

## **Coping with unexpected foreseeable events Guidelines for a Strategic Plan of “Strait of Messina Region”**

DRAFT – NOT FOR QUOTING

### **1. Summary**

This paper aims at exploring the role of planning facing the “pulsar effect” generated by the construction of a large infrastructure, like the bridge across the Strait of Messina in Italy. This bridge will deeply influence the overall settlement system of the Strait Region, one of the most relevant areas of the Mediterranean Sea.

The entire decision process is briefly presented, pointing out both regional and political issues that have led to the decision of building the world’s longest single span suspension bridge.

The paper highlights constraints and limits of this process, pointing out the substantial lack of a planning approach referred to the entire area of the Strait. By describing both the decision process and the insights given by the existing plans of the area, at different levels, the authors have developed the belief that this infrastructure will have a furthermore relevant role for the locality than for the national or even international transport and economic system.

However, an adequate planning solution, at regional and urban level, risks to be disregarded just now that the building of this infrastructure has reached the closest point to the realization in its 150 years long history.

Very often planners are required to provide solutions that accommodate consequences of choices that are not well rooted in shared and well-tested planning procedures.

The role of planning here envisaged can be two-folded: reorient the localization choices related to the infrastructure, integrating it in the overall transport and functional system, or just adapt land use choices in order to avoid pathological consequences of the new infrastructure.

The method proposed for reaching this goal is strategic planning with the proper involvement of local communities.

### **2. The Messina strait Region: a brief description**

The north east part of Sicily and the south west part of Calabria shape the Strait of Messina, an area which is one of the most attractive scenic points of Italy, rich of history and mythological traditions. This place is not only the cradle of a important part of Greek mythology, from the Ulysses’ voyage to the home of the fire’s God Volcano, but also the background of some beautiful paintings by Antonello da Messina and the inspiring subject of writers and poets.

Sicily (the largest Italian region, 25.707 square kilometers) has a population of 4,866 million. Calabria is the southernmost region of Italian peninsula (15.080 square kilometers) and has a population of 1,993 million (data from census 2001). For both regions, the per capita GNP is the lowest in Italy (7,979 € for Calabria and 9,321 € for Sicily, compared with 13,782 € for Italy). Both regions still employ the largest part of active population in agriculture (16.8% Calabria and 13,1% Sicily against a national average of 7.4%) and the lowest in industrial production (18.6% Calabria and 19,6% Sicily against 32,5% in Italy, data 1997).

The southern part of the country has been always considered as a less developed area. This area, known as “Mezzogiorno”, which was the destination of the “Grand Tour” for travelers and intellectuals, like Goethe, Byron, Stendhal, fascinated by this “paradise inhabited by

devils" in the 18<sup>th</sup> century, became the object of social and economic studies dating from the Italian reunification and the target of state subsidies in the second half of 20<sup>th</sup> century.

All these elements, together with its long and complex history and its relevant cultural heritage, are some of the ingredients of a never-ending debate, the so called "*questione meridionale*", that is often characterized by a mixture of rational and passionate disputes.

Morphologically, the Strait Region is marked by the presence of steep mountains, a part of the Apennine chain, called Aspromonte in the Calabrian side and Peloritani in the Sicilian one. Peloritani, the divide between Ionian and Tirreno seas descend swiftly from an height of about 1,100 meters to the sea, just behind the city of Messina. They are marked by narrow valleys, large woods, small villages and a considerable cultural and archeological heritage that include Greek and Roman remains, Byzantine churches, ruins of castles and fortifications from Islamic to Spanish dominations. The far view of Eolian Islands (now inscribed in the Unesco World Heritage List) and Mount Etna (the highest European volcano, 3,340 meters, designated as Regional Park from 1987) is the background of this impressive scenery of land and water.

Even more harsh is the landscape on the Calabrian side with more precipitous mountains that culminates in the massif of Aspromonte, an area of 76,000 hectares also designated as National Park, 40 km far from the city of Reggio. The highest point of Aspromonte reaches about 2,000 meters and the park includes a group of small villages where people already speak an ancient Greek dialect, testifying how these lands, named as *Magna Grecia* have been linked to the mother land.

The presence of this impressive mountains and of the large natural harbor on the Sicilian Side has molded the human settlements since the Greek colonization. As a consequence all the human settlements, including the two major cities (Messina and Reggio) have been located in the narrow plan along coasts and valleys..

The Strait region was hit in 1908 by a devastating earthquake that destroyed almost completely the two main cities, causing thousands of casualties. The reconstruction pattern was based, in the beginning, on a low density settlement with large streets and low rise buildings. This model was abandoned in the recent years when both the cities grew considerably according to the widespread housing settlement fashion, based on multi-storey condominiums located on the hills behind the rebuilt central area. The result is a quite aggressive impact on the scenery.

The present regional and urban patterns are marked by the two main urban systems along both sides of the Strait.

The city of Reggio, on the Calabrian side, has now developed extensively along the coast, forming a linear urban system spanning approximately 25 kilometers.

Definitely more complex is the settlement system on the Sicilian side. It hinges on three main cities (Messina, Catania and Syracuse) and has more than 2 million inhabitants (slightly less than 50% of Sicilian population). This conurbation is rapidly evolving towards a sort of Megalopolis, borrowing the well known Gottmann's definition, laying for 150 km along the Ionian coast in the eastern part of Sicily.

### **3. Describing the bridge idea and the planning context.**

The following description highlights some elements of a complex decision process that has mainly involved national level living to regional and local ones a less relevant role. On the contrary, local authorities legally in charge of urban planning coped with the "stable connection issue" swinging between accepting and refusing of understating this idea. A parallel description of this two aspects brings to the conclusion that this infrastructure will have a furthermore relevant role for the locality than for the national or even international transport and economic system.

#### **3.1 A brief history of the bridge project**

The history of the stable connection is as old as unification of Italy in one nation. In 1866, the neo established Minister of Public Works committed a feasibility study and in 1870 (the same

year when Rome became capital of Italy) at Politecnico of Torino was presented a final dissertation in civil engineering that designed a crossing tunnel.

At the end of 19<sup>th</sup> century (1899) a daily ferry service connecting the two sides was initiated. The first and second world war left the project out of any priority

The great season of heavy infrastructures, and in particularly the creation of the entire motorway network, highlighted once again the idea of a stable connection: in 1955 was established the Gruppo Ponte Messina (GPM) a company owned by Fiat. In same period, the Minister of Public Works established a committee led by Pier Luigi Nervi. In the light of a favorable acceptance of the idea by EEC (that in 1961 was including six countries), the GPM detected three crossing hypotheses: aerial bridge, tunnel and bridge tunnel under the sea level. In 1965, a first consortium among public institution (at central and local level) was established in order to follow up the final design and works. At this stage the initiative was strongly supported by the local trade unions.

An international design competition was launched in 1968, supported by National Roads Authority (ANAS). Six projects ex-aequo (out of 143) won the first prize (5 bridges – one or more span - and one floating tunnel) and six projects ex-aequo got the second prize.

Some years later a national law (L. 1158/1971) confirmed the preeminent national interest for the stable connection and creates the conditions to establish a state financed agency to design and execute the work.

Only ten years later (following the publication of study by GPM and Lincei Academy) this agency, called Stretto di Messina Spa (SdM), was established (majority held by Iritecna, part of state-owned IRI, and the rest shared in equal parts by ANAS, National Railway Authority (FS), and regional governments of Sicily and Calabria.

In 1985, SdM began its operating activity but in 1986 ENI Group (the other Italian state-owned giant company) pushed for the solution of a floating tunnel (a remake of one among the proposed solutions of the 1968 competition) and elaborated a detailed preliminary study.

All the solutions (aerial, floating and tunnel) were considered acceptable by SdM but the *Consiglio Superiore dei Lavori Pubblici* (High Committee of Public Works) evaluated the aerial solution as safer, cheaper and faster to build, easier and less expensive to maintain. The conclusions were delivered according to the appraisal of an advisor committee previously appointed by SdM.

Two projects were evaluated in 1990, a single span and a double span suspended bridges. In 1992, the “final” preliminary study was issued which included estimation of costs, time schedule and environmental impact assessment.

In three years both FS and ANAS expressed their favorable evaluation (suggesting some technical deeper studies) and recommended to pursue the decision process, at political and management level, for the sufficient ripeness reached by the proposal.

Also the High Committee of Public Works expressed its favorable opinion suggesting more technical verifications and underlined the need to check the role of SdM according to new European and Italian legislation on public works.

In 1998, the *CIFE* (National Committee for Economic Planning) in order to finalize the socioeconomic, environmental and regional issues suggested to submit the study to an independent panel of advisors for a comprehensive evaluation. The advisors' study, committed after an international tender, won by a international group led by PriceWaterhouse and Copers, was completed and delivered in 2000.

Meanwhile the frequent car accidents in the center of Messina, due to the heavy lorries traffic urged the study of new harbor in the south area of the city.

At the same time the MP leaders of majority parties proposed a bill aimed at pushing the building of a set of new relevant infrastructures along the so called Europe-Mediterranean axis aimed at increase the relationships between Mediterranean countries including, also, the bridge on Strait of Messina as primary element.

### **3.2 The bridge project within the planning history of Messina Region**

All these studies above quoted are mainly concentrated on technical and structural aspects like the type of crossing tunnel or bridge etc.

In the same period, from 1960s on, the idea of the bridge comes back in the proposals of urban master plans both on Sicilian and Calabrian side of the strait. In this paragraph some of these proposals are briefly outlined.

The planning history of the city of Messina can be considered quite representative of the typical pattern followed by urban planning in large part of Italy. It has been marked by a considerable number of plans that have not been implemented. In the reconstruction after the earthquake of 1908 the idea of the bridge faded vis a vis the prevailing issue of rebuilding almost entirely the city and the surrounding villages.

In 1961 the architect and town planner Samonà won the national competition for the new master plan of the city. The proposal includes the idea of the bridge that became a significant part of the city structure. The approach adopted considers the bridge exclusively from the point of view of its effects on the city, integrating it in its new physical and functional layout within a larger region. Samonà devised a role for Messina as a central place of a region that includes its entire province but also the southern tip of Calabria. This role for the city implies the need of increasing the endowment of transport infrastructures that would serve the entire region. On the basis of this idea the plan includes a comprehensive scheme of road, railway and maritime infrastructures. The key element of the plan is a new port, physically connected with the bridge that would serve the entire region, including new industrial estates that have to be planned in Calabria. Moreover, the plan defines in detail the area near the bridge approach that would host the university and a new location for the existing expo. This activity would take advantage by the proximity with the new bridge as a symbol of progress and technical capability.

On the other side of the Strait, the 1968 master plan for Reggio Calabria (designed by Quaroni, Quistelli, and D'Orsi Villani) hypothesizes a new role for the city after the construction of the bridge. This infrastructure would transform deeply the geography of the Strait Region, creating a unique urban area. Consequently, localization choices would be not influenced by the burden of the strait crossing and could be guided by other factors. Accordingly, Reggio would host functions that serve the entire Strait Region considering that it has minor geographical constraints compared with Messina. This plan defines functions and infrastructures that take into account this new role, including a system of interchange areas near the bridge approach, the expansion and improvement of the existing airport etc.

The 1968 master plan is still in force and the new plan is being defined (Imbesi, 2000). One of the themes that the new plan is going to face is the re-balance of functions that, in spite of the directions of the 1968 plan, have localized mainly along the motorway east and south of the central area. The area north of the city centre, that includes a group of villages that were autonomous municipalities since the 30s, has been developed less intensely and has unused potentialities that are going to be investigated by the new plan.

The 1969 competition promoted by the National Agency for Roads (ANAS) produced several projects that looked not only at technical solutions but also at more complex ideas of reshaping the entire settlement structure of the area.

Among this second group of projects two are particularly relevant: the first proposed by the bridge engineer Musmeci with Quaroni as planner, that won the first prize, and another by Giuseppe Samonà that won the second prize.

In particular, the Musmeci–Quaroni project looks carefully at the overall settlement of the Strait Region proposing a complex scheme for future land uses. It includes two large interchange facilities in the approach areas of the bridge. These complex systems include not only transport infrastructures but also tourist, recreational and business facilities. The recreational and tourist component is considered a key element, for this reason the proposal envisages also a safeguard system of scenic values, especially natural ones like the large forests that covers the mountains behind Reggio and Messina.

The group led by Samonà proposed a complete reorganization of the two urban areas based on the concentration of buildings and functions along the hills areas behind the two existing cities. The proposal includes the reshaping of the existing landscape and a layout based on huge buildings on very high pillars that allow the perception of the scenery from the motorway that connects the bridge. The proposed project, that reminds some famous Le

Corbusier's projects or even the macro infrastructure by Kenzo Tange for Tokyo bay, today appears quite naïve and unrealistic.

Samonà is also one of the designers of the two master plans (1963 and 1977) of Villa S. Giovanni, the small town that hosts the present landing places of ferries and the future Calabrian Approach of the Bridge. It is noticeable that in the first plan the bridge hypothesis has great influence on the layout of the plan, whereas in the second one (1977) the bridge does not represent any more the focal issue and the plan aims at solving more concrete problems at local level.

More recently, in the 1973 the proposal of master plan for Messina (known as piano Tekne) considered the bridge just as an element that increases the uncertainties about the future layout of road and railway networks and the ferry boats landings.

The 1988 proposal of master plan for Messina (known as piano Urbani) represents the final result of a complex planning process that has attempted to include the "bridge issue" in a general scheme for the city that was aimed also at solving the current needs of this urban area. The adopted approach is based on the idea that an objective has to be reached in any case: a more rational integration of the areas on both sides of the Strait. At that time, the main problem was the insufficient level of the studies on the stable crossing solution, for this reason the plan include only general considerations about the crossing of the Strait (the "horizontal lines") and the coastal issues (the "vertical lines") The redesign of coastal areas considers three parts:

- the northern one (near the lakes) that would host the bridge approach;
- the central one that would host the floating tunnel approach;
- the southern one that would host the new ferry boats landings.

Each of the possible "horizontal lines" could integrate with the key element of the plan the "*collettore ad ansa*", that is a new ring road that connect and give order to the main urban functions and reminds the shape of an harp.

The last Messina master plan, recently approved, represents the final point of the progressive detachment of the physical planning from the key issue of the bridge. This plan is just overlapping the preliminary project on the city zoning, without considering the relevant relationships of the infrastructure with the settlement system. Consequently, existing and planned settlements (a small village on the hills, housing schemes that will be necessarily wiped out by the bridge pier and connection infrastructures) on the Sicilian shore are maintained.

### **3.3 The Advisors' Executive Summary and the conclusion of the decision process**

The above mentioned study committed by *CIPE*, National Committee for Economic Planning in 2001 to a group of advisors, leaded by Pricewaterhouse Coopers Consulting, supplies a wide set of elements for the analysis and evaluation of different solutions to better connect Sicily with the mainland.

The starting point is the analysis of present state that shows. that the quality of the transport services across the Strait of Messina is insufficient and destined to worsen in the coming years, following the expected increase in the demand.

The study compares two solutions to this problem: the bridge as defined by the preliminary project approved by the High Committee of Public Works and an alternative intermodal transport system, without giving explicitly a final preference.

For both solutions positive and negative elements are evaluated, considering different traffic growth scenarios, with reference to the temporal horizons of the years 2012 and 2032. The report examines in detail both the construction and completion stages. Financial and managerial aspects are also pointed out, with a proposal of variation of the existing legislation on public works in order to increase the possibility of funding by private investors.

The bridge solution considered will be the longest single span suspension bridge in the world (3,300 meters), with a total cost that has been evaluated in about 4,842 million €, net of VAT, whereas the alternative intermodal system will cost 1,074 million €. In both cases the study indicates the need of planning other works indispensable to meet the transport growth demands between Sicily and the mainland. This works, which includes the improvement of

railway, motorways, ports and airports, will cost an extra 2.401 million €. The reports states clearly that without these improvements, the potentiality of the bridge could not be totally exploited.

As far as the reduction in time and costs of the crossing is concerned, the study shows that the main effect is the reduction of traveling time for roads links on the Sicily-Villa S. Giovanni-North route (50 minutes) and railway connections (1 hour for passengers and almost 2 hours for goods). The advantages of the bridge are quite modest for the connection between the two main cities (Messina and Reggio).

About the social, economic and territorial impact, the advisors report states that positive effects on local economy (provinces of Messina and Reggio Calabria) and on regional economy (Calabria and Sicily) have not always the same level of relevance. In fact if the analysis is widened (to the entire "Mezzogiorno" or to Italy) the "yard stage" impact remains perceptible, while the "operational stage" is diluted and does not show significant differential effects.

A relevant element that emerges from the study is a certain understatement of key issues, like the real benefits of the bridge and the environmental impact of the infrastructure.

The other important issue is represented by the impact of the work on the surrounding environment both during the "building" stage and the following "completion" stage, i. e. the damage caused by building yards, the need for sand and gravel required in the building works (about 1 million m<sup>3</sup>), the dumping of materials from excavations (about 8 million m<sup>3</sup>).

The study considers also the tourist impact due to the "monument effect" of the bridge which will become a major tourist destination, or other factors like the reduction of the psychological condition of "insularity" of Sicily.

The overall impression is that the level of uncertainty of many elements is still too high and the study could be considered a sort of detailed checking list. Moreover, there is no clear difference between "soft" and intangible elements and more rigorous transport, financial and economic analyses. The assessment of the two proposed solutions is an unequal one since the bridge one has been defined at a sufficient level by the preliminary project, whereas the alternative solution is still vaguely outlined. The result is a quite incomplete framework that give few useful elements in order to assess the feasibility of the two proposed solutions.

After the completion of the study the Ministry of Treasury asked private investors to express their interest in investing in the proposed bridge solution. Private investors, that are supposed to cater 51% of the required financial resources, express a moderate interest in investing in the proposed bridge, pointing out the need of guarantees about the real will of the public authorities about to complete the work and about the indispensable role of the railway authority in order to guarantee the forecasted levels of traffic (Barca, Fontana,2001).

The right wing coalition led by Silvio Berlusconi included the construction of the bridge in the electoral program and after the elections inscribed it among the strategic public works. The new Government is still acting toward the definition of the detailed project and an extensive media coverage is accompanying these phases of the decision process.

#### **4. The bridge as a Pulsar Effect**

The idea of building the bridge as previously described is part of a very complex process in which rationality has given way to other reasons. The bridge as a symbol of technical progress and chance of breaking the historical condition of insularity, has been a very strong component of the process. This highly symbolic elements, particularly the first one, represents a common feature with other pulsar activities like expos or sport events.

Such kind of decision process easily to be defines as "the Pharaoh Act", heavily based on symbolic values is satisfactory both for decision makers (politicians), because it is easy to communicate, and for common people that feel that politicians take care of them. On the contrary, it is not rooted in local development processes.

There is a major difficulty in analyzing unemotionally the multiple elements that are at stake. Very often in this period several events (like the present severe draught or a recent railway

accident) trigger an harsh political debate on the opportunity of investing an huge amount of resources on the bridge instead of other alternative investments (De Seta 2002)

Moreover, the extensive media coverage and the bipartisan political sponsorship of the idea have heavily influenced the decision process, causing a substantial reduction in the possibility of discussing in terms of real planning alternatives. In this process, the participation and partnership approach, nowadays a central element in any planning process aimed at supporting local development, has been impoverished in its contents and transformed into a nonessential component. The decision process has been polarized into two irreconcilable alternatives, where “bridge supporters” accuse “bridge fighters” and vice versa, by using remarks that are only vaguely related to the real matter.

Moreover, if the bridge will be built according to approved layout it is likely that it will not play a relevant role in the developing process of the Strait Region. This represents another similarity with events that concentrate investments, public activities, oversized infrastructures that are going to be underused after the event.

Finally the building yard stage could have relevant consequences on the fragile settlement structure of the area.

## **5. Guidelines for a strategic plan of the Strait Region**

As it emerges by the above description, the main focus has been on the bridge considered as a technical infrastructure. This has been also due to the role played by public agencies involved from the very beginning in the decision process. In this scenario, the role of planning has been progressively weakened, as it is shown by the lack of in-depth territorial analyses. This element will affect more than the opportunity of fund raising the lack of consensus on the bridge, especially at local level.

On the other hand, it is very unlikely that the “reason of planning” can affect the decision process, vis a vis the typical pulsar motivators above mentioned. Planning has to justify its choices using “rational” arguments and confronting them in a public arena in which many actors participate.

On the contrary, the bridge decision seems to be typical of “orthogonal design” (Friedmann, 1987) where projects have not to be justified from a rational point of view but just to conform to a sort of “gods inspiration” that often conceals the will of the “king”.

Consequently, the remaining role for planning is investigating ways of integrating the new infrastructure in a strategic plan for the Strait Region, considering that the decision of building the bridge has been already taken. This plan has to reorganize the entire settlement structure of the area, opening up a range of alternatives in order to cope with some of the problems of the region, considering that the possible solutions have to integrate spatial, economic and social elements.

Traditional planning approaches have been not able to cope with such kind of uncertainties, mainly as far as the time dimension is concerned as it appears clearly from the above described planning experiences of Messina and Villa.

On the contrary, the approach of strategic planning can give global guidance to regional transformations within a shared framework, orienting private and public actors choices. A fundamental element which is particularly useful in this situation is the ability to take into account the reversibility of proposed actions. In a planning process dominated by uncertainty the unique acceptable conclusion is proposing reversible solutions (La Greca, 2002).

The following considerations try to outline the elements on which a strategic plan has to focus, that is the actors involved and the contents.

As far as the contents are concerned only broad land use aspects will be briefly outlined leaving out issues like environmental, scenic and social problems that have been already analyzed by others (Campo, 2001; Pieroni 2001, Bettini and Ziparo 2002).

### **5.1 Actors and procedures**

Local actors are nowadays the central element of any process of control of territorial transformations. As a consequence, planners have to search and experiment new tools, procedures, resources and practices that allow inhabitants to manage these transformations and not only to accept them. If planning efficacy can be measured from its capacity of governing decision processes, new participation policies have to stimulate design capacities shared among central and local authorities, social and economic actors.

In the examined case of the Messina Bridge, the desire of overcoming the condition of insularity and marginality, together with the myth of full employment, have detached local actors from the decision process. In this kind of events, the risk of not sharing properly relevant information can affect deeply the decision process, submitting it to narrow-minded sectorial rationalities oriented by a strong political guidance. The lack of a "regional project" amplifies the difficulties of reaching a broad consensus both at national and local level.

On the contrary, the awareness of possible scenarios can orient the choice about the areas that can be reshaped. Moreover, this can ease the decision process and accelerate administrative procedures. The planner can play a role in producing "critically ordered descriptions that can be compared" (Mazza, 2002) about possible territorial transformations. Defining "how" the territorial project will be implemented and "who" will participate to decision process at different levels becomes, in this perspective, an action that anticipates any possible transformation. In the bridge event, assuming that it will be built, planning can intervene defining a strategic plan that can also promote an endogenous economic development for the area, defining a structure for the decision object.

The territorial project, looking at different solutions can initiate decision processes in which administrators and local actors become responsible. This will reverse the traditional behaviour of Italian public administration that have often stopped an evaluative approach to policies and projects (Fubini, 2002). A "planning support system" could be a useful tool for regional governance even if the issue cannot be limited to the definition of a linear model of managing territorial data.

A methodology that explores cognitive mechanisms is perhaps the way to cope with multidimensional issues and criteria that intervene in decision processes. Multi-criteria methods can improve and clarify bargaining processes by taking into account at the same time economic, financial, political and social aspects. These methods try to make explicit preferences of a community splitting them in components. The aim of the decision process is not reaching an optimal result but just comparing alternative ideas compatible with the relevant area. By clearly detecting effects and impacts of the proposed infrastructure, it is possible to find out a larger number of stakeholders that can have a say on choices that it is possible to share because are sound and acceptable for them. This will be a further step in comparison with the simple acceptance of a set of symbolic values whose validity must be taken for granted.

## **5.2 Some elements for the strategic plan**

The role of planning here envisaged can be two-folded: reorient the localization choices related to the infrastructure, integrating it in the overall transport and functional system, or just adapt land use choices in order to avoid pathological consequences of the new infrastructure.

For instance, the relevant dimension of the infrastructure requires accurate planning in order to avoid a worsening of the present situation. The whole area has considerable problems of congestion and an incoherent general layout of settlements.

In particular, the major issues at stake are:

- the creation of new relationships between the new infrastructures (the bridge, main roads and railway connections) and the existing urban fabric;
- the mitigation of the effects (physical and social) of the bridge on the immediate surrounding areas;

- the re-use of brown-field areas (currently used by ferry landings and railway stations) that can host new urban functions;
- problems related to the environment and natural risks (i. e. the overwhelming urban load along coasts and rivers).

The idea of applying methods and approaches of strategic planning can be particularly useful considering that:

- the uncertainties are relevant so it can be useful to define scenarios in order to face this condition by evaluating strengths, weaknesses, threats and opportunities of each option related to the new situation after the bridge;
- time related issues are an important component, considering that the length of the entire bridge process, both decision and construction, clashes with the need of solving present problems.

It is useful to distinguish from short and long term themes.

Short term issues are related to construction process, they include:

- Negative ones:  
The presence of a relevant number of people and building sites can have considerable effects for land use, considering the fragile equilibrium of these contexts and the attitude to spontaneous not controlled urban growth.
- Positive ones  
The building process can be seen as an event in itself that can attract visitors and draw the attention of national and international public opinion on the area.

Long term issues involve aspects related both to land use and the social and economic role of this context.

Among the elements that have a major impact on land use, the following are particularly relevant:

- Transports;
- housing strategies;
- location of industrial facilities and re-use of brown field areas;
- tourism, recreation and sport facilities;
- commercial activities.

Tourism and commerce are undoubtedly the key elements of any future strategy. The remarkable cultural, scenic and natural heritage is the main asset of this area. Taormina and Mount Etna are already a major tourist attraction, Eolian Islands are growing in importance. However, the entire system suffers of a lack of integration from several points of view.

For instance, a considerable amount of the natural and cultural heritage is almost neglected. A part from the above mentioned resorts, both the provinces of Messina and Reggio are endowed by an extraordinary number of sites of outstanding natural and archeological value, like the Regional Park of Nebrodi (an area of 85.500 hectares that includes the southernmost beech forests in Europe).

Moreover, accommodation, transport facilities and services are concentrated in few areas and their quality is often quite poor. The two major cities of the Strait region Reggio and Messina are not tourist destinations in itself, although both have important museums and a some monuments survived to the earthquake. In a new vision of integrated tourist offer of the region they can assume a new role. By the same token, the airport of Reggio Calabria can assume greater importance compared with its current very limited offer of scheduled flights and ground and sea connections.

Recreational and sport activities are functions related to the tourist sector that can benefit from a new integrated layout of the region. The current population of the two provinces (Messina e Reggio) exceeds 1,2 million inhabitants and represent a potential group of customers that can be reasonably extended to the contiguous provinces both in Sicily and Calabria, especially Catania and Syracuse and Ragusa, extending the number of possible customer/user to almost 5 million people. This is the area of potential users that already benefit of sport, music, leisure and cultural events that already take place in Taormina, especially in the summer season.

The same holds true for commercial activities (especially major shopping malls) a typical sector where people is inclined to move for kilometers in order to reach a venue that offer unique products or services. The area of Catania is already playing this role, hosting a considerable number of shopping malls and leisure facilities very often located in unsuitable areas. The proper localization of this functions in the Strait Area is a key element that must be carefully considered also in relationship with the re-use of industrial estates.

A strategic plan must take into account also a set of intangible elements, including the following ones.

The building process of the bridge will attract the interest of public opinion for a certain period of time. The real problem is trying to turn this typical feature of the pulsar effects, that is a great visibility of the place involved in the event, in a long term advantage for the area.

This is a task that must involve a set of different public and private actors including institutions and entrepreneurs.

So far, this area as shown a low capacity of playing in a competitive environment where more and more regions struggle for attracting activities and investments. In this market oriented vision, quality, of the social and economic system as well as of the settlement system, is an important element. This is the typical approach pursued by marketing planning (Lacaze, 1995). Many cities are now building a comprehensive strategy in which the promotion of the city image is pursued with considerable investments in financial and human resources. Among the others, a relevant example in Italy is the one of Turin that is using the Winter Olympic Games of 2006 as a stimulus to promote an overall strategy for the City aimed at improving the both its image and overall urban quality.

By the same token, there will be a set of long term outcomes of the bridge for University and other research and educational institutions, also considering that there are already three universities (Catania, Messina and Reggio Calabria) with a full range of science and technical faculties within a 100 kilometers radius). These institutions can have indirect benefits from the technological activities related to the bridge management and maintenance research related to it ecc.

The bridge event is becoming more a more foreseeable, since the decision process seems to come to an end, but at the same time it remains unexpected for this region for two main reasons. The first one is that this project is, at its present state, only loosely rooted in the existing complex settlement system; the second one is the lack of shared evaluation of the broad consequences on the same system. A real strategic thinking, on the future of the region, involving a large number of stakeholders (i.e local social, and economic communities) can turn the bridge event into an useful opportunity of the area.

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