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## Conference Paper

# Technological Innovation and Urban Processes

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## **Technological Innovation and Urban Processes**

### Abstract

Technological innovation pushes transformation in, renovation and urban regeneration of areas and services. Special attention is given to the major urban centres, for the most related to national and/or EU policy (EC, 2003; EC 004). A number of important questions are emerging between the reinforcement of the bigger areas, both metropolitan and urban, and the smaller centres. Moreover, according with different institutional actors it would be better more balanced process of anthropization because environmental and social reasons (APAT, 2004).

In Calabria there are very few towns with more than 15.000 residents, often they are isolated and in the internal land. It requires to connect these areas by network, to push the diffusion of innovation and technology, to build up the “educated technology” (Del Nord, 1991). As said in other place (Aragona, 2003), the region is becoming to participate to the global village and the EU (Ue, 1994; 1995; 1996) have policies and areas of implementation (Information Society, POR Calabria 2000-20006; RIS+ 2001-2002). The paper faces a number of questions continuing such a topic.

How are changing some of these areas that have implemented the technological innovation? Which impact are making the strategies and the choices on the spatial, functional and social context. The social effectiveness related to the quality life, said by Gasparini (1990) does it better? Could it be the outcome due to the absence of concentrated localization as is the case of other territorial areas marked by the “reticular” network (Dematteis, 1990)?

Above all it requires to evaluate, said that the technological facilities are present enough, the role plays by the innovation as engine for both the cultural and awareness growth. Push for and knowledge that overcomes the mere informatization and suggests the e-government: a formation and information path dedicated to build up new tools for local action and planning in the global coepetition.

Identification of new settlements and spatial criteria (Appold et al., 1990), construction of urban spaces as signs of the past (Augè, 2004) but also signals of a new development and of social cohesion, new citizenship (Cacciari, 1991).

## **1. Pedagogy for citizenship**

Technological innovation implies many elements of different nature. On one side there are the material transformation, which consist in new product and/or process. On the other side, there are social and cultural changes.

Both the cases have diverse times so evolution dynamics, localisation criteria, services opportunity/offer are not synchronous. A number of functions may be “tele” but that does not imply the disappearing of a “face to face” number base services.

The local actor may play a relevant function in supporting the knowledge and the diffusion of the new opportunities. It is interesting to underline that in the beginning there is a mere informatization of ordinary services e.g. the administrative local information, public services open hour, etc... As the case of the revolution in the modern industrialization it leads to a sort of automatization.

The most the Local Authority (LA) is small and/or its area it marked by less advanced in social, cultural and economic conditions, the most the role before said offering an information tool means having an engine for innovation.

Innovation that, first of all, consists in having awareness of rights and opportunities: in the South Italy, above all in the less central areas, one of the deepest limits in the formation of modernity. It is not a case if just in these territories the project of the modern city, seen in its most positive valences and chances, falls in a much more radical way then in other sites on the nation. It means that the tie between inhabitants and space, the base for having a “pedagogy of/by the city” (Gennari, 1990), does not appear, the citizenship does not form because there is only the inhabiting. Together with the absence of the public space, the lack of public services and functions too, welfare state fundamental elements, are not seen as a big scandal.

The modern city does grow a side the industrial society. Where the latest did not form, that is when there is not a vast base of a common demand, the absence of the push by a strong working class, does not solicit the construction of a mass society with the connected right and duties.

In the ‘70ies a side this model of transformation Italian researchers structured a new one, called “Third Italy”. In those years, medium and little size centres seated in a part of Italy (especially in the Adriatic sea side of the central regions) had economic development. The main, supposed, reasons of such a phenomenon consisted in the presence of basic urban facilities, efficient local public administrations, affordable access to financial services, local community history and knowledge, the absence of relevant criminal, corruption, clientele (clientele) risks. Thanks to the technological innovation related to the material communication

(high speed train and airplane) and the virtual one (i.e. telematics) the “territorial reticular” model (Dematteis, 1985) appears.

In that territories did not have made a strong social demand, because the economic dynamics were not the industrial ones and the historical events did not help the building of a collective urban consciousness, the huge risk is that innovation can reinforce the individualistic pushes for the solution of not only personal questions but also the collective ones. The concept of “making system” does become moreover harder.

The territorial fragmentation and the small demographic dimensions, associated with the administrative ones, makes this risk more high. The insistent presence of atavist concurrency behaviours does difficult to build a “coopetition” attitude, instead existing in area characterized by a cooperative past and present.

The options made by UE, nowadays become the main reference for the national strategies, clearly exalt the role of the towns and the metropolises. These are the actors of the global competition (Sassen, 1997). But, for participating in such a competition, the towns have to be not least then 2000.000 inhabitants (DATAR), (even if the other relevant components, as the social, cultural, technical, administrative ones are not considered): Reggio Calabria, the largest town in Calabria Region, counts about 190.000 citizens.

The absence of medium size towns, centres similar to the ones of the European “pentagon”, can make fall the philosophy of the territorial rebalance present in the SSSE SDEC...(1999). Regarding this fact, the evidence by Cicile e Rozenblat (2003) about the much lesser attractiveness, if it is compared with that one expected on the demographic size, expressed by the most of the southern Italy cities it may have two diverse key lecture and so to suggest two different action lines.

On one hand, that may represent another gap of the medium and large towns in the south of Italy, unable to exploit the demographic density as an element for obtaining scale and agglomeration economies. Till having because the dimension and agglomeration one more cause of diseconomy about congestion and disservices.

On the other hand, that lack lets, at least on theoretical way, more free field for the local actors. But such an opportunity depends on the political choices as well as the infrastructures option of the European corridors are tied to the politic decisions.

The “...globalization generates resistances, exclusions, conflicts,... transforming the conditions and the specific resources of the diverse urban and regional milieu in competitive advantages, it uses them as factors of local diversification. The risk is that (such a) selection makes by the global market may be functional to the capitalistic accumulation... restricted to a limited number of homologating choice” (Dematteis, 2005, p.24).

Through urban and territorial policies the various local actors may participate to the construction of the dynamics beside said. The bigger urban centres, associated in a number of institutions, Metrex, Eurocities, etc... have proposed strategies for pursuing a balanced development of their territories, taking act of the EU decisions. First of all the multimodal corridors and the telecommunications network (Eurocities, 2003).

The local communities of the smaller centres, basing on their capacity of self-organization, have to build up paths able at the same time two diverse emergences. First of all do not crunch by the transformations deriving by the globalization conveniences, which can start deterritorialization processes and/or only production of market values. Second, but related to the former questions, increasing the local life quality.

Where, as is the case of Calabria Region, there are not large urban and/or metropolitan centres the strategic political function is much more valuable and relevant. The localisation conveniences create by the urbanization economies are minimum, the agglomeration ones almost not existing, so it requires an action of supplant by the LA. But this one, because the small dimension and the reduced potentiality of the area<sup>1</sup>, does need a superior scale authority (Association of Cities and/or the Province). If in the context there are not economic relevant actors too, the role of the Region is very important: it should (o would?) be the case of Calabria.

## **2. Beyond the technology**

The union of global and local, the glocalization (Robertson, 1995) involves a concept that potentially allows the integration and the contemporaneity of the different scales. But it requires to govern the network, the networks, the data information and the exchanges, material ed immaterial ones, in accord with modalities able to defend the complexities.

Together with the facility of information access, also in the smaller areas in the South Italy it is forming a nucleus of technical and technological knowledge, base of the “higher technological knowledge” (Zeleny,1985). It started an alphabetization process in the fact already telematics, then beyond the (mere) informatization.

Even if there is a large gap between the southern society and the rest of the nation; this latter, moreover, already back if considered with the more advanced countries. Update studies on the factors determining success and competitiveness, thanks to the creativity expressed by the diverse territories, based on the level of Technology, Talent e Tolerance<sup>2</sup> see the southern towns seated in the latter places of such a graduator.

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<sup>1</sup> Moccia (2005) underline that in EPSON Research the Potential Polycentric Integration Area, i.e. .in Italy “quasi” provincial and “quasi” regional dimension, consist in systems (insiemi) of Functional Urban Area that is centres having at least 15.000 inhabitants.

<sup>2</sup> Research Method elaborated by prof. Richard Florida of the Carnegie Mellon University, Pittsburg, USA, which doct. Tinaglia (involved in the staff of this American university), implemented on 103 Italian provinces between the period time 2004 -2005.

Interesting to note that a number of little and medium size centre for the most in the centre or north Italy (e.g. Rimini, Perugia, Modena, Padova, Pisa) are placed in a good creativity position, so confirming those potentiality that these areas have related to their dimension. However they already enjoy advantages due to be in territories influenced by metropolitan centres.

One of the elements driving towards such a not brilliant outcome is the closeness of the territorial systems. That is the more a territory is closed to the exchange and to the diverse<sup>3</sup> the less it is open to the new and to the transformation. This determines either difficulties in the looking for alternatives path in the anthropization processes either it is caused by the rare openness towards the newness. For having a diffused community (Stagni, 1998) where the individual is centre and network and in which uncertainty and consciousness of the limit of the knowledge, of learning by the mistake, participating to the formation of the citizenship responsibility in the construction of *civitas an even if (se non di) urbis*, the indispensable element consists in the will for listening and well coming the “strange” and “out” ones.

In a continuous context the difficulty to modify one’s own position, the absence of cultural elasticity surely obstacles and/or deletes the innovation, surely it makes less quite the acceptance. The forms of dialogue and mediation are harder to play and instead of confrontation and possible meeting there are contra opposite positions. It happens hard to start processes of collective learning (Bobbio, 1996), that is to built reflective spaces allowing to mute the forms of relationships, shaping new identities, ruling the codivision and/of knowledge, creating the place consciousness.

Urban systems in this part of the Nation are often not adequate to face with the social questions posed by the contemporaneity. Either remaining far, as soon as possible, from the transformations of meaning and not being able to catch the solicits and the opportunities.

Social and spatial events do drive the local transformations without being in a strategy finalised for a new become subject and a reconstruction of contexts: dynamics of re-territorialisation, processes for individualizing identity and recognizescion which may lead according to Bonomi (2004) to “geocommunities”. The outcome does consist in production of homologues spaces, often conflicting and far from the cooperative criteria, lasting of the word before used “coopetition” only the competition and the disorder deriving by the lack of public collective and shared choices.

Instead, increasing the structural complexity means to diminish entropy. Then, compactness and polycentrism, specialisation but not monofunction, ferry collective transportation for the

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<sup>3</sup> The percentage of gay population is one of the analysis elements, that because the behaviour towards this social subject does represent an indicator of the tolerance for other cultures (Turani, 2005).

territorial networks and pedestrian at the local scale. Reticules and vincula for diminishing the consume of land.

One of relevant elements of this dynamic consists in making/becoming territorial system. Such a system is realized in its infrastructures in connection with local action (it is the case of the supports for the creation of “networks of small cities”, POR Calabria 2000-2006), but it can be also structured having as its components far places virtually connected. That does not imply the desparetion (scomparsa) of vincula, requirements and opportunities related to the local place. Surely all that participates to the construction of the place, to the shaping of the contemporaneity of that specific place: this is, on the fact, the basic theme.

In the past the technical and technicological transformations did modify the settlement criteria and the antropization process. Transportation using water ways, the discover of the wheel, the steam engine, mongolphier air transport before and then by airplane: all that offered the chances and/or the conveniences for new placements. More relevant opportunities did derive by the steel, steel conglomerate, elevators and telephone, the modern vertical town starts its history.

Yet (Pure) with similar scientific and technological conditions, however diverse models of cities and territories take form. This happen because together with the possible innovations the social, economic, cultural, politic and military conditions of the place (but not alone them) play a central rule in choosing the evolution path.

The attention of the disciplines studying the space is moving back to the town, or towards the diverse urbanization forms resulting by the contemporaney antropization processes. They are characterized by diffusive and/or dispersive dynamics, production of metropole and diffused cities, however strong nodes valuing the agglomeration. Castells already in 1989 depicted their basic elements, ranking them as global towns. Ascher (1995) then, enlarged some aspects proposing the idea of Métapolis.

Surely the economic dynamics based on competition through centres have defined the present prevalence due to political options and to needs/advantages both technical and settlemental ones.

Then it is interesting to face with a case study characterized by being a “minor centre”, Tropea, but not less relevant because its culture, landscape and environment, even if “small”: about 7000 inhabitants and only 3,5 kms. Town, as other cities of the Calabria Region,. is trying to go out from the isolation also thanks to the telecommunications network<sup>4</sup>.

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<sup>4</sup> As shown by Aragona S. in various AISRe Conferences: the regional level (“Urban environment, Innovation, Local Context”, 2001); Regional Measures and Action Plans with the case of an advanced medium centre, Cosenza, of the Region (“Action plans for the new urban environment: innovation in the local context”, 2002); the experimentation by a small city as Soveria Mannelli (“Innovation that change the town”, 2003) and, then, in the largest of the Calabria Region, Reggio Calabria (“Innovation and town”, 2004).

### 3. Tropea City in the AsmeNet Project

In an integrated vision the City of Tropea is associated with the ASMEZ Consortium, Interregional Consortium for the Management and Technological Innovation for the associated LAs. The Consortium is a not profit organization with public share majority, it gives assistantship, consultancy and support for the action in diverse sectors of the consorted LAs. The areas of action consist in the following ones<sup>5</sup>:

- Innovative Projects: 592 LAs involved in the Asme.Net Project; 81 LAs in the Siba Project; 67 LAs in the Costa project; 250LAs in the Community Network.
- Tax and territories: till 28% the increase of income for the LAs supported in the fiscal management;
- Dedicated services for financial regional, national and European support.
- Education: 72.000 hours for public workers, 31.000 hours for employees in Small/Medium Enterprises, 324.000 hours for young people and unemployed, 99.000 hours in stage in more than 300 Small/Medium Enterprises settled in the Centre and North Italy;
- Information ad Free Time Institutions.

The Consortium does want to support those LAs for the introduction of the new technologies, for the improvement of the management techniques, for the access to the European funds and for becoming effective subjects of the social and economic context of the local population.

The large plateau of the associated Authorities allows to diminish the costs thank to the standardization of the procedures and the processes and to use high professional figures so having a very qualitative level action.

The cost for participating in the Consortium is related to the demographic dimension of the LA (from euro 516,45 < 5.000 inhabitants, up euro 3098,74 > 20.000 inhabitants). For the Comunità Montane (Association of LA in the mountain) it is euro 3098,74. A specific agreement fixes the rules for the services.

Asme.Net project represents a system of e-Government able to value the role of mediator of the LAs towards the citizens and the enterprises, realizing a standard technological/managerial environment. It allows the active participation at the innovation process also to the LAs having less then 5000 inhabitants in Southern Region as Campania, Calabria and Basilicata. That is, lowering the electronics barriers in according to the Web Accessibility Initiative and the AIPA decisions.

It sums up 570 LAs and 22 Comunità Montane. The total population involved is about 4 millions of people<sup>6</sup>.

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<sup>5</sup> Information taken by the [www.asmez.it](http://www.asmez.it) site.

<sup>6</sup> Information by the [www.forumpa.it](http://www.forumpa.it) site.



The promoter is ASMEZ, Asme.Net has funds also by the Department for the Innovation and the Technologies of the Presidency of the Counsel of the Ministers, by the Campania e Calabria Region, by the participant LAs and by e Private Partners as Alenia Spazio and Sanpaolo IMI S.p.a.

The project has also the participation of the Provinces of Avellino, Benevento, Salerno, Caserta, Reggio Calabria, Crotone, of INPS (National Authority for the Social Security), of the Ministry for the Work and Welfare, of the Work Authority of the Campania Region, of the National Association of the managers and high directors of the education, of the Authority for the Territory, of the Fiscal Authority, of the Campania Association of the LAs (Anci).

The head of the Project is the Comunità Montana of the Tanagro (SA).

The main goal of the project consists in having a modern front office for citizens and enterprises, realizing an interactive multi channel system using telephone, internet, telematic kiosks, services card. An information free number will be soon operative.

Thank to a strong process of cooperation, through the involved LAs, the will is to build up a model for the information inter exchange and the use of common hardware, software and services resources.

At the same time, with the collaboration of qualified private partners, there is the education of new professional figures working in the LAs, able to catch the chances offered by the new web technologies and to participate in the “management of the transition” inside its own reality.

Asme.Net has a web site for the citizens an another one for the enterprises, connected to the “Sportello Unico per le Attività Produttive”. There is a network of 250 LAs, in grouped in 19 clusters and 54 local networks, the public fund consists in about 2.450.000 euro. Every LA has an own site with dominio [www.comune.nomecomune.it](http://www.comune.nomecomune.it).

The project has space in the Regional Territorial Plans (Piani Territoriali Regionali) being in coherence with their lines and strategies.

The main obstacles in the project are about in the delate present in the public administration. Above all in the adoption of administrative procedures for implementing and valuing of the Information Technology.

According to the diverse needs of the citizens, enterprises and LAs, the “Services on line” allow: self declaration, tax payment, ceck of the presence at school of the children, consultation of the civic defender, to have information about LA services, up date on public competitions and opportunities, put on line own curriculum vitae, etc...

In such a way the LA emphasis its role and gives relevance to the process of competence decentralisation (in Italy “work in progress”) both for the services offer and the active participation to the dynamics about communication and information.

At the same time there is the creation of an innovative system of management of the relations between citizens and LA.: interactive bidirectional communication allowing monitoring and effectiveness valuation of offers and the outcomes, but also support for the visibility of the citizens.

The access is of two typologies:

- Free access
- access by authentication

Authentication procedure it is not only a technical requirement but it represents the birth for the “virtual citizen”, because this phase implies to learn the procedures, the needs and the benefits of the system: it do constitute the incoming of the citizen in the “virtual community”. Only in such a way he can become node and connection, as before said, for flow and then of information.

The virtual community is a service of the Asme.Net site by ASMEZ.

#### **4. Suggestions for a strategy**

The creation of a virtual community is a relevant moment because it says the ALs’ will to extend its own existence beyond the geographical bounds. This attitude is emblematic of an advanced behaviour in the network management. It is a signal representing the LA’s consciousness level about the potentialities of the system.

That may reveal the important role of the LA in addressing and driving the innovation especially where there are not other actors able “to push” it.

It requires time for reading the functional, social and spatial impacts due to the ASME.NET project implementation, both at local and territorial scale. An interpretative model has to be constructed using not only quantitative but also qualitative indicators based on a multicriteria approach.

However already the production and diffusion of the project did start a virtuosos process of information and education, either formal or informal one. This fact involves the local population and employees in the LAs and un the private sectors too.

Asme.Net project has been supported, as before said, also by the Calabria Region, Operative Regional Plan (POR), Measure 6.3, “Information Society Technology”.

If it was associated with other EU actions it could be able to help the shaping of territorial reticules so relevant when there are not important urban centres or metropolitan areas.

The strategy should be composed by united, integrate, criteria in which participated various EU funds:

- “Networks of small cities”, FESR, Action 5.1.c; V° Axe, “Development and valorisation of the urban areas”
- “Networks and local systems for the touristic offer”, FESR, Measure 4.4, IV° Axe
- “Enterprises Initiatives Development in the Cultural Heritage Area”, FESR, Measure 2.3, II° Axe

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