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Archaeo-mobility. Integrating archaeological heritage with everyday life

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Abstract

Underground mass-transit is the logical solution for the growing demand of mobility that presses the urban space of historical cities, but it has to deal with the palimpsest of the numerous layers the history of many cities is made of. The construction of subway lines is a unique opportunity to develop a contemporary and active display of the archaeological heritage and return it to the dynamics of urban life. Some projects in this direction have been attempted, too often crashing against bureaucratic and economic difficulties, or against inadequate methods for investigating and managing the archaeological heritage. New metro lines in Athens, Thessaloniki, Sofia, Istanbul, are showing pros and cons in techno-economical and cultural terms while interest and care for the heritage is growing everywhere as well as the awareness of handling it as a resource. Unfortunately, in most cases archaeological remains are simply extracted and arranged in banal museum-like displays while taking into no account the high potential of involving the urban context. Italy has the largest and most stratified archaeological heritage of the world and at the same time one of the smallest metro systems, but in the last two decades a vast program of upgrading has been developed, introducing important advances in archaeological investigation methods, excavation planning and architectural integration. Naples is nowadays world-renowned for its Art-stations, but in the Municipio station currently under construction, the collision of infrastructure and archaeological strata is managed with continuous adjustments to give a spatial response to the extraordinary finds as they are discovered in Europe's largest archaeological excavation site. New Line C is under construction in the very centre of Rome intersecting outstanding remains together with crucial urban nodes with stations in places like Colosseum or Imperial Fora; projects now under discussion are expected to set new standards in archaeo-mobility.

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1. Archaeo-Mobility. For a new approach to sustainable mobility

The underground public transport is certainly the most logical solution to a question of mobility that has become ever more pressing especially where the spaces of the existing city are not able to withstand flows of traffic for which they were not designed.

If in the case of cities from relatively recent history the problem of contemporary insertions concerns purely technical and engineering aspects, cities with a more complex historical stratification oppose a different spectrum of difficulties.

Evaluating just technical solutions to the interference with modern overlying structures is in fact very different from crossing whole archaeological and historical layers, that characterize in particular many of the European cities.

Here towns have grown literally on themselves, thus constituting a true palimpsest, a continuous rewriting deposited layer by layer which constitutes the genetic heritage of the city, although normally invisible and unknown to the citizens themselves.

Therefore, the inevitable interference not only requires a technical solution but seeks above all an appropriate cultural approach, able to recognize the enormous potential offered by the occasion to get back in touch with the history of their origins. In this sense the construction of new subway lines is a unique opportunity to enter in the cycle of daily life for archaeological remains which are, at best, likely to remain confined in some museum.

This is, however, a sensitivity only gained in recent years, along with a culture of heritage conservation that had to start to reckon with the economic dimension, looking both at preservation costs and resources that can come from the exploitation of the historical heritage.

The two subway lines built for the Athens 2004 Olympics somehow pioneered an approach more attentive to opportunities offered by findings intercepted crossing the city; it must be recognized, however, that the fallout in terms of spatial layout has not grasped the full potential of a more organic involvement of finds with transit spaces.

Though on some occasions a good solution was found, such as the reconstruction of a section of excavations displaying on site findings as burials and hydraulic works, more generally the exhibit design used rather conventional modes.

Whenever it was decided to keep in place some of the finds parts, accommodations are generally marginal and disadvantageous for archeology, whose remains are confined to an abstract condition extrapolated from the passenger flows.

Even the arrangement of numerous architectural and artistic pieces is affected by a dated, rather conventional, museum-type approach; the objects are enclosed in windows and showcases, missing the opportunity to convey the richer idea of a context.

It was not fully understood in Athens experience that it was not to set up a small museum, but a subway station, which has the great asset to go through the story, but that is still regulated by its own factors of perception, speed, comfort, safety and strict regulations.

Then just putting some objects in scattered windows in mostly indifferent spatial arrangements is an inadequate solution, ineffective in identifying an urban and contemporary character; this approach becomes almost inevitable as long as the overall approach to the question generally makes mere technical aspects take precedence over the architectural and urban factors, so that it happens very often that superficial adaptations of the project are developed rather than site-specific solutions.

Fig. 1. Left: Athens Metro . Dafni Station. Reconstruction of the archaeological strata. Right: Thessaloniki Metro under construction on the site of the ancient Egnatia road, few meters underneath the modern ground level.

We can make many examples in this sense.

In Sofia, which preserves a rich Roman urban fabric, some efforts were made to integrate some underpasses to ancient structures so that they can be actually crossed, but the arrangement of the central Nezavisimost square favors an exhibition of monumental modernism that replicates characters of isolation and decontextualization.

In fact even though the metro line crossing was sunken 27 meters, the result of a project that has suffered at least five variants, the rich potential offered by the vast remains of the Roman city of Ulpia Serdica has been somehow overwhelmed by a bombastic setting so keeping the separation strong, both physical and conceptual, between ancient and modern layers.

In other cities, such as Vienna, Prague, London, etc, where the archaeological layer is even more modest, sporadic findings are equally marginal to the transit space but different modes of involvement are beginning to take place, as shown by E. Souto de Moura in Campo 24 de Agosto station of the Porto subway.

In this case a finding isolated and reassembled in an abstract large space shows how even using only a rather recent piece of archeology it is possible to activate a spatial solution recognized as an opportunity to characterize the entire station without being didacting at all.

Fig. 2. Sofia Underground. Left: Display and isolation of archaeological finds in a corner of Serdika II Station, arch. Krasen Andreev. Right: Sofia Largo Project; underground display of the restored ruins of Roman city Ulpia Serdica.

The new line under construction in Thessaloniki has revived themes similar to those faced in Athens by the same operator; the city, of ancient origins, has a subsurface dense of archaeological remains, which are regularly brought to light during excavations; the tracing in fact is largely that of the Via Egnatia, a transport corridor of international importance since ancient times and thus extremely loaded with historical stratification.

Excavations have unearthed extraordinary archaeological sections, but to date it does not appear that they are intended to be involved in a project that involves a convincing spatial structure, although it was also urged by proposals drawn up by the local cultural world.

One wonders whether, in light of so many disappointing experiences it is more desirable a design approach that attempts to minimize or avoid contact between infrastructure and history, or rather it is preferable to seek this

contact and turn it into an exciting opportunity through a different planning and more adaptive administrative and technical procedures.

2. Italy, high potential and lost opportunities

It is clear that an elusive strategy is not always completely feasible, especially when you have to go through the town centers and even more when these belong to regions of high stratification of urban history, as in Italy.

This country presents in fact the curious contradiction of having many cities with a rich historical heritage that, however, is evidently incompatible for shape, size and value, with a surface mobility adequate to contemporary requirements; despite the fact that the most logical solution is offered by mass underground transport, this system is among the least developed in the country.

Larger cities such as Rome, Milan, Naples, Turin, have on average no more than three subway lines each; this is certainly due to high construction costs, but above all to a not very effective planning, to inelastic administrative procedures and to short-sighted politics, although on the technical level Italian companies are able to export worldwide their know-how in the field.

For a long time and somehow even today the design approach has generally seen the supremacy of the mere technical side, as if the constructive optimization were to be pursued as an independent priority over the peculiarities and values of a given environmental and urban context.

In this respect it is clear that any contact with the history and archaeology of the city becomes an obstacle, an incident that generates delays, changes and disputes because the infrastructure project is designed as a rigid and possibly self-referential system; and, above all, the administrative structure that governs it is even more rigid, bound to a cost control system full of authorization procedures, but slow and unable to adapt to changing conditions on the field.

We must remember that Italy faces rather late on the scene of the underground transport: the first line was built in Rome between the years '30 and 1955, six years after the first line opened in Milan, and the second line in Rome even twenty years after.

They are three extremely clear examples of what the operational and cultural background approach has been.

The first line in Rome, the current line B, is planned under fascism and work began in a quite depressed technical-economic environment: the line runs from the central Termini station and passes through most of the old town, touching the Colosseum, the arch of Constantine and the Circus Maximus.

But it is made in very traditional techniques and runs just under the surface so that, for long stretches, the technique of open trench and vaulted brick tunnels will be used.

The construction site inevitably passes through areas rich in archaeological layers such as the Servian walls and an important villa at Termini or traces of settlements at the foot of the Colosseum, all removed after being found not affecting the track or influencing the space configuration of the stations, but rejecting every inspiration even for the layout of the interiors.

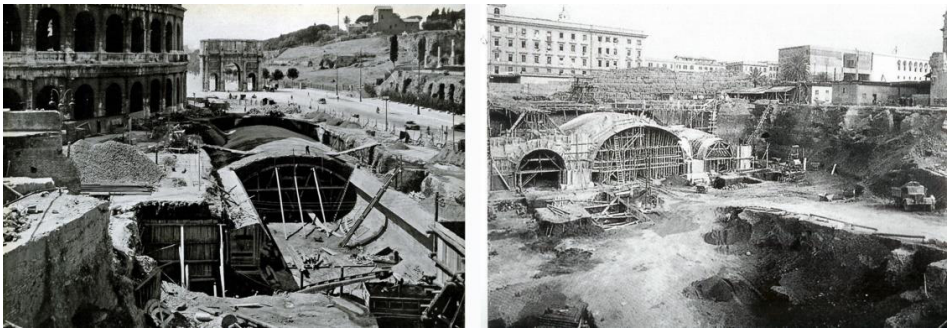

Fig. 3. Rome Metro Line B, mid '30's: Left: Excavations right at the foot of the Colosseum and Arch of Constantine. Right: Termini Station; the construction of the underground line has swept out the remains of a villa; in the background the Servian Wall.

In Milan, things did not go differently, although the excavations for the construction would have offered the opportunity for exceptional finds, right in the central Piazza Duomo, for here it comes to light the complex of the original nucleus of the Christian Milan, the Basilica of St. Tecla and the adjacent Baptistery of San Giovanni alle Fonti.

The latter is visible today, but only by paying a special ticket entering through the complex of the Cathedral. Although it is located just below the floor of the most important square in Milan and in adherence with the local station, a wall physically separates the two areas and prevents even a simple eye contact, so depriving citizens and tourists of the unique opportunity to get in touch in the most natural way with an amazing piece of history of the city.

Things do not change even with the second line in Rome, the A line, designed since the late 60s and opened only in 1985; although designed to cross the city at a deeper level than the B Line, it cannot avoid to intercept the equally profound archaeological layers of the city; a first measure is certainly the choice to run at a level estimated safe just for its depth underneath archaeological layers, but it proves once again the lack of a vision oriented to involve heritage in the project; stations and subsidiary works in fact cannot avoid to interfere with archaeological strata, so while the track remains indifferent to the places, the progress of excavations continues colliding, as an inevitable accident, with underground remains, as we can see denounced by the same F. Fellini in a memorable scene of his film Roma.

Still in the 80s no awareness is gained about, so neither the interior space nor the track are affected by a possible influence; once again what is prevailing is the visual identity of the line and a strictly technical view of the problem, causing the destruction of what is being intercepted along the line. Indeed interference with accidental situations raises a question of method: should we give priority to the uniformity of the visual identity of the line or should we privilege the diversity offered by site-specific situations?

Many lines in the world privileged unification, usually facilitated by the absence of significant interference; but if the subway in New York is an example of utilitarian pragmatism - embellished with graphic design by M. Vignelli - at the opposite the Moscow metro definitely develops a spatial and iconographic program that, beyond any political implication, makes it one of the attractions of the city.

The same opposition has been reproposed in Italy: on the one hand the line 1 of Milan has set in some way a standard in the field of the visual identity thanks to the project of the interiors by F. Albini and the graphic design by B Noorda, that was literally and more modestly replied for the line A of Rome. On the other side we must still wait many years to see the experience of the so-called Art Stations in Naples, that face programmatically the theme of diversity as a means of identity and urban regeneration. "Naples model" started first with the involvement of artists called to interpret the interior spaces and entrances of the stations according to a program that its curator, art critic A. Bonito Oliva, defined as "Obligatory Museum", since people can enjoy an artistic experience as it passes through transit spaces that would have had to cross in any case.

The operation was so successful that not only the resident population felt involved in the process of upgrading so being pushed to the respect of the places, but also the whole program became an extra tourist attraction for the city, with obvious economic benefits.

With the construction of new stations of Line 1, this program becomes even more ambitious, involving leading international architects for the characterization of the stations, but the most important aspect is the tender procedure, especially for those sites which are expected to have archaeological implications, as it was for stations Municipio and Duomo.

In these cases, respectively designed by A. Siza + E. Souto de Moura and M. Fuksas, even knowing from literature and prior investigations that rich archeological layers would have been met, excavations have gradually uncovered finds beyond all expectations.

Planning and administrative procedures have been particularly adaptive in these cases, having reckoned from the start the possibility of adapting the project, its budget and schedule to the changes that would emerged from time to time.

The Municipio station, in particular, progressively revealed an unexpected number of strata, enabling archaeologists and historians to add new and exceptional documents to the history of the city of Naples.

At the same time designers were "forced" to change the design more than fifteen times, adding each time an opportunity for extra value, generated not only by the simple recovery of artifacts, but mainly by the inclusion of strata of urban history in a functional transit space that has progressively turned into a museum, shaped on the specific characteristics of the place.

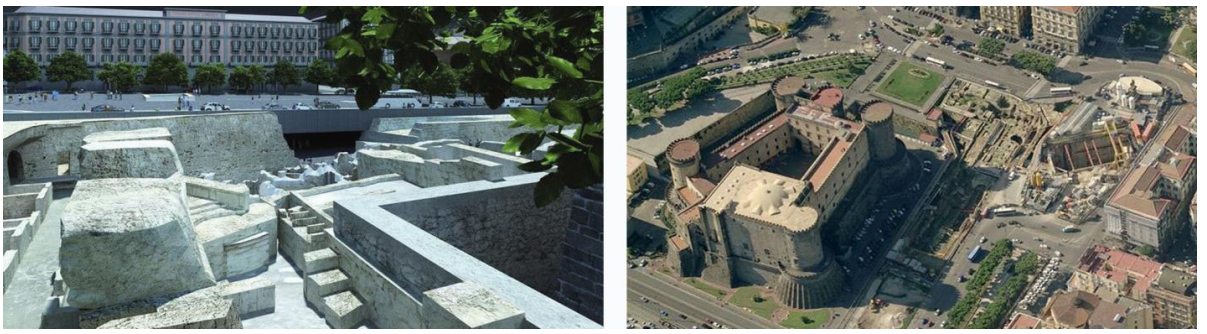

Fig. 4. Left: Naples Underground Line 1, Municipio Station; Left: open-air display of the finds by A. Siza, E. Souto De Moura. Right: aerial view of the dig and the vast archeological site at the foot of Maschio Angioino Castle.

3. Rome, travelling through history

It is therefore easy to imagine what could be achieved with such an approach if it was applied to the context of Rome; although many opportunities have been lost in the past, the possibility still remains of not making the same mistakes: with the new C line currently under construction, and the planned D line; both driven through the city with stations that are expected to open in extraordinary points of the city.

Today the C line has been realized in its most peripheral tract and is now ready to enter the historic city; however, the technical and the architectural projects are not made to meet this challenge with the right tools: the interior design is characterized by a uniform and indifferent language, the spatiality of the stations being heavily constrained by the top-down technique.

The line has now arrived at the borders of the ancient city - along the Aurelian Wall - with the stations of St. John Lateran and Amba Aradam and new stations are to be localized at the foot of the Colosseum, Piazza Venezia - a few meters from Trajan's column - and in full Renaissance center, in front of one of Borromini's masterpieces. So what's going on?

Fig. 5. Rome Metro Line C. .San Giovanni Station. Left: the monumental context, with the S. Giovanni Basilica and the Aurelian Wall. Center: the big dig along the Aurelian Wall. Right: F. Lambertucci, A. Grimaldi; proposed design for a continuous underground plaza connecting the new Line C station, -right corner - the existing Line A station - center - and the ancient Porta Asinaria - top.

In the San Giovanni station, where it was expected a moderately significant impact due to the location just outside the Aurelian Walls, the excavations have instead led to the light layers up to 25 meters deep, ranging from

the nineteenth century city to the Pleistocene, revealing an important farm with extensive water works from imperial age.

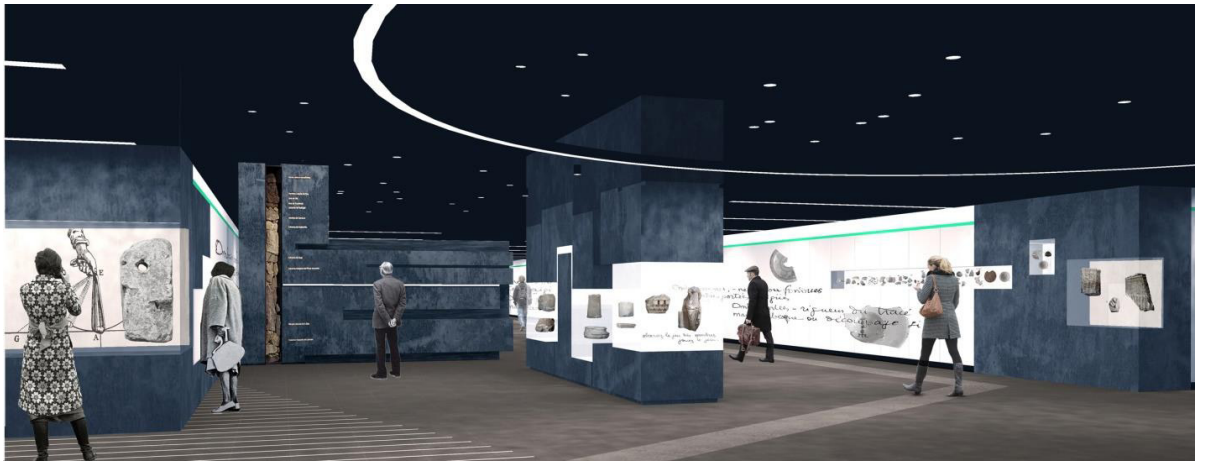

Fig. 6. Rome Metro Line C. .San Giovanni Station. F. Lambertucci, A. Grimaldi, A. Farris, the underground entrance hall designed as a pass-thru museum displaying the findings encased in the archaeological layer.

Although numerous prospections have hinted an ample consistency of the findings, the project has not suffered spatial variations oriented to put in the right light the findings; the outline of the diaphragm walls remained unchanged and only the depth of the railway tunnel was increased; it has only left room for the application of advanced archaeological survey techniques, with the only advantage of having accelerated the excavation and removal of the remains.

Today the station is almost complete and, only too late, it was decided to elaborate a new layout for the interiors that can only operate just on the surface of the walls trying to evoke the feeling of travelling through the exceptional depth of the strata.

Fig. 7. Rome Metro Line C . Left: F. Lambertucci, A. Grimaldi; San Giovanni station: the design of the walls evokes the descent across the history of the city, showing some of the 40.000 findings and the depth both of ground and time. Right: Rome, Metro Line C under construction: the remains of a huge castrum, an unexpected surprise waiting for decisions about their destiny on the site of Amba Aradam station currently under construction.

Since this is a deep station it is acceptable to think that the deeper areas can have a more basic and functional spatial configuration, but the surface level could trigger a large underground plaza saving pedestrians from the intense surface traffic, connecting a network of archaeological sites, forgotten spaces of the historic city and modern

retail space that are only waiting to be activated; a desirable contemporary urban space, useful to the understanding of the city's history could be easily realized with almost no extra costs, but this implies the modification of the project, the review of the budget, the updating of a long list of authorizations, and last, but not least, a political commitment that at the moment is not in sight.

Moreover, a few hundred meters away from the ongoing excavations for the next station are proposing an even more challenging question: in an area where the archaeology literature provided a low risk of findings has unexpectedly come to light an entire neighborhood of exceptional documentary value.

The survey campaign probably insufficient, had not revealed in advance what has appeared to be a building complex of outstanding spatial force; then how can it be thinkable to miss an opportunity of this magnitude and not to involve it directly in a re-design not only of the interiors, but also of the entire shape of the station, allowing passengers to experience the remains where they were while traveling across contemporary city.

By what means, then must we face the next stations, which will have to find their space in the densest and richest archaeological area of the world? Surveys conducted in Piazza Venezia, a few dozen meters from Trajan's Column, allowed for the reconstruction of events ranging from the seventeenth century to the first century AD, reserving also exceptional surprises, as the discovery of the so-called Hadrian auditoria, one extraordinary complex of massive public halls for poetry and speeches, probably part of the system of the nearby Hadrian's library and Trajan's temple.

These findings have contributed a fundamental page to the studies on the reconstruction of the Roman Forum and demonstrate the full extent of the potential contribution to culture and urban wealth that infrastructure works can offer just for the simple fact of making possible excavations otherwise unthinkable in terms of extension and depth.

Fig. 8. Rome Metro Line C Left: Construction site at the foot of Colosseum and Basilica of Massenzio; the line runs just beneath Via dei Fori Imperiali, crossing all the area of the Imperial Fora. Center and Right: Archaeological level, including Trajan's Column, could be easily linked to transit spaces of the next station in Piazza Venezia.

It becomes therefore a commitment to take advantage of this resource, which offers also extremely favorable conditions: the level of the excavation coincides with that of the first underground floor of the station and especially could be easily linked to the adjacent archaeological site of the Imperial Forums, which is a renown attraction at global scale; it would be almost natural to establish a connection integrating all these areas for a full enjoyment of all the historical layers an ancient city like Rome is made of.

The banal utilitarian act of taking a train would become the most natural way to immerse oneself in archaeology, while it might be offered the tourist who comes here the exceptional experience of moving in the living fabric of history that suddenly appears as he gets off the train.

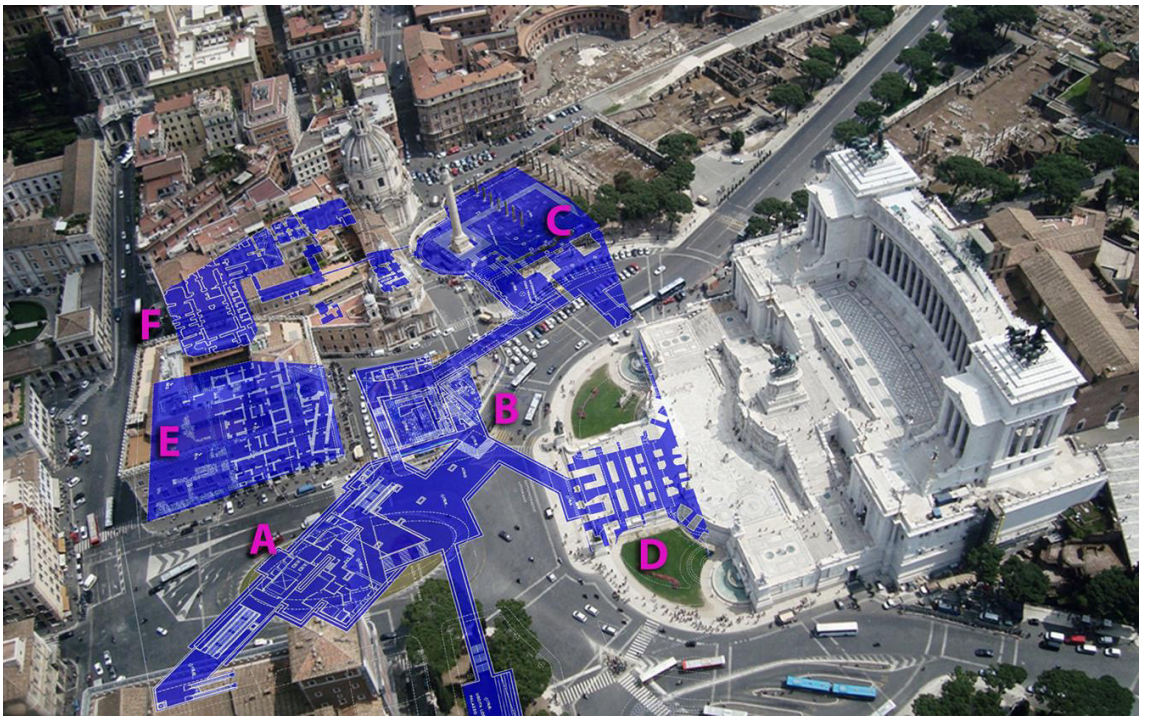

Fig. 9. Rome Metro C LineRight: A. Foschi, F. Lambertucci, tutor; Venezia station: proposal for the underground system linking A, the station, B, Hadrian's auditoria, C, Trajan's Column, D, Altar of the Fatherland, E, domus underneath Assicurazioni Generali Palace, F, museum of the domus of Valentini Palace.

4. A change of perspective

While on the one hand it is clear that there is no lack of engineering and technical capabilities as well as of cutting-edge expertise in survey and archaeological methodology, on the other hand there is still no real integration of the worlds of engineering and heritage conservation, which continue to consider each other as a mutual obstacle.

However, experiences such as that of Naples have shown that such integration will lead to a positive result not only scientifically but also for the user's liking and, last but not least, for the economic return generated by this success. In the presence of an unrepeatable opportunity it is therefore necessary a change of perspective, to be implemented starting from the recognition of the potential of the issue on the part of policy makers.

The way is easier to trace at the technical level since we have recognized a state of the art of the disciplines involved, but at the condition of promoting some aspects: 1. strengthening of preventive archeology with appropriate investigation campaigns; 2. adaptive planning, set on a high sensitivity in both the transposition of results from preventive archeology and during construction; 3. adaptive management of the procurement process, which should include from the beginning margins of adaptation about time and costs to avoid the system of delays, penalties, litigations.

All this presupposes a willingness to recognize the stratification of the city as a resource to be promoted as part of an integrated economic and cultural vision; the collective use of cultural and environmental heritage must be regarded as a distinctive element of the public dimension, through which reinforcing the idea of citizenship: the cultural and environmental heritage must be experienced and not perceived as something of alien and distant from everyday life of common citizens.

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