

The nexus knowledge-market: The role of ARCA Consortium

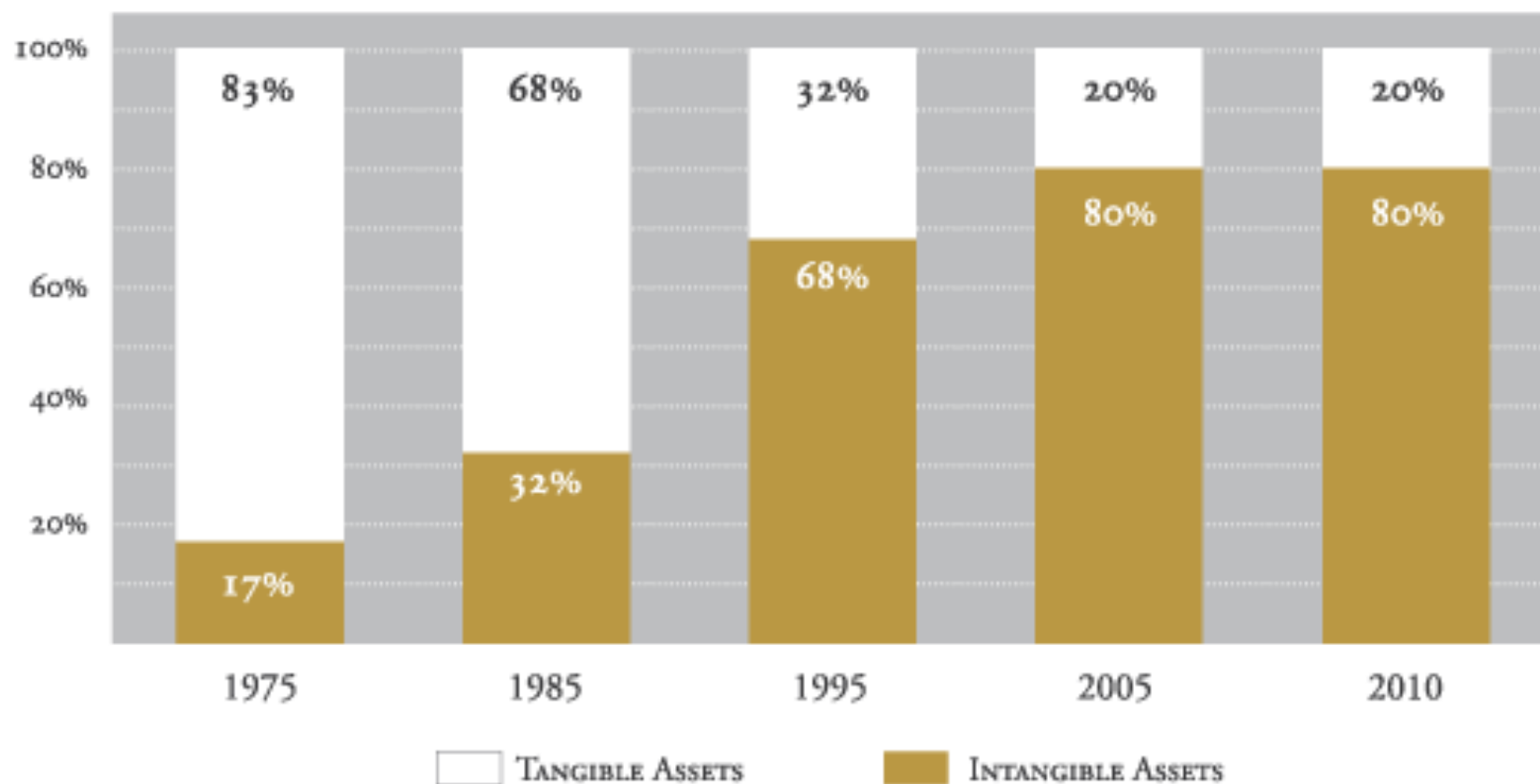
Umberto La Commare

Palermo, June 11th 2015

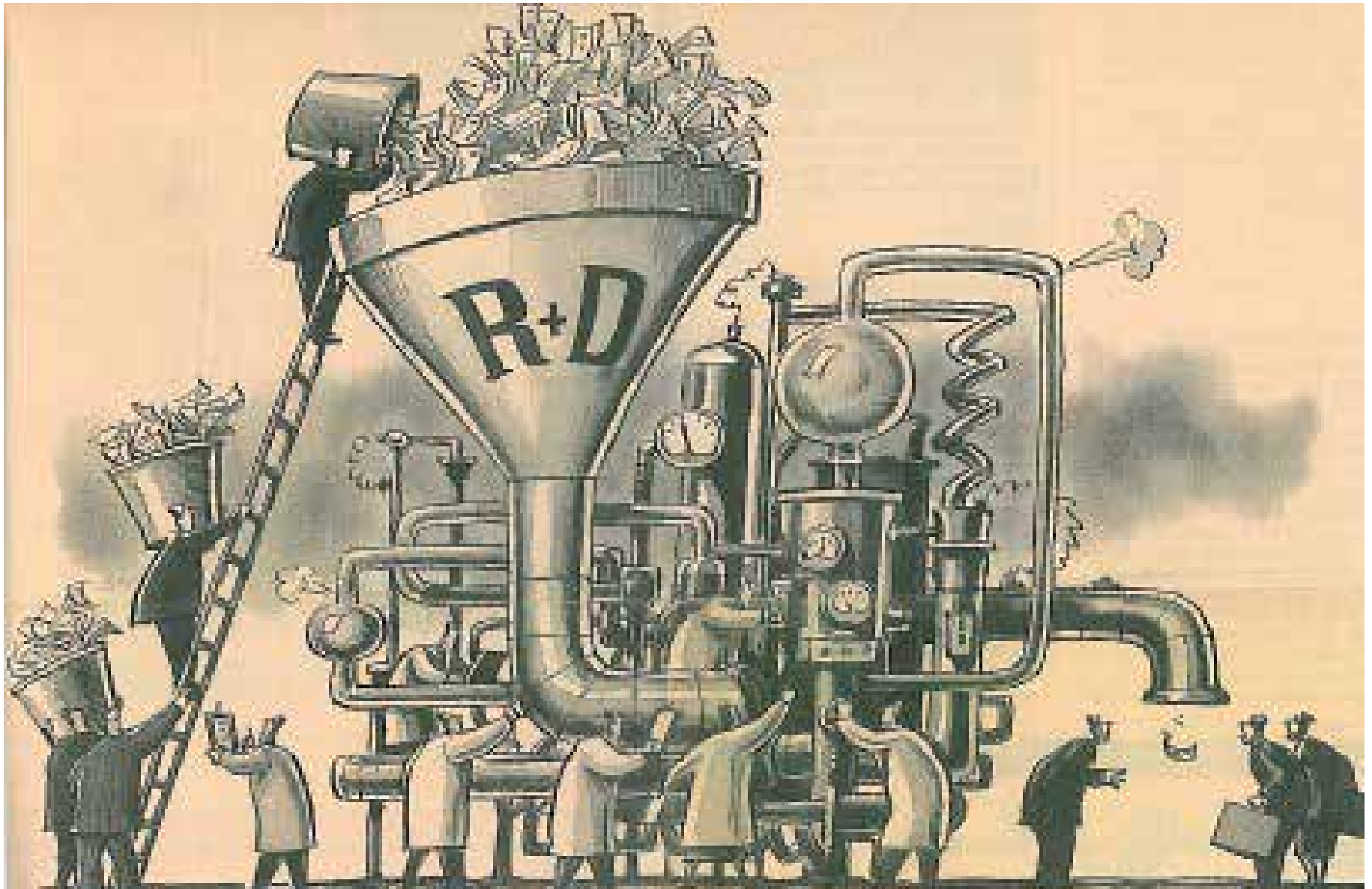


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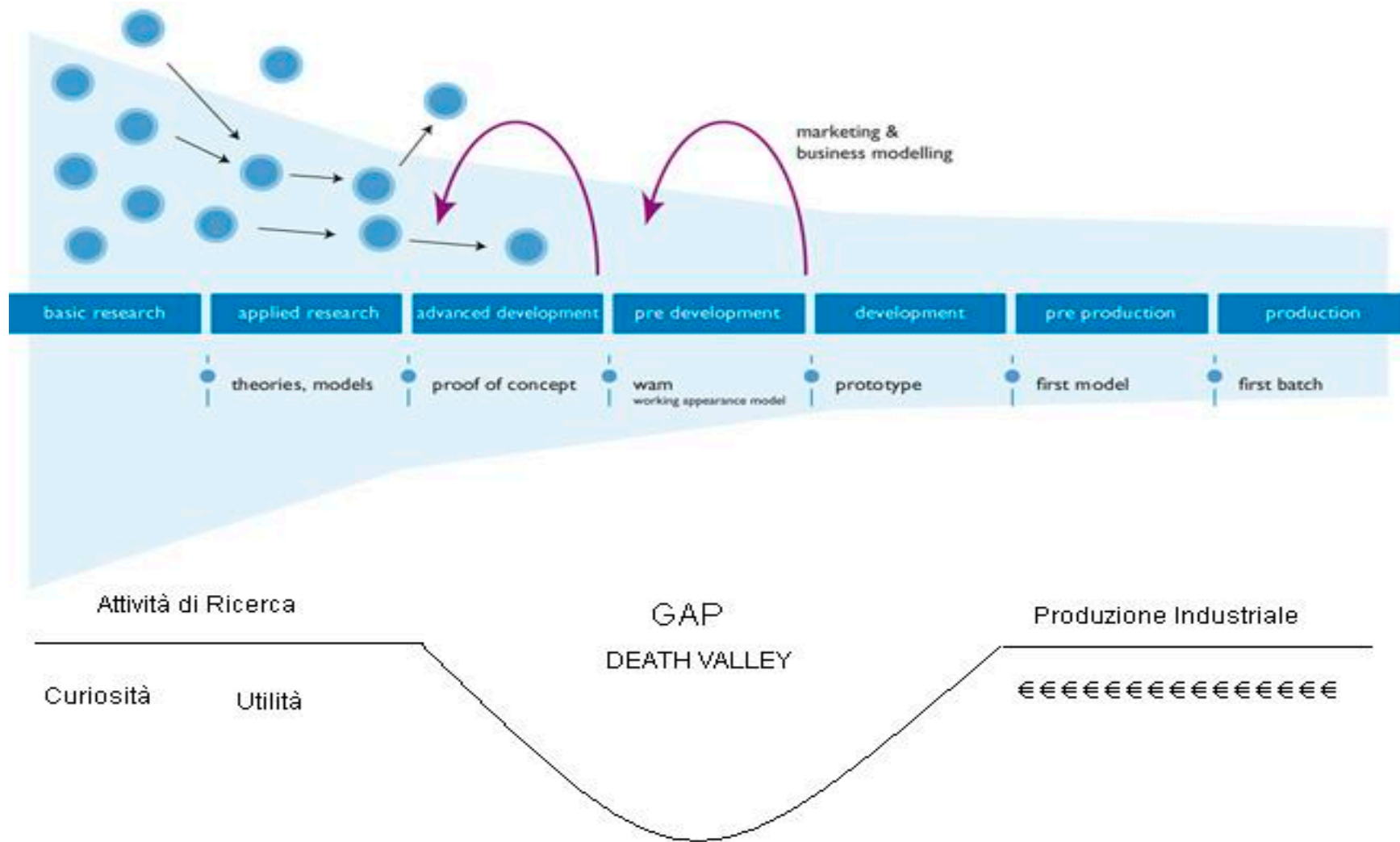
COMPONENTS OF S&P 500 MARKET VALUE



Source: Ocean Tomo



credits: The Financial Times, November 8th, 2005



G. Technology readiness levels (TRL)

Where a topic description refers to a TRL, the following definitions apply, unless otherwise specified:

TRL 1 – basic principles observed

BASIC RESEARCH

TRL 2 – technology concept formulated

TRL 3 – experimental proof of concept

TRL 4 – technology validated in lab



APPLIED RESEARCH

TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 7 – system prototype demonstration in operational environment

TRL 8 – system complete and qualified

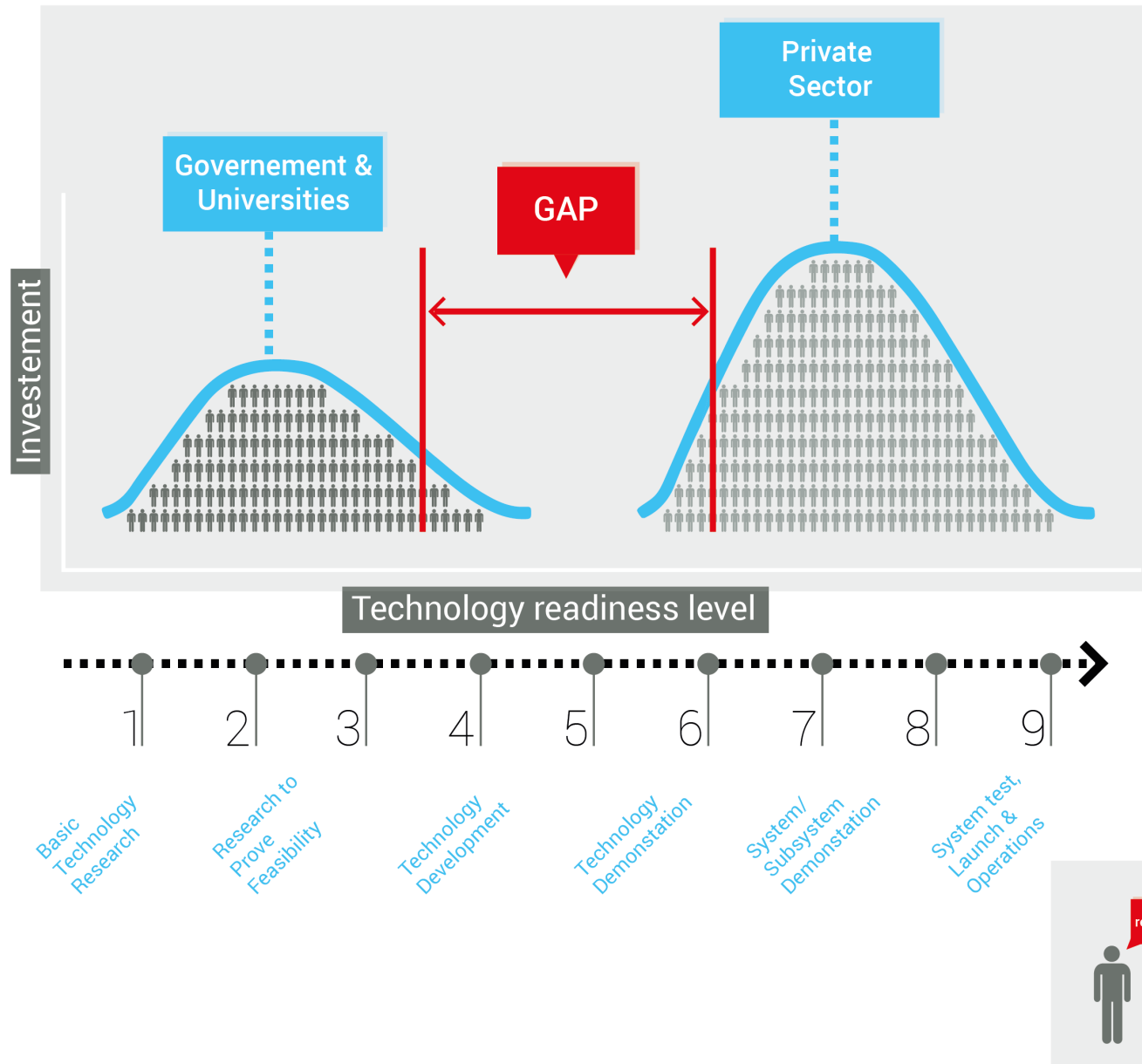


PROOF OF
CONCEPT
&
PRODUCT
DEVELOPMENT

TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

MARKET READY

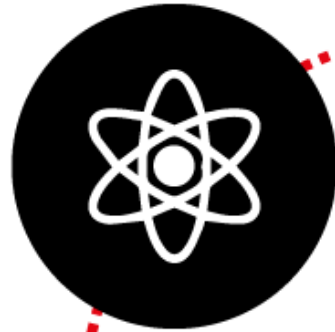
GAP IN MANUFACTURING INNOVATION



**NO MAN'S
LAND**

S'

THE FIVE DIMENSIONS OF KNOWLEDGE



THEORETICAL



EXPERIMENTAL



MANUFACTURING

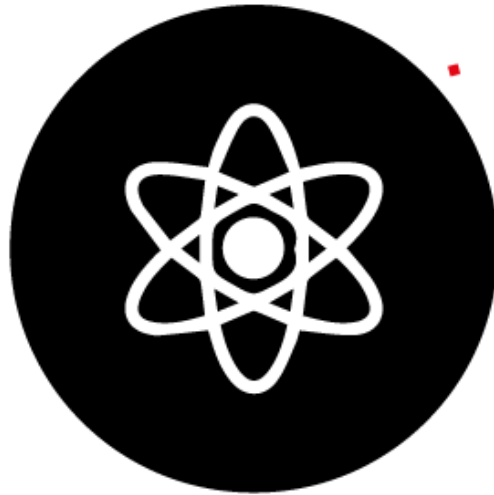


ECONOMIC

CONNECTIVE



UNIVERSITY AND PUBLIC RESEARCH CENTER



THEORETICAL



EXPERIMENTAL



MANUFACTURING

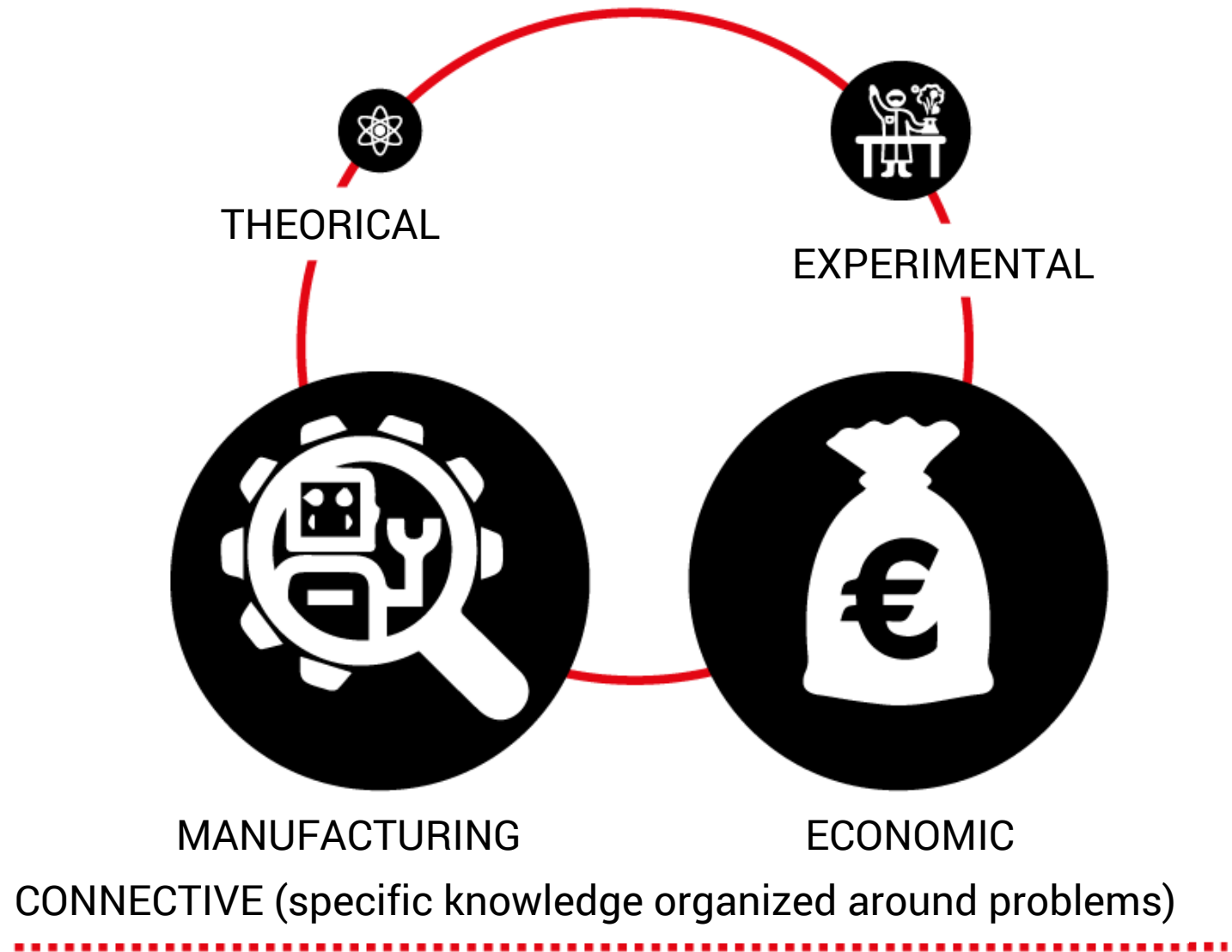


ECONOMIC

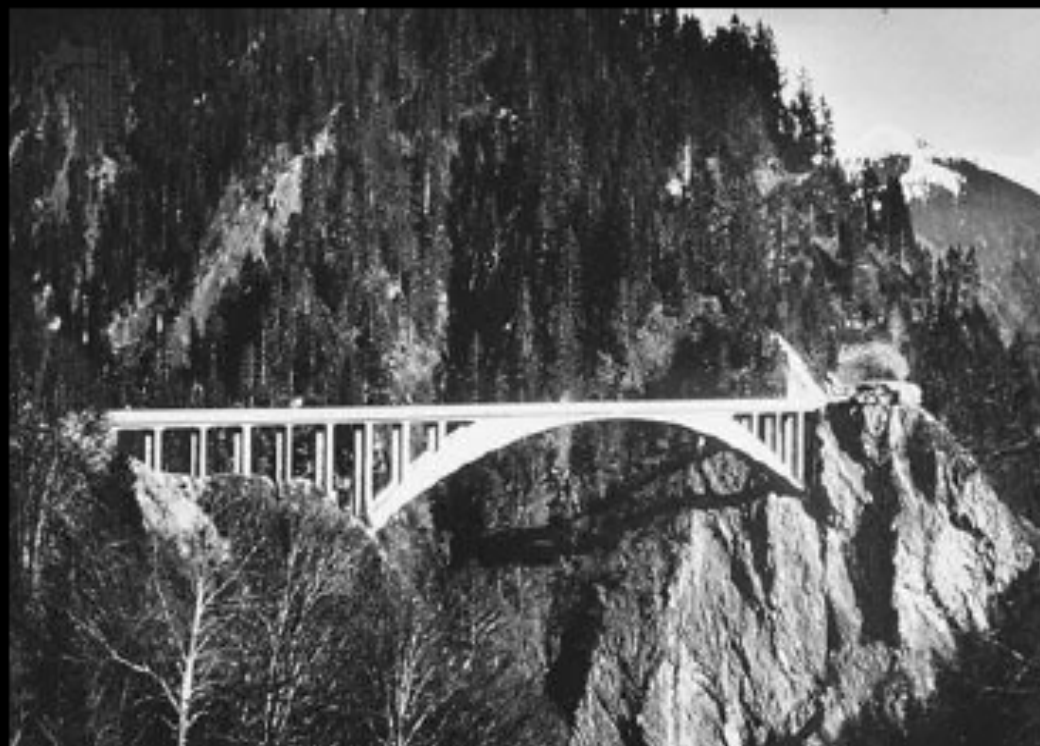
CONNECTIVE (high level knowledge organized by disciplines)



COMPANIES



Salginatobel Bridge, Svizzera



Ponte ad arco in cemento armato progettato dal celebre ingegnere civile svizzero **Robert Maillart**. E' stato costruito in una valle alpina a Schiers, in Svizzera, tra il 1929 e 1930. Il ponte è stato dichiarato, nel 1991, International Historic Civil Engineering Landmark.

CONSORZIO
ARCA



CONSORTIUM FOR THE APPLICATION OF RESEARCH
AND CREATION OF INNOVATIVE ENTERPRISES

ABOUT US

ARCA is a **public-private consortium** established in 2003 by the University of Palermo and a private group founded by local researchers in mid 90s to promote innovative technology transfer processes.

Our lines of activity are:

- **incubation** of innovative companies
- **technology transfer** and development of **new products** for SMEs and their networks
- management of **territorial and social innovation projects** related to the promotion of the entrepreneurial culture.



Entrepreneurship in the knowledge economy



OUR METHODOLOGY

- **Open Innovation** approach to link:
 - innovators
 - startups
 - SMEs and/or clusters of SMEs
 - large enterprises.
- **Multidisciplinary** teams and context
- Hybrid process:
 - **scouting of ideas** with a bottom-up approach
 - management of **pathfinder RTD programs** able to generate competitive clusters.
- Development of **international networks**
- Care about **local social impact**.

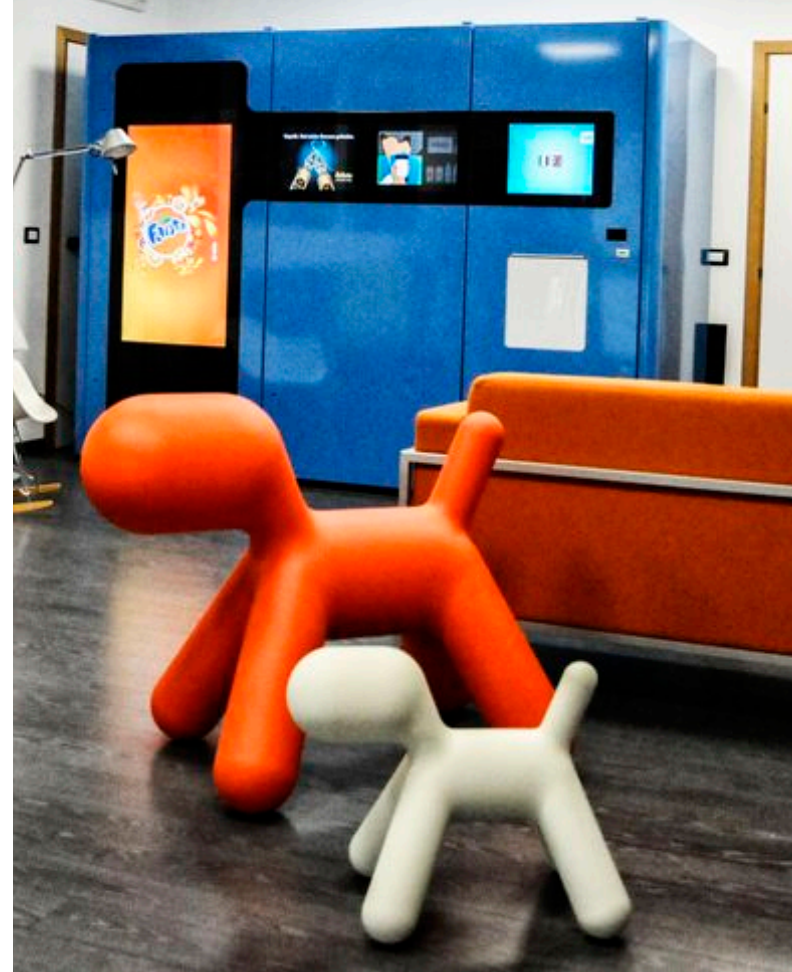


OUR INCUBATORS

The **high-tech ARCA incubator** is placed inside the university campus. It can host up to 20 ventures, events, meetings. A large prototyping area (the “**fabbrica**”) helps in the development of proofs of concept and minimum viable products.

The new **CRE_ZI incubator for creative companies** is under preparation in the cultural park of Palermo.

Other incubation&innovation hubs are under evaluation.



NETWORK AND PARTNERSHIPS

- partner of **EEN – Enterprise Europe Network**,
- hosting TLL Sicily, the regional node of **ENoLL, the European Network of Living Labs**.
- partnership agreements with **VC investors, scouting initiatives** (Vertis Venture, Seedlab, Premio Marzotto, StartLab Unicredit, SiamoSoci) and other incubators (M31, Makeacube).
- member of scientific, industrial and social organization devoted to **sustainable development** (ISES, ANEST, UN-SDSN).
- service center of the manufacturing district **Meccatronica Sicilia** and promotor of **Distretto ad Alta Tecnologia dei Sistemi Avanzati di Manifattura**.
- partner in projects of TT of the **main R&D national institutions** (ENEA, CNR, INAF, INGV)



European
Network of
Living Labs



National Research
Council of Italy



SOME SUCCESS STORIES OF OUR STARTUPS

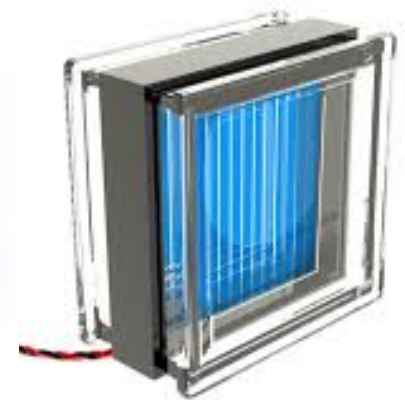
Mosaicoon



Abiel



SBskin



Panoptes



WIB



Informamuse

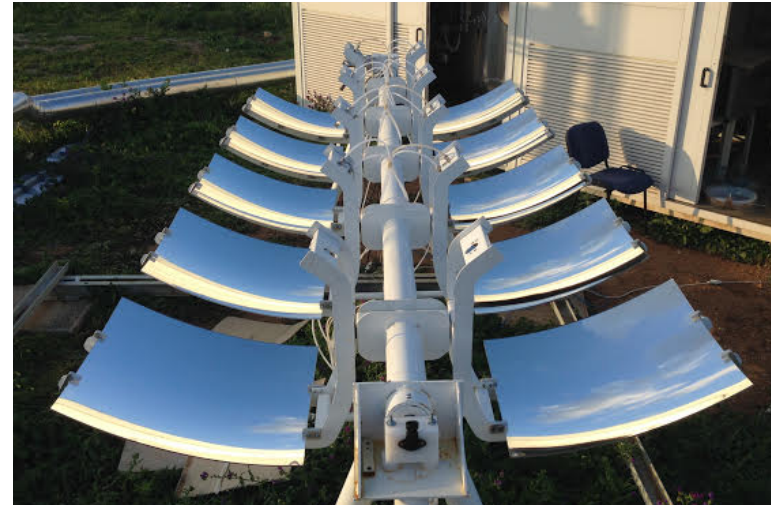


AN EXAMPLE OF PATHFINDER ACTIVITY: THE SOLAR LABORATORY

- **solar radiation is a relevant asset of our region** and an industrial specialization in this field is envisaged in regional S3
- we decided to invest in promoting projects on advanced solar systems specially designed for **distributed polygeneration** (large niche market)
- we look forward to **establish an internationally recognized center** for the design, prototyping and testing of solar components and systems (model PSA in Spain).

ERDF project FAE

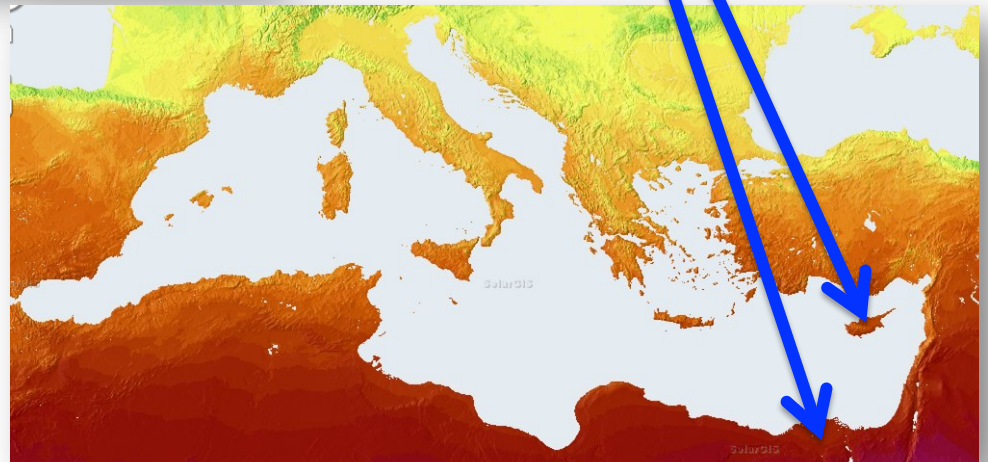
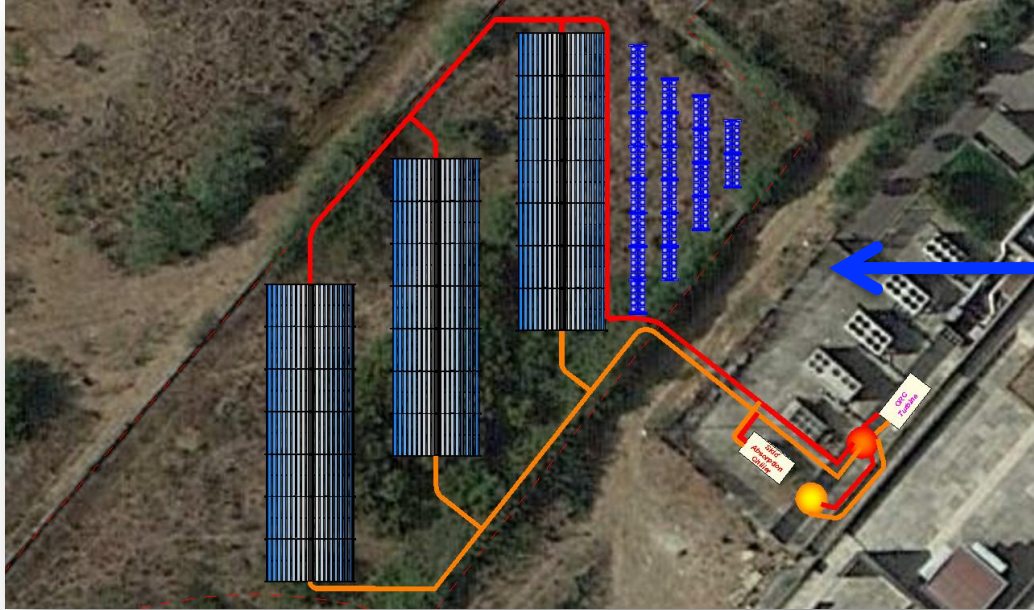
HCPVT for the combined production of electricity (efficiency >30%) and heat (efficiency >50%)



ERDF project FRESCO

An integrated solar thermal system to generate both heat and cold for civil and industrial applications

FROM ERDF PROJECTS TO ENPI DEMO PLANTS . . .



... TO A SOLAR CITY LIVING LAB



Thanks for the attention

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Consorzio Arca



Arcalncubatore

