SUMMARY

Executive summary

The objective of the District Logistics Analysis (DLA) carried out in the Casentino area was to identify the main characteristics of the material flows and the businesses performances. To this end a questionnaire was elaborated and a sample of key businesses was selected. Interviews followed. The information obtained regarding logistics flows were then used to determine the economic fabric of the Casentino Valley. The results concerning business performances were utilised to determine profiles (corporate "ideal-type") according to a benchmarking method.

The main indicators utilised to analyse material flows were: tonnes, Tkm, distances, territory interested (inside and outside the Valley), load typologies, transport modes, typology of matter transported, transport costs.

The indicators utilised to analyse Business performances were those of the balance sheets with more in depth questions focusing on the 10 aspects of the SDL Orientation.

The results are integrated into a Regional Profile, where the main characteristics of the logistics flows and businesses performances were evaluated in terms of strengths, weaknesses, opportunities and threats (SDL / SWOT analysis), taking into account the relationships between the sample and the Casentino entrepreneurial fabric. The results of the SDL / SWOT analysis were compared to those emerged from the Local Context Analysis (LCA).

Hypotheses of innovative option according to the SDL approach were identified, compared and integrated to those emerged from the Local Context Analysis (LCA), as summarised in the below Regional Perspective.

Regional Profile

A sample of businesses was chosen to represents the overall economic fabric of the Casentino Valley. Businesses were selected according to sector (agriculture, industry and services) and location (the thirteen municipalities) respecting both population and employment quantities. 40 companies were selected and directly interviewed with the assistance of field-workers. Answers obtained covered the 92% of the local units considered in the sample.

	Sample			
Municipality	Agriculture	Industry	Services	Total
Bibbiena	3	5	3	11
Capolona	0	1	2	3
Castel Focognano	0	1	0	1
Castel San Niccolò	0	0	0	0
Chitignano	0	0	0	0
Chiusi della Verna	0	1	0	1
Montemignaio	0	0	0	0
Ortignano - Raggiolo	0	1	0	1
Poppi	1	4	5	10
Pratovecchio	2	1	1	4
Stia	0	1	2	3

Subbiano	0	1	1	2
Talla	1	0	0	1
Casentino total	7	16	14	37

From an employment point of view, the sample can be considered representative since there is a statistical error of 1,95% determined by the comparison between the 2.036 employed of the sample and the 9.147 employed in the corresponding activities of the entire Casentino Valley (data source: Chamber of Commerce). Even though the sample is more representative in the industry sector and services than in agriculture, the results maintain a good statistical tolerance due the importance played by the interviewed companies in terms of logistics flows and business performances.

The procedure to utilise the sample results to represent the Casentino economic fabric was based on specifically differentiated calculation for each sector (agriculture, industry and services) with relation to the employment dimension of the companies.

Redundancy was considered between the data on transport flows (Tkm) provided by the transport companies (third parties' account) and those declared by the companies of the other sectors (in part transport on own account and largely as third parties' services).

The inference gave a result that corresponds nearly exactly to the estimates formulated in the Local Context Analysis: 164 millions of Tkm.

As a conclusion, data collected from the District Logistics Analysis equalled the 48% of the total Tkm estimated in the Local Context Analysis and confirmed by the statistical inference: 79.133.112 (sample results) in front of the total amount of 164.177.600 (estimated data).

DLA - Summary Orientation

	Strengths	Weaknesses	Threats	Opportunities
01 The environmental dimension	●●	●●●●	●●●	●●●●
02 The economy dimension	●●●	●●●●	●●●●	●●●
03 The socio-culture dimension	●●	●●●●	●●●●	●●●●
04 Equity between individuals	●●●	●●●	●●●●	●●●●
05 Equity between territories	●●	●●●●●	●●●●	●●●
06 Equity between generations	●	●●●●●	●●●●	●●●●●
07 Diversity	●●●	●●●●	●●●●	●●●●●
08 Subsidiarity	●●●	●●●●	●●●	●●●
09 Networking and partnership	●●●	●●●●●	●●●●	●●●
10 Participation	●●●	●●●●	●●●●	●●●●●

LCA - Summary Orientation

	Strengths	Weaknesses	Threats	Opportunities
The environmental dimension	●●●●	●●●	●●●●	●●●
The economic dimension	●●●●	●●●	●●●	●●●
The socio-cultural dimension	●●●	●●●●	●●●	●●●
04 Equity between individuals	●●	●●	●●●	●●●
05 Equity between territories	●●●	●●●	●●●	●●●
06 Equity between generations	●●●	●●●	●●●●	●●
07 Diversity	●●●●	●●●	●●	●●●
08 Subsidiarity	●●●●	●●●	●●●	●●●●
09 Networking and partnership	●●●●	●●●	●●●	●●●
10 Participation	●●●●	●●●●●	●●●	●●

Correlation between the DLA findings and the LCA hypotheses of innovative options

The District Logistics Analysis (DLA) identified some hypotheses of alternative options considering the answers provided from the interviewed businesses on their logistics flows and performances (see section 3. SDL / SWOT

analysis). These hypotheses have a positive correlation with those resulted from the Local Context Analysis (LCA), as shown by the following results.

First hypothesis
D1 - Enhancing problem understanding
P1 - Perception of a variety of development approaches
O1 - Environment
O2 - Economy

LCA - 1st main hypothesis
To create a permanent structure for the study of sustainable logistics where local professionals interact with local and regional bodies to create a Plan for Sustainable Accessibility in Casentino. This structure will have the responsibilities to coordinate hypothesis 2, 3, 4, 5 and 6.

- combination of attempts stemming from local initiatives in favour of sustainable development
- investments in e-logistics and e-commerce supported by the e-government network
- a co-ordinated organisational and management system of the supply and distribution chains based on freight rail transportation (e.g. night-freight-trains) combined with light freight road transportation (e.g. share-a-ride / vanpool)
- an inter-modal transport system based on linear connection by railway and transversal connections by road networks
- an integrated system (local network between the municipalities) to monitor and evaluate the total costs (economic, social and environmental) of the logistics structure and the impacts of logistics fluxes on the territory utilising a series of strategic indicators (qualitative and quantitative) that orient local stakeholders towards the quality improvement of business and spatial planning

DLA findings
To promote the corporate environmental commitment and to favour changes in business strategy on logistics management opening a long-term path aimed at reducing road transport in favour of rail mode with immediate measures that rationalise freight transport organisation

- exchange of good entrepreneurial practices towards sustainable development
- integration of local resources (financial, technical and managerial) to support local businesses
- flexible (e.g. dial-a-ride) but in common (e.g. share-a-ride) services (e.g. van-pool) of supply and distribution, supported by the e-government network and privately managed
- consolidation of freight loads in small logistics centres located in the existing railways stations and supported by ICT
- improvement of railways services (e.g. night-freight-trains) connected with the regional and national railways networks
- specific logistics plans co-decided between the large companies and the public authorities
- business investments in e-logistics and e-commerce integrated into the e-government network
- an annual award in service-voucher especially for small and medium sized enterprises

Second hypothesis
D3 - Negotiation and co-decision
P3 - Capacity to cope with complexity and to anticipate change
P10 - Shared value system taking into account environmental, socio-cultural and economic interdependencies
P15 - Access to information and dialogue
O9 - Networking and partnership

LCA - 2nd main hypothesis
To create a roundtable on logistics issues, with the involvement of a large variety of stakeholders for planning logistics fluxes, integrating accessibility issues into Local Agenda 21.

- investment in impact analysis, monitoring and evaluating systems, research, learning and training
- creation of an integrated communication centre for public information on the issues related to sustainable development and logistics issues, enlarging the scope of the e-government network

DLA findings
To involve local stakeholders in territorial marketing (e.g. local brands) and integrated logistics networks

- creation of clusters and networks of supply, production and consumption with the collaboration of environmental departments and agencies as well as with the integration of this issue into the elaboration of the Valley Local Agenda 21
- close relationships with international and European networks on CSR and sustainable businesses

Third hypothesis
D6 - Result orientation
P2 - Entrepreneurial creativity and innovation
P5 - Discovery and re-encoding of the local specificities and knowledge
P7 - Fractal distribution of responsibilities and competence
P8 - Facilitating structure for autonomy and collaboration into the decision-making
P9 - Primary reliance on the endogenous resources without compromising the ones of the others
O7 - Diversity
O8 - Subsidiarity

LCA - 3rd main hypothesis
To organise a long term system for monitoring and evaluating in order to assist logistics stakeholders to improve their activities in terms of economic, social and environmental diversification and to facilitate the participation of logistics stakeholders in integrated decision making

- a specific budget dedicated to logistics development (e.g. integration of public and private financial resources)
- a permanent monitoring system of the local, external and transit fluxes of freights
- clear criteria on stakeholder analysis and involvement in the public decision-making according to the specific field of problems, issues, policies and services
- programmes and projects to stimulate analogous methods in corporate strategies on a volunteer basis, providing financial support and technical assistance to disseminate CSR specifically in favour of existing small businesses and enterprise creation
- a Charter of main orientation principles and procedures to implement an integrated management of local plans
- development of methods of project financing based on clear protocols and agreements that respect local autonomy in decision-making

DLA findings
To support business innovation, creativity and investments to elaborate a plan concerning the promotion of the corporate environmental and social responsibility (CSR)

- a stable benchmarking system on local and international good practices accompanied by enquiries, research and scientific studies on biological, social, cultural and economic diversity
- clear criteria to involve all the enterprise associations and sectors (agriculture, industry and services), experts, NGOs, public and private development agencies

Fourth hypothesis
D4 - Creation of a shared vision
P13 - Capacity for creating shared visions of local development
P16 - Existence of facilitators and animators of multiple interactions
O10 - Participation

LCA - 4th main hypothesis
To create a group of local facilitators for "win-win" solutions, participation of local stakeholders, elaboration of locally-adapted methodology.

- involvement of existing local development agencies and agents
- application for a new professional profile that combines sustainable development and logistics knowledge
- specific training courses

DLA findings
To support local businesses (especially small and medium sized enterprises and farms) in the elaboration of environmental and social marketing

- creation of a few numbers of "quality circles" per sectors and activity with the involvement of stakeholder samples (e.g. households, customers, suppliers, consumers' associations, environmental organisations).

Fifth hypothesis
D2 - Open collective learning
P14 - Integration of social and technical skills for innovative processes
O3 - Socio-culture

LCA - 5th main hypothesis
To create of a "centre of resources", integrated with Local Agenda 21 structures, in which knowledge, know-how and skills in sustainable logistics are developed year by year also through specific courses, seminars and workshops.

- integration of several financial resources and plans, e.g. EU - ESF Ob. 3 (provincial plan for vocational guidance and training), Community Initiatives (e.g. Leader Plus), research and education (university and schools), trade association, regional and provincial support to Local Agenda 21 elaboration

DLA findings
To facilitate company investment in human capital

- integration of business strategy with external support in the fields of training, studies, research, managerial and technical assistance (e.g. on social audit with a specific focus on logistics management).

Sixth hypothesis
D5 - Client orientation
P4 - Enrichment of the local knowledge to create a cohesive multicultural environment
P6 - Ability to reach optimal levels of attainment and fulfilment of life
P11 - Social cohesion
P12 - Opportunity and room for fair interactions
O4 - Social equity (between individuals)
O5 - Inter-local equity (between territories)
O6 - Inter-temporal equity (between generations)

LCA - 6th main hypothesis
To include quality management issues and sustainable development principles in all training courses and e-learning tools for producers (employers and employees) and consumers (general public, job-seekers and unemployed, families, pupils) in order to increase awareness of sustainable logistics as a means to favour social cohesion and development in depressed areas over the next 15 years.

- new methods of services delivery (e.g. e-government network supporting e-commerce, e-logistics, home-shopping, e-banking, e-administration)
- an integrated e-logistics and a safety-orientated inter-modal transport system based on the full utilisation of co-ordination potentials
- programmes and projects related to integration between different knowledge and cultures taking into account future impacts on logistics dynamics
- programmes and projects for fair interactions also in trade through logistics facilities with different immigrant communities and countries
- programmes and projects for positive actions in favour of women insertion in labour market, education and decision-making with a close attention to logistics impacts

DLA findings
To improve entrepreneurial knowledge and strategy through the dissemination of the principles of social and environmental quality

- a co-ordinated action plan on SA 8000 certification elaborated by the Mountain Community, the Province, trade associations, trade unions and relevant NGOs.
- elaboration of logistics plans in favour of fair trade through the dissemination of good practices among the Casentino stakeholders opening a specifically dedicated web-site in the e-government network with information on strategies, programmes and actions (e.g. the European World Shops, Fair Trade Organisation, ethical banks).
- a stable monitoring and evaluation system on strategic (long-term) impacts of processes, products and

consumption utilising international sources of information and knowledge (e.g. the Dow Jones Sustainability Indices).

Overall comment

Firstly, it should be fully acknowledged that:

- the questionnaire was administered on a volunteer basis, for research purposes without an immediate return from a business point of view and a profit nature (e.g. quality improvement, technical assistance and managerial support to the firm, awards or financial incentives in favour of corporate social and environmental responsibility)
- even though the interviewed companies manifested a collaborative attitude, some of them did not answer all the questions in order to protect sensitive data or because it was difficult to calculate data in such a detail as it was requested by the questionnaire
- different level of entrepreneurial language, knowledge and skills emerged from the answers received to questions that were very technically formulated in all the three areas of investigation (logistics, profit and loss account, statement of assts and liabilities)

Secondly, the above-reported results delineate different sectoral profiles:

- industry; an important corporate culture emerges in well locally established companies that have national and international relationships, along with a consolidated practice of good industrial relations; in this case, more attention can be detected also on the environmental and social issues which progressively are incorporated in the company strategy, in the quality of the products and processes, improving the company image on the markets (e.g. responsible marketing and appropriate certifications); good business relationships are established with local firms and those that are socially and environmental responsible; investments and expenses are made to improve human capital and work condition, to adopt systems that are environmentally friendly (also in warehousing and transport) and to utilise recyclable, recycled and not dangerous raw materials, dedicating some attention also on the impacts on a long term perspective
- agriculture; an interesting role is played by organic farms that express a developed awareness and knowledge on biological systems with a positive impacts also in logistics, reducing the material flows; less evidence is given to the social nature of the agriculture (and biological) activities generally because it "culturally" absorbed as an aspect of the environmental commitment; moreover, being very small farms, less attention is focused on the formalisation of procedures regarding work organisation and relationships, as well as certain lack of entrepreneurial culture can be detected in management, marketing, accounting, business relationships, etc.
- services; in comparison with industry and agriculture, a flatter profile emerges in the services "ideal-type"; this sector seems to be characterised by low awareness and attention on the issues that are at the basis of the SDL approach, with a prevalently traditional corporate culture focussed on economic and business relationships; anyway it is too risky and too early to arrive at an overall consideration, given that a wide range of activities are included in this sector making it difficult to generalise the enquiry results.

Thirdly, the experimentation demonstrated that:

- the questionnaire worked well allowing researchers to assess trends towards the SDL approach (performance indices)
- a separated section should be introduced into the questionnaire and dedicated to logistics costs, specifying the meaning of the related voices and suggesting the way to calculate them
- as far as the services sector is concerned, there is need for a more in depth enquiry through the enlargement of the sample and its articulation in different comparable types of activities (economic categories)

Fourthly, the experimentation opens a perspective for a permanent benchmarking system according to the following recommendations:

- the benchmarking system should be organised by a partnership between the local trade associations (e.g. industry, craftsmanship, agriculture, services) and managed with the involvement of the existing development agencies with the aim of combining technical, administrative, training and financial support to enterprises and small businesses towards the increasing of corporate social and environmental responsibility

- relationships between the individual firm and the benchmarking system should be nourished by contractual bases (e.g. companies that provide sensitive data will receive the aggregated results immediately and free of charge, while those not involved in the system will pay to receive a summarised report)
- the benchmarking system should be utilised as an instrument to foster quality certification, lowering its costs and promoting a preferential access to financial support through specific agreements between trade associations, public authorities, the regional loan institution (FIDI Toscana) and the relevant credit institutes that operate in the Casentino Valley