



LUCENSE

EriK NETWORK

How to innovate traditional clusters

The experience
of LUCENSE
in supporting innovation
and technological transfer

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Bologna , 30th June 2003



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Status : **No-profit Società Consortile per Azioni**

Promoting partners (1984):

**local Authorities: Municipality, Province;
Chamber of Commerce,
Cassa di Risparmio – a local bank,
three Trade Associations (Industrialists,
Merchants and Artisans).**

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- ***Aimed at the promotion of Technology and Management Innovation***

(researches, projects, technological & infrastructural resources, training courses and services)

University–Scientific Research

Interface

SMEs – Local Government

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Company's history



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- **2003**: 8 R&TD projects; 1200 customers; staff: 13 p. & 10 freelancers; turnover = ~1.6 M €
- **1998**: foundation of **CELSIUS**, a Lucca Company for training and University studies
- **1995**: opening of **LUNET** node, first ISP in Lucca
- **1991**: opening of **CQC**, a paper test lab
- **1989**: foundation of **Qualital**, the Univ. Cons. in Q. Eng.
- **1988**: opening of **Ceditec**, the Technology area
- **1984**: foundation, 2 staff



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The “Door to Door” experience (1998)

a research on

Innovation and Technology Transfer
opportunities for the SMEs of Lucca

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- To **efficiently check** local SMEs, in order to verify their technological level and management practices
- To **build a knowledge base**, useful to successively elaborate and develop knowledge transfer processes towards SMEs
- To **propose actions** either in the technological and in the management fields
- To **shorten the distance** between research centers and enterprises

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- Strong competition among companies in the same market sector
- Low propensity of the territory toward “making a system”
- SMEs difficulties (manpower < 10 units)
- Difficulties in establishing systematic relationships among companies and universities



DtoD - The scheme



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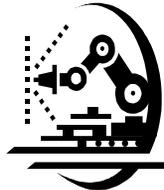
Food



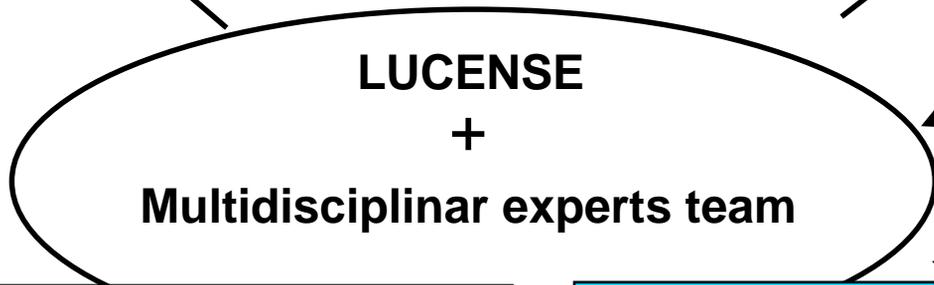
Paperboard



Eng. Industry



Plastics



Meetings with Opinion Leaders

Extensive survey with Questionnaire

Door to Door visits to selected SMEs

Total Quality Managem.

Tele Robotics & Virtual Reality

Production & Logistics

Artificial Neural Network & Signal Processing

Economy & Finance



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Questionnaire:

272 Q. mailed, 42 filled and returned.

Response ratio = 15.4%

Sector	Q. mailed	Q. back	% of returned
Paper\board	103	14	13,6
Eng. Ind.	89	13	14,6
Food	34	7	20,6
Plastics	46	8	17,4
Total	272	42	15,4

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Door to Door visits:

A total of 21 SMEs have been visited.

Visits lasted at least half of a productive day.

Sector	DtD visits
Paper\board	4
Eng. Ind.	7
Food	5
Plastics	5
Total	21

All the experts (5) participated to each visit organised in the following way:

First part: discussion with the management

Second part: visit to the plants

Third part: debriefing

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SMEs have:

- **Set up 3 research projects**

(The three researches have been 60% funded by the National R&TD Ministry. Fund request has been managed by Lucense)

- **requested 3 feasibility evaluations for:**

the use of Artificial Vision systems in the production control and in the logistics

- Requested and **attended 3 workshops** (funded by Chamber of Commerce) **on:**

- Highly advanced 3D CAD Design
- Artificial Vision systems in the production controls
- Mktg and market investigation via Internet

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- One of the reasons for the successful implementation of the DtD project has been the **right choice of the multidisciplinary expert team (skilled and motivated)**.
- **On site visits** have been a bridge over the gap from Research to Enterprises.
- Another crucial point has been the support for funding search.
It is necessary a financial support to Innovation.
- Poor results in the management and marketing sectors (due to a lack of competences in Lucense)





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LUCENSE has:

- established a systematic collaboration with the PERCRO labs in the field of project design /simulation
- brought its personnel to reach high skills in the field of innovation financing
- proposed to QUALITAL a refinement of the methodology with the EC project EDISON

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Achieving an European dimension
for the "Door to Door" scheme
to drive SMEs' innovation

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<http://www.edisonproject.info/>



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EDiSon project aims to the definition of a Scheme to foster the use, by the European SMEs, of new technologies and new management methodologies.

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This general objective will be achieved through the achievement of several specific objectives:

- (1) validation, at an European level, of the Scheme developed during the "Door to Door" project, as an operative tool to manage, to make easier and to make effective and efficient the processes for the transfer of technology and the processes for the innovation of the SMEs.

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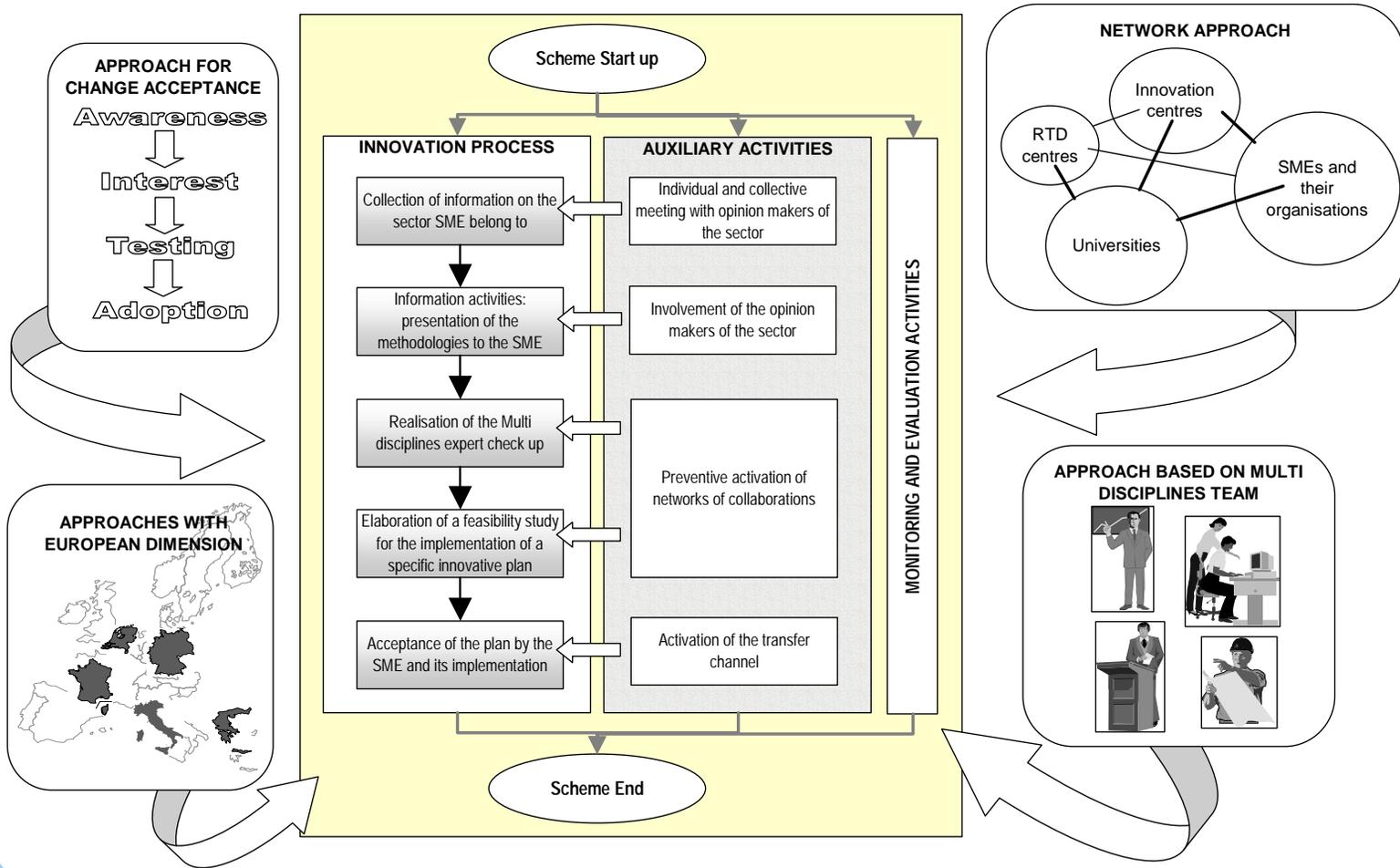
- (2) Revision, integration and improvement of the proposed Scheme, improving its ability to adapt itself to the different European contexts.
- (3) Realisation of pilot experiences of application of the scheme in different European sectors, completed with specific studies on innovation.

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Architecture of the EDiSon scheme



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**Support to the innovation strategies of
the papermaking district
(**IN**novazione **DI**stretto **CA**rtario)**

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PRAI - ITT



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Main features:

- 11 municipalities of the Province of Lucca,
1 municipality of the Province of Pistoia;
- 132 paper mills companies (manpower: 5700 units);
- two different types of production and transformation :
 - paper board, 40% of the Italian overall production,
 - tissue, 70% of the Italian overall production;
- 384 metal and mechanical engineering industries (manpower: 7400 units),
25 of which specialized in the papermaking sector (manpower: 1500 units);
- water consumption: more than 18 m. m³/year.

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It is represented by the DI.CA. Committee
made up of:

- **The Province of Lucca;**
- **Municipalities;**
- **Manufacturer and trade associations**
- **Companies**
- **Trade unions**

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Has defined the strategical goals for its development

(infrastructures, environment, regulations – safety – quality, development of sharable strategies of innovation, human resources development, undertaking of analysis and market communication/promotion)

Has appointed LUCENSE as the chief operative structure

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Transfer and Net methodologies carried out by INDICA project:

- comes to light by a first confrontation among LUCENSE and Competence Centers ***(offer net side)*** to tackle, in an articulate way, the **DI.CA. needs** (environment, safety, education, tech and management innovation)

(comprehensive intervention strategy, to respond to the innovation actual needs)

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- It is assessed by some Opinion Leaders and then by papermaking industries (*demand net side*), and adjusted on their real needs (*demand offer intersection*)

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- **The project tackles:**

1. **The search of any possible water consumption reduction in the paper mills**

- 2a. **The transfer of innovative methodologies for maintenance management**

- 2b. **The development of a CMMS software, specifically designed for the paper industry**

3. **The development of a *motion based* forklift simulator for guide training, in order to foster safety in the goods loading and unloading operations.**

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- It has been introduced to the DI.CA. in order to establish an effective and articulated collaboration among companies (17 units) and competence centers (6 units)

(thus overcoming the barriers and critical points due to the high competitiveness in the companies of the DI.CA.)

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- **It develops through:**
 - a) Companies audits with the experts team, for a more detailed analysis of the expressed needs (but also the unexpressed ones), and/or the precise definition of the design specifications,**
 - b) brainstorming among the experts team for an evaluation of the needs and for the identification of the solutions and their implementation modalities**

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- c) **Development (in co-design) of the proposals, testing and implementation in the interested companies,**
- d) **Dissemination of the results through trade reports, newspapers, publications, meetings and workshops, web site**
- e) **Support services activation in order to exploit the project results (help desk, task force, courses)**

**The methodology crosses the
bottom-up e top-down approaches.**

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- **It is fundamental:**

- the presence of a **LOCAL** and **TRUSTED** Competence Center (to act as an interface and fulcrum of an extended and tested collaboration net)
- harmony among institutional subjects

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- **Nether the less:**

- the innovation and tech transfer projects that can be developed in a cooperative way are of a “transversal” nature (not involving the Know-how of each single company)

- the companies that take part to the effort are the more structured (manpower: > 50 units) and not the smallest ones

- the projects have to cost **NOTHING** (even in terms of administrative work)

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**Thanks you
for your attention!**

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