Contribution to literature

The contribution that the thesis can make regarding the knowledge of OKRs can be summarised in two aspects. The first is the fact that OKRs, being a relatively young instrument, have not been studied at an academic level. With the research I went to analyse, firstly, the OKRs at a theoretical level and then how they could be used within the organisations analysed. This allowed me to bring different analyses to bear on a topic that has not yet been widely studied. The second fundamental aspect that emerged from the research is that OKR and agile can be linked. As analysed at the end of the literature review chapter, the characteristics of OKRs share the same theoretical principles as the agile approach. Moreover, during the analysis of the data, I could assume that OKRs can be the tool that triggers the process leading to organisational agility. In fact, OKRs acting directly on people can be the tool that develops the understanding of a new working model, through the creation of an agile mentality.

Contributions to managers

The research could be useful to those organisations that have only partially succeeded in gaining the hoped-for benefits from using an agile approach to work. What the thesis has brought out is that implementing OKRs has a positive effect on the behaviour and mindset of individuals. The use of OKRs alone leads to employees being able to have more flexibility of action, to feel more responsible and empowered, and finally to be able to be updated and aligned with what other members in the organisation are working on. The direct effect of these capabilities is on the agility of the organisation. At the beginning of the research, the positive effect of OKRs on organisational agility was not taken into account. Through the analysis of the literature, and especially by analysing how OKRs have changed the start-ups interviewed, I believe that we can define the influence of OKRs on agility as a positive externality effect that directly affects the capabilities of the organisation.

Research limitations

The research was affected by a number of constraints that may have limited it. The main limitations stemmed from the selection of the research sample. Firstly, the research is limited only within the context of digital start-ups, a very specific type of organisation that has profoundly different traits from other types of companies. Moreover, the start-ups analysed were selected from the same ecosystem. In fact, all the organisations are Italian and based in Milan. Consequently, even if the business areas were different, the start-ups analysed may have cultural and environmental characteristics that are only found in that specific context. Another factor to be taken into account is that the research sample consisted of only 5 organisations and not all the members of the analysed companies were interviewed.

CHAPTER 1: INTRODUCTION

1. Flexible management in an uncertain world

In recent decades, the advancement of technology and innovation in many sectors has brought both opportunities, such as more effective ways of being in touch with the end customer, and major challenges for organisations. (Cooper, 2016)

The result of this phenomenon is that traditional organisations, such as large corporations in regular and static markets, have been faced with strategic changes to reduce costs and time to develop products and services capable of competing in a changing market (Kraatz, 2001). In this first introductory chapter we will start by analysing the ecosystem in which organisations compete today, trying to analyse which major trends influence markets today. From this premise we will analyse how organisations have tried to adapt to these new competitive pressures. For several years now, organisations have needed to change their structure, their working methods and their approach to an increasingly competitive market, thus needing to be increasingly flexible and agile. We will analyse what it means to have an agile approach and how agile methodologies have developed over time, trying to decode agile principles with concrete tools. We will see which agile tools are most used and in which contexts and finally we will reflect on some limitations in the use of these tools.

1.1. The need to be agile

The concept that has been particularly prevalent in the strategy of many organisations is to create an adaptable business model, i.e. a model that allows companies to adapt to ever-changing circumstances and stay ahead of the competition. In the context of large organisations, this adaptability has generally been determined by their ability to change: to change strategy, to change processes, to change products, etc. While the principle of constant change has now been accepted, the last century has seen an increased prevalence of another concept that, while not new, had remained fairly unexplored in the past: the idea that the pace of change must also be taken into account. It is widely recognised that the pace at which variables change in today's world is unprecedented and ever increasing.

As such, it is not only the ability of organisations to change that is being challenged, but also the extent to which they can do so at a fast enough pace. Organisations have traditionally employed various methodologies to bring about change, mostly involving a series of sequential steps, from conception to delivery, executed by different teams. (Cooper,2018)

However, the aforementioned pace of change is encouraging organisations to explore alternative methodologies, where the delivery of change is broken down into smaller components, managed by multifunctional teams. Many factors have led organisations to look for a new way of working to keep up with today's accelerated pace of change, brought about by phenomena such as the exponential increase in connectivity. The need for organisations to increase the pace at which they implement change is multifaceted, and can be highlighted by multiple events on a global scale. (Cascales and Camps 2019)

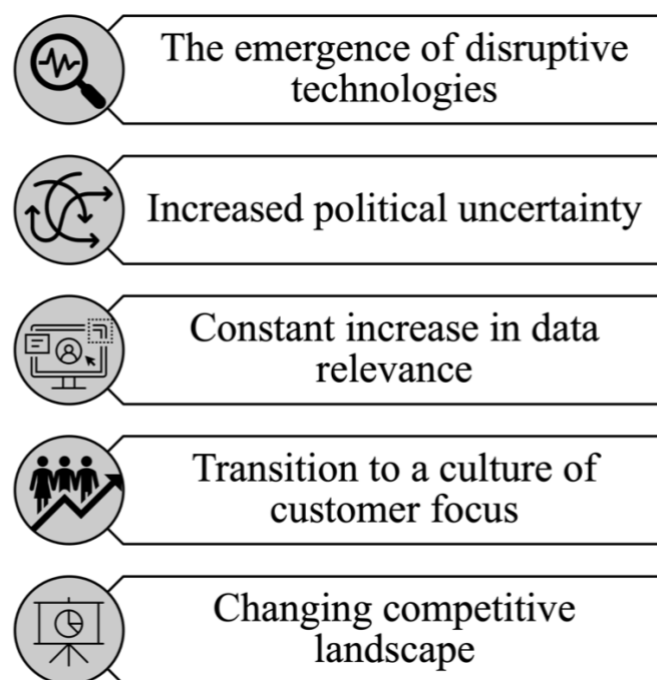


Figure 1. Macro trends that describe the competitive environment

Innovation and speed to market are two of the key requirements for capturing and retaining customers. New technologies such as Data Analytics, Artificial Intelligence and the Internet of Things are enabling companies to develop cutting-edge products and services, bring them to market before their peers and learn from their mistakes when they fail. Organisations embracing digitisation are building resilient and flexible processes that

allow them to quickly reallocate critical resources to adapt to evolving customer needs. This trend goes beyond IT companies, as more and more companies across all sectors are introducing these new technologies into their operating models. In addition, the emergence of digital leaders such as Google, Apple or Amazon, or new digital-native business models such as Netflix, Spotify or Uber, has reshaped customer relationships and their expectations of product quality, service quality and accessibility, allowing these companies to perform better while being more efficient, and increasing competition in the market (Pavlou, 2006). The recent financial crisis, in addition to a number of other circumstances, has disrupted the global political framework. The rise of national extremism, coupled with various political events such as the UK's planned exit from the European Union, has had an impact on international trade, while increasing general uncertainty about the future state of global business. As a result, organisations are less and less able to plan for the long term.

The global competitive environment is changing rapidly. Fuelled by factors such as globalisation, easier access to information and low barriers to entry, disruptive new competitors are emerging at a rapid pace. Such organisations can use digital technologies to quickly reach a wide audience and at the same time rapidly roll out new products and solutions. As such, large, established organisations, often burdened with complexity stemming from decades of operation, must be able to adapt and become flexible to keep up with new competitive forces. This is evidenced by the continued growth of the global start-up revolution, with global venture capital funding booming, with over \$140 billion invested and global value creation estimated at \$2.3 trillion in 2015-2017 (a 25.6% increase on previous years). In the financial services sector, for example, GAFA (Google, Apple, Facebook and Amazon) & FinTechs have shaken the confidence of major institutions, just after the major setback suffered due to the financial crisis and the regulatory wave that followed it. Global investment in FinTechs increased steadily between 2014 and 2017; accelerating their growth in the first half of 2018 (Cascales and Camps 2019). The fact that these new digital born competitors do not suffer from the constraints that large traditional entities have, such as outdated legacy platforms and stricter regulations, has allowed their influence and market share to grow exponentially. their long-term potential is even greater.

Customer expectations and behaviours are evolving much faster than most companies can cope with, as they have become much more unpredictable than they used to be, spurred on by increased access to information through channels such as social media and the internet. This has in turn increased customers' expectations of their service providers and limited their tolerance for unfair outcomes. At the same time, increased competition and lower switching costs have amplified customers' bargaining power, making it more difficult for companies to develop and maintain a loyal customer base. As a result, the best organisations have changed their focus to try to meet the changing needs of their customers, putting the customer at the centre of their processes and strategies. Companies must become flexible, adaptive and receptive to change in order to succeed in an environment of ever-changing demands. (Sorescu, 2011)

The amount and quality of information that organisations are able to collect about their customers, products and markets is also changing rapidly. The rate of change in information creation is best demonstrated by the amount of data created: 90% of the world's data has been generated in the last 2 years. There are 2.5 quintillion bytes of data created every day at our current rate, and this rate is only accelerating with the growth of the Internet of Things (IoT). The increased availability of information, along with the advanced techniques that can be used to analyse it, have led to data becoming a key strategic asset in successful organisations. Successful exploitation of this asset can dramatically improve the service provided to the customer, reveal ways to make processes more cost-effective, and enable senior management to make more informed business decisions. (Cascales and Camps 2019)

The hypercompetitive environment formed in recent decades has led to the creation of new types of approaches to work. Professionals within organisations have realised that they need to be better able to capture, manage and react to continuous market changes. Consequently, in the 1990s, the waterfall approach began to be questioned and the development of a methodology, which would eventually be called 'agile', began to take hold. The set of new strategic and operational conditions, described by the macro trends analysed above, create an environment where organisations are immersed in hyper competitiveness. The term "agile" is commonly used to describe companies that are able to adapt and function well in rapidly changing environments (Setia, 2007). The concept of agile organisations and agile methodologies has been dealt with for many years and

under various aspects and different contexts of application, but in order to arrive at an analysis of what an agile working approach means we must first analyse how agile methodologies were born and have developed to date. The tools that organisations use to achieve the characteristics of flexibility are called agile methodologies. A set of practices and tools that try to guide organisations towards agility and flexibility (Hoobs, 2017). Nevertheless, some organisations have problems with the use of these methodologies. Workers within organisations often find themselves unfit to use these tools. Their behaviour and approach to work seems to be far from organisational agility. (Lindvall, 2002)

In the last decade more and more organisations are using a tool for creating and monitoring company objectives. Its diffusion has started from large digital companies to innovative start-ups. The tool in question is the ' Objectives and Key Results' (OKR). At this point, it would be interesting to analyse the factors that allow OKRs to develop characteristics suitable for agile work. The difficulties of organisations in achieving agility, leads to the question of how OKRs can succeed where agile methodologies have failed. This analysis is interesting for those organisations that, despite using agile methodologies, have not managed (or only partially) to achieve the agility necessary to be competitive. Due to the fact that they are strongly individual-oriented tools, as agile methodologies are, and that their characteristics refer to the fundamentals of the agile approach, the use of OKRs can lead individuals to embrace agile statements. At this point there are two issues to be analysed; firstly, it is necessary to understand how a set of agile behaviours of the individuals of a company leads the organisation to be an agile organisation. The second issue concerns the fact that it is necessary to analyse how OKRs lead individuals to have agile behaviours and whether it is possible to identify the factors for which some organisations that use agile methodologies encounter problems of unsuitable behaviour of their workers. (Niven, 2016)

In conclusion, the definition of a thesis question that may be useful to organisations seeking to achieve robust organisational agility. The aim of this thesis will be to understand how the use of the Objectives and Key Results tool leads to organisational agility. This research question is driven by the aspiration to find a new way forward, useful for those organisations that have problems promoting an agile approach to work among their employees.

CHAPTER 2: LITIRATURE REVIEW

2. The history and birth of agile

The agile approach originated in software development and IT project management. The first forms of the method appeared as early as the early 1990s. With the publication of the Agile Manifesto in 2001, the principles initially spread to the IT and project management sectors, where innovation is an integral part of everyday business activity. (Dingsøyr, 2012). We will now look back at some of the most significant events in the history of the agile approach. In the early 1990s, a number of publications highlighted the shortcomings of the Waterfall methodology. Jeff Sutherland began working with Ken Schwaber and other software experts in the field to create more efficient systems. One of the articles that inspired them was a 1986 Harvard Business Review called "The New Product Development Game", written by Hirotaka Takeuchi and Ikujiro Nonaka (Hirotaka,1986). This article mentioned the term "Scrum" for the first time, emphasising the importance of teams in the development of complex products. Their research showed that outstanding performance is achieved when teams are small, self-organised units of people, and when such teams are given specific goals, not executable tasks. Teams can only reach their strongest potential when there is room for change in their strategies towards shared goals.

In 2001, Sutherland, Schwaber and 15 other independent programme managers, engineers and software developers met, convened by Kent Beck, to find the formula for successful software development. Although they did not agree on everything, they established four values and twelve operating principles that make up the Manifesto for Agile Software Development (usually called the 'Agile Manifesto') (Beck et al., 2001). Since then, development frameworks aligned with these values and principles have been known as Agile techniques. As Agile methodologies were becoming more well-known and widespread, some companies such as Netflix, Spotify, and Google started to adapt their development methodologies by emphasising fast feedback, iterative changes, and cross-team collaboration. Google has also introduced 'failure as part of the process' and the 'learn as you go' strategy into its culture of rapid delivery. These companies' ability to innovate, grow, and succeed inspired traditional organisations looking to grow and

innovate in the fast-paced business environment of the time, where rapid consumer demands and continuous cycles of product iteration were on the rise. (Denning, 2018)

IT development and digital business units naturally adopted different variants of Agile methodologies. In most cases, these teams had to work around the existing governance and processes in their organisations (which were optimised for Waterfall delivery), as neither their format nor frequency was able to address the needs of the digital business. Given the exploratory nature of the exercise, the natural learning curve of digital teams and the reliance on external support, the cost was not necessarily lower than the equivalent Waterfall delivery. However, improved employee engagement and satisfaction is a recognised side benefit. To date, these Agile techniques have been increasingly popular across geographies and industries (high tech, telecommunications, financial services, media and entertainment) enabling organisations to improve their responsiveness to customer needs, achieve faster delivery of better products (fewer defects, better customer experience), reduce the complexity of their existing processes and outperform their peers in the marketplace (Nerur, 2007). Finally, another strong sign of the consolidation of Agile is the emergence and establishment of official and globally recognised organisations, agencies and standardisation bodies that provide best practices, and support the widespread adoption and effective practice of different Agile methodologies.

2.1 Analysis of the principles of the Agile Manifesto

The use of the term Agile, as mentioned earlier, in this context stems from the Manifesto for Agile Software Development, published in 2001 by a group of software developers. The drafting of the document stemmed from the increasing difficulties in effectively managing software development by applying traditional approaches (Lisca, 2019). When seventeen Agile advocates met in early 2001 to discuss new methods of software development, what emerged was the Manifesto for Agile 'Software Development'. They summarised their views, saying that "the Agile movement is not anti-methodology, in fact, many of us want to restore credibility to the word methodology. We want to re-establish a balance. We embrace modelling, but not to store a few diagrams in a dusty company archive. We accept documentation, but not hundreds of pages of tomes that are never maintained and rarely used. We plan, but we recognise the limits of planning in a turbulent environment" (Beck et al., 2001).

The agile manifesto has therefore become a synthesis of all the reflections arising from the analysis of the various existing development methodologies. In this paragraph we are going to analyse the 4 values and 12 principles at the basis of this manifesto, which since 2001 has represented the true essence of all agile methodologies. The four points of the agile manifesto state that: Individuals and interactions more than processes and tools, Functioning software more than exhaustive documentation, Customer collaboration more than contract negotiation, Responding to change more than following a plan. As we can see, these are quite concise and simple statements that make it very clear what the founders wanted to promote. Usually, traditional methods are rigid and emphasise procedures and timeframes while the agile manifesto emphasises exactly the opposite, thus favouring: people-product and communication-reaction. In the following, we will look in detail at the values behind Agile (Cohen, 2004).

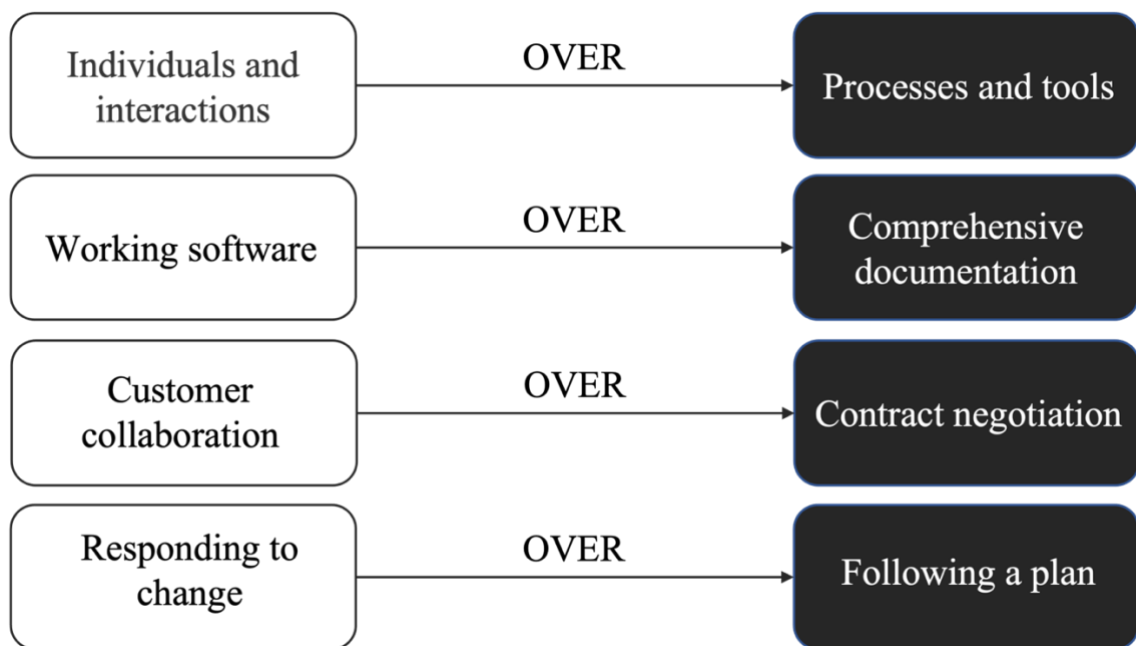


Figure 2. Agile Manifesto Pillars

Individuals and interactions are preferred over processes and tools because they make the team more responsive. If individuals are aligned and in sync, the team can solve problems by quickly and independently selecting the most appropriate tools or processes. But if teams insist on blindly sticking to processes, this can lead to misunderstandings between individuals and create unexpected roadblocks resulting in project delays or, at worst, dead ends from which it is complex and costly to reverse. This is why it is always preferable

to have interactions and communication between team members rather than blindly trusting processes to choose the way forward. Traditional software engineering has been too stuck in its emphasis on process, but at the same time most professionals know that people matter more than processes.

Traditional project management required comprehensive documentation defining every aspect to be taken into account and often led to delays of months, putting unnecessary pressure and constraints on the project and relegating team members to mere executors who had a supposedly all-encompassing specification in their hands and could not take responsibility for choices made by others. The type of documentation created in the past was very detailed and so many documents were created that many of them were not even mentioned as the project progressed. This was an unnecessary evil that project teams used to live with. But it also manifested delivery problems. The focus was on documentation to such an extent that the teams wanted to publish a finished product that was 100% compatible with the specifications. However, the final product was quite different from expectations because it was impossible to fully convey an overall vision of the whole and often ended up with something very different from what was actually required. That is why Agile says that working software is a much better option to assess customer expectations than huge documentation. This does not imply that documentation is not necessary. It just means that a working product is a better indicator every day of alignment with customer needs and expectations than a document created months earlier. It also implies that teams are ready to adapt to changes as and when required, showing the customer working software with each release. It is important to remember that the end result of building software is the product.

Negotiation means that the details of the project are defined a priori before being finalised and in much the same way as documentation binds a priori choices that cannot actually be made in negotiations. There is still room for renegotiation but, once the negotiation is over, there will be no more discussion about it. What agile says is that instead of investing time and resources in negotiating, it would be better to choose the path of continuous collaboration. Collaboration implies that there is still room for discussion, and communication is constantly ongoing. This offers a double advantage: while it helps the team to make a course correction if required at an earlier stage, it also helps the client to

refine its vision and redefine its requirements, if required, during the course of the project. This helps agile teams to better align with real needs.

The standard process is that change is expensive and we should avoid change at all costs. This is the unnecessary goal of the documentation and plans drawn up to meet the timelines and specifications. But as experience teaches us, changes are mostly inevitable and instead of running away from them we should try to embrace and plan for them or at least take into account that they will be there and be ready to manage them. Agile allows us to make this transition. What agile suggests is that change is not an expense, it is a positive feedback that helps to improve the project. It should not be avoided, but sought because it adds value to the product. Most of the functionality developed with the waterfall approach is never used. Agile also plans, but espouses a 'just in time approach in which planning is done as much as necessary, and plans are always open to change as the product evolves.

The 12 agile principles were added after the creation of the manifesto to help and guide the transition of teams into agile and to check if the practices they are following are in line with agile methodologies. We can define these points as more operational guidelines than the 4 pillars analysed above, they on the contrary represent the heart of the agile culture. (Conboy, 2004)

1- Our top priority is to satisfy the customer by releasing valuable software, immediately and continuously	7- Working software is the main measure of progress
2- We embrace changes in requirements, even at advanced stages of development. Agile processes exploit change to the customer's competitive advantage	8- Agile processes promote sustainable development. Sponsors, developers and users should be able to maintain a steady pace indefinitely
3- We frequently deliver working software, varying from a couple of weeks to a couple of months, with a preference for short periods	9- Continuous focus on technical excellence and good design enhances agility
4- Clients and developers must work together on a daily basis throughout the duration of the project	10- Simplicity - the art of maximising the amount of work not done - is essential
5- We base projects on motivated individuals. We give them the environment and support they need and trust in their ability to get the job done	11- The best architectures, requirements and design emerge from self-organising teams
6- A face-to-face conversation is the most efficient and effective way to communicate with and within the team	12- At regular intervals the team reflects on how to become more effective and then adjusts and adapts its behaviour accordingly

Figure 3. 12 Agile Manifesto Principles

The 12 principles shown in the table are set out below.

1- Customers will obviously be enthusiastic about seeing working software deployed at each release rather than having to go through an ambiguous and often indefinite waiting period at the end of which to see the product.

2- Changes can be incorporated without much delay in the overall timeline because agile teams believe in quality above all else and would rather incorporate changes than avoid changes and deliver a product that does not meet real needs.

3- Because releases are timed iterations and deliver working software at the end of each release, customers regularly have an idea of progress.

4- The best decisions are made when both work together in collaboration and there is a constant feedback loop between the two for course correction and agility of change. Communication between stakeholders is always the key to agile.

5- It is essential to support, trust and motivate teams. A motivated team is more likely to succeed and deliver a superior product than unhappy teams that are unwilling to give their best. Empowering the development team to self-organise and make their own decisions is one of the best ways to achieve this.

6- Communication is better and more effective if teams can communicate easily and can meet face-to-face for discussions. It helps build trust and brings understanding between the various stakeholders.

7- Usable software, even if imperfect, beats all other KPIs and is the best indicator of work done.

8- Consistency of delivery is emphasised. The team should be able to maintain its pace throughout the duration of the project and not run out of steam after the first few releases.

9- The team should have all the skills and good product design to manage changes and produce a high quality product while being able to incorporate changes.

10- Often the most useful thing to do is not to implement a feature if it is not really essential to maximise the quality of the work done.

11- This leads to open communication and regular sharing of ideas between team members, which in most cases is invaluable for the project.

12- Self-improvement leads to faster results and less rework on the product, taking the time to discuss and investigate successes and failures following a release allows the team to build up a wealth of invaluable experience across technical and commercial aspects of the product. Customer focus and attention to communication have brought success to agile that is now evident to all.

Agile is not a technique but a set of principles, a set of proven best practices with implications not only on software delivery but also in other areas and today it has become fundamental not only for the software industry but also in many other areas.

2.2 Adoption of agile tools

Since the Agile Manifesto, many companies have changed or are trying to change their processes to a more dynamic way of working. Organisations and employees have found some difficulties in trying to put the 4 basic principles of the agile manifesto into practice in their everyday work. As we can see the four pillars of the agile manifesto are principles stipulated to cope with a changing world; but to transform these principles into concrete acts some people need guidance (Nerur, 2007). The abstract concepts of the agile manifesto need to be made more concrete and usable for all practitioners who face challenges without a tool. Agile tools were born for this reason, they try to translate the theory of the agile approach into concrete tools that if used correctly lead to the pursuit of the principles of the agile manifesto. According to the 14th Annual State of Agile Report and the State of Scrum Report (Scrum Alliance Organization), (Cascales and Camps 2019) among companies that have decided to go Agile, Scrum is the most widespread methodology when adopting an Agile way of working.

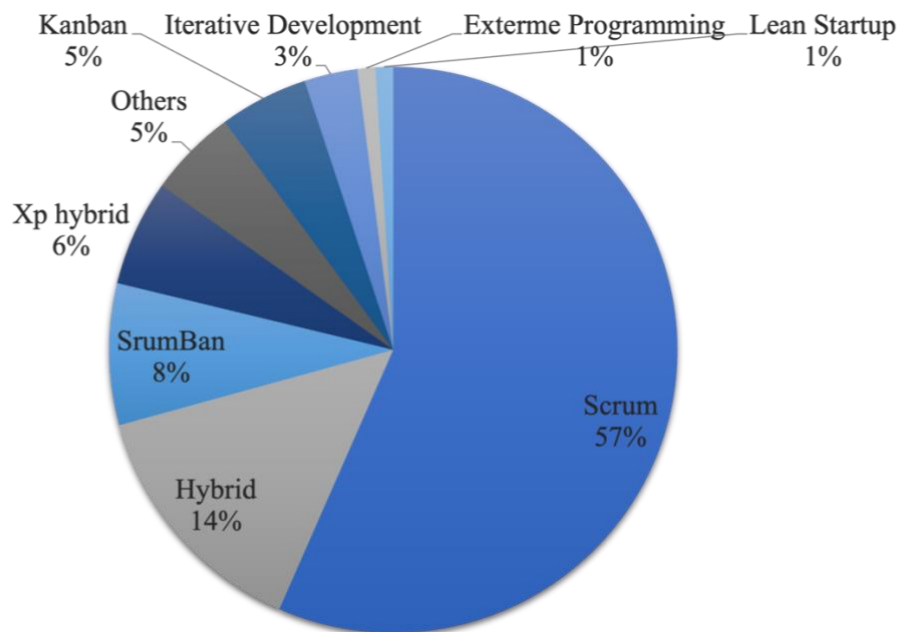


Figure 4. Principal agile methodologies used

There are many other tools used at the level of development teams, business units and at company level. The peculiarity of these types of tools is that due to their very flexible nature they are able to adapt to different types of sectors and teams. Some of the most

used agile tools are: Kanban, Scrum, Extreme Programming, Dynamic Systems Development Method, DevOps, BusDevOps (Conboy, 2009). In the following, we are going to analyse two of the most used agile tools in more detail, to be able to understand how they with their structures manage to be in line with agile thinking. The following methodologies have emerged on the basis of the principles of the Agile Manifesto.

Scrum

According to the definition of Scrum, this methodology can be described as a framework within which people can tackle complex adaptive problems while productively and creatively producing products of the highest possible value. The Scrum methodology defines specific roles: Product Owner, Development Team and Scrum Master. (Mahnic, 2015)

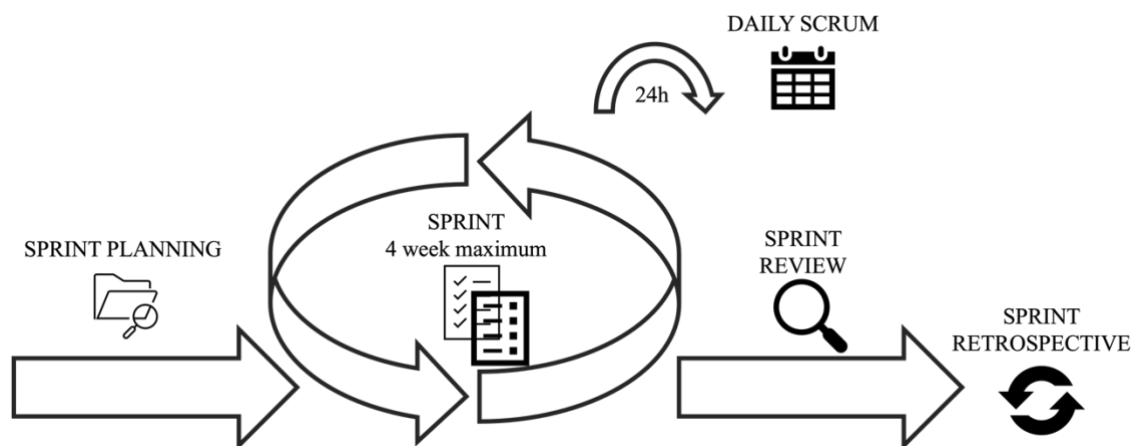


Figure 5. Scrum process

The Scrum workflow is structured around five main events:

- The Sprint: the heart of Scrum is a Sprint, a time interval of 4 weeks or less during which a 'done', usable and potentially releasable product increment is created. Sprints have a constant duration throughout the development effort.
- Sprint Planning: The work to be performed in the Sprint is planned in the Sprint Planning. This plan is created by the collaborative work of the entire Scrum Team. The Sprint Planning is limited to a maximum of eight hours for a one-month Sprint. After Sprint Planning, the team must be able to clearly understand the purpose and workload of the next Sprint (Sprint Backlog), and explain how the Sprint Goal will be achieved and how the expected increment will be created.

- **Daily Scrum:** This is a daily 15-minute timed event for the Development Team. In it, the development team plans the work for the next 24 hours. This optimises the team's collaboration and performance by inspecting the work since the last Daily Scrum and forecasting the work of the next Sprint.
- **Sprint Review:** is held at the end of the Sprint to inspect the increment and adjust the Product Backlog if necessary. This event is at most a four-hour meeting for one-month Sprints.
- **Sprint Retrospective:** is an opportunity for the Scrum Team to inspect itself and create a plan for improvements to be implemented during the next Sprint. This is at most a 3-hour meeting for one-month Sprints. (Schwaber 2019)

Kanban

Kanban optimises customer value by improving the overall efficiency, effectiveness and predictability of a process by following the principles of workflow visualisation, work in progress limitation, flow management and improvement, policy clarification and continuous improvement. (Mahnic, 2015)

- **Workflow visualisation:** The team uses the Kanban board to reflect the flow of tasks through the value stream. The work is divided into steps, written on a board and displayed on the wall. Then, the different columns are named to illustrate where each element is in the workflow. By creating a visual model, the team can observe the workflow, including any blocks and queues, and increase communication and collaboration.
- **Limit work in progress:** The Kanban methodology assigns explicit limits to how many elements can be in progress in each state of the workflow.
- **Manage and improve the flow:** the goal is to achieve a fast and smooth flow by managing and monitoring the speed of the flow using metrics, KPIs and analytics to ensure transparency of progress and active management.
- **Make policies explicit:** to ensure the efficiency of the process, it is essential that team members understand the state of the flow and how they need to do their work to ensure progress. To this end, the process must be clearly defined, published and socialised. This can be done through policies, process rules or guidelines.
- **Continuous improvement:** teams share proposals to improve processes in order to achieve maximum flow efficiency (Cascales and Camps 2019)

But there are many other possibilities in the Agile landscape that could better suit the needs of an organisation depending on its characteristics, goals and strategy. Many organisations have naturally adopted different variants of Agile methodologies, i.e. combinations and derivations of the above tools. In fact, most organisations do not use a specific methodology but follow hybrid practices to organise their development processes. The techniques used may theoretically belong to a specific methodology, but because of their added value they are used indiscriminately. The predominant techniques are daily stand-ups, sprint/iteration planning, retrospectives, sprint/iteration review and short iterations.

2.3 The use of the agile approach in today's context

The macro trends that describe the hyper competitive landscape of recent years show how customer-centric the customer has become when it comes to agility. Due to the customer-centric nature of agility, where agility and customer focus become intrinsically related, changing customer demands have a significant impact on an organisation's operations and must be taken into account when assessing the external pressures that affect an organisation's overall agility (Zasa, 2021). The concept of agility has moved from being a methodology used only in computer engineering to being used well beyond the boundaries of software development. Over the years, the scope of agile methodologies has expanded: first used in IT development projects, then in project management (in different business areas, from product development to marketing, operations and finance projects). Today, many organisations are trying to implement a more holistic approach to the concept of agility, establishing practices and structures that make these companies agile organisations.

2.3.a Agile organisations

As already mentioned, the term Agile originated in the field of computer engineering, this adjective was later generalised and adopted well beyond the boundaries of software development. Various authors, scholars and practitioners have written about agile organisations and more generally about organisational agility. Each definition and description is, however, consistent with the values and principles of the Manifesto (Olivia, 2019). Of the many professionals who have attempted to give an exhaustive

definition of agile organisations, I would like to quote the contribution of McKinsey & Company, who have published several articles in their magazine on the subject for several years. Agile organisations are made up of a network of teams within a people-centred culture, offering rapid learning and decision-making cycles, enabled by technology and driven by a powerful common purpose of co-creating value for all stakeholders. Such operating models enable rapid and efficient reconfigurations of strategy, structure, processes, people and technology towards creating value and securing opportunities. (Darino, 2019).

Agile organisations thus add speed and adaptability to stability, creating a critical source of competitive advantage in volatile, uncertain, complex and ambiguous conditions. A group of professors from the University of Northern Colorado published an article in 2015 in "The Journal of Applied Business Research" that listed and argued ten pillars on which an agile organisation should be based in order to successfully meet today's challenges of the constant and ever faster changing external environment. (Harraf, 2015)

The ten pillars are:

1) Culture of innovation

You have to be able to create a culture, a business environment that is conducive to innovation. It is a state of mind in which everything is evaluated and questioned continuously, critically but constructively: organisational systems and structures, procedures, teams, objectives, capabilities. It is something that goes beyond openness to change; it is an attitude to search for new and better methods. There are distinct relationships and some dependencies between innovation, competitiveness and agility. Innovation, especially in fast-changing industries, is of great importance. More specifically, it is a culture of innovation, rather than innovation itself, that is crucial to the success and agility of organisations. (Harraf, 2015)

2) Empowerment

In the management lexicon, empowerment refers to the practice of sharing information, rewards and power with employees so that they can take the initiative to solve problems and improve service and performance. Empowerment therefore gives the person the ability to act within the organisation. In the truly agile organisation, power is distributed evenly within the organisation among those who are part of it, regardless of their position.

Decision-making must therefore be decentralised. This is therefore a major point of differentiation from traditional organisations, where decisions follow the classic top-down flow. Not having to constantly wait for the green light from one's superiors obviously makes everything faster (Kirkman, 1999). However, in particular critical situations it can be useful to re-centralise power momentarily, so that top managers can decide quickly on crucial issues. This shift from decentralisation to centralisation (and vice versa) of decision-making powers must also be a rapid process. (Baker, 2017)

3) Tolerance for Ambiguity

Operating in such volatile and unpredictable markets, one has to develop an aptitude for constant uncertainty. The huge amount of information available today is a double-edged sword, because while it gives us potentially unlimited knowledge, it also makes everything very confusing and it becomes very difficult to select the really relevant information. There is no longer a single orthodox method of answering the question. Expecting clarity and certainty becomes obsolete, as the new standard becomes the ability to adapt to change. (Judge, 1999)

4) Vision

The company's vision should have two main purposes: to inspire employees and to keep them focused. It is also important that it is simple, concise, and inspiring; all actions of the organisation should, in theory, be directed towards its pursuit. If, as already mentioned, the market is uncertain and demand unpredictable, the vision must always be clear. Just setting a certain vision does not in itself promote agile behaviour. What makes the difference is how it is communicated through organisational culture and practices. Leadership plays a crucial role in focusing the organisation towards the strategic direction. Despite the decentralisation of decision-making power, the actions of top management lead the way. Employees, if well directed, will be able to make quick and effective decisions with more confidence and a sense of responsibility. (Nadler, 1990)

5) Change management

Change and agility are inseparable concepts. Successful change management has three essential steps. First, there is a perceived need for change (without which there would not be the pressure to move from the current status quo). Second, there is a need to implement the change efficiently and effectively. And third, the change has to be tested, evaluated.

The agile organisation, in which change is the order of the day, must be able to implement these three phases at all times. (Worley, 2014)

6) Communication

The way in which the organisation communicates internally - between employees - and externally - with customers, stakeholders, - will determine its ability to be truly agile.

Horizontal communication facilitates interdepartmental relations and exchanges in such a way as to minimise repetition or overlap between functions. Often, in order to ensure the necessary agility, exhaustive communication can be by-passed as it takes time. In any case, a corporate culture that promotes effective communication is necessary. Decentralisation of decision-making powers and effective communication require the construction of cross-functional project teams. (Nerur, 2005)

7) Market analysis and response

As already mentioned, it is essential to properly read and analyse the market in which one operates. An accurate analysis of the demand and of one's competitive position allows one to implement the necessary responses and adjustments in time. More specifically, this pillar establishes the need to equip oneself with the tools for effective analysis. (Harraf, 2015)

8) Operations management

Much of what an organisation seeks to achieve is directly related to efficiency and/or effectiveness. Efficiency refers to the ability to complete operations while minimising effort, resources and time spent, without sacrificing output quality. Effectiveness, on the other hand, refers to whether the objective has actually been achieved. Both characterise the agile enterprise.

9) Structural fluidity

In general terms, the organisational structure of a company may hinder its ability to be flexible, responsive and manageable. The structure determines the links that are formed between people, operations and communication channels, also influencing the vision of the enterprise. As already pointed out, the agile organisational structure tends to be flat, focused on consumers, structured around teams, not functions. (Lane, 2009)

10) Development of a Learning Organisation

The agile organisation is in a constant state of growth, through a continuous learning stimulus of its members. It is therefore crucial to develop a learning organisation. Organisational learning and agility are inseparable concepts that feed into each other. (Garvin, 1993)

These concepts provide a general framework for the implementation of an agile organisation. While the concepts are not new, together they provide a framework for deploying an organisation that is more responsive to the external environment. The way in which the organisation deploys the measures related to each attribute should vary according to the needs of the organisation. Although the application may vary, understanding the degree to which an organisation subscribes to the pillars can enable managers to guide their companies to future success.

2.4 Agile tools are no longer enough

It is now undeniable that agile methodologies are considered as one of the best ways to work and meet the challenges of our decade. In recent years there has been a huge increase in the use of agile in organisations, In addition, through the use of the agile approach, organisations have been able to reap a number of benefits, including increased ability to manage change, greater visibility into projects and reduced development costs and time (Nerur, 2005). All these factors inevitably suggest that the agile world is destined to grow and change further. However, there is some research that shows some pitfalls and problems that some workers may experience when using some agile methods.

The following is a list of empirical research that gives examples of people who have been monitored and studied while using some agile methodologies. The first study published by Information and software technology in 2008 told of development teams using the Extreme programming (XP) technique. One of the most interesting analyses is the one concerning customer perceptions, reporting that customers are satisfied with the opportunities for feedback and response to changes and that practitioners can find great benefit in constant dialogue with the customer while saving time and resources. However, in this study, it was analysed that the on-site customer role can be stressful and cannot be

sustained over a long period of time. Another limitation that was mentioned is that team members are less interchangeable in agile teams, which has consequences on how projects are managed. It has been noted that with the introduction of new figures into agile teams, the induction process can be more difficult than in more hierarchical structures. (Moe, 2009)

In the second research, also published by Information and software technology, a nine-month study was conducted on a software development organisation using Scrum. It is thought that team leadership and team orientation promote the ability of team members to monitor the performance of their teammates. This does not seem to be borne out by this case study in several ways. Because of the isomorphic team structure, developers focused on their own modules and often created their own plan and made their own decisions. In addition, problems were seen as personal. This low orientation of the team by the developers led them to not know what others were doing, and consequently it was difficult to control the performance of others. Team members seemed to be used to having a high degree of individual autonomy. This created problems when team members tried to change their normal way of working to become part of a self-directed team. The leadership of the team was also not distributed as it should be in a self-managing team. Only a few team members participated in decision-making, and the Scrum master focused more on command and control than on providing direction and support to other team members. Due to the fact that team members did not monitor each other, there was little feedback and almost no backup, which became evident when the team started losing resources at the end of the project. Team members provided some positive feedback, but many found it difficult to both give and accept negative feedback. If an effective backup is to be provided, teammates need to be aware of each other's work to identify what kind of assistance is required at a particular time. The team had problems with all the teamwork skills and consequently had problems coordinating teamwork. Important tasks were even forgotten. In Scrum, daily stand-up is the most important mechanism to achieve such communication. All these factors can be summarised in the following sentence of one of the interviewed Scrum team members: "without sufficient trust, team members spend time and energy protecting, controlling and inspecting each other, instead of collaborating to provide value-added ideas. It is clear that trust is a prerequisite for shared leadership, feedback and communication." (Moe, Dingsøy, 2010)

The latest study taken into analysis published by Global Journal of Flexible Systems Management in 2017, analyses the behaviours of an agile team using SCRUM in an IT services organisation. In general, a number of agile anti-patterns were noted during the case study that impacted the productivity, effectiveness and workflow of the Agile Scrum development team. These anti-patterns included key stakeholders not consistently using official Scrum track meetings to request and set work items, an inability of stakeholders to collaboratively prioritise work items and define sprint goals, and an inability to actually define when work items were completed according to the required 'definition of fact'. The agile anti-pattern of the team and project manager using ad hoc requests should not be interpreted as ineptitude in any way on their part, but rather that an agile culture or spirit still had to permeate the traditionally non-agile organisation at all levels. Indeed, the demands on project managers were proportionally higher towards the beginning and end of the project, suggesting planning and closing activities. This suggests that the project manager was still applying a traditional top-down hierarchical management approach, even though it was not at all suitable for a Scrum project. This attempt at forced adaptation of a traditional management style is a recurring anti-pattern in the agile literature. Instead, the project manager should have used track meetings twice a week in particular to request work through the dedicated Product Owner (PO), who would then reflect this work on the prioritised product backlog. This study provides further evidence of this apparent inconsistency between a hierarchical cultural orientation in an organisation and the use of agile methods in general. Overall, the implications of the findings presented are that a broader 'agile culture' needs to be properly nurtured, and agile values induced and aligned, within organisations in order to reap the benefits of transitioning to the use of an agile methodology (Carew and Glynn 2017)

Now, analysing the three studies presented earlier as a whole, it can be seen that within organisations using agile methodologies, non-agile behaviours emerge. By non-agile behaviours I mean, those actions that go against the four founding principles of the agile manifesto. As analysed before, we can find a lack of communication and trust within Scrum teams, tasks that are perceived as individual and not as a set of actions to achieve a common goal, the inability of many members of the organisation to give or receive feedback, project managers dictating from above goals that have not been planned and shared before within the team and perceiving the client not as an entity that must be part of the development process but as a sort of antagonist. As I have already said, agile

methodologies and tools have been created for a specific purpose, namely to help the members of the organisation to embrace agile values. Despite this, some people, while using these methodologies, behave in a non-agile way. There may be various reasons to analyse this phenomenon. (Nerur, 2007)

First of all, agile methodologies are not always a guarantee of success; one has to know how to apply them according to a method (Dybå,2008). Every year, new agile tools and software are adopted by organisations, so there is an increasing drive to try to customize products to make them usable by all types of organisations in all contexts. In addition, many organisations do not strictly follow the frameworks of agile methodologies, because some of these frameworks are considered unsuitable for a given context or perhaps too complicated and time consuming. The consequence is that these organisations only adopt certain frameworks of a certain methodology. On the one hand, it is right that companies and teams should organise themselves using methodologies that are more in line with their way of working, adopting only certain techniques and using agile tools that are better tailored to their needs. However, modifying methodologies created and designed to achieve the maximum benefits of the agile approach could be a mistake and lead to the exact opposite effect. Another very interesting issue considered in the article by Carew in the *Global Journal of Flexible Systems Management* analysed above is that of creating an agile culture (Carew and Glynn 2017). The implications of the research findings are that a broader "agile culture" needs to be properly nurtured, and agile values induced and aligned, within organisations in order to reap the benefits of the transition to using an agile methodology. However, whether organisational culture can indeed be manipulated to become more compatible with the agile approach, or whether an agile culture should instead manifest itself as an emergent, ongoing, mutually reinforcing spirit alongside organisational culture, remains debatable (Iivari 2011). What emerges from this latest analysis of the agile approach is that something is missing in agile methodologies. There is a problem with the agile approach today, and that the methodologies designed to pass on the concepts of the agile manifesto to people are no longer sufficient, at least not sufficient for everyone.

CHAPTER 3

3. A revolutionary tool: OKR

In the following chapter we are going to analyse an organisational protocol for goal setting in the company. A tool that has had a very wide adoption in recent years, starting from big tech companies like Intel and Google to new and small innovative start-ups. This new protocol is the Objectives and Key Results (OKR). In the following pages I am going to trace the birth and development of OKRs, showing the key results and how this tool can help organisations within today's hyper-competitive marketplace. As OKRs are a relatively young tool there are no relevant academic articles to rely on. The only relevant sources that deal with this topic are books; "OKR revolution" by John Doerr (Doerr, 2019) and "Objectives and Key Results" by Paul Niven and Ben Lamorte. (Niven, 2016)

3.1 History of OKRs, the evolution of Management by Objectives

In 1954, a management concept known as Management by Objectives (MBO), was introduced by Professor Drucker, it was proposed in the book "The Practice of Management" (Drucker, 2006), one of the classic management textbooks. MBO is a process during which management and employees define and agree on the objectives they consider crucial within a given period of time. The idea that a manager would set a goal and then trust his team to achieve it, certainly by operating a process of delegation, was a relevant step (Dirsmith, 1997). One of the limitations of this approach was to make managers aware of whether the objective had been achieved or not. The answer lies in measuring the result achieved against the target set. In the 1970s, Intel was a growing company, evolving and reorganising to compete and establish itself in the new and promising microprocessor market. The MBO was modified by Intel during the time that Andy Grove was CEO. In Grove's thinking, a successful MBO system has to answer only two fundamental questions: the first is where I want to go (the goal) and the second is how I am going to achieve it. This second question, simple as it may seem, proved revolutionary in launching the OKRs movement, associating a goal with what would be known as a 'key result'. (Doerr, 2019)

Andy Grove's revolutionary step was to apply the principles of manufacturing to the so-called 'soft' professions, meaning all those professions where the relationship between input resources and final output was not defined, such as administrative and managerial professions. Andy Grove tried to create an environment that appreciated and put a more concrete analysis on the output. Focusing on output is the key to increasing productivity, whereas trying to increase activity can result in exactly the opposite. For example, in the case of an assembly line, it is easy enough to distinguish output from activity, but it becomes more delicate when the employees carry out research and study activities. Grove had to answer the question of how to measure the output of knowledge workers and how to increase output performance. To answer this question, Grove tried to analyse these knowledge output creation processes with a scientific and engineering approach. Within Intel, Grove succeeded in developing a system capable of monitoring all the organisation's activities. Grove called his goal-setting system 'iMBO', which stood for Intel management by objectives. From then on Grove talked about objectives and always linked them to key results. In 1975, John Doerr, attended a course at Intel given by Andy Grove where he was introduced to the theory of iMBOs. John Doerr went from being an executive who had worked with Andy Grove to an investor. It can be said that he was one of the main investors in Google when it was still a little known start-up. Having felt comfortable with OKRs from his time at Intel, John Doerr proposed the method to the two founders of Google (Larry Page and Sergey Brin) and they agreed to experiment with it. This was the starting point from which Google embraced the OKRs. OKRs differed in several respects from the old MBO method. The OKRs added a fundamental shift from the old MBO method of goal development, which was limited to analysing what goal should be pursued, whereas the OKRs try to guide the organisation on how a goal is achieved. The time frame of the objectives is also redefined, moving from annual objectives to quarterly or monthly objectives and, above all, known to the whole organisation. As we will analyse later, OKRs were never conceived as personnel evaluation tools and therefore linked to financial compensation, as the MBO process did, but as tools capable of helping any worker in the organisation.

MBO	OKR
'What'	'What' and 'How'
Annual	Monthly or quarterly
Private and closed	Public and transparent
Top-down	Bottom up and late-rare (50%)
Related to compensation	Separation from compensation
Risk-averse	Aggressive and aspirational

Figure 6. Comparison between MBO and OKR

In 1999, John Doerr introduced the OKR goal-setting methodology at Google. From Google and Zynga, both companies in which Doerr invested and supported, the OKR methodology spread to companies such as LinkedIn, GoPro, Flipboard, Spotify, Oracle, Sears, Twitter and others. So OKR from an approach invented at Intel and developed by John Doherr, has been further developed within larger companies. Today this principle has been adapted to meet the needs of companies, entrepreneurs, professionals and start-ups of all sizes, particularly those who wish to make rapid progress with significant development with an open view of achieving goals and agile planning of their project. (Doerr, 2019)

3.1.a The OKR structure

In order to give a clearer idea of what an OKR is we will analyse the structure of this tool. As can be seen from the etymology of the acronym, an OKR is divided into two parts: an objective and the key results which are linked to that objective. An objective is simply what has to be achieved. By definition, objectives are meaningful, concrete, action-oriented and motivating. If properly identified and implemented they are the key against confusion in thinking and acting. Key results keep an eye on how we get to the goal. Effective KR are simple, time-limited, aggressive but realistic. Above all, they are measurable and verifiable; there is no key result if it is not expressed in a numerical metric. At the end of a predetermined period, it is declared whether the KR is satisfied or not. In contrast to an objective that may have a long duration and be pursued over several months, key results evolve as the work progresses. Once the KRs have all been completed,

necessarily the objective is achieved; if not, it means that OKR was ill-defined to begin with. A definition, which describes the OKR protocol well, can be found in the book 'Objectives and Key Results' by Paul Niven. "OKRs are a critical thinking framework and ongoing discipline that seeks to ensure that employees work together, focusing their efforts on making measurable contributions that move the company forward." Let's take a more concrete look at this definition of OKR, trying to argue its main passages. (Niven, 2016)

Critical thinking framework: When examining the results of OKRs, the challenge is to go beyond the numbers and dig deeper into what they mean so that we can bring to light the challenging questions that can lead to future discoveries. OKRs, when implemented with rigour and discipline, facilitate this pattern of critical thinking. Constant discipline OKRs foster a culture of continuous improvement. This involves updating the OKRs quarterly (or as often as required), carefully reviewing results and modifying the ongoing strategy and business model as necessary, based on results and external feedback.

Ensure employees work together: OKRs should be structured, and used, to maximise collaboration and alignment. One of the ways in which this is facilitated is through the inherent transparency of OKRs, which are widely shared so that everyone, from top to bottom, can see the key objectives and outcomes across the organisation. An important factor in the success of OKRs is that they are a mix of top-down and bottom-up involvement in the organisation.

Focusing their efforts: OKRs are not, and should never be, seen as a checklist of tasks that need to be completed. The purpose of the model is to identify the most critical business objectives and measure accountability through quantitative key results. Objectives and key results should not be considered a "legal document" binding employees, OKRs should be an input used to determine the effectiveness and not the efficiency of an employee.

Make measurable contributions: key results are quantitative in nature. OKRs are built to avoid subjectivity and accurately note how the business is progressing based on the achievement of the OKRs.

OKRs are tools that are used very flexibly within various types of organisations. Even within the same organisation these tools can be at individual level, at team level, at division level or associated with existing working practices. Another decision to be taken into consideration when building an OKR is the time frame of the OKR itself. It is suggested that key objectives and outcomes be set more frequently, recommending quarterly or in some cases monthly. This is a recognition of the fast pace of the industry in which you work, but also reflects the fundamental importance of adopting fast feedback into the culture of an organisation. (Niven, 2016)

An example of an OKR from the OKR revolution book will be shown below to make it easier to understand what this tool looks like and how it can be used. (Doerr, 2019)

3.2 OKR drafting example: Google case

One of the organisations with the most collective experience in OKR implementation is undoubtedly Google. During its growth the company has periodically issued guidelines and new templates for OKRs. The information below is mainly taken from internal sources collected in Doerr's OKR revolution book, with permission from Google. One of the reasons that makes Google one of the most innovative and profitable multinationals of our time, according to the organisation itself, has been the implementation of OKRs. As Doerr reports: 'At Google we like to think big. We use a process called Key Results Objectives to help us communicate, measure and achieve these ambitious goals. It is crucial for Google's employees and managers to make conscious, informed choices about how they allocate their time and energy, both as individuals and as members of a team. OKRs are the manifestation of these careful choices, the means by which individuals can coordinate to achieve great collective goals. OKRs are used to plan what people will produce, monitor progress against plans and co-ordinate priorities and milestones between people and teams.

In addition, there is an awareness that in OKRs ambitious goals are set, and as the experience at Google explains, no one expects to be able to achieve all of them, if this happens it means that they have not been set aggressively enough. Within Google therefore a colour scale has been created to show how far an OKR has been achieved. So at the end of the period in which one is working on a particular OKR, thanks to their

quantitative character one is able to assign each individual OKR a rating that corresponds to how far its KR has been completed. (Doerr, 2019)

- from 0.0 to 0.3 the rating is red, i.e. the KR has not been achieved.
- from 0.4 to 0.6 the rating is yellow, meaning that the KR has been set correctly and a good rating has been achieved.
- from 0.7 to one the rating is green, the KR has been achieved completion but that means that at the start it was probably set in a non-challenging way.

3.2.a Writing effective OKRs

John Doerr in the book OKR revolution explains how Google believes that writing OKRs is a meaningful ritual, not made and imposed from above but seen as a people-oriented tool that can drive work. OKRs built and managed in the wrong way are a waste of time, a ritual void of meaning. OKRs are in fact a motivational management tool that helps to clarify to teams what is important, what to optimise and what compromises to make during the daily work. Writing good OKRs is not an easy task but it is not impossible either. Google gives general, but very useful guidelines to help set up effective OKRs. (Doerr, 2019)

SOME BASIC RULES TO SET OKRs
Maximum 5 objective with 4 key results
60% Objectives from bottom-up
Not a performance evaluation weapon
60-70% grade mean a good results
40% grade mean a bad results
Continue incomplete key results only if they are still important

Figure 7. OKR rules

One of the first rules is to select no more than five objectives with no more than four related key results per OKR setting session. This is often an effort for some people, but it is necessary to become aware of what is really important to work on. In addition, more

than 60% of the objectives have to come from the bottom up, which means that it is the frontline operational employees who dictate most of the objectives. This is because it is these people who are most in contact with the customer and the external environment and therefore most aware of what the organisation has to compete on. All OKRs have to be chosen and shared by all team members and no one can impose a top-down objective without consulting the other team members. As mentioned before, OKRs should not be weapons that employers and team leaders use to assess the performance of individuals. Achieving 100% of an objective is not considered a positive sign, it means that the OKRs related to that objective have also been fully completed and as explained above, this means that an error has occurred in setting the OKR. A percentage within which an individual can consider an OKR to have been useful is when a goal is 60-70% achieved, while below 40% is not achieved. However, this does not mean that the OKR was not useful, but that most likely there was either a mistake in some operational action at KR level or that the objective was too ambitious for that particular moment. (Doerr, 2019)

3.2.b Errors in the creation of OKRs

In Doerr's book some typical mistakes that one can fall into when writing OKRs are illustrated. The most common ones are listed and commented on below.

- Writing "business as usual" OKRs; this means that OKRs are often written on the basis of what the team believes they can achieve without changing anything they are doing, rather than on the basis of what the team and its customers really want.
- Write non-aspirational OKRs; a team's OKRs must credibly commit most of its resources. Teams that manage to achieve all their OKRs without needing all the human and capital resources at their disposal are then assumed to be hoarding resources or the team is not motivated enough, or both. This is a signal for the senior manager to reallocate other resources to teams that make more effective use of them.
- Write down low value objectives; OKRs must bring clear value to the company, otherwise there is no point in using resources to achieve them. Low-value objectives are those that even if achieved with a full score will not be noticed and will not affect the well-being of the organisation.
- Set insufficient KRs for the objective: OKRs are divided between the desired outcome and the measurable steps needed to get to that outcome. It is essential

that the KRs are written so that a high score on the key results generates a 1.0 score for the objective. A common mistake is to write key results that are necessary but not sufficient to complete the objective to which they are related. This error is particularly damaging because it delays both the identification of the resources needed for the objective and the discovery that the objective will not be completed by the deadline.

(Doerr, 2019)

3.2.c A typical OKR cycle

In the following I will analyse a classic OKR cycle proposed by Google. As explained earlier it can be assumed that different organisations use OKRs at different levels; company, team and individual employee level (larger companies may have additional levels). Within an OKR cycle there are distinct moments where different professionals interact with each other in different ways:

- 4-6 weeks before the start of the quarter: brainstorming on the annual and first quarter OKRs for the company. Senior leaders start discussing the higher level OKRs for the company. The OKRs for the first quarter are set, it is time to also define the annual plan, which can help guide the direction of the company.
- Two weeks before the quarter: Communicate the company-wide level OKRs for the coming year and for the first quarter. Finalisation of OKRs for the company and communication to all members.
- Start of quarter: Communication of team OKRs for the first quarter. Based on the company OKRs, teams develop their own OKRs and share them in their meetings.
- One week after start of quarter: Sharing of OKRs with employees for the first quarter. One week after the communication of team OKRs, individual employees share their OKRs. This may require collaboration between employees and their managers.

- During the course of the quarter: Employees keep track of progress and carry out periodic checks. During the course of the quarter employees measure and share their trends by checking them regularly with their manager. During the quarter individuals estimate the likelihood of fully achieving their OKR. If their achievement seems unlikely they may have to recalibrate.
- Towards the end of the quarter: employees reflect on and evaluate their OKRs from the first quarter. Each employee assesses their OKRs and carries out a self-assessment reflecting on what they have managed to achieve.

Below is a timeline taken from the OKR revolution book, which summarises the OKR cycle. (Doerr, 2019)

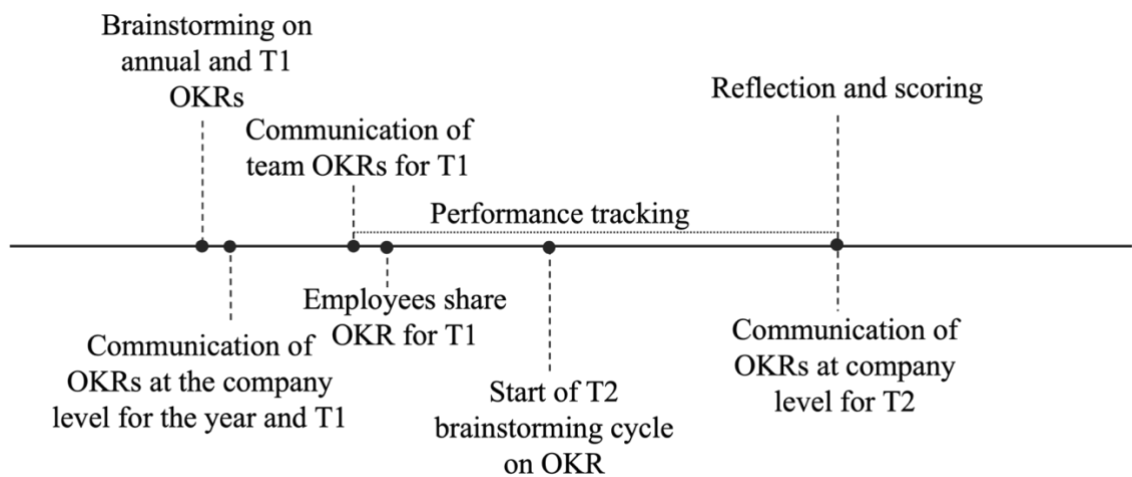


Figure 8. OKR cycle

3.3 The fundamental characteristics of OKRs

In the following chapter we are going to analyse four fundamental characteristics that OKRs possess and how these characteristics manage to transform ideas into execution. The characteristics are focus, alignment, tracking and aspiration; they were cognised by John Doerr in his book, he dubbed them the four OKR superpowers, noting that these characteristics are the four pillars of the OKR methodology. In this chapter we will analyse what they mean in concrete terms. (Doerr, 2019)

3.3.a Focusing and Selecting Priorities

This first key results of OKRs tells how high performing organisations focus on the work that brings real value and are equally clear about what does not matter. By firmly supporting a few high OKRs the leaders of organisations give their teams a compass and a reference system to evaluate their efforts. Bad decisions can be corrected when the results encountered do not live up to expectations but, decisions not made are the most damaging to the organisation. An effective goal setting system with disciplined thinking leads the organisation to invest its time and energy in choosing what really matters. Making a list of goals less crowded is always a challenge, especially for those organisations that are highly innovative and always looking to find new opportunities from both inside and outside, but it is a necessary process. As any leader will tell you there is no such thing as an individual or a company that can do anything, with a selected set of OKRs you can highlight a few objectives, the vital ones, that must be completed for collective success.

The clear communication of the organisation's strategic objectives is a fundamental point of focus. By the organisations' own admission, two out of three companies do not know how to consistently communicate their objectives (Garr, 2014). In another survey of 11,000 senior executive managers, the majority were unable to name their highest corporate priorities and only half were able to name one. (Sul,2015) Leaders need to be able to communicate to their employees why they are committed to some tasks instead of others. Employees and co-workers need more than monthly milestones to be motivated. Most employees want to know and understand how their goals relate to the company's mission. The information process cannot stop at the presentation of high-level OKRs in a quarterly meeting, but must be nurtured by sharing practices between top management and frontline employees.

One of the most insidious questions for high-level managers is to decide where to start in order to prioritise corporate objectives. To cite an example, Google, in order to understand what is really relevant within its organisation, started from its mission statement: "to organise the world's information and make it universal and accessible to all". From this starting point, all their products and initiatives, such as Android, Google Earth, Chrome and YouTube are all focused on making Google's mission concrete. In each case, the impetus to focus on priorities starts with the founders and the executive team, who have made their focus and commitment clear through objectives and key results. OKRs are

also a formidable tool because they encapsulate both vision and execution. Goals are the substance of long-term horizons while key results are more concrete and are defined by metrics. If an objective is well identified, three to five key results are usually enough to achieve it. Too many can blur the focus and obscure the progress of the work. In addition, each key result must lead to an improvement; if you are certain that you will fully achieve a KR, it is probably not a necessary KR. To win in the global marketplace, organisations need to be more flexible than ever. According to Google's model, a quarterly OKR cadence is best suited to keep pace with the rapidity of change in today's markets. A three-month horizon prevents continued procrastination and brings real improvements in performance. In a note in a paper, Andy Grove, when he worked at Intel, quotes: 'for feedback to be effective it must be received very soon after the activity it measures has occurred. Consequently, an OKR system must set targets for a relatively short period. For example, if we plan on an annual basis, the corresponding time frame (of OKRs) must be at least the quarter or even better the month". Obviously, this type of OKR compilation protocol is not unique to all organisations. A technical team may opt for six-week OKR cycles to stay in sync with development sprints while a monthly cycle may be more effective for a company that is still taking its first steps and still needs to find the best match between its product and the market. Essentially this ties in with the theme of focus, giving each organisation the freedom to find the best cadence for their OKRs, often the best cadence is the one that can keep the organisation focused on the changing market in which it is immersed.

In most cases, the ideal number of quarterly OKRs will range from three to five, it may be tempting to introduce more objectives but generally a mistake. too many objectives can make the focus less precise on what matters, or they can distract us and cause us to continually look for something that seems easier to achieve. Selective goal-setting is the first line of defence against excessive scattering of forces. Once individuals have consulted with their manager and committed themselves to their OKRs for the quarter, any key results added must be consistent with the programme already established. In any case it is only fair to remember that an OKR can also be changed or cancelled at any point in its cycle, sometimes the correct key results are discovered weeks or months after a target has been set. OKRs have the inherent nature of being tools that can adapt to both the needs of the business and the challenges that the market presents, making them extremely flexible tools. Within the definition of objectives, Andy Grove strongly

believes that the selection of a few objectives, even if it is a complicated process, is the real key to success. He says: "The one thing an OKR system must provide to achieve excellence is focus. This can only happen if we keep the number of targets low. Every time you commit to something, you eliminate the possibility of committing to something else. This of course is an inevitable consequence of the allocation of any finite resource. People who plan must have the courage the honesty and discipline to let go of projects and not just start by saying no but be proactive to new challenges. We have to realise and act on this realisation that if we try to focus on everything, we are not focusing on anything." Above all, higher level goals must be given meaning. OKRs are neither a list of things to be done in the sum of a team's daily activities. They are a set of very strictly defined goals that need special attention and that push people to give their best. (Doerr, 2019)

3.3.b Aligning and connecting to improve teamwork

In a society where transparency and sharing is a prerogative of every individual there is a contradiction that leaves many organisations struggling. In most organisations the strategic objectives remain secret, as a result at any given time there is a significant percentage of people working on the wrong things, the problem is knowing how to identify who these people are. As quoted from the book "OKR revolutions". , goals that are made public are more likely to be achieved than those that remain private, being transparent with all members of the organisation improves results overall. Out of 1,000 adult workers in the US, 92 per cent responded that they would be more motivated to achieve their goals if their colleagues could see their progress (Doerr, 2019). In an OKR system, even the last employee to join the company can see everyone's goals, right down to the CEO. Criticism and corrections are shared publicly, employees have all the freedom to create and even point out flaws in the goal setting process itself. Meritocracy within these companies is consequently fostered, when everyone writes down what they are working on, it is easier to see where the best ideas come from. It soon becomes apparent that the individuals who move up the ladder are the ones who do what brings the most value to the company. Transparency fuels collaboration; let's say, for example, that an employee is struggling to meet a quarterly target. Because he has publicly reported his work progress, his colleagues can see that he needs help. They can intervene by sending comments and offering support, thus both communication between people and teams and

teamwork improves. Equally important is that working relationships between people are deepened and strengthened. In larger organisations it is often the case that several people are unknowingly working on the same objective. By having a view on everyone's objectives, OKRs eliminate redundant efforts and align all the schedules saving time and money.

Taking any organisation as an example, one starts by setting high-level objectives. Then, in the transition from planning to execution, managers and all staff link their daily activities to the organisation's vision. The term for this linkage is called alignment. According to Harvard business review, companies whose employees are strongly aligned are twice as likely to be top performing organisations.(Duggan,2016) Unfortunately, alignment is a rare occurrence, some research says that only 7% of employees fully understand their company's business strategies and what they should be doing to help achieve common goals. A lack of alignment according to a survey of CEOs globally is the main obstacle between strategy and execution (Kaplan, 2001) The answer lies in focused and transparent OKRs that are able to link the work of each individual to the efforts of the team, the projects of the department and the overall mission of the organisation. People inherently crave connection, in the workplace we are naturally curious about what the company's leaders are doing and how our work intertwines with theirs; OKRs are a vehicle that can align companies both horizontally and vertically.

In the business world of the past as a waterfall goal-scheduling process, work was strictly top-down. Objectives were passed down the organisational graph without being discussed with any lower hierarchical level. The higher level managers set the more general objectives for their department heads who then passed them on to the lower level of managers and so on. This way of managing goal-setting is no longer universal, but it is still the dominant one in most larger organisations. Its power of attraction is the reason why the waterfall process is still widely used, as cascading objectives bring together lower level employees and ensure that they work on what is in the best interests of the company. In the best case this cascading process forges unity by making it clear that each department acts as a team. John Doerr in a presentation of the OKR methodology at Google gives an example of OKR formulation within an American football team, highlighting the limitations of the cascading goal setting process. In the example presented by Doerr, he imagines the stipulation of objectives according to a cascade

method in an American football team. Starting with the general manager, the person at the top of the organisational pyramid, the first OKR is generated. For the general manager, the main goal is to increase the profits for the owner of the football team, the key results related to this goal are: winning the championship and filling the stadium 90% in home games. Then following the hierarchical level of the organisation the first key result of the general manager becomes the goal of another professional figure, the head coach. In fact, the main goal of the head coach is to win the championship and the key results related to that goal become the goals of his collaborators (the offensive coach, the defensive coach, the special teams coach). The second key result of the general manager, to fill the stadium 90% in home games, also becomes the objective of another branch of the company and in particular of a specific person, the marketing manager, who in turn will draw up key results that will be the objectives of his collaborators (the marketing director, the press, the merchandising director).

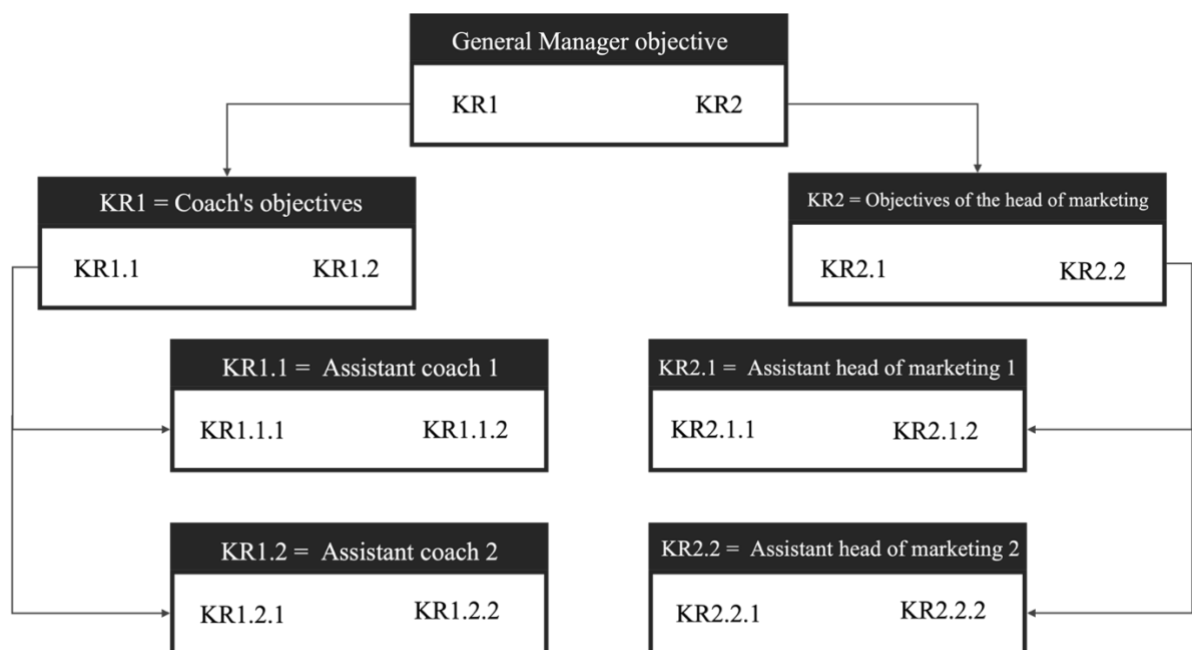


Figure 9. Hierarchy of objectives and key results

This type of OKR scheduling may seem to be a consistent methodology, but it hides some limitations. When applied with moderation, cascading descent makes an operation more coherent, but when all objectives are made to descend from above, the process becomes purely mechanical with four negative effects:

- Lack of agility. Even medium-sized companies can have six or seven levels of information flow. While everyone waits for the cascade of information to finish descending, meetings and reviews multiply. Managing each cycle of objectives

can take weeks even months. Organisations that rigidly apply this cascade process tend to resist rapid and frequent goal setting. Implementation is so mechanical that quarterly OKRs may prove impractical.

- Lack of flexibility. Because the formulation of cascading targets requires so much effort people are reluctant to set them again mid-cycle if the need arises. Each small update can be a burden for all those downstream who find it difficult to keep their goals aligned. Over time the system becomes very costly to maintain.
- Marginalised co-workers. Rigidly cascaded systems tend to block input from front-line employees. In a top down system, employees will be hesitant to express misgivings about goals or promising ideas.
- One-dimensional cascaded connections stabilise vertical orientation but are less effective in containing horizontal, cross-departmental input. (Doerr, 2019)

Thanks to the structure of OKRs we have an alternative, as they can be shared without cascading from one level to the next. If functional for the more general purpose, multiple hierarchical levels can be skipped, instead of cascading down from the CEO to a director or manager, a goal can jump from the CEO directly to an individual employee. Or the leadership of the company can present their OKRs to everyone at one time, trusting that people are ready to understand where the organisation is going and how to align personal goals with the company goals. Taking Google, which has tens of thousands of employees, as an example, its innovative culture would be baseless if it used OKRs mechanically descended from above. One of the proposals for the antithesis of the cascade process could be the "20% of Google's time" strategy. This kind of strategy gives engineers the freedom to work on side projects for the equivalent of one day a week. By freeing up time for a few motivated employees, Google changed the perception of individual work. Thanks to this system, in 2001 a young Google employee started a project called Caribou with the strategy of '20%', today that project is known as Gmail, the world's most popular web-based e-mail service. This shows that by avoiding mechanical and compulsive hyper alignment, organisations encourage the emergence of goals from below. Innovation waits to dwell less at the centre of an organisation and more at its edges. The most powerful OKRs normally originate from insights far removed from business strategies. As noted by Andy Grove: 'People at the edges of organisations usually come into contact early on with the changes that are coming. For example, salespeople understand how customer demand is shifting before management does; financial analysts are the first to know when

the fundamentals of a business are changing." In a healthy OKR environment there is a balance between alignment and autonomy, between common purpose and creative openness. An optimal OKR system gives everyone the freedom to set at least some of their own goals and especially their own key results. People are encouraged to go beyond their limits or set themselves higher goals than they have set themselves; the higher the goals, the higher the performance.

Even if the modern goal-setting process successfully overcomes corporate organisation charts, unrecognised connections between and among teams and individuals remain the number one cause of project delays. The solution to this limitation is horizontal cross-functional connectivity, so develop peer-to-peer and team-to-team connections. For innovation and advanced problem solving, a single individual cannot compete with a connected group. As businesses become more intricate and initiatives more complex, interdependent divisions need a tool to help them achieve a common goal together. Connected businesses are the fastest growing businesses, and to assert a competitive advantage the leader and employees must be connected horizontally across role barriers. A transparent OKR system promotes this kind of free collaboration. (Niven, 2016)

3.3.c Monitoring and accountability

One of the most underestimated features of OKRs is that they can be monitored and then revised or adapted as circumstances require. Unlike traditional business objectives, OKRs are dynamic tools. Their lifecycle is divided into three phases which I analyse below.

The first is the setup phase. In this first phase, organisations must be able to find methodologies and tools to have a rapid and transparent circulation of information regarding the objectives of each individual employee in the company. Tools not created for the purpose of OKR drafting can be applied, but this may work when organisations are at an early stage of development and their staff is still limited. As the complexity of goal setting increases, a large number of organisations adopt dedicated, cloud-based OKR management software. The best such platforms provide apps with automatic updates, analytical reporting tools, real-time alerts and integration with other business management apps. Employees who become users of such software can access a digital dashboard to create, track, edit and evaluate their OKRs.

These types of platforms infuse OKRs with value, for several reasons:

- They make goals more visible to everyone. Users gain access to OKRs from any hierarchical level in the organisation.
- They strengthen involvement. You have a daily view of your activities, it is easier to see if the goal is being achieved and it is easier to stay motivated.
- They promote internal networking. A transparent platform brings individuals closer to the ideas of colleagues.
- They save time and money and reduce frustration. In conventional goal setting, hours are wasted searching for documentation in meeting minutes, emails and Word and PowerPoint documents. With an OKR management platform, all relevant information is ready where it is needed. (Doerr, 2019)

A key condition for an OKR system to work effectively is that the team deploying it must adopt it universally without exception. There are bound to be some individuals who are slow to adopt this tool and others who resist change. To push the more reluctant employees it is a good practice to appoint one or more OKR managers within the company. The second phase is monitoring the progress of the OKR. Individuals have a strong desire to know about the progress they are making and to see it represented visually. Research shows (Amabile, 2011) that measuring progress can be a better incentive than public recognition, monetary bonuses or even achieving the goal itself. The simple act of putting a goal in writing increases the likelihood of achieving it. The odds are even better if you keep track of progress while sharing the goal with colleagues, two features that are integral to OKRs. A study conducted (Matthews, 2019) by the University of California found that people who recorded their goals and sent weekly progress reports achieved 43% more of their goals than those who simply thought about their goals without sharing them. In tracking and monitoring OKR, four actions can be identified at any point in the cycle:

- Continue: if a goal is performing well there is no need to correct it.
- Update: modify a key result or objective to respond to changes in the workflow in the external environment. Those responsible for that OKR need to ask themselves what could be done differently to bring the objective back to good performance. The options may be different; you may want to revise the timeline or free up resources from other activities to promote this objective.
- Start: A new OKR is launched at any point in the cycle whenever the need arises.

- Stop: When an objective is underperforming and has outlived its usefulness, the best solution may be to delete it to make room for a new one.

Whenever a key result or objective becomes obsolete and impractical, both employees and senior managers should feel free to modify or delete an OKR during the execution cycle. Unlike a more traditional approach to goal setting, OKRs allow you to avoid being tied to a goal that no longer reflects reality. OKRs serve people and not the other way around. Nevertheless, it should not be forgotten that when a goal is dropped before the deadline, it is important to communicate this to everyone who relies on it. In order to get the best results, OKRs are reviewed several times each quarter by employees and their managers, then trends are reported, obstacles are identified and key results are entrusted. Google's virtuous example tells us that the frequency of team reviews varies with the business needs of the moment, the gap between expected outcomes and execution, the quality of communications within the team, and the size and geographical distribution of the team. The more dispersed the team members are, the more frequently they maintain contact. Google's typical review cycle is at least monthly, although discussions on objectives are so frequent that sometimes formal meetings are not even necessary. The last phase of the OKR life cycle is the measurement of results and self-assessment. This retrospective phase is the feature that distinguishes OKRs from all other business goal setting methods. OKRs do not expire on completion. Because it is a data-driven system, a lot of value can be gained from the final evaluation and analysis. In team meetings these summaries consist of three parts: objective measurement, subjective self-assessment and reflection. During the objective measurement you analyse the OKRs you have worked on and ask questions about how you might behave differently in the next cycle. A poor score forces a reconsideration, i.e. you have to ask yourself whether the objective is still worth pursuing, and if the answer is positive, how you can modify it to achieve it. In more modern goal management platforms, OKR scores are generated by the system. This is possible because OKRs are based on numbers, on parameters that are objective and do not depend on human intervention. The easiest way to score an objective is to average the percentage completion rates of the associated key results. A classic example of objective evaluation has already been explained in the previous chapter where we see how Google uses a three-colour scale to which scores from 0.0 to 1.0 are associated. In the OKR performance evaluations the objective data are enriched by the subjective evaluation of those who have defined goals. For any given goal, in any given quarter, there may be

extenuating circumstances. A seemingly poor score may hide a great effort and a score may be underestimated. For example, let's assume that the team's goal is to recruit new customers and that an employee's individual key results is to make 50 phone calls. At the end of the cycle the target of 30 phone calls has been reached and the result is 70% achieved. In this case the data does not fully express the achievement of the target, but if we assume that 12 of the calls lasted hours and resulted in 8 new customers we could give this performance a high rating. Conversely; if you kept putting off work and then in the last days of the quarter you made 50 phone calls and gained just one customer the performance rating is totally inadequate. Considering this aspect of subjectivity, employees are encouraged to use their OKR in the self-assessment as guides and not as scores. The key aspect is not simply to have achieved a red, yellow or green result, but that the results have led to something above 'business as usual'. A natural thing in this self-assessment process is that some will judge themselves too harshly while others will have to be downgraded. In any case, an attentive facilitator will intervene and contribute to a recalibration. In the end, numbers in some cases are less important than contextual feedback and a more general discussion within the team. While OKR scores highlight what went right or wrong with the work, and how the team can improve, self-assessment fosters a more effective goal-setting process for the next quarter, leaving aside personal judgements and imparting lessons for future action. The key to individual satisfaction using OKRs is to set aggressive goals, achieve most of them, stop and reflect on what you have achieved and then repeat the cycle. As a Harvard Business School study (Di Stefano,2014) found, "learning from direct experience can be most effective when combined with reflection, i.e. a conscious attempt to synthesise, abstract and articulate the fundamental lessons derived from experience".

The following are some reflections on closing an OKR cycle:

- It is necessary to analyse whether the objectives were achieved and what contributed to this success
- Ask yourself what obstacles you encountered
- In retrospect, if one were to reformulate a goal that I have fully achieved in what way one could change it.
- Ask yourself what you have learnt that could change OKR setting for the next cycle.
- In conclusion, OKR summaries are both retrospective and forward looking. An uncompleted objective can be resubmitted for the next quarter, with a new set of

key results, or whether it is the right time to leave it aside. In either case, sound management judgement is put first. (Niven, 2016)

3.3.d Aiming high and promoting innovation

OKRs have the quality of pushing individuals beyond their comfort zone, leading to achievements that lie at the edge of their abilities. They bring to light original capabilities, unveil creative solutions and revolutionise business models. For companies that want to live long and prosper in a turbulent and competitive market, setting ambitious goals is mandatory. If companies do not continue to innovate, they are doomed to die; iteration is no longer enough to be competitive; you have to find ways that have not yet been explored by others. Setting cautious targets gets in the way of innovation and the lifeblood of today's companies, it cannot be given up. Edwin Locke, a management scholar and expert on the subject of goal setting, analysed studies looking for a quantitative correlation between the difficulty of goals and their achievement. The fields concerned were varied, but Lock analysed that the more difficult the goal selected, the higher the level of performance. Although subjects with very difficult goals achieve them much less often than subjects with very easy goals, the former regularly show a higher level of performance than the latter. (Locke, 1968)

This analysis shows that workers who are driven to high goals are not only more productive, but also more motivated and involved. Setting specific and challenging goals is also a means to increase interest in one's tasks and to help people discover rewarding aspects of an activity. In newly established start-ups as well as in market-leading companies, high goals can sharpen an entrepreneurial culture. By pushing people beyond their usual limits, they become a force for operational acceleration. The most suitable tool for nurturing these huge goals undertaken by companies are OKRs. Aspirational goals draw on all the fundamental characteristics of OKRs. Focus and commitment are indispensable to aim for goals that make a real difference. Only a transparent,

collaborative aligned and connected organisation can achieve results so far beyond the norm, and finally without quantifiable tracking, how can you know when you have achieved such a high goal. According to Maslow's theory of the hierarchy of needs, individuals only after satisfying basic needs can move on to higher level motivations. Considering the pyramid structure of Maslow's theory, at the top is the need for self-actualisation (Kenrick, 2010). Grove was fascinated by the existence of people who, without any prompting, were led to try to test the limits of their ability in order to reach their maximum. Grove realised, however, that not everyone has this natural inclination; for all other individuals, ambitious goals present insurmountable obstacles. OKRs, within a corporate culture that tolerates the mistakes of employees who step out of their comfort zone and aspire to ambitious goals, are the tool that best helps cautious individuals set goals that aspire to great performance. (Doerr, 2019)

To be successful, a goal that aims very high cannot seem like a long, arduous race, nor can it be imposed from above without taking into account the reality on the ground. When presenting goals that require great commitment and involve high risks, employee commitment is essential. Leaders must be able to communicate two things: the importance of the outcome and the belief that it is achievable. Few organisations in the world have an abundance of capital resources, yes some outcome should not go as expected all organisations have a margin of risk tolerance that can vary over time. The greater the margin of error the higher the company can aim. For example, a 40% failure rate for OKRs may seem too risky and discouraging regardless of what the leadership says. Referring back to the case study of a company presented earlier, in MyFitnessPal all OKRs are difficult and demanding goals to achieve, but fully within the reach of the employees' abilities, these are all reasonable but not without problems. Employees will have a tendency to stray from targets for which they may not achieve a high score. It is best for leaders to leave some margin for error for their employees, over time teams and individuals gain experience with OKRs and their key results become more accurate and aggressive. Each team has to ask itself what maximum value it can create and what might be innovative. Trying to achieve something amazing is a good starting point but certainly according to the OKR methodology it cannot be the point where the work stops. (Doerr, 2019)

Now that you have analysed OKRs in depth, you have a better understanding of what they are, how they can be used and what their main characteristics are. In the following I will compare the two working methodologies analysed in the first two chapters; the Agile approach and the OKR tool. The aim is to understand if and how these two methodologies can influence each other. Before doing this analysis it was necessary to have a deep knowledge of the theory of both methods.

CHAPTER 4

4. Combined analysis between OKR and Agile

In the previous chapters two macro topics, which are central to the research, have been dealt with. Agile methodologies and the OKR tool have been analysed separately as if they were two separate topics. The initial aim of the thesis is to understand how the OKR tool and the agile approach could interact with each other, and in what way. The intention is to be able to analyse the benefits that an organisation can gain from the links between OKR and agile methodologies. In order to analyse if and how OKRs and agile approaches interact, we have to start by analysing here cases where they coexist. There are no articles in the literature that deal with these dynamics, as already mentioned OKRs are a tool that is still little studied in the literature. In order to obtain information of this kind, it is necessary to take another look at Doerr's book. The author mentions many agile organisations that use OKRs. However, he never discusses cases of teams using a specific agile methodology integrated with OKR. Quoting Doerr from his book "OKRs are tools suitable for any business environment. They have been adopted especially in the technology sector, where the agile working approach and teamwork are imperatives" (Doerr,2019). It also mentions many multinational companies, working following agile logics, that have adopted the use of OKRs; such as DropBox, LinkedIn, Oracle, Slack, Spotify and Twitter.

The fact that OKRs are now present in different agile work contexts highlights an interesting factor, namely that OKRs and agile methodologies can coexist in the same work environment. The question that arises at this point is, how is it possible that a tool born far from agile logic can be perfectly adapted to such a work context.

4.1 A new way of working with OKRs

In the previous chapter we looked at the main characteristics that OKRs possess and how these characteristics influence the way organisations work. Two aspects in which OKRs bring great benefits to organisations are the creation of a corporate culture and the drive for continuous improvement. (Doerr,2019)

These macro themes are very recurrent especially in recent years where the management of organisations more than ever, try to cope with problems coming from a very competitive external environment. Without a continuous drive to improve their performance in order to stay in touch with the innovation that grows day by day and a suitable organisational culture, today's organisations can find many obstacles. For companies that want to achieve organisational agility these are central aspects to continue to compete in today's market. The theme of continuous improvement within agile organisations is a recurring one, and agile methodologies have been developed with the aim that their value does not end with the conclusion of a sprint cycle, but that it lasts over time, giving the opportunity to improve by learning from the past. Agile culture is a topic that has been widely discussed but still encounters some ambiguities. In the following paragraphs we will analyse how OKRs can develop these two aspects that are so central to agile organisations.

4.1.a Continuous improvement

Continuous improvement programmes have been a central theme for organisations for decades, as companies strive to improve in order to gain a strategic advantage over their competitors. Three critical issues need to be addressed before a company can truly become a learning organisation. First is the question of meaning: a well-founded and easy-to-apply definition of a learning organisation. Second comes management: clearer operational guidelines for practice. Finally, better measurement tools can assess the rate and level of learning in an organisation. Learning organisations can be defined as skilled in five main activities (Garvin,1993):

- systematic problem solving
- experimenting with new approaches
- learning from past experience
- learning from best practices
- transferring knowledge rapidly throughout the organisation

One of the characteristics of agile organisations is precisely that of becoming Learning Organisations. The agile organisation is in a constant state of growth, through a continuous learning stimulus of its members; it is therefore crucial to develop a learning organisation. Learning and organisational agility are inseparable concepts, feeding off

each other (Harraf, 2015). OKRs through their use also seek to push organisations towards new way of working that promotes continuous improvement. Let's start with an observation; annual reports that track the performance of organisations are too expensive and mostly of little use. On average, 7.5 hours of a manager's time is wasted for every person who brings a performance report directly to him or her. Only 12% of HR managers consider this process to be effective in delivering overall value to the company and only 6% think it is worth the time it takes. (Sloan, 2015) To achieve ambitious goals, organisations need to have another kind of performance tracking. Countless smaller, less tradition-bound start-ups have abandoned annual performance reviews. A mobile and agile workforce in a non-hierarchical work environment needs a tool capable of moving from annual performance reviews to constant sharing of real-time feedback. In this way companies are able to introduce improvements throughout the year (Grass, 2020). In this working environment alignment and transparency become everyday imperatives, and using OKRs is the way to achieve continuous improvement. Continuous management of organisations through the use of OKRs increases performance exponentially. In many workplaces OKRs are combined with shorter term objectives (quarterly objectives) and monitored on an ongoing basis using OKRs to capture continuous performance value. OKRs, due to their characteristics, lead companies to move from annual performance management to continuous management. (Doerr, 2019)

ANNUAL PERFORMANCE MANAGEMENT	CONTINUOUS PERFORMANCE MANAGEMENT
Annual feedback	Continuous feedback
Linked to remuneration	Separate from remuneration
Authoritative	Coaching and democratic
Focused on results	Process focused
Based on weaknesses	Based on strengths
Exposed to distortions	Fact-driven

Figure 10. Annual and continuous performance management

Nevertheless, even though OKRs you cannot have a Learning Organisation in a short time. Success comes from carefully cultivated attitudes, commitments and management processes that build up slowly and steadily. The first step is to foster an environment conducive to learning.

4.1.b Developing a culture

Linked to the concept of developing a favourable environment within the organisation, another extremely interesting topic is that of creating an organisational culture. As far as agile organisations are concerned, the creation of an organisational culture translates into the creation of an agile culture within the company. The agile culture must be a properly nurtured process, and agile values induced and nurtured, within organisations in order to reap the benefits of using agile methodologies (Gogate, 2017). However, whether organisational cultures can be manipulated to become more compatible with the agile approach or whether an agile culture should instead manifest itself as an autonomous spirit still remains a matter of debate (Livari, 2011). The concept of organisational culture has been extensively dealt with by several studies, but it is still a very complicated topic. Leaders of organisations are rightly concerned about the creation of an organisational culture, especially founders wonder how they can protect the cultural values of their company even as it starts to grow. So the question for organisations is, how can they define and build a positive culture. OKRs provide a blueprint for this question; by aligning teams to work towards a small number of common goals, OKRs unite them through goal-oriented communications, and create transparency and accountability. A healthy culture and structured goal setting are interdependent; they are interlinked concepts that underpin operational excellence. (Brettel, 2014)

A culture using OKRs and above all a transparent culture, the founders thanks to OKRs are able to give a vision to the whole company avoiding techniques of direct control over employees. Thanks to this aspect, the company's organisation chart is flattened, which makes the organisation more agile. In addition, if harnessed correctly, OKRs build top down alignment, team networking, button up innovation and engagement; the pillars of any successful culture. However, even with regards to the use of OKRs there are aspects that are not clear; on the one hand it is thought that culture change needs to start before OKRs are implemented, while on the other hand OKRs can be directly relied upon to transform culture from the top down. (Doerr,2019)

4.2 Conclusions literature review and research question

After the combine analysis between agile methodologies and the OKR tool, conclusions can be drawn regarding the literature review. As we have seen in this chapter, there are similarities between the agile approach and OKRs. Starting by analysing the fact that OKR and agile could coexist in the same working environment, (Doerr, 2019) I tried to ask why this could be possible. The fundamental characteristics of OKRs, as explained by Doerr, perfectly meet the needs of an agile working environment. As far as the operational work within the organisation is concerned, it was possible to analyse how OKRs promote two central characteristics of agile organisations: the development of a culture that leads to innovation and the creation of a Learning Organisation. (Livari, 2011; Harraf, 2015)

From the above considerations it is clear to understand that there are similarities between OKR and agile. The characteristics of OKRs reflect the needs of organisations working in today's turbulent and competitive environment (Pavlou, 2006). As analysed in the literature chapter, agile methodologies are also born to respond to the needs of organisations. In fact, the agile pillars are nothing more than the translation of the theory of the manifesto into practical methods (Nerur, 2007). At this point, it can be said that both agile methodologies and OKRs have the 4 pillars of the agile manifesto as their theoretical foundation. The objective of these two types of tools is to transform workers into agile individuals; by agile individuals we mean people who, within their working environment, think and act according to the statements of the agile manifesto. We take the four pillars of the agile manifesto as a reference for agility because, as explained above, they represent the foundation of the whole agile approach to work. (Beck et al., 2001)

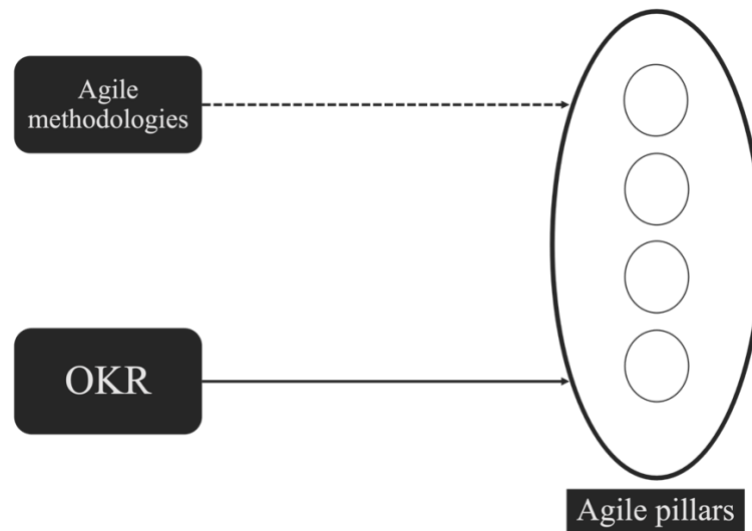


Figure 11. Agile methodologies and OKR aim at agile pillars

However, some individuals, despite using agile methodologies, have behaviours that are far from an agile working approach (Carew and Glynn, 2017). Nevertheless, the causes that trigger these behaviours are unknown to organisations. Therefore, there are factors that go beyond the use of agile methodologies and hinder workers from developing agile behaviours. If we analyse the literature concerning OKRs, it can be said that, at least on a theoretical level, this tool may be able to promote the adoption of the agile manifesto statements (Doerr, 2019). Considering the fact that a relationship between OKRs and Agile exists, it would now be interesting to understand how a new tool such as OKRs can enrich the agile approach. If we start to analyse where agile methodologies have limitations, an analysis made in chapter two, OKRs can be a useful tool. The aim of the thesis will be to understand how OKRs can help organisations that have failed, or only partially succeeded in achieving agility.

CHAPTER 5: METHODOLOGY

5. Research methodology

Having completed the literature review phase, this chapter presents the methodology adopted in carrying out the research work on which this thesis is based. The structure of the chapter shows the context in which the research was carried out, analyses which organisations were involved and how the data was collected. In the first step of the thesis work, the agile approach and the instrument of Objectives and Key Results were analysed, first separately and then jointly. As the aim of the research was to understand how and if there were similarities between Agile and OKR, I accumulated enough knowledge over several months to be able to deal with these topics.

Through keywords I collected a variety of material, including scientific articles, books, manuals and litigation papers. After an initial analysis, I selected the sources that were the most reliable and the most useful for the research, trying to order them according to certain themes. Then I analysed (reported in the previous chapters) the literature that will be the starting point for the fieldwork. Once I had reached a sufficient level of preparation on the literature, the research question was formulated (already analysed in the previous chapter but which I will reproduce below). Through analysis of the agile approach and OKRs, it emerged that the characteristics of OKRs refer to the principles of the agile approach, therefore these tools, as well as agile methodologies, seek to make the organisation agile. At this point it is not clear how this is possible, so the research tries to understand how OKRs lead to organisational agility. In the following chapter I will analyse the analysis context of the research.



Figure 12. Preparation process for data study

5.1 Context of analysis

In order to try to answer the research question of the thesis, during the months between February and July 2021 I tried to collect as many testimonials on the use of OKRs as possible. The research started by trying to find organisations that already had agile working processes in place and had subsequently implemented the use of OKRs. These are fundamental prerequisites that the organisations involved in this research must have, in fact it is necessary to carefully analyse how these companies behaved with the transition from before to after the implementation of OKRs, therefore all those organisations that are in the early stages of introducing this new tool cannot be taken into consideration for the research. In addition, organisations must have adopted the use of OKRs in all its hierarchical levels and in all its work teams, this is crucial to understand how the organisation as a whole has changed with the introduction of OKRs and not just to analyse a single team. The second prerequisite is that the companies analysed must be agile organisations or at least tending towards an agile working methodology.

5.1.a Analysis of digital start-ups

Starting from the context presented above, the research immediately turned to one type of organisation in particular. The organisation model analysed was that of digital start-ups. Digital start-ups are usually defined as innovative and high-technology enterprises with a repeatable and scalable business model. The term initially referred only to start-ups operating in the Internet and communication technology sector, but nowadays, thanks to technological development, it can touch all sectors of the economy. This type of organisation is extremely topical, if we think that in Italy alone between 2019 and 2020 the number of start-ups registered was +31% (Orlando, 2020), we can imagine how this type of company is put under so much scrutiny. One of the main reasons is the fact that startups, thanks to their structure and organisational culture, are the most suitable companies to compete in the current competitive landscape. Currently due to the extended deadlines for solution development and due to the search for diversity in meeting new market demands, larger and more structured companies are looking for solutions in the shared and disruptive environment of startups. (Olivia, 2019)

The digital environment is also a factor of extreme interest. Working in a digital environment can bring countless benefits: it improves the customer experience, facilitates business management, reduces operating costs and allows for real-time process planning. In addition, working in a digital environment allows organisations to implement a range of strategies that an organisation working in a non-digital environment would struggle to do. For these types of organisations, the development of their business is simplified by a series of actions that the digital context allows them to do: formulating falsifiable hypotheses about the business idea; incorporating these hypotheses into a designed business model (BM); developing a Minimum Viable Product (MVP) to replicate the product functions and test the business model; identifying target audiences or "earlyvangelists" from whom to receive feedback; and performing tests with multiple iterations to make decisions on how to persevere with the business idea (Ghezzi, 2018). A valid reason to invest in the digital sphere is not to fall behind the competition. By now, all organisations are trying to succeed in the digital market, this is because they have realised the benefits it can offer. The best move to achieve real results and not fall behind is therefore to adopt a competitive strategy.

There are three fundamental characteristics that you absolutely must take into account when talking about a digital start-up. First of all, scalability is the ability of a start-up to grow exponentially using few resources. Replicability of the business is another one of the characteristics to consider, it explains that the business model of a start-up can be repeated in different geographical areas and in different time periods without requiring major changes. Finally, the innovative capacity must be taken into account: start-ups are born to satisfy a need that has not yet been satisfied (or to create a need that is not yet evident), i.e. they are born to create innovation. Analysing the aspect that most characterises this type of organisation, i.e. innovation, we can state that start-ups are often subject to change and innovation because of their need to deal with resource scarcity and align the internal resources acquired with external conditions. This is especially true for start-ups operating in a dynamic and uncertain digital environment, where the impact of pervasive and multipurpose digital technologies increases the pace of change, leading to significant transformations in different sectors. In such a dynamic context, innovating is an intricate exercise that requires idiosyncratic and seemingly divergent approaches and tools that digital start-ups can select depending on the direction they intend to take when embarking on their innovation process. Thus, two concepts that are strongly correlated

within these types of innovation are dilemma, understood as market turbulence, and innovation. (Dessyana, 2017)

Innovation can be understood as two distinct concepts. The innovation needed to modify and adapt their products, services and value propositions to changing internal and/or market conditions - and refers mainly to the process of new product development (NPD). Innovation in their business model (BMI), i.e. their overall value architecture and related practices. The overall value architecture and related mechanisms they set around their value position to generate value for their target customers, place that value on the market and retain some of it to ensure economic and financial viability. In their journey to bring about product, service and value proposition innovation, start-ups operating in this digital age can leverage a number of approaches that fall within the domain of agile methods. Within this group, Agile Development (AD) refers to software development practices based on the centrality of individuals and interaction, incremental delivery of working software, collaboration with customers and response to change. Agility is the ability to embrace and adapt to change in a dynamic environment. Being agile means applying prior knowledge while learning from current experience to deliver high quality products, under budget and on time. Thus, agility encompasses the characteristics of flexibility, speed, learning and responding to change and lean. (Ghezzi, 2020)

Agile Development refers to a set of practices that enable agility for software development. A survey of AD methods found that the most widely used methods are Extreme Programming, Scrum, Kanban, Lean, Feature-Driven Development, Dynamic Systems Development Method. AD methods aim to take proper account of the dynamism and uncertainty within the product innovation process, including iterations, feed-back-feed-forward cycles and intensive testing procedures which are significantly different from a well-structured - though often rigid and plan-based - stage-gate approach (Ghezzi, 2020). As mentioned before, the concept of dynamism is recurrent within the start-up world. Compared to more structured companies that have resided in a particular market for years and are therefore almost reluctant to change, start-ups embrace the concept of change because they know that it is the only weapon at their disposal to be competitive. Digital start-ups are among the organisations that have the greatest need for agile structures and business models that are able to better manage the constant change they undergo. For these reasons, digital start-ups are the perfect sample for the analysis of the

thesis, in fact, starting from these assumptions there is the certainty of going to analyse organisations that are strongly focused on innovation and able to both understand the concept of agile approach to work and to apply Agile Development practices. (Ghezzi, 2020)

In conclusion, the decision to use organisations such as digital start-ups as a research context has two main reasons. The first one is that such organisations are currently in strong growth and of strong interest, for a number of reasons analysed above. In addition they are organisations that are strongly driven towards the use of the agile approach to work and for this reason perfect for the research. The search for these types of organisations brought me into contact with a programme created by Google to try to help start-ups in their growth. The programme in question is Google for start-ups, and it will be explained in detail in the next paragraph.

5.1.b Google for Startups

Google for Startups, is the division of Google that connects a global network of over 50 innovative organisations, with a presence in more than 135 countries, with the aim of inspiring and connecting innovative entrepreneurs and start-ups around the world. Through various partnerships, all over the world, with associations that promote innovation, Google tries to get to know as many start-ups as possible. Start-ups solve some of the world's most important problems with agility, innovative technology and determination. In Google's culture there is a strong belief in conveying innovation, so it is natural that this large corporation is encouraged to promote this kind of initiative. These types of programmes not only benefit the start-ups involved in the acceleration project, but above all the entire ecosystem where these start-ups operate. The concept of innovation does not remain the exclusive value of a single organisation, but becomes the heritage of the entire community. The concept of innovation does not remain the exclusive value of a single organisation, but becomes an asset for the whole community. Following this reasoning, Google, thanks to the Google for Start-ups programme, not only receives visibility, publicity and status for the company, but the most important thing is that it can benefit from the progress of the start-ups it helps. Google is one of the few multinationals in the world, which despite being very large and widespread still manages to be flexible and agile. Google is one of the few multinationals in the world that, despite

being very large and widespread, is still able to be flexible and agile. Thanks to its human capital, it is able both to generate innovation autonomously, being careful to pick up on insights from the surrounding environment, and to find opportunities for innovation outside its own company. This is why Google decides to invest time and money on programmes to grow small companies with enormous potential, but without acquiring any of their shares. So Google for Startups runs programmes, shares resources, builds campuses and supports a global network of technology hubs, accelerators and diversity-focused organisations in the world's fastest-growing markets, because if start-ups succeed, communities and economies succeed, and so does Google. Google Developers accelerators are tailored specifically to local markets where start-ups operate and provide access to the best of Google; its professionals, network and advanced technologies to help start-ups build great products. All start-ups that are accepted into the program will receive mentorship and support from Google and the global network of mentors in AI/ML, Cloud, UX, Android & Google Play, Web, Product Strategy and Marketing. In addition, Google For Startups has succeeded in creating a Sales Academy focused on start-ups to provide the same Google-caliber training to the founders of selected start-ups. The mission of the Sales Academy is to provide start-up founders with essential sales skills and practical applications that they can implement immediately to acquire new customers and partnerships. One way we assess the value and impact of the Sales Academy is to measure the improvements of the participating founders. As an example, here are the founder performance improvements shown in the table. (document Google for startups, 2020)

29% more confident that founders have an intentional way to "connect" and build rapport with customers
35% more confident that founders have a formulaic approach to communicating in a benefit-oriented way
40% more confident that founders have a consistent sales process
76% more confident that founders have a customer-centric structure and agenda to start customer meetings
13% more confident that founders have a process to consistently and effectively share customer success stories
33% more confident that founders have an ability to position their company in a way that invites their customers to share more
89% more confident that founders have a consistent process to handle resistance and overcome objections
124% more confident that founders have a process that helps them work with resistance and not against it

Figure 13. Performance derived from the Google for Startups programme

In addition to this set of knowledge made available by Google, start-ups are also offered a tool to make the organisation competitive in today's market and to be able to exploit the skills acquired. This tool is the Objectives and Key Results. Google, with years of experience in using OKRs, strongly believes that much of its success is due to this tool. For this reason, OKRs have been proposed as a tool for managing the objectives within start-ups since the early stages of the acceleration programme. The acceleration programme is spread all over the world, the selection of start-ups is divided by geographical areas. The sample of organisations analysed refers to start-ups selected in the Southern European cluster, in particular the companies involved in the research are part of the same ecosystem based in Milan. The acceleration programme has a duration of about three months, with the possibility of following a series of training workshops. As mentioned above, the selected start-ups have been invited to implement the OKR tool within the organisation since the initial stages of the programme. Each start-up is accompanied by a mentor who, during the whole time of the acceleration programme and also in the following months, supports and directs the organisation on the use of some best practices that are promoted by Google itself.

First, the founders, or at least the managers of the organisations, are introduced to the world of OKRs; they are explained the features, how they are implemented and what advantages they can bring. Subsequently, during the period of the accelerator programme, usually a quarter, the OKR tool is tested across the organisation, while having continuous alignment with the mentor. At the end of the quarter the founders, again with the help of the mentor, validate the achieved results and how well the OKRs have been used. Thereafter there is no imposition of any kind by the Google mentor in the final implementation of the OKRs, the proposed implementation of the OKRs is not a constraint that start-ups in the Google accelerator programme have to follow.

5.2 Sampling strategy

The sampling strategy to identify the organisations that will be part of the analysis of the thesis was done following a process. Starting from a very large set of organisations, gradually adding constraints related to the research, I came up with a set of organisations with characteristics that would be useful in answering the research question. I started by

looking for organisations that were already established in the approach to agile working, and then from this set of organisations I eliminated those that did not use the OKR tool. From the remaining companies, only those organisations that had implemented the use of OKRs throughout their workforce (i.e. both at every level of the hierarchy and across every team or department) were selected. This is because the thesis attempts to study how the effects of OKRs affect the organisation as a whole, not just in certain areas. Finally, I selected only those organisations that are not in the initial stages of introducing OKRs, but that have been formulating and using their own OKRs for at least two quarters without the help of external consultants. It is not interest to analyse the introduction phase of the OKRs, but to understand how they have been integrated into the company dynamics. The combination of these constraints led me to identify the Google for Startups programme as the perfect sample organisation for the research. In fact, at the end of the programme it is the same organisations that spontaneously decide to adhere to the use of OKRs in their future. This is already an interesting factor of analysis for the research. If we consider that the organisations involved in the acceleration programme, once the quarter is over, spontaneously decide to continue using OKRs, it means that in some form this tool has brought benefits, expected or unexpected, that the organisation did not have before its introduction. Therefore, it is interesting to analyse how the situation in organisations has changed before and after the implementation of OKRs. Within the Google acceleration programme based in Milan, I contacted several start-ups. The decision of this particular geographical area is dictated by the possibility of being able to have a personal contact with these organisations.

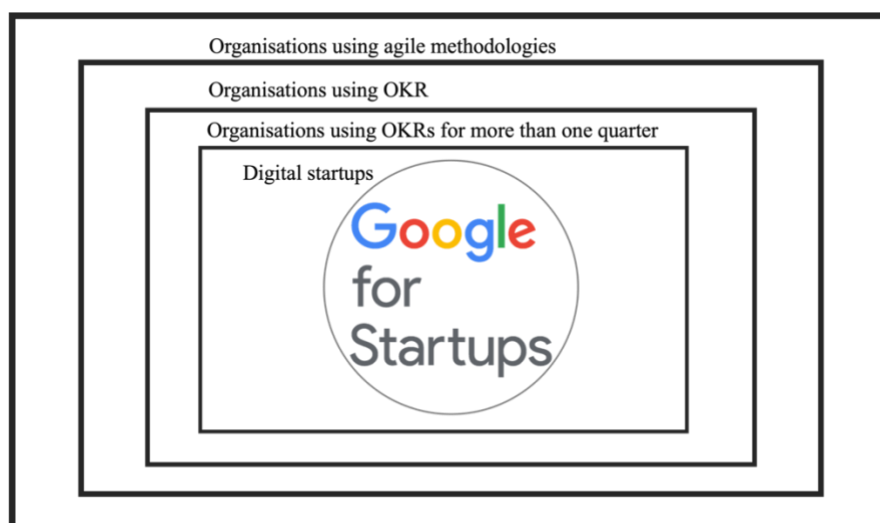


Figure 14. Sampling strategy

5.2.a Selected start-ups

In the following paragraphs, the five organisations that are part of the research sample will be presented. For reasons of confidentiality, the organisations will be referred to by the first letters of the alphabet, followed by the field of work in which they operate. In the following paragraphs, the start-ups will be analysed to first give a general overview of the research sample.

Organisation A: Food tech - Delivery of fresh foods

Organisation A is a start-up founded in early 2019, working in the food sector. Its business is about delivering fresh products directly to its customers' homes. Its users can receive fresh products every week by subscribing and managing it directly from their personal area within the organisation's website. Their mission is to save some food products discarded by the large-scale retail trade, due to purely aesthetic defects, and propose them to their users directly at their homes. Today it aims to become one of Italy's number one food delivery companies in the next three years. The start-up is divided into several teams each with a manager while the two founders have the role of CEO and COO respectively. Not all the teams in the organisation use agile methodologies; some examples of their use can be found in the IT and product development team, where the agile sprint methodology was used to organise the work during the implementation of the web platform. In other teams, the concept of agile working is promoted mainly by the founders through various practices. First of all, every week all members of the organisation get together for an alignment meeting on what happened the previous week and what each team will work on in the following week. In addition, the founders try to promote mutual collaboration between the different teams, continuous alignment through daily feedback and implementing shared decision making of actions for the business. Within this organisation, OKRs were introduced within a few months of their founding, as they were already part of the Google for Startups programme in Q1 2020 and finally implemented in Q3 2020. Within this organisation, OKRs are associated with the time interval of a quarter. Before the start of each quarter, each team individually formulates its OKRs; each team is free to associate each OKR with a specific individual in the team or leave them as common goals for the whole team. Once the OKRs of each team have been

formulated, they are reported directly to the CEO, who checks whether they are aligned with the outlook for the organisation over the coming months. If necessary, the CEO can modify the OKRs together with the team leader so that they are both in line with the start-up's medium to long-term vision and coordinated with the other teams. At the beginning of the quarter a meeting is held where each team presents to all the others the progress that has been made in the previous quarter and the OKRs for the next quarter.

Organisation B: Food tech - App to fight food waste

Organisation B was founded in 2016, so by Italian legal standards it could no longer be defined as a start-up as more than 5 years have passed since its foundation. Nevertheless, it was taken into account before this deadline in the Google for Startups programme and therefore qualifies for the list of organisations eligible for this research. The founders are the same as organisation A. The founders are the same as Organisation A. This organisation, like the one above, works in the food sector. Its business concerns the use of an application released for smartphones, where registered users can easily find expiring products in supermarkets in their area with discounts of up to 70%. They also develop marketing and social campaigns for some supermarket chains that are their direct customers. The way OKRs are used is the same as that of organisation A. As the founders are in common between the two organisations, they dictate the guidelines for the use of OKRs.

Organisation C: Software Development - SaaS platform for data management in manufacturing companies

This start-up works in the field of Industry 4.0, more specifically offering software solutions to manufacturing companies that want to align themselves with new technological trends. Their business focuses on the digitisation of assets within manufacturing companies and the creation of a preventive maintenance plan for machinery. Initially, the company took a consultative approach to its clients, creating ad hoc software solutions for the digitisation of their assets. Today the company is moving towards a more scalable solution for different customers, developing a modular SaaS platform. Within this reality OKRs are implemented within the sprints of the various

teams. The start-up distinguishes between two different types of sprints: internal sprints, which are linked either to platform development or business objectives, and external sprints, which are in collaboration with the end customer. Even before the OKRs the work within the organisation was carried out through the sprint methodology. Each internal sprint within the organisation, a sprint master is elected from among the members of the organisation; in that particular period of time he or she personifies the role of the scrum master. OKRs within the organisation are also used for medium to long term periods, i.e. not directly linked to development sprints. In this case, each team develops OKRs and each team member takes responsibility for a particular OKR. Recently, a new personal self-assessment tool was introduced in the organisation, the document is called Role, Responsibility and Expectations. Each member has to fill it out taking into account at the same time the company's objectives for which they are responsible and their personal aspirations. Many members of the organisation try to be guided in the compilation of this document by the OKRs for which they are responsible.

Organisation D: Virtual Reality - Augmented reality for marketing

Organization D is a 2019 founded start-up, it is a SaaS marketing platform that helps brands and creative agencies to easily launch WebAR marketing campaigns. Through reality augmentation, with any device such as a smartphone, one can visualise the modelling in a product. This is very useful to be able to perceive how a future product looks in real space and in three dimensions. The company's mission is to make an augmented reality marketing campaign application accessible and easy to use for every company in every industry. It has also been selected for the Milan-based Google for Startups programme. Together with Organisation E, this start-up is one of the smallest analysed in this research. It consists of seven elements, four of which work full-time in the organisation. This is one of the reasons why the formulation of OKRs is done in meetings where the whole team is present. Within this start-up they try to create OKRs which are on the one hand flexible and easy to modify during the working period, and on the other hand not to have OKRs which are too long-term oriented. These conditions are dictated by the fact that the organisation works in a rapidly changing and dynamic environment and therefore wants to avoid being anchored to objectives that may become obsolete in a few months.

Organisation E: Virtual reality - App for developing photos and videos in 3D

This start-up was founded in 2018 and towards the end of 2019 was selected for the Google startup programme. The business of the organisation is to develop and maintain an app for mobile devices that allows its users to take photos and videos in 3D. The app has been awarded app of the month several times in the App Store. The three-dimensional effects developed are widely used in the social sphere by their users. For task management within the organisation the members use online software which has the structure of Kanban boards. Since the foundation of the start-up, different types of Kanban boards have been changed, trying to find the solution that best suits the needs of the organisation. As mentioned above, this start-up is one of the smallest that was analysed. In fact, it consists of four members of which three are the founders. For this structure, each individual is responsible for a fundamental part of the organisation, so the OKRs are not linked to a team of people but to a single individual. In addition, there are other OKRs at a higher level that link the objectives of each individual to the company's objectives. Through the use of the Kanban board, members of the organisation are able to be aware of the progress of other members and are able to view the progress of their own goals on a daily basis.

5.2.b Data collection protocol

The thesis is based on a qualitative analysis of a set of organisations with common characteristics in order to be able to study a phenomenon and draw conclusions. The information gathered on the interviewed start-ups comes from a number of different sources. The information collected comes from direct testimony gathered during interviews with some members of the start-up, some documents I had the opportunity to have in confidence (Kanban board screen, end and beginning of quarter alignment presentations) and information freely found on the web. Each organisation will be presented with a different degree of detail in relation to the documentation found by each of them. Most of the data collected during this research came directly from interviews conducted individually with members of the organisations under review. The interviews

lasted approximately 50 minutes each and were held both in physical presence and through online calls.

ORGANIZATION	ORGANIZATION INFORMATION	INTERVIEWS AND DOCUMENTS
1	Food tech - Delivery of fresh foods	INTERVIEWS: <ul style="list-style-type: none"> • Head of Product • COO and Founder • Head of IT
2	Food tech - App to fight food waste	INTERVIEWS: <ul style="list-style-type: none"> • CEO and Founder • Head of Marketing
3	Software Development - SaaS platform for data management in manufacturing companies	INTERVIEWS: <ul style="list-style-type: none"> • Senior Operations Manager • Senior Software Developer DOCUMENTS: <ul style="list-style-type: none"> • Kanban Board, a sprint with the integration of OKR
4	Virtual Reality - Augmented reality for marketing	INTERVIEWS: <ul style="list-style-type: none"> • Founder and Head of Marketing
5	Virtual reality - App for developing photos and videos in 3D	INTERVIEWS: <ul style="list-style-type: none"> • CEO and Founder

Figure 15. Data collection summary

During these interviews, the interviewees were asked questions which mainly focused on three macro themes.

After a brief introduction of the interviewee, questions were asked on:

- First part: The agile approach. The first questions of the interview focus on the topic of the agile approach to work. The interviewee is asked when and how he approached the agile world, what his vision is and what it means for him to have an agile approach and whether the agile approach is applied within his organisation (through tools, methodologies or organisational culture).
- Second part: the tool in the OKRs. In the second part of the interview, the interviewee is asked questions aimed at collecting information about the OKR tool. He/she is asked how he/she became aware of the OKR, what were the difficulties in introducing the tool, what are the most significant features and how they are used within the organisation.
- Third part: new approach to work. In the last part of the interview we try to analyse how after the introduction of the OKRs, the way of working of the individuals and the organisation has changed. First of all, there is the need to understand the reasons why the organisation, after a trial period, decided to definitely implement

the use of OKRs. It is asked to explain what benefits the organisation and the individuals have gained from the use of this tool, if and what changes in behaviour and habits have occurred and how the conception of the external environment and internal dynamics has changed.

Nine interviews were conducted with different members distributed in 5 organisations. These interviews are the most significant data content of this research, in addition to documents that some organisations allowed me to view.

5.3 Coding of interviews

In order to derive meaningful data from the research, a process of coding the interviews was conducted. The thesis deals with qualitative data and therefore requires a well-defined analysis process. (Medelyan, 2020)

Qualitative data analysis is the process of examining and interpreting data to understand what it represents. Qualitative data is defined as any non-numerical and unstructured data; when looking at interviewee feedback, qualitative data usually refers to any verbatim or text-based feedback such as interviews conducted with start-ups. Coding qualitative data makes it easier to interpret feedback. Coding words and phrases in each response helps capture what the response is about and, in turn, helps better analyse and summarise the results of the entire survey. Researchers use coding and other qualitative data analysis processes to help them analyse data based on feedback. When using coding to analyse customer feedback, common themes in the language can be quantified. This makes it easier to accurately interpret and analyse interviews. The coding of the interviews was carried out following a well-defined process. Once the interviews were transcribed I started coding. Coding is the process of labelling and organising qualitative data to identify different themes and the relationships between them. When coding the interviews, labels are assigned to words or phrases that represent important and recurring themes in each response. Coding qualitative research to find common themes and concepts is part of thematic analysis, which is part of qualitative data analysis. Thematic analysis extracts themes from the text by analysing the structure of words and sentences. The coding was manual, so I did not use any kind of software to be able to code the data. Furthermore, mine was inductive coding, also called open coding. You create codes based on the qualitative data itself, without having predefined codes in advance. You don't have

a predefined code book; all codes arise directly from the survey responses. Inductive coding is an iterative process, which means it takes longer and is more in-depth than deductive coding. But it also gives a more complete and unbiased look at the themes in your data. Once all the interviews had been coded, it was immediately apparent that the codes covered two macro topics: the first was the agile approach and the second was the use of OKRs. The codes that dealt with the agile approach, however, could start to be divided into thematic groups, so as to organise the reasoning in the most structured way possible.

The thematic groups into which the codes dealing with the agile approach are divided are:

- Advantages of using the agile method: In these codes it is illustrated how the use of agile methodologies bring various advantages within organisations. This type of consideration is completely in line with the previous literature research. In fact, analysing various sources in the literature, it is clear that the use of agile methodologies in recent decades has revolutionised the way many organisations work, and that the world of work is moving in a unified and definitive manner towards this type of work.
- Need for organisations to adopt an agile working approach: During the interviews it became clear that the start-ups analysed have a need for an agile working approach. This is dictated by factors including the environment in which these organisations compete. These factors were also analysed extensively during the literature review.
- Difficulties in using the agile approach: Some statements within the interviews conducted are related to the fact that some members within the start-ups have difficulties in implementing agile methodologies. This is due to several factors, again taking into account the information found during the interviews. Firstly, the interviewees analysed the fact that agile methodologies are not suitable for every business environment and that forcing a certain team to use methodologies can lead to the opposite of agility, i.e. organisational rigidity. A second factor dealt with is that some members are not inclined to implement certain methodologies; this is mainly due to their beliefs and certainties and the reluctance to change their behaviour and mindset.

Taking note of how the agile working method was illustrated by the interviewees, I decided that for research I would put aside the codes that dealt with the advantages of agile methodologies, and would focus on the last two groups illustrated. This decision was made for several reasons. The research does not want to analyse what the advantages of using agile methodologies are and how they affect the organisation. These are issues that have already been extensively addressed during the course of the last decade. But on the other hand, we do not want to criticise the agile approach in any way, that would be illogical given the countless studies that show how effective agile methodologies are. Analysing the factors for which organisations express the need to be agile and observing the limitations that the agile approach may have, represents the will and ambition of the research to shed light on some issues concerning agile methodologies that have not yet been dealt with in depth. Once I had selected the codes relating to the concepts mentioned above from the agile approach, I continued the coding of the interviews, moving on to the part where the use of OKRs was analysed. Due to the good selection made for the start-ups involved in the research, the interviewees provided several factors of analysis regarding the OKR tool. As the heart of the analysis in the research is based on the OKR tool and as there are no relevant documents in the literature to date that deal with the subject of OKRs, I did not exclude any code related to the subject of the use of Key objectives and Key results from research. After explaining what research context was and how the data for the thesis was collected, the next chapter will analyse the various data sources collected during the research and find an answer to the research question of the thesis.

CHAPTER 6: EMPIRICAL RESULTS

6. Empirical results

In the following chapter we will analyse the data collected during the research period carried out with the organisations that have been presented above. In order to analyse the research results of the thesis, I started by coding the various interviews carried out. The final aim of this chapter is to be able to analyse which are the most significant patterns that emerge from the interviews and how these elements link together. In the following paragraphs it will be explained how, starting from the transcription of the interviews, elements were decoded and subsequently subdivided into clusters according to common concepts, leading to the definition of three different aggregate dimensions. By means of this analysis in the following chapter it will be possible to draw conclusions about the research and thus to answer the initial research question.

6.1 Coding analysis

After the coding of the interviews, two different code lists were distinctly defined. The first list collects all the codes that deal with the topic of issues arising from the use of agile practices, while the second list collects the codes that deal with the OKR topic. In addition to each code there is a letter representing in which organisation that code has been identified. Once this set of codes was collected I started to reformulate them into concepts. This process serves to render the codes, which are extrapolations of text collected from the interviews into concepts representing phenomena to be analysed. In essence, the concepts represent a reformulation into theoretical concepts of the codes identified earlier during the interviews. Below are the two lists of concepts; the first list deals with the problems that have emerged in organisations with the use of agile methodologies, while the second list collects the concepts that deal with the use of OKRs.

Concepts on the use of OKRs	
OBJECTIVES ARISE FROM THE BOTTOM	INCREASED DIALOGUE WITH THE CUSTOMER
OKR ARE NOT INDICATORS FOR MEASURING INDIVIDUAL PERFORMANCE	MORE FLEXIBILITY TO RESPOND TO CHANGE
UNDERSTAND THAT ONE'S CONTRIBUTION IS LINKED TO A COMPANY OBJECTIVE	INCREASED AWARENESS OF THE EXTERNAL ENVIRONMENT
OKR MAKE VISIBLE THE EFFORTS MADE	OKR AS A BENCHMARKING TOOL
FORCE YOURSELF TO PRIORITIZE OBJECTIVES	ABILITY TO MEASURE PERFORMANCE OBJECTIVELY
WITH PERSONAL OKR I KNOW WHICH TASKS ARE MY RESPONSIBILITY	OKR ENABLES FASTER RELEASE OF SOLUTIONS
HAVE A SHARED VISION	HORIZONTAL ORGANIZATIONS
OKR USEFUL FOR HIGH-LEVEL PLANNING	SHARING DECISIONS
MOVING FROM WORKING BY TASKS TO WORKING BY (MEASURABLE) OBJECTIVES	OKR ALLOW DELEGATION
NEW METHOD SHARED BY ALL	ALIGNMENT BETWEEN TOP MANAGERS AND OPERATIONS
OKR INVOLVE THE WHOLE ORGANIZATION	GRADUAL VALUE RELEASE
MAKING YOUR OBJECTIVES VISIBLE ALLOWS OTHERS TO HELP YOU	NOT CONCENTRATING ON TASKS THAT ONLY BRING SHORT-TERM BENEFITS
ALIGNING PEOPLE	SHARING MEETINGS

Figure 16. List of concepts on OKR usage

Concepts on the limits of the agile approach	
FORCED TO BE AGILE	NOT HAVING THE NEED TO USE AGILE METHODOLOGIES IN YOUR TEAM
START-UPS WORK IN UNCERTAINTY	LACK OF TEAM ALIGNMENT
FORCED USE OF AGILE TOOLS LEADS TO BEING RIGID	LACK OF SHARING OF RESPONSIBILITIES
START-UPS ARE BY NATURE AGILE ORGANISATIONS	LACK OF SHARING OF RESPONSIBILITIES
INDIVIDUALS FEEL IN THEIR COMFORT ZONE WITH A TRADITIONAL WAY OF WORKING	CHANGE OF SEVERAL AGILE TOOLS
AGILE APPROACH IS INFLUENCED BY INDIVIDUALS MINDSET	AGILE APPROACH IN THE SENSE OF AGILE TOOLS
SMALL COMPANY SIZE DOES NOT NEED AN ORGANIZATIONAL METHOD	MODIFICATION OF THE SPRINT METHODOLOGY ACCORDING TO THE NEEDS OF THE ORGANIZATION
IMPOSSIBILITY TO USE AGILE IN ALL TEAMS	NECESSITY OF A SHARED WORKING PROTOCOL FOR ALL

Figure 17. List of concepts on the limits of the Agile approach

Once these concepts were defined, the next step was to try to aggregate them according to common themes. Thus from the two lists of concepts, several themes were formed. Themes arise from a set of concepts that analyse the respondents' behaviours that have similarities in common. In the next two paragraphs I will analyse each single theme identified by the clustering of concepts in the two lists.

6.1.a Clustering in themes: limitations of agile methodologies

In this paragraph we will analyse the concepts extracted from the interviews and the documents collected that concern the topic of the limits of agile methodologies. Once the set of concepts was identified, I tried to group them in different clusters associating to each of these clusters a theme recalling theoretical concepts. The subdivision into clusters was done following a logic of concept affinity, i.e. concepts that have a theoretical affinity are grouped under one common theme. In the following, I will list and analyse the themes identified during this process.

Need for organisations to be agile

Almost the majority of the start-ups interviewed (4 out of 5 organisations) expressed concepts that relate to the need for agility. The need for agility refers to the need of the interviewed start-ups to be able to manage their everyday work in a flexible and agile way. The concepts formulated that relate to this theme are shown in the figure below. Organisations driven by the pressing need to achieve organisational agility force some processes even though they are not ready to accept such a change in the working model. As stated by organisations A and B, there is an increasing push towards the adoption of agile methodologies. ("Now that we are agile by necessity so basic we try to apply what are agile theories in everyday work. We must be by definition" [A]). This means, for example, that attempts are made to force certain teams to adopt agile methodologies solely on the assumption that such methodologies can theoretically bring advantages. A very closely related concept is that the forced use of agile tools leads individuals to follow predefined structures without grasping their deeper value. The consequence is that organisations instead of developing agile behaviours in individuals, only rigidity in methods is introduced. Another concept that drives the need for agility is the one that analyses the fact that start-ups work in an uncertain environment. An interviewee of startup A, stated in fact that, in the state in which the startup is now, goals change rapidly and therefore their main priority is to be flexible ("At the stage we are now, priorities change daily and weekly, so we need to be flexible and agile[A]"). Working in this kind of ecosystem an organisation needs working models that make the organisation able to manage the continuous change of the external environment. Finally, one can analyse the

notion that start-ups due to their organisational structure tend more naturally to be agile organisations. Respondents, especially those who were there from the day their start-ups were founded, state that trying to work in an agile way was a natural consequence of working in a start-up. The small size, the stimulating innovative environment and the continuous exchange of feedback between colleagues naturally lead these organisations to adopt agile methodologies. ("However we are a start-up, I think we are agile by nature. We have to be quick to change everything, this can be harder for a larger company.[B]")

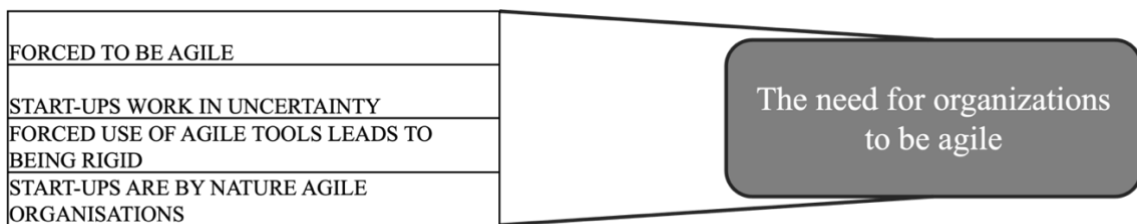


Figure 18. Theme: 'The need for organizations to be agile'

Reluctance of individuals to change their mental patterns

This theme explores an aspect related to the mindset of individuals within the organisations under review. During the interviews conducted it emerged that several individuals had difficulties in adapting their mental schemes of work towards an agile approach. The first concept that emerges is the fact that some individuals find it difficult to move out of their comfort zone, which in this case is represented by a more traditional approach to work made of requests coming from a higher hierarchical level that are executed by lower hierarchical level. An interesting example can be analysed within Organisation A. In fact, one of the interviewees stated that within the marketing communication team some people found it difficult to change their working methods. For a long time these employees were used to creative work requests but the guidelines were dictated from above. The change to a working method where they also had to be direct decision-makers in the implementation of marketing campaigns was difficult. The interviewee stated that one of the main problems was due to the mental schemes these individuals had formed over time. ("the part of communication team does not work using sprint and cannot work with agile; It is more traditional in the sense of management of the request that arrive from others[A]"). This is linked to another concept extrapolated from other organisations, where it is analysed that the approach to agile work starts above

all from the mindset of each individual within the organisation E. "Agile is first of all a mindset before being a working framework [E]". This is how one of the interviewees from Organisation E comments on this concept. This suggests that agile methodologies cannot reach their full potential if the people using them are not ready or reluctant to use them.

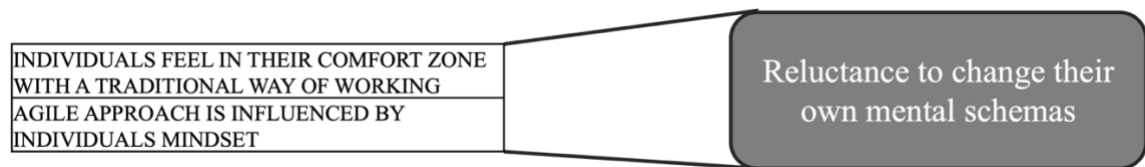


Figure 19. Theme: 'Reluctance to change their own mental schemas'

Lack of adequate organisational culture to work in a turbulent market

This theme highlights that some of the interviewed start-ups lacked certain skills on the part of their workers to be able to contribute to the company's performance. This stems from a lack of or incorrect corporate culture, capable of promoting practices to help their workers. With regard to the issue of corporate culture, the notion that start-ups do not need a predefined organisational structure was analysed in some of the companies interviewed. This suggests that due to the small size of the start-ups the mutual sharing of feedback and continuous communication with the majority of the members does not lead to the necessity of creating a specific organisational culture. ("Since the organisation was in a phase of first development, it was not necessary to have working methodologies. when the team was very small, therefore under 7-6 basic units, it was not even almost necessary to have a particular organisational system."[B]). This erroneous belief inevitably leads to consequences related to the topic under consideration now. Another belief that emerged during the interviews is that agile methodologies are only effective in certain areas within the organisation. Some interviewees stated that agile methodologies were not applicable to their team because the working environment did not allow it; for example, in more control departments such as Finance and Administration, or with projects that were less digitally related. (I have realised over time and especially by putting it into practice, that agile is not the panacea for all ills. In some organisations it can hurt, i.e. you can't build a skyscraper by following agile methodologies."[E]) This belief ignores the fact that agile methodologies are just a tool that has as its basis an approach to work that can be applied in any corporate dress.

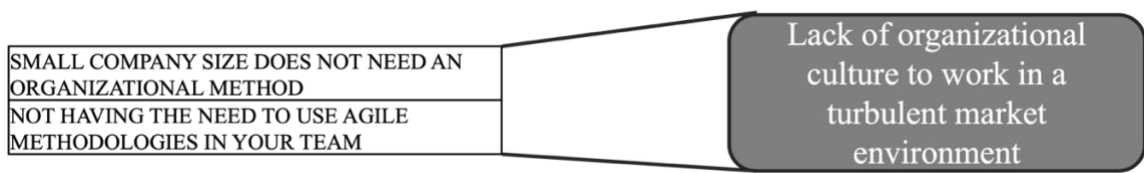


Figure 20. Theme: 'Lack of organizational culture to work in a turbulent market environment'

Behaviour that does not reflect the agile working method

During the interviews several concepts emerged that refer to behaviours of some members of the organisations that do not reflect the agile working method. This means that in organisations where agile methodologies are used, and an agile approach to work is taken, there are still individuals who think and act in ways that do not respect the theoretical statements of the agile manifesto. One of the first aspects to be considered is the lack of sharing of responsibilities; one of the founders of the interviewed start-ups stated that before the introduction of OKRs he was frequently forced to monitor the progress of objectives in the various teams by the company. This points to a lack of accountability of some employees with respect to company goals. ("Before (the introduction of OKRs) maybe I would often find myself checking to see if things were going a certain way. But now for me it was an advantage because it allowed me to be a little more detached on the operational side, to be able to focus on something else" [B]). Another critical point that emerged is the lack of transparency; within organisations there is often a lack of capacity to inform other members of one's progress and thoughts. This then leads to another behaviour which is the lack of alignment between different teams. With the introduction of the OKRs, one respondent from organisation D stated, there is a possibility to be aligned on everyone's goals and to know what other team members are working on. This suggests that before that, there were misalignments between different parts of the team. ("there is a problem that (before applying OKRs) I who am an employee can see what the CEO is working on"[D])

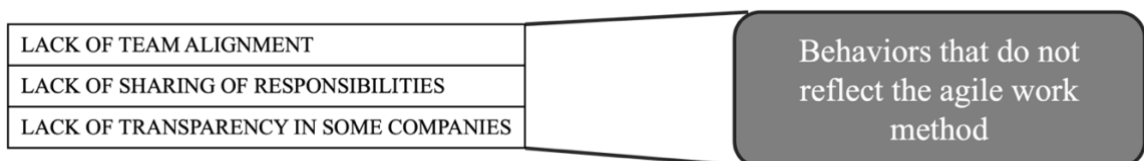


Figure 21. Theme: 'Behaviours that do not reflect the agile work method'

Achieving agility through agile tools

This theme analyses the mistaken belief of some respondent organisations that achieving organisational agility is through the use of agile tools. The majority of respondents associate the agile working approach with the use of agile methodologies. This can be seen by analysing the fact that the respondents associate the concept of organisational agility only with the concept of using agile tools, completely leaving out the theoretical constructs underlying these methodologies (as analysed in the literature chapter, agile methodologies are nothing but the practical translation of concepts from the agile manifesto). ("The first day of work, my first assignment, was to look for more information on agile methodology and we have in a sense always used it externally, that is with our customers. So in that case we operate with sprint in agile mode and we have always done that with customers"[C]). This kind of belief inevitably leads organisations to a continuous search for agile tools, as stated by an interviewee from organisation E, with the belief that at the end of this search the organisation will gain a real competitive advantage from achieving agility. ("We need an agile tool that helps keep track of our actions. Then we moved on to a tool with more focus on agile methodology, Jira. We learned about it in the field and in the literature, but after a few months we realised that using such a tool for our team was more of a disadvantage than an advantage. So we moved to Notion."[E]). Another interesting concept to analyse is the one concerning the modification of some agile methodologies, such as the sprint method, according to the needs of the organisation using it. This has emerged especially in organisation C where the use of sprint methodology is very widespread. This behaviour analysed in the literature is a quite common process within organisations and can be interpreted as a correct practice. In fact, agile methodologies are able to adapt and modify to the context of use. But on the other hand, one should not fall into the error of thinking that once one is aware that a certain agile methodology has not brought the hoped-for benefits, by modifying some of its practices the result can change. This is a problem that goes beyond the methodology, it is an intrinsic problem of the individuals and the organisation that uses that methodology. ("we take advantage of sprints in different ways, often we don't necessarily keep to two weeks, meaning we are variable sometimes from could go to 3-4 weeks a sprint"[B]).

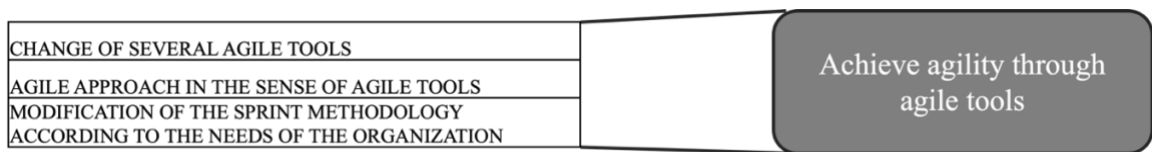


Figure 22. Theme: ‘Achieve agility through agile tools’

The working method is not shared by the whole organisation

The theme analysed now focuses mainly on the aspect of agile methodologies seen as a working protocol within the organisation. As previously analysed, some interviewees expressed their perplexity about the fact that agile approach to work cannot be applied in every single team within the company. During the interviews it emerged that agile methodologies, due to their nature, cannot be used in every company environment. ("Agile methodologies are useful, but they cannot be used indiscriminately. There are some teams, some BUs that cannot work in agile like for example an HR or finance team"[5]). Consequently, within the same organisation we would have teams that use a shared working protocol represented by the use of agile methodologies and other teams that will be disconnected and try to have their own working methodologies. Hence the interviewees pointed out the need to have a working protocol that is univocal for the whole organisation, to avoid having the same company travelling at different speeds. ("without a shared working protocol, with some people it is hard to find a working structure that is shared, you have to try to understand the way they think"[B]).

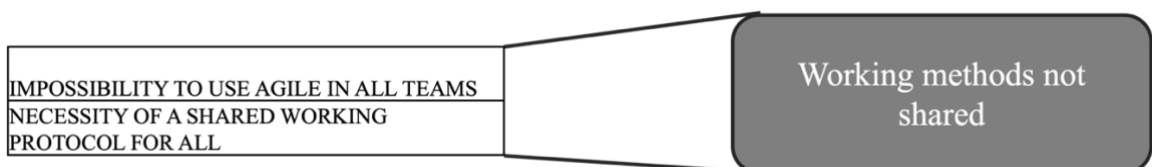


Figure 23. Theme: ‘Working methods not shared’

6.1.b Clustering in themes: use of OKRs

In the following section, the themes concerning the use of OKRs will be analysed. The process of defining themes is the same as in the previous section.

OKRs push towards a culture of innovation

During the interviews some concepts emerged that make one reflect on the fact that the interviewed organisations have developed a strong innovation culture. It can be analysed from the collected documentation that these phenomena of innovation development can be linked to the implementation of OKRs. The concepts forming this theme are two. The first one analyses the ability of OKRs to bring out business objectives even from the lowest organisational levels. This is due to the fact that operators at the lower levels of the organisational chart are also the first to pick up various influences from the external environment. This is due to the fact that those at the lower levels of the organisation are also the first to pick up on the various influences from the external environment. ("because I believe that the sense that OKR is that everyone gives himself his own goals, following his reasoning and his instinct, and that they are not dropped from above"[C]). The creation of innovation within these start-ups is also enabled by the fact that OKRs are not tools for measuring individual performance. In this way, the various workers within the organisation can feel free to set very ambitious goals with a high failure rate, while avoiding repercussions on their personal evaluation. As one respondent from organisation B states (OKR should not become a tool for evaluating your work. It may be that among the activities you try there some that too ambitious, but that's okay, you can start from that to understand where you went wrong. [B])

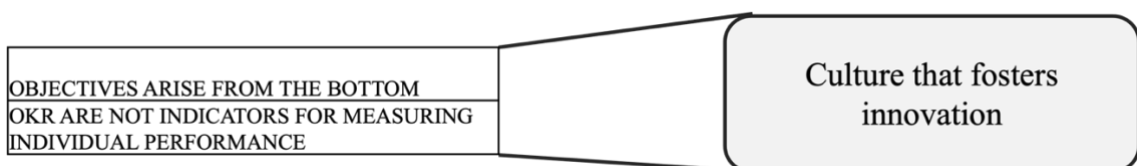


Figure 24. Theme: 'Culture that fosters innovation'

Participation

The topic of participation is mentioned many times in the interviews conducted, although in different forms. Participation refers to the tendency of individuals to feel that they are an integral part of the company's value creation process. Within the theme of participation we can also include the concept of accountability which is expressed by the interviewees as the ability of individuals to understand how their contribution is linked to the company's objectives. This element emerges always connected to the use of OKRs, thanks

to their structure that allows to go back to what are the actions that have contributed to the achievement of a specific objective, each individual involved in this process develops the awareness of his own contribution. ("Obviously who do logistics can realise that my goal is actually the key result of something that is in the top manager and then I realise that something that for me could be a trivial becomes also part of something bigger"[A]). An advantage found during the use of OKRs is related to the measurable component of KRs. Unlike other goal-setting tools, OKRs allow individuals to have objective feedback on the achievement of certain performances due to the measurable nature of KRs. Individuals interviewed stated that work was less frustrating after the introduction of OKRs. In fact, by visualising the completion of the different KRs for which they were responsible, there is a greater awareness that they are spending their time in a more concrete way. ("If you're not clear on what the priority is for the week you feel like you've never done enough. If, on the other hand, you can at least finish what you set out to do (through completion of the KRs), you say this week I did my duty"[C]).

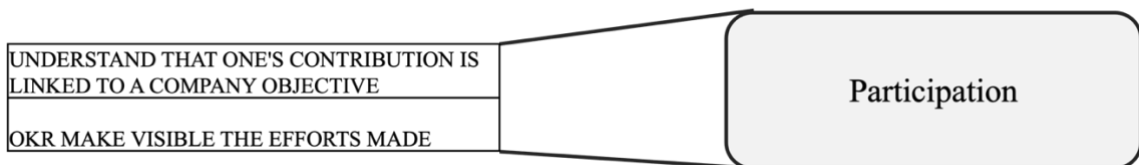


Figure 25. Theme: 'Participation'

Focusing on priorities

One of the key characteristics of OKRs that is also studied in theory is the ability to focus on priorities. The ability to select only a couple of goals per period, and then drop others because they are not a priority at that time, is a skill that today's workers must have. This allows start-ups to be able to identify what is most important to their customers and consequently to their business. This theme is individualised during the interviews. One of the main advantages of OKRs according to the interviewees is to bring in a condition of forced choice of some actions, and consequently to exclude others. This is an extremely useful process especially for organisations such as digital start-ups, where the possibilities for new opportunities are almost endless. Being able to avoid having an endless list of goals, but focusing on just a couple of them is an exhausting but necessary action. As one of the interviewees from organisation C recounts, during the early stages of implementing

the OKRs, each member of the organisation drew up priorities that were crucial to him or her at that moment. The result was an Excel sheet with a very long list of objectives. This was the starting point for the organisation to become aware of what was really vital for the company. With the implementation of OKRs there is a clear distinction of what the responsibilities of each member of the organisation are. This phenomenon is amplified when the OKRs are not associated with a team but with a single person. Also in organisation C, one of the interviewees stated that with the introduction of OKRs he realised that he was carrying out activities that were not his particular responsibility. (with personal OKRs, I realise that I am wasting time on things that are not, at least ideally should not be, my responsibility [C]).

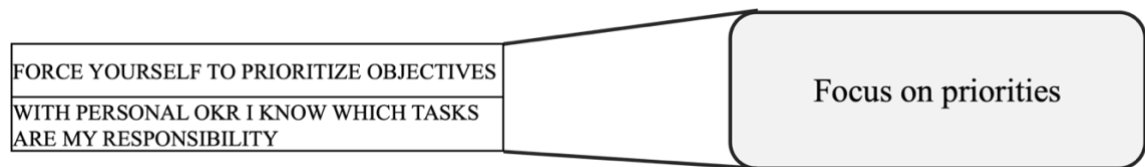


Figure 26. Theme: 'Focus on priorities'

Creating a vision

Creating a vision was a theme that came up several times during the research. By vision we mean the ability to focus all individuals on a certain path to follow in the medium to long term. Generally, the guidelines of the vision are dictated by the managers/founders, but they have to be shared by the whole team of the organisation. First of all, during the interviews there was a common thought that OKRs create a shared vision for the organisation. Writing down both operational and strategic level objectives is an action that seems trivial but in reality it makes everyone aware of the future plans for the organisation. "When you join a big company you do it because of what it has done, when you join a start-up you do it because you believe in what it will do [E]", this is a sentence uttered during an interview with a member of the E organisation. It perfectly expresses the idea that within start-ups there is a lot of future orientation, and the owners and founders have to be able to convey a shared vision of what the plans for the organisation are. Another interesting concept that emerged in the interview with organisation B is that due to the implementation of OKRs some individuals have developed more strategic thinking than before. Perhaps this means that employees who had purely operational tasks

before the introduction of OKRs have become aware that they also influence the vision of the company. ("OKR leads you to be more strategic. To look more at the long run, while focusing less on the content of here and now; even to people who before the introduction of OKRs didn't need to do this"[B]). This relates to another concept that explains that it is much more stimulating to work for goals than to work to bring home results. "Working to bring home results is not as stimulating as working to bring home objectives" is a sentence said by an interviewee of organisation A. Working on an objective is a process that starts with a decision made by yourself, you are aware that the achievement of your objective will significantly influence the vision of the company. Developing a goal that is in line with the company's vision makes you more aware that you are part of that vision. While achieving the goal is simply an action of solving a request that did not originate from your critical thinking, you fail to see how its fulfilment will affect the company's performance.

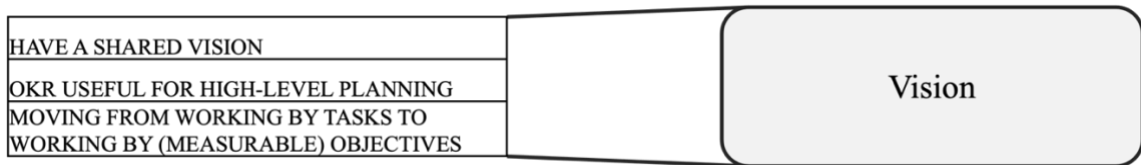


Figure 27. Theme: 'Vision'

Sharing Common Practices

The introduction of OKRs within all the teams of the interviewed start-ups led the organisations to have common working practices. In contrast to the statements made in the previous paragraph, which dealt with the fact that agile methodologies have not been implemented in all business areas, OKRs make the organisation able to work following a common method and therefore avoiding misalignments. ("Because OKRs when you implement them it involves your whole organisation, all departments. The maximum potential of OKRs is when everyone is involved"[E]). A respondent from organisation A finds that the most important benefit of OKRs is to have a shared working method. In this way, no time is wasted in understanding how another person in the team has set up his or her work, and you don't have to adapt the working methods of some people. ("For me, the main advantages are those of sharing a method. Being fundamental because each of us can have a personal method, so we organise the work, but the organisation must have

common methodologies"[A]). One concept that emerged was that thanks to software that allows a daily view of the OKRs of the whole organisation, all employees can share feedback and help their colleagues. By viewing the progress of their colleagues' OKRs, an employee can realise that with their contribution they can help a colleague who is struggling at that moment. ("If, for example, you have a goal to grow sales and you need to be able to do 5% more follower acquisition, but no one in your organisation knows this, then no one can help you"[C]).

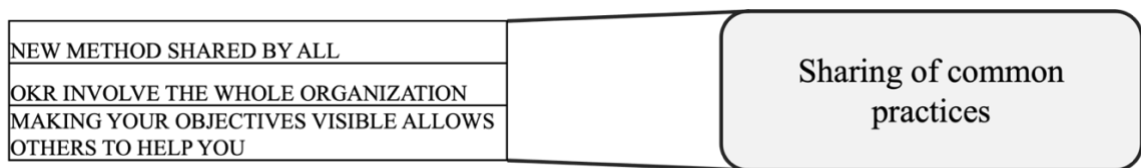


Figure 28. Theme: 'Sharing of common practices'

Communication

The theme of communication encompasses several concepts from the interviews, but the common pattern is that with the introduction of OKRs communication within and outside the organisation has improved. Taking organisation C as an example, it uses the sprint methodology to formulate commissions with its customers, incorporating OKRs. The formulation of these OKRs is the result of dialogue and sharing between the organisation and its customers. With the introduction of such a tool, clients are more aware, and consequently reassured, of how Organisation C is working. There has been a shift from a negotiation process, which included as arguments the time spent by the organisation to implement certain features in order to calculate a fee, to a collaboration process, where customers have a more proactive attitude towards the organisation. Customers perceive the organisation as an internal collaborator, and consequently are more willing to be guided by it. ("with the OKR and you tell him often to have a closer collaboration with the customers, for example anticipating or postponing some functionalities. Maybe this is useful also for the customer, because alone he doesn't see the potential of a certain functionality that maybe we can propose."[C]). Within the start-ups, moments of sharing have increased. In the start-ups interviewed, new weekly, monthly and quarterly meetings have been introduced where the whole team meets and aligns on the results achieved and future implementations. An example to be mentioned is that of organisation B. ("One of

the things we do (after the introduction of the OKRs) is useful in this sense is the Monday meeting. A moment in which, on a weekly basis, the whole team meets and aligns itself on what is being done. Basically, the floor is taken by the heads of the various teams, but then everyone is given the opportunity to intervene and have their say"[B]). This organisation, thanks to the introduction of OKRs, created weekly meetings, where all members of the start-up are present. In these meetings the team leaders present the progress of their OKRs in the previous week, the difficulties and the actions to be taken in the following week. The increase of the alignment meetings means that all members of the organisation are more informed about what other teams are working on. ("So, thanks to the OKRs, we are all aligned on which activities should be carried out first or on which it is necessary to put more effort because they are the ones that actually contribute to the achievement of that specific objective"[B]).

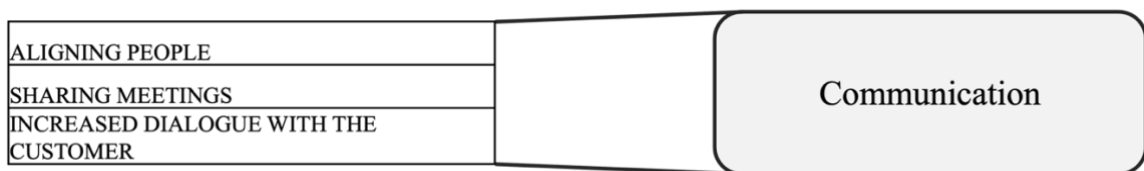


Figure 29. Theme: 'Communication'

Knowledge of the external environment

Having a greater awareness of the external environment, where your organisation is located, is an element of extreme competitive advantage. During the interviews conducted this theme emerged consistently, especially when discussing the use of OKRs. The introduction of OKRs has developed in the interviewed organisations an increased knowledge of the external environment. First of all, in order to write effective OKRs, one has to be aware of what the competitive forces outside the company are. ("You can look at the external market or however you do, you do some analysis that before (of the OKRs) you don't do some investigations that before you didn't do and therefore also when you think about some functionalities and maybe I mean not a small functionality but some important aspects of the product"[C]). An interviewee from organisation D, stated that before setting up an OKR there is a need to analyse how your competitors are performing, so from this point of view OKR is also used as a benchmarking tool. (We have more of a benchmark on what we are doing and how we are doing it, since you set the OKR correctly

there is no way to lie"[D]) The consequence of being constantly updated on the external environment is to have a greater ability to respond to changes dictated by the market. ("We keep coming up with new features, and the OKRs really help in that regard. By having the ability to change them as you go along, they allow you to stay aligned with what's happening outside of your organisation."[A]).

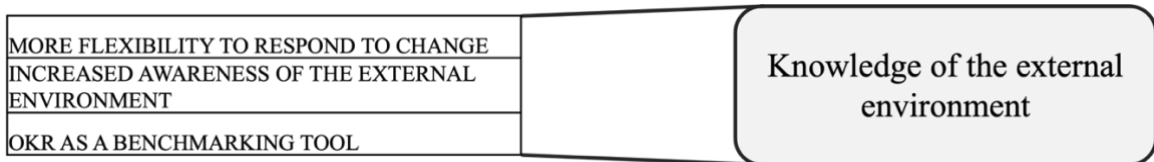


Figure 30. Theme: 'Knowledge of the external environment'

Flexibility of action

Some interviewees raised concepts that relate to the flexibility of action brought by OKRs. Compared to objective management methods such as MBOs, OKRs allow for greater flexibility of action, this is due to the ability of OKRs to be modified during the period in which they are in use allowing organisations to release new solutions for their products more quickly. ("with the introduction of OKRs in the sprints we are more organised and we are faster to release new features and consequently more agile"[3]).

The reason why a particular OKR is changed in the process may derive from the ability of these tools to return an objective performance measurement. This means that by referring to the metrics of the OKRs, organisations have immediate feedback on their performance, and consequently can implement actions to modify the performance of the objectives. "The strong part of the OKRs are the kr's, up the goals they all get there. The key is to be able to honestly measure, especially with yourself, how effective my work is"; as stated by an interviewee from organisation D, the OKRs are a good tool to understand how your personal performance is progressing. Consequently if you need to be able to modify your work actions.

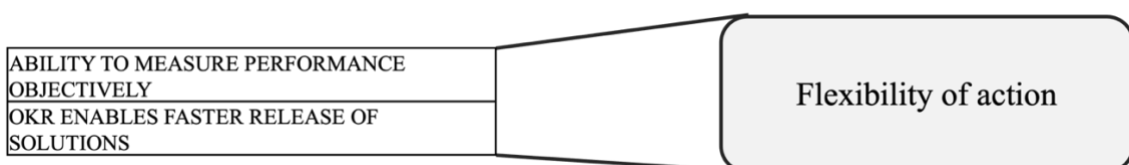


Figure 31. Theme: 'Flexibility of action'

Role burning

Role burning refers to the development of awareness in individuals to perceive hierarchical levels in a less defined way. Role burning aims at creating flatter organisations with more shared responsibilities. "(OKRs) lead you to not be afraid of the difference in role that separates one person from another. So what I try to do in this is to make the organisation as horizontal as possible"[B]). Interviewees stated that after the introduction of OKRs new behaviours developed in the different members of the organisation. Talking to the founders and managers of the start-ups, they stated that with the introduction of OKRs they increased delegation to their employees, while on the other hand the employees felt more responsible for the company's objectives. This phenomenon was analysed especially in organisation A; the founder feels less responsible for the operational performance of the teams and can devote himself to more high-level goals. In the same organisation, the same phenomenon was confirmed by a manager, who stated that he perceived less control from the founder, and more delegation in carrying out his objectives. The consequence of these phenomena is that there is less distance between the top management and the operational levels of the organisations. ("the goal is to try to align ourselves, of course he (the founder) has his own results to achieve, but in this way there is less distance between his goals and ours (product team)"[A]). Thanks to the introduction of OKRs the positions of power have been levelled out, creating more horizontal organisations where there is more sharing of decisions, more delegation by managers and a perfect alignment between top management and operational teams. "(OKRs) lead you to not be afraid of the difference in role that separates one person from another. So what I try to do in this is to make the organisation as horizontal as possible."; statement by the founder of the Organisation A.

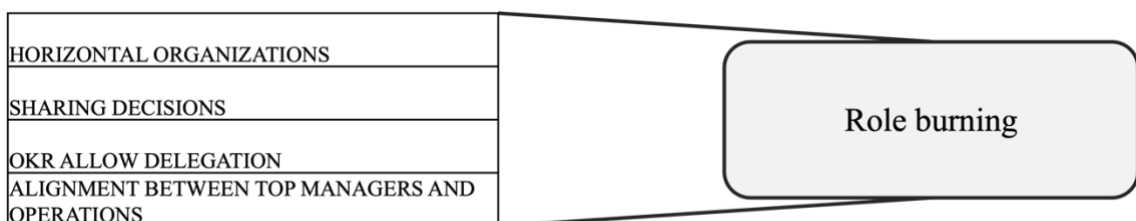


Figure 32. Theme: 'Role burning'

Culture of continuous improvement

The use of OKRs pushed the organisations interviewed towards a continuous improvement approach. This is demonstrated by some of the concepts found in the interviews. One characteristic found during the interviews regarding OKRs is that these tools lead individuals to have a vision that focuses less on short-term operations, but more on a medium to long-term vision. However, this does not mean that actions in the present are influential, but respondents stated that actions they take today should not only have benefits in the short term. This kind of phenomenon was especially found in organisation C, concerning the development of their SaaS platform one respondent stated that: "I realised that I was doing things that have value in the short term but do not stand up in the long term. They can have economic advantages in the short term but maybe you miss opportunities to develop much more important things" [B]. Aiming at longer-term implementations suggests that organisations are increasingly focusing on improving future performance. Another issue raised in the interviews with start-up C, concerns the possibility of gradual release of the product to the customer. In this way, the organisation can take feedback from the customer so as to be able to modify and improve the next value release of the product. ("It is useful (OKR) because you make the customer understand the whole philosophy of continuous IMPROVEMENT, i.e. you start from a prototype and you build new features and you improve it over time always giving appreciable results but gradually, so you don't start by saying we work six months on this product and you see the delivery at the end of the year"[C]). This inevitably suggests that OKRs are tools for developing a culture of continuous improvement. The OKR structure itself can be seen as a never-ending process, where you start by writing an OKR quarterly and in the next quarter you can start by analysing past performance to be able to set another OKR to improve that performance. This type of process allows organisations to improve day by day.

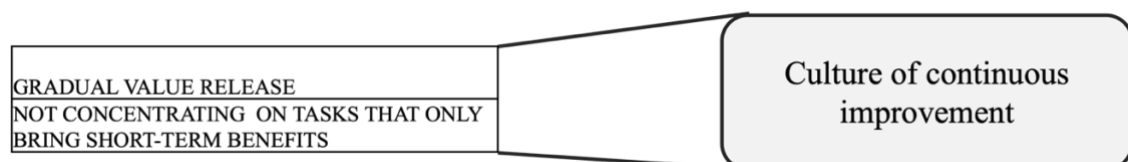


Figure 33. Theme: 'Culture of continuous improvement'

Before moving on to the next section it is important to note that the themes formed regarding the use of OKRs recall in several aspects the characteristics of agile organisations analysed in the first chapter of the literature review. The fact that the themes found during the interviews dealing with the topic of OKRs and the characteristics of agile organisations coincide is certainly not a coincidence. This can already be defined as a proof of what was anticipated in the last chapter of the literature review, i.e. the fact that OKRs are based on the same principles as agile methodologies. However, the analysis of the results cannot stop at merely determining that there is a link between the OKR tool and agile organisations, we need to dig deeper to understand how this link develops.

6.2 Definition of aggregate dimensions

Through the analysis of the documentation and transcripts of the interviews, two different lists of themes were identified and analysed in the previous section. At this point, always keeping the research question fixed, now the is question of how these two different lists of themes could interact with each other.

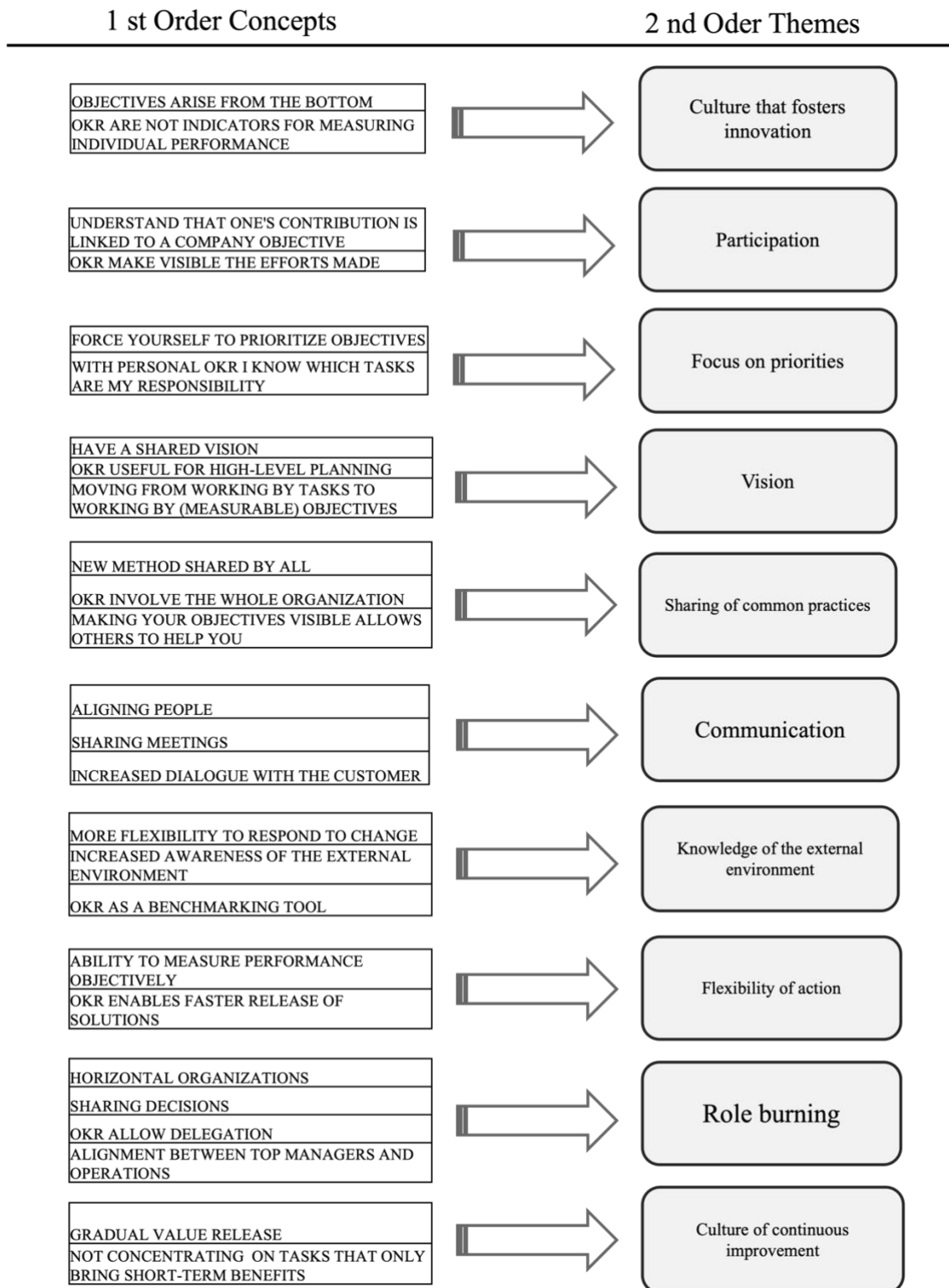


Figure 34. Themes on the use of OKRs

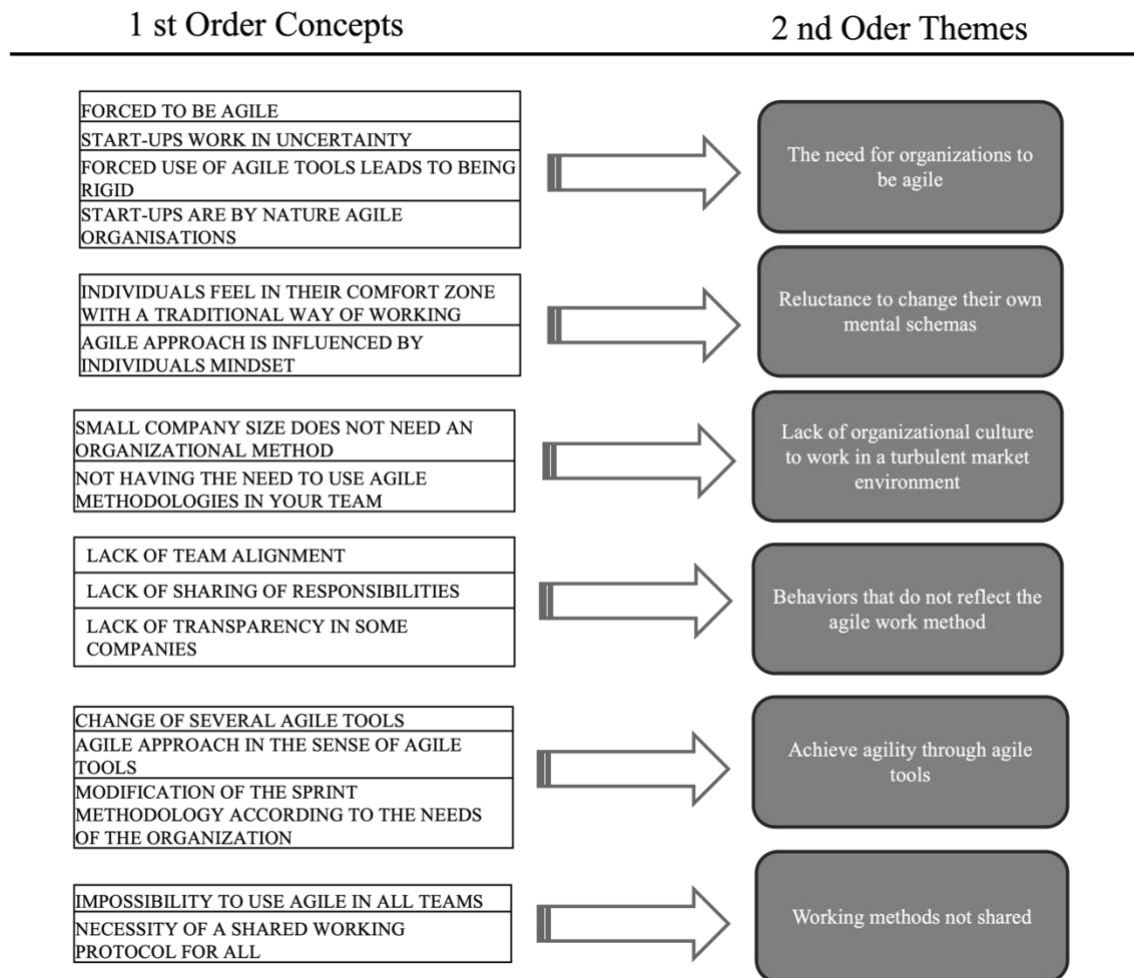


Figure 35. Themes on the limits of agile methodologies

Starting from the themes dealing with agile methodologies, they bring out difficulties within the organisations under analysis. These are not direct criticisms of the agile approach, but are problems encountered by the start-ups interviewed, thus related to their working context and how agile methodologies are used. Because of these limitations, organisations find it difficult to fully embrace the agile approach. The analysis of the agile approach revealed critical issues regarding the wrong mental approach that some individuals have in using agile methodologies. The issues identified by the concepts of the limitations of agile methodologies that relate to this phenomenon are, the reluctance of individuals to change their mental patterns and have behaviours that do not reflect the agile approach. If we think about the criticalities that these two themes bring to organisations, we can identify the fact that within the companies analysed where these episodes occur, there is certainly, on the part of some individuals, a mentality that is not suited to agile working. As analysed in the previous section, there are individuals within

start-ups who, despite using agile tools and being in an environment that favours agile working, have behaviours that do not reflect agile principles. Still dealing with the limits of agile methodologies, two interesting themes emerged from the start-ups examined. First, there is a strong desire for agility within these start-ups; the organisations interviewed realise that having the ability to be agile in today's competitive environment is an absolutely necessary characteristic. Despite this, in some of the organisations interviewed, there is a lack of organisational culture to cope with this compelling need. By organisational culture we mean practices and corporate thinking that guide individuals in the competitive environment of start-ups. A culture that drives innovation, that leads to competitive advantages and that makes individuals aware that their contribution is fundamental to the creation of value for the company. During the interviews it emerged that many organisations were using agile methodologies to achieve agile working competencies, without having a deep understanding of the theory of agile working as a basis. However, this is not the case in all parts of the company. Using certain practices only in some teams has led to misaligned companies. Individuals have to make compromises, some workers have to fit into the thinking patterns of others in the absence of a common method. The result is to have slowdowns in the various operations due to lack of sharing of objectives, lack of communication and feedback and misalignment between teams. To summarize what are the main problems expressed by the interviewed organizations regarding the agile approach we can state that: first of all, individuals have behaviours and mentalities that do not reflect the theory of the agile approach (A), the need for flexibility leads organizations to use agile methodologies without fully understanding them (B), the introduction of the agile method is not shared by the whole organization and therefore leads to misalignment among individuals (C).

Once we have analysed the main issues raised during the analysis of the agile approach, we can move on to analyse how OKRs can intervene in this context. The use of OKRs has introduced a new way of working. OKRs are tools that act directly on the behaviour of the individuals who use them, significantly changing their approach to work (Niven, 2016). Considering the issues raised by the agile methodologies and the OKR issues, three different aggregate dimensions can be created. They arise from a problem raised by the analysis of agile methodologies and how the new approach to work given by OKRs can solve it. Analysing the two different groups of themes, we can see that they act as antagonistic forces one against the other.

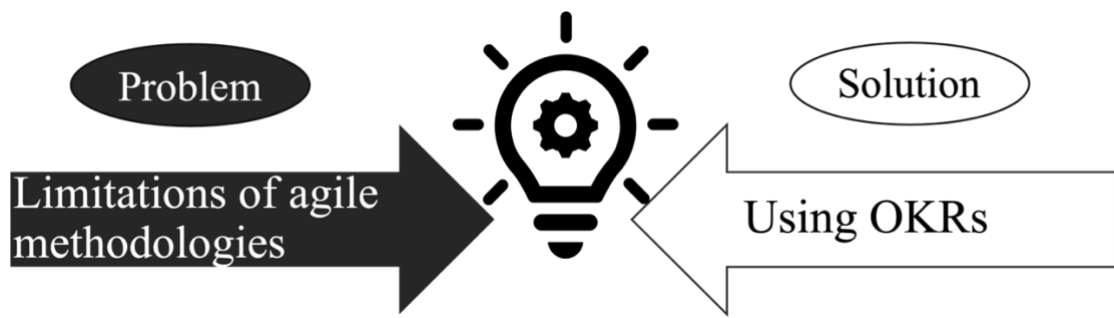


Figure 36. Scheme for creating aggregate dimensions

In order to identify the first aggregate dimension, we have to start from the limits of the agile approach that analyse how individuals lack the capacity to work flexibly (B). This limitation, as analysed above, derives from the fact that the start-ups interviewed stated that they have an extreme need for agility and the way they try to achieve it is through the use of agile practices, but without understanding the underlying theory. In order to solve these problems it is possible to analyse which topics, from the list concerning the use of OKRs, can be useful. At first analysis it can be stated that, analysing the limitations expressed above, the interviewed organisations have the need to develop individual flexibility in their team members. As stated by the interviewees, the use of OKRs brings advantages that enable the development of working flexibility. Thanks to the introduction of OKRs, organisations have developed a different corporate culture. This new corporate culture promotes innovation and continuous improvement. Thanks to OKRs, individuals feel more comfortable setting ambitious goals with a high failure rate. Typically, it is from these types of initiatives that organisations are able to achieve more innovation, and consequently more value for their customers. In addition, thanks to the flexible structure of creating and modifying OKRs, each team or individual is able to monitor and modify the progress of the objectives. In this way, if environmental conditions or other factors have changed, and the objectives that were selected at the beginning of the quarter are no longer in line with the company's vision, they can be changed very easily and with a minimum of bureaucratic effort. This type of practice has led to the development of a culture oriented towards being flexible and reactive in order to be able to respond to the changing environment, so as to be able to constantly improve. In addition, OKRs, through their use, encourage the organisation to collect and analyse a large amount of information, such as market performance, new trends, customer needs and feedback from external collaborators; thus developing a great knowledge of the external environment. The formation of this type of culture has led organisations that have implemented the use of

OKRs to have greater flexibility of action. OKRs are tools that adapt to the needs of the company's objectives and not the other way around, i.e. their structure allows them to be easily modified to take advantage of possible new opportunities. This means that the start-ups analysed are able to implement new solutions and strategies more effectively and in less time in order to remain competitive on the market (Ghezzi, 2019). Through these characteristics, OKRs allow the individuals who use them to have more individual flexibility. The flexibility is a fundamental capability that before the introduction of the OKRs was missing in the interviewed start-ups, and through analysis of the themes it can be identified as the first aggregate dimension. According to the literature, flexibility is one of the fundamental soft skills that workers must possess in today's market. Flexibility is a characteristic that allows individuals to better analyse the context, going beyond the changes imposed by the market, leaving behind standard practices and methods. (Robles, 2012)

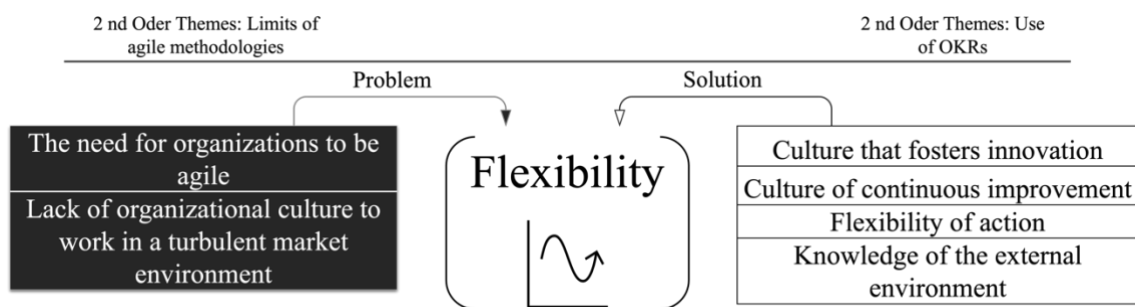


Figure 37. Aggregate dimension: 'Flexibility'

Greater individual flexibility is the first aggregate dimension identified in the research; thanks to greater flexibility, individuals have more freedom of action but must at the same time be able to bear that responsibility. Linked to this personal reflection of mine are also limitations of agile methodologies which show that individuals working within realities that define themselves as agile, have behaviours that do not reflect the foundations of the Manifesto. This limitation, as analysed above, derives from the fact that the start-ups interviewed stated that some individuals are reluctant to change their mental patterns, and that their behaviours do not reflect the theory of the agile approach. Going now to analyse the factors that influence these phenomena through the use of OKRs, we can mention some of the themes identified above, such as participation, role burning and focusing on priorities. Focusing on priorities is a mental process that pushes individuals to understand what is the best solution to make their organisation more competitive, so OKRs are an excellent tool to increase the responsibility of individuals. Role burning, through the

creation of a very horizontal organisation chart, enables the most operational workers to develop greater responsibility for the performance of the company and the founders to delegate more to their employees. Increased participation makes all workers aware that their contribution reflects concretely on the future of the whole organisation. Thanks to the structure of the OKRs, every action can be traced back to a change in the company's performance and since the KRs are numerical, and therefore objective, indicators, every worker is aware of how significant his or her contribution is to the company. These three effects brought about by the use of OKRs lead to the creation of greater personal empowerment in individuals. OKRs directly influence the behaviour of individuals, thus stimulating empowerment, which in other words means that each employee feels responsible for his or her own OKRs, because every employee is aware that he is part of the creation of value for the company (Grass, 2020). Empowerment can be considered as the second aggregate dimension. Empowerment is defined when an individual, through a certain degree of autonomy, takes on so much responsibility that he feels that the company's objectives are his own. (Seibert, 2004)

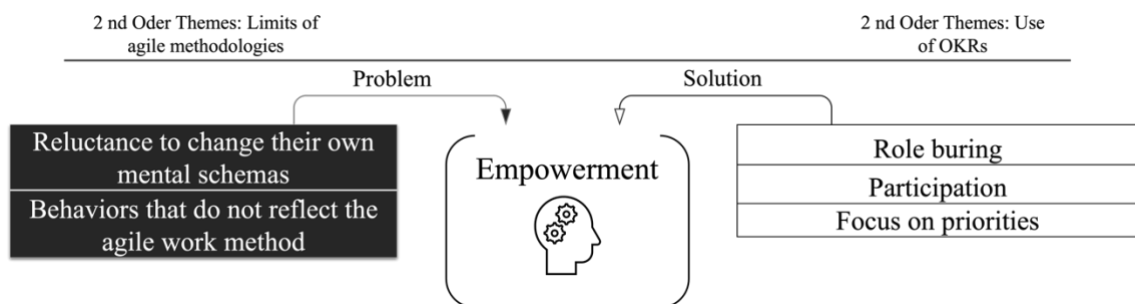


Figure 38. Aggregate dimension: 'Empowerment'

At this point, after allowing individuals flexibility of action and empowerment, it remains to be defined how one manages to coordinate the various action within the organisation. Starting from the limits of the agile approach, I analysed how the interviewees expressed their perplexity about the fact that agile methodologies are not shared throughout the organisation. This stems from two themes analysed above, which are: the achievement of organisational agility only through agile methodologies and the absence of a shared working method. Also at this juncture, it is possible to use the characteristics of OKRs, expressed in the themes concerning the use of OKRs, to respond to the limits raised by agile methodologies. The use of OKRs has brought into organisations a working method that is shared by all individuals. The benefits are clearly visible; according to the research conducted in the interviewed start-ups, common working practices have increased, with

the introduction for example, in addition to the OKR tool itself, of several periodic meetings (weekly, monthly, quarterly) with the presence of the whole staff. Communication both within the teams and with other departments has improved a lot; comments occur daily and also the quality of feedback has improved now that all employees are aligned on each other's work. Better and constant communication makes it much easier to develop a strong company vision. The founders of the start-ups are the spokespersons for the vision and are more easily able to convey both the values and the long-term goals of the company, involving all employees. OKRs have made it possible to create a working method that synchronises each employee. The various employees feel they are part of a common vision and the organisation works in unison without misalignment. Ultimately, I can assume that the third aggregate dimension is that of alignment. This expresses how OKRs are able to give a common working method to the organisation, and that therefore all employees are able to think following a model that is common to that of a colleague, without creating misalignment in the company. Also communication is one of the soft skills needed in today's competitive environment. Alignment is the ability of individuals to communicate with each other, so that they act as a team (Robles, 2012). Alignment leads to all members of an organisation knowing what others are working on. In this way each person can see if his contribution is in line with the company's objectives. (Tallon, 2011)

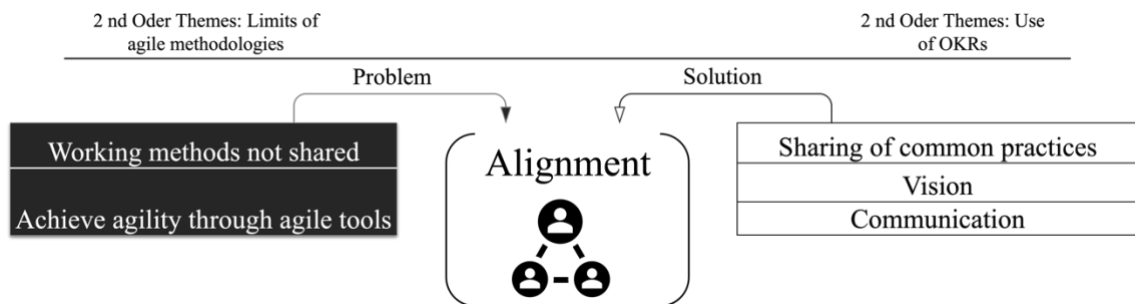


Figure 39. Aggregate dimension: 'Alignment'

Having identified these three dimensions of aggregation, it is now clearer how OKRs interact with the agile approach. In fact, it was found that the OKR tool is strongly linked with the behaviour of individuals. In fact, OKRs are people-oriented tools, and the three aggregate dimensions found clearly show this (Doerr, 2019). They show three fundamental aspects of individual work where OKRs act. OKRs thus act at the level of individual flexibility, increased empowerment and greater alignment between individuals. Referring to the research question, it is not clear how the modification of

behaviours and working methods leads to an agile organisation. In the last chapter of the conclusions I will analyse how these three aggregated dimensions change the organisation in a holistic way, so as to achieve agility.

CHAPTER 7: DISCUSSION

7. Discussion

In this final chapter I will set out discussion about the thesis question. At the beginning of this chapter we will look at what emerged from the data analysis and try to interpret how OKRs and Agile are so related. What I have seen so far is that there is a link between OKR and agile. The contact between these two working methodologies can be seen both in the analysis of the literature. Having established the fact that there is an affinity between OKR and Agile, the research sought to understand how OKRs could solve the problems that were raised by the respondents regarding the agile approach. Through joint analysis of the themes of agile methodologies and OKRs, I sought to identify three aggregate dimensions that explained how OKRs helped the organisations interviewed. The three aggregate dimensions have been analysed in the previous chapter. They are defined as: increased individual flexibility, increased empowerment and alignment between individuals.

The first analysis that can be drawn by analysing the aggregate dimensions is that all three affect the work traits of individuals. The dimensions analysed do not involve structural and process changes within the organisation, but focus directly on individuals. Indeed, one might have expected that the use of OKRs could lead to directly influencing the behaviour of individuals. In fact, OKRs, as explained in the literature, are tools that are strongly people-oriented. As Doerr explains in his book, OKRs are tools created for people, to be able to guide them and as a tool for self-assessment and criticism. From this point of view, it can be considered as an encouraging result. Given that OKRs are presented in the literature as people-oriented tools and the aggregate dimensions found in the research recall this concept, I can be reassured about the quality of the research up to this point. Once it is found that the aggregate dimensions involve people in a process of change, it is necessary to analyse how this process takes place and especially how it can help organisations achieve agility.

7.1 Agile characteristic of OKRs

Analysing the results of the research, it can be seen that OKRs are perfectly linked to the context of agile organisations. On the contrary, in many cases, the characteristics of OKRs are able to develop the capabilities of individuals (described by the aggregate dimensions), which are able to overcome some of the limitations of agile methodologies. In order to illustrate how OKRs and Agile methodologies are so closely linked, we return to their theoretical foundations. The foundations of the agile approach to which I refer are the four pillars of the 2001 agile manifesto (Beck et al., 2001). These four concepts, are the foundations to which agile methodologies refer (Dingsøy, 2012). As for OKRs instead we refer to the four characteristics analysed one by one, they have been named by Doerr "the four superpowers of OKRs" (Doerr,2019). This jargon refers to the fact, that as with the pillars of the agile manifesto, of what are the main benefits that OKRs bring. In the following we analyse how these components are linked to each other.

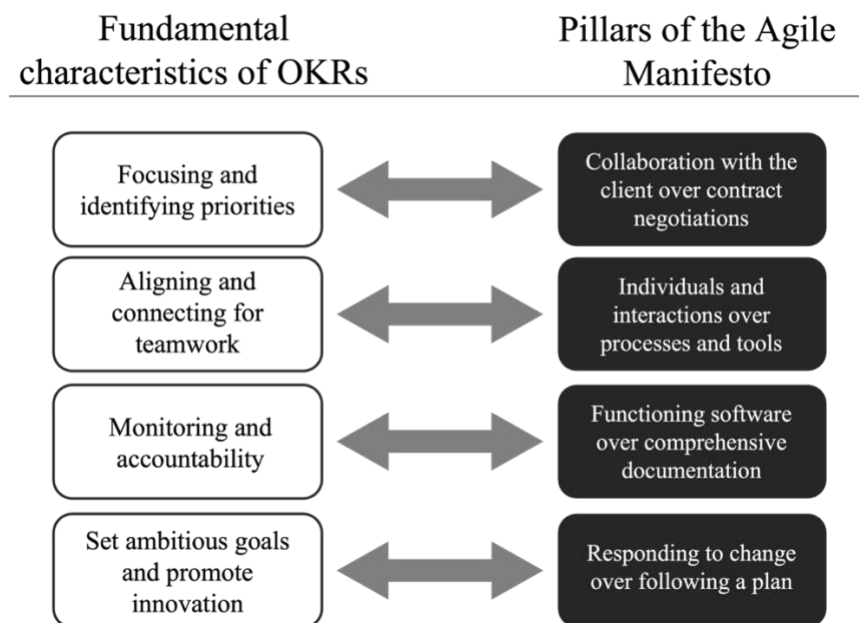


Figure 40. Link between OKR and Agile

As the statement of the first agile pillar explains "Individuals and interactions are preferred over processes and tools". The direct consequence of these behaviours is to make the team more responsive. If individuals are aligned and connected, the team can solve problems by quickly and autonomously selecting the most appropriate tools or processes (Lindvall, 2002). The characteristic of 'alignment and connection' in an OKR

system perfectly reflects the concept of the statement 'individuals and interactions rather than processes and tools'. In an OKR system, even the last employee entering the company can see everyone's goals and criticism and corrections are shared publicly (Niven, 2016). Transparency fuels collaboration; for example, that an employee is struggling to meet a quarterly target. Because he has publicly reported on the progress of his work, all his colleagues are aligned and can step in to provide support. They can step in with comments and support, so both communication between people and teamwork improves. Also the team leaders themselves do not have to wait until the end of the quarter to realise that one of their colleagues is in trouble, the alignment and sharing automatically leads to direct intervention if this is necessary. The agile manifesto clearly explains that people matter more than processes (Moe, 2010). Having said that, it can be said that OKRs like agile methodologies try to put people, and not processes, at the centre. (Doerr, 2019). The OKR characteristic of "alignment and connection" can be perfectly explained by the agile statement that prioritises individuals over tools.

The agile statement of having a working software (product) rather than an exhaustive documentation highlights the development dynamics that take place within teams. Very often, teams that want to publish a finished product that they think is one hundred percent compatible with the specifications are actually quite different from the customer's expectations. After all the efforts, it is impossible to fully convey an overall vision and often something very different from what was actually required is produced (Albers, 2020). That is why Agile states that a working software is a much better option to assess customer expectations than a huge amount of documentation and specifications that do not reflect the value of the product. This does not imply that documentation is not necessary. It just means that a working product is a better indicator every day of alignment with customer needs and expectations than a document created months earlier (Dybå,2008). Being able to monitor and be accountable for the performance of a product is also reflected in the characteristics of OKRs. As already analysed, OKRs can be modified and deleted at any time in their cycle. Sometimes the right key results surface weeks or months after a target has been set. OKRs, due to their structure, are able to accurately monitor performance trends (Doerr, 2019). Being very flexible tools they are adapted to be modified, following new specifications and changes in the course of the work. OKRs are able to follow a project all the way through, gathering useful feedback to deliver a solution that is of value to both the client and the company, while at the same

time meeting the required specifications. The OKR tool fits in perfectly with the agile logic that a working product is better than exhaustive documentation. This derives from the fact that the characteristics of OKRs analysed above are based on the foundations of the agile statement.

When in the agile manifesto we talk about negotiation it means that; the details of the project are defined a priori before being finalised and in a very similar way to documentation they bind a priori choices that cannot actually be made in negotiation. There is still the possibility to renegotiation but, once the negotiation is over, there is no more discussion about it. What the agile approach says is that instead of investing time and resources in negotiation it would be better to choose the path of continuous collaboration (Gregory, 2017). Collaboration implies that there is still room for discussion and communication is constantly ongoing. This offers a double advantage: while helping the team to focus on the agreed objectives, it also helps the client to refine his vision and redefine his priorities (Santistevan, 2018). The same principle is also found in OKRs; these tools lead organisations and their members to select and focus their efforts on certain objectives. The selection of objectives is guided by what really creates value for the organisation and its customers and, as the agile approach proposes, is an action that is carried out through collaboration between the parties. In this case it is very clear that both OKR and the agile approach promote the same principle, namely collaboration between individuals. (Doerr, 2019)

Experience teaches us that changes are mostly inevitable and instead of running away from them we should try to embrace and plan for them or at least take into account that they will be there and be ready to manage them. Agile allows us to make this transition (Pavlou, 2006). What this working approach suggests is that change is not a cost, it is a positive feedback that helps to improve the project. It should not be avoided, but sought after because it adds value to the product. Change very often relates to innovation, organisations must not only be able to change but also be able to create, seek and collect innovation (Cooper,2018). Thanks to OKRs the promotion of innovation becomes an indispensable benefit. Organisations that set ambitious goals are the ones that are able to create innovation and consequently compete better in a changing market. Again, it is very clear that the principle of being able to respond to change, addressed by the agile manifesto, is the theoretical foundation for which OKRs push towards the creation of

ambitious goals (Doerr, 2019). Being able to have ambitious goals gives you a competitive advantage, and consequently you are better prepared to respond to a change in the market.

After analysing how the agile principles and characteristics of OKRs are linked, a conclusion can be drawn. The reason why OKRs are so compatible with the agile methodology is because the fundamental characteristics of OKRs are based on the same principles on which the whole agile world is based. As we have analysed above, there is an unequivocal correspondence between agile pillars and OKR superpowers. This is because OKRs are also born to solve problems in today's organisations (Nerur, 2007). The characteristics of OKRs echo the agile principles perfectly, thus creating a point of contact.

7.2 Forming an agile mindset

Assuming that the research seeks to understand how OKRs can be used within the agile world, I started by trying to understand how aggregate dimensions could improve the implementation and compression of the agile approach. As explained before, empowerment, alignment and flexibility are concepts that drive individuals to act and think in a way that is more in line with the agile approach. This personal consideration is motivated by the fact that the three aggregated dimensions were created to solve problems related to the agile approach. Consequently, through the use of OKRs, individuals are able to develop the three aggregate dimensions; they are considered the solution to the limitations of the agile methodologies identified in the data analysis. Below is a diagram that can help to understand how OKRs can act within the agile approach. The proposed scheme was designed by Ahmed Sidky. The intent of this diagram is to introduce and make people understand the concept of agile thinking. (Sidky, 2007)

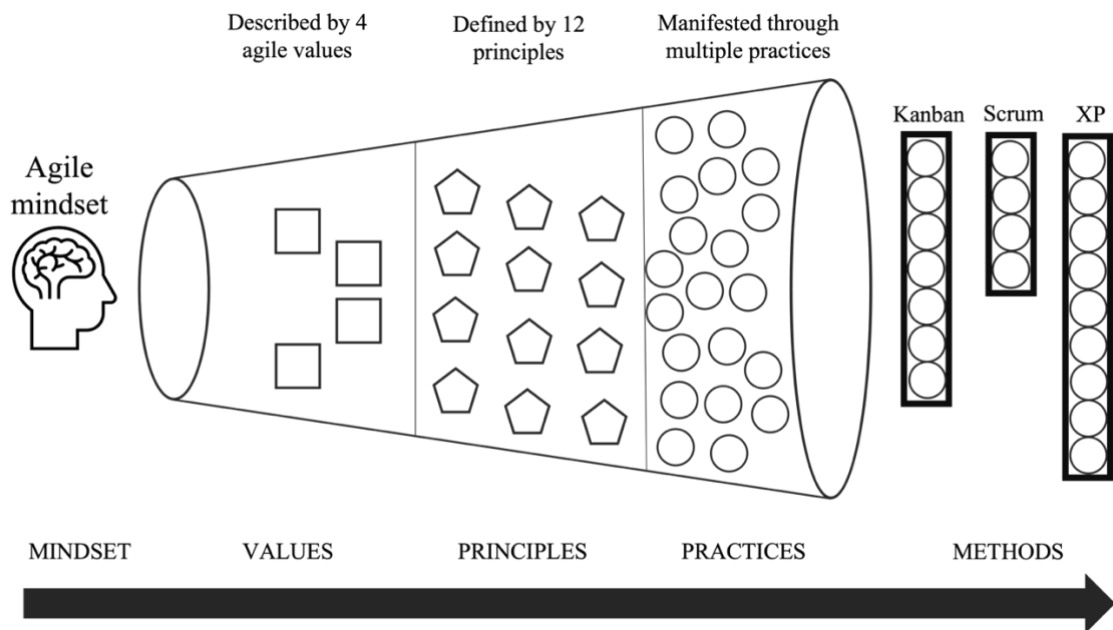


Figure 41. Agile process funnel

This concept can be summarised by saying that the agile mindset is the set of attitudes that form the basis of an agile working environment. Individuals who develop an agile mindset think and act in accordance with the principles of the agile manifesto, and are able to use agile methods to their full potential. The diagram represents very clearly how the agile approach develops. The image shows how the agile mindset is the starting point of the whole working methodology. The agile mindset represents a single individual or a group of individuals who share the same principles. As mentioned above, the agile mindset is expressed by the four pillars of the agile manifesto, which means that an individual, in order to acquire an agile mindset, must fully understand where the agile approach comes from. The four pillars of the manifesto in turn are represented by the 12 principles in the manifesto document. From these 12 principles a number of different working practices have been created over the years. By practices we mean a set of actions that are undertaken by individuals, both at the decision-making and operational level. Finally, by grouping these practices according to different logics and requirements, agile methodologies were born. Some of these methodologies, the most famous and used, have already been analysed in the first chapter of the literature review. (Ghani, 2016)

This is a very useful pattern for the research, because it brings out a factor that emerged both during the literature review and during the interviews with start-ups. Very often the

adoption of agile methodologies follows a wrong process. As the diagram above makes very clear, agile methodologies are the last step towards the adoption of the agile approach. Before implementing methodologies such as scrum or XP in the company, the process depicted in the diagram should be followed (Moe and Dingsøy, 2010; Carew and Glynn 2017). However, many organisations needing to be able to manage their work flexibly rely directly on such methodologies. Consequently, the implementation of an agile approach initially passes only through the use of methodologies. In this way, workers are not given the opportunity to develop an agile mindset capable of managing these tools (Lowry, 2016).

During the interviews, and even before analysing the literature, there are episodes that express how agile methodologies are not easy to apply for some individuals. As analysed in the start-ups interviewed, many individuals were sceptical about the use of agile approaches throughout the organisation. In addition, cases were analysed in which people and teams, although trying to work following an agile model and using tools for this type of approach to work, presented behaviours that were not in line with the agile philosophy. At first I thought that the agile approach could not be suitable in all business contexts and that agile methodologies had structural limitations. The agile approach does not have limitations derived from a different business context or from the type of project to be developed. Agile methodologies can cause problems if they are implemented in the organisation in an incorrect way. What I have been able to analyse is that the implementation of the agile approach is very often not accompanied by theoretical knowledge. The understanding of the agile philosophy passes through the creation of an agile mindset in individuals (Breu, 2002). At this point, OKRs can be a tool to facilitate the understanding of the agile approach within organisations (Doerr,2019). As can be seen in Ahmed Sidky's diagram, the creation of an agile mindset is not stimulated by any element. OKRs are placed at the beginning of the beautiful tunnel scheme that leads to the use of agile methodologies.

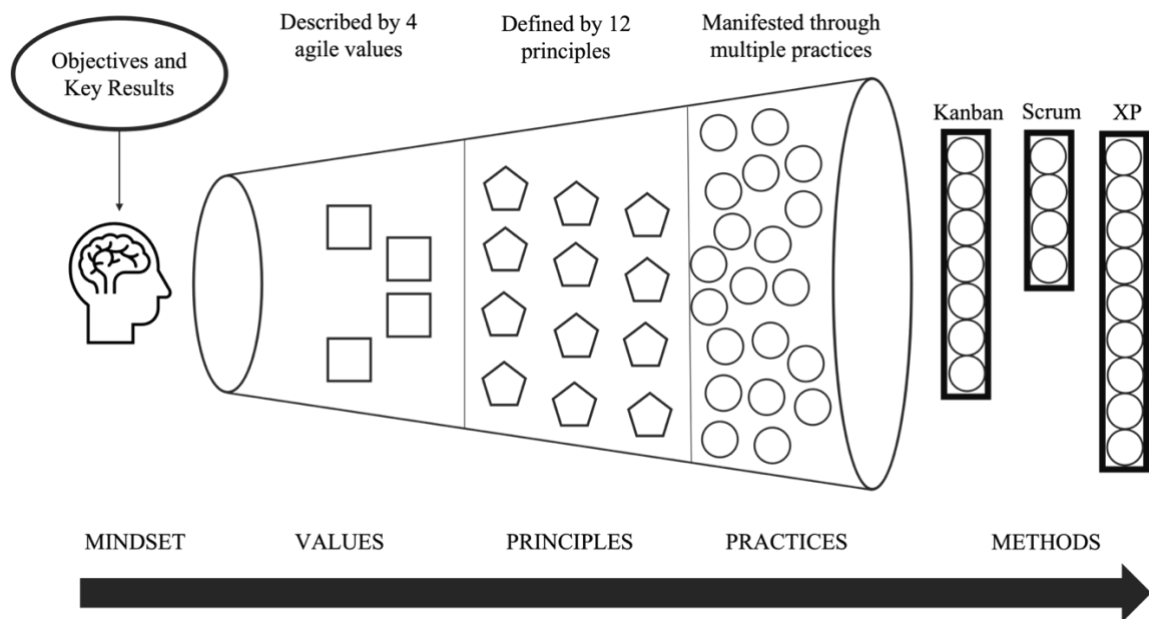


Figure 42. Agile process tunnel with the addition of OKRs

As already explained, OKRs are tools that directly affect individuals' behaviour and way of working. According to this assumption, OKRs might be able to accompany individuals in a transition of their mental and behavioural processes, until they develop an agile mindset (Doerr, 2019). At this point, it could be that through the use of OKRs, the process leading to the correct implementation of agile methodologies within organisations is activated. In this way, agile methodologies should no longer raise the issues analysed during the interviews and in the literature. Individuals, through the use of OKRs, will be able to make the best use of the agile approach in a variety of work contexts.

Once we have analysed how OKRs can influence the agile approach, in order to have a clearer and more comprehensive view of how the interviewed organisations have changed before and after the introduction of OKRs, in the following paragraph I will present a model formed by a block diagram.

7.3 Model of the effect of OKRs on the organisations

The following model shows how OKRs impacted on the adoption of agile behaviors in the organizations of the sample.

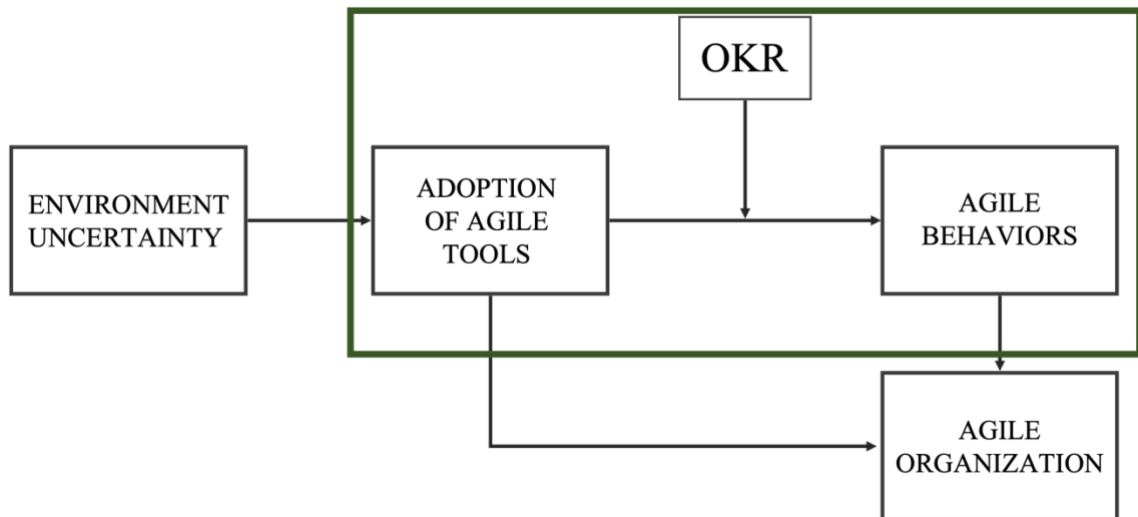


Figure 43. Block model of organizations after the introduction of OKRs

The first element of the block diagram, expresses the condition the interviewed start-ups are in. Within the interviews all organisations pointed out that start-ups find themselves working in a very uncertain environment (Camps and Cascales, 2019). As an interviewee from organisation E stated, start-ups work in an environment that goes from chaotic to complex (French, 2013). Start-ups are always within an uncertain environment and rely on the agile approach in order to be able to be flexible in their work (Cooper, 2016). The uncertain environment therefore leads organisations to adopt agile tools to work. In fact, greater complexity of the work environment leads to greater adoption of agile practices by organisations. Adoption of the agile tools means that organisations implement practices and methodologies that push towards agile working in order to have more flexibility to respond to the chaotic external environment (Hoobs, 2017).

Now let us focus on the elements enclosed in the green box. OKRs start to act as a moderating relationship between the implementation of the agile approach and the development of agile behaviours. The model represents how OKRs are used together with the implementation of the agile tools. The same individuals who previously had difficulties with the agile approach, through the use of OKRs are more able to understand and make better use of agile methodologies. This is possible thanks to the fact that OKRs act on the working dimensions of individuals (Doerr, 2019). As already explained in the previous chapter, OKRs develop an agile mindset in the individuals who use them. The process that guides individuals to embrace the agile mindset passes through the three aggregate dimensions identified above. Therefore, through the use of OKRs, individuals

are able to have greater flexibility of action within their organisation, they feel more empowered because they are able to select and identify objectives autonomously, thus feeling more responsible, and finally, the work between the various individuals is more aligned and transparent (Robles, 2012; Grass, 2020).

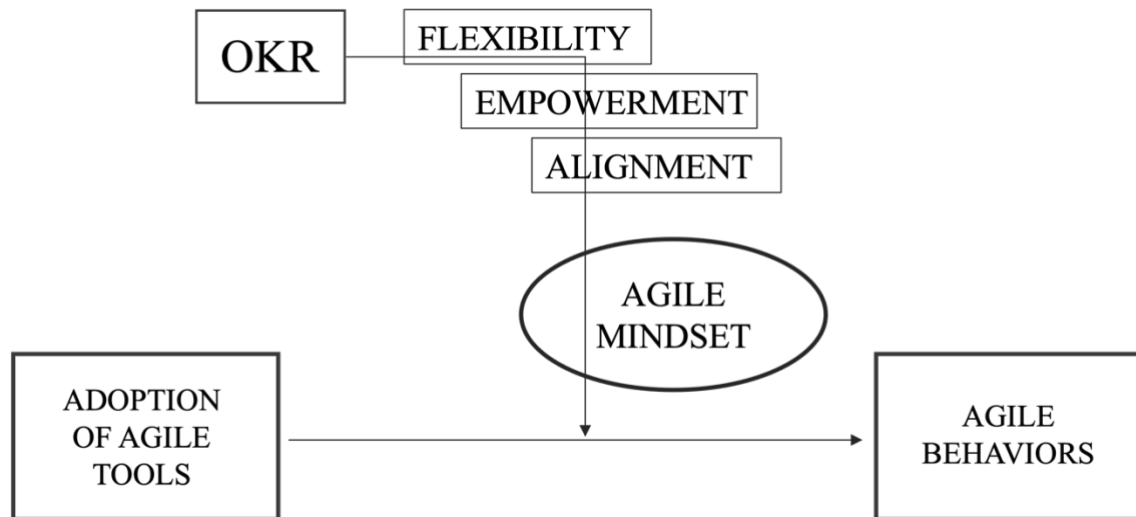


Figure 44. Aggregate dimensions influence the agile mindset

It can therefore be assumed that the three aggregate dimensions, summarised with the three terms flexibility, empowerment and alignment, lead to the creation of an agile mindset in the employees of the start-ups interviewed. Through the concept expressed by the graph in the previous paragraph dealing with agile mindset development, it can be stated that agile mindset is expressed by individuals through behaviours that are in agreement with the statements of the agile manifesto (Dingsøy, 2012). For this reason, the agile mindset of individuals manages to mediate the use of the agile approach. Individuals through the development of the agile mindset are more aware and able to understand how to properly use the agile approach at work. The individuals who previously had difficulties with agile methodologies, now have behaviours adapted to this type of working model. The agile mindset promotes behaviours in workers that are guided by agile principles, consequently there will be no more individuals in the same organisation who are desalinated at the level of mentality. The adoption of OKRs by all members of the organisation is a factor that is present in every start-up interviewed (Doerr, 2019). Inevitably this leads to having workers able to think and reason following the same approach to work.

In conclusion, by having all the members of the start-up presenting positive behaviours in line with the agile approach, the organisation, in a holistic sense, is positively influenced. By analysing the data collected, OKRs are able to mitigate some individuals' behaviour that is distant from the agile approach. This action leads certain workers to use agile practices with behaviours in line with the statements of the agile manifesto. Obvious this effect has been found in a limited sample of companies, so there should be the need for further studies to corroborate this moderating factor of OKRs. Whereas individuals who previously had difficulties with the agile approach, now also manage to have a positive effect on the creation of an agile organisation through their behaviour. Organisations that started from a situation of uncertainty and ambiguity, arrived through the implementation of OKRs to solve the problems that had arisen concerning the limits of the agile methods. The development of the agile mindset in each individual allowed the start-ups to aim to be agile organisations. The introduction of OKRs leads organisations to achieve organisational agility in a holistic sense, without having the need to implement new actions. Ultimately, I want to point out that this modelling is based on the data analysis. This model clearly shows the effect of OKRs on organisational agility.

7.4 Development of Organisational Agility

In this paragraph I am going to define how OKRs have been able, in the analysed start-ups, to bring the knowledge to make them achieve organisational agility. The starting point of the reflection starts from the characteristics developed by the members of the organisations through the use of OKRs. The aggregate dimensions found express characteristics that individuals have developed through the use of OKRs. These characteristics can be summarised in three distinct elements: flexibility, empowerment and alignment (Tallon, 2011; Robles, 2012; Grass, 2020). These three aggregated dimensions stem from a problem that arose from the use of the agile approach and how OKRs were able to compensate for it. A fundamental clarification has to be made, the limitations that emerged from the agile methodologies arose because some individuals within the organisations interviewed at the time were not able to exploit the potential of the agile approach to the fullest (Carew and Glynn, 2017). This is a very important point to well on; within the analysed start-ups there are beliefs that lead to think that agile methodologies are not suitable for every working context and that they can in some cases be counterproductive. This is true when workers are not ready to work according to the

logic of agile working. For some individuals it is necessary to start a process that leads them to change their behaviour and working methods; therefore the starting point should not be focused on agile methodologies, but directly on individuals (Sidky, 2007). The concept of focusing on individuals is very well expressed by the three aggregated dimensions. Flexibility, empowerment and alignment are three characteristics that act directly on the mindset of people. This aspect can be easily understood from the fact that the agile dimensions stem directly from the use of OKRs, which, as explained in the previous chapters, are tools strongly oriented towards people (Doerr, 2019). At this point, after analysing the fact that the focus for the achievement of organisational agility passes through the mindset of each individual within the organisation, I went on to hypothesise how the action of OKRs has enabled the achievement of organisational agility.

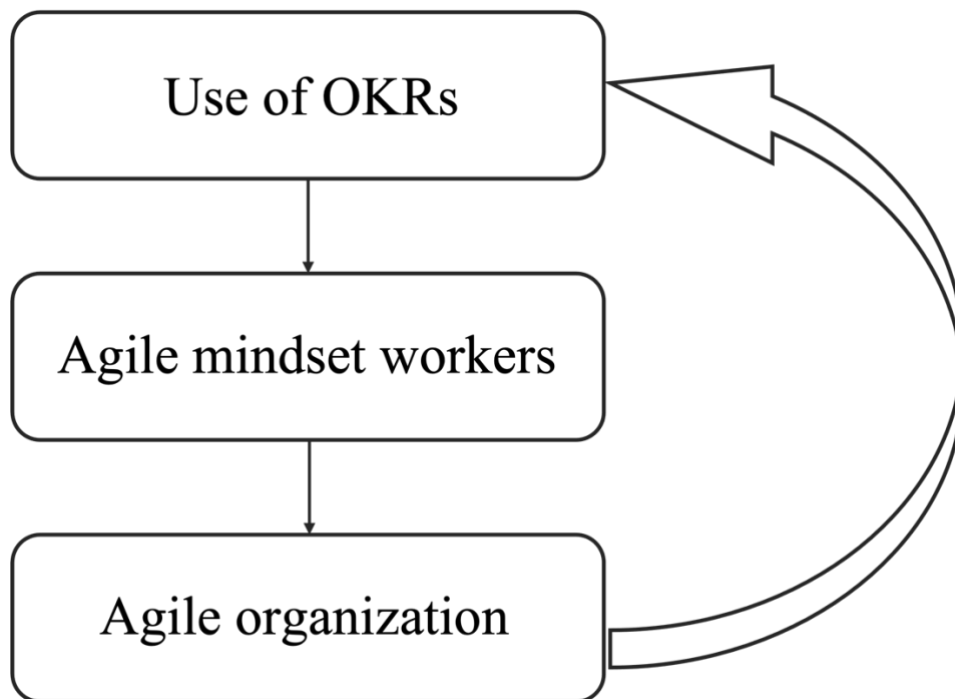


Figure 45. The influence of OKRs on organisational agility

What I could hypothesise is that individuals through the use of OKRs are able to develop characteristics that are represented by the three aggregate dimensions (empowerment, flexibility, alignment). Through the development of these individual characteristics, workers in the start-ups interviewed were able to develop an agile mindset, i.e. a set of behaviours that are the basis for succeeding in working using an agile approach. In fact, the agile mindset is represented as the ability of individuals to think and act following the statements of the agile manifesto (Sidky, 2007). The development of this mentality, even

in individuals who had difficulties in using the agile approach, has led all the members of the organisation to have behaviours that reflect the agile philosophy. The set of virtuous behaviours of all the workers in the organisation inevitably leads to positive effects on the organisation itself (Harraf, 2015). If we consider a company as a series of individuals, who through the totality of their skills are able to create value, we can affirm that a set of individuals from the same company who act according to the guidelines of the agile approach, are able to create an agile organisation. The above diagram summarises how, starting from the use of OKRs, agile organisations can be created. The link from the "agile organisations" to the "use of OKRs" forms a virtuous circle driven by the OKRs. The significance of this link is that, as Doerr also states, the organisations best placed to exploit the full potential of OKRs are agile organisations (Doerr, 2019). The research led me to propose this kind of hypothesis: the implementation of the OKR tool, in the start-ups interviewed, led, through a greater flexibility of action of the workers accompanied by an increase in empowerment and alignment among individuals, to the formation of an agile mindset in each member of the organisation. The direct consequence of having developed such a mentality in each individual of the same company is that the organisation, in its most holistic view, has managed to achieve the agility required for the competitive context where the start-ups analysed are located. Finally, an agile organisation is the most favourable environment in which to use the OKRs, in this way also the organisation itself influences the potential of the OKRs creating a virtuous circle that positively influences the process of agility development in the organisation.

In conclusion, I suppose that OKRs have their own intrinsic value. A tool that was born far from the agile logic and methodologies has been able to involve organisations that have failed, or only partially succeeded, allowing them to reach agility. At the beginning of the research I would not have expected to find this positive effect in using OKRs, this tool was able, in the organisations analysed, to make them fully embrace the agile working approach.

CHAPTER 8: CONCLUSION

8. Conclusions

In the following section I will summarise how I arrived at a conclusions; starting with the thesis question and moving through the data analysis to formulate a conclusion. At the beginning of the research, the aim was to understand how agile methodology could interact with the OKR tool. After analysing the literature on these two topics, I came to formulate a research question that would be interesting and useful in today's business context. Starting from the difficulty of some organisations to exploit the advantages of the agile approach, I analysed how OKRs and Agile had some features in common. In fact, the main characteristics of OKR can be summarised by the agile principles of the manifesto. Based on this, it can be said that both agile methodologies and OKRs seek to develop agility and flexibility within companies. The thesis question seeks to understand how OKRs, a new and young tool in the business landscape, born after and far from the logic of agile methodologies, could help organisations where agile methodologies had partially failed. The data collection started keeping the focus on how OKRs are able to lead to organisational agility. During the research and data collection, five different start-ups in the digital space were examined. In the data analysis I tried to understand how OKRs had changed organisations since their introduction. From the data collected, some critical issues emerged regarding the use of the agile approach for some individuals, but at the same time concepts emerged that expressed how the use of OKRs can respond to the critical issues found. Thanks to the clusterization of the themes, which dealt on the one hand with the limits of agile methodologies and on the other hand with the use of OKRs, I was able to identify three aggregate dimensions. It is that individuals through the use of OKRs are able to develop characteristics that are represented by the three aggregate dimensions (empowerment, flexibility, alignment). Through the development of these individual characteristics, workers in the start-ups interviewed were able to develop an agile mindset, i.e. a series of behaviours that are the basis for succeeding in working using an agile approach. The development of such a mindset, even in individuals who had difficulties in using the agile approach, led all members of the organisation to have behaviours that reflect the agile philosophy. The set of virtuous behaviours of all the workers in the organisation inevitably leads to positive effects on the organisation itself.

The direct consequence of having developed such a mentality in each individual of the same company is that the organisation, in its most holistic view, has managed to achieve the agility required for the competitive context where the start-ups analysed are located. Finally, an agile organisation is the most favourable environment in which to use OKRs; in this way, the organisation itself influences the potential of OKRs, creating a virtuous circle that positively influences the process of agility development in the organisation.

8.1 Contribution to literature

The research has brought to light some aspects that I think are very interesting both in terms of the use of the agile working approach and of knowledge about the OKR tool. In the following paragraph I will express the concepts that can be useful to enrich the literature especially regarding two issues: the first one is the development of an agile mentality, while the second one is the increase of knowledge regarding the OKR tool.

Regarding the use of the agile approach, to date we can rely on many relevant articles. What the research can contribute to increase knowledge about the agile world, concerns the process that every organisation has to go through in order to reach organisational agility. As I have outlined in the previous paragraphs, agile methodologies do not have structural limitations. What happens in many organisations and why they apply a process of adoption to agile is wrong. The correct process that leads to the use of agile methodologies with proper awareness, passes through the behaviour of each member of the company. The development of an agile mindset in each individual is the first step towards the correct use of agile methodologies. A worker possessing a mindset that allows him/her to think and act according to the four principles of the agile manifesto is able to understand the use of agile practices. Usually the process adopted among companies to use the agile approach starts directly from the implementation of methodologies, which according to a logical process should be the end point. I believe that this study makes it clear that the first step in achieving organisational agility is to educate every single member of the company.

The contribution that the thesis can make regarding the knowledge of OKRs can be summarised in two aspects. The first is the fact that OKRs, being a relatively young instrument, have not been studied at an academic level. With this research I went to

analyse, firstly, the OKRs at a theoretical level and then how they could be used within the organisations analysed. This allowed me to bring different analyses to bear on a topic that has not yet been widely studied. The second fundamental aspect that emerged from the research is that OKR and agile can be linked. As analysed at the end of the literature review chapter, the characteristics of OKRs share the same theoretical principles as the agile approach. Moreover, during the analysis of the data, I could assume that OKRs can be the tool that triggers the process leading to organisational agility. In fact, OKRs acting directly on people can be the tool that develops the understanding of a new working model, through the creation of an agile mentality.

8.2 Contributions to managers

The research has brought out some very interesting contributions that managers of organisations can analyse. Starting from the need of today's organisations to be agile and flexible within a turbulent market, I could see that not all companies are able to fully embrace the agile approach. The research could be useful to those organisations that have only partially succeeded in gaining the hoped-for benefits from using an agile approach to work. What the thesis has brought out is that implementing OKRs has a positive effect on the behaviour and mindset of individuals. The use of OKRs alone leads to employees being able to have more flexibility of action, to feel more responsible and empowered, and finally to be able to be updated and aligned with what other members in the organisation are working on. The direct effect of these capabilities is on the agility of the organisation. At the beginning of the research, the positive effect of OKRs on organisational agility was not taken into account. Through the analysis of the literature, and especially by analysing how OKRs have changed the start-ups interviewed, I believe that we can define the influence of OKRs on agility as a positive externality effect that directly affects the capabilities of the organisation.

8.3 Research limitations

The research was affected by a number of constraints that may have limited it. The main limitations stemmed from the selection of the research sample. Firstly, the research is

limited only within the context of digital start-ups, a very specific type of organisation that has profoundly different traits from other types of companies. Moreover, the start-ups analysed were selected from the same ecosystem. In fact, all the organisations are Italian and based in Milan. Consequently, even if the business areas were different, the start-ups analysed may have cultural and environmental characteristics that are only found in that specific context. Another factor to be taken into account is that the research sample consisted of only 5 organisations and not all the members of the analysed companies were interviewed. For reasons of company privacy, most of these organisations did not want to release documentation about their working practices, which would have been very useful to analyse the research context in more detail.

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