HOJA POR LA **INNOVACIÓN** EN
NANOMEDICINA EN ESPAÑA

UNIVERSITAT POLITÈCNICA DE CATALUNYA

Institut de bioenginyeria de Catalunya

ciber-bbn

INNOVACIÓN CON NANOMATERIALES: REGENERACIÓN Y MEDICINA PERSONALIZADA

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Con el apoyo de:

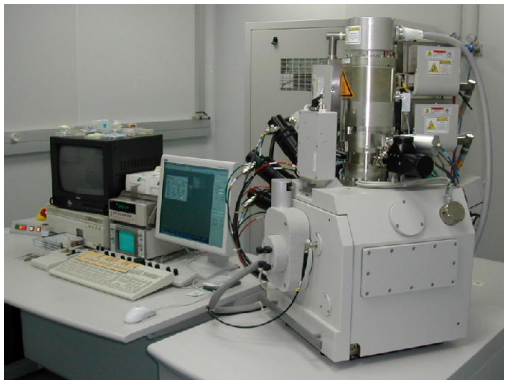
GOBIERNO DE ESPAÑA · MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD · SECRETARÍA DE ESTADO DE INVESTIGACIÓN, DESARROLLO E INNOVACIÓN

NANOMED SPAIN

IBEC – Institut de Bioenginyeria de Catalunya

Research programmes:

- Cellular Biotecnology
- Biomaterials, Implants and Tissue Engineering
- Biomechanics and Cellular Biophysics
- Nanobioengineering
- Robotics and Images
- Signals and Instrumentation



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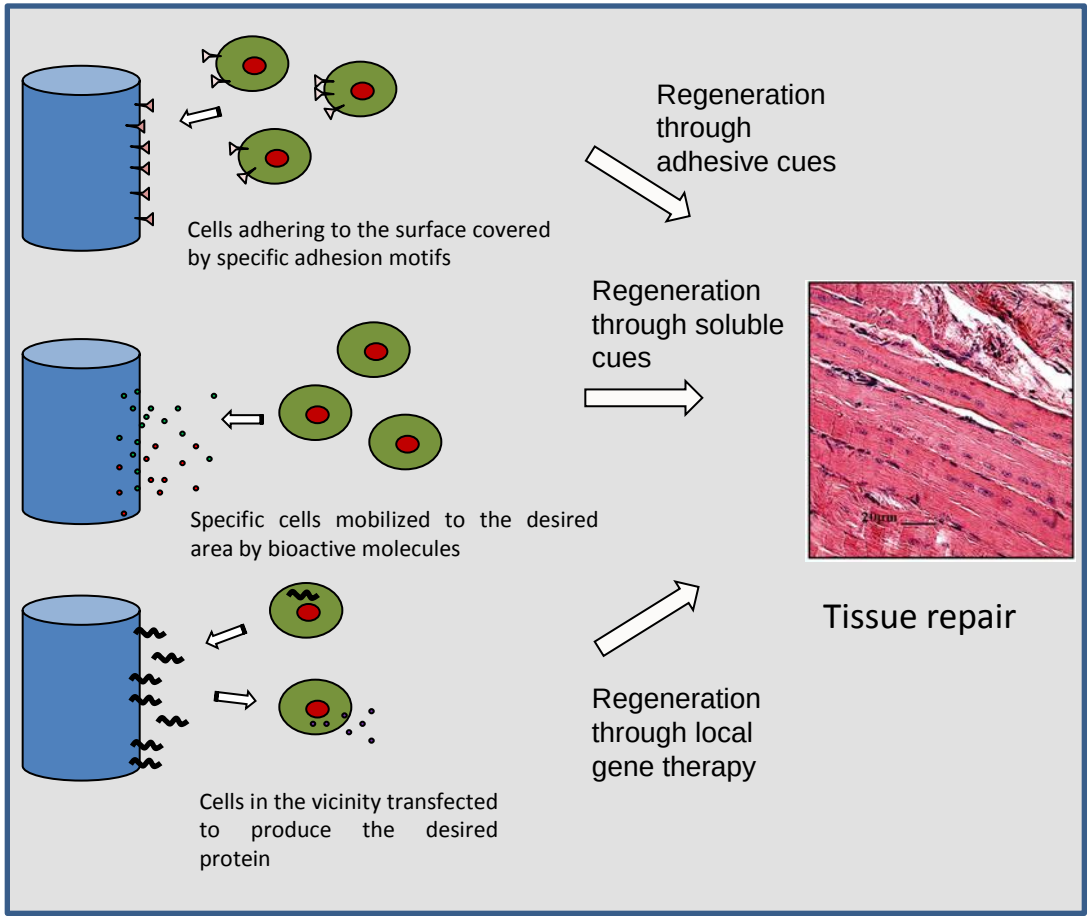
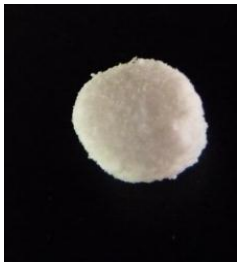
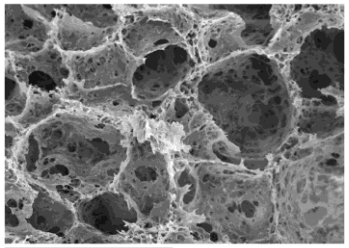
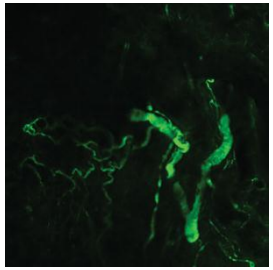
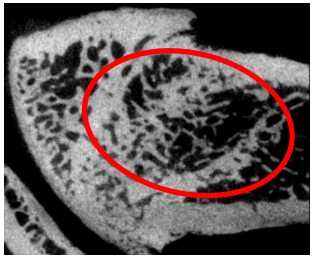




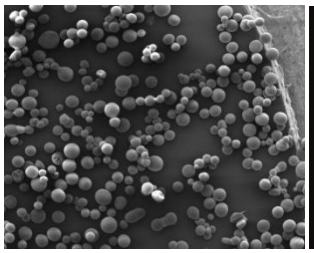


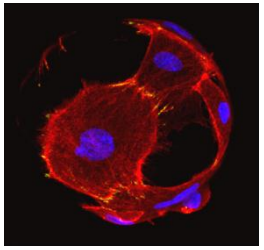


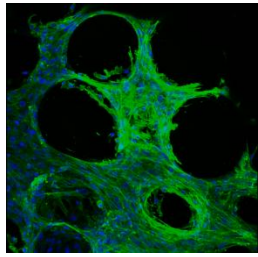


PLA/G5 60d

Olaia F. Vila, et al., JBMR-A, DOI: 10.1002/jbm.a.34391







R.Levato et al., Macromol. Biosci., 2012

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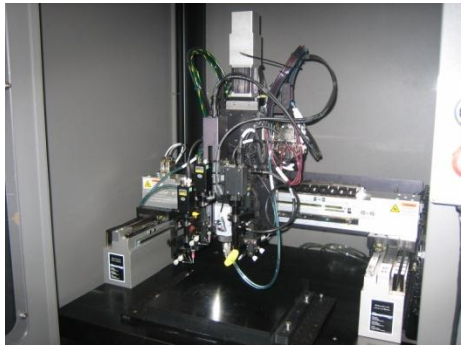
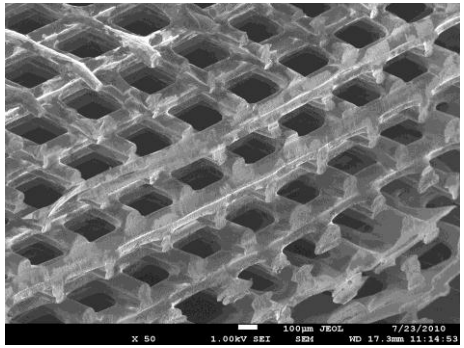
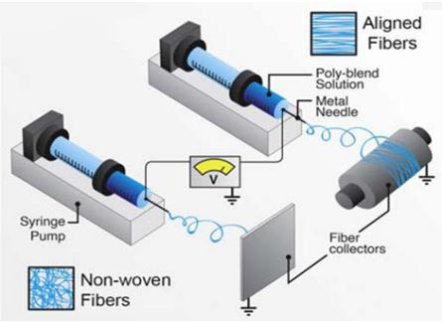
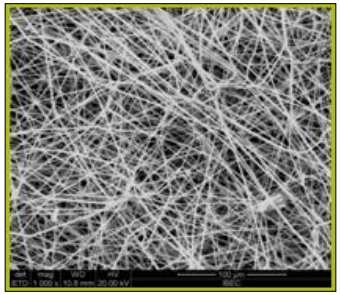
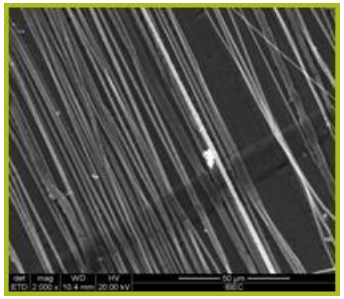


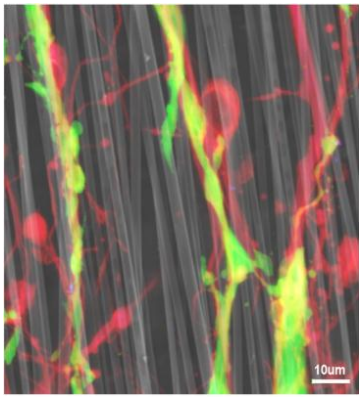


Serra, T et al., Acta Biomat, in press









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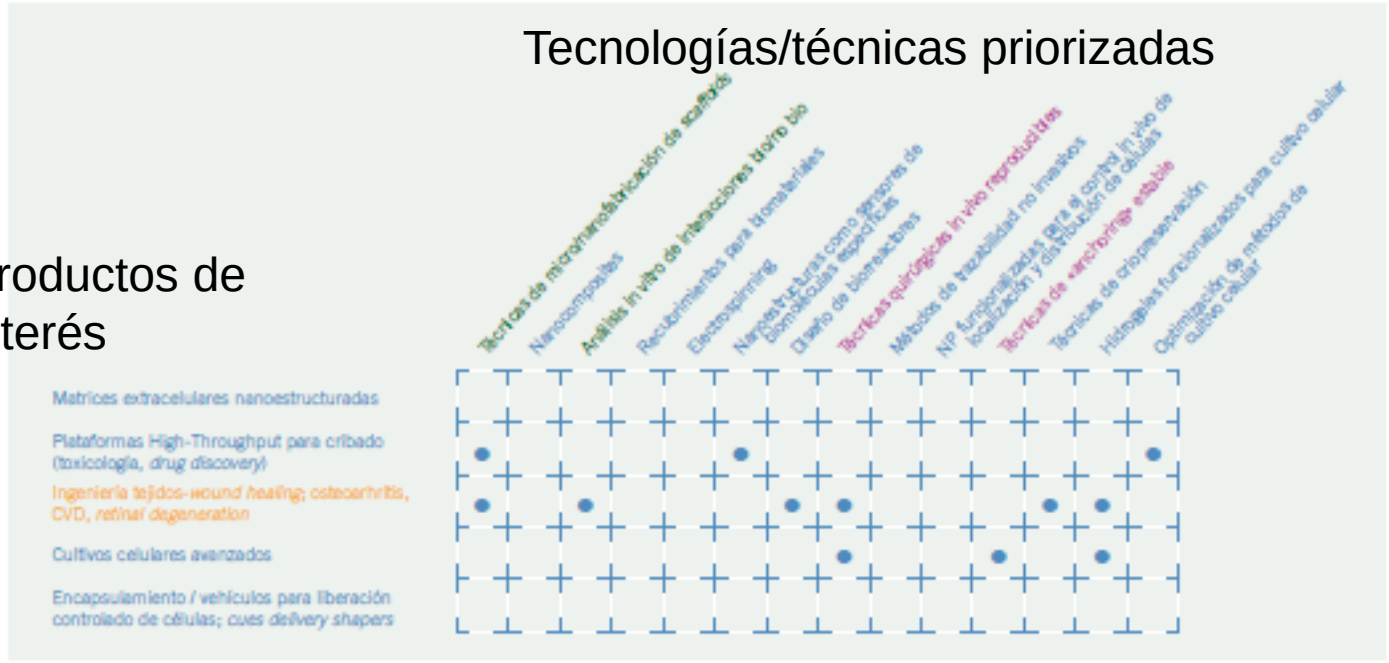

Figura 3.6 -e Matriz de relación productos y técnicas en nanomedicina: Productos con interés para la industria vs técnicas I+D priorizadas, en las áreas de medicina regenerativa

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Se puede hablar de **INNOVACIÓN** cuando un producto o un servicio tiene éxito en el mercado o se acaba implantado (práctica clínica)

i = R x P x CR x CP x E x … *(Según Dr. A. Mas-Colell)*

i : innovación
R : investigación
P : patentes o protección de IP
CR : capital riesgo
CP : política de compra pública
E : emprendeduria

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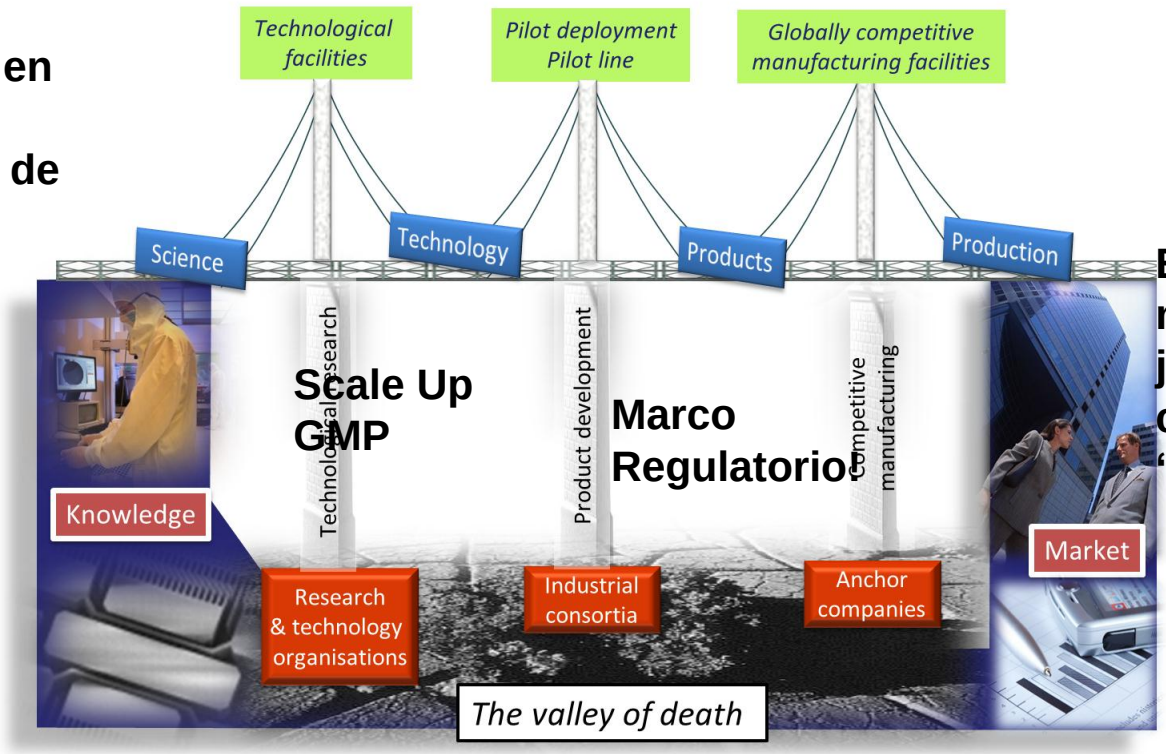
MEDICINA REGENERATIVA : RETOS y BARRERAS observadas = “The valley of death”

Dificultades en protección/ Valorización de tecnologías



Empresas: muy jóvenes, casi todas “start ups”

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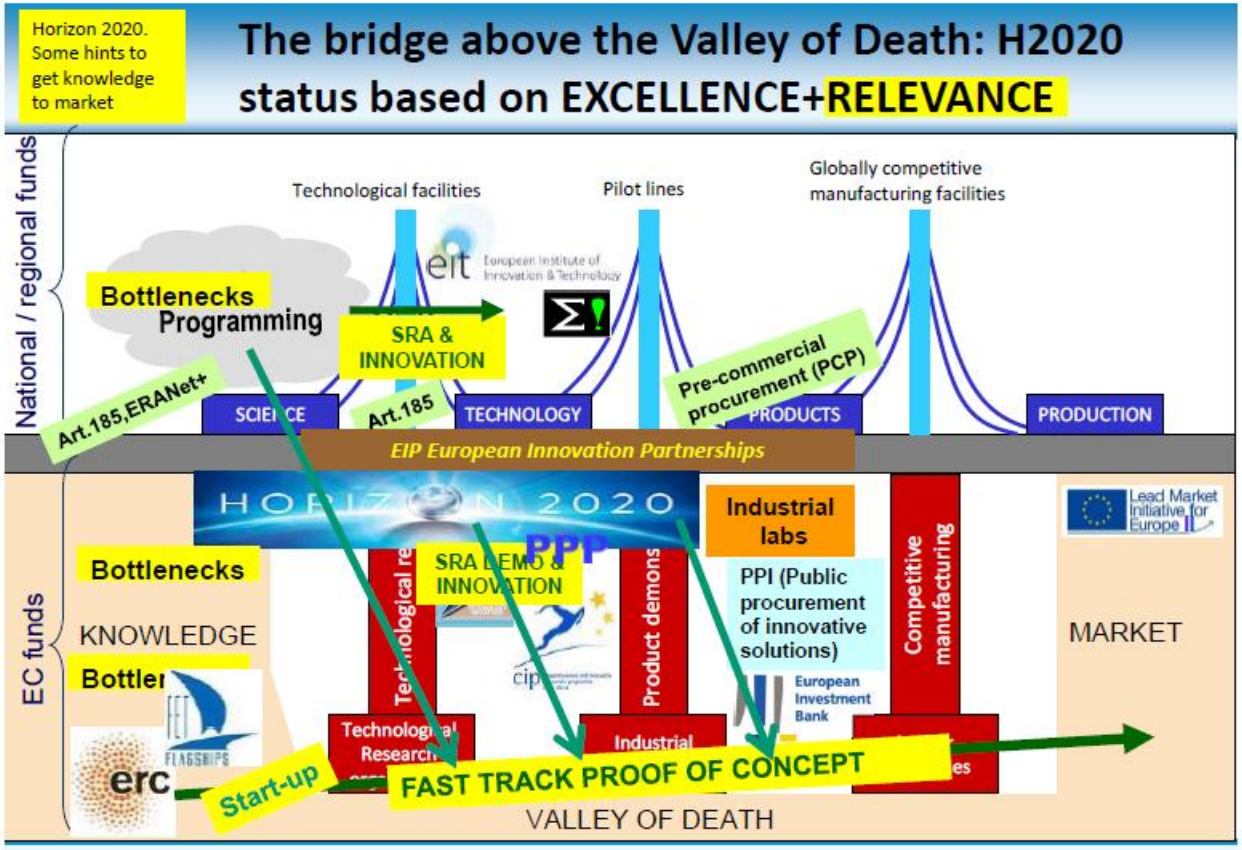
MEDICINA REGENERATIVA: Recomendaciones



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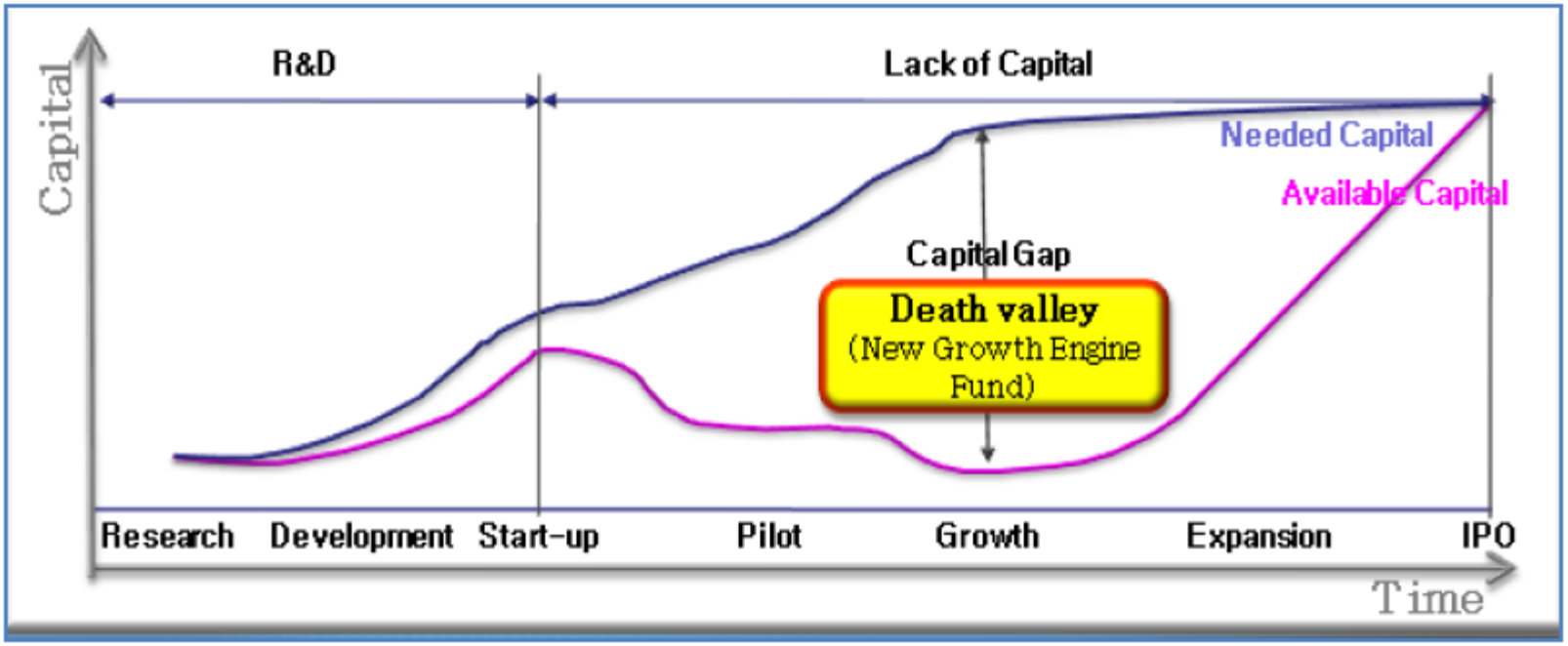
MEDICINA REGENERATIVA: Recomendaciones // Fomento de la emprendeduria.

Technology Transfer Promotion Act-Corea del Sur (2000) – Apoyo a patentes de calidad. Korean Invention Patent Association (KIPA) revisa las ofertas tecnológicas, evalua el potencial y viabilidad del mercado, identifica socios/clientes interesados y ofrece apoyo para aspectos legales en tech transfer.

Figure 1: New Growth Engine Fund, Korea



Source: KIAT, 2011

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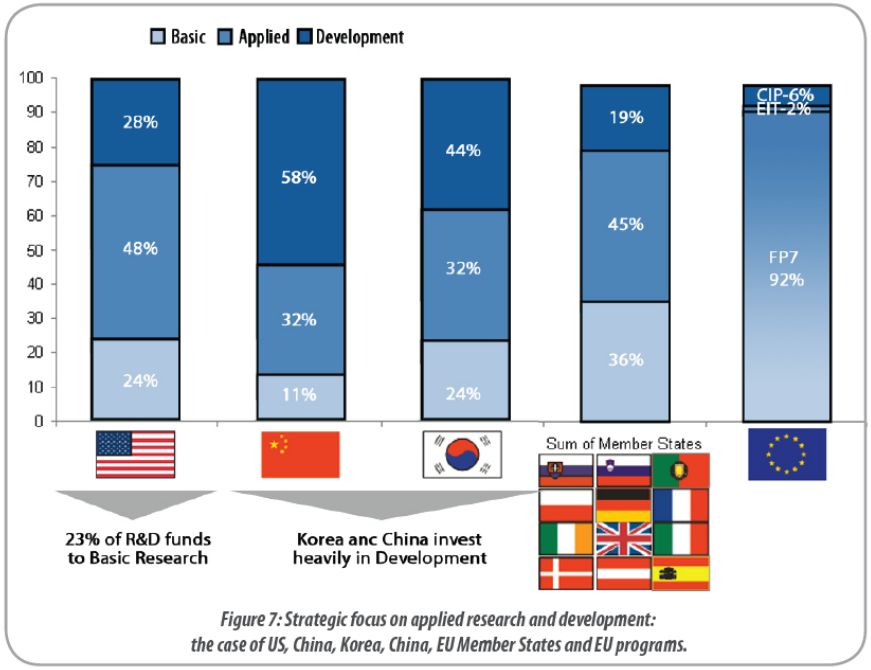

Figure 7: Strategic focus on applied research and development: the case of US, China, Korea, China, EU Member States and EU programs.

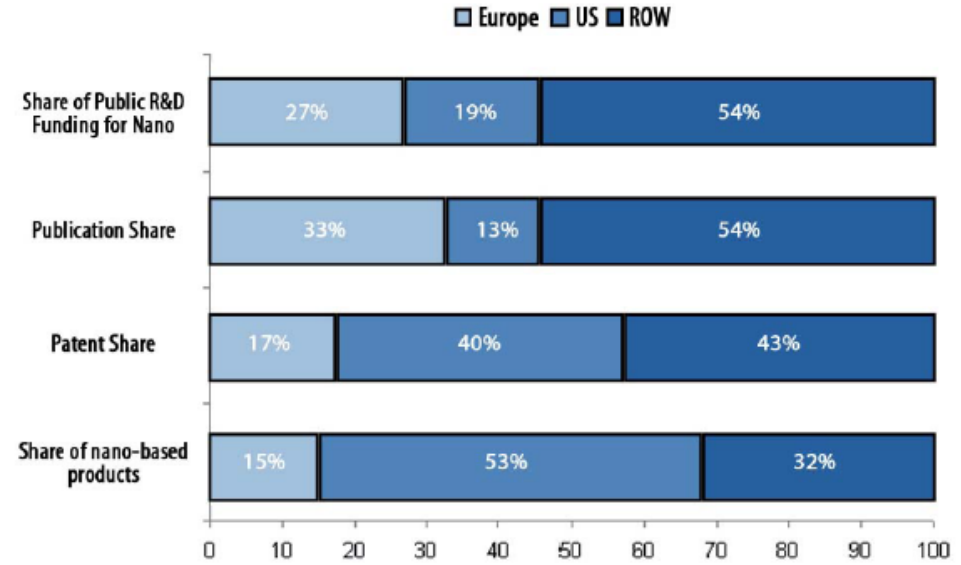

Figure8: Nanotechnology public funding in the EU, the US and the rest of the world.

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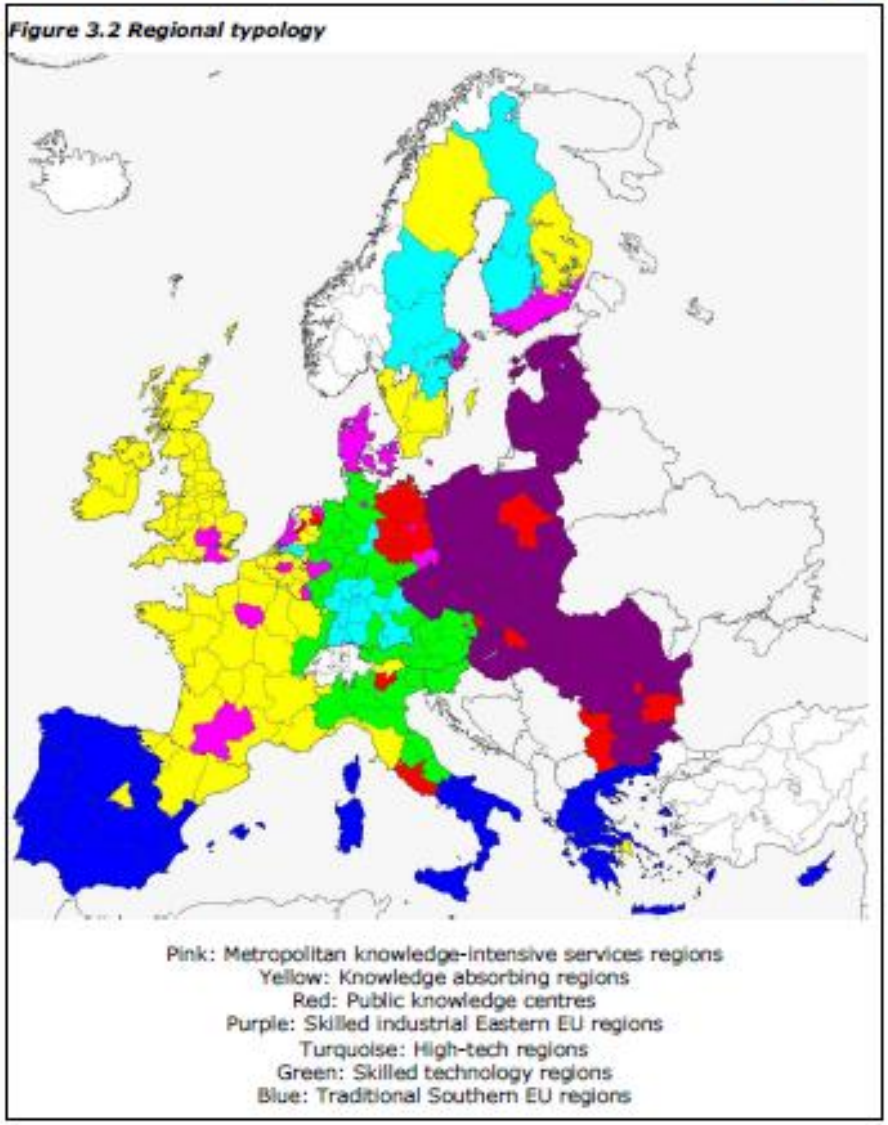
The network for European Techno-Economic Policy Support



The regional impact of technological change in 2020

· **Metropolitan knowledge-intensive services (KIS) regions, including 23** regions in densely populated metropolitan areas in Western Europe. These regions perform above average on absorption capability and average on both diffusion capacity and accessibility to knowledge. These regions show high rates of urbanisation and their level of economic performance is highest of all regions. Many regions serve as their country's capital region,

· **Knowledge absorbing regions including 76 regions mostly in France, British** Isles, Benelux and Northern Spain. These regions perform average on absorption capability, diffusion capacity and accessibility to knowledge. Their level of economic performance is just above average.

· **Public knowledge centres including 16 regions, mostly in Eastern Germany and** metropolitan areas in Eastern Europe. These regions perform average on both absorption capability and diffusion capacity and above average on accessibility to knowledge. Their level of economic performance is close to average and economic growth has been strong.

· **Skilled industrial Eastern EU regions including 44 regions in Eastern Europe.** These regions perform below average on both absorption capability and diffusion capacity and average on accessibility to knowledge. They are rapidly catching-up from low levels of economic performance.

· **High-tech regions including 17 R&D-intensive regions in Germany, Finland,** Sweden and the Netherlands. These regions perform above average on absorption capability, diffusion capacity and accessibility to knowledge. Their level of economic performance is above average.

· **Skilled technology regions including 38 regions in Germany, Northern Italy** and Austria. These regions perform average on absorption capability, diffusion capacity and accessibility to knowledge. Their level of economic performance is above average but their growth record has been below average.

· **Traditional Southern regions including 39 regions in Southern Europe** (Portugal, Italy, Greece and Spain). These regions perform below average on absorption capability, diffusion capacity and accessibility to knowledge. Their level of economic development is below average and many regions rely on agricultural and tourism activities.

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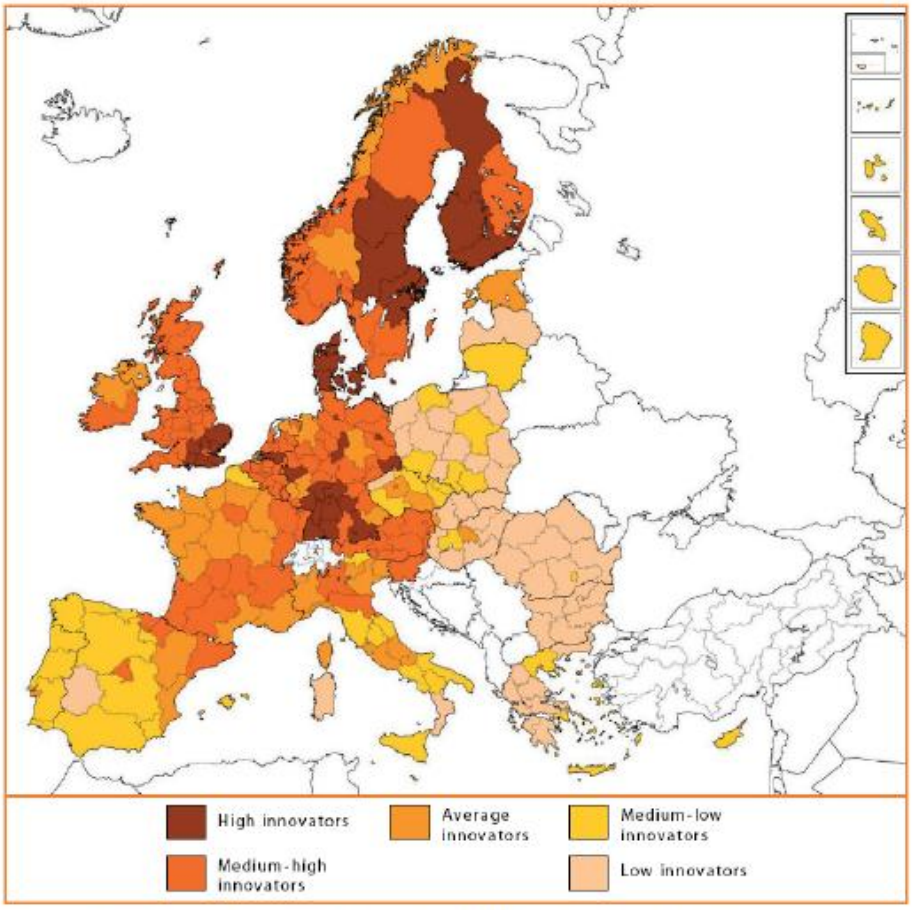
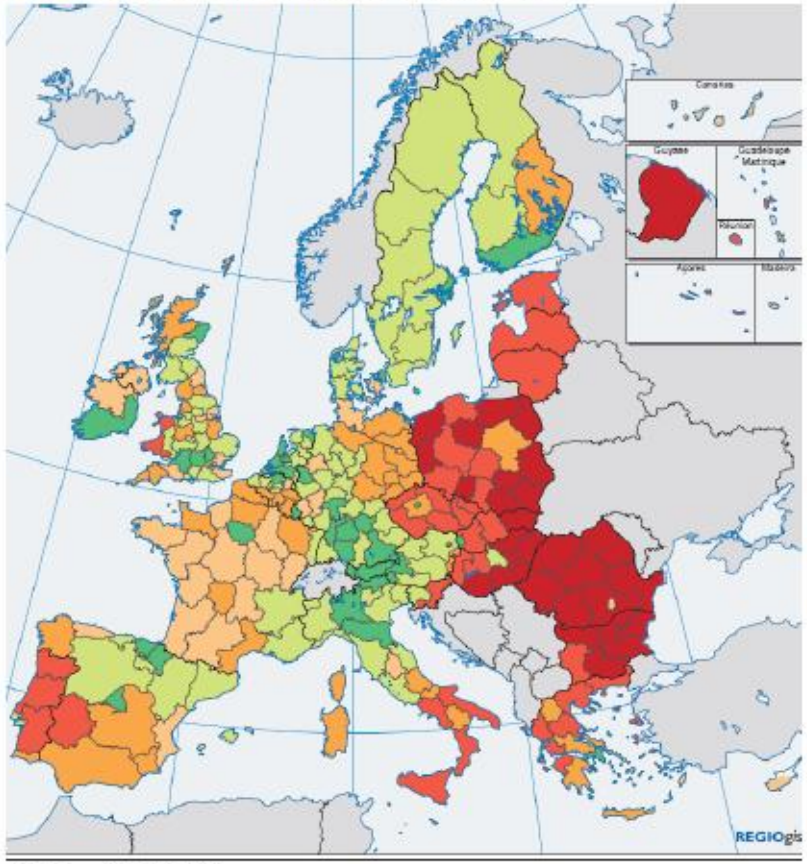
Figure 3.3 Regional innovation performance



Source: 2009 Regional Innovation Scoreboard (Hollanders et al., 2009).

Figure 3.5 GDP per capita at regional level in Europe, 2007



GDP/head (PPS), 2007

Index, EU-27 = 100
- < 50
- 50 - 75
- 75 - 90
- 90 - 100
- 100 - 125
- >= 125

Source: Eurostat

0 500 Km

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