

PaGES²

Pianificazione, Gestione
ed esecuzione di un
Esperimento Scientifico
in un centro di ricerca
internazionale

How to generate value from the knowledge?

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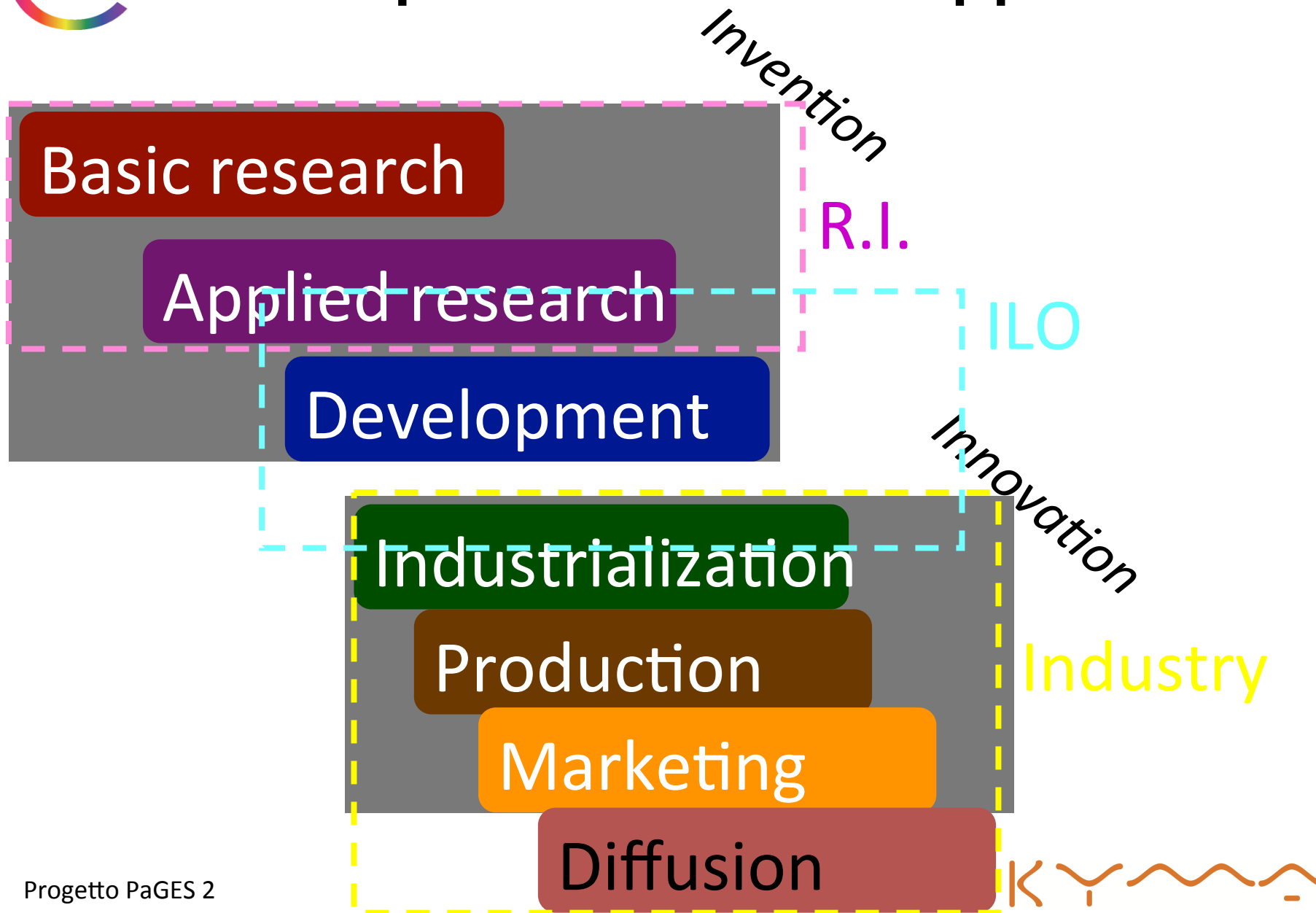
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REGIONE AUTONOMA
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The path to industrial applications







What is TT?

- The process of transferring scientific findings from one organization to another for the purpose of further development and commercialization
- Often call “Spin-off”
- Different meanings in different situations:
 - Transfer of legal rights (Patent title, license, etc.)
 - Informal movement of information, knowledge, skills through person-to-person interaction

Congressional Research Service

Technology Transfer: Use of Federally Funded Research and Development

Wendy H. Schacht

Specialist in Science and Technology Policy

December 3, 2012





Technology Transfer vs. Knowledge Management

... but basically we have to transfer

Knowledge



Technology Transfer vs. Knowledge Management

- What is *"Technology"* ?
- What shall we actually *"Transfer"* ?
- We can transfer:
 - ✓ Prototypes
 - ✓ Equipment
 - ✓ Materials and components
 - ✓ People
 - ✓





Why?

- Give a man a fish and you feed him for a day.
- Give a man a fishing rod, and he feeds himself and his family for as long as the rod lasts.
- Help a man develop the knowledge and means to improve the fishing rod and to design and produce new ones, and he may feed himself and his society for years to come.





Different mechanisms for TT

EDUCATED-ORIENTED

- ❖ Didactic activities
- ❖ Scientific publications
- ❖ Mobility of researchers
- ❖ Outplacement of students
- ❖ Academic networks
- ❖ Participation to conferences, meetings, fairs
- ❖ Postdoc masters (also for workers)

MARKET-ORIENTED

- ❖ Research contracts
- ❖ Co-operative research programs
- ❖ R&D consortia
- ❖ Shared laboratories
- ❖ Sell of intellectual property
- ❖ Spin-off creation
- ❖ Services for tests and analysis
- ❖ Technological consultancy
- ❖ Accreditation and certification activities





Tools to promote TT

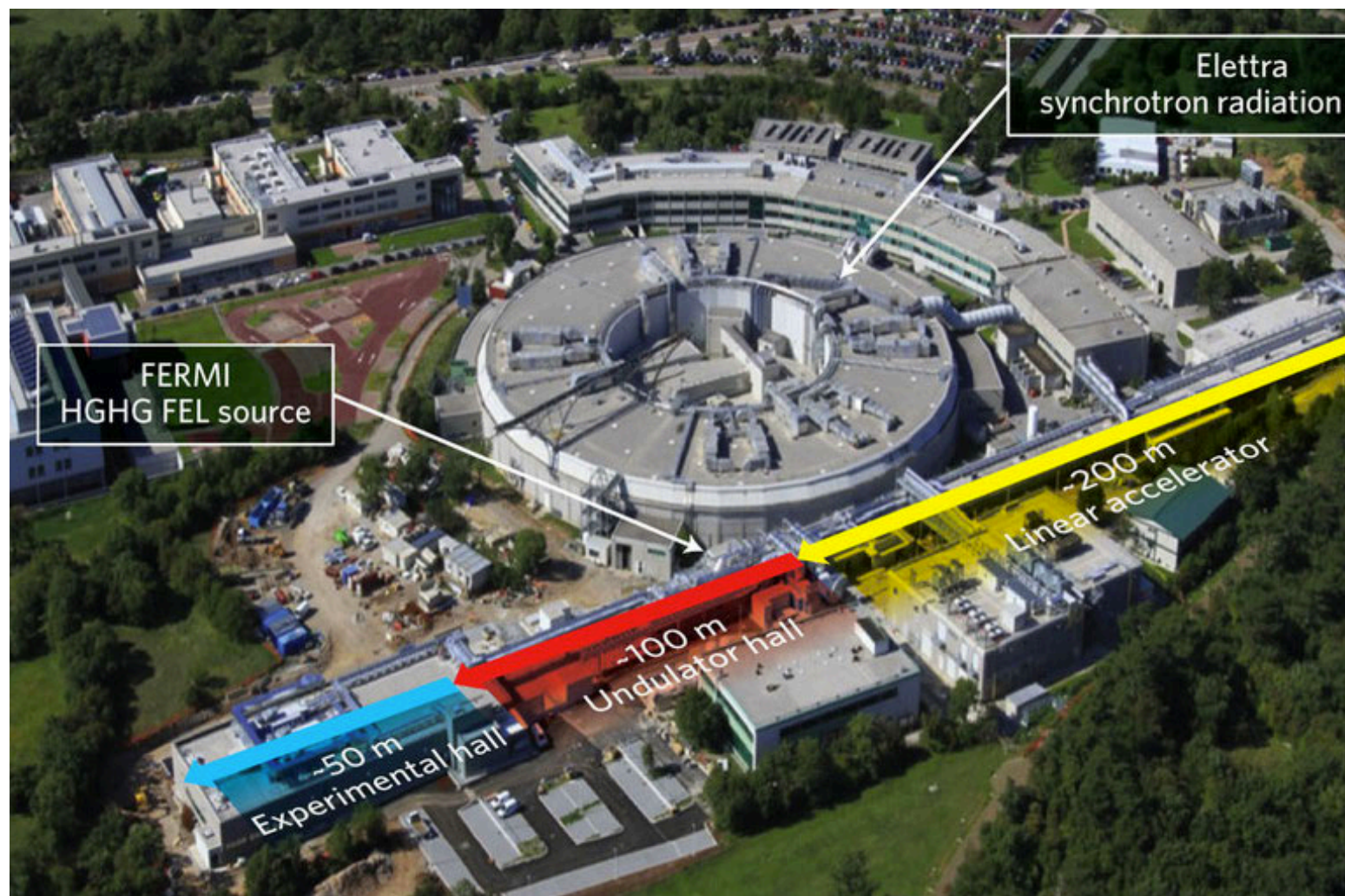
- Scientific parks
- Innovation districts
- Business incubators
- Industrial Liaison Offices (ILO)
- Patents
- STTR (Small Business Technology Transfer Program) SBIR (Small Business Innovation Research)
 - *SBA_SBIR-STTR_Overview_October_2015.ppt*





Technology transfer: from research to market

- Universities and Research Centers do not have appropriate resources and sufficient competences and even culture to exploit an opportunity from the commercial point of view
- For enterprises it is almost impossible to cover all the different disciplines and relevant knowledge that are often necessary to conceive and set up a new technology and/or a new product





Technology transfer: Kyma example

- ✓ Kyma was established as a spin-off of Elettra - Sincrotrone Trieste to design, realize and install all the 18 undulators for FERMI@Elettra project.
- ✓ An open European tender issued by end 2006 with the purpose to find potential partners for realizing the undulators.
 - Potential partners were required to set up a new company to that purpose, together with Elettra.
 - The capital of the company was formed by 51% of shares of the NewCo as **intangible assets** supplied by Elettra - Sincrotrone Trieste and 49% of liquid capital supplied by the partners.
 - Elettra had to contribute transferring to the NewCo its know-how on undulators. **Knowledge Transfer monetarily evaluated.**





Achievement in a nutshell

- Kyma Srl established in August 2007
- Kyma Tehnologija d.o.o. established in July 2008
- Operations started by end 2008
- All undulators for the FERMI@Elettra project delivered on spec, on time, on budget
- Supply of insertion devices to the light source market started in 2010
- Cooperation with major scientific institutions worldwide
- 2 M€ profit after taxation in fiscal years 2008 to 2013

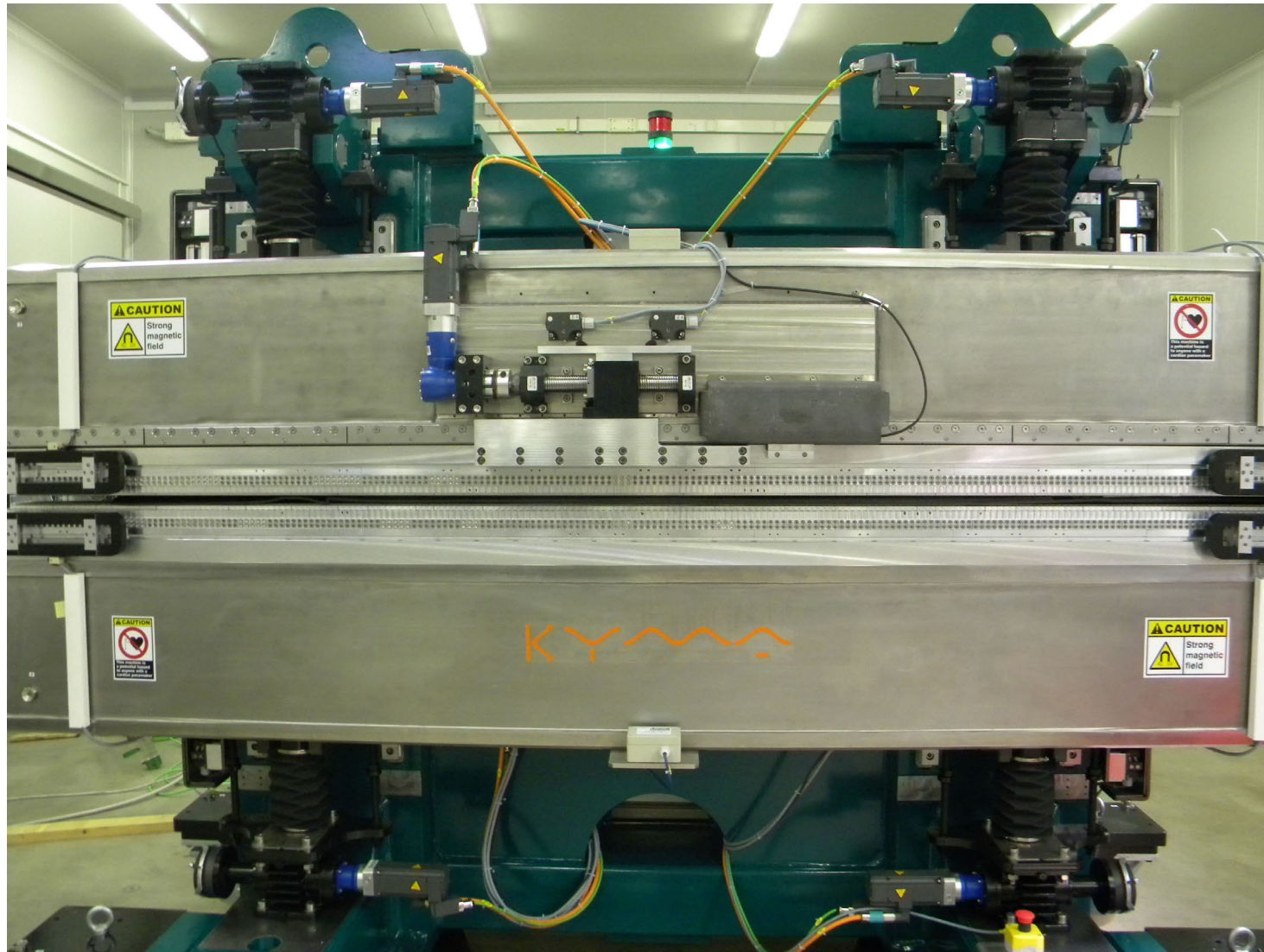


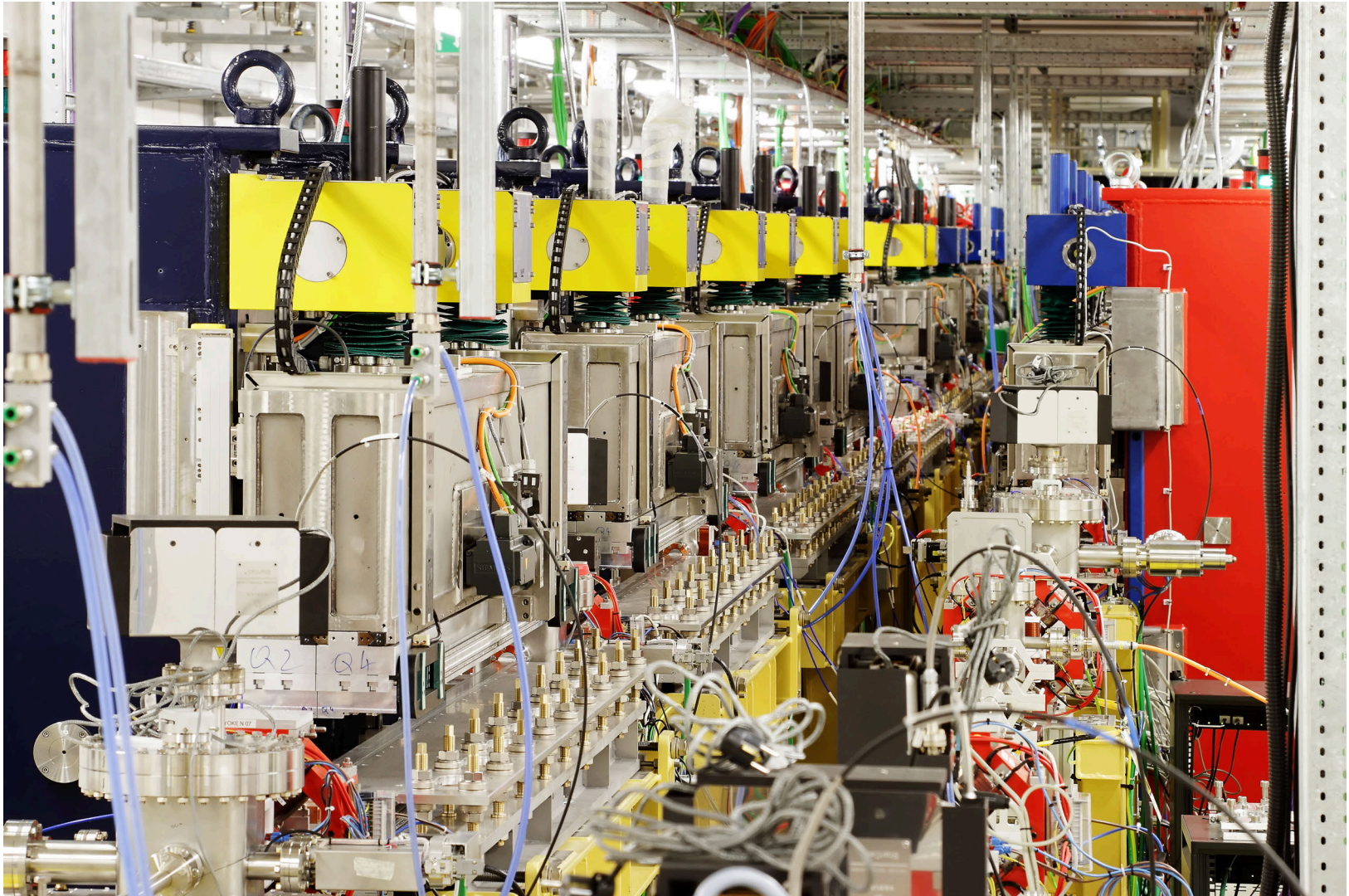


August 2008

Progetto PaGES 2



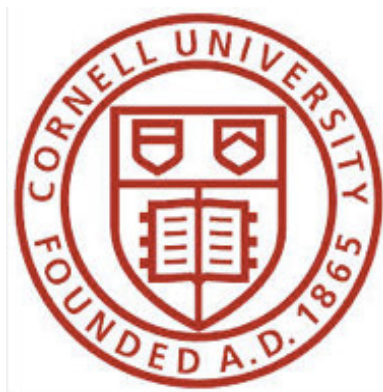




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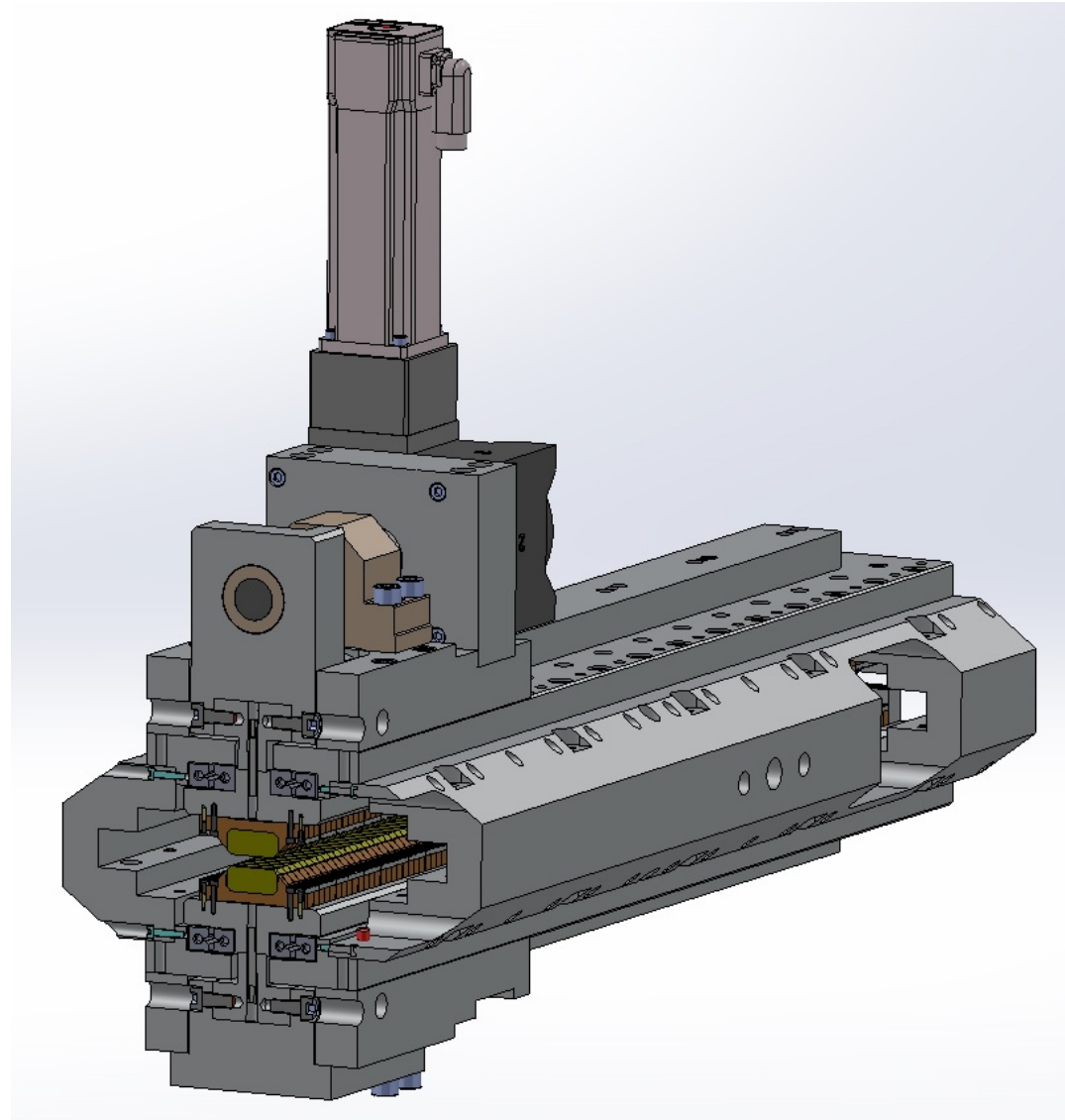
The partnership with



CORNELL UNIVERSITY

Committed to develop
new generations of IDs

Fixed-gap, variable-phase, compact LPU



Progetto PaGES 2





BUSINESS PLAN

Business plans are **NOT**

Just for commercial sector

Just for start-ups

Just for MBAs

Just for top management

If you are moving
your team / group / department / division
beyond the hunter-gatherer science model
or into a new business area requiring significant resources
you need a business plan





Business Plan **SCRITTO**

La scrittura è il banco di prova del tuo pensiero!





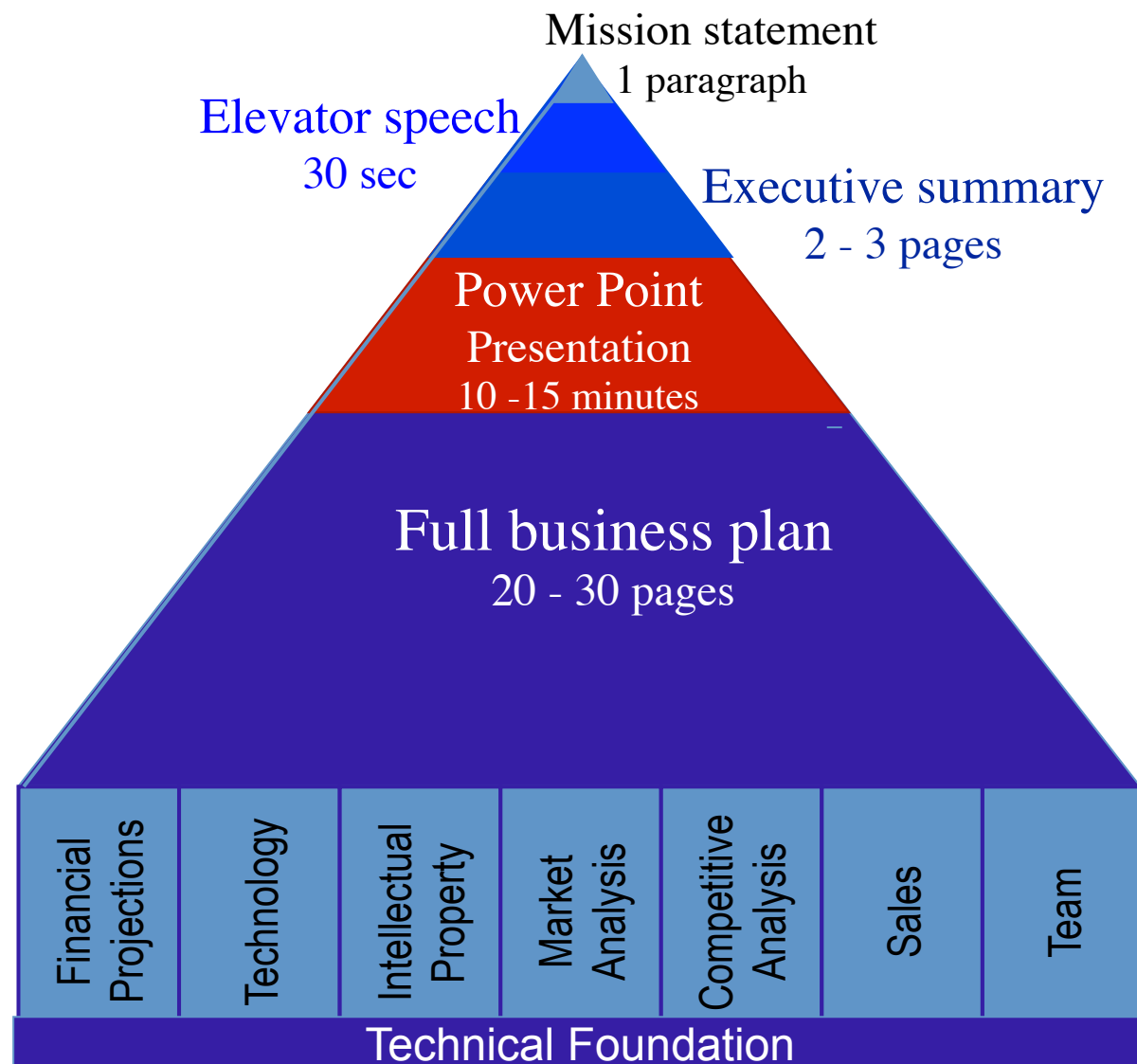
What is a business plan?

- A written summary of your
 - Business model
 - Specific business goals
 - Roadmap to those goals
 - Required resources
 - What and when
 - Operating plan
 - How resources will be managed
 - Plan for assessing progress
 - Metrics
 - Schedule
- A selling document
 - Professional but not slick*
 - Projects the character and excitement of the enterprise

slick: effective but not sincere or honest



Business plan schematic: written and verbal



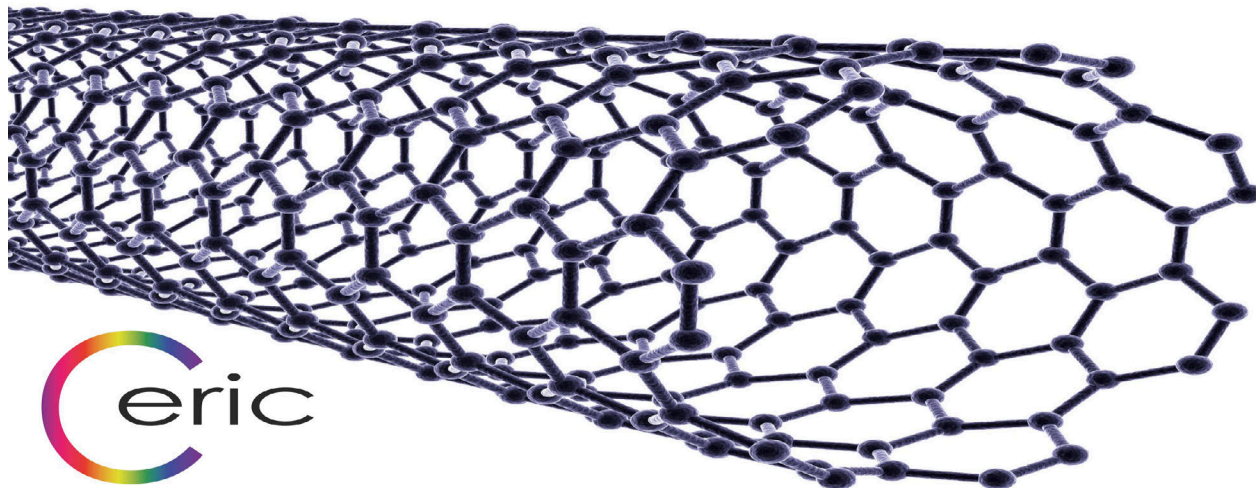
Source: J. Hadzima



Is your plan attractive to investors?

- Who are your investors?
 - Yourself
 - Your team
 - Your university, laboratory or company
 - External investors
- How attractive is the plan?
 - Does it fulfill (or create) a need
 - What is unique about your product
 - What is its growth potential
 - Is it financially viable
 - Does it pass the reality check





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Thank you