



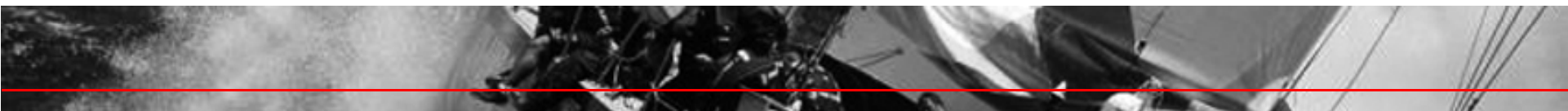
Innovación, Tecnología e Internacionalización

# Innovación

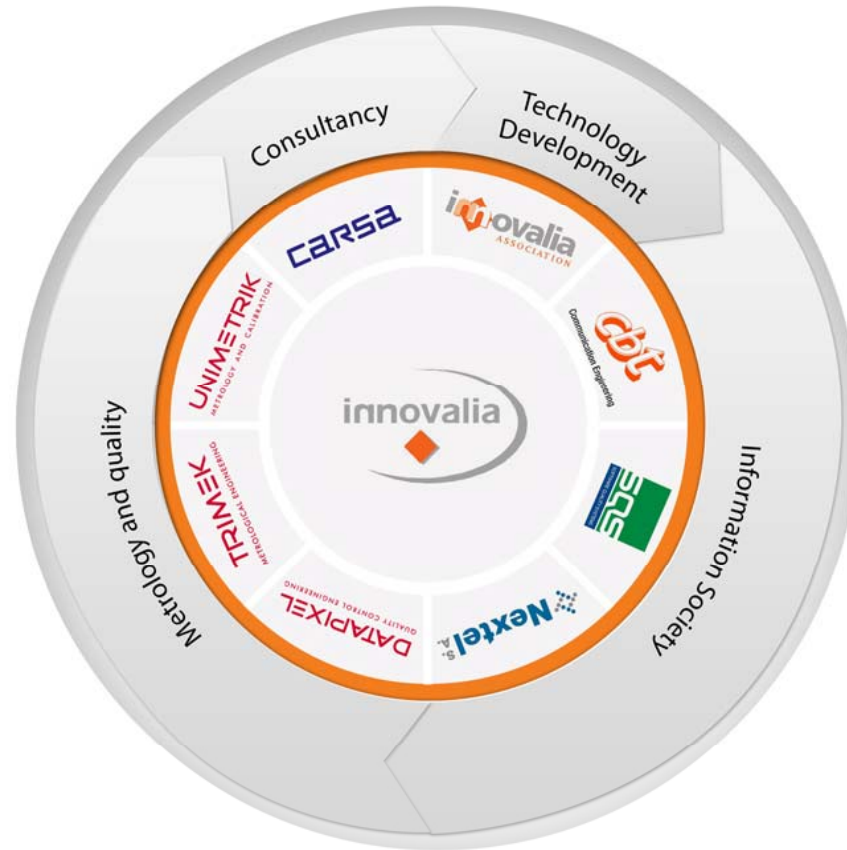


Because the only purpose of business is to create a customer, the business enterprise has two and only two basic functions: marketing and innovation. Marketing and innovation produce results; the rest are costs

Peter Drucker



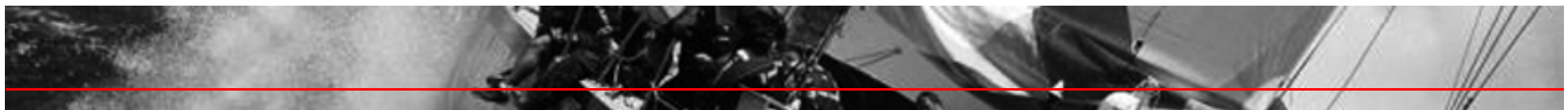
Innovación



Innovación – Nuestro reto

Innovación y creatividad como ejes de **Colaboración** con las **Empresas** .....en el desarrollo de **Propuestas de Valor Tecnológico**

**Shaping Technology** for Tomorrow's World





Innovación

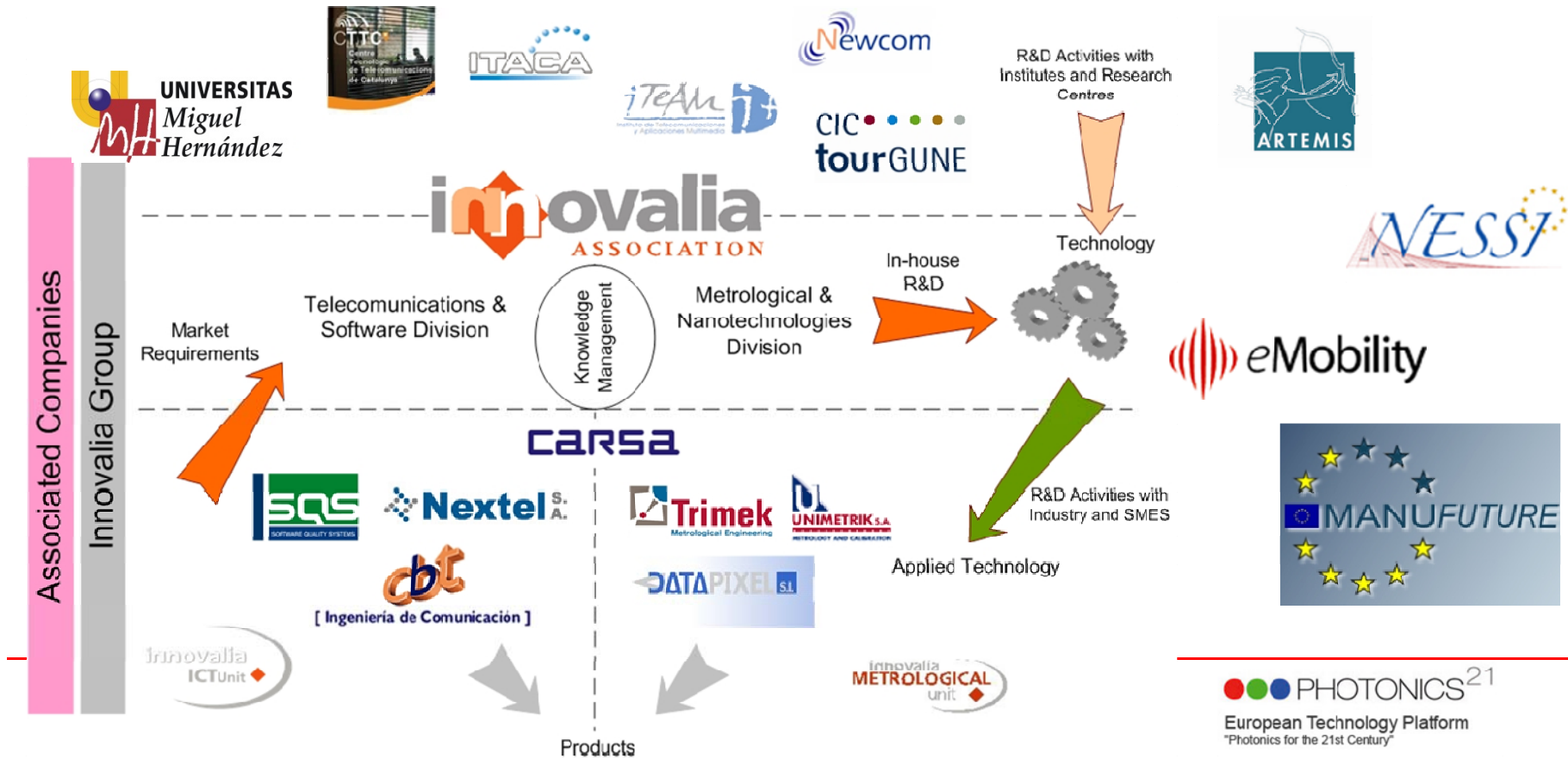


Innovación

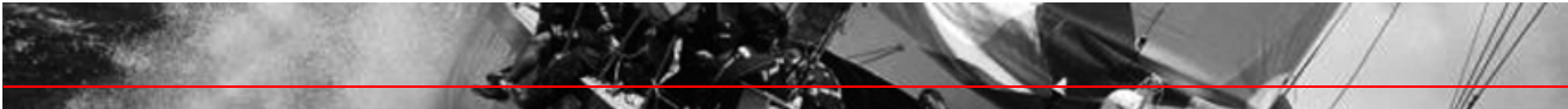
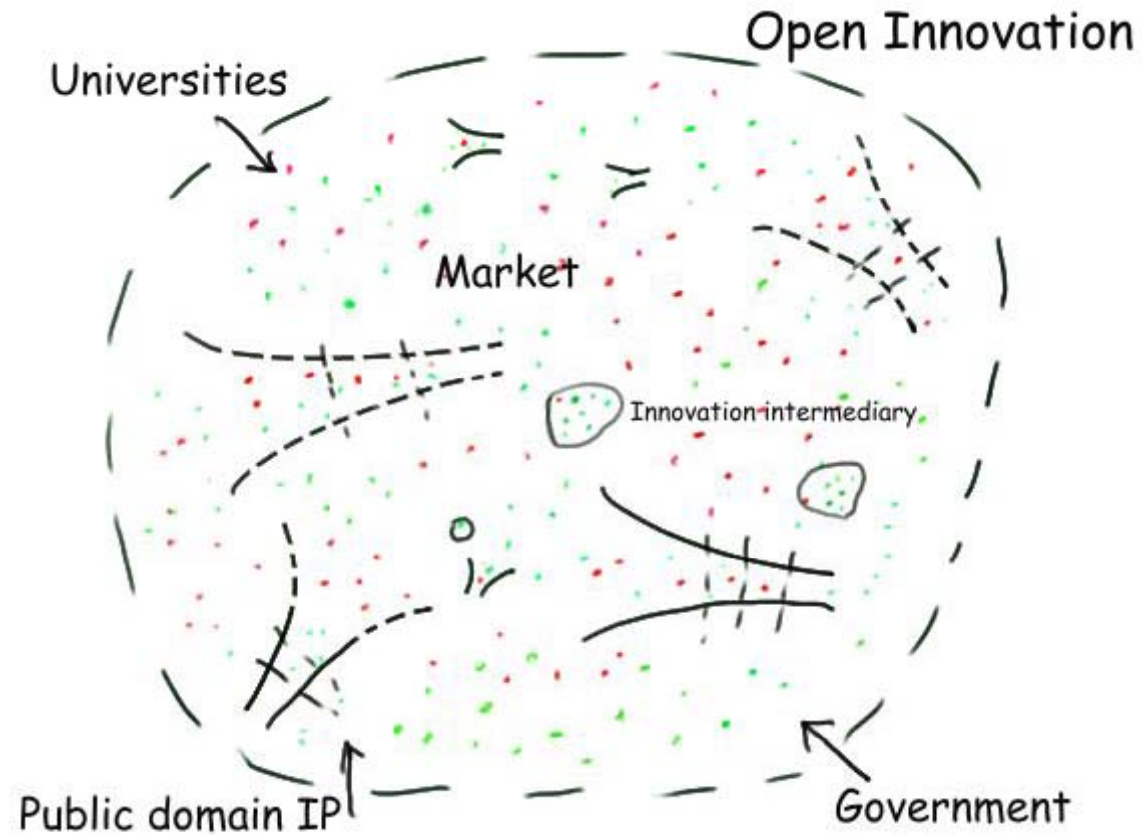


**Estamos solos?**

Innovación

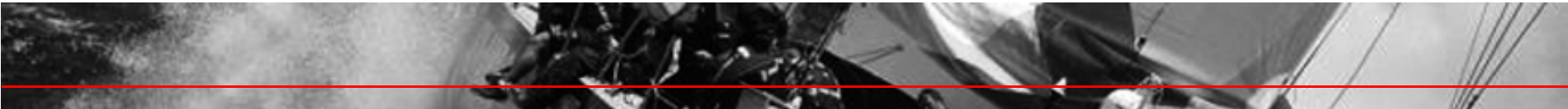


## Modelos o Ecosistema de Innovación Abierta



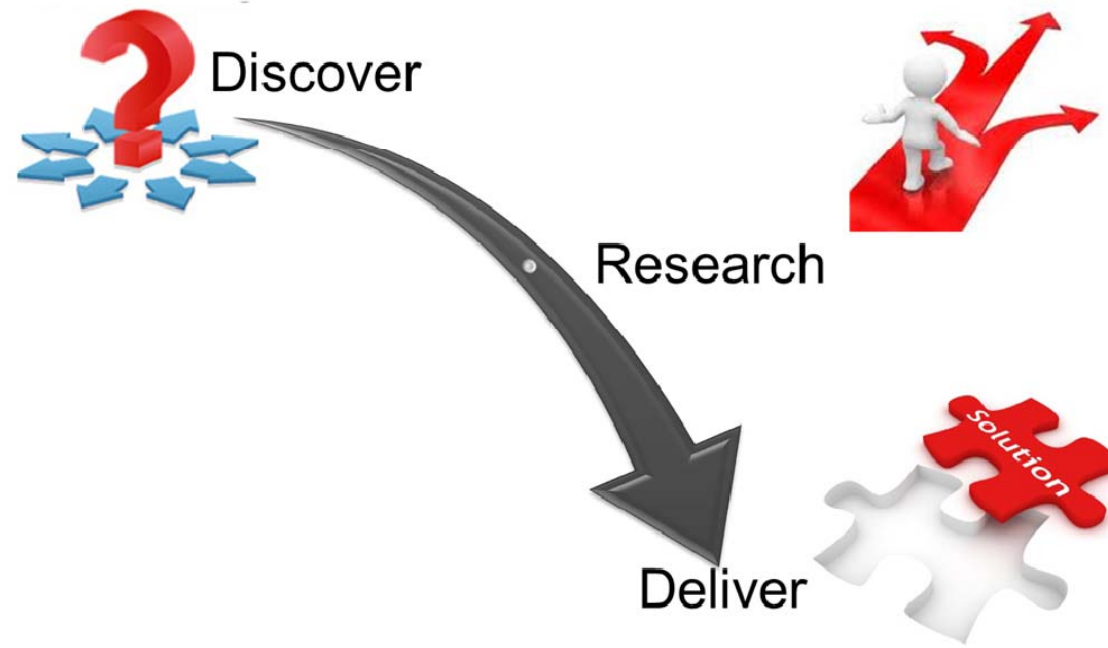


Tecnología





Tecnología



**I+D orientada a producto**



Tecnología



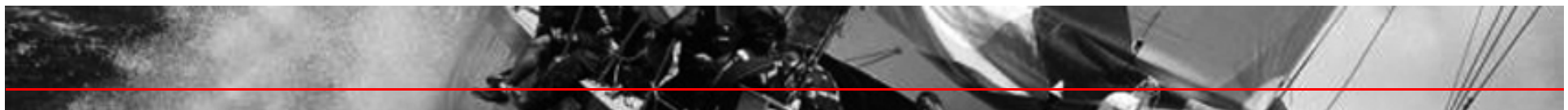
**Equipo con mayor alcance**



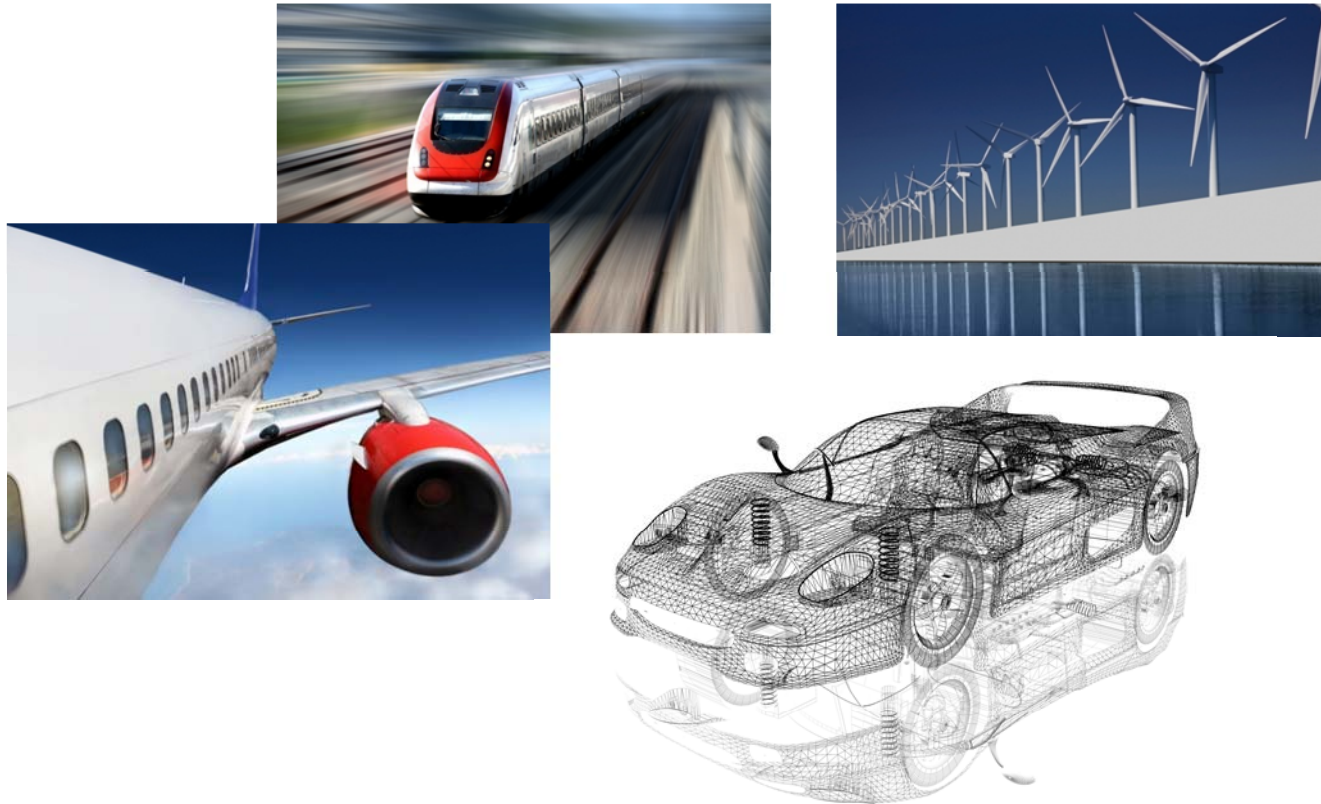
## Tecnología

- 
- A background image showing a close-up of a dictionary page with the word "re-search" highlighted. The page is slightly blurred, and the text is in a serif font.
-  Inline & Virtual Metrology
  -  Micro and nano-metrology.
  -  Wireless communications & service platforms.
  -  Software Engineering: Verification, Validation & Quality Assurance
  -  Security, dependability & trust.
  -  Knowledge Management.

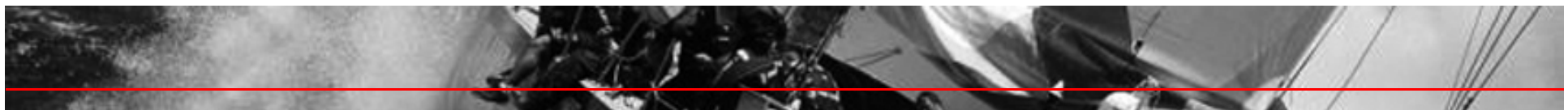
## Crecimiento basado en fortalezas



Tecnología




Tecnología





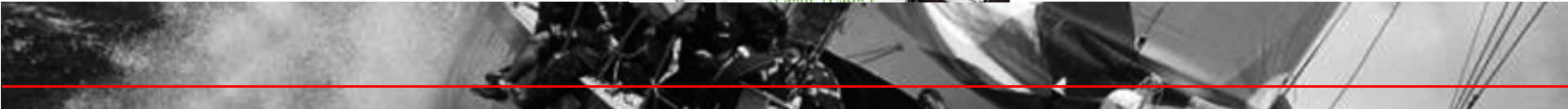
# Tecnología

- 
-  Inline & Virtual Metrology
  -  Micro and nano-metrology.
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  -  Security, dependability & trust.
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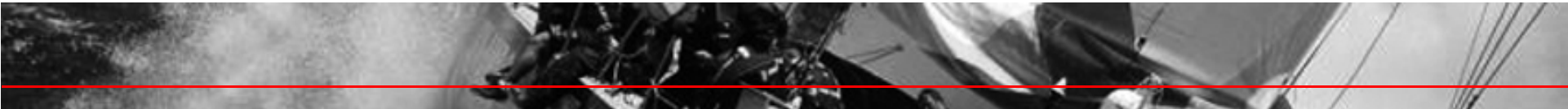
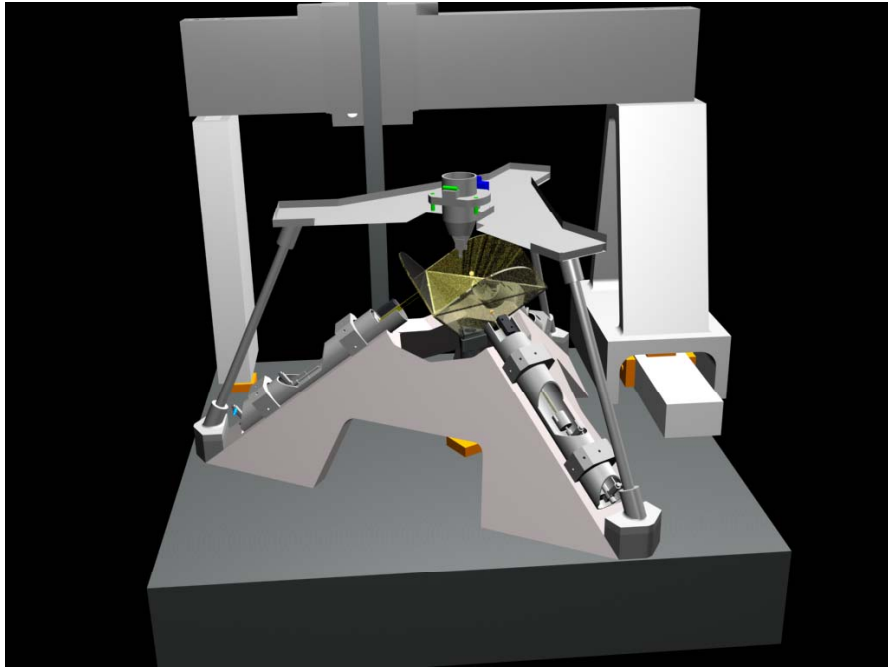


**Smart City**

**Factories of the Future**



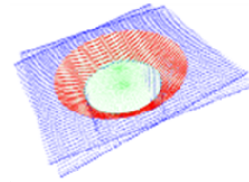
Tecnología

The logo for NanoCMM, with the text "NanoCMM" in a blue, bold, sans-serif font. Below the text is a row of several grey spheres of varying sizes, representing a coordinate measuring machine's probe.

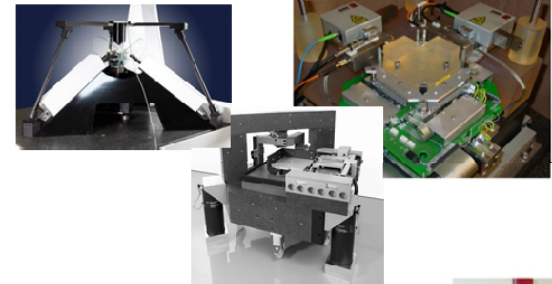
Tecnología



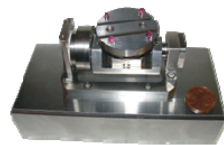
**Navigation system**  
(3D microscopy)



**Nano GFX**  
(3D geometry extraction)



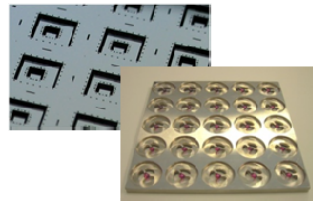
**Metrology frame**



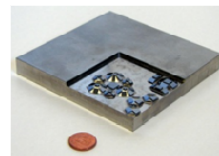
**Rotary table**  
(multiorientation)



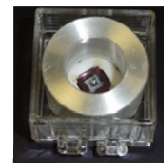
**SENSORES Y ARTEFACTOS**



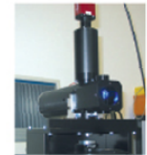
**Standards & artefacts**  
(calibration)



**Fiducials**  
(reference)



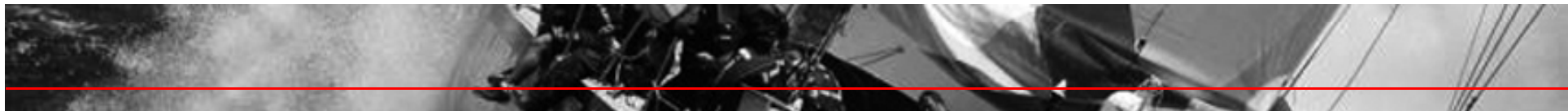
**Tactile sensor**  
(3D scanning  $\mu$ -probe)



**Optical sensor**  
(area scanning)



**Optical sensor**  
(point  $\mu$ -probe)





Tecnología

NanoCMM



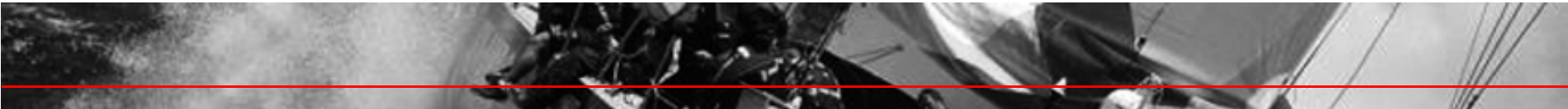


Tecnología

**MULTIPOL** Security policy in multi-domain environments



ITEA2 Gold Award





Tecnología

metaverse1



Virtual World

Real World

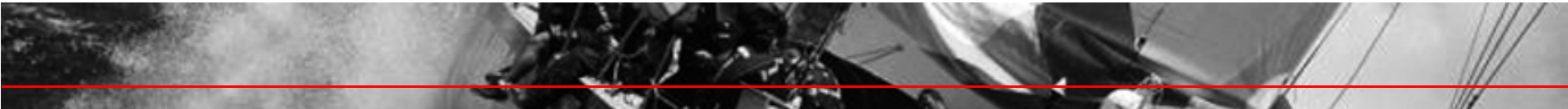


global standards among real and virtual world  
use case: virtual travel



Tecnología

**Servery: Advanced SERVICE Architecture and Service DELIVERY Environment**



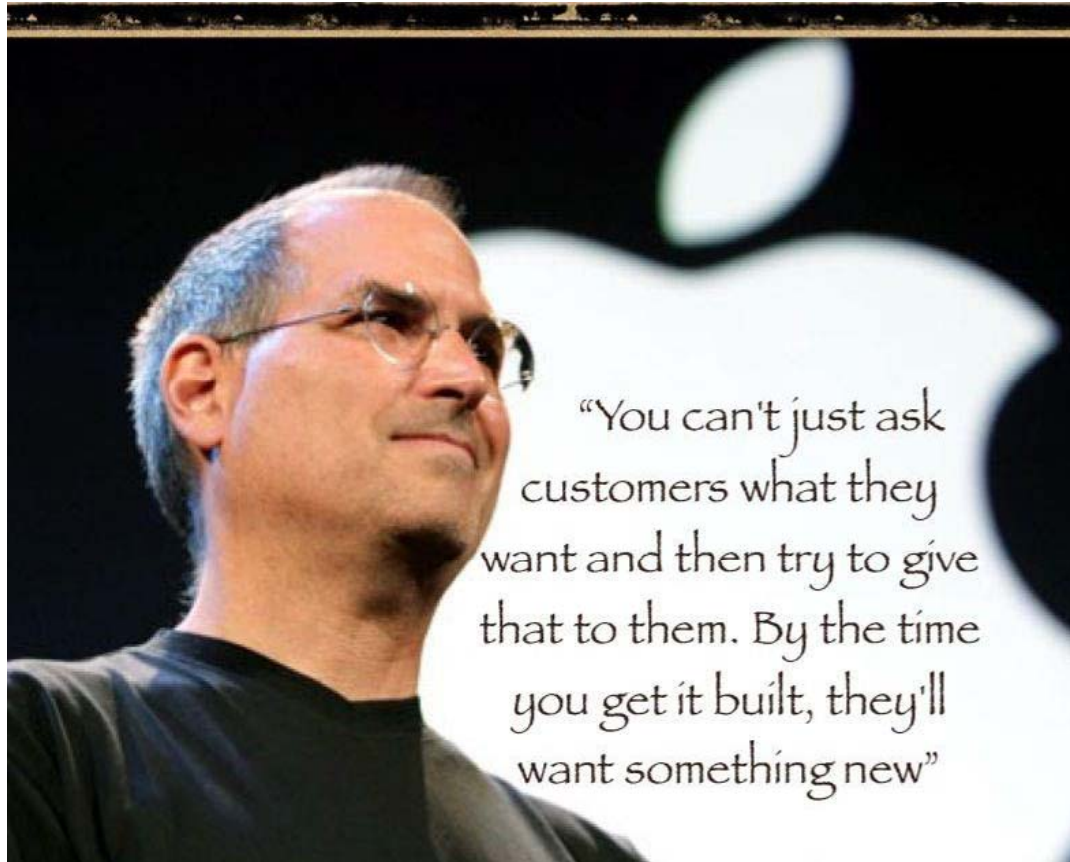
Tecnología



**escucha – interioriza - reacciona**



Tecnología – Clientes y velocidad de innovación





Tecnología – Clientes y velocidad de innovación



2005







## Vulkan gage

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## Spark gage

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**m3 server**



**m3 tablet**



## Plataforma M3

### Equipamiento M3



#### M3 gage

- Equipos de adquisición de datos 3D



#### M3 server

- Equipos de almacenamiento de información

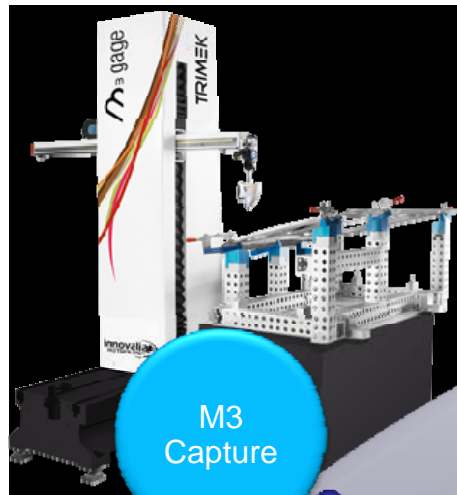


#### M3 tablet

- Dispositivos móviles de consulta

# Plataforma M3

## M3 SW Suite



M3  
Capture

Datos



M3  
Server  
Manager

Información

M3  
GFX

M3  
CAD

M3  
Digital  
Report

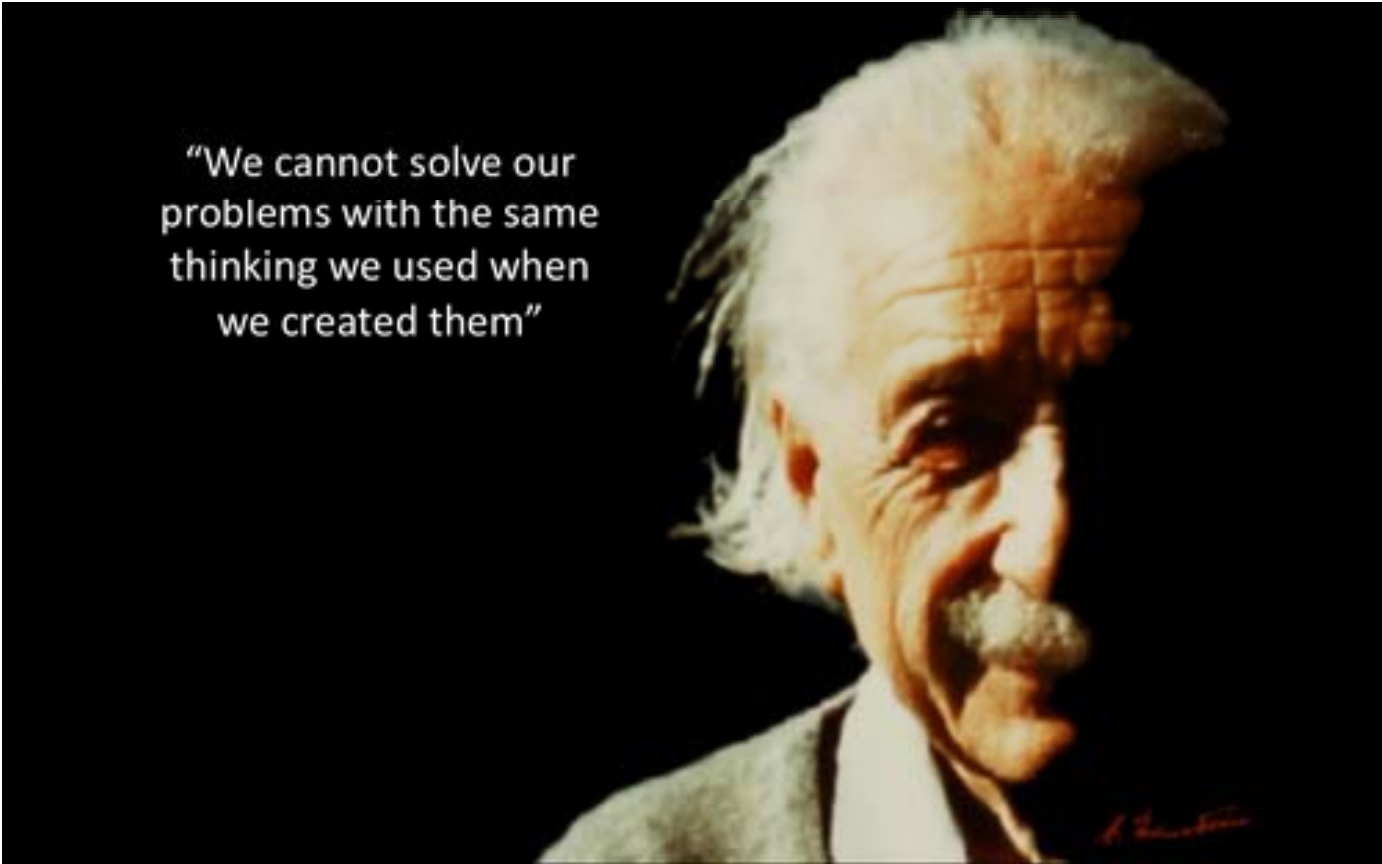
M3  
Mobile

M3  
Maps

Conocimiento



La ruta de la Innovación



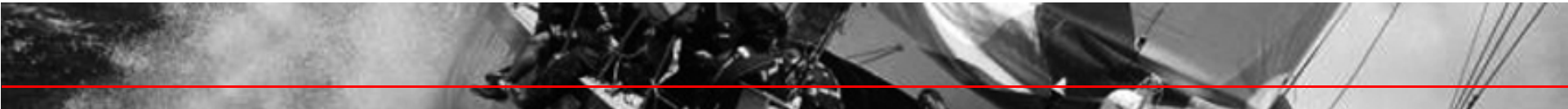
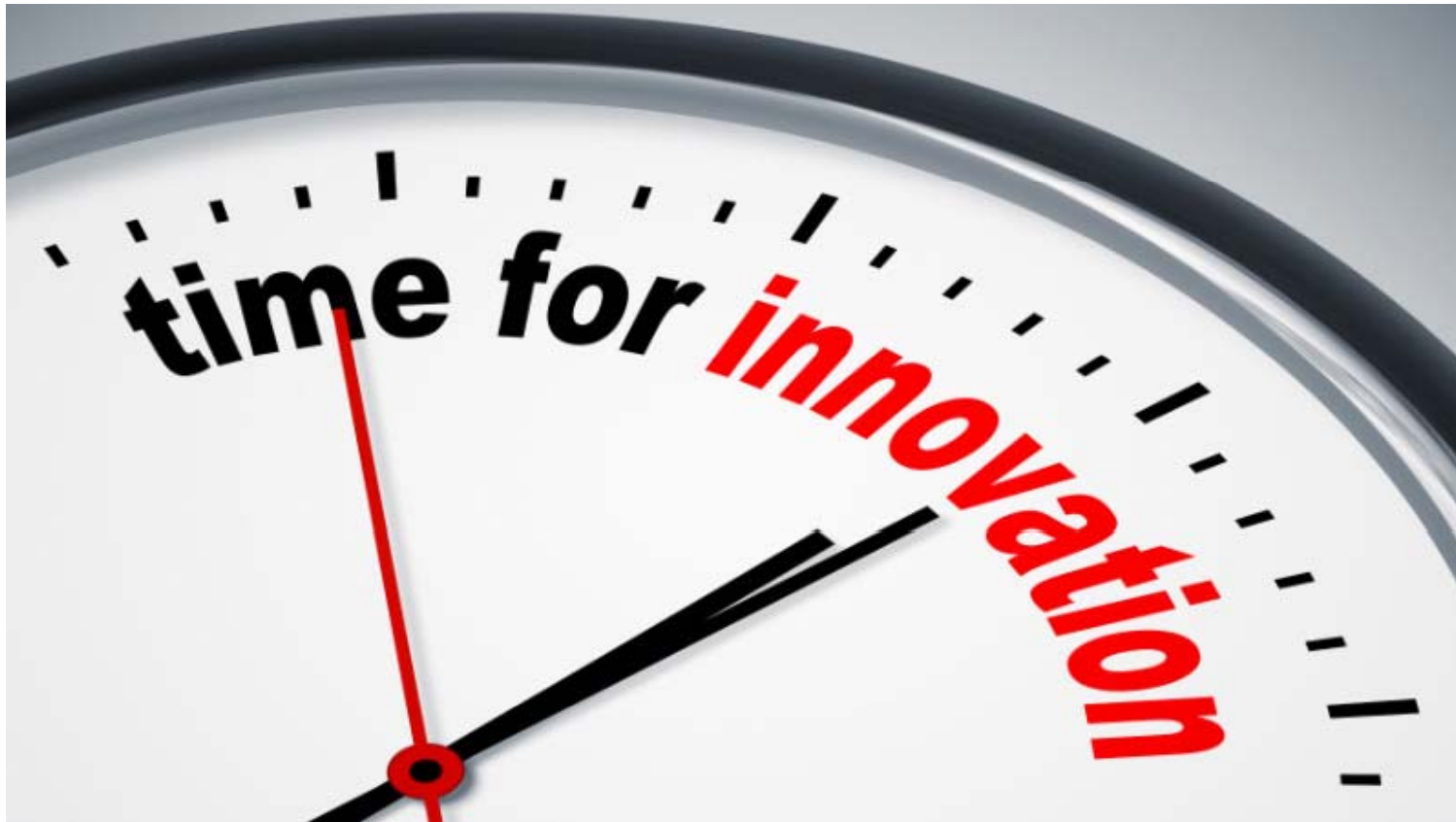




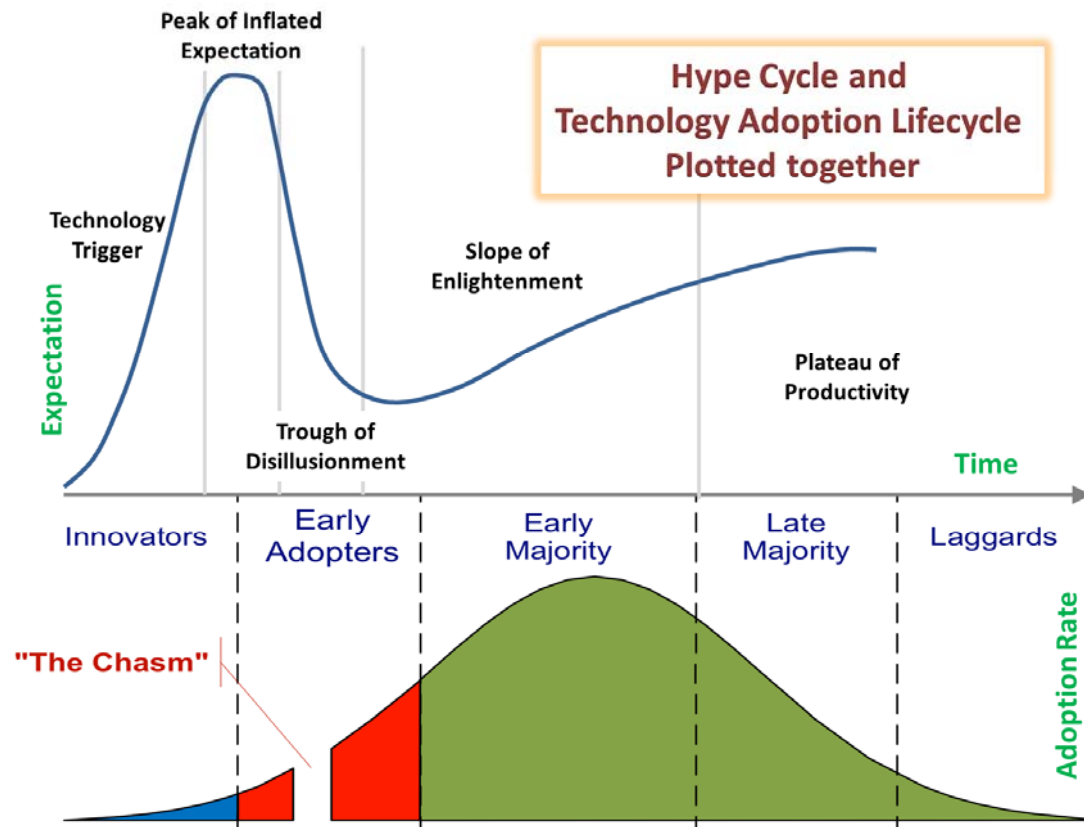
La compleja ruta de la Innovación



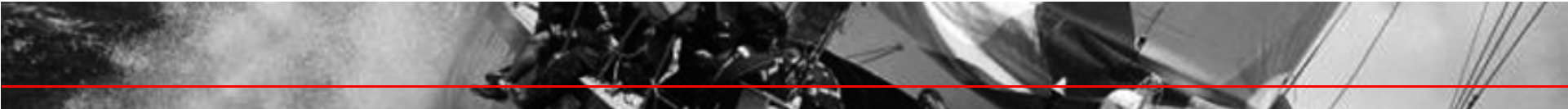
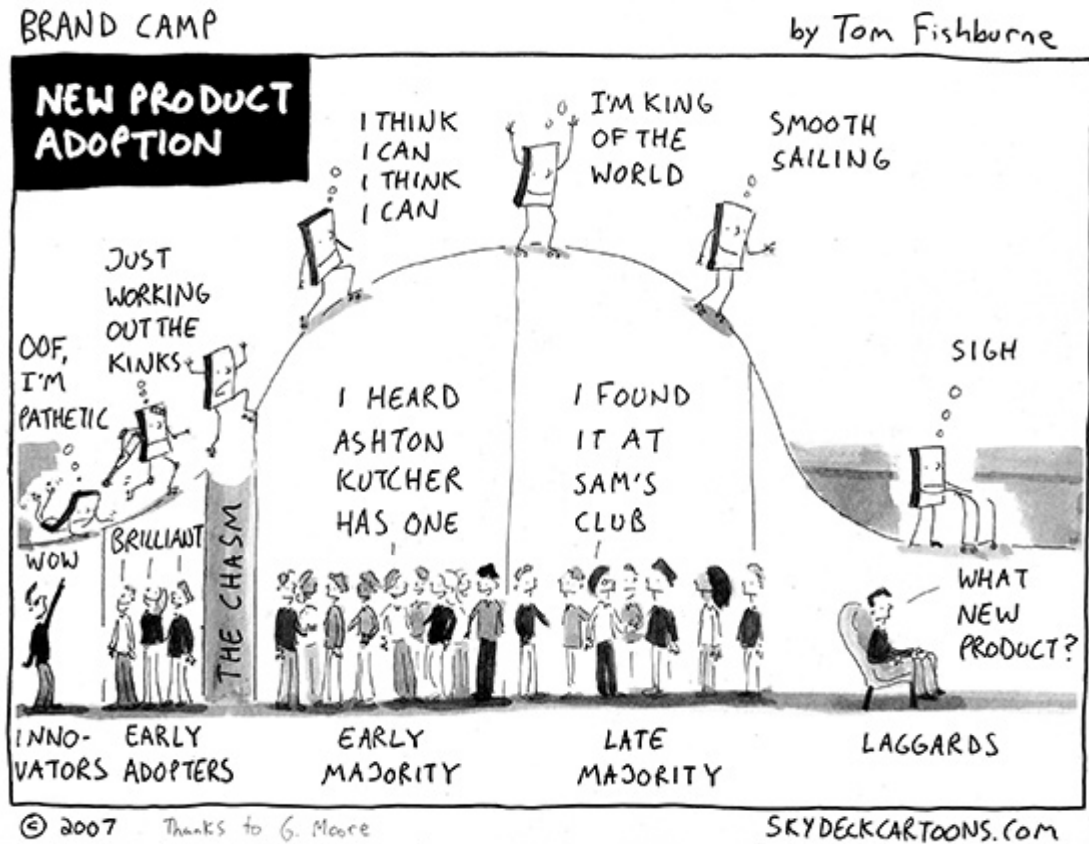
La ruta de la Innovación



# La ruta de la Innovación



# La ruta de la Innovación

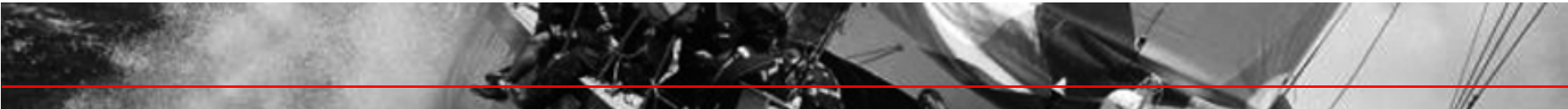
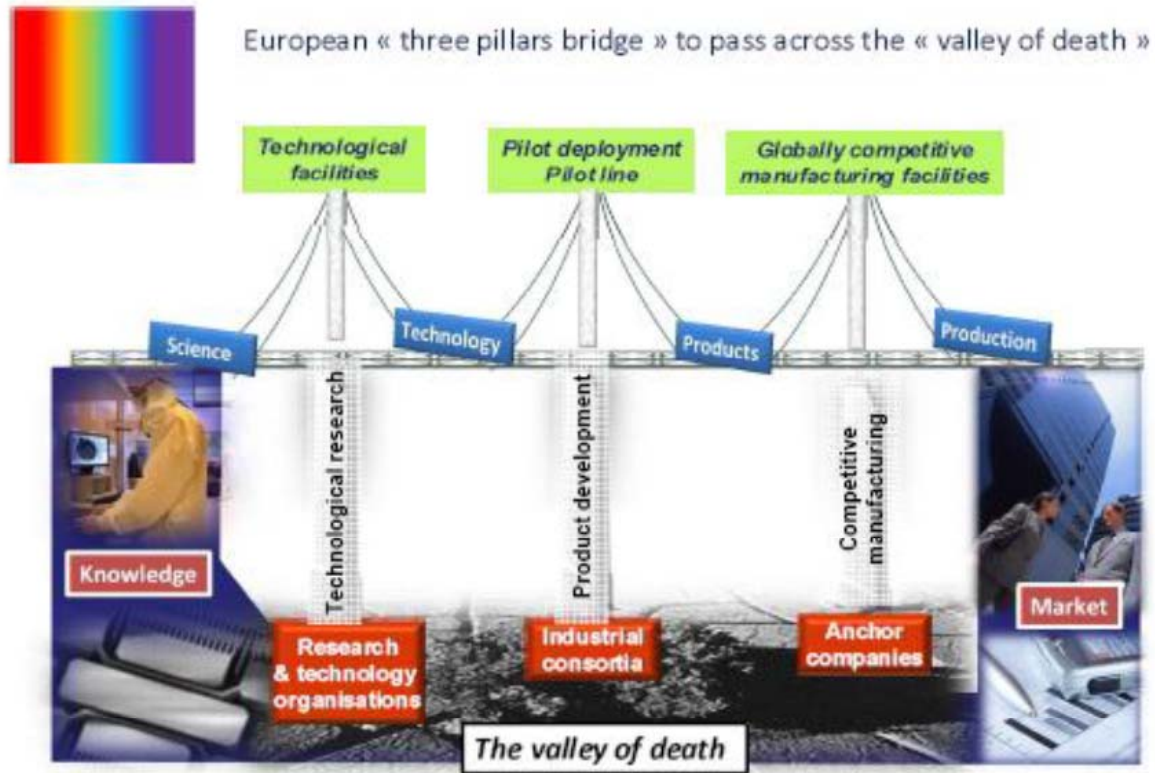


La ruta de la Innovación – Cooperación e Internacionalización

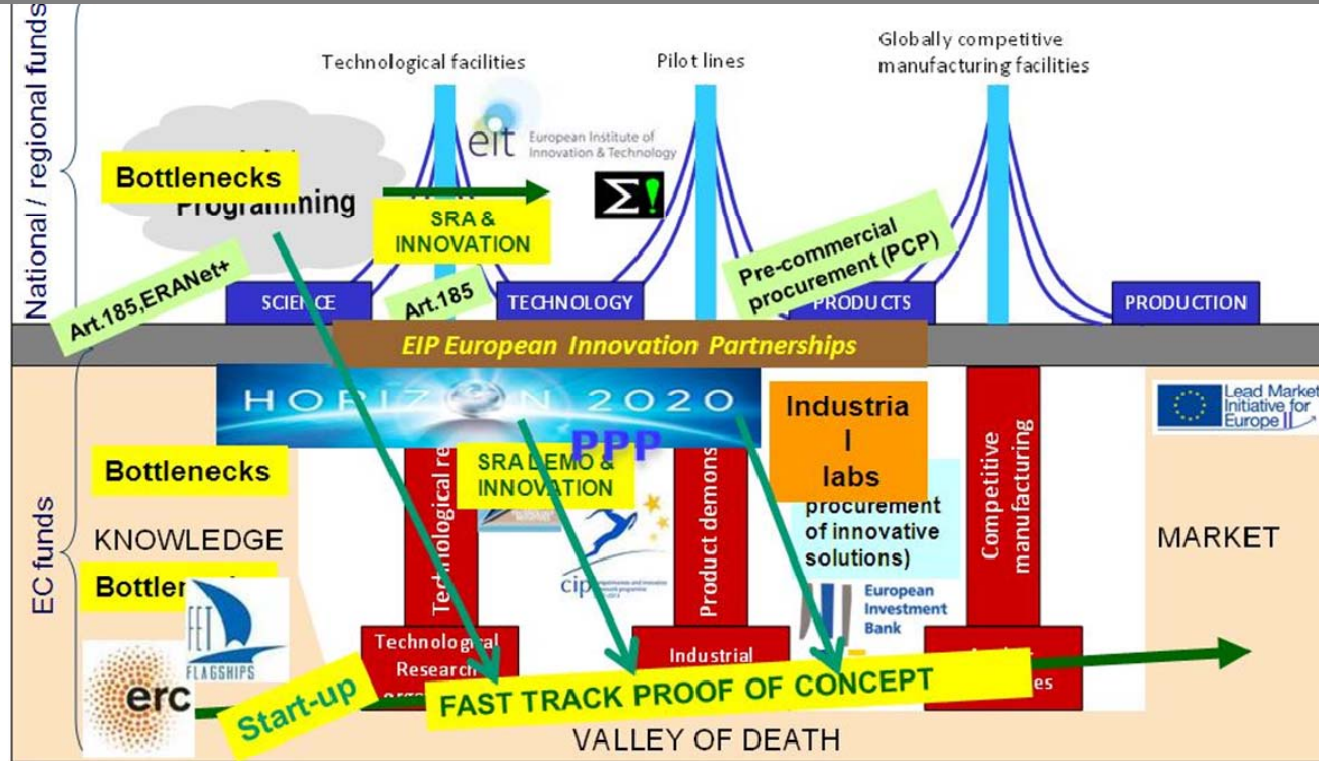




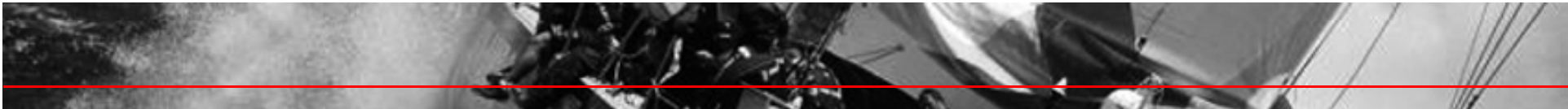
# Ruta de la Innovación



Ruta de la Innovación



Complejidad Exponencial



# FI-WARE: Opportunities for SMEs and entrepreneurs



<http://www.fi-ware.eu>

<http://www.fi-ppp.eu>

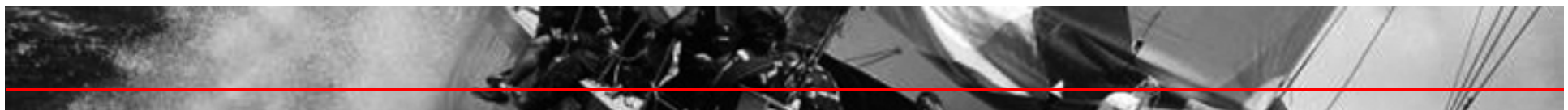
[http://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php/Quick\\_FI-WARE\\_tour](http://forge.fi-ware.eu/plugins/mediawiki/wiki/fiware/index.php/Quick_FI-WARE_tour)



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## Strategic European Perspective: Confluence of two trends

- 1) Technological trends constantly create new business opportunities. Mobility/mobile access, big data, evolving telecom infrastructure, or the Internet of Things keep changing the business over the Internet.
  
- 2) Currently this change is particularly dynamic as Internet users and usage grows rapidly and Internet services cover all parts of life and business.



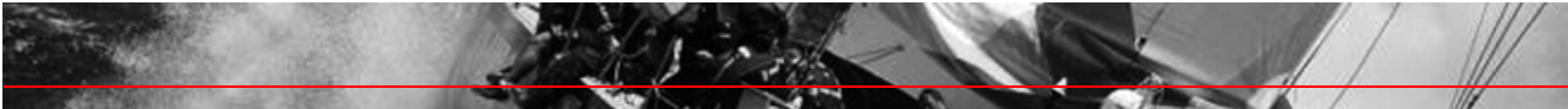
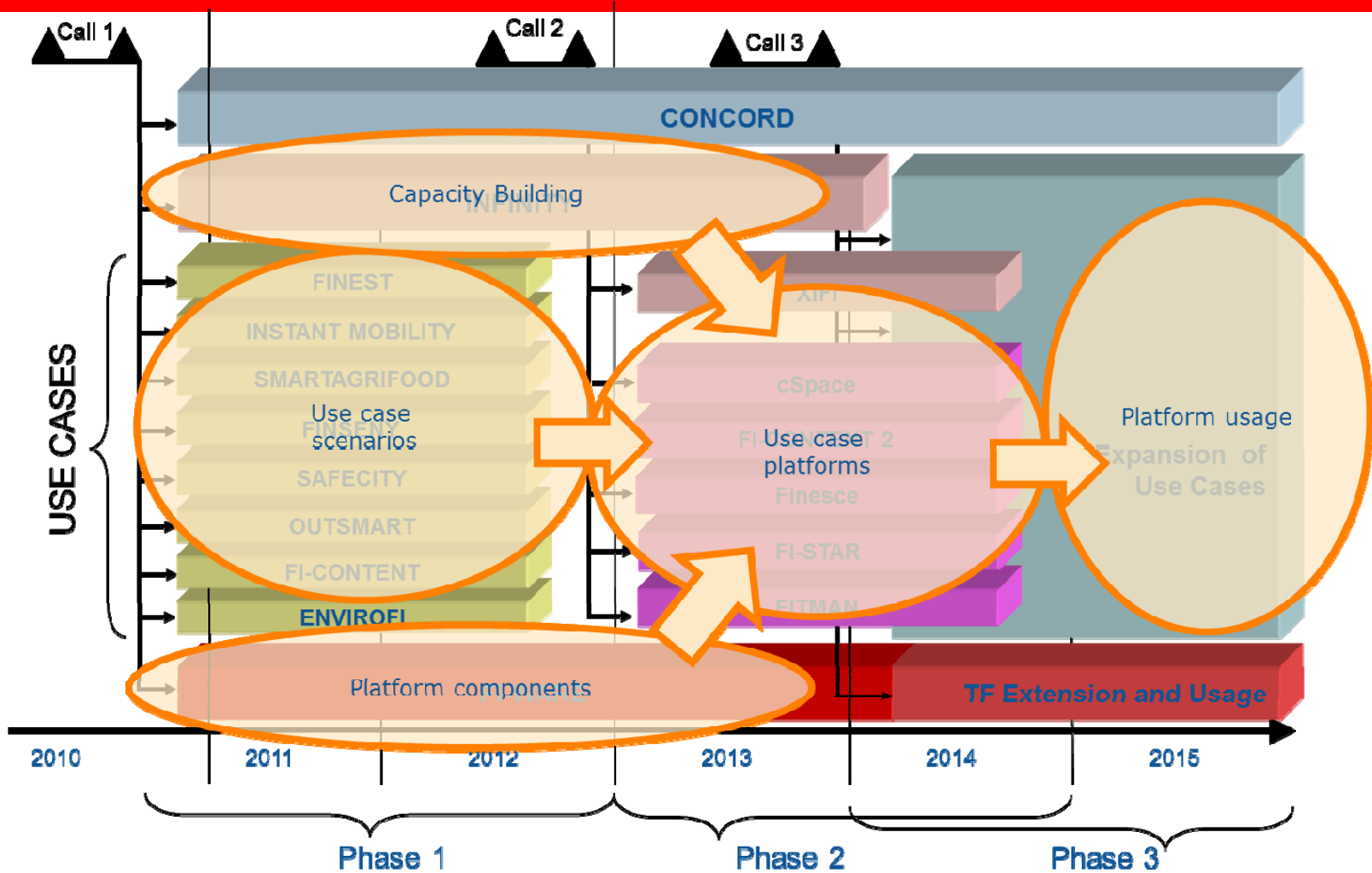






# FI-WARE serving usage areas





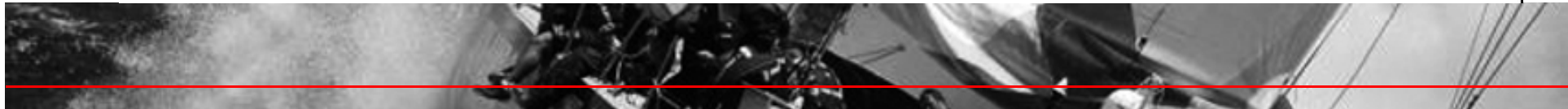
## FI-WARE: positioning Europe towards opportunities derived from the digitalization of sectors

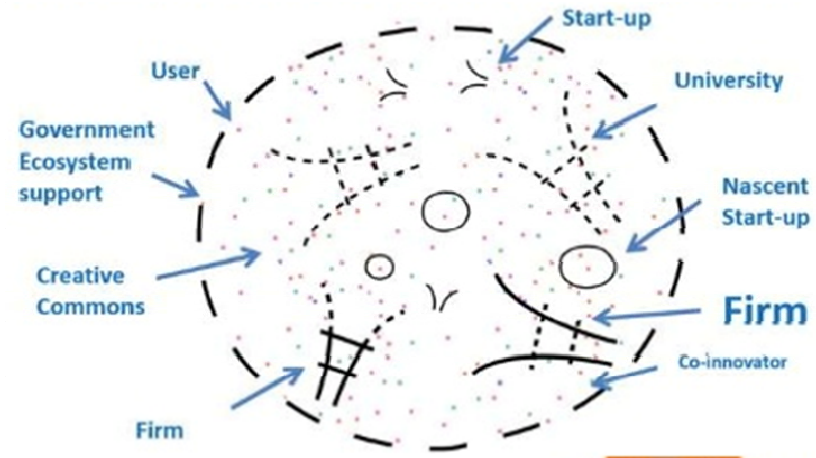
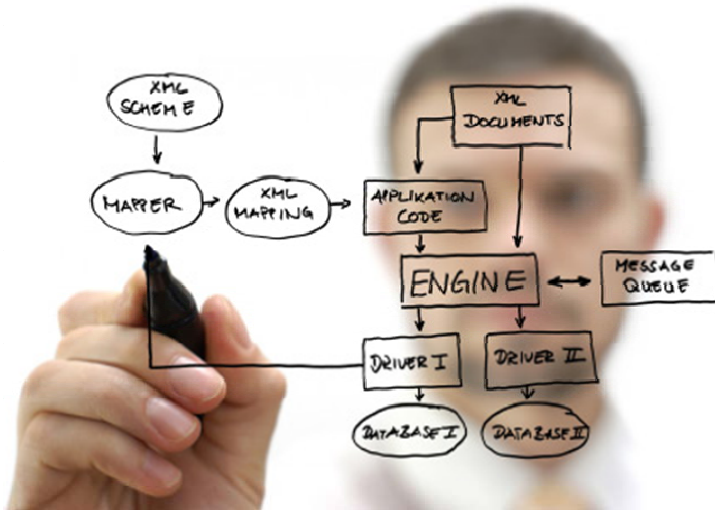
A Core Platform that lowers the barriers for innovation

Lower the Risk →  
Open, implementation driven  
Make it simpler →  
Simple yet powerful APIs



A sustainable innovation ecosystem





**Technology**



**A true open innovation ecosystem**





# Phase 2 Use case trial sites

- FI-Space
- FI-CONTENT 2
- FINESCE
- FI-STAR
- FITMAN
- XIFI





## Opportunities for SMEs and entrepreneurs (I)

- **Ambitious FI-WARE promotion campaign (4,2 M€ investment during May 2013 – April 2014 period)**
  - Launch of the **FI-WARE Open Innovation Lab** at [London Campus Party](#) (September 3-8)
  - Presence in 50 startup weekend events across Europe
  - Hackathons, Development contests (700 K€ in awards)
  
- **100 M€ of funding for SMEs and Web entrepreneurs** developing products on top of FI-WARE:
  - to be canalized through incubators, accelerators, SME associations
  - projects starting in 2014
  
- Design and deployment of **pan-European FI-WARE trial facility** to be launched in April 2014
  
- Proposal for **Technology Foundation continuation** phase (23 M€) with 10% budget for Open Calls



## Opportunities for SMEs and entrepreneurs (II)

- Use the **open and free technology** provided by FI-LAB to develop innovative apps under the topics of:

- **Smart Cities**
- **Smart Businesses**

- **PRIZES**

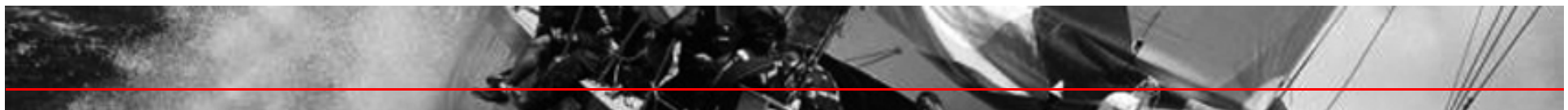
- First Prize: 75.000 €
- Second Prize: 40.000 €
- Third Prize: 20.000 €
- Special Mention Young Developer: 5.000 €
- Special Mention Most Innovative App: 5.000 €

- Further info: <http://www.fi-ware.eu/challenges/>



## Oportunities for SMEs – Fase 3 (80M€ support)

- From September 2014, Phase 3 projects will start.
- 3 – 4 months later (**January 2015**) Open Calls for innovative services/apps will be launched.
- **Up to 150 K€ for development of apps & services** for smart cities, manufacturing, content, e-health, energy, logistics, smart agrifood.....
- **Access to business modelling** for FI services, support to access to VC, technical training...
- Become **part of the FI-PPP Innovation cluster and FI-Lab open innovation ecosystem.**



ICT Innovation for Manufacturing SMEs

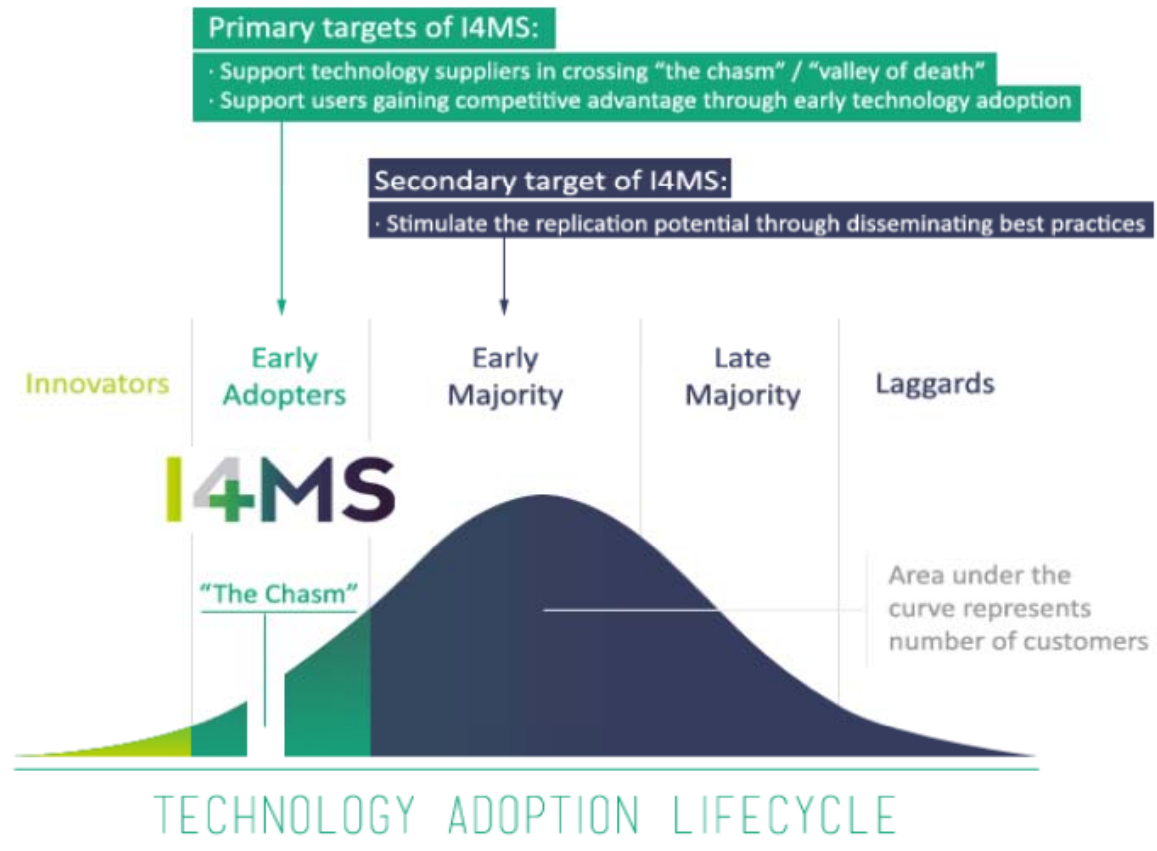


# Innovación TIC en Manufactura

<http://i4ms.eu/i4ms/i4ms.php>



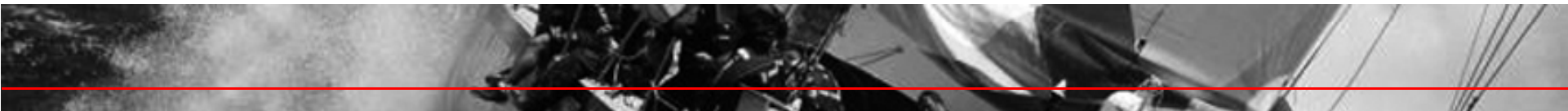
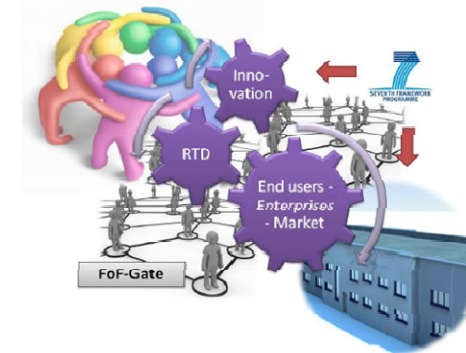
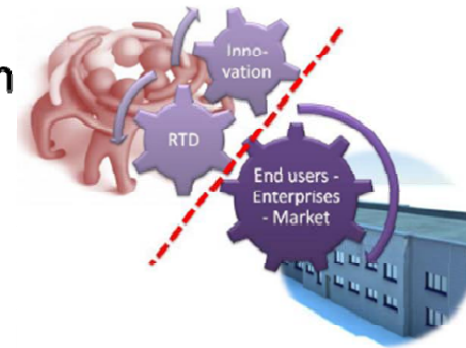
# ICT Innovation for Manufacturing SMEs



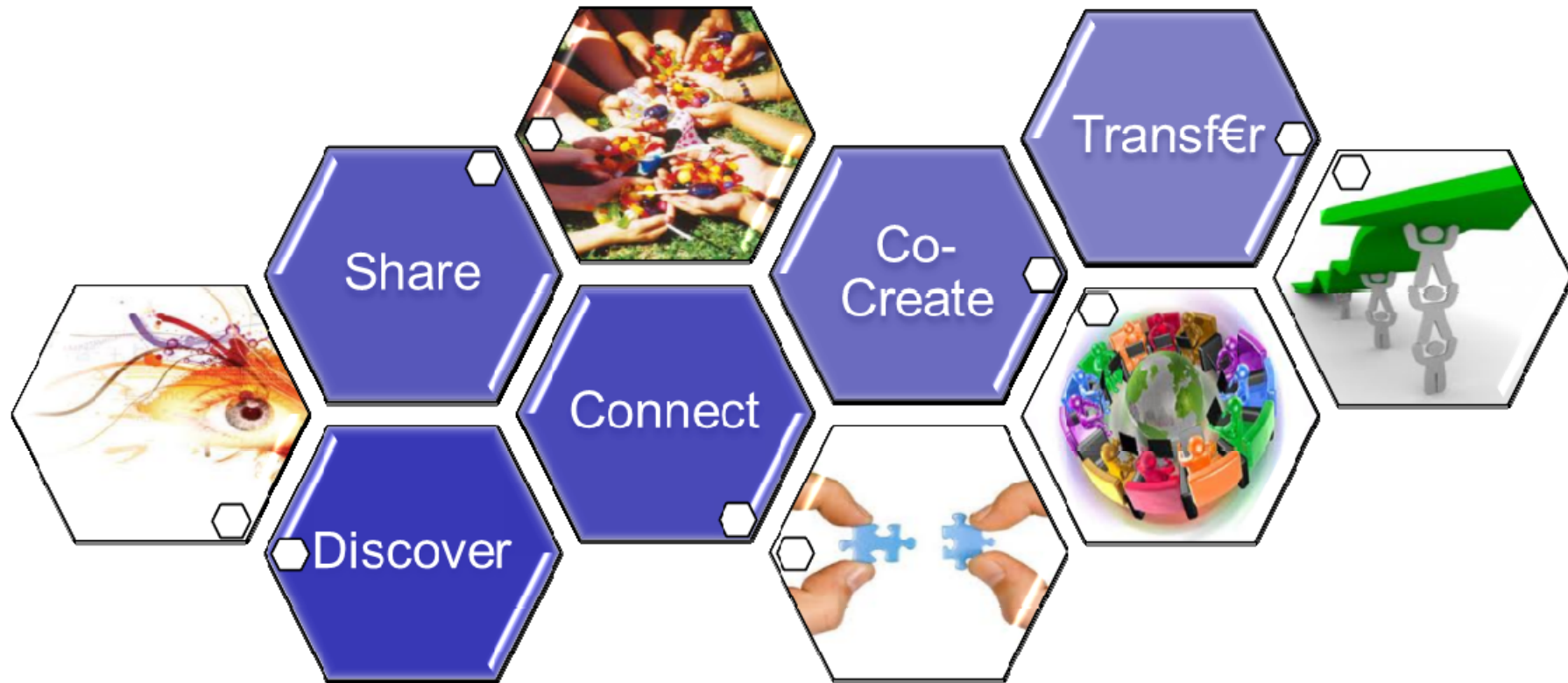


## ICT Innovation for Manufacturing SMEs

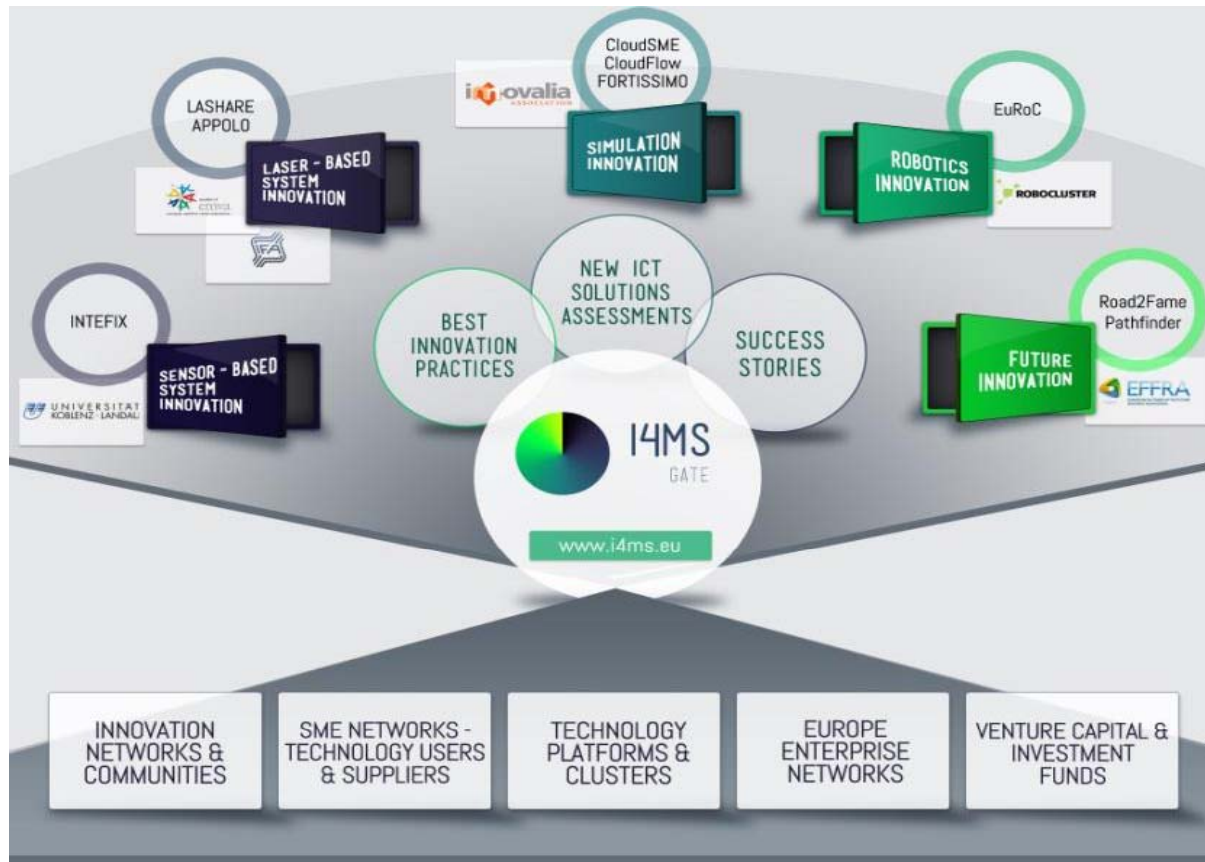
- **Open Innovation Platform.** Not yet another network, not yet another platform
- **Enhanced** connectivity and knowledge activation.
- **Multiply** the benefits of I4MS projects. Measure the success of innovation.
- **Amplify** the impact of I4MS activities
- **Brig forward** the business value of ICT based solutions for manufacturing (SMEs).
- **Boost** the effectiveness of open calls.
- **Foster** an open (trusted) efficient (result-oriented) innovation ecosystem for European SMEs.



ICT Innovation for Manufacturing SMEs



ICT Innovation for Manufacturing SMEs

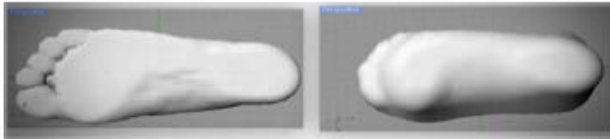


# ICT Innovation for Manufacturing SMEs



## 3D SCAN INSOLE DESIGNER

- \* PC SW simulation used in the design of tailored insoles.
- \* Migration to a cloud ubiquitous platform will help in the internationalization of the company and in the availability of computing resources for tailored design to increase production.
- \* Simulation helps in:
  - \* Detection of wrongly scanned areas without points or too few points
  - \* Screening of flat areas in the foot profile due to an incorrect scan process
  - \* Detection of painful or unpleasant contact areas of the foot with the insole





ICT Innovation for Manufacturing SMEs



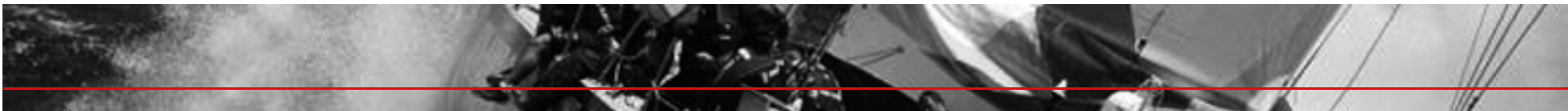
Reconfigurable Interactive Manufacturing Cell



Shop Floor Logistics and Manipulation



Plant Inspection and Servicing



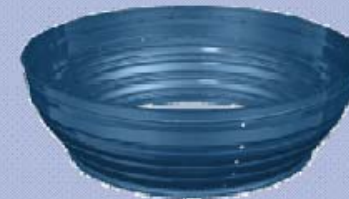


## ICT Innovation for Manufacturing SMEs



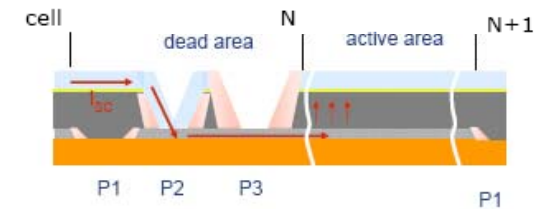
### VIBRATIONS – Turbine Case

- Vibrations come from:
  - Low stiffness
  - Changes in geometry
  - Process and clamping forces
- Solution:
  - Smart fixtures: sensors+actuators+control
  - Vibration detection (sensors)
  - Changes in the dynamic behaviour (actuators): variable clamping force and position, added mass/damping/stiffness



ICT Innovation for Manufacturing SMEs

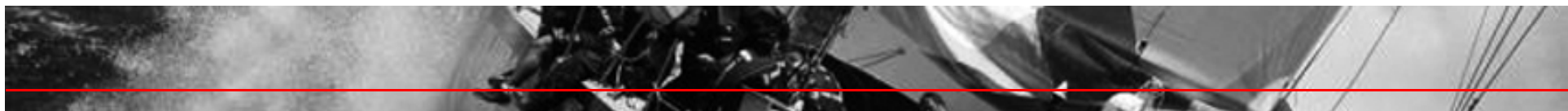
■ Thin film CIGS solar cell scribing with picosecond lasers



■ Laser patterning and direct writing for flexible 3D electronics

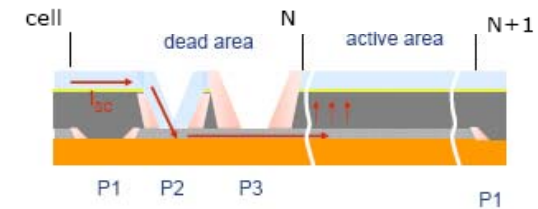
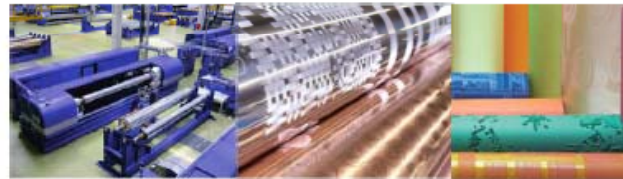


■ Laser surface texturing



ICT Innovation for Manufacturing SMEs

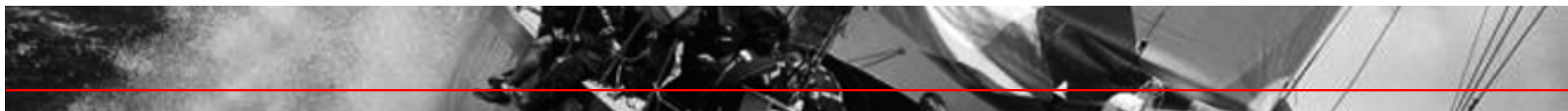
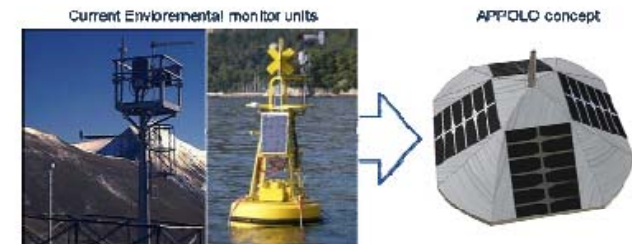
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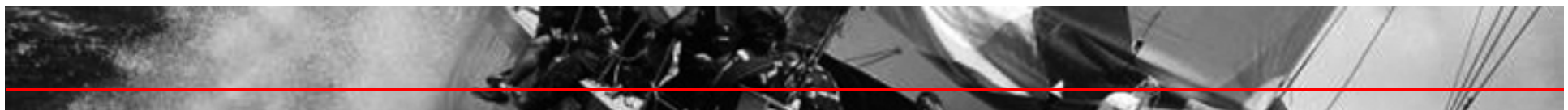


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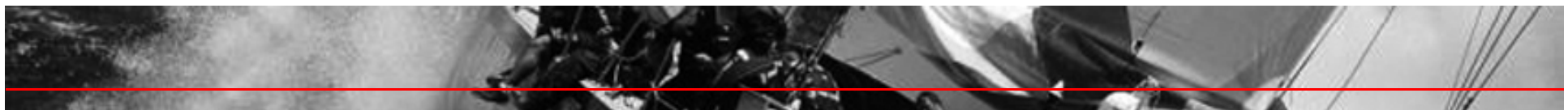
## Oportunidades para PYMES – (35M€)

- I4MS comenzó 1 Julio 2013
- 3 áreas:
  - Robotica
  - HPC Cloud
  - Laser
  - Intelligent fixturings
- Se extenderá el modelo a más áreas (CPS, IoT, M2M) en H2020 y continuará en FoF.
- 35 M€ en los próximos 2 años en open calls  
[http://i4ms.eu/open\\_calls/open\\_calls.php](http://i4ms.eu/open_calls/open_calls.php)



## Oportunidades para PYMES – (35M€)

- Información
  - Uniros a los grupos LinkedIn I4MS.
  - Visitad con regularidad la web.
  - Estudiad, contactad con los proyectos experimentales.







Innovación, Tecnología & Internacionalización

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CONTACTO



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[www.innovalia.org](http://www.innovalia.org)

