POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture
Honors theses

PARTICIPATORY PLANNING AND SUSTAINABILITY: A PROPOSAL FOR A GEOGRAPHIC INFORMATION INTEREST VALUE FRAMEWORK WITHIN MCDA MANAGEMENT METHODOLOGIES IN THE CAREMA TERRITORY

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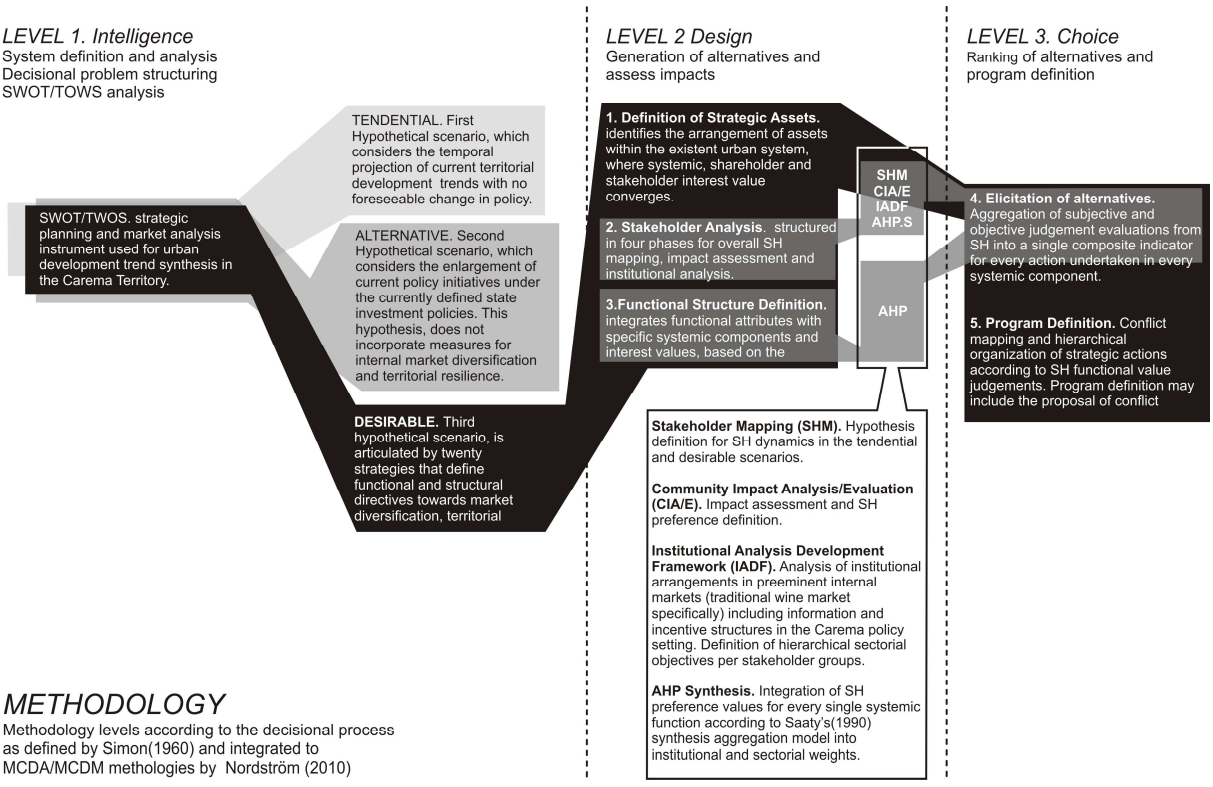
Urban systems are the physical expression of the economic and political organization of society (Weber,1921). Like most dynamic systems, urban and regional systems they are highly complex and susceptible to structural and organizational shifts derived from systemic rearrangements in policy making and the emergence of new parametric variables to their constitutive behavior. Similarly, as in all organic systems, there are ecological, physical and institutional constraints that affect the behavior of internal economic relations to well-defined trends and interactions. In this sense, the compatibility between urban systems and ecologically sustainable systems (limited by definition by their own systemic capacities and organizational arrangements) is not necessarily guaranteed by the sole maxims of economic growth, technological innovation or any of the contemporary paradigms that have defined public policy in the last thirty years.



METHODOLOGY
Methodology levels according to the decisional process as defined by Simon(1960) and integrated to MCDA/MCDM methologies by Nordström (2010)

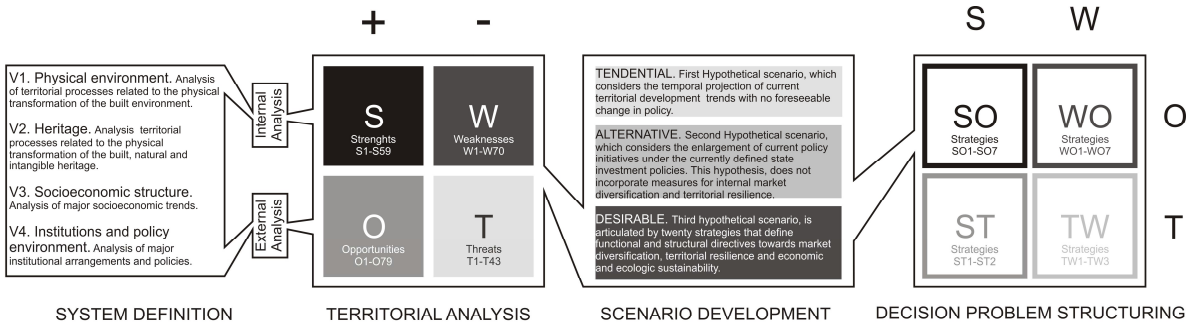
From an institutional perspective, the problem of adaptation to a new parametric production infrastructures and technologies seems to be determined by economic geography, linked necessarily to the political and socioeconomic dynamics of the nation-state which, through the management of labor capital relations, production and public policy, seeks to ensure institutional consensus and achieve practical goals of sustained, but not necessarily sustainable economic growth.

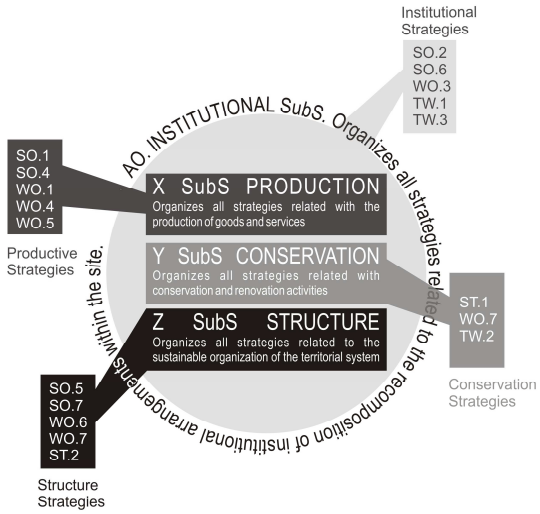
As demonstrated by the deep economic crisis in Europe, the design and implementation of integrative decision-making mechanisms and methodologies for territorial cohesion and management of resources within the framework European Union cohesion policies, has consistently deepened the structural differences between territorial states, profoundly changing their domestic markets (particularly in those in the so called “periphery”, Southern Mediterranean and Central Europe), and largely cementing the main causalities for the present financial crisis. Prospective change for the current European urban and regional reality (greatly transformed by the implementation of this specific model of growth and spatial development) requires a profound reorganization of institutional dynamics and the structuring of effective, democratic models of territorial cohesion and sustainability.

The thesis presented in this research proposes a decision-making architecture and methodology for Carema, in the northwestern Piedmont province, as a technical alternative to European Union mechanisms for integrated planning and financing. This specific application, restrained by a particular territorial scale and special market and spatial conditions, develops from a comprehensive analysis of overall socioeconomic trends and regional particularities and the definition of multiple solution scenarios, including a desirable scenario where economic and ecological sustainability is achievable.

Certainly this assessment is constrained by contemporary economic and urban theory and the particular structure of local and regional markets. Nevertheless the decisional optimization structure and Multicriteria Decision Analysis/Method (MCDA/MCDM) framework proposed takes into account this morphological and institutional constraints and structures an action program for the development of sustainable growth conditions and the overall recovery of natural, physical and intangible heritage.

The proposed decisional architecture also defines a system of strategic actions for development in a specific physical heritage territorial asset, with very specific economic, morphological and organizational characteristics. Similarly, this system adds specific functionality information to each systemic component of the system, by adding individual social economic and technical assessments for each specific action, including those directly related to the sustainability issues.

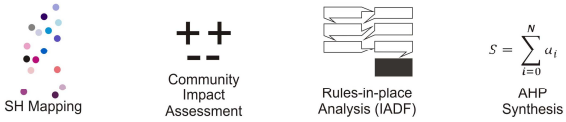




LEVEL 1. INTELLIGENCE

First methodological phase: defines problem structure, general and specific objectives and strategic actions.

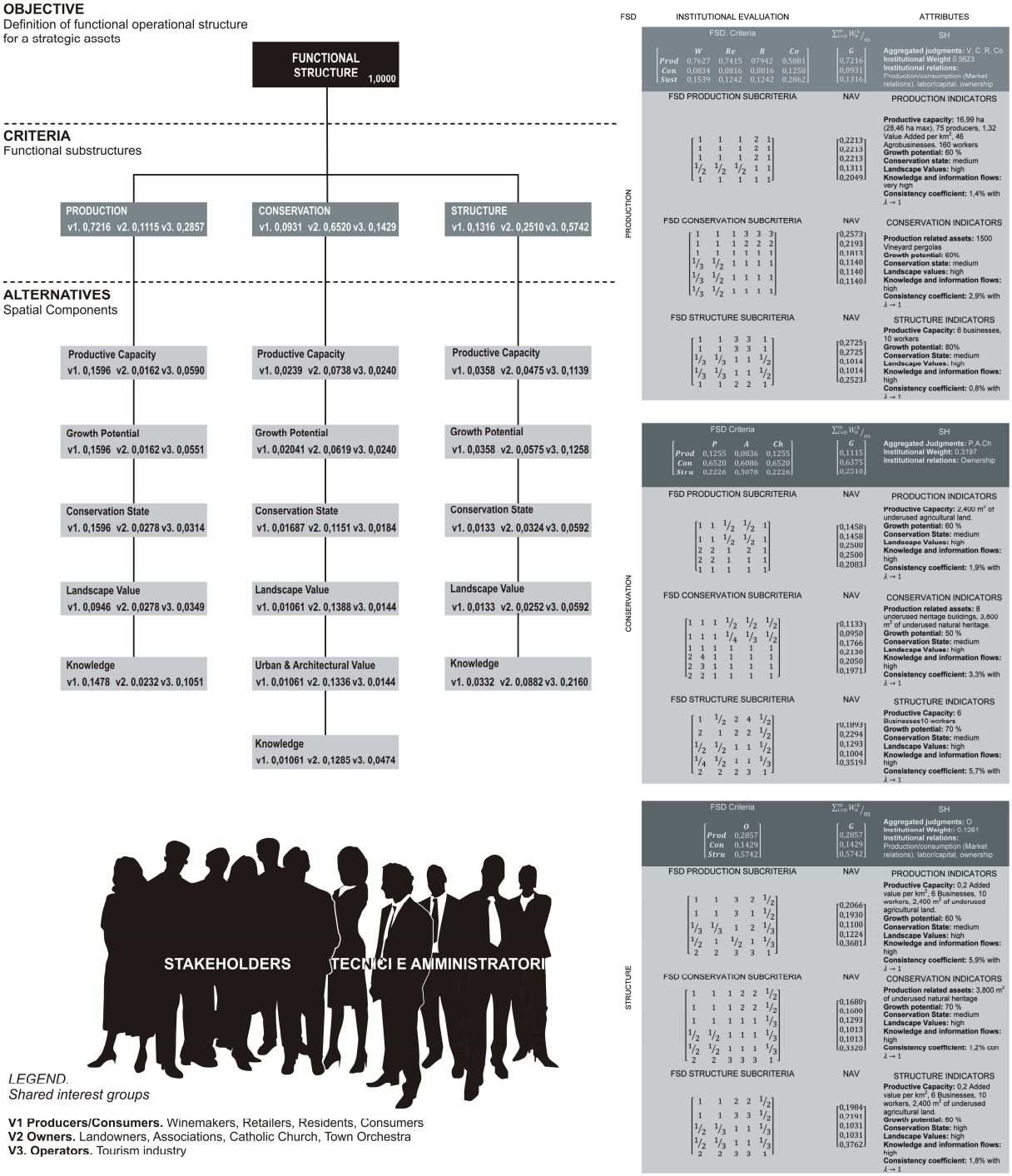
First Technical Assessment. Definition and structuring of the decisional problem (desirable scenario) from a comprehensive territorial, socioeconomic and institutional analysis. This methodological phase organizes the decisional problem structure in four typological substructures that define specific guidelines for development within the decisional problem. This phase was developed by managers in collaboration with stakeholders.



LIVELLO 2. DESIGN

Second Methodological Phase. defines functional MCDA/MCDM architecture by integrating specific systemic components and assigned interest values defined by stakeholder analysis.

Second Technical Assessment. Defines the MCDA/MCDM framework of development for the decisional problem, through stakeholder analysis and functional structuring which assigns specific actions and interest values to strategic assets. This phase was developed by managers in collaboration with stakeholders.



LEGEND.
Shared interest groups

V1 Producers/Consumers. Winemakers, Retailers, Residents, Consumers
V2 Owners. Landowners, Associations, Catholic Church, Town Orchestra
V3. Operators. Tourism industry

LEVEL 3. CHOICE

Third Methodological Phase. defines stakeholder interest value levels for every functional Substructure in the decisional problem and pounders new functional attributes assigned to specific assets

Third Technical Assessment. Defines Stakeholder interest value for every functional substructure and assigned strategic assets including cultural and natural heritage on the decisional system. Also, this evaluation assesses the potential institutional scenarios derive from the redefinition of the economic and structural organization of the overall urban system. This phase was developed by managers in collaboration with stakeholders.

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