

INDUSTRIA 2015

Industrial Innovation Project “Innovating technologies for cultural and tourism goods and activities”

PROJECT LOGICS AND PLANNED ACTIONS

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AGENDA

1. A short overview of INDUSTRIA 2015 goals
2. New technologies at the service of culture and application framework of PII “Innovating technologies for cultural and tourism goods and activities”
3. The enforced method
4. New suggested priority actions
5. Comments on “linked” actions

LOGICS AT THE BASIS OF INDUSTRIA 2015

- The government strategy highlighted in **company networks**, **innovating finance** and **Industrial Innovating Projects** (PII) the new available tools to provide for the Italian industrial system strategic repositioning, within the world-wide, globalized and strongly competitive economy.
- A strategy aiming at **identifying the main change drivers** in terms of innovation and to consequently support economic policy choices.
- Such a strategy implementation is based on the **capacity to orient the production system** to compatible frameworks with the competitive scenarios.
- **Innovations are both technological and organisational** and they should lead to product, process, **service** and **marketing** innovations.

COLLATERAL GOALS

1. Collect "innovating" ideas from companies to support people "willing to try".
2. Support the birth (through financing) of new technologies and "Italian" organisations (for example a new company network generation).
3. Actually re-qualify consumptions (for example a higher awareness of the environmental impact).

FOCUS ON THE INDUSTRIAL INNOVATION PROJECTS

Basic research	<ul style="list-style-type: none">• Industrial Research• Experimental development (prototypes)	Industrialisation
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Focus of PII of Industria 2015

FOCUS ON THE INDUSTRIAL INNOVATION PROJECTS: MAIN ATTENTION PAID TO

PII must finance operating **prototypes** to be applied to specific contexts (even though general as much as possible). Such prototypes (synthetically called **platforms**) must solve concrete, cogent and widespread problems, thus leading to specific, complete and concrete solutions (innovating as well), where **new technologies are simple ONE of the ingredients** (besides the innovating use of standard machines, processes and relating services, the possible new demanded contents, new organisation modes, ...).

Such complete prototypes allow to comply with another important goal of I2015: **spur company sectors and systems to better co-operate.**

It is important to remind that ASII must seize any opportunity (or solve "critical issues") within the affected sectors. The so-called **integrated actions** (premises, regulations and local "context" actions) strengthen and mainly supplement the ASII actions.

THE ROLE OF TECHNOLOGICAL INNOVATION SERVICES: SOME EXAMPLES

- In 2006 for the first time the Italian **technological balance** is positive, with more than €780m (3.7% of balance of trade). According to the information from Confindustria (the Italian manufacturers' association) technological content services were important (balance growing by 60%) including technical services on sales and exploitation rights, technical feasibility studies and engineering studies, staff training, technicians and experts support.
- **Turnover evolution of the more consistent technology manufacturers.** IBM case stands out: profits in 2007 accounted for \$98.8b. Offered services accounted for: services (52%), hardware (26.7%), software (17.3%), others (4%).

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PII APPLICATION SECTORS

“Cultural and tourism activities (short summary in Cultural heritage) refers to "cultural heritage" in our country within the wider word sense:

- **"Traditional ancient cultural masterpieces** (archaeological goods, landscape, historical and artistic specimens, ...) duly preserved, protected and enhanced.
- **Cultural activities** (cinema, music, publishing, theatre ...) which the so-called cultural industry consists of.
- **“New cultural goods”** that is new buildings allocated to cultural functions (museums, libraries, concert halls...) designed by important architects and testing grounds for technologies and avant-garde building systems.
- **Ancient and prestigious buildings and places** (all controlled by the State) **duly re-qualified in terms of destinations** and therefore asking - as to comply with their declared goals - for typical competences of diagnostics, restoration or consolidation of ancient buildings together with modern architectural and installation design systems as well as new materials.

The attribute **“tourism”** is nothing but the natural conclusion of the enhancement and spreading process of any cultural asset.

THE ITALIAN TERRITORY MATCHES CULTURE AND HISTORY



The real Italian record is not the majority shareholding of the world-wide cultural heritage but the fact that here **museums are everywhere, at any corner of the territory**; a real "**widespread**" museum, leaving its borders outside, filling squares and roads and present everywhere on the territory (Antonio Paolucci).

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THE SECTOR IS HIGHLY FRAGMENTED AND ARTICULATED

A consistent sector fragmentation and the highest possible variance of involved actor types (from multinational companies to craftsmen).

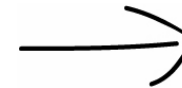
Building companies

Design companies

Information technology and telecommunications

Cultural industry

....



Mainly
**technology
manufacturers**

Craftsmen and consortiums

- from restoration to artistic handicraft activity

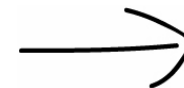
- management of museum services

- cultural promotion

- perfection and customisation of
building and design activities

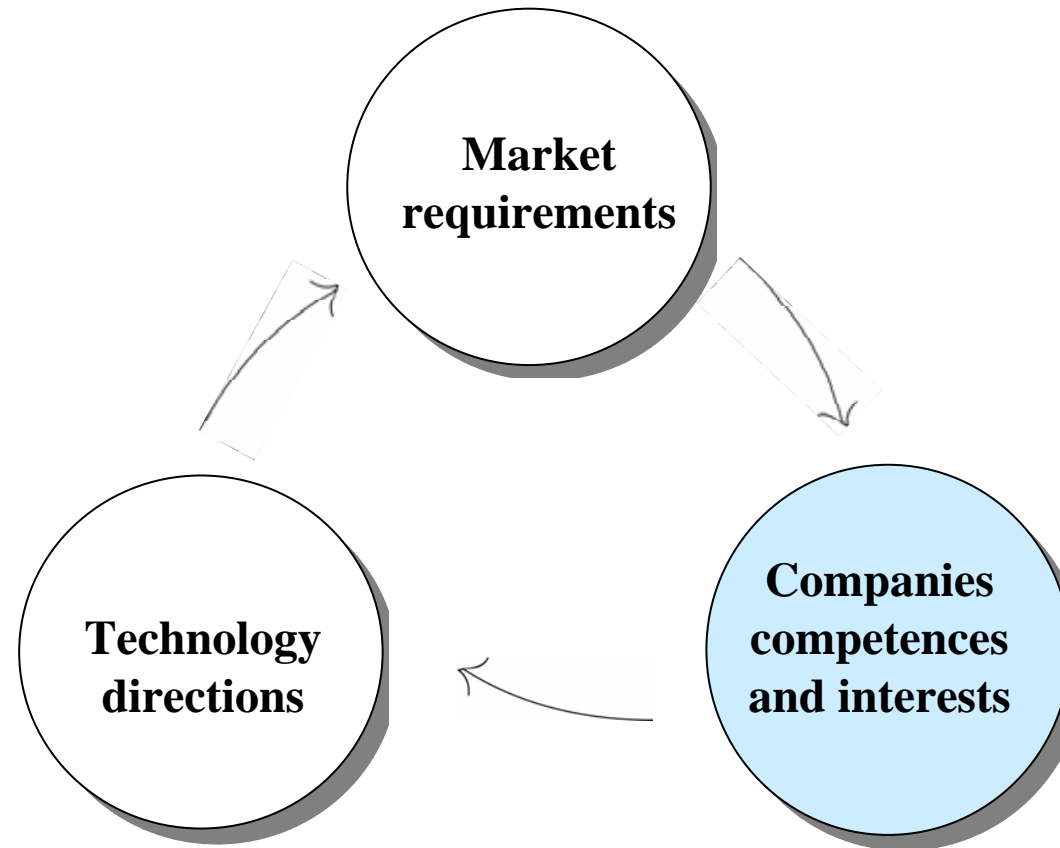
- audio-visual production

...



Mainly
technology users

METHOD USED TO BUILD INTERVENTION PRIORITIES



MAIN ANALYSIS

Technology directions

Analysis of any technological trend to identify the most interesting technologies and their relating positioning in Italy (by ENEA and CNR).

Market requirements

Analysis from the company view point (technology consulting) and wide study by the Ministry of Cultural Heritages and its research institutes (Istituto Centrale del Restauro, Opificio delle pietre dure, Istituto per la patologia del libro, ...) as to identify strategic requirements (which are not satisfied by the presently available products, services and consistently standing out).

Companies competences and interests

Analysis by the Ministry of Cultural Heritage among interested companies (present and potential suppliers) and systematic confrontations with category associations (which spurred and aggregated requests) and company groups to collect interests, priorities and proposals.

ANALYSIS OF THE TECHNOLOGICAL DIRECTIONS

Directions were analysed in 6 technological areas which are the most important for the Cultural Heritage:

- materials (protection, restoration, building re-qualification)
- diagnostics systems
- sensors and installations (conditioning, "furnishing", ...)
- building construction and cultural consolidation systems
- safety and security systems
- digital technologies

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PII MACRO-OBJECTIVE

Define, connect through a network and enhance the sector linked to the cultural heritage enhancement, improving its "technological dignity".

Such a macro objective is divided into 4 **technological-production goals**:

1. Move to the integrated management of the "cultural heritage" paying due attention to exploitation, enhancement and spreading if compared to the simple creation or protection.
2. Support technologies which affect many different sectors.
3. Appointment of "national champions" which can seize consistent export opportunities.
4. Support and implement conditions to lead to a more consistent attraction from direct foreign investments (developers to re-qualify historical-artistic areas, Private Equity funds to support technological and service sector components...).

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

a) Innovating systems to protect, monitor and restore artistic masterpieces.

Many initiatives were enforced aiming at developing protecting techniques of the main cultural heritage through methods, materials, technologies and diagnostics tools.

- Innovating systems and method to identify, diagnose and massively and effectively list findings (archaeological and not, well-known or submerged) as to identify false heritages or false assignments.
- Innovating methods to analyse and monitor the earthquake risk for historical-artistic buildings or objects to be re-qualified.
- Innovating systems and methods to protect masterpieces from "extreme" pathogens"

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

a)...

- Innovating systems to analyse and recover damaged and/or obsolete supports.
- Innovating systems for the "non continuous" conditioning of historical-artistic buildings
- Innovating systems to allow historical-artistic buildings to be safe under critical conditions too
- Innovating systems to protect and control artistic masterpieces "conditions".

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

b) Updated and innovating platforms to profit and enhance the cultural, landscape, wine-gastronomic and company heritage. Many initiatives aiming at innovating information communication and cultural content systems, looking for innovating models to manage, digitalize and file, as not only to provide for the best complete management but also to lead to a complete management and also a rich and "memorable" cultural use.

- Innovating systems to profit from culture in a mode to be extended to disadvantaged categories.
- Innovating processes and technologies to better manage the cultural content life cycle and both public and private property...
- Innovated and integrated systems to furnish and lighten buildings and historical-cultural places which are environmental friendly, suitable to different contexts.

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

b)...

- Innovating systems and technologies to standardise and build new generation digital systems better representing the cultural heritage (accessible and non accessible).
- Innovating platform to enhance historical jobs and company museums.

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

c) Platforms, systems and innovating business models to protect, improve safety and manage cultural "places" in a sustainable way. Many initiatives aim at developing prototypes and models for an integrated (including safety) and "affordable" management of cultural buildings.

- Innovating platforms to efficiently and better manage "complex buildings".
- Innovated and integrated system for privileged (*and customised*) access to cultural places.
- Innovating flexible platforms to support and at the complete cultural tourist service.
- Integrated system to protect masterpieces and prestigious places too from anthropic risks.

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

d) Innovating systems, material and installations to restore and re-qualify buildings and places which are consistently rich from a cultural view point. Many initiatives aim at developing restoration, requalification and enhancement projects to improve highly historical, cultural and landscape rich sites.

- Materials, innovating techniques and structural or furnishing elements to restore and re-qualify ancient buildings or limited-access places.
- Innovating techniques and systems as for installations and sensors to support ancient building and limited-access places requalification.
- Innovating solutions for alternative energy in ancient buildings.
- Innovating methods to re-qualify historical-artistic valuable places within hotels and facilities.

INDUSTRIAL INNOVATION STRATEGIC ACTIONS

e) Innovating platforms to manage the content productive cultural cycle and create new use and spreading modes and new formats.

Mainly initiatives aiming at developing new production, use and distribution models of cultural contents and new facility solutions for such models.

- Innovating platforms supporting production, copyright management, distribution and content use.
- Integrated and innovating solution to create the "technological" soul of new multi-functional cultural centres.
- Integrated and innovating system to spread digital on-demand contents to public places

ELEMENTS TO BUILD A TENDER

The “Innovating technologies for cultural and tourism goods and activities” **recover the same layout at "New technologies for products made in Italy”** with the specific differences listed hereby:

- 5 Objective areas and relating Sub-Areas (which can be similar to the Project topics as in the Made in Italy): in total 23 identified project themes if compared to the 50 in the Made in Italy tender.
- A series of maximum amount thresholds as for facilitation costs are identified which should be lower than 7 million euro and than 3 million euro for programmes where companies are classified as micro or small companies.
- In the presented proposals, a series of areas are to be identified where to enforce operating tests, thus checking the prototype correct operation and its concrete utility.

ELEMENTS TO BUILD A BID

Finally two topics are underlined:

- The importance of the **meta-manager** role for projects presented by micro-mini companies: a company belonging to an association which should build the project in detail and setup an attending company consortium. Its contribution will be mainly concentrated in the initial project phases.
- Besides any functionality test forecast by PII, there is a **series of testing activities following** (the system test - checking the integrated prototype operation with local operating processes - and the loading tests - which "stresses" the prototype to check its duration on growing use volumes and rates) which could be financed by actions supported by the regional activities which intend to profit from the prototype (as they believe they are required and/or intend to finance companies on the territory profiting from the project, implementing it - as the system integrators - or simply installing it). The test places connected to the relating actions should be unique from the project complexity and international visibility view point. Local bodies could integrate the PII financing to engineer a solution and export it at the international level too.

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“LINKED” ACTIONS

There are 3 types of integrated activities to increase the efficacy of the strategic actions of industrial innovation:

1. Regulation

2. Infrastructure construction

- to increase production and product and service spreading
- to structure and strengthen the new sector

3. Context actions (regional initiatives)

- to strengthen strategic actions
- and complement the application field

For what is more specific, **framework agreements** can be forecast to finance “key strategic projects” in the Southern Italian regions.

“LINKED” ACTIONS: REGULATION

Administration regulation and simplification actions are to be forecast, to be enforced at the central and regional level. In the case of some effective technological solutions their "forced" implementation - under specific conditions - could be forecast and imposed. Under different conditions, the regulation could lead to the professional register implementation providing for a consistent commitment in terms of quality and implemented competences.

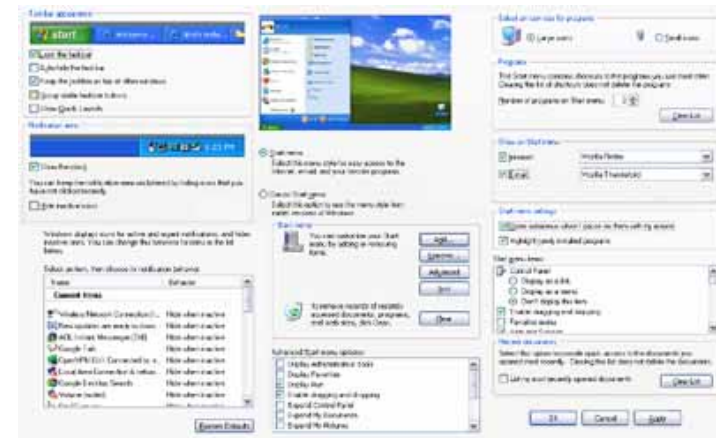
“LINKED” ACTIONS: INFRASTRUCTURE BUILDING

A series of technological structures and facilities are to be built or improved aiming at industrial research and technological transfer in the innovating technology area for goods and cultural and tourism activities, supplementing the forecast initiatives. As many cultural products are designed together with the "customer", a series of "in vivo" testing areas are to be forecast (in museums, archaeological sites) where to test prototypes and monitor the used behaviours without interfering to the user process. Taking the competence fragmentation and specialisation into account which such an area implies, it will be critically important to set up a professional observatory and a "market place" which supports the dynamic and effective allocation of the highest competences.

SOME KEY TOPICS RELATING TO DIGITAL INFRASTRUCTURES

- **Digital facilities (service networks and centres) to "capillary distribute" cultural contents in an evolved digital fashion** (audio-visual supports, immersion models, satellite maps...) to cut the "sub-networks" proliferation.
- **Equipped placed to collectively profit from the cultural heritage** (mainly in small centres and by elderly people institutions): the so-called "digital agora".
- **Taxonomy and "intelligent nomenclature"** (as the national telephone system) to unequivocally identify the cultural heritage and support the single sub-systems operation.
- **Innovation support systems** in terms of product and services up to the heritage sharing.
- **Interfaces** which are natural and suitable to simply access the digital heritage (under the most evolved fashions) and cut "knowledge" costs which any user should stand as for non-compatible users.

INTERFACE EXAMPLES



INTERFACE EVOLUTION

from

to

UNIQUE

ADAPTABLE

MULTIPLE

TO BE DESIGNED

- my-Yahoo
- Winplayer Skin

- Apple Mac

Ad hoc interface:

- As a representation metaphor
- As a representing style (classic or romantic)
- As an interaction style
- To what type of device
- ...

NATURAL INTERACTION WITH A PAINTING

INDUSTRIA 2015



SOURCE: POINTAT

“SENSITIVE” AMBIENCES TO SIMPLIFY INTERACTIONS

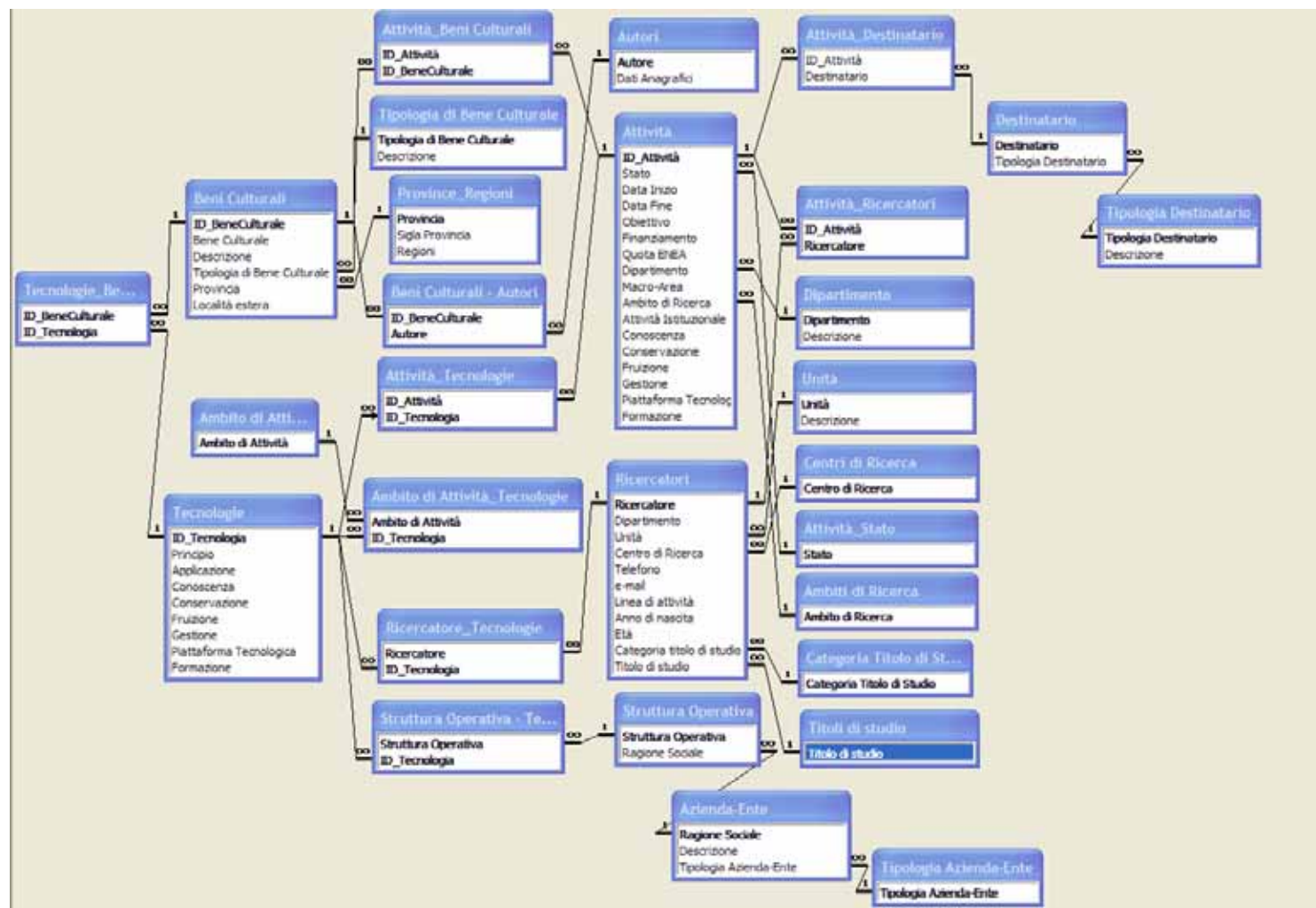


SOURCE: Studio Azzurro, La pozzanghera (Interactive micro-landscape for children), 2006

SECTOR FACILITIES: A SERIES OF TESTED INITIATIVES

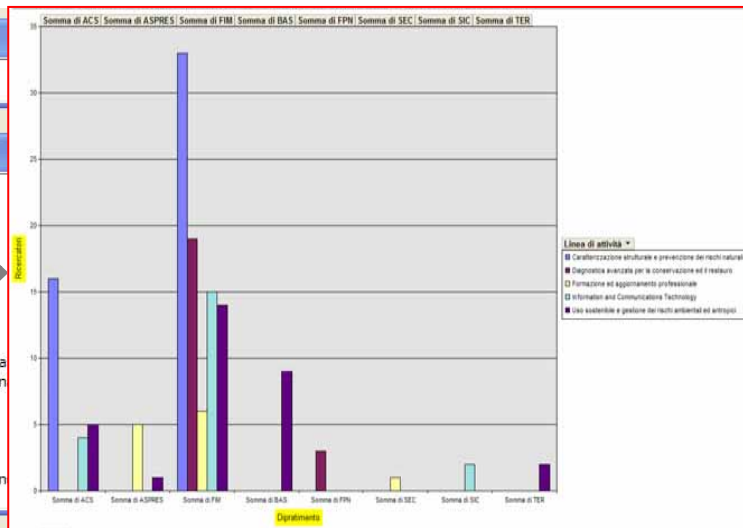
- Yellow Pages & Market places for companies (catalogue and qualification of the offers expressed in the tender language)
- **Infomediary to transfer know-how and technologies from the research and company universe to the users and creation of Whos Who for Italian experts and counsels (ENEA and CNR)**
- Common practices including clarification and training of operators on "good practices" relating to the market
- Competence exchange to dynamically allocate poor resources and to profit from potential depending on trainee stages
- **International exhibitions and scientific meetings to "accelerate" stabilisation of a new economic aggregate.**

INFOMEDIARY ON TECHNOLOGY: TAXONOMY

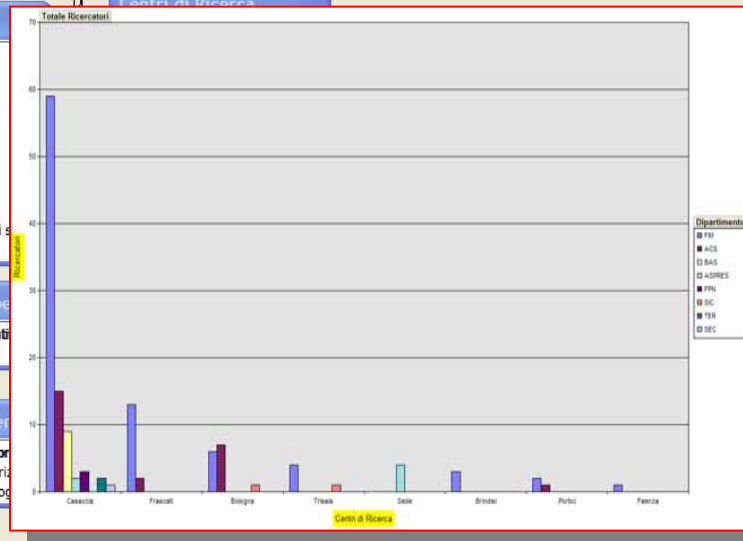


INFOMEDIARY ON TECHNOLOGY: A FEW LOGIC VIEWS

INDUSTRIA 2015



Research centres



EXHIBITION "TECHNOLOGIES AND DESIGN FOR CULTURE" IN ROME



The initiative depends on the requirement (and opportunity) to **combine the different cultural forms (tangibles and intangibles) and solutions (technological and design) in a synergic system which led to their creation, protection, spreading and enhancement** and strengthen both the Italian cultural system and technological and production system making it possible.

It aims at **making companies and the wider public (with a main attention paid to young customers) sensitive to the many aspects of culture and its big opportunities as future business.**

It aims at creating a **new exhibition use model**, which introduces a series of exhibition models and many training-emotional elements (to train the final technology to the wider public).



Such an initiative intends to not only lover of culture but also
"entrepreneur" of culture.

EXHIBITION "TECHNOLOGIES & DESIGN FOR CULTURE" IN ROME



GENERAL PROGRAMME

3 major "events":

Presence on the web (scientific material, practice community, "yellow pages" of the companies, ...)

December 2008

International meeting of the scientific community

November 2008

Exhibition initiative

June 2009

“LINKED” ACTIONS: CONTEXT ACTIONS

- main and/or industrial research activity on topics which can lead to impacts on applied technologies on goods and cultural activities on the long run;
- demo and technological qualification activities of the public request;
- **test activities in place on artistic masterpieces which are rather complex and prestigious**, to increase the developed prototype strength and its fame ;
- product and/or innovating industrialisation activity supported by ASII;
- supporting activity to set up and create new *high tech* companies;
- sensitivity and animation activity, mainly directed to the foreign markets (multi-language portals, promoting abroad technological excellence);
- human resource training and development activities;
- other network activities, transfer and result spreading;
- activities aimed at the production sector development on the territory.

THANKS FOR YOUR ATTENTION

