

D4UH

DESIGN FOR UKRAINE'S HERITAGE





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A Passion in Action Program held by Prof. Anna Barbara with Annunziata Albano, Amirreza Mostafaei, Elena Baharlouei, Silvia Cantalupi and, the special contribution of Silvia Chiodi and Gian Carlo Fedeli and the support of Tetyana Shyshnyak, Kseniia Havrylova and Pavlo Kukurudz.

Interior and Spatial Design

“You use a glass mirror to see your face; you use works of art to see your soul.”

George Bernard Shaw

Abstract

Our project, Design for Ukraine's Heritage (D4UH), presents a dynamic, digitally-mediated initiative centered on safeguarding and enhancing Ukraine's rich cultural heritage. In collaboration with MEAN—the European Nonviolent Action Movement, we orchestrate an engaging environment that invites an assortment of individuals—students, museum directors, volunteers, researchers, and more—to participate in this remarkable endeavor. Across 20 unique Ukrainian museums, we champion the preservation and digitization of collections, underscoring the intricate interconnectedness between humanity, human senses, and cultural heritage.

The D4UH project begins with an intensive data collection process, focusing on the past, present, and future of each museum. Our team identifies relevant sources of data, such as social media platforms, museum websites, and direct communication with museum directors. We meticulously gather diverse information detailing the museums' history, architecture, collections, current state, and the impact of the ongoing war. This collected data is thoroughly analyzed to gain insights into the museums' current situation, identify patterns and trends, and guide the design of the virtual museum. We constantly review the data and incorporate feedback from the project team into the design process, ensuring an accurate representation of each museum's narrative.

Once we've collated and reviewed the necessary data, we deploy two distinct but harmonious strategies for creating a virtual museum experience: a faithful digital recreation of an existing physical space, and an immersive, metaverse-style experience.

Firstly, we digitally replicate the National Museum of the History of Ukraine, capturing the intricate details of its architecture and interiors. This approach seeks to transport users into the physical museum, providing an authentic and immersive sense of the significant cultural space.

Simultaneously, we venture into the emergent realm of the metaverse. Here, we create an immersive, game-like digital environment where users navigate through different scenarios, each echoing a narrative about the impacts of war on Ukraine's museums.

By weaving these two design methodologies together, we create a tapestry of experiences celebrating Ukraine's rich cultural heritage and emphasizing its urgent protection and preservation. The D4UH project, thus, symbolizes the convergence of past, present, and future, presenting varied perspectives on cultural heritage preservation in the context of conflict.

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Query

At the very heart of the D4UH project is a profound query: How can we leverage design, education, and collaborative engagement to protect, preserve, and promote Ukrainian cultural heritage, particularly in the face of complex and challenging circumstances?

This query does not exist in isolation. It emerges from an intricate web of cultural, historical, political, and socio-economic realities that shape the state of cultural heritage preservation in Ukraine and across the globe. Therefore, our endeavor is to approach this query with an openness and flexibility that honors this complexity and encourages us to adapt, evolve, and innovate throughout our journey.

Our approach to answering this query is firmly rooted in the principles of Participatory Action Research (PAR). Acknowledging the invaluable insights and perspectives that a diverse group of individuals can offer, we've sought to create a platform where students, museum directors, researchers, volunteers, and various other stakeholders can actively engage and contribute.

The PAR approach forms a collaborative, inclusive, and democratic framework that not only enables us to gather a rich and varied range of data but also fosters a sense of shared ownership and investment among all involved. It promotes an

environment where knowledge is not merely received but co-created, where ideas are not imposed but born out of collective brainstorming, and where the goal of preserving cultural heritage becomes a shared responsibility that transcends individual boundaries.

This methodology comprises four integral stages: identification of the problem, planning, action, and reflection. Throughout these stages, we've prioritized transparency, communication, and constant learning. Whether it was through online workshops or student research, we've emphasized the importance of fostering a mutual understanding and promoting a continuous dialogue among all participants.

At this juncture, our query also acknowledges the emerging paradigm shifts in the design of virtual spaces. There are two distinct approaches that we are simultaneously exploring - one that offers an authentic, virtual recreation of a physical museum, and another that immerses the audience in a metaverse-style, game-like environment.

In the first approach, we faithfully digitally replicate the National Museum of the History of Ukraine, with meticulous attention to its architecture and interiors. This method seeks to transport users into the physical museum, providing an immersive sense of presence within this culturally

significant space. This traditional approach to virtual design echoes the familiar, seeking to replicate the tangible and the known.

The second approach, however, taps into the potential of the emerging metaverse, creating a digital realm where narratives about the impacts of war on Ukraine's museums are explored through an immersive, game-like environment. This approach, a novel direction in virtual design, provides a platform where the familiar and the abstract can coexist, providing a canvas for storytelling that defies physical limitations.

Underpinning our methodology is the understanding that our query isn't just about finding a one-time solution. It's about embarking on a journey of discovery, understanding, and transformation that engages us in a continuous process of learning, unlearning, and relearning. It's about challenging our assumptions, pushing our boundaries, and continually seeking innovative and empathetic ways to protect, preserve, and promote cultural heritage.

Preface

The preservation of cultural heritage is an endeavor that holds profound significance, going beyond the realm of academia to touch upon the very core of human identity. It is an act that echoes our collective past, resonates with our present, and reverberates into the future. Now, more than ever, we find ourselves in an era where the echoes of history are threatened by the clamor of conflict. The rich cultural heritage of Ukraine, steeped in time and testament to the human spirit, faces risks that are too urgent to ignore. It is against this backdrop that the Design for Ukraine's Heritage (D4UH) project emerges, as both a response and a responsibility.

As I immersed myself in the D4UH project, I found myself propelled by a dual motivation. Firstly, there is a deeply personal and human drive to safeguard what essentially reflects a society's soul. Cultural heritage is not merely about artifacts and monuments; it is about narratives, identities, and memories that bind us together. Ukraine's heritage belongs to us all. In preserving it, we safeguard a part of our shared human story.

Secondly, the project provided a fertile ground to explore the interplay between spatial design and digital technology. How does one construct a virtual space that could possibly mirror the tangible, sensorial experience of a physical museum?

And beyond that, how could we leverage the potentials of the emerging metaverse to create an immersive, interactive environment that narrates the impact of war on cultural heritage?

In this booklet, I seek to lay bare the journey of the D4UH project. Herein, you will find a thorough recounting of the process, a reflection on the methods, a celebration of the collective effort, and a projection of our aspirations. As this narrative unfolds, I hope it also serves as an invitation to dialogue, understanding, and empathy.

After all, the endeavor to preserve cultural heritage is not a solitary pursuit. It is a collective responsibility that thrives on diverse perspectives and shared commitment. It is an ongoing conversation that continually evolves, learns, and reimagines. In that spirit, I invite you to join this conversation, engage with our work, and contribute to the narrative with your insights, critique, and vision. Let us together celebrate the resilience of cultural heritage, the power of collective effort, and the promise of a shared future.

Introduction

The profound resonance between the built environment and the narratives it shelters is a testament to the power of design and cultural heritage. In this dynamic confluence, the Design for Ukraine's Heritage (D4UH) project carves out its remarkable narrative. Anchored in the urgency of protecting and preserving Ukraine's cultural heritage amidst challenging circumstances, the D4UH project endeavors to intertwine the transformative potential of design and technology.

In this pursuit, the project employs a dual methodology to create a virtual museum: a faithful digital reconstruction of existing spaces, and an innovative metaverse experience. Each approach offers a distinct lens through which we can experience, understand, and ultimately cherish the cultural heritage of Ukraine.

The first approach focuses on the meticulous digital replication of the National Museum of the History of Ukraine, inviting users into a virtual rendition of this critical cultural space. Here, the authenticity of the experience is paramount, enabling a profound sense of 'being' within the physical museum.

Simultaneously, the second approach offers an immersive, game-like metaverse experience, where users navigate through narratives encapsulating the impact of war on Ukraine's museums. This method presents an engaging and interactive opportunity for users to comprehend the profound repercussions of conflict on cultural heritage.

Together, these approaches harmonize to form a comprehensive, nuanced, and multifaceted narrative of Ukraine's cultural heritage. Their symbiosis in the D4UH project underlines the dynamic possibilities of integrating diverse design methodologies within the realm of cultural heritage preservation.

D4UH, thus, offers an intricate tapestry of experiences that bring to light the urgent need for cultural heritage preservation in Ukraine and globally. As we traverse the pages of this booklet, let us appreciate the past, acknowledge the present, and anticipate the future of Ukraine's cultural heritage through the lens of design.

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Framework

The process engaged by our project, D4UH—Design for Ukraine’s Heritage, to safeguard and promote Ukraine’s cultural heritage, is meticulously structured to ensure comprehensive and inclusive preservation efforts. The framework followed is as follows:

1-Initial Meetings and Introductions:

The project commenced with initial meetings that served as a foundational platform for all involved. These meetings were designed to familiarize participants with each other, clearly articulate our mission, and outline the journey ahead. Post this, each student was dedicated a specific museum, forming the bedrock of our unique participatory and collaborative approach. These students were then introduced to the respective museum directors, establishing a direct line of communication and collaboration that would remain integral throughout the project.

2-Problem Identification and Review Sessions:

As the project progressed, various challenges and issues surfaced. To tackle these effectively, we organized review sessions that aimed at collective problem-solving and strategy formulation. The participatory approach ensured that each voice was heard, each concern addressed, and

every possible solution considered.

3-Miro Board and Participatory Action Research (PAR):

We utilized Miro Board, a virtual collaborative workspace, as our primary tool for conducting Participatory Action Research. We adopted the principles highlighted in the previously discussed paper to guide our research process. This enabled us to collect, organize, and analyze diverse data, providing a comprehensive view of Ukraine’s cultural heritage state and its preservation needs.

4-Design of the Virtual Museum – The Realistic Approach:

Our first design methodology focused on creating a digital replica of the National Museum of the History of Ukraine. We conducted extensive meetings and discussions with Prof. Anna Barbara, leading to a meticulously detailed design that captured the museum’s architecture and interior authentically. This approach aimed at offering users a realistic sense of being within the physical museum space, thereby connecting them directly with the encapsulated heritage and identity.

5-Design of the Virtual Museum – The Metaverse Approach:

Simultaneously, we pursued a second,

more unconventional approach to museum design. A workshop was organized to commemorate the Russian invasion anniversary, leading to the creation of a metaverse-style museum. This immersive, game-like digital environment offered users a new way to interact with Ukrainian cultural heritage narratives, navigating different scenarios illustrating the war’s impact on Ukraine’s museums.

Through these diverse steps, our project aims to provide a wide-ranging framework for exploring, understanding, and promoting Ukraine’s cultural heritage, highlighting the power and potential of digital technology in times of conflict.



Fig 0.1: Team members collaboratively strategizing and brainstorming on the Miro board for the D4UH project.

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Activism Paper

**Design for Ukraine's Heritage: Engaging International Students
During Times of War Through Design Activism**

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Abstract

The Russian invasion of Ukraine - which began in February 2022 - has caused, and continues to inflict, a substantial number of deaths and destruction of buildings, including museums, cultural institutions, and heritage. Despite the instruments of international law put in place to protect cultural heritage, alarming reports of the removal and displacement of museums' collections from occupied areas continue to emerge.

In the amid of this complex context, how can design researchers and educators prompt students towards the development of contributions for emergencies such as war? Can digital platforms be used to support such development? And how can these technologies be employed to safeguard and raise awareness about at-risk heritage?

Drawing from the legacy of design activism and socially responsible design, the research aims to provide an answer to these questions, presenting the results of the Design for Ukraine's Heritage (D4UH) experience. D4UH is an educational project, the first step of a broader strategy that has the goal of creating a network of European institutions and NGOs to envision and develop possible solutions to safeguard the Ukrainian museums' heritage during and after times of war. D4UH pairs 20 Ukrainian museums with 20 international students from architecture and

design schools, united by the desire to give support to the Ukrainian heritage.

Partners, students and museums are asked to collaborate in the collection of videos, pictures and interviews to design the Virtual Museum of Ukrainian Museums, which acts as a statement of Ukrainian museums' current situation. Offering the chance of engaging, researching, curating and designing the virtual exhibition's narrative space, students and design educators can directly experience how the action of designing can tackle intricate cultural, social and political issues. The expected results of the project are, in fact, not merely to exhibit Ukrainian cultural heritage, but also to consider the relevance of museum institutions themselves as guardians of temporality to be interpreted and protected, especially in times of war, because of their contribution to the community's progress.

Author keywords

Cultural heritage; digital museums; design activism; design education; design in emergency.

Introduction

The Russian invasion of Ukraine - which began in February 2022 and is still ongoing- continues to result in losses on both sides (MacFarquhar, 2022) and among civilians (Office of the High Commissioner for Human Rights [OHCHR], 2023).

Attempts to protect and enhance the Ukrainian cultural heritage have overall been timely and effective, although some worrying news regarding the territories still under Russian control has come to us (Spinney, 2022). Many projects have sprung up to help the cause: Save Ukrainian Cultural Heritage Online (<https://www.sucho.org/>) coordinated by an international team and managed by over 1500 volunteers (Majstorovic, 2022), Skrynia a cultural heritage protection programme run by Shadows Project (<https://saveua.art/>), the initiatives from the International Council of Museums (ICOM) (Solidarity Projects Ukraine, 2022), and the partnership between the International Alliance for the Protection of Heritage in Conflict Areas (ALIPH) and Getty (ALIPH and Getty Partner to Protect Cultural Heritage in Ukraine, 2022).

Among these initiatives there is the European Nonviolent Action Movement (MEAN, 2022). After a visit Kyiv in July 2022, MEAN volunteers including a representative of our design university received and helped promote support requests from 20 Ukrainian museums to Italian

institutions. The idea of involving our students to help raise awareness about the current Ukrainian crisis and the protection of cultural heritage took shape: the Design for Ukrainian Heritage (D4UH) initiative was born.

In the first part of this paper, we will briefly discuss the three main themes around which the D4UH educational initiative has been developed: the protection of cultural heritage, the transformations of museum institutions in recent years, and the role of design activism. The second section will describe the initiative itself through the analysis of students' work, together with a reflection on its relevance and efficacy and the subsequent steps for spreading the results.

Background

The Protection of Cultural Properties as Common Heritage,

As a reaction to the destruction inflicted by the Second World War, the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict was adopted in 1954 under the auspices of UNESCO. It is the first and most significant treaty devoted to the protection of cultural property, which is defined in the same document as: “(a) Movable or immovable property of great importance to the cultural heritage of every people [...]; (b) Buildings whose main and effective purpose is to preserve or exhibit the movable cultural property defined in sub-paragraph (a) [...]; (c) Centers containing a large amount of cultural property as defined in sub-paragraphs (a) and (b), to be known as centers containing monuments” (Convention for the Protection of Cultural Property in the Event of Armed Conflict, 1954).

The most significant aspect of the Convention is its definition of cultural property as universal heritage, rather than national heritage, “since each people makes its contribution to the culture of the world”. Gradually, the concept has been expanded to include intangible cultural heritage, which is of particular significance in armed situations. In fact, one of the goals of wars is frequently the elimination of the historical-cultural identity of the enemy, beginning with questioning those identities while simultaneously establishing new

ones and eliminating as rapidly as possible any evidence that may undermine the strategy (Chiodi, 2018, p. 46).

A second important aspect that emerged concerns the need to build respect for heritage. The Second Protocol to the Hague Convention of 1954 (1999) encourages the enhancement of the cultural legacy of the territory during times of peace through educational and informational initiatives directed at the civilian population. Nonetheless, as suggested by Chiodi (2018, p. 48), raising awareness of different cultures through the inclusion of propaedeutic subjects for interand infra-culturality related to cultural heritage in education programs would be especially crucial for cultivating respect for cultural properties as a common heritage.

The Museum: from object-oriented institution to polyphonic (virtual) space of memory Historically,

Museums have centered their interest on the past: their focus on ancient artifacts has made them object-oriented (MacDonald & Alford, 2009, p. 72) and this viewpoint has been prevalent for a long time.

In recent years though, the definition of museum has been revised to acknowledge, first and foremost, the significance of museum institutions as “democratizing, inclusive, and polyphonic spaces for critical dialogue about the past and the

future” (Lehmannová, 2020) as well as the relevance of community participation and the provision of “varied experiences for education, enjoyment, reflection and knowledge sharing” (ICOM, 2022).

The new kind of audience that the technologies’ appearance has shaped over the 20th century has unquestionably played a crucial part in the evolution of the museum institution and in the birth of virtual museums, necessitating a shift in how knowledge is presented to the public (Williams, 2009, p. 16) through different media.

Experiments in the field of memorialization forms, which underwent several alterations in the last century, are of special relevance to this study. While monuments and memorials appear to lose their value with time and become lifeless replicas of a memory they can no longer revive or preserve (Bassanelli, 2014, p. 11), new physical and virtual forms of commemoration have recently emerged. All of them share, albeit in varying manifestations, the desire to engage people by offering chances for intercultural interchange, eradicating national barriers, and facilitating both geographical and political permeability (Bassanelli, 2013, pp. 27-28).

This change in the field of curation, which aims to build a link between the past and the present and start a conversation about current social issues, shows that

institutions want to change how they contribute to a better future for society (Janes & Sandell, 2019). An example of the use of this approach can be found in Holocaust museums: they do not merely seek to stimulate visitors’ interest in the subject from a purely historical knowledge perspective, but they propose activities, albeit sometimes with questionable outcomes (Popescu, 2019, p. 344), and invite visitors to actively engage in political and social actions, connecting past, present, and future not to let certain atrocities occur again.

The Potential Role of Design Activism

The shifts towards digitalization (Bekele et al., 2018) and activism (Janes & Sandell, 2019) happening in the museum field open new possibilities for design and designers. Specifically, starting to collaborate with museums keen to engage with social and political issues - exploring alternative routes beyond their historical (supposed) neutrality (Brekke, 2019, p. 268) - could be an area of interest for design activism and design activists.

With the term “design activism”, we indicate a miscellaneous design movement acting on environmental, social, and/or political issues. Born in the ’70s from the seminal work of Victor Papanek — *Design for the Real World* (1972) — and drawn from the Italian radical design movement such as Superstudio and Archizoom

— instances (Julier, 2013b), design activism can be nowadays understood as “[...] representing design’s central role in (1) promoting social change, (2) raising awareness about values and beliefs (e.g., in relation to climate change, sustainability, etc.), or (3) questioning the constraints that mass production and consumerism place on people’s everyday life” (Markussen, 2013). Sprouting from the need for disruption and injustice-revealing activism advocates for (Thorpe, 2011), design activism frames issues and generates better alternatives by “[...] a designerly way of intervening in people’s lives” (Markussen, 2013), putting at the service of a community its aesthetic practice, its tools and its methods.

The range of action, within the design field, design activism can engage varies from fashion design to urbanism, from service design to architecture, covering different scales and types of projects. The wide in-the-making definition of design activism and its positioning as a relatively new subject of discussion still make scholars in the field debate about its inner nature, its relationships to design and its limits (Faud Luke, 2009; Julier, 2013b; Markussen, 2013; Thorpe, 2011).

To evaluate, reflect upon and understand the relationships between design and activism Thorpe (2011) proposed four open criteria:

- 1- It publicly reveals or frames a problem or challenging issue.
- 2- It makes a contentious claim for change (it calls for change) based on that problem or issue.
- 3- It works on behalf of a neglected, excluded or disadvantaged group.
- 4- It disrupts routine practices, or systems of authority, which gives it the characteristic of being unconventional or unorthodox—outside traditional channels of change.

Against these criteria and through the discussion of the D4UH initiative, the next section of this paper tries to reflect on and discuss the role of design researchers and educators in prompting students towards the development of design activism contributions.

Design for Ukraine’s Heritage

D4UH is the first step of a long-term plan by MEAN to protect and digitalize the collections of 20 Ukrainian museums, by gathering basic information about their current state. To achieve this goal, an open call has been launched to students of architecture and design schools from different universities.

The results of the initiative will give birth to the Virtual Museum of Ukrainian Museums

with the broadened aim of increasing awareness of the situation in which these cultural institutions find themselves, attracting the attention of the public as well as private institutions and individual citizens, and inviting them to an active engagement.

Method

The project adopted a Participatory Action Research (PAR) approach, following the definition given by Reason and Bradbury: “action research is a participatory process concerned with developing practical knowing in the pursuit of [...] practical solutions to issues of pressing concern to people [...]” (2007, p. 4). Specifically, the initiative used a PAR strategy with the two goals of encouraging student engagement in socio-political concerns and fostering activist participation in emergency situations.

D4UH involved different types of actors: museum directors and their collaborators - partnering since previous months through the coordination of the National Museum of the History of Ukraine-, students, volunteer linguistic mediators, MEAN, researchers and professors from the hosting university and a national council of research. The initiative engaged 20 students of different nationalities and universities, including two Ukrainian students. Each of them has been assigned to one of the 20

already-mentioned museums, the majority of which are small local history museums that lack the resources to protect their artefacts and disseminate information about their condition to a large audience outside their own country.

The characteristics of the museums and their staff, as well as the unique circumstances, necessitated a heightened level of commitment from the Ukrainian students and other nativespeaking volunteers, who worked as cultural mediators and tried to foster an atmosphere of mutual trust.

The initiative evolved through four online workshops and reviews with the students: an introductory presentation of the project and participating museums, two meetings to verify the work’s progress, and one final presentation. It was determined that a digital whiteboard was used so that students could share material and discuss their various research strategies even remotely.

Insights and outputs from students’ research

The students’ research was organized with a time frame: the past, the present, and the future.

Regarding the past, they focused on the museum’s history, museological

characteristics, permanent collections, and significant temporary exhibitions.

The most essential component of the investigation, however, was the analysis of the current situation, from mapping the military condition of the museums' areas to determining whether the museums were currently open and with what activities. The information collected was pivotal to understanding what similar initiatives and strategies were already put in place, and to building a comprehensive picture of how the museums are using their spaces to serve the local communities in the emergency.

The students constantly monitored the state of the museums using social media news and direct connections with collaborators, when possible. Thus, they were able to determine if and when museums were harmed, as well as the extent of the damage and the condition of their permanent collections.

Challenged with the question of the museums' future at the end of their research, students displayed, on the one hand, great respect and sensitivity for the current situation and, on the other, an innovative spirit, insisting on the need for the digitalization of the collections and the creation of virtual educational paths also accessible to foreign audiences. The interaction with the museum directors helped establish actual

action steps, beginning with the short-term demand for the conservation of the works and moving to the long-term improvement of museum itineraries.

The narration of the war period has become a focal point of interest, especially in damaged museums. For example, when talking about the renovation of a local history museum that had been badly damaged by bombing, a student suggested "keeping the remnants and mixing them with new pieces as a reminder of the aftermath of the war and how the museum recovers." This shows the importance of including the traces of the war in the narrative space of the museum.

One of the participating students began to reflect on the second phase of the strategy: the design of the Virtual Museum of Ukrainian Institutions, which would store the results of the PAR undertaken in collaboration with students and museums. The virtual museum — the subject of his degree thesis — will be "set up" within the National Museum of the History of Ukraine. The tour will start at the museum's entry with an explanation of the project's goals and instructions on how to explore the virtual space. Each room will be devoted to a specific museum, turning the museum institution into a subject to be narrated and experienced through the storytelling of its past, present, and future. The exhibition will employ the Kintsugi

concept and interactive elements to depict the general condition of Ukrainian history and the specific conditions of each museum. The overall installation atmosphere will try to foster a positive attitude towards the future.

Discussion

Using the criteria developed by Thorpe (2011) as guidelines, in this section, we discuss the project results, their relevance, potential and limits. Firstly, the issue D4UH reveals and tries to frame regards the protection of cultural heritage in war zones and/or in countries at war.

Through the engagement of local actors and the desk research carried out by participating students, investigations around the 20 museums' situations highlight how — in times of emergency — it is hard to distribute and properly direct resources, both in terms of skills and financial aid. We noticed how small and rural museums struggle more to access support and, despite being guardians of traditions, stories and identities of a piece of territory, make their voices heard by the broader international community. We experienced challenges in getting and keeping in touch with some of the above-mentioned museums: trust issues due to the little time at

at our disposal to "set the scene" of the project, communication barriers such as language and operational problems as the difficult access to broadband and electricity were just some of the limits we have had to face.

Reporting and researching that specific situation, D4UH tried also to make a claim for change: raising awareness, giving visibility and supporting (less renowned) museums in times of war is a chance to safeguard the tangible and intangible cultural heritage of a population. The "neglected, excluded or disadvantaged group" (Thorpe, 2011) the project aimed to work for/on behalf of was, in fact, the broader community of people who identify themselves or feel close to Ukrainian history and culture.

Lastly, we can see how this project can be considered a design activism action as — with its use of digital platforms and by being carried out in an educational environment — it moved "outside traditional channels of change" (Thorpe, 2011). In the emergency caused by the war, digital tools had been vital to engage with local stakeholders, collecting, elaborating and disseminating precious information: all communications and material exchange had been made possible mainly via the web (for e.g.: via e-mails, social networks, instant messages apps.); students gathered, analyzed, synthesized and

Conclusion

systemically presented all found data on a digital collaborative platform; the final output itself is going to be a digital experience in the shape of a virtual museum. The important use of digital technologies provided us as well with the opportunity of bringing together international students from different universities, giving us the chance to experiment with a sort of remote activism through design research in an educational context. Of course, if on one hand 'digital' makes D4UH possible, on the other it underlined some criticalities such as trust development between stakeholders, and the dependence on broadband and power lines which are at stake in territories in war.

The purpose of D4UH was to include students in the creation of a design activism contribution.

The PAR, on which students, volunteers, and museum staff collaborated, demonstrated and made visible the war's impact on Ukrainian museum institutions.

In the week following the conclusion of the initiative, one of the partner museums was bombed, and only a part of its collection was preserved. In light of this last event, it is essential to continue documenting what is happening to preserve the identity of the Ukrainian people and their cultural legacy for the benefit of society as a whole.

The research results will be shared with a wider audience through the implementation of the current Virtual Museum of Ukrainian Museums because, in the words of one of the participating students, museums' "role in preserving and narrating the [...] culture, history, and stories, despite the suffering and danger in which they found themselves, showed to us how that despite perils, there are always stories that must be narrated".

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02

Project Description

1. Project Initiation:

“Design for Ukraine’s Heritage (D4UH)” is an ambitious project dedicated to preserving and promoting Ukraine’s endangered cultural heritage, especially under the challenges of conflict. This initiative assembles 20 students from diverse nationalities and universities, with each assigned to one of the twenty selected museums.

2. Role Assignment and Collaboration:

After the collective understanding of our mission and methodology, the next step was the assignment of individual roles. Each participant was connected to one of the designated twenty museums, setting the stage for their in-depth research journey. This pivotal step meant more than just assigning roles; it was about forging connections with museum directors, establishing a bridge of communication that allowed us to gain valuable insights and provide tailored solutions. This phase also involved a meeting where participants shared their assigned museums, highlighting the unique characteristics and histories of each institution. This facilitated a sense of shared responsibility and collective purpose, strengthening the team's commitment to the project.

3. Research Phases:

Our research was structured into three temporal phases: past, present, and future. The 'Past' phase involved understanding the museum's history, museological characteristics, permanent collections, and significant temporary exhibitions. However, the 'Present' phase was the cornerstone of our investigation, where students continually monitored the condition of their respective museums, assessing damages and their impact on the permanent collections.

4. Final Presentation & Publication:

"Unveiling Research Outcomes and Expanding Awareness"

At the conclusion of our meticulously conducted research and exhaustive collaborative endeavors, we gathered our insights and revelations for a comprehensive final presentation. Each student crafted a summary board, conceptualizing their respective museum as a distinctive piece of art situated within the "National Museum of the History of Ukraine." This strategy manifested our profound understanding and recognition of the richly diverse cultural heritage preserved within these institutions. However, our final presentation served as more than just a platform to display our findings. It evolved into an artistic tribute to the historical significance and resilience of the museums we had dedicated our efforts to study.

Concurrently, we launched a concerted social media campaign on the Instagram platform "Design Against War." This channel enabled us to disseminate our research findings, articulate our project's intentions, and elevate global consciousness about the urgent need to safeguard Ukraine's cultural heritage, increasingly at risk. Living in an era characterized by pervasive digital connectivity, this campaign allowed us to extend our project's influence beyond traditional academic and professional confines, stimulating broader societal engagement in crucial cultural conservation discourse.

5. Virtual Museum Design:

As a participant and assistant in this project, I contemplated the design of the Virtual Museum of Ukrainian Institutions. His degree thesis outlines this virtual museum's design, set within the National Museum of the History of Ukraine. This immersive experience commences with an explanation of the project's objectives and guidance on navigating the virtual space.

6. Project Culmination:

After a comprehensive journey of research, collaboration, and digital presentation, the final stage of the D4UH project is reached: the culmination of efforts into the creation of a Virtual Museum of Ukrainian Institutions. As the tangible manifestation of our endeavors, this part is integral to the project's overarching objective – promoting and preserving Ukraine's cultural heritage in the face of adversity.

The design of this virtual museum was a part of the degree thesis of one of the participants, aiming to offer an immersive, educational experience grounded in extensive research and innovative technological solutions. The virtual museum is designed within the digital confines of the "National Museum of the History of Ukraine," serving as the virtual hub for the exploration of the twenty studied institutions.

The culmination of the project involves two distinct design methodologies:

1- Digital Reconstruction: This method aims at creating a meticulously crafted digital replica of the "National Museum of the History of Ukraine," offering visitors a sense of 'being' within the physical museum from anywhere around the world. By leveraging cutting-edge 3D modeling and rendering techniques, we sought to recreate the museum's architecture, exhibitions, and ambiance. This approach's primary objective was to make the museum's collections accessible digitally, providing a detailed, immersive experience that pays tribute to the original environment.

2- Metaverse Experience: Going beyond traditional virtual tours, we sought to create an immersive, interactive metaverse. The metaverse is a virtual reality space where users can interact with a computer-generated environment and other users. This experience encapsulates the impact of war on Ukraine's museums, offering an emotive, engaging journey through Ukraine's cultural history. It encourages active engagement, allowing users to interact with exhibitions and learn about their history and cultural significance. The metaverse experience also promotes empathy and awareness about the museums' current challenges by simulating the effects of conflict on these cultural institutions.

7. Project Legacy:

In the end, the project's culmination is more than a virtual museum. It serves as a global platform for recognizing the urgency of preserving cultural heritage in conflict regions, a call to action echoing through the digital corridors of our recreated spaces. By merging state-of-the-art technology with comprehensive research, we emphasize the importance of digitalization and the creation of globally accessible virtual educational paths. In doing so, we aspire to protect, preserve, and promote the rich cultural heritage of Ukraine, inspiring similar initiatives worldwide.

In conclusion, D4UH provides a platform to highlight the urgency of preserving cultural heritage in Ukraine. Amidst the present challenges, we emphasize the need for digitizing collections and creating virtual educational paths accessible to global audiences, preserving and promoting Ukraine's rich cultural heritage.



