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**THE PARTICIPATORY CITY****INNOVATIONS IN THE EUROPEAN UNION***by***VOULA MEGA****Research Manager****European Foundation for the  
Improvement of Living and Working Conditions**

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*"What is the city but the people..."*

The City is not just a reality, it is also a project. The term " City " today means, at the same time, environmental sustainability, social cohesion, democratic governance and cultural expression. These are some of the main challenges highlighted by the author of this article. The growth of such ideas and of European unity have occurred simultaneously and helped to support new and different ways of making cities better places to live in, even though many urban policies have failed.

The idea of sustainability includes not only environmental awareness and a sustained economy, but also, and more important, social integration and new ways of governing cities that will include a participative role for every citizen (which explains our preference for the term " social sustainability "). It is for these reasons that social sustainability is a key concept for the MOST Programme. This is illustrated by this Discussion Paper, which presents institutional innovations based on solidarity and citizenship.

Cities as arenas of social transformations is one of the three themes of the UNESCO MOST Programme, the main goal of which is to create political awareness. At the Istanbul City Summit, in 1996, UNESCO, with its message " humanizing the city ", promoted building bridges to restore social cohesion and reinforce the symbolic dimension of space. Now, subsequent to the Istanbul Declaration, we are providing expertise and technical assistance for the implementation of these urban perspectives.

We must learn from different experiences and our aims should be guided by values and ideas and be deeply rooted in practice. That is another reason for presenting this text in the MOST Discussion Paper Series. It is based on an overview of urban innovations within the European Union between 1993 and 1996.

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## Contents

### Abstract

A. Europe, an archipelago of cities at the dawn of the 21<sup>st</sup> century

B. The intangible forefront of participative innovations in Europe: untapped opportunities for governments and cities

C. Social participation and environmental innovations in European cities

D. Innovations for the socially sustainable city

E. Participation in the art and science for the city of the future

F. Epilogue. What lessons from Europe for the East Asian archipelago of cities?

### Selective bibliography

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## ABSTRACT

Europe is a kaleidoscope of unique urban cultures. It consists of an archipelago of cities, called by Braudel "greenhouses of civilisation", and by Levi-Strauss "objects of nature and subjects of culture". From the traditional city to the mid-20th century metropolis and, most recently, to the metapolis, a network of networks in a universal network, the city has always been, as defined by Aristotle, "built politics".

Cities crystallise hopes for a better tomorrow, which will be much less like yesterday. They establish brown, green and grey agendas to meet the three-fold challenge of globalisation, sustainability and cohesion. However, environmental problems and social shock waves cannot be absorbed in many cities. Unemployment scars their face. New forms of poverty (like "fuel poverty") are both a cause and an effect of declining social cohesion. Globalisation offers cities the opportunity to become world players, but may also trigger processes of change which cannot be influenced by local communities. Shifts may be swift and lethal.

Change is inevitable. The challenge is how best to manage change in order to achieve the best European future. Cities are the only places where decision-makers, entrepreneurs, workers and citizens congregate, at a point beyond which synergetic effects become more important than the accumulative ones. The potential, due to their scale and diversity, has to be reinforced; the participation of all is leading to the optimisation of the "disorderly order of human interaction".

Sustainability has been the most sacrosanct, overarching concept of recent years. A sustainable city cannot be conceived without environmental awareness, social integration, a sustained economy and citizen participation, together in harmonious, dynamic co-evolution. Many urban policies have failed, but failure must signal the birth of a new era, marked by European unity

and diversity. The efficiency and effectiveness of policies must be improved and maximised. It is a yeasty period for innovations, non-depletable resources. Innovation is "creative destruction", a key to success. Sterile cities stagnate, fertile cities progress.

A journey into innovations might be an odyssey to tomorrow-land, in search of best practices and paradigm shifts. Each city is unique, but models are universal. Common frames for the implementation of shared principles are needed, and the development of indicators, as a new measure of progress, is an outstanding example. Europe should mean a search for excellence.

This paper highlights examples of innovations, which focus on participation and aim at a fulfilling life for all. It is based on the programme Overview of Urban Innovations in the European Union. This programme included the identification and description of 110 urban projects in the 15 Member States. It was done in two stages: first, in 1993, for the first 12 Member States, and later, in 1996, for Austria, Sweden and Finland (EF 1993a, 1996c). It covers a wide spectrum of urban action, varying in type, field, cost and scale. The research focused on projects already implemented or at an advanced planning phase, reflecting integrated approaches for the renaissance of the multifunctional and pluricultural cityscape.

The projects selected were those with a collective significance for the city, resisting time and favouring local democracy and participation at the conception, decision and execution levels; projects introducing new concepts, materials, techniques and methods; projects that can be transplanted elsewhere while respecting differences in city character and human culture; innovations from within and below and also micro-projects with manageable consequences. Given the time that has passed since the overview was done, many of the projects can no longer be called innovations, even in the same context. This is not surprising: it is the very essence of innovation. Innovations are born to be surpassed.

Cities have promoted open democracies. The art and science of co-governing cities with all actors requires institutional innovations based on solidarity and citizenship. Cities become schools and laboratories to move from government to governance. Noble public spaces can serve as places to promote unique cultures, exercise citizenship and "negotiate" democracy.

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#### **A. EUROPE, AN ARCHIPELAGO OF CITIES AT THE DAWN OF THE 21<sup>ST</sup> CENTURY**

Europe is first and foremost urban. It consists of an archipelago with some of the most splendid cities humanity ever created. Braudel called them "greenhouses of civilisation", and Levi-Strauss "objects of nature and subjects of culture". In the 1990s, cities emerge as the most complex and dynamic ecosystems, the only human ones, open, dependent and vulnerable. It would be impossible to define a city without taking into account the major universal dynamics of change affecting it, the deep interrelations among cities and between cities and their hinterlands. Martinotti suggests that there are at least three urban formations intermeshed in the territorial reality: the traditional city with its physical and institutional morphology and its sociological entity, the mid-20th century metropolis, dominated by a centre (core)–periphery (fringes) morphology, and finally a new World city, a Global city or Exopolis, an open

network with plural nodes. The coexistence and superimposition of these three "urban layers" creates new social orders that are undergoing a deep mutation (EF 1997a, Ascher 1995).

At the twilight of the 20th century, globalisation and sustainability become major issues for cities and link them to the world. Cities are networks of local networks and, at the same time, poles of global networks.

Many cities gain importance as places where the networks can be decoded, condensed, converted, metabolised; where decision-makers, entrepreneurs and citizens congregate at a point beyond which synergetic effects become more important than the accumulative ones. They produce more wealth than their demographic weight in the national framework would suggest. Economic diversification, social heterogeneity and cultural diversity have always been their main assets.

Sustainability has been the most emblematic term of recent years. Initially defined in environmental terms, it now embraces socio-economic visions. A sustainable city cannot be conceived without environmental awareness, social integration, a sustained economy and citizens' participation (EF 1992b, 1996b). HABITAT II confirmed the need for sustainable engagements. A growing body of research suggests that, finally, the sustainable city will be communities' and businesses' investment in the future (OECD 1996b).

The progress of Europe depends on the capacity of cities to meet the challenges of the future, their adaptability and proactiveness, their openness to change. According to the European Commission's Green Paper on the Urban Environment (hailed by the cities of Europe as the first sign of interest by the European Union in cities) and the Reports on the Sustainable City, as we move towards the 21st century, cities will continue to be the main centres of economic activity, innovation and culture (EC 1990, 1994a, 1996a). But cities become more ambivalent; there are cities that include but also exclude, that assemble but also divide, that integrate but also disintegrate, enrich but also impoverish, fulfil but also drain potential.

They are threatened by environmental deterioration and social exclusion, but seem unwilling to sacrifice environmental quality and social values for economic growth. They establish brown, green and grey agendas to upgrade their environment and reinforce their capacity for innovation. They all want to win the battle of sustainable development and to become more attractive to people and capital.

Turning problems into opportunities is a paramount challenge for all actors and decision-makers (EF 1992a-c, 1996b; Hall 1995; MOPTMA 1995; OECD 1994a, 1996b) and many developments in Europe seem to provide the elements of a new (improved) paradigm (Beatley 1995).

European cities seem convinced that they need to change and that the future they aim at cannot be the linear continuation of the past, especially if, in the era of the search for sustainability, we are persuaded that past patterns and trends lead to an unwelcome reality (INTA 1995).

A global economy gives many more cities the opportunity to become parts of a global city, but this world conglomeration might have strong central quarters and weak peripheral ones. Harvey suggests the strengthening of the social place as the best way of meeting the new challenges emerging with globalisation

(1991). A simple extension of past policies cannot achieve this new goal; new elements have to be injected into the reciprocating system to activate older elements towards the desired direction. It is these precious elements that we call innovations. As Hall argues, product innovations preceded process ones, and the two are now being combined to bring forth urban innovations (ACDHRD 1995). With advancing globalisation, shifts in the economy might be swift and lethal for institutions which do not innovate, while sustainability demands innovations which enhance the potential of limited resources, environments, skills and chances.

The sustainable city refuses political exclusion (EF 1995b). Urban democracy, representative and direct, is a key element to the existence of cities and their capacity for sustainability. Cities have promoted open democracies since the age of Pericles (The Economist 1995), long before acid rain destroyed the face of the Caryatids. But democracy may be fragile. It needs a daily reconfirmation of civic values, an ongoing reinforcement of the civic bond. It has to precede any gestation of visions and plans and touch the heartbeat of the city. Citizens should be transformed from mere users and consumers into city actors and should rise to the new challenges of urban governance (METROPOLIS 1996). The question of the "duly constituted" authorities of representative democracy is linked to the "constitutional" issue related to the representative role of local groups. States and cities must undertake the challenge of strengthening citizen action in local communities. Among the various developments in Europe, it is worth highlighting a symbolic one: the opening of an Embassy of Local Democracy in Sarajevo.

There are expanding efforts to create citizen-friendly and environment-friendly cities. The passage from ego-citizens to eco-citizens and socio-citizens will certainly require significant amounts of mobilisation, education and culture.

Participation has been declared a precondition for the construction of the political identity of the European Union (CEMR 1996). There is a unanimously recognised trend: city dwellers are increasingly invited to act as partners rather than protesters (EF 1992c; Healey 1997). Very different projects, ranging from the improvement of exceptional vernacular architecture, such as Otranto and Bari, to the tracing of the new metro lines in Valencia, have been crowned with success, thanks to the active participation of residents. In Reggio Emilia, citizens participate in the compiling of the city budget, with the use of new technologies (EF 1993a). In Amsterdam, after a referendum to restrict car-use in the city centre in 1993, two more referenda were prepared, on the new metro line and the extension of the city plan. Lisbon is the first city in Southern Europe to have an ombudsman.

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## **B. THE INTANGIBLE FOREFRONT OF PARTICIPATIVE INNOVATIONS IN EUROPE: UNTAPPED OPPORTUNITIES FOR GOVERNMENTS AND CITIES**

"Innovation is a creative destruction": innovative doctrine radically exploits new ways or beliefs and destroys old, outmoded doctrines (Schumpeter 1976). It implies a radical shift from the creation of something new at the expense of something conventional. It discards old assumptions and seeks new alliances. Innovation theory starts by distinguishing innovation from invention, at the one end, and transformation and diffusion, at the other. It involves a dramatic and thorough change that widens the horizon of capabilities and a catalytic

organisational restructuring that allows the new product, concept or idea to bring about the required transformation. Invention is often identified with the research and development of a product or idea, while innovation includes all the politics of its adaptation. An old world of principles, ideas and patterns dies while a new one is born. The cutting edge is where innovation lies, but it is more a process than an event. It encompasses all processes that lead to the transformation. It needs planning, foresight and strategic choices.

In organisation theory, innovation implies significant change in an organisation's tasks and incentives. Yet, the more complex and diverse an organisation, the greater the number of innovations that will be conceived and proposed, but the fewer the number of innovations that will be adopted. The more established an organisation, the more difficult it is to change. Discipline, hierarchy and conformity are the enemies of change, and resistance increases when innovations touch the core interests or boundaries of institutions.

While the adage of bureaucracies is "Never do one thing for the first time", the hardest innovation is to stop an established practice. However, many organisations look at innovations as an investment rather than as an expenditure. A new discipline can bring about a new freedom. All of this also applies to cities. There is always, in their history, a moment where the future enters. "We were innovative in products and in services, we are now moving to innovative solutions", states Wymack, inventor of the "lean enterprise" concept (MIT 1997).

Radical innovation is rare and changes the status quo and flow of power. One should distinguish innovation from pure evolutionary change and the adaptive responses to new technologies, within the established rules and procedures. Innovation implies creative pro-action to structural change. It comprises a managerial and institutional response to the opportunities offered by new technology. Its main sources are necessity or choice: for example, scarcity, pure accident, defence, crisis or creative conflict. It can also be strategy-driven. Crises force people to take a hard look at reality and generate a plethora of new ideas. Sometimes the source of innovation can become the obstacle to it. Any given innovation creates the conditions for its own demise. Competition can be both the source and the obstacle, it can also be used to export the cost of innovations. Last, but not least, political leadership can be a major source of innovation.

Innovation is a highly political process and governments have a broad spectrum of ways in which to influence this. Directly, they can promote innovation by supporting R&D activities and by adopting new ideas and products. Indirectly, even in decreasing budget environments, they can influence innovation, through regulation and demand (versus supply) subsidies.

Each innovation constitutes a dynamic which can be very powerful. It might also be a largely uncontrolled process and leaders trying to harness it are faced with the same difficulties as when managing an explosion. Innovations are often needed to control the innovation process. However, this is the endless chain of innovations on which the history of civilisation is based. One could be tempted to paraphrase Valéry: the value of the world relies on extreme innovations, its stability on average conventional action. Creating a utopia (which by definition has no place) in a specific socio-spatial and temporal context requires art and science.

Innovation and sustainability share a common desire for immortality – a quest

for eternal youth, in pursuit of perfection. Cities, as very complex systems, are, by definition, organisations where many new ideas, concepts and products are created, but where the difficulties of implementation also abound. In European cities, with mythological origins, all forces emulating innovation try to focus on the future. The future, however, is a moving ground. Should one focus on the immediate future and the next generation, or further ahead? All approaches require vision, strategy and tactics, design of tools and methods, information and organisation. Above all, they need co-operation and concerted action. There has never been a technical invention or gadget capable of changing the face of civilisation compared to what strong will and effort by people can do to enhance their opportunities.

Cities do not grow as an enlargement of what is essentially already there. They grow by processes of gradual diversification and differentiation. Cities are wholly existential, their being and the sources of their growth lie within themselves. "Adding new work to older work proceeds vigorously and creates possibilities for change" (Jacobs 1969). There can be no innovation without creativity, leading to invention and the birth of new ideas. Cities are places where creativity concentrates, since there is no source of innovation other than human brains and hearts.

A creative city is a city that can compose a better future out of its people's creativity. This presupposes a recognition of the creativity of all actors and of each individual citizen. From a new idea to the grafting into a mainstream policy, the birth, growth and death of an innovation depends on a city's creative assets and their mobilisation towards solving urban problems and not only adapting to change, but creating the desired change. Nurturing creativity can be contagious, it can create a climate for mobilising more creative potential. The success of innovations is never certain, but not undertaking innovation is certainly a failure. Sterile cities stagnate, fertile cities progress.

Obstacles to innovation are powerful. Very often, established administrative and financial structures nullify the possibility of innovations. Sometimes innovations that are extremely easy to implement fail because of the inadequacy of closed frameworks. Discrimination is the other major prohibitive factor. It creates flaws, it gives unequal nurturing of creativity, it blocks the access of a fertile field for innovation, if generated by non-recognised actors. Innovations are also needed to overcome the obstacles to innovation. Redressing the imbalances and addressing the inflexibility of structures represents a vast field for innovation and change. Each successful innovation probably comes after (constructive) errors and (purposeful) trials; it might constitute itself a less successful stage of a most successful initiative. Imitation seldom requires as much trial and error as innovation does, but it is a shortcut, an economic borrowing (Jacobs 1969). The more innovative an innovation, the more trials required until it is accepted as such.

Creative use of capital for valuable innovation might be incompatible with urban efficiency. A city supporting and fulfilling innovations might not be the most efficient in the short term, but this does not mean that innovations are necessarily expensive. In assessing an innovation, one should consider the costs of generating, designing and implementing an innovation and compare it with the indirect costs of not introducing it.

Improving the prospect of success and reducing the associated risk becomes a challenge for an innovation-friendly city. Many of the innovations of the Overview programme are linked to a small initial capital. Many of them

produce great positive change. Sometimes, the purposeful and knowledgeable use of capital is impossible unless small sums have first been invested in a multiple of small new departures.

The success of each small departure is an expression of the creativity that fertilised each small sum and of the mechanisms (or their absence) that made it happen. Finally, the social significance of each innovation is essential, both for the added external social benefit and for the encouragement of innovations by society in general. In the Janus-faced problem: "Urban efficiency versus innovation", social acceptance can play a balancing role.

Governments, at all levels, are much more enablers than providers, but, equally, they are initiators of innovation to address specific problems. They can choose from a myriad of innovative options. They can enhance and offer inspiration for innovations. They can motivate the social partners to co-initiate innovations and make them grow. They can give an example in sharing responsibility for a proactive city (Abbott 1996). Efficient but non-creative use of capital in cities can lead to the systematic imitation of innovations produced elsewhere, a chronic "import" of creative solutions. Trial is limited in the search for the optimal and most efficient conditions for transplanting innovations. However, over-transplanting innovations may be dangerous. Continuous imitation kills the seeds of productivity and weakens the constructive capacity of cities. Rapid mobilisation of creativity and innovation cannot happen if there is neither a permanent environment for the peaceful incubation of genuinely new ideas and unproven goods and services (Jacobs 1969) nor the willingness and effort of co-operation for implementing them (MIT 1997).

Nobody holds the monopoly on innovations. All actors have the potential of influencing the city as a surgical team, operating on a complex living organism, like the human body, with a common healing purpose (EF 1997a). Each has a distinct contribution to make. Public authorities have to provide frameworks and must establish the rules by which the market of innovations is allowed to operate. The private sector can direct its profit-oriented drive, entrepreneurship and ability towards making things happen. NGOs can assist in the unleashing of the inventive and entrepreneurial capacity of the local society. Participation of all offers multiple benefits. The involvement of the private sector decreases the social cost of innovations. The involvement of NGOs is often accompanied by volunteer labour. Solidarity is built and community identity fostered. When citizens take greater pride in innovations, they develop a sense of ownership which leads to broad coalitions for the responsible implementation of innovations.

Innovations affecting individual behaviour and lifestyles are impossible to implement without participation. An unconvinced electorate is likely to oppose regulations or economic incentives.

Decision-makers should become progress-makers and orchestrate change. They must become both wiser visionaries and better communicators of alternative visions, in a plural but converging society.

Scenario workshops try to bring together different local groups, with traditionally conflicting views, on "neutral grounds" and on "equal terms" to formulate consensus on a vision of a sustainable city (IIUE 1995). Action planning schemes introduced in the UK, but also in Eastern Europe, involve the organisation of carefully structured collaborative events in which all local

stakeholders participate. Urban regeneration is not about places; it is about people. These types of events unlock creative individuals, co-articulate a sense of vision and create a momentum, a thrust for the future. Among them, the Action Planning weekends from London to Moscow nourished creative plans for places ranging from redundant railway lands to docklands (PWIA 1996).

By sharing the cost and responsibility of innovations, decision-makers become more accountable to their electorates, while projects initiated by the authorities are less likely to be opposed and more likely to be valued by the beneficiaries. The success of an innovation will depend on the capacity to bring all actors, having their own priorities, to work together towards a common goal. Innovations may not necessarily be neutral: they usually benefit some interests and discriminate against others. Communication, negotiation and mediation at the earliest possible stages maximise benefits and reconcile short-term interests with long-term benefits. Informal input is important. Often, the groups left without a voice may plant important seeds of innovations. And if authorities and businesses do not know how they live, they cannot introduce innovations to improve their lives. Because the final test of an innovative city will always be the quality of life it ultimately offers to its inhabitants.

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### **C. SOCIAL PARTICIPATION AND ENVIRONMENTAL INNOVATIONS IN EUROPEAN CITIES**

Europe is one of the lands of cornucopia. On a daily basis, a European city of one million inhabitants consumes, on average, 11,500 tonnes of fossil fuels, 320,000 tonnes of water and 2,000 tonnes of food (EEA 1995a). The Charter of European Sustainable Cities and Towns recognises that decreasing consumption levels of greedy cities is quixotic and thus targets the stabilisation of consumption (ICLEI 1995). The ecological footprint of the North, which contains 25% of the world population while consuming 75% of all resources, is six times heavier than that of the South (this is calculated by an examination of the biophysical capacity of land surfaces required both to produce the resources necessary for cities and to absorb their waste). If the South were to increase its consumption by 50%, the North would have to decrease its own consumption by 15%. A change of such magnitude can only be achieved through the commitment of each individual citizen to a concerted effort to improve lifestyle patterns; "better" becomes more important than "more". Environmental sustainability might lead to the "lean city".

In the energy field, it is worth mentioning that the European Union explored various socio-political scenarios in order to define and explain the workings of energy economies. Four contrasting scenarios were developed to reflect various global social and economic trends, macro-economic prospects and energy policy agendas.

The Conventional Wisdom scenario is designed to evaluate the energy consequences of the pursuit of current policies. In the Battlefield scenario, the world reverts to isolationism and protectionism, while under the Hypermarket scenario, the predominant themes are market forces, liberalism and free trade. Only under a fourth scenario, the Forum scenario, can both economic growth and environmental goals be achieved. Even if it foresees energy growth by 2020 at an average rate of 1.6% p.a. (as much as in the conventional scenario), it leads to a fall in CO<sub>2</sub> emissions of 11% (1990-2020), through an increasing share of nuclear energy supply. Its main hypothesis is that the world is moving

more towards consensus and co-operative international structures with a strong role for public administration (EC 1996b).

Energy production patterns are affected by the social, economical and environmental views of all citizens who contribute directly to consumption trends; for their behaviour pattern is the bottom line for the success or failure of any environmental initiative. Governments should increase the efficiency of the energy sector by promoting renewable energy sources (solar, wind, water, biomass) and more environmentally-sound fuels, by developing decentralised combined heat and electricity plants, local energy provision concepts and synergy effects and savings through the improvement of the systems. The mini-centre for the co-generation of electricity and heating in Milan tries to develop specific scientific and engineering knowledge in a local context and stimulate the interest of potential users (EF 1993a). Introducing photovoltaic cells for the combined production of electric and thermal energy is also gaining ground in Palermo and in other Mediterranean cities. In the German Länder, energy-saving measures include the introduction of an "energy pass" to optimise the energy-efficiency conditions of houses. In The Hague, formerly long-term unemployed were trained to advise low-income households in energy savings (OECD 1994b).

Citizen participation contributes greatly to coherent efforts to address environmental problems, reflected in the drafting and implementation of environmental plans and charters, including Local Agendas 21. Together, all actors establish the environmental radiography of a city and collectively define visions and actions. In Naples, one of the most seriously threatened urban environments of Europe, citizens signed the Environmental Charter after one year of consultation and mediation (Gillo & Solera 1997). In Finland, the Lahti Environmental Forum tries to ensure the commitment of all actors in order to promote sustainable development in the Lahti area. In France, environmental charters constitute contracts between the State and individual cities. The Charter of Mulhouse is a clear example of the strong will to improve the environmental and public health. Citizen involvement is the key to balancing the multiple aims of the charter, including the protection of natural resources, the improvement of the quality of life of the inhabitants, the adoption of a "Health and Environment Perspective", the promotion of urban safety and the integration of socio-economic objectives with the preservation of the environment (Ministère de l'Environnement 1993; EF 1993a, 1995a).

During the last decade, we have witnessed a healthy competition of cities to gain environmental credentials, prompted by their inhabitants' desire to transform their ecological awareness into action.

"Green City" does not simply mean green spaces, grass roofs, timber frame constructions, improved energy systems and water cycles (Elkin & McLaren 1991; Girardet 1992). A whole cultural reform is needed to give meaning to all technical achievements. As the first British city to be accorded the status of Environment City, Leicester offers a model for setting in motion a process for change, hallmarked by an emphasis on partnerships. This is reflected in the fact that many initiatives emerged from the private sector, the churches, individuals and the voluntary sector. The "Business Sector Network" offered the expertise of the city's commercial sector, while "Environ", a non-profit-making company was set up to provide local organisations with access to environmental audits and advice (EF 1993a). The city is also worth mentioning for other achievements, among which is its solidarity, attained by the harmonious coexistence of various races.

All over Europe, cities have become laboratories of ecological innovation, with high experimental value. The Understenshöjden ecological village in Stockholm is a good example of improving urban metabolism with user participation and ecological concerns as fundamentals. Based on a constructive alternative to government building proposals, put forward by a citizen's association, a full-scale building project was planned, designed and, to an extent, physically constructed by future inhabitants. Schwabach, a small, self-sufficient German city, offers an example of the efforts to implement an urban ecology planning strategy. The city had been selected by the Federal Ministry because of its unified, dynamic local government and its ecological achievements to date, especially in the area of waste management. The basic principles are that nothing is impossible and everybody should participate. The pilot study aimed at introducing ecological concepts and actions to a normal city, under normal conditions and with normal funds. After the study, the city council issued guidelines for action and translated them into a concrete programme in its 1993-2003 Model Urban Development Strategy, leading to Schwabach Ecological City (Schmidt-Eichstaedt 1993).

As cities undergo a "renaissance", urban ecology offers new visions (Rueda 1996). In Berlin, often called the recycled city, the derelict space adjoining the former wall became, once again, a central space for creation and innovation. In Kreuzberg, "Block 103" highlights links between social well-being and environmental upgrading. Former squatters of the block have been offered the opportunity to own the space they occupied and, at the same time, they have been trained in converting the houses into ecological modern buildings. Special emphasis has been accorded to energy, water, green spaces and new materials and techniques. Another complex, "Block 6", has pioneered alternative water systems. Based on a combination of cleaning techniques for water depending on its origin, previous and destination use, the project emphasises the learning and communication process. Residents have been trained in "feeling" the process. The system allows 50% savings on water, while the society of inhabitants participates in the technological monitoring of the system (Gelford et al. 1992).

In the area of resource management, the first innovation comes from a shift in emphasis from the treatment to the prevention of waste, followed by new techniques to motivate participation.

Fostering community involvement is a must for waste to be considered a resource. In Parma, students were associated with the collection of aluminium cans; the paper recycling efforts featured the slogan "we will build a kindergarten with the profits received from the sale of used paper". The city continued with the innovative recycling of plastic. In Rimini, a medium-sized city whose population doubles during the summer months, the city administration decided to unify waste management (intense summer activity) with garden maintenance (intense winter activity). Paper recycling is stimulated through an exchange of paper for a plant. The collected paper is transported to a mill near the city, whose management, from 1991 on, has been entrusted to a centre for the rehabilitation of drug addicts (EF 1993a).

In Vaasa, Finland, children taught in kindergartens and schools to sort waste, teach their parents to do the same. An ecological information centre offers a workshop which is run by six formerly unemployed people. This project results in over 90% of inhabitants sorting their waste (EF 1996c).

The Municipality of Oeiras, in the metropolitan area of Lisbon, set up a

backyard composting of organic waste programme. In order to reduce the amount of waste the municipal services have to collect, transport, treat and dispose of, the municipality began a publicity and information campaign which achieved the enrolment of 100 families. Besides conferring economic benefits on the authorities, the project gives inhabitants the possibility to produce a high quality fertiliser for their gardens and increases their awareness of urban environmental problems (EF 1993a). Waste pricing has been achieving extraordinary results in cities like Zurich.

Environmental problems in European metropolitan areas do not mainly come from production; they stem from consumption, primarily from motorised traffic. Transport systems everywhere are accused of no longer being able to deliver the expected levels of service. Traffic congestion represents a loss of 3% of GDP in the countries of the EU and traffic infrastructure covers 10-15% of the urban space (EC 1994a). In cities such as Athens, more than 80% of air pollution is due to traffic. Ironically, these failures are virtually the direct result of urban policies in recent decades (Jacobs 1992). Traffic provisions should be like arteries, facilitating the flow of vitality rather than dominating the body of the city (ALFOZ 1995; Ambiente Italia 1993; Friends of the Earth 1992; EF 1995c).

Urban renaissance of spaces and functions has decreased unsustainable mobility, thus favouring public transport over the private car and giving priority to the pedestrian and the bicycle (UITP 1991). This cannot be achieved without the involvement of everybody. Experiments encouraging active participation of car-owners expand (Burwitz et al. 1991).

There is no innovation more important and difficult to achieve than that which stops a widespread practice, such as the use of the private car, considered to be the single most destructive factor for cities. The study undertaken by the European Commission on "A Car-Free City" suggested the reconception of a city in pedestrian terms, in a plan of small units which proved both ecologically and economically efficient (EC 1992a).

Subsequent to the EC research, the municipality of Amsterdam organised the conference "Car-Free Cities?" (1994). The question mark is important, as it expresses reactions, reluctance and inhibitions. On that occasion, the Car-Free Cities Club was launched by cities committed to promoting policies discouraging the use of private cars (Car-Free Cities Club 1994).

Following the example of cities like Bologna in 1985, Amsterdam held a referendum on the question of banning the car, and its citizens voted affirmatively (1994). The narrow majority, however, illustrated a need for more consultation and debate before so drastic a change is implemented. The 1993 Granada Declaration had already highlighted the importance of a co-ordinated land-use policy to curb the unnecessary physical movement of an effective integrated access system.

There is a shift of interest from mobility to accessibility (ALFOZ 1995). Accessibility is linked to proximity. Although physical proximity does not necessarily eliminate social distance, it may constitute a first step in the formation of social cohesion. The role of cities in assembling and in averting divisions may be reinforced with the removal of architectonic barriers, vestiges of past heavy transport infrastructures (EF 1995c). Removal of these barriers and the subsequent designation of the recovered space for public purposes, undoubtedly represents an action that is both exemplary and transferable. The

creation of a green strip in Madrid is a good example (EF 1993a). Integral urban accessibility programmes have been developed in the Spanish cities of El Ferrol and Salamanca. The concrete objectives are the limitation of the obstacles that hinder mobility and access to centres, public transport, pedestrian paths and crossings (EF 1993a). The introduction of urban tolls will need strong coalitions to expand, since social acceptance is low, reminiscent of the reluctance to accept pay parking in the 1960s.

Walking and cycling are the only sustainable modes of transport. A pedestrian-friendly city is more human. Venice, emblematic and desirable, remains the archetype of a car-free city (Grund 1991). Copenhagen has been a pioneer city in recognising the social value of pedestrian streets, with its main street, Strøget, pedestrianised in 1962, and the process gaining more ground each year. Oulu, in Finland, is extending its pedestrian zone, which is proving to be very successful, even in temperatures of -30°C. In milder climates, Italian cities (Perugia, Bolzano, Spoleto, Rome) have been pioneers in creating pedestrian cultural environments. Turning protesters into partners has been crucial in implementing such reforms, as their success lies in the fact that shop-owners, previously fearful of decreased sales, were persuaded of the reverse. In Naples, places like Piazza de Plebiscito rediscover their former splendour after the removal of private cars. Amsterdam is the European city with the most elaborate bicycle network, complementing the road and canal systems. In cities like Copenhagen, Münster and Erlangen, 35% of all transport needs are satisfied by bicycle (Rautsi 1993).

The use of private cars will not be curbed until such time as provision is made by governments and cities for efficient public transport systems (EF 1995c). In La Rochelle, France, a new multi-optional concept (Autoplus) has been introduced through a partnership between municipalities, the semi-public company for public transport, taxis, two private bus companies, one ship, hotels and a bank. Information and consultation campaigns, including special events, presentations to schoolchildren, a quarterly magazine, 'Minitel' phone-terminals, and information booths have been set up to include citizens in the new scheme.

In Toulouse, the city, the semi-public enterprise for public transport and the society which has created a smart-pass, work together for the readjustment of the transport services to meet people's needs (EF 1993a). In Germany, the concept of "short distances" gains ground in many cities. Heidelberg, Freiburg and Basle have been pioneers in introducing low-noise vehicles in noise-protected districts and eco-tickets for public transport. Clean, silent and fast tramways are gaining acceptance in European cities. In France, Nantes, Grenoble and Strasbourg, from 1985 onwards, introduced three technological generations of tramway (EF 1993a).

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#### **D. INNOVATIONS FOR THE SOCIALLY SUSTAINABLE CITY**

The social city, "the city of solidarity and citizenship", cannot be perceived without equity, otherwise it will be the polysegmented city (Moss) or the city of forced solidarity (Durkheim). Even in the most prosperous European cities, there are urban islands where environmental degradation and social exclusion go hand in hand. They are overcrowded, extended zones in run-down city centres or chaotic peripheral zones, where the disadvantaged sections of society tend to be concentrated (Martinotti 1993). They remind us of the third or even

the fourth world.. They are the lowest depths of the city, where the city secretes another city or the tentacular suburbs that have nothing in common with the poetic "tentacular" cities of Verhaaren. They are places of functional impoverishment, with poor housing and insufficient equipment and facilities. Is it a coincidence that the social features of these areas are poverty, delinquency and crime, high unemployment, low mobility, little access to information, education and training (EF 1992b; Jacquier 1991)? Partnership and solidarity are highlighted as European efforts towards the city that integrates and assembles (DIV 1995).

The spirals of unemployment and exclusion scar the faces of cities. In the 1990s, the European Union has stepped up the pace of its action for the disadvantaged and the excluded. In this vast and vague category, one should include the more than 52 million people (15% of total EU population) estimated to live below the poverty line, the 18 million unemployed and more than 3 million homeless. The need for new sources of employment is sharp and the achievements not always promising, even if everybody recognises the need to move from assistance to the unemployed towards work incentives for the future worker. The European Confidence Pact for Employment is described as a process to restore the confidence of European citizens. Confidence cannot be decreed, it has to be won. Rehabilitation and renewal works, cultural tourism, landscaping, caring about the equilibrium of urban aquatic systems, nurturing biodiversity, enhancing indigenous flora and fauna, protecting wildlife sanctuary areas, bio-producing locally for the self-sufficient society, promoting a sounder urban metabolism (reduce, reuse, recycle, repair) and better neighbourhood management may be important sources of employment, confidence and empowerment (EC 1995b).

In Rinkeby, Sweden, the merging of social services and the support for employment generation, in a community highly dependent on social welfare, brought significant results. The project includes meaningful training, the establishment of an SME incubator for immigrants and the creation of new jobs in activities ranging from crime and drug abuse prevention to theatre productions (EF 1996c). In Galway, Ireland, the work of the Community Action Group now continued by the Galway City Partnership Company represents a "bottom-up" approach to local economic development. It has a Board of Directors composed of social partners, with representatives of trade unions and employers, state agencies and community and voluntary organisations. The aim of these partnership companies is to oversee the integrated development of particular areas of the city through local community initiatives, enterprise creation, training and education, environment and infrastructure improvement and the capacity building of local people (EF 1997d).

Improvement of the housing cells of a city can be given new opportunities if governments, local population and the business sector collaborate (OECD 1996a). Mass housing (social and subsidised) has often created social tensions on the urban fringe. In many European cities, housing is now becoming self-regulated, local, personal, individualised, proactive, with corporate neighbourhood space and responsive local management. Vibrant local communities, fostering identification, are replacing void neighbourhoods. A new human face is judged necessary in most of those estates built quickly and cheaply after the war, as if they were to house "interchangeable people". After the celebration of functionalism and the rigid zoning, there is a search for multicultural, mixed human spaces. The Mascagni development in Reggio Emilia shows how a multifunctional urban space can be created from a rigid

series of anonymous buildings, a functional marriage between old and new, with integrated public services and schemes to create local business (EF 1993a).

Partnership between national and local authorities, housing associations and tenants, and a private sector developer are also being formed for the reshaping of housing estates. The renewal of Holly Street Estate in London, a housing estate notorious for its state of deprivation, was initiated to maximise every opportunity for community and economic growth through the redevelopment process and to help break the cycle of welfare dependency and poverty. Pleasant Victorian-style houses replace the tower blocks, in response to discussions with tenants' groups, giving opportunity for home identification. Measures to involve the community included the establishment of the Holly Street Community Enterprise Trust, a body responsible for the physical management of the estate on whose boards tenants were represented; regular consultations with tenants; a freephone number to the Project Director; the publication of a regular newsletter; individual home visits and the establishment of a local housing management office (EF 1993a).

While a central government continues to play a central role in the provision of housing, its burden can be alleviated and new innovations can be introduced when authority is delegated. Local government in Kavala, Greece, in collaboration with other actors, is promoting a new residential extension to accommodate 7,000 people.

Planned in conjunction with a public development agency, it is a self-financing project with the local authority operating what is, in effect, a land bank to address the problems of making low-cost housing available, sites for improvements to infrastructure and services, and the incorporation of existing illegal housing developments.

It is the first post-war example in Greece of an organised development involving a local authority designed to provide housing for middle to lower income groups and to resolve land ownership problems through consultation. In Galway, the process has moved a step further, with local authorities, in addition to operating a number of low-cost home ownership schemes, offering assistance to two voluntary and co-operative housing associations (EF 1997d).

Affordability was probably the reason cited by the new political authority to explain the termination of the renewal of the "Barrio de Mil Viviendas", a dilapidated neighbourhood in Alicante, Spain. The former local authority had designed an ambitious plan, with the participation of the inhabitants, and was committed to engaging unemployed residents in the reconstruction of the quarter. However, the former mayor recognised that "if such a project stops without huge public protest, the mistake lies with the authority which initiated the project, without the full commitment of the inhabitants". This highlights the importance of community support as a prerequisite for undertaking major expenditure (EF 1996a).

In Finland, the Top Toijala project tried to activate and strengthen tenants' potential and engagement for the improvement of the Rautala housing area. A "community theatre" has been created to identify and propose solutions to problems and nourish visions and actions. Initial suspicion towards this unconventional and seemingly frivolous method has evolved into strong resident support for the project. An ambitious renewal has been planned with a modest budget (EF 1996c).

Urban safety poses a major challenge to cities and governments. While policing still remains essential, community projects in Denmark are being used to prevent crime. Action Plan 10, by involving tenants in successful renovation of their own neighbourhoods, has contributed to crime prevention. By providing them with better physical surroundings, offering them the possibility to realise their own potential, developing pride in an area, and giving the example of working adults to youth familiar with high unemployment levels, this project has addressed the underlying causes of criminality. The safety committees in the neighbourhoods of Barcelona involve citizens who are engaged in improving the quality of daily life (EF 1993a).

Graffiti attacks, unrelated to any form of artistic expression, seem to be the post-modern way of attacking public spaces and property. An example of a successfully implemented integrated approach to fighting graffiti in public spaces is a micro-project in Maastricht. It includes extra means to trace the offenders, education programmes to improve the skills of graffiti "artists" and an anti-graffiti bus with formerly unemployed people specialised in removing graffiti. The city made a wall available to citizens wishing to express themselves using graffiti. Within two years the damage caused by graffiti pollution decreased considerably (80-90% at the railway station).

Tracing of offenders and conditional or alternative punishment have a noticeable effect on preventing recidivism, while there are former offenders, who, after their training, have become famous graffiti artists (EF 1993a). Given the high cost of removing graffiti, the project brings an overall high return with a positive impact on job creation and community awareness.

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#### **E. PARTICIPATION IN THE ART AND SCIENCE FOR THE CITY OF THE FUTURE**

"What is the city but the people?" (Shakespeare's *Coriolanus*, Act 3). Giving people opportunities is the decisive first step towards making cities efficient. One of the most basic principles in producing mega-results from micro-investments is the optimisation of human resources. Barcelona leads the way. A body of 40,000 volunteers was created in 1988 and trained for four years in order to work in the Olympic Games. After 1992, it was clear to the city authorities that this body was a living heritage and should be offered new opportunities. The municipality conferred prestige on the group and helped its self-organisation into a productive force. The most active group of volunteers created an association – Volunteers 2,000 – which manages the whole voluntary body. Today, the city has 50,000 volunteers assisting in all types of projects, safeguarding the functioning and minimising the cost of every action. This is a good lesson for cities in search of projects of maximum financial return. Mathematics suggest that projects having almost zero-cost may have nearly infinite productivity.

The rehabilitation of the Ciutat Vella, in the historic centre of Barcelona, is an unprecedented and unique event, in terms of scope and civic spirit. Following the opening of the city towards the sea and the creation of the Villa Olímpica, the whole urban fabric is changing, with the injection of improvements on various scales. Selective renovation, rehabilitation, construction, pedestrianisation and greening are the visible elements. Civic centres have been created and have become frequently used meeting points and a cultural reference.

The invisible elements responsible for the greatest change are the strong neighbourhood groups which, in partnership with the authorities, played a pioneering role in the allocation of new housing and services, the dismantling of unsound activities and the whole change of climate (EF 1993a; Rueda 1995).

A community may profit when a municipality makes planning permits conditional on specific terms, as co-operation with private investors can decrease the social cost of a project. In Stockley, a former industrial dump became an example of bold environmental action. A partnership between the developer, the local authority and the university created an international business park and public parkland including recreational facilities. In exchange for the right to construct the business park over 36 hectares, the developer guaranteed the reclamation of the whole site (140 hectares), its environmental enhancement and landscaping. Local residents were involved in the process through extensive community consultation (EF 1993a).

Participation, innovation and planning confront new challenges and, in 1982, Evora was the first Portuguese city to prepare a municipal master plan. The political situation after the 1974 revolution favoured citizen participation and the municipality led a long project of consultation. The common reflection and dialogue allowed the rigorous respect of the plan by all concerned. It trained the collective conscience and favoured participation in all urban activities. The plan, approved by the government in 1985, aimed at creating a viable economic base and improving the environment and living conditions. Ten years later Evora was the leader of the European network "Strategies for Medium-sized Cities" (EF 1997d). In the evolving world of planning where many components become unpredictable and uncontrollable, Evora enhances informal input. The preservation of its monumental culture depends on everybody.

There is such a notion as "Euroaesthetics". There are as many aesthetics as ways to understand a city's soul, to appreciate the desires of its citizens and to listen to its heartbeat (EF 1995d). Public spaces, described by Koolhaas as fortresses of freedom (La Ville 1994b), have great potential as islands of urbanity in the archipelago of the city (Council of Europe 1992; UNESCO 1995).

Public open space should enhance aesthetics and sociability and serve as a place for "negotiating" democracy. Setting up qualitative recommendations for the functional, environmental, cultural and aesthetic character of the spaces, roads and pavements, roadside plantations and public lighting is very important in forging cultural identity, of which process the Manual of Public Spaces in Brussels is a good example. The unification of the archaeological spaces in Athens and their functional and aesthetic links to green spaces is expected to create a public space of high value (EF 1993a).

Citizen participation is a determining force not only for the preservation of heritage but also for the rejection of projects which do not respect it. Saltsjöbaden, near Stockholm, constructed at the end of the last century, offers a suitable example of constructive citizen alternatives to government plans. A project for the construction of an anonymous apartment block on the sea-front gave rise to citizen protests. The "charette" method was used to assemble the opinions of all actors, local residents, promoters, politicians, social partners and planners. For an entire week, they worked together to elaborate a vision for a future respecting the past. The result was more than the rejection of the concrete project; it was also the beginning of an extraordinary dialogue on the built landscape on which they had been born and which would outlive them.

Future citizens must be given high priority, not simply as recipients of, but as participants in innovatory processes. Hundreds of French cities establish "municipal councils of children". The "Cities in Schools" project in the UK addresses the multiple needs of persistent truants and underachievers (EF 1993a). The Finnish project "Children as Urban Planners" educates future citizens in environmental awareness and responsibility for their built and natural environment (EF 1996c). In Milan, the "Council for the Well-being of Minors" will implement projects where children, with their teachers, will single out open spaces to be reclaimed, prepare models and put into practice the changes envisaged (WHO-OECD 1996).

In Dunkirk, neighbourhood committees with young people aged between 12 and 13 years, have proved to be promising for the future of the city. Cities generate new identities. New visions emerge, towards a human face for the urban environment (Abbott 1996; Short 1989; World Bank 1995a).

Innovative milieus in government, research and education, business and civic participation, without forgetting the creative links between them, are cornerstones for sustainable progress. The geographical distribution of the identified innovations highlights a correspondence with the map of competitive European regions. In Italy, 6 out of 11 selected projects (EF 1993a) come from Emilia Romagna, a region with traditional openness, the paradigm of small and medium enterprises. Putnam asserts that Emilia Romagna is "not populated by angels, but within its borders collective action of all sorts, including government, is facilitated by norms and networks of civil engagement" (1993). One can refer back to the Schumpeter definition and reflect on what creates or obstructs new ideas and what promotes or inhibits successful coalitions.

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#### **F. EPILOGUE: WHAT LESSONS FROM EUROPE FOR THE EAST ASIAN ARCHIPELAGO OF CITIES?**

Initial understandings of the term urban innovation were moulded by this Odyssey through countless practical applications which can be crystallised in the following definition:

**Urban Innovation = Creative New Concepts + Coalitions for their Implementations => Improvement of Quality of Life in Cities**

The participative innovations we have inventoried in Europe permit an attempt at a decalogue of conclusions, lessons and messages. Benefits coming from the innovations include lower expenditure, greater social cohesion, greater faith and pride in the city and government. This list of advantages is by no means exhaustive. How could it be, if so much potential for further participatory alliances exists, waiting to be tapped in new and creative ways?

#### ***1. Cities are privileged places for innovation and participation***

Cities are the most complex and dynamic ecosystems, where diverse creativities accumulate and cross-fertilise. The synergetic results are much more important than the additive ones. Doxiadis, the famous Greek planner, founder of Ekistics, represented a village as a whole of blue dots, and one red one, a "red" person (Einstein? The village idiot?) and the town as a whole of blue dots with four or five red ones floating around. In a city, there are various groups of red people who interact, while many blue dots turn purple. This metamorphosis is the quintessence of innovation.

## ***2. Participative innovation is a precondition for progress***

Linear evolutionary change is not sufficient for progress in the era of sustainability and globalisation. This is particularly crucial when the failure of past-policies, or their incompleteness with respect to the social or environmental aspects of growth, is becoming evident. Many old beliefs and patterns have to be destroyed for a new world to be born. Innovation needs strong coalitions for the implementation of bright ideas. New coalitions to overcome obstacles and adopt new ways of thinking and acting are required.

## ***3. Everybody is a source and an actor of innovation***

Chance or conscious strategy, crises or abundance of ideas could all be sources of innovation. As every wind of change brings its own uncertainties and unpredictability, a flexible but strong alliance is needed with all actors to create the space and the conditions for the transition. Governments should give special opportunities to the concepts and ideas proposed by those usually without a voice. Empowering them ultimately empowers everyone.

## ***4. Participative innovation shares costs and multiplies responsibilities***

Sharing costs and benefits being the essence of any participative action, the multiplier dimensions in matters of innovation are impressive. The enhancement of the sense of responsibility, linked to the introduction of an innovation, is decisive for its social acceptance. The involvement of the business sector, social partners and citizens makes possible projects at an otherwise prohibitive cost.

## ***5. Innovation, decentralisation and efficiency***

The invention of a new idea, product or concept probably requires a higher degree of decentralisation than does its implementation. Cities which constantly innovate might not be efficient in the short term. Achieving a balance between a diversity of ideas at the initial stages of the project and an integrated approach for their implementation is essential. Governments should allow as many voices as possible to be heard, and as many values as possible to be represented, but not allow valuable projects to stop or get delayed.

## ***6. Innovative coalitions for the art and science of consensus***

The architecture of coalitions is very diverse and challenges general rules. Alliances based on agreement, mediation, political manoeuvring and negotiation can best direct the wave of the future. Mediation at an early stage can be critical in certain cultural settings as a "face-saving" measure (Kwon 1995).

Making compromises and reaching an agreement at an early stage is much preferred to tiresome, time-consuming, costly and hostility-engendering processes of conflict and arbitration.

## ***7. Openness, focus, proactiveness***

Models of coalitions that place people at the centre of a genuine, far-reaching development strategy seem to have an unparalleled potential. Often, policy analysts are stunned by the important role individuals play in generating and

implementing innovations. Charismatic leaders, scientists or simply local citizens/workers are all potential bearers, initiators or adapters of innovations. A common problem or a common perspective often ferments the common ground for the coalition. Anticipation of problems might be decisive but it cannot constitute an entire strategy.

### ***8. The most important innovation: Stopping a dangerous, widespread practice***

Changing basic consumption patterns or well-established organisational schemes is the most difficult to achieve.

Conventional organisations resist innovation. They are largely created to replace the uncertain and haphazard activities of voluntary or ad hoc endeavours with the stability of organisation, standardised procedures and relationships. Breaking this pattern requires a strong front, especially when core interests by various stakeholders are touched.

### ***9. Innovation, change and homeostasis***

Innovations may be both superb and dangerous. They might create serious disruptions, lead to points of no return and affect the cultural stable equilibrium of a city. A strategy of moderation is needed for the gradual introduction of the exceptionally new elements. Citizen participation can act as a cultural net and business participation as a financial one. Openness, awareness, civic engagement, efficient management and a balance of needs assure "homeostasis", change within stability.

### ***10. From an innovative milieu to the struggle for survival***

A permanent environment for the quiet incubation of ideas and the construction of partnerships leads to a rapid mobilisation towards valuable solutions when problems become acute. Innovation might also be the result of a struggle for survival. Complex problems that inhibit innovation often create a sharper need for it. After all "necessity is the mother of invention" and an ancient legend tells us that the God of Innovation is the Son of the God of Scarcity and the Goddess of Beauty in Distress.

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