

# The European Network for Sustainable District Logistics (ENSDL)



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INNESTO project**

**innesto**  
a project for Sustainable District Logistics



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# ENSDL nature, mission, vision and actions





# ENSDL, European Network for Sustainable District Logistics, is a Non-profit International Association

created after the conclusion of the INNESTO project (January 2002 – June 2004) co-financed by the EU Commission under the Fifth Framework Programme

launched together with the European SDL Charter in the INNESTO Final Conference (28-29 June 2004) and having the following *mission*:

*to promote the use of the SDL (Sustainable District Logistics) approach and tools in the analysis and improvement of the logistics conditions of a specific territory, with a particular reference to the costs associated with logistics operations from an economic, social and environmental point of view*



## The ENSDL *vision* corresponds to the definition of SDL as a paradigmatic change:

From	To
Logistics is the "process of planning, implementing and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory from point-of-origin to point-of-consumption for the purpose of conforming to customer requirements".	<b><i>Sustainable District Logistics (SDL)</i> is the integrated management of materials, energy and information flows in a cohesive territorial system to improve access to goods, services, people and places, maintaining and renewing the available resources (human-made, human and natural).</b>
Council of Logistics Management (ECMT/OECD, 1997)	INNESTO project

The SDL approach requires open confrontation, debate and research to overcome the negative impacts of the current logistics process on a significant number of economic activities and geographical areas

# The ENSDL implements actions defined by the European SDL Charter to promote



1. The sustainable accessibility to goods, services, people, places and information. This is a requirement to improve the quality of life based on equity between individuals, territories and generations considering both local and global dimensions and looking at the integration of different European contexts.
2. Participation, cooperation, networking, negotiation and shared visions. In fact, sustainable development requires the motivation of different stakeholders, citizens, public and private sectors while respecting all opinions and points of view.
3. A territorial governance based on a holistic vision considering the future generations. Territorial and business plans should valorise and integrate the diversity of social, economic and environmental features in order to cope with the negative aspects of a high mobility society.
4. A flexible and evolving toolbox. In fact, new methodologies are necessary to foster mutual learning and negotiation, through research, analysis, and market strategies (production and consumption) on a regional level and with benefits for local businesses and planners.

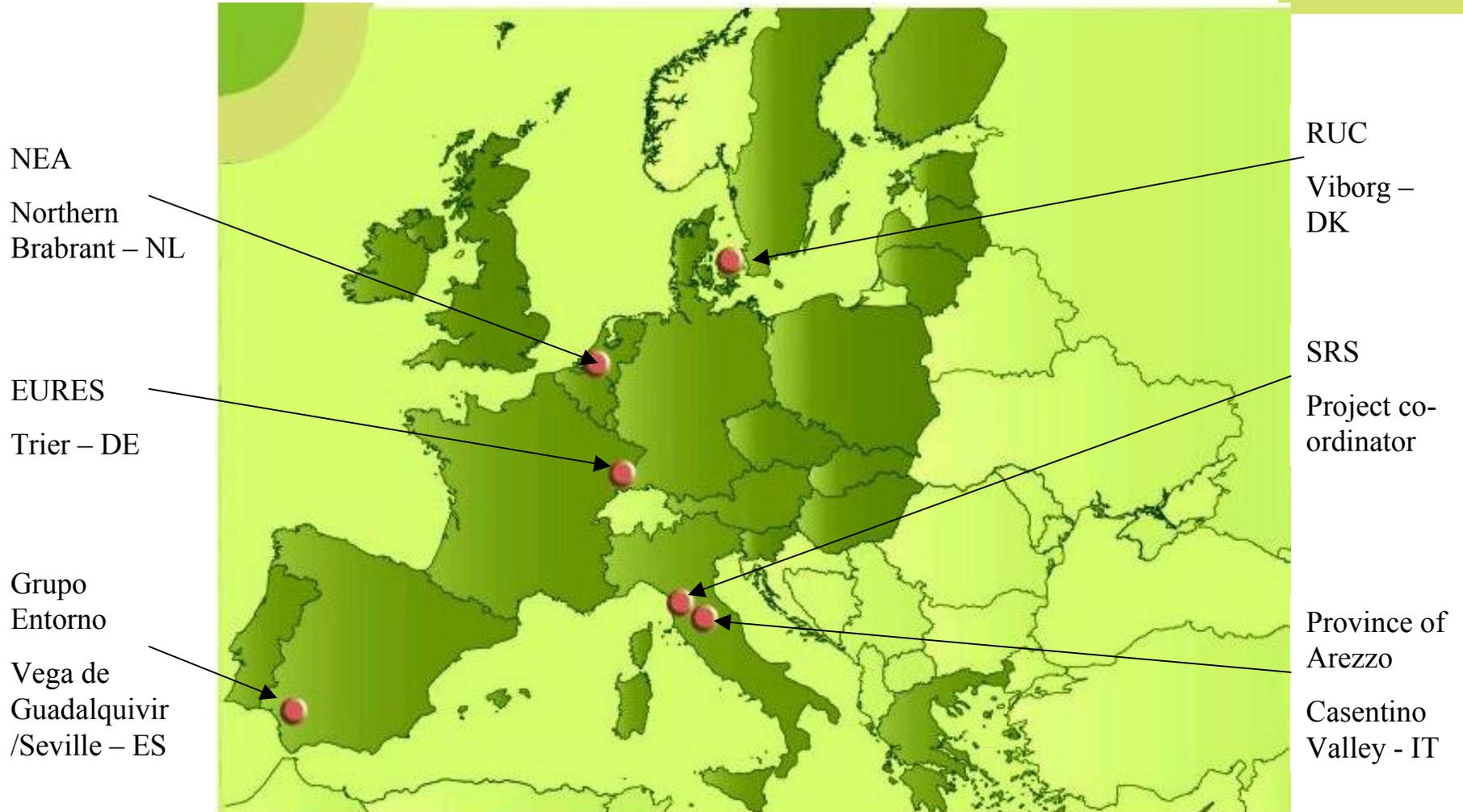


## **The ENSDL Associates can be:**

- local public authorities
- public and private organisations
- businesses and business associations
- NGOs
- research institutes and universities
- interested persons, that is individuals interested and capable of participating in the activities of the Association.

*Founding* Associates are those who were involved in INNESTO project (from which the ENSDL originated) and who confirmed their willingness and commitment to be members of the Association

# The INNESTO partners and case study areas



# ENSDL knowledge and tools





## The ENSDL maintains, develops and disseminate the knowledge provided by the INNESTO project

....to innovate theory and methods	<b>The SDL Discussion Paper (Theoretical framework)</b>	A
....to involve stakeholders	<b>The SDL Paper on Stakeholders involvement</b>	B
....to innovate territorial and business plans	<b>The SDL Handbook (Operational framework)</b>	C
.....facilitating evaluation and decisions	<b>The “SDL.development” system, integrated on-line (Internet – based) tool to carry out SDL projects</b>	D
....to communicate and exchange experiences	<b>The web site <a href="http://www.districtlogistics.net">www.districtlogistics.net</a></b>	E

**Additional documents (e.g. a paper on Life Cycle Analysis and internal reports) and tools (e.g. benchmarking, analysis of logistics flows)**

A

# The SDL Discussion Paper



The Discussion Paper is intended to contribute to the ongoing debate promoted within EU research, documents and White Papers, in particular:

*A sustainable Europe for a Better World: A European Union Strategy for Sustainable Development*

*European transport policy for 2010: time to decide*

*European Governance*

*Corporate Social Responsibility*

*Discussion paper  
June 2004*

## **Sustainable District Logistics: a Theoretical framework for understanding a new paradigm**

**F. Strati, R. Schleicher-Tappeser, S. Loisele,  
L. G. Hansen, A. M. Di Paolo, A. Rosenbrand  
and S. Ojeda**

*The INNESTO research project is supported by the European Commission under the Fifth Framework Programme and contributing to the implementation of the Key Action "Policy Aspects" within the Energy, Environment and Sustainable Development Programme (Contract N° EVG1-CT-2001-00054)*



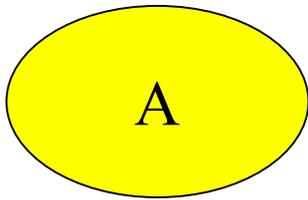
One of the main questions addressed by the Paper is:

How to move the current logistics management towards the integration between different interests, decision-making processes, identities, cultures, knowledge, skills and experiences?



**Integration is necessary to reduce the intensity of material flows and maximise the sustainable use of renewable resources by:**

- **favouring local networks and new styles of production and consumption**
- **promoting participation-oriented local development**
- **enhancing the reuse and recycling of materials**
- **extending the usable life of products**
- **substituting the use of material goods by services**
- **substituting physical movement (transport) by other types of access to goods and services (e.g. information technology)**
- **organising transport in an optimal way by exploiting all possibilities of bundling and co-operation adopting a territorial perspective**



# The SDL Discussion Paper



**The Discussion Paper provides the theoretical background for the Sustainable District Logistics (SDL) approach.**

**In nearly 110 pages, the 10 Chapters of this document present:**

- an integrated vision of Sustainability based on the *SQM - Sustainable Quality Management*®, which calls for a better Governance and for quality management (Part I)**
- the theories on economic, natural and knowledge systems, which contribute to define a District (Part II)**
- the principles of strategic management, glocacity and accessibility, which re-examine the current definition of Logistics (Part III)**
- the amalgamation of basic conceptions concerning these three dimensions (Sustainability, District and Logistics) giving the rise to the SDL approach**

Each Chapter reports experiences derived from the five local case studies performed during the INNESTO project

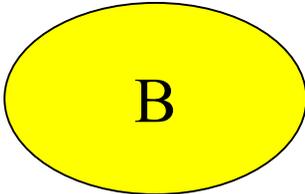


**This Paper regards the participation of local stakeholders in the development of a SDL project.**



**The main question addressed by this Paper is:**

**- How to develop methodologies that favour local stakeholders in the creation of a "new social and territorial pact" based on fair partnerships, negotiation and co-decision processes towards a long term logistics strategy capable of integrating the economic, environmental and socio-cultural resources of a local territory**

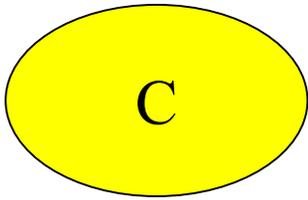
**B**

## The SDL Paper on Stakeholders Involvement



**In nearly 35 pages, the 7 Chapters of this document present experiences from the five local case studies of the INNESTO project. These experiences reveal the necessity to permanently support the stakeholder interests in relation to the scope of the specific project, taking into account among other things:**

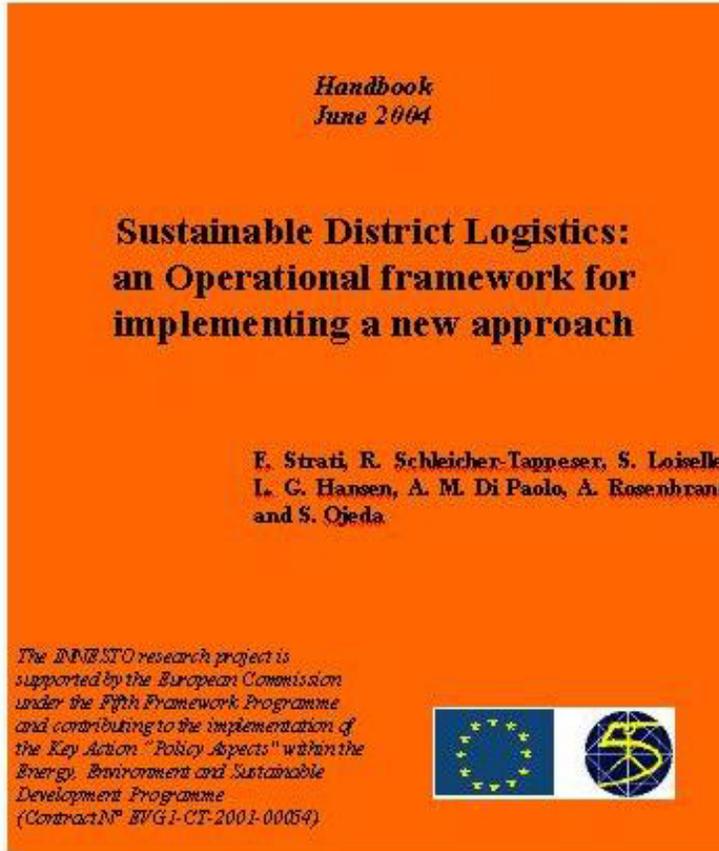
- the close relationships between logistics issues and several policy fields of territorial planning (e.g. spatial, rural, social services, employment, vocational training, corporate social responsibility, governance)**
- a wide range of relationships that can exist between the operators of an extended production chain or in a cross-border territorial area**
- the different interests, expertise and professional roles that can favour the identification of a multidisciplinary core group of stakeholders**
- women's involvement that can add new points of view to the traditional logistics approach**



# The SDL Handbook

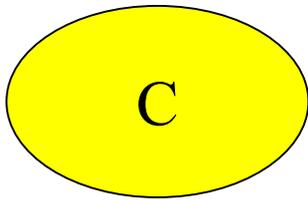


**The Handbook provides instructions and recommendations on how to manage the SDL methods and tools in order to carry out a SDL project considering the specific issues and the diversities of a concerned local context.**



**The Handbook is aimed at putting into practice the concepts and guidelines provided by the Discussion Paper.**

**The Handbook supports the utilisation of the “SDL. Development” system.**

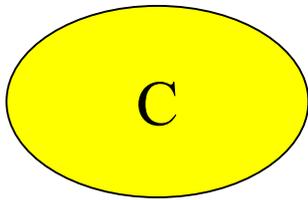


# The SDL Handbook



**The main questions addressed by the Handbook are:**

- How to involve local stakeholders in a SDL project in order to represent and combine different interests and points of view**
- How to analyse the main features of current local initiatives and the territorial aspects of the local context in order to formulate hypotheses of innovative actions**
- How to examine logistics flows and business performances at a territorial (district) level in order to integrate the hypotheses of innovative actions**
- How to determine locally shared visions of the future development (e.g. 15-year perspective) to reinforce the main hypotheses of innovative actions**
- How to utilise the “SDL.development” system, which is an Internet-based collaborative instrument for supporting evaluations and decisions**



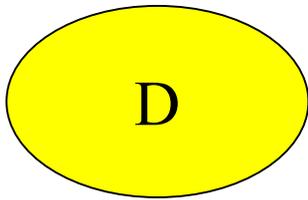
# The SDL Handbook



**In nearly 65 pages, the 7 Chapters of this document present:**

- **a coherent method to analyse and identify the local stakeholders to be involved in appropriate working groups along the project management**
- **an iterative open-ended process for the appraisal of a local context and the design of innovative actions that regard territorial and business planning through the utilisation of the SDL / SWOT analysis**
- **a description of the 32 aspects of the SDL approach to carry out the appraisal and design activities, together with the indicators to be usefully adapted to a territorial area**
- **a series of procedures to identify the district logistics flows and business performances, through questionnaires, data elaboration and estimation together with the description of the 10 aspects of the SDL approach useful to understand the orientation of business strategies (benchmarking)**
- **a methodology to perform workshops that facilitate the local stakeholders to arrive at a shared vision of the future development while simplifying, verifying and integrating hypotheses of innovative actions at business and territorial levels**
- **a description and some basic instructions to utilise the “SDL.development” system**

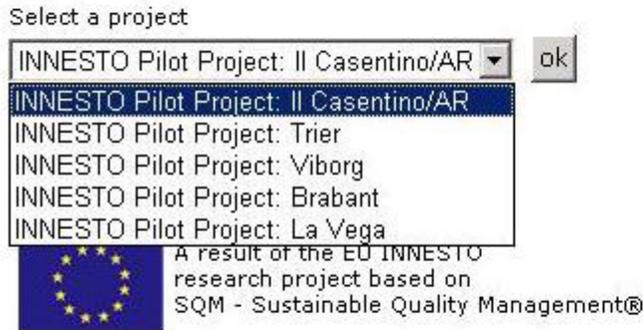
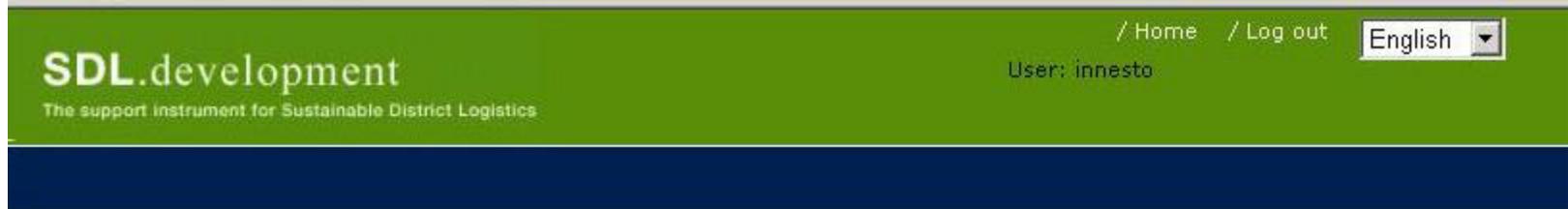
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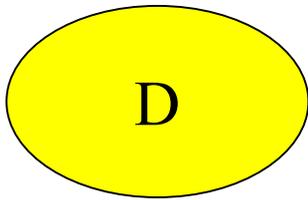
# The “SDL.development” system



The “SDL. Development” system is available to the ENSDL Associates who want to carry out a SDL project.



based on ‘SQM - Sustainable Quality Management®’ founded by Ruggero Schleicher Tappeser and Filippo Strati



# The “SDL.development” system



**SDL.development**

The support instrument for Sustainable District Logistics

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English

## INNESTO Pilot Project: Il Casentino/AR

### Browse task

- ▼ 1 Local Context Analysis (LCA)
  - ▼ 1.1 Overall analysis of the district
    - ▶ 1.1.1 Main indicators
    - ▶ 1.1.2 SQM Analysis
    - ▶ 1.1.2.OR Orientation
    - ▶ 1.1.2.SP Social Potential
    - ▶ 1.1.2.3 Dynamics
  - ▶ 1.2 Summary
- ▶ 2 District Logistics Analysis (DLA)
- ▶ 3 Strategy Development (STD)

### 1.1.2 SQM Analysis

based on ‘SQM - Sustainable Quality Management®’ founded by Ruggero Schleicher Tappeser and Filippo Strati

E

[www.districtlogistics.net](http://www.districtlogistics.net)



European  
Final  
Conference  
28-29 June  
2004  
**ENTER**

Welcome to

**innesto:**  
a project for Sustainable District Logistics

**ENTER**

The European Commission

Fifth Framework  
Programme 1998-2002

instruments and networks for developing logistics towards sustainable territorial objectives

The web site  
that will be  
changed in  
March 2006



The ENSDL guarantees a fair access of all the Associates to all the services and the instruments supplied from the Association on the basis of the following principles:

- to improve awareness and capacity of all kind of stakeholders to carry out SDL projects
- to facilitate stakeholders participation in SDL projects since their beginning
- to favour exchange of experiences and best practices among and outside the Associates
- to increase the value of diversity and solidarity among territorial contexts and social communities
- to promote positive courses of action in favour of the less developed territorial contexts and social communities
- to differentiate services and instruments according the territorial distinctive features and diversities
- to provide research, training and consultancy to develop the capacity of all the Associates to utilise the SDL approach and tools
- to increase the dissemination of the SDL approach and tools through the activities of the Associates, collaboration and professional solidarity among them
- to maintain and develop the SDL approach and tools in order to provide useful services to all the Associates

# Main tasks of a SDL project

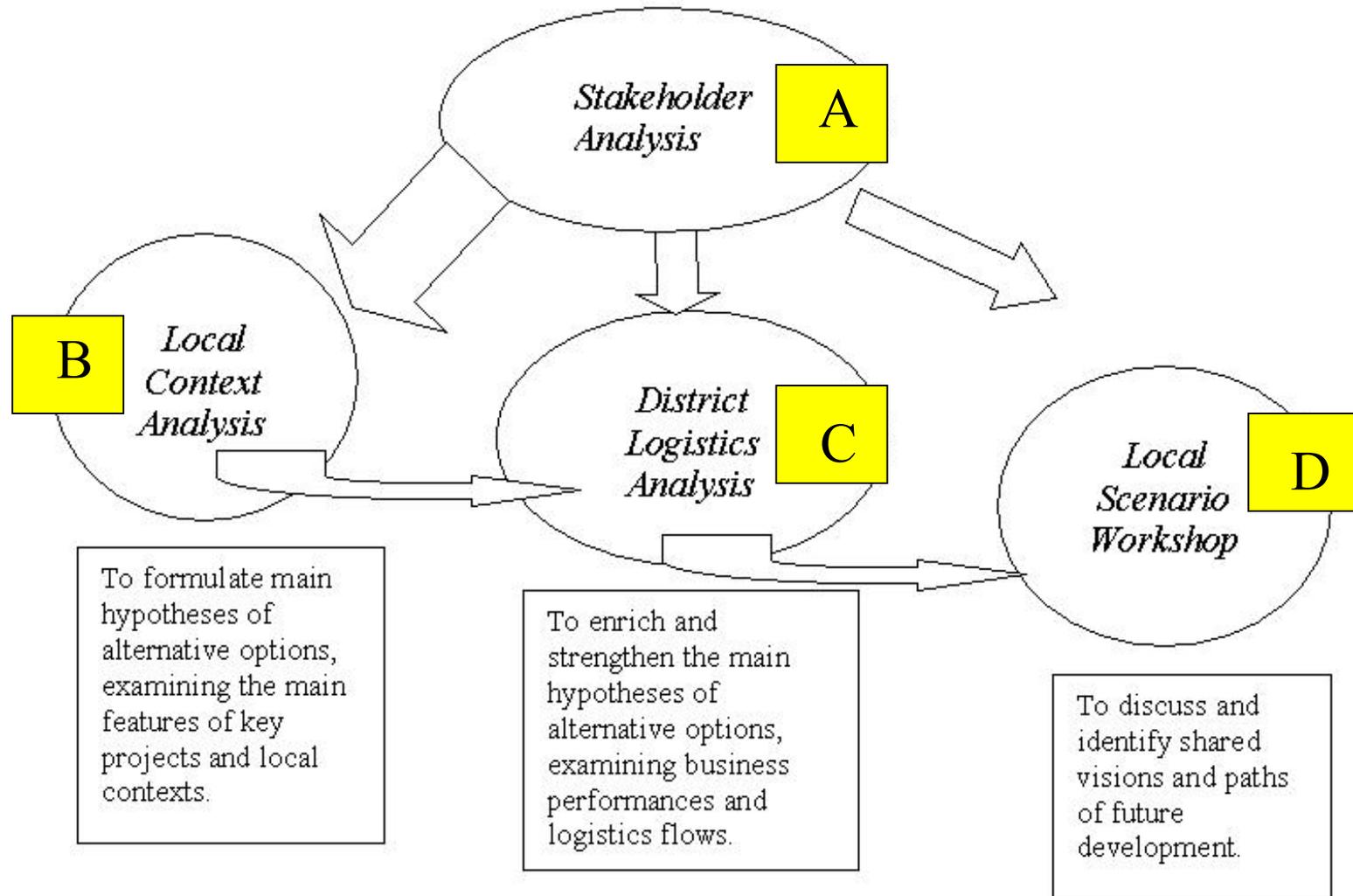


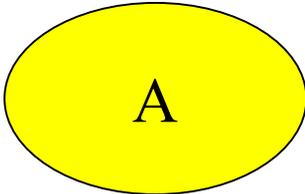


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## How to carry out a SDL project

Four main tasks





# A

## Stakeholder Analysis (SA)

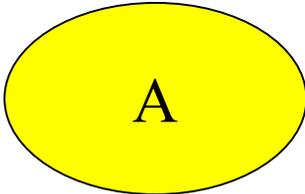


**An analysis of the local stakeholders should be made at the beginning of a SDL project, but it is useful to update the analysis during the project implementation both to adapt their involvement to the new developments (especially the hypotheses of innovative options) and to enlarge the representation of different interests and points of view:**

- the public sector (local and regional governments and authorities),**
- the civil society (groups and organisations of diverse interests),**
- the economic components (producers and suppliers, small and medium sized enterprises, larger companies, logistics and transport operators),**
- the social and environmental components (local communities, citizens and families, environmental organisations).**

**Three groups of stakeholders are suggested, since they play different roles in the appraisal and design activities:**

- the LAG, Local Advisory Group**
- the LPG, Local Project Group**
- the LSW, Local Scenario Workshop**



# A

## Stakeholder Analysis (SA)



### 1. The LAG, Local Advisory Group

**The LAG constitutes the local "political" branch of a SDL project. The LAG gives advice, discusses, addresses, suggests, supports and monitors the promotion and implementation of SDL initiatives.**

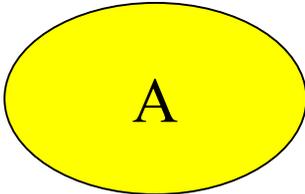
**LAG specifically participates in the Local Context Analysis (LCA), from which the main hypotheses of innovative options are derived.**

**To comply with this role, participants in the LAG are representatives of local associations of end-users, for instance businesses and trades, farmers, logistics and transport operators, public authorities, social communities, trade unions, environmental interests, etc.**

### 2. LPG, Local Project Group

**The LPG is the local "operational branch" of a SDL project, involving local experts in logistics, business organisation and/or sustainable development, chosen from existing local development & business innovation agencies, firms, local authorities and organisations.**

**LPG participates in the District Logistics Analysis (DLA), in which flows (e.g. material, energy, information, but also people) are examined in depth together with business performance (e.g. logistics costs, organisational networks and typologies, SDL indices).**



# A

## Stakeholder Analysis (SA)

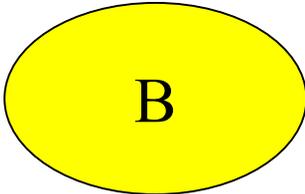


### 3. LSW, Local Scenario Workshop

**The LSW is not a permanent group in the structure of a SDL project, but it constitutes a central step to enlarge the points of view with the aims of determining a locally shared vision and paths on the future development (e.g. 15 year perspective) of sustainable district logistics (SDL).**

**The participants in a LSW should be selected to include and/or strengthen interests that are recognised to be relevant in relation with the results of the Local Context Analysis and District Logistics Analysis.**

**To this end, answers should be given to the question “who are the excluded and why?”, looking at the composition of the Local Advisory and Project Groups, as well as at the main findings of the Local Context Analysis and District Logistics Analysis.**

**B**

## Local Context Analysis (LCA)



**The Local Context Analysis serves to discover all the probable interrelationships between the current situations of logistics, the expected trends of logistics and the overall features (economic, socio-cultural and environmental) of each territorial system.**

**The most important actions (projects, plans, programmes) are taken into consideration in order to evaluate the impacts of logistics situations and trends on the territorial systems in terms of Strengths, Weaknesses, Opportunities and Threats (SWOT) according to the “descriptors” that distinguish the 32 aspects of the Sustainable District Logistics (SDL) approach.**

**Descriptions are formulated for each SDL aspect as basic guidelines to carry out appraisal and design activities.**

**For each SDL aspect a series of indicators are identified to facilitate a more in depth analysis of the concerned local context.**

The 32 SDL aspects, based on ‘SQM - Sustainable Quality Management®’, regard:

- 1) the Orientation towards SDL (10 aspects)
- 2) the key factors that characterise the Social Potential of the local context (16 aspects)
- 3) the levers of Dynamics that foster change in the local development patterns (6 aspects).

**B**

## Local Context Analysis (LCA): Orientation



The Orientation towards SDL approach is aimed at answering a first basic question:

<b>Which direction should be given to logistics systems in the concerned territorial system?</b>	
What do we want to sustain?	<b>The integration between three Development Dimensions:</b> <ul style="list-style-type: none"><li>• The environment</li><li>• Economy</li><li>• Socio-culture</li></ul>
Why do we want to sustain it?	<b>To integrate three Equity Dimensions</b> <ul style="list-style-type: none"><li>• Equity between individuals</li><li>• Equity between territories</li><li>• Equity between generations</li></ul>
How do we want to sustain it?	<b>Through the integration of four Systemic Principles:</b> <ul style="list-style-type: none"><li>• Diversity</li><li>• Subsidiarity</li><li>• Networking / Partnership</li><li>• Participation</li></ul>

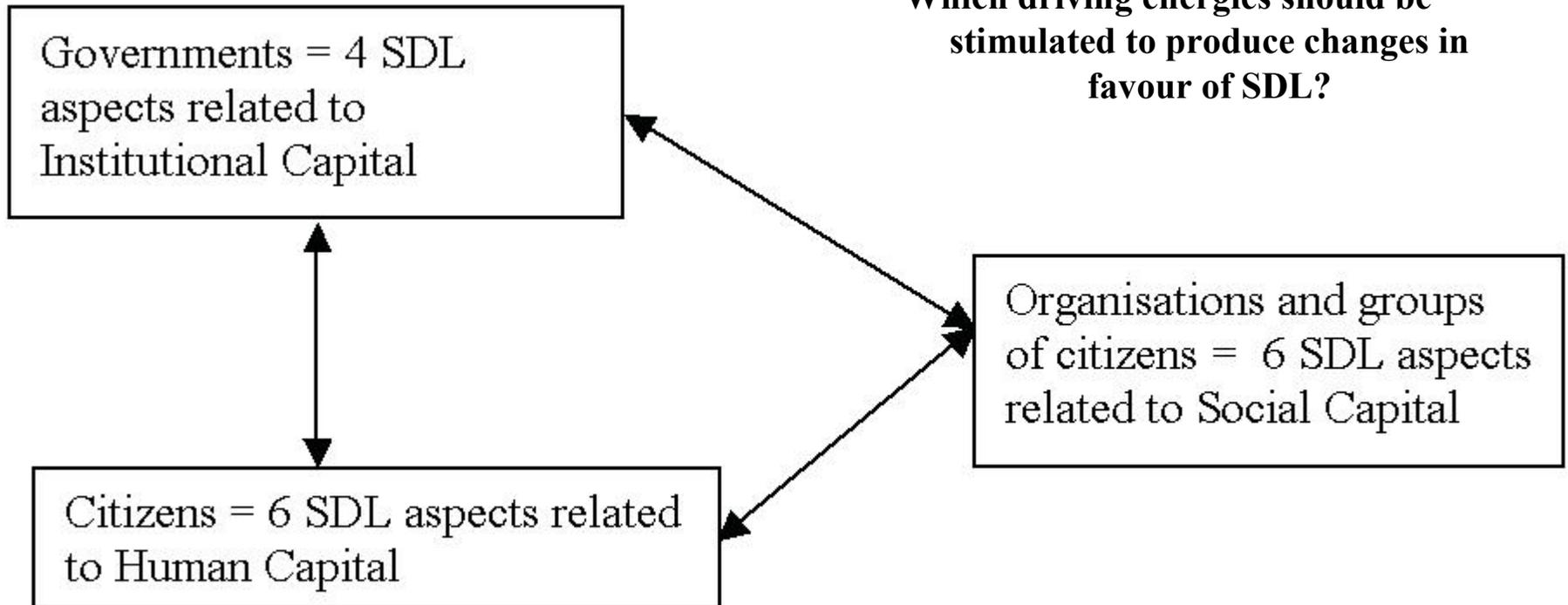
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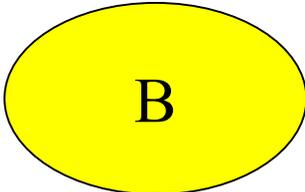
## Local Context Analysis (LCA): Social Potential



The analysis of the Social Potential of a specific local context is aimed at answering a second basic question :

**Which driving energies should be stimulated to produce changes in favour of SDL?**



**B**

## Local Context Analysis (LCA): Social Potential

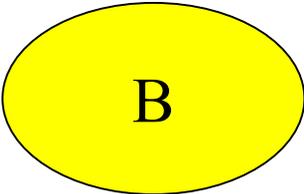


**16 aspects are taken into consideration and they regard the capacity for a multi-level Governance to foster a “new social and territorial deal” towards SDL**

**6 refer to Human Capital (the citizens with their individually possessed knowledge, skills and competencies), e.g. entrepreneurial creativity, perception of new development approaches, integration of social and technical skills, capacity to cope with complexity**

**6 refer to Social Capital (a “relational capital” produced and used by the Human Capital by means of networks, associations, etc.), e.g. local and multicultural knowledge, social cohesion, capacity to create shared visions of local development, multiple interactions through animators and facilitators**

**4 refer to Institutional Capital (decision-making processes, organisational capacity, support, services and resources) e.g. fractal distribution of responsibilities and competence, autonomy and collaboration, access to information and dialogue**

**B**

## Local Context Analysis (LCA): Dynamics

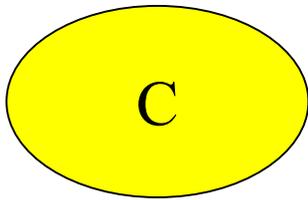


The analysis of the Dynamics of a specific local context is aimed at answering a third basic question:

**Which driving energies should be stimulated to produce changes in favour of SDL?**

**6 aspects are taken into consideration and they regard the transformation capacity derivable from**

- **Enhancing problem understanding**
- **Open collective learning**
- **Negotiation and co-decision**
- **Creation of a shared vision**
- **Client orientation**
- **Result orientation**



## District Logistics Analysis (DLA)



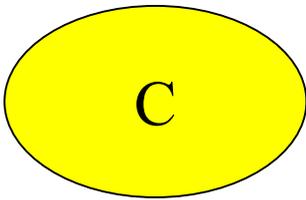
**After the completion of the Local Context Analysis, a SDL project performs a District Logistics Analysis (DLA) on the examined territorial area.**

**The DLA purpose is to discover the main characteristics of the logistics flows and the related business performances.**

**By using data collection techniques such as questionnaires, the DLA elaborates results that are correlated with the LCA hypotheses through integration and, if necessary, modification.**

**Generally, the procedures followed to carry out a District Logistics Analysis consist of:**

- Selecting a sample of local businesses (likely different sectors of the District)**
- Elaborating a questionnaire to examine logistics activities, costs and impacts**
- Administering the questionnaires to the sample**
- Collecting the questionnaires and elaborating the results**
- Combining these results with those of the SDL / SWOT analysis of the Local Context Analysis, namely the main hypotheses of innovative actions**
- Suggesting hypotheses that combine eco-efficiency, businesses and territorial processes to reduce logistics costs and resources consumption both at a business (mid – term perspective) and a territorial (long - term perspective) planning**
- Correlating the DLA findings with LCA hypotheses of innovative actions**

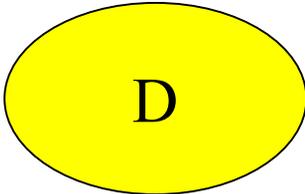


## District Logistics Analysis (DLA)



**Questionnaires should be formulated in a flexible manner according to the specific issues emerging from each SDL project with relation to the particular features of the examined local context, but looking at a common frame of reference, which main items regard:**

- **Logistics flows (materials, energy, information, goods, people) and costs**
- **Logistics management and costs**
  - from *Input* (sourcing, storage, transport)
  - to *Transformation* (resource planning, handling, storage, utilisation, packaging, inventory management, transport)
  - to *Output* (physical and virtual distribution; warehouses; stores; transport)
  - to the *Utilisation* of products (looking specifically to the reduction, re-utilisation, recycle and discharge of waste and materials along the life cycle of a product)
- **Business organisation and costs (e.g. profit and loss account, statement of economic assets and liabilities)**

**D**

## Local Scenario Workshop (LSW)



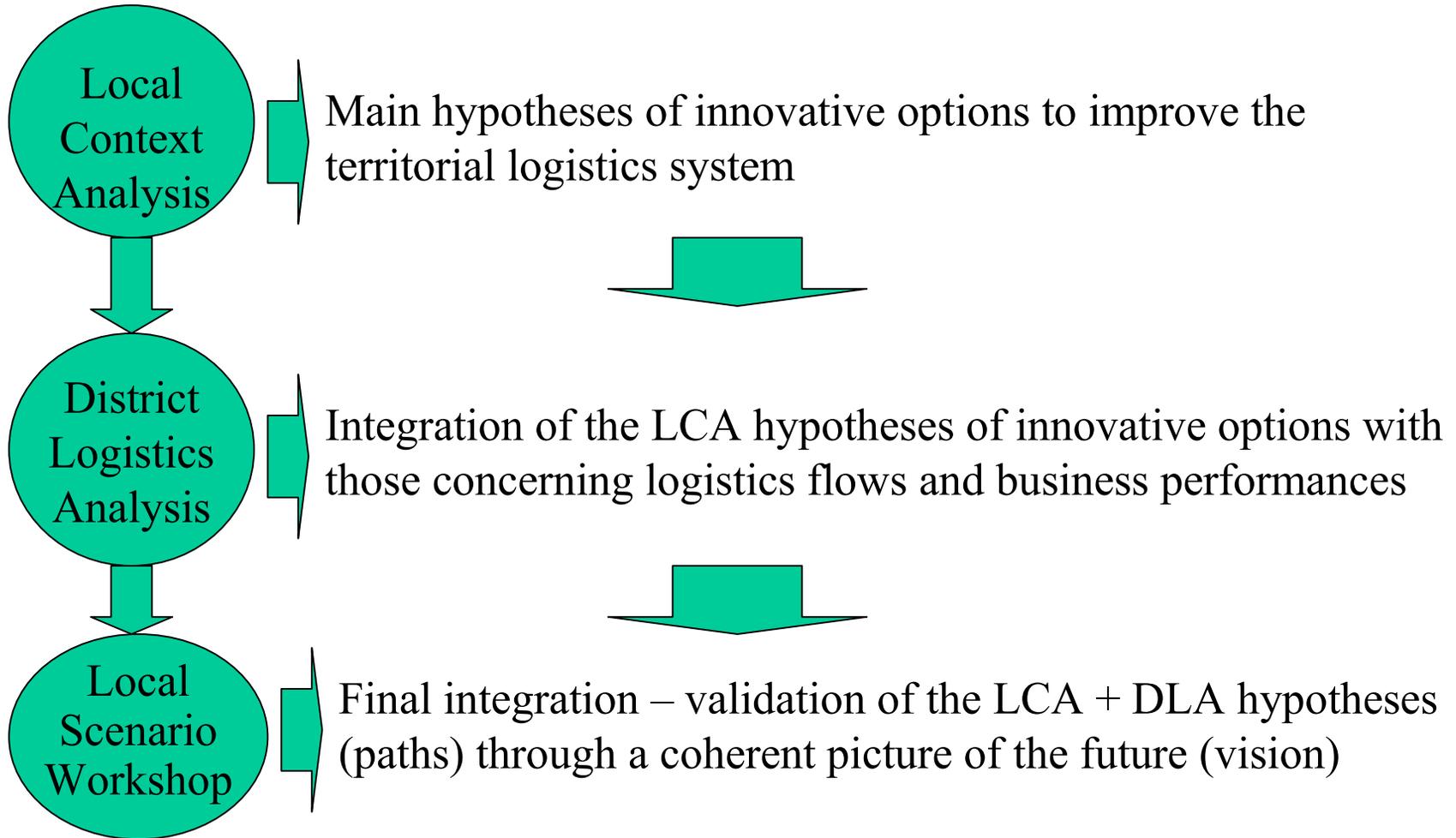
**The use of scenario workshops in a SDL project has the aims to develop shared visions and paths on the future development (e.g. 15-year perspective) of sustainable district logistics, revising and reinforcing the main hypotheses of innovative options developed in the Local Context Analysis and in the District Logistics Analysis.**

**According to the SDL approach, a scenario is an overarching picture of future development while simplifying, verifying and integrating the hypotheses of innovative actions at business and territorial levels.**

**There are three main Brainstorming sessions:**

- phase of CRITICISM regarding the present situation, “what is wrong now”, everyone is negative**
- phase of UTOPIA. “Reality is out of function. We are situated in a perfect world, where everything is possible”**
- phase of REALISATION. “We keep our wishes and dreams, how can they become a reality”. Results of a SDL project (from LCA and / or DLA) can be introduced and groups discuss and determine paths from the future to the present situation (backcasting)**

# LCA, DLA and LSW connection



# Lessons and suggestions





## “More Unity and More Diversity”

**The SDL approach and tools are flexibly adaptable to different local contexts putting in value the richness that derives from diversity (economic, socio-cultural and environmental)**

**Lessons and suggestions from the INNESTO case studies that provided guidelines for**

- A sustainable accessibility plan for the Casentino Valley (Italy).**
- Virtual networks to increase transport efficiency in the region of Brabant (The Netherlands).**
- Cross-border inter-modal cooperation between public and private actors in the region of Trier (Germany).**
- Global and local logistics among small and medium sized enterprises in the Viborg County (Denmark).**
- Renewable energy and logistics in the region of Vega de Guadalquivir (Spain).**



## Lessons and suggestions: stakeholders

- **flexibility in the formation and management of the local groups (e.g. a combination between Local Advisory and Project groups can be useful in some cases, as well as small groups or enlarged Local Scenario Workshops)**
- **a large variety of stakeholders is necessary when the purposes of a SDL project concern a close relationships between logistics issues and several policy fields of territorial planning**
- **a core group of stakeholders should be identify when a SDL project needs to be carried out in a short time and, therefore, it is necessary to work in a fast and efficient way, as well as to combine different interests, expertises and professional roles**
- **the ongoing adaptation of the local groups to arrive at a well balanced involvement of a variety of stakeholders**
- **the involvement of public authorities as key members, since alliance with public authorities helps to overcome difficulties**
- **the integration of competences coming from the research side with those typically offered by local development agents and facilitators in order to permanently motivate key persons and associations of interests**
- **the traditional culture of the transport and logistics domains, where women have limited access and few opportunities to manage high levels of decision-making, does not favour their involvement in the stakeholder groups (Local Advisory and Project Groups); therefore the problem can be partly solved in the Local Scenario Workshop where the final debate on the future perspectives can be organised ensuring a fair composition between men and women participants**



## Lessons and suggestions: LCA, DLA, LSW

- **the ingredients of the general SDL framework (e.g. the number of SDL aspects and indicators) should be selected and combined to arrive at the hypotheses of innovative actions according to the specific characteristics of a local context and to the topics taken into consideration by the relative SDL project**
- **the full utilisation of all the SDL aspects is generally necessary when the territorial characteristics and logistics issues concern several policy fields; when a limited number of issues emerges, it is possible to utilise a selected number of SDL aspects**
- **the scheduled work plans and all the SDL procedures should be utilised in a flexible way according to the main hypotheses emerged from the Local Context Analysis (LCA) and the District Logistics Analysis (DLA)**
- **the research efforts should be concentrated in a feasible way, acting on the basic interests of the local stakeholders and simplifying the originally scheduled steps and procedures**
- **the three phases of LSW can be further simplified and backcasting (from the future to the present) techniques can be adapted to SDL / SWOT performed by the participant stakeholders**
- **a specific technical training is necessary to utilise the “SDL.development” system and e-learning methods should be provided in the next future; this will be a task (e.g. tutorial exercises supported by simple modules and examples) of the European Network for Sustainable District Logistics (ENSDL)**