LIVENARCH VI

livable environments & architecture

REPLACING

ARCHITECTURE

proceedings volume II

6th International Congress

September 25-28 2019 Trabzon TURKEY

KARADENİZ TECHNICAL UNIVERSITY

Faculty of Architecture Department of Architecture

Edited by Nilgün Kuloğlu Asu Beşgen

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INDUSTRIAL HERITAGE AND DIGITAL ERA INTERVENTION STRATEGIES: KEEPING THE MEMORY IN THE MIDDLE OF TRANSFORMATIONS

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ABSTRACT

Nowadays the urban tissue often presents mixed architectures, abandoned parts from a recent past, mostly former industrial buildings, near new saturation and developments. The city growth has included them after they lost their use, they have still a strong appeal on the collective imagination. Recovering them is not necessarily a demolition and reconstruction operation while such an intervention is at risk about causing the loss of important urban aspects and characterizations. The historical, or even "popular" beliefs about them can be something to implement and/or enhance the quality of urban areas, increasing the chances of a real reintegration into productive reuse. In this complex logic of interventions, the contemporary, "digital layer" may play a strategic role. In the use of this very contemporary solution, both industrial and archaeological heritage are interesting subjects, with very different declinations. From one side there is the need of mixing old peculiar aspects with new functions, with risk about missing the chance in being fully efficient in communication. On the other there is the new, almost intangible, possibility to overlay reality with onsite or online elements, creating "new realities" where anyone should find fascinating elements coming from usual places and/or discovering new information, learning about the value of a place. To better identify strategies and proposals three "operative clusters" will be defined to group the functions and tools for the architect/built heritage expert to operate. A set of case studies, selected while consistent, thus not "compromised by an excess of popularity", will help to put in evidence aspects that can be useful contributions in defining intervention choices: the Montemartini Museum in Rome; industrial buildings from the Beyoğlu neighborhood in Istanbul; London King's Cross intervention, the LocHal Library, in Tilburg, Netherlands, the industrial heritage forgiveness in Tirana, Albania.

Key Words: Built Heritage; Industrial Architecture; Industrial Archaeology; Transformation; Digital Layer.

INTRODUCTION

> *"An immense industrial network cannot be managed in the same way that one changes a tire... It expresses a circuit of cosmic energy on which it depends, which it cannot limit, and whose laws it cannot ignore without consequences",*
>
> *Georges Bataille* [4].

The evolution of the urban settlements should be seen by analogy with a complex network of rivers and torrents: there are some main streams and many minor waterlines, hidden waters and apparently desiccated channels. Which thing, as it is for a real system of waters, does not means that the real transformations or the issues will come only from the main flux. And as it is in nature, on the long run, it is not possible to fight and win against time and physical rules, in the same way the urban evolution cannot escape from economic and social features connected to its development reasons. In both cases, accompanying the flows, exploiting the rules, guiding the transformation reducing to a minimal the use of walls or dams can be a better strategy than simply trying to contrast the events. At the base of such a logic of intervention there is the understanding of a very articulated system, where is still possible to separate single sub-parts, finding their reasons and solutions, which thing may result useful until it is possible not to lose the reference to the global asset.

In many cities of our time, the urban tissue often presents a mix of architectures, abandoned parts from a recent past, mostly former industrial buildings stand close to new, sometimes untidy constructions. Most of the time the industrial heritage is reached by new expansions of the neighborhoods or by saturations of previously partially built lots. The city growth has included these buildings after they lost their use, losing with it their need of isolation from common urban living [1, 2]. Now they do not pollute the air anymore, they do not produce noises, dusts, smokes, they do not need heavy trucks and other vehicles moving in and out their lots, nor need large depot areas around the main productive buildings. Thus, the main core of this industrial past still has a strong appeal on the collective imagination, influencing the place from the toponymy name to the urban asset of the following settlements.

The intervention on these areas is often called "industrial archaeology", creating a "controversial" parallel with traditional archaeology [17, 21] or being intended as included in the "urban regeneration" processes [18]. This variation is applied, most of the time accordingly to the nature more or less inclined to "musealization" of the spaces. In the interventions, many characteristics of the process are undoubtedly a common ground between the two "archaeologies", with a strong difference in the approaches and in the freedom about altering the consistency of the original building/remains. Thus, it is possible to assume that many solutions adopted in designing the new relationship between traditional archaeologies and the contemporary urban development should be mediated in industrial archaeologies interventions. Some countries, especially

from the European area, have developed a specific inclination towards the re-use/regeneration of industrial spaces, between them, United Kingdom had in the last years an eminent rule [8], bringing some experiences to be considered of reference and capable of interesting replication. The interventions in Germany follow immediately, with less networking solutions, but bringing on high quality and well-structured restorations/reuses [5].

For both industrial and traditional archaeologies, information technology should give a series of great tools in investigating, understanding, promoting, disseminating and, in the end, enhancing the possibility in revitalization of such areas. On the base of the ongoing "digital revolution" what it is possible to call the "digital layer" is more and more a part and a robust set of instruments in the design strategies. All the operators and users of the urban environment are now a days involved, directly or indirectly, in the "digital layer", a virtual, online or onsite, system of digital tools that extends the comprehension, simplifies the access and, in the end influence the perception of the spaces. Each time users or visitors use their personal devices to navigate to a place, ask information about where they are, scan a QR code, or even when they photograph or write a note about a place and post it to social networks, they contribute to the construction of this layer. It exists and makes sense in the measure it is used or exploited, otherwise it is merely intangible. But even in this specific condition, in our times, it is a robust presence and may influence the way people access a place and the way they interpret its values. More than any other things, the Digital Layer is a design "subject" strongly influencing the project of places, giving new options to define choices, it allows to expand the perception of architecture and the way it can be communicated to visitors and users. The digital layer starts from a first phase, the one of the system of tools that allow the gathering of information and then define the design proposal where the operators create and work on a "digital twin" [27] of the real place; then, it evolves in digital solutions allowing to get onsite specific information about what is in front of the users/visitors, later it is integrated by online digital system that in sparse or coherent and connected ways define the amount of information available in place (and from anywhere) about the subject. This sequence contributes to the definition of the Digital Layer that overlay the traditional reality, influencing people and asking for specific strategies. According to the concept of "Cyberspace", defined by William Gibson, the Cyberspace "Actually it's the place where any telephone call takes place and we take that very much for granted" [12], a quarter of century after this definition, the possibility of abstraction and overlaying of the digital on the real is extremely diffused and it looks like something just at the beginning in the way it will change the perception and use of museums, infrastructures, entire urban areas.

The use and design of the digital layer can be considered as something that may contribute efficiently on both the two archaeologies above mentioned, because its potentiality in guiding, teaching and telling about the past aspects, features and stories coming from a former industrial, former abandoned, architectural space.

Antoine Picon in his book, "Smart Cities, A Spatialized Intelligence", mentions that digital technologies have recovered the importance of space by including geolocation and physical reality through the ability of knowing the position of different movable objects and by enhancing the three dimensionalities of the space. According to Picon, they did not cause a tangible physical change in the past, but it is obvious that the digital improvements will bring soon to morphological transformations. The term "spatial turn" which was defined by the geographer and urban planner Edward Soja, when applied in the field of digital transformation, may correspond to electronic interfaces, emergence of wireless connections, computation and their improvements [24].

The parallel between traditional and industrial archaeology and their (possible) integration with a "digital layer" as active part of the design process, can be spotted taking in consideration two "opposite" cases, where the common rules seem approached in original ways while the use of the "digital layer" appears at the antipodes. The Montemartini Museum in Rome is a rare case, where the industrial building now hosts archaeological remains coming from the Capitoline Museums in Rome, with a minimal (if none) exploitation of digital opportunities. The Montemartini's Museum in Rome, former a Power Plant [9], at first was setup to host a temporary exhibition and later permanently changed into a museum [3]. It presents a new asset mixing old peculiar aspects with new functions, where very traditional solutions may be enough to create a fascinating environment [29], characterized by traditional solutions in the access, with an almost complete absence of the digital layer (if not for the basic website and the modest dissemination produced by the pictures taken by visitors in the social networks) and so at risk about missing the chance in being fully efficient in its teaching/learning aims and in communication.

Figure 1. Interiors of the Montemartini Museum in Rome, July 2018.

On the opposite, the London Mithraeum, a valuable remain from the ancient London. This is clearly not an industrial archaeology, but it cannot be considered a "fully" traditional one, while the ruins were moved from their original location for unstoppable construction needs and then rebuilt in a new location [15]. It is characterized by a very robust digital layer integration, maybe one of the strongest around, with no similar equivalent about technological development in Industrial archaeology interventions.

Figure 2. Inside the London Mithraeum, February 2019.

This important digital effort was probably applied to compensate somehow the "suffering" from the fact of being a "migrant" archaeology and is fully a part of the exhibition design. This very specific museum completely exploits the new, almost intangible, possibility to overlay reality with onsite and online elements and/or exhibitions. In example, it presents the ruins moved from their original location in a new, attracting architectural and "digital" packaging. This kind of intervention needs a multi-disciplinary approach, moving go and back from the architecture, to the informatics, to the communication, to the pedagogy, to the archaeology. The lesson that is possible to learn from this apparently weird parallel between the Mithraeum and the Montemartini is that the traditional archaeology, with a longer past behind and with subjects of strong appeal, finds easier the access to digital layer integration, especially when the gap between the present conditions and the possibility from the visitors to have a proper abstraction about the place is very large. Specialization and innovative exhibition solutions seem to be the proper way for our time. Massive exhibition, serialization, modest teaching apparatus, lack of communication seem to afflict the possibility of the interventions to fulfill their aims. The digital layer may become the most attractive element of the exhibition, even if, apparently, it remains in the second line, justified by the need of "explaining" and giving the right evidence to the remains. The Industrial archaeology may benefit from the development of this approach, getting similar solutions and inheriting a possible processing to make easier the access and the attraction of visitors. Most of all, if the strength of digital innovation can give a new value to a heavily altered/moved around ruin like the London Mithraeum, it is possible to imagine that similar and even more articulated approaches can be the right solution in regenerating urban archaeology places, helping the preservation of the memory for this complex heritage. In its suffered story, the London Mithraeum, from the context of the "traditional archaeology", seems to positively indicate a way to digitally-led interventions that may be efficiently declined in the interventions on industrial archaeologies. While the "static" and very traditional solutions of the Montemartini, seem to afflict the potentiality of the place, no matter the richness, quality and spectacularism of the exhibited items and industrial archaeology elements and spaces.

An Architecture Challenge in the Digital Era

An industrial architecture may apparently disappear from the perception of the environment, just to come back in the occasion of its reuse with some new function, bringing back to the eyesight the surprise of incredible, unexpected spaces. In this phase of transformation, the digital layer can be a strong tool to enhance the comprehension and the communication of the place under intervention or in its "new life". More than ever, the digital layer may allow making the place more interesting and attractive, it may help in creating more chances in learning from the visit, getting useful information and the correct approach in preserving element of the heritage, both built and intangible. And this with the simple and at the same time complex operation of making easy to reach, or even adding, contents to that area. The presence of these contents, telling stories and/or removing uncertainty about the value and the qualities of the place, as well as its development strategies, may allow to make easier any intervention, connecting specificities, addressing the users and the visitors and at the same time leaving the option to people about not using it. Who want to get the simple surprise from a traditional approach to places should be completely free to move looking around leaving the digital layer to those who want it. There are no doubts that such a feature needs a specific project, design and management, all the cases at now, even the more surprising, seem developed most of all chasing the latest technologies or by "spontaneous" overlapping of digital elements over the real. Starting from the reasoning of few pages behind, it is possible to define three ways putting in relationship places and the digital layer:

1) The creation of "digital twins": in the past 20 years the approach to surveying and inspecting an architecture or a whole neighborhood is more and more a digital operation that creates a virtual model, representation of the reality and of its dataset and information on which all the operators focus their processing. This base brings the development of a digital project, manifestation of the designers' intentions and conjectures that then reflects itself in what is being constructed. Both the knowledge and project phases are conducted using digital tools. To observe such a result is enough to look around, from the shapes of design objects to those of the urban assets it is clear how much the Ernesto Nathan Rogers' concept "from the spoon to the town" indicating the whole range of design opportunities, is now clearly guided by a digital-led process.

2) The overlaying of a digital layer as a way to integrate the project: the large number of digital technologies enters and enriches the project strategies; side by side the plumbing, the electrical and the cooling systems, there are the systems of monitors, of interconnected sensors, of cameras and of virtual tools, taking part to the definition of the results, more and more they are not considered as external parts of the intervention, but as fully integrated components, influencing architectural choices. For the "virtual tools" it is possible to mention augmented realities (AR) solutions [25], connections using QR codes [31], information got after localization, like Google Maps and

similar neogeography solutions and all the possible digital services overlaying and connected to the physical place [10].

3) The overlaying of planned, or even spontaneous digital elements and phenomena: the presence of social network activities and online services in everyday life creates a powerful influence in behaviors. The way people choose where to go, where taking a picture, what to buy or where to have a dinner… The strength of communication from the online communities may force the way certain places are interpreted or the way they attract visitors. From the marketing initiative, to the dissemination about events and attractions, to what directly starts by chance from a community and that becomes "viral", the use of social media is a very interesting factor to be considered in a design process.

Approaching an Open Scenario

The digital tools have made possible to develop extremely articulated tasks, creating new way to approach architecture and urban planning. But even our world made itself more intricate, with overlaying, expansion of the town, movements of people, new consciousness about environment and pollution.

When facing such complex contexts, any scholar should identify strategies and proposals, which may be organized in what it is possible to define as three "operative clusters", that can be useful to group the functions and tools for the architect/engineer/built heritage expert to operate:

The cluster of gathering information and transmit the values.

In this it is important to consider that photography, filmmaking, survey procedures are changed, multimedia is more and more a clear creature than a chimaera. The implications with social media are an opportunity. So, it became fundamental to identify the right tools to capture the values of a place. The most interesting strategies and solutions from the infield operations to the social media presence should be controlled and properly used.

The Cluster of Intervention

Sometimes finding the right questions is better than keep on searching for the correct answers. In the intervention on former industrial building, at a very first level, the two main questions should be: Which are the more appropriate strategies in approaching the reuse of industrial heritage? Not only for size or potential economic success but in the capacity of creating innovation and being attractive in front of a worldwide community. And in consequence of this: which strategies can be used to fulfil this task?

The Cluster of Overlaying

The common questions about this part should be about which are the main tools to operate and promote a "mixed realities" intervention, but the tools are right now under a continuous evolution, the guidelines seem well defined (interaction, localization, augmented reality, real time) but the real feedback

from the users is still missing and so this system is yet far to define a stable scenario. If such an "intangible" approach will be capable to suggest a step forward in architectural work or not is something that can be approached in two ways: analyzing the most interesting case studies where it has a consolidated presence and reasoning about situations where it can be a prepositive and efficient tool in all its range of applications.

CASE STUDIES

The "New" King's Cross Railway Station in London

King's Cross Station is considered one of the main train stations to serve London, England by being one of the oldest train stations with St. Pancras, they both took their names from different companies owning railways. Since 1852 it kept its fundamental rule of transportation knot [13], and in 2012 it was open back after a consistent restoration to better accomplish the new needs of a modern station [6]. The King's Cross intervention presents all the three ways of the digital layer. The spontaneous one can be found in one of the reason that bring many people to visit the place, without any need about taking a train and which is linked to a specific and original subject: in the worldwide famous series of books and movies dedicated to the fictional Harry Potter's saga, ideated by J. K. Rowling since 1997, the students of Hogwarts School of Witchcraft and Wizardry take the scarlet steam engine named the "Hogwarts Express" to Hogwarts from Platform 9¾.. To get to Platform 9¾, they must run straight at the wall between 9 and 10. Today, this place it is still a part of touristic attractions in London. Its consistency in capturing interest is due to the wide diffusion in the social networks of images and references about this specific place. The fans of the Rowling's creations are happy to take a picture after a long queue with other people waiting for the pose.

Figure 3. Images of People Playing the "Platform 9¾" Scene at King's Cross, Taken from Instagram and an Image of the Queue of Fans Waiting to Pose.

They may keep the picture as a souvenir and obviously, they will post it in their social profiles. In this way the attraction coming from the place self-feeds itself from the interaction with the fans. The invention, thanks to its popularity, makes the place interesting, the replication of the action of miming the novels/movies acts keep on the interest. The fans go there not (only) to see the place, but to take that picture. Nothing is real, but all pass by the digital devices in a circle of seeing, understanding the pose, taking the picture in the place, posting it online, someone else doing it again. The digital layer made

the place attractive and at the same time de-materializes it, its manifestation on the Internet become stronger than its presence in the real world.

Figure 4. The Large Shelter Designed Using Parametric Software in the King's Cross Station Main Hall (pictures by Elliott Brown).

The second way of the digital layer is well visible in all the panels, screens and structured info tools around the station, the old parts of the building, as well as the new ones, receive electronic displays guiding people to their destinations, informing them about the news and pushing them with commercial proposals. The online tools, like Google Maps, include a map of the place and all the schedules of the trains, bringing people to move around in the common pose of the smartphone in one hand and the head reclined on it.

Thus, the main hall of the station leaves no doubts about how is worthy to look up. The large shelter of this wide space is clearly the product of digital design, a fascinating work from Arup, John McAslan and partners [16], exploiting the art of parametric/procedural design to develop a large network of beams.

The LocHal Library, in Tilburg, Netherlands

The LocHal library presents a robust digital layer through the transformation of a former locomotive atelier [30], this is done taking various advantages and inspiration from what is in the vicinity of Tilburg. In its nearby there is the Efteling, one of the biggest amusement parks ("luna park" using the common definition used in many European/Mediterranean countries) this element, together with the fame of the city due to its textile industry, gave inspiration to be blended in the redesign of the library, actually much more than a library.

The idea "library as a living lab" has been utilized here through the re-functioning of the elements. This was done from the former function as well as thinking to flexible uses of the building. Paying attention to needs and expectations from the future and digital adaptation. From this point of view, LocHal places itself in a threshold from the regular transformation to a transformation into the digital era.

Figure 5. Views from the Interiors of the LocHal Library in Tilburg, Netherlands (pictures by Ossip Architectuurfotografie, courtesy of Mecanoo).

Design and transformation of LocHal consists of three main parts: the *Bibliotheek Midden Brabant* which serves as folk library, *Kuntsloc Brabant* as culture and art research centre and the *Brabant C* hosting a lot of elements related to the digital layer of the LocHal, aimed to support culture and creativity.

Some specific parts of the LocHal library enhance themselves as a digital layer, connecting to the ideas behind the design and transformations as well as defining the way for using formal elements, spaces and materials. This structure is based on a system of laboratories: Digilab allows visitors to meet photograph and video facilities, editing as well as 3D productions. Gamelab has been designed for the young generations to support creative thinking and problem solving. These two main themes affect the way of structuring areas in order to serve the facility. Futurelab is represented as the part dedicated to future thinkers. Futurelab also addresses the students, entrepreneurs and companies in order to share ideas through presentations and meetings. Mobile Foodlab**,** corresponds the sense of taste, seeing, smelling and feeling through the idea of food. Different types of activities match with portable/mobile elements. *Kennis Makerij* (learning lab) offers to visitors various spaces to allow them to organize conferences, meetings, performances and discussions in any fields. The aim here is to support active learning by sharing. *Tijdlab* (time lab) is a unique part of LocHal by addressing past, present and future of Tilburg. Any object related to city in timeline, photographic collection, videos, movies and documentaries are represented here together with a specific silence area to focus and to study. *Stemming makerij* (communication lab), refers to a colorful community which respects and appreciates different kind of ideas. A glass curtain is used here to define digital space allowing presentations and digital screen shows. *Woord lab* (word lab), promotes the improvements in language, literature and creative writing. The concept guiding this part is to enhance writing and speaking skills with direct exercises.

In the whole asset of this intervention it is appreciable a specific overlay of elements: the past and the heritage consistency, composed in a sort of background and guiding the further developments: the present arrangement is light, polite, neat, it defines the space and leaves wide open views to the elements from the past; then there is the space of the small elements -while the presence of books opens a travel into a word of details- that fragments

and enriches each view; and last, the digital layer, connecting the mass of the resources to the possibility of finding and enhancing the options of studying and learning.

The Beyoğlu Neighbourhood in Istanbul

Since the XIVth century, the core of today's Beyoğlu, Galata has been the window of Istanbul to Europe, not only in terms of trade but also in terms of lifestyle. In the Ottoman period when the old Istanbul was turned into a center of administration and settlement, Galata and Beyoğlu (*Pera*) were left to the Genoese administration and then to the other Franks who came to trade. making of these areas a small Genoese town, transformed in the architectural features into a sort of Mediterranean Italian urbanscape. This tolerant environment in Beyoğlu and its surroundings has supported both new developments in later stages and played a role in the creation of its own identity. The existing cosmopolitan structure in the region is a natural consequence of Galata being an important port and trade center. All along these phases there is the definition of the urban pattern, with its logic of key buildings, open spaces and housing and marketplace settlements. A trace that, in plant, was destined to remain in time if not for the progressive saturation of the empty lots and the continuous integration of all the existing architectures by superfetation.

Beyoğlu was formed as a result of this pioneering and important accumulation that symbolized the West in the region. As a result, the entrance of the Industrial Revolution, which influenced the period of the Ottoman Empire, became the gateway. Maintaining this feature without interruption, Beyoğlu is almost like the first brilliant product of the Industrial Revolution in Istanbul [14]. Visiting these neighborhoods in the present time, there is something like a colorful intangible heritage that is corroding little by little the built heritage with its wills and behaviors. According to the most consolidated theories about the waterfront evolution, the one in Beyoğlu should be considered in the passage between "Deterioration" and "Rediscovery" [23]. In this way a proper knowledge about the entity of the patrimony is fundamental: the use of buildings, their potentiality, their specific features, the value of the "intangible heritage", balanced with the value of the "built heritage" [7] and the behaviors of the people. Any strategy "cutting out" the present considering the actual configuration "poor" or "too old", like something just to be left behind and replaced by "new" and "more modern/actual" structures, should be successful from an economic point of view, but a failure in preserving the layering and the richness of the place [22]. The high level of details, the large extension of the area and the mix of small to medium size items disseminated all around the shops and restaurants make quite complex to define a "quick" tool to gather details, "intangible features" and architectural descriptions of this settlement. In such a situation the creation of a proper "digital twin" can only start from a global digital survey.

Figure 6. 3D Laser Scanning in Beyoğlu to Create the Bases for a Detailed Digital Twin of the Urban Façade of the Neighborhood (March 2019).
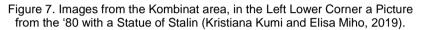
The use of digital tools for survey may allow to create a base of knowledge, sharable in between different competencies. But in such a complexity, an approach based only on architectural solutions, should be limited and only partially effective. The implementation of digital media strategies, passing by social networks, may success in promoting a better use of the built patrimony, not because it is the "right thing", or because rules make it mandatory, but because is the more convenient one. And this can be well defined in these digital environment as well as expanding the practice of "on the field" activities, like workshops and/or shared events, teaching methods to enhance the approach of users to their built heritage and their recent construction. Once more, the use of social media may greatly contribute to the tourism, not only massive, but most of all cultural and interested in specificities, and the access to places by the locals, helping the sustainability of the whole settlement. Moving it to its next steps limiting the risk of losing specificities and original aspects. A strategic physical/digital-led plan of intervention should be a great challenge for this complex neighborhood in Istanbul.

The Industrial Heritage Forgiveness in Tirana

Albania has seen significant transformations in the past 30 years, passing from one of the most rigorous communist dystopias, which was planted in a country which previously had a troubled political century, to a new condition of possible freedom combined with social and economic crisis. The country has experienced a wide range of complex events, which brought to the present annihilation of most of the industrial apparatus and of some infrastructures (like, with a quite weird choice, the railway system). In the cruise to political stability, large industrial settlements, former pride of the dictatorship [11], felt in abandon: their machines somehow removed, the statues of Stalin or Lenin destroyed or moved somewhere else [20]. Is this the case of the *Kombinat*, a large industrial settlement, located in the Western periphery of Tirana. This industrial settlement was a combination of facilities aimed to production and housing for the workers. Despite a modest quality in the architectural solutions it still keeps a significant presence even if the long years of abandon has brought a quite sad patina on the whole settlement.

Figure 7. Images from the Kombinat area, in the Left Lower Corner a Picture
from the '80 with a Statue of Stalin (Kristiana Kumi and Elisa Miho, 2019).

The conditions in the present are characterized by a large abandon of the
former industrial structure, while the recent choices in the Albanian urban
renovation put large doubts on the future of this industrial heritage, with a
difficult equilibrium between complete demolition/reconstruction or partial
reuse. In this second possibility, the potentiality of such an area are quite
interesting and "in line" with the recent choices about "specific" recovering of
the recent past, in the form of a valuable memory of a difficult period. Or at
least as a tourist attraction. In this it is important to take in count the rapid
evolution of the Albanian society [19], apparently quite inclined in trashing
elements of the past and moving quickly to a foggy but attractive future: the
concept of metropolis in place of large town, the interest in new malls in place
of industrial area, a "boulevard" in place of the central train station [28]. In this,
a policy oriented to a partial recovery of the more valuable and impressive
buildings from the industrial past, with the reuse of eminent elements justified
by their spectacularism can be a choice that may well be integrated by the
digital layer, the use of digital survey and digital diagnostic tools to understand
the real possibility of recovering, especially in front of unclear pollution
conditions, combined with digital strategies for dissemination, can well
integrate the ongoing regeneration scenario [20].

The recent restoration of the bunker architectures from the past regime,
converted in exhibition spaces presenting memories of the past oppressions,
as well as the recent recovery project of the "Hoxha's Pyramid" by MVRDV
and the active debate about the demolition of the National Theatre of Opera
and Ballet (*Teatri Kombetar*) [26] seem to create positive premises in putting
more attention in the new interventions. A system of operations that need a
proper rethinking of the approach to elements from the recent past, while their
documentation and investigation must be operated from zero.

The digital layer tools may bring an efficient benefit to this processing, offering
practical and low-cost solutions in front of the massive interventions needed
and the quality of the possible results.

CONCLUSIONS

The consistency of architecture is not only its walls, the conditions of the windows, the presence of precious details, it is also a matter of perception, of correct reading and interpretation. The original designer thought that architecture according to his/her technical, practical and aesthetic values, which may foresee that building being a significant urban element or even "hidden" and "isolated" from the urban context. In our time the digital revolution is bringing more and more significative transformations. Some of them are immediate, some others take time. But there is no doubt that starting from very first experiences half a century ago, the digital transformation of architectural/urban planning is at a nodal point. The process previously limited to the design/projecting is like "bending" on itself, influencing the architecture is managed and accessed after its opening and for all its use. Planning the digital layer is an opportunity helping a positive result of the intervention, it comes from "the outside" of the architectural world, but it needs to be planned properly, being an integration and keeping the possibility to adapt and evolve. It is a significant challenge for the schools, starting from the re-definition of competencies and moving to the professional firms and to all the operators, asking for ideas, inventions, creative strategies. Something that will not wipe out the previous experiences, but must develop and grow from them, integrating, creating contents, it does not mean if permanent or ephemeral, but keeping connected the architectural design/restoration to its own time.

ACKNOWLEDGEMENTS

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