THE ROLE OF TRENCHLESS TECHNOLOGY INFORMATION DISPERSION

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A subject often discussed in the No-Dig field concerns the level of improvement and reliability attained from Technology. Certainly, in many applications, trenchless technology has attained such a high level of improvement and reliability that we can speak of a technological maturity.

This is a quite widespread feeling among operators in the No-Dig sector, which is deemed to be 'proven' given the thousands of kilometres of underground utilities which have now been renewed, replaced or newly installed using trenchless technology.

Nevertheless, there is widespread awareness that there still exist economies that find it hard to accept the culture on which trenchless technology is based. In many countries, amongst which Italy can be included, the prevalent economic criteria in assessing projects are still those by which the work can be measured on the basis of the means necessary to acquire the materials and to carry out the work. The use (or the waste) of free resources like air, water, etc., the interference that can arise during the execution of works, with human activities, traffic, the existing underground structures, and with ecosystems are hardly identified as significant costs for the whole economic balance.

Although these costs really do exist, can be measured in fiscal terms and significantly affect the whole economic balance, many national economies still ignore them. In many areas, where existing methods with high environmental impact are traditionally used (open cut), there now exist technologies which are able to cut down these costs.

This begs the question, is this refusal to acknowledge the newer technologies arising from a lack of knowledge of elementary technical-economic phenomenons, or is due to resistance of single economic components against a technological conversion which seems inevitable. It is obvious that economics is not a mysterious or unknown subject, in the same way as environmental science, and the above mentioned refusal to acknowledge technology takes its origin from what we could define as a 'natural inertia' of markets. This inertia normally creates a temporal gap or lead time between technological innovation and operational technological transfer. In the latter case Italy is a prime example, since the country has just emerged from a deep crisis involving all sectors of civil works which had disastrous consequences on the economy. Italian companies have to face rebuilding of their business base with technologies that, in many cases, are out of date. Few companies in Italy have decided to invest in new technologies despite the country needing service infrastructures adequate to meet present day needs. It is necessary to realise thousands of kilometres of new infrastructure for telecommunications; renew or replace thousands kilometres of water supply and drainage pipes; and to install new pipe networks for natural gas. To achieve this, many kilometres of underground utilities must be installed, the companies reply with technologies totally incompatible with the environment which is now finally being considered as a significant economic factor; the term 'environment' does not now just refer to the natural one, but above all to the human environment.

Politicians indirectly show the opposition expressed by firms, and consequently Italy is being left behind in the defining and introduction of procedures and methods that may help to make environmentally-friendly installations possible, which are presently being made using open cut excavations. The role of local administrations is fundamental, since more than any other, the local administrators are sensitive to the problems expressed by their citizens. From the point of view of workers and researchers of No-Dig, there is a lack of correct, widespread and easily accessible information about trenchless technology. As a result, whilst there are increasing requests for the reduction of local impact caused by installations or other works such as renewal or replacement of underground utilities, in many cases people do not even know of the existence of trenchless technology. The consequence is puzzling: there exist urban and environmental situations where any disruption due to open cut excavations is actually unbearable; there is a need to realise many new installation, renewal or replacement projects in relation to underground utilities; there exist companies which have technologies and machinery which are out of date; and there are citizens and local administrations requiring that the works be carried out in such a way as to reduce the environmental impact; and the technologies exist to meet these demands. However, there seems to be a major difficulty in bringing all the needs and the technologies together so many of these factors continue to lead to the use of open cut excavations.

Open cut excavations continue to be the prevalent reality because project economy fluctuates between immaturity and a lack of knowledge, which opposes the affirmation of trenchless technology. All of this points again to the main subject which we all should think about, that is information.

It seems that many countries lack that fundamental link which allows the transfer of information between a specialised construction sector and public opinion. This role of transfer should be played by the national associations affiliated to ISTT, whose task it is to translate those apparently technical ideas into elementary information understandable by the general public. Some specialised companies have been responsibile for hiding some of these new technologies, with the thought that having developed and applied the technologies they should keep them to themselves and not share them with anyone due to simple commercial proriety.

What they have not understood is that such an economic view, even when only in a particular sector, cannot survive with just a few workers. This outlook generally leads to the creation of niches and not overall or worldwide technological conversion. Unfortunately, this is what, to some extent, has happened to the trenchless technology sector, and not only in Italy. If we agree with this analysis, we must admit that the only effective system is for strong economies to accept and promote the diffusion of trenchless technology, by making available simple, correct information directly addressed to public opinion, explaining the philosophy upon which trenchless technologies are based, the advantages in using these technologies and the best way to attain them.

The real innovation, introduced by trenchless technology, is the advatnages gained by the end-user of the utilities. This is why the aim point for the diffusion of trenchless technology information has to be the citizen/end-user.

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