Resum de Tesi Doctoral

UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Escola de Doctorat

DNI/NIE/Passaport	
Nom i cognoms	Nicola Tollin
Títol de la tesi	A RESILIENCE TRANSITION FOR SUSTAINABLE URBAN DEVELOPMENT: A process design methodology to support participatory decision making
Unitat estructural	Institut de Sostenibilitat
Programa	Sostenibilitat
Codis UNESCO	332900 / 620103 / 631106 /

(Mínim 1 i màxim 4, podeu veure els codis a http://doctorat.upc.edu/gestio-academica/impresos/tesi-matricula-i-diposit/codis-unesco)

Resum de la tesi de 4000 caràcters màxim (si supera els 4000 es tallarà automàticament)

Today over 50% of world population lives in urban areas (75% in EU), and cities account for 60-80% of global energy consumption and the same share of GHG CO2, producing 50% of global waste, consuming 75% of natural resources and producing 80% of global GDP. (UNEP-DTIE, 2013)

“Climate change has the potential to influence almost all components of the urban environment and raises new, complex challenges for quality of urban life, health and urban biodiversity. Some cities will experience droughts and increased temperatures. Others may experience floods. Climate change will affect many aspects of urban living from air quality to consumption patterns. The EU has put in place ambitious policies and initiatives to promoting solutions on the ground. These include initiatives to increase resilience and promote renewable energies and low-carbon technologies.” (EC, 2015)

Cities have already started to develop specific mitigation or adaption or risk policies/plans/actions; and a relatively small but growing number of them are now pioneering an integrated approach urban resilience based, facing challenges related uncertainty and unpredictability of the phenomena they are addressing, and ultimately suffering for a lack of knowledge in terms of research, evaluation methods/tools and planning skills. (EU, 2013)

Following a review of sustainable development principles and key urban challenges, as climate and global environmental changes, it is here presented a process design methodology for urban resilience transition.

The methodology is based on broad stakeholders’ participation, following co-design and co-evolution principles. The most innovative element of the process design methodology is related to the contribution in terms of planning theory and practices for urban resilience, cross-scale both in time and space, which is currently very little understood and developed. Furthermore the participatory process design approach re-define the role of planner in a wider perspective, not any longer as demiurges, but as facilitator of planning and design processes.

The original objective of the thesis, to develop a methodology for integrated evaluation of sustainable urban development, was expanded and broadened to address the very needed request, as proven by both existence of scientific literature and EU/UN policy document, for new forms and methodology of planning addressing urban resilience, as a dynamic process of continuous adaptation of cities balancing between the need to reduce risk and to innovate, ultimately to increase well-being urban citizens, through co-evolution based participatory planning processes.

The results is a fully working process design methodology for urban resilient transition, including the original system thinking approach and embedded with an integrated evaluation of sustainability system, which has been developed from inception to a Technology Readiness Level 7-8, finally including the system prototype demonstration in operational environment.

Lloc: Bradford, UK Data: 1/09/2015

Signatura