

Banque Européenne d'Investissement
Facilité Euro Méditerranéenne d'Investissement
et de Partenariat
SCIENCE PARKS

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- 1. La BEI et la FEMIP**
- 2. Les Science Parks**
- 3. Une étude de cas
(Italie/Finlande/Portugal)**
- 4. Conclusions**

Le Groupe BEI : La BEI et le FEI

La Banque européenne d'investissement (BEI), l'institution financière de l'Union

- Créée par le Traité de Rome en 1958, elle finance par des prêts à long terme des projets contribuant à l'intégration européenne et aux objectifs de l'Union
- Actionnaires : les 27 Etats Membres de l'Union
- Capital souscrit : € 164,8 milliards
- Volume des opérations en 2006 :
 - Prêts : € 45,8 milliards (dont 39,8 milliards dans l'Union)
 - Emprunts : € 48 milliards (en 303 opérations, 24 monnaies)

LA FEMIP : les priorités

- **Quantitatif** : 1.5 Milliards d'€ par an
1,4 milliard en 2006
Nouveau Mandat : 8.7 + 2 Milliards sur 2007-2013
- **Qualitatif** :
 - le soutien au **secteur privé**: IDE, PME locales, secteur bancaire
 - les infrastructures de développement **socio-économique** (santé, éducation, formation, environnement, communication, énergie)
 - les investissements de **dimension régionale** (Coop.« Sud-Sud »)
- Privilégier « **l'appropriation** » des PPM
 - Conseil Ministériel : Chypre Mai 2007
 - Comité FEMIP : Novembre 2007
 - Conférences 2008: Tourisme, Micro finance
 - 3 bureaux locaux

LA FEMIP : les produits

Apporter aux PPM les produits financiers pas/peu disponibles localement, ayant un fort effet de levier:

- Financements à **long terme** (10-20 ans et +)
- Financements à **partage de risque** (SFE-réserve de 100 mio d'€)
- **Capital-risque** : +/- 40 millions/an, utilisés pour des dotations en fonds propres, quasi-fonds propres, du crédit-bail, de la micro-finance
- Bonifications d'intérêt pour les projets environnementaux
- Financements panachés

En outre, pour accompagner ces produits:

- **Assistance technique** : +/- 25 à 30 millions par an
Fonds Assistance FEMIP (Budget UE)
Fonds Fiduciaire FEMIP (Etats Membres)

Why Science Parks at EIB?

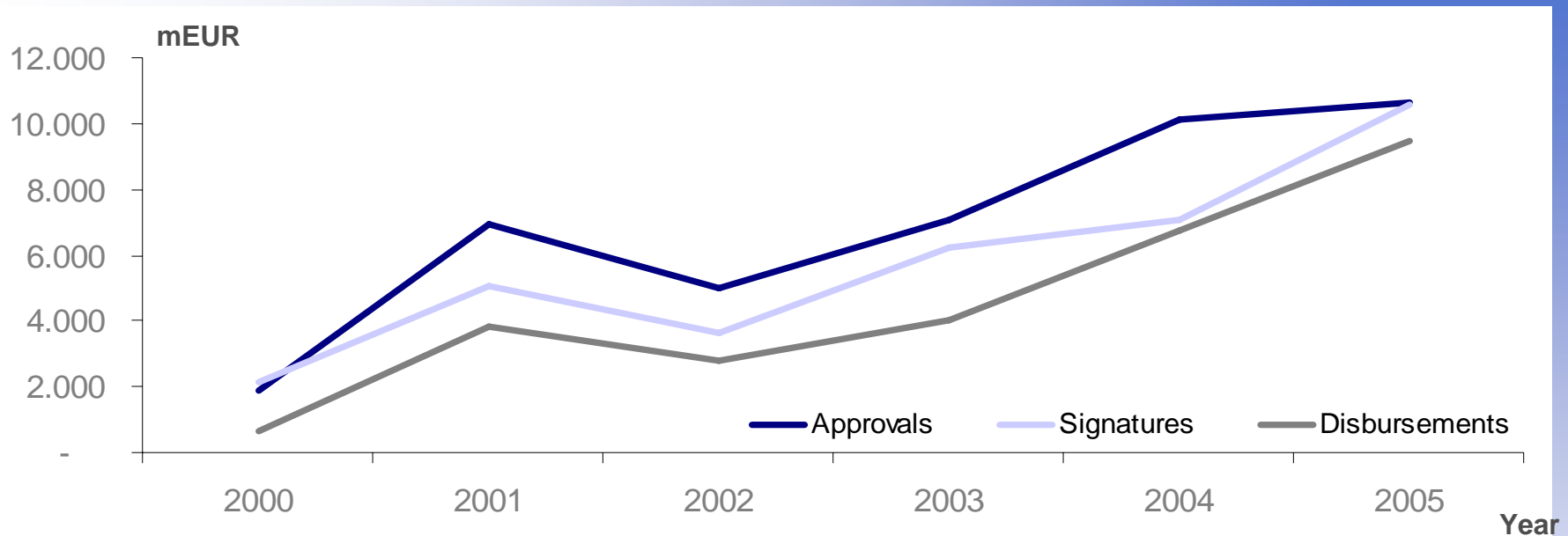
**Innovation 2010 initiative (i2i) launched in 2000
(Lisbon Agenda)
Growth and employment**

A mandate from the EU which covers, amongst others:

Private and Public Sector Investment in R&D (and downstream investments), **including Science Parks**

**Development of Information and Communication
Technology (ICT)**

Track Record in i2i Financing



- EIB i2i financing : Loans of **EUR 9.5bn** in 2006 for:
 - Research, development & innovation (RDI)
 - Education & Training
 - Information & communication technology networks (ICT)
- EIB's i2i objective : lend **EUR 50bn** by 2010 to foster innovation over current decade.
- Total loans of **EUR 35.9bn** over **2002-2006**

Science Parks - What's in a Name?

Science Parks = generic umbrella for...

- ◆ **Research Parks**
 - majority of tenants heavily engage in basic and applied research
- ◆ **Technology Parks**
 - majority of tenants heavily engage in applied research and technological development
- ◆ **Innovation Parks**
 - house new start-up companies and incubator facilities
- ◆ **Commercial or industrial parks**
 - tenants add value to R&D-based products through assembly or (re-)packaging, rather than through R&D

Science park operations so far approved by the EIB since 2000

- **Eight projects : 1.4 bn EUR investments, close to 600 M EUR loans**
- Project scope :
 - **Modernisation and extension of existing science parks:** Helsinki Science Park (Finland, 2003), Finnish Science Parks (2003), San Raffaele (Italy, 2005), Goteborg (2005), Technopoles Tunisie (Tunisia)
 - **Construction :** Heidelberg Bioscience Infrastructure (Germany, 2001), Turku Biotechnology (Finland, 2002), Phoenix West Dortmund (2004)
- **International Conference Science Parks and Innovation, Luxembourg May 2006**

Profile of EIB science park operations

Terms / structure

- Size : 30-80 M EUR
- Tenor : 12-20 years
- Structure : mostly bank intermediated or guaranteed loans

Rationale for security :

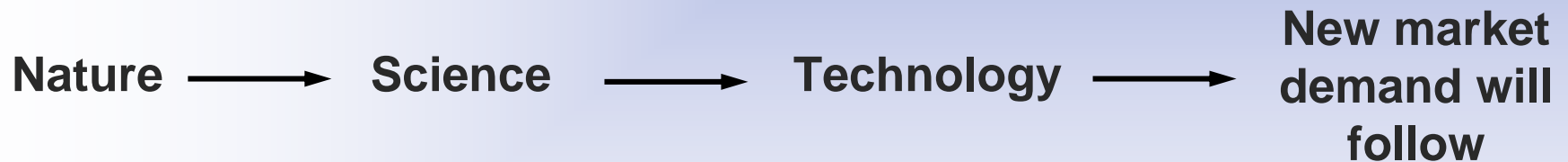
- Revenue risk (rental income from start-ups)
- Exposure to sector risk (structural and business cycle)
- High proportion of property (exposure to real estate risk) and special equipment (with limited resale value)
- Important size of investment vs. limited financial resources of promoter

Science Matters. Do Science Parks too?

- ◆ **Standard textbook assumptions**
 - ◆ No! Location of R&D does not matter!
- ◆ **In a more realistic world**
 - ◆ **New knowledge is not a “normal” good, nor a “public” good**
 - ◆ **Temporary monopoly positions (patents, trade marks, ...)**
 - Temporarily excludable (*royalty fees*)
 - But non-rival!
 - Hence, can lead to “creative destruction” → sub-optimal investments in R&D → innovation policy
- ◆ **Increasing returns to scale**
- ◆ **Beneficial for companies to cluster**
- ◆ **Even more so close to sources of frontier-shifting knowledge**
 - *Knowledge crosses corridors and streets more easily than oceans and continents*

Views on transfer of academic knowledge into technology?

Until late 1960s: linear, supply pushed



Science Parks Generations

- ◆ **1st generation (1960s)**
 - Science push
 - Facilitate academics to become entrepreneurs
- ◆ **2nd generation (1980s)**
 - Market pull
 - Dedicated high-tech zone with business (market demand) setting R&D agenda
- ◆ **3rd generation (current)**
 - Cluster oriented, market driven
 - Looks to develop in a dynamic urban region
 - Integrated in wider socio-economic activities and culture
 - Benefit most from spill-overs

Case study : Policy Framework

◆ Finland

- ◆ High-level government commitment and a coherent innovation system
- ◆ Recognised importance of the role of Science Parks

◆ Italy

- ◆ Inefficient national innovation system: lack of coordination, fragmentation of financial resources
- ◆ Since 2001, increased role of Regions
- ◆ No centralized strategy for the development of Science Parks (regional initiatives)

◆ Portugal

- ◆ Lack of systematic and consistent innovation policy
 - Divide between science and industrial policies
 - Specific Innovation objectives change too often
 - Few, rather fragmented coordination processes on innovation policy
- ◆ No explicit strategy in the development of Science Parks

Case study : Snapshots

◆ Maturity

- ◆ Finland: **A well developed sector. First SP in 1982, a strong development in past 5 yrs. Currently 23 SPs**
- ◆ Italy: **First SP in 1982, but development started in the 1990s. Currently 30 SPs**
- ◆ Portugal: **late starter. First SP in 1993, with steady development. Currently 12 SPs**

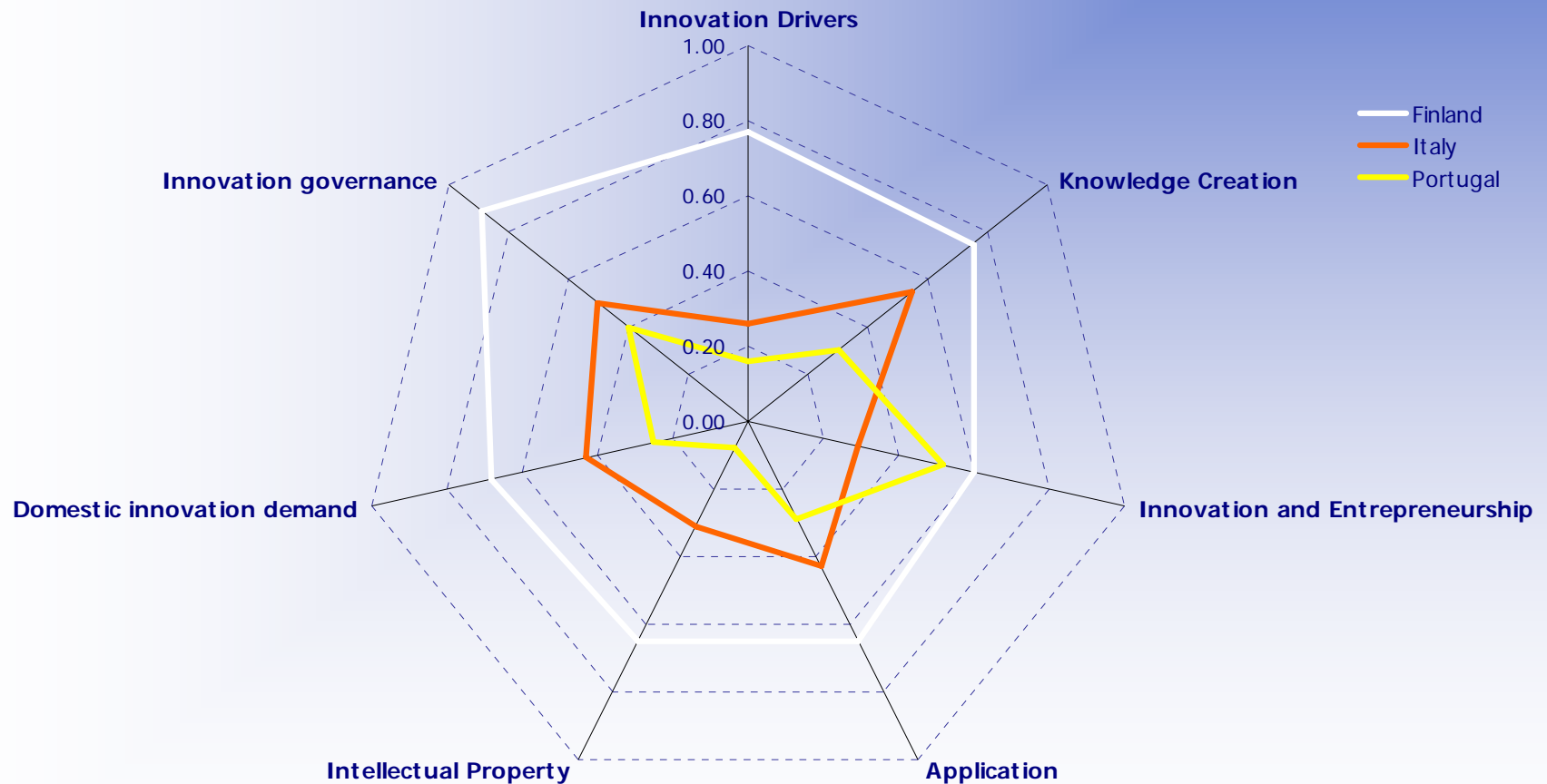
◆ Links to University

- ◆ Finland: **good links (located on site, role of incubator)**
- ◆ Italy: **weak involvement**
- ◆ Portugal: **always *de jure* links**

◆ Performance

- ◆ Finland is a model: **steady growth, market driven, good Sector focus, good International Cooperation. BUT risk of regional fragmentation..**
- ◆ Italy and Portugal: **extreme heterogeneity, some success stories BUT room to improve**
- **Owned by cities (in partnership with University), financially independent**
- ◆ **Main focus on ICT and Life Sciences**

Case study : Key Dimensions of Innovation Performance



What are the characteristics of a well planned Science Park?

- ◆ **Suitable location**
 - ◆ Availability and/or capability to attract skilled workers
 - ◆ R&D intensity
 - ◆ Economic environment
 - ◆ Regional /national policy in support of innovation
- ◆ **Clear long-term vision, shared by sponsors and management**
 - ◆ Careful selection policy
 - ◆ Self- evaluation of performance
- ◆ **Flexible physical facilities**
 - ◆ Design
 - ◆ Multiphase development

What do we mean by a well managed Science Park?

A professional management team:

- ◆ **With a business background and an understanding of the areas in which on-park companies are operating**
- ◆ **A proactive marketing strategy**
- ◆ **Focused on providing high value –added services**
- ◆ **Smart networker**
 - Regional
 - International

When does the link with « University » work?

- ◆ **Necessary? Definitely not sufficient!**
 - ◆ **Co-location (i.e. on-campus vs. off-campus)**
 - ◆ **Presence in the shareholding structure of the SP**
 - ◆ **Active participation in the management of the SP**
- ◆ **So what matters?**
 - ◆ **A research oriented University with an entrepreneurial culture**
 - ◆ **Careful selection of tenant companies**
 - ◆ **An incubator well integrated within the SP**

«Real» Science Parks (should) have:

- ◆ **Real Estate and Infrastructure Development**, including an industrial zone (unless they are virtual)
- ◆ **Organisational Programme / Strategy for Activities of Technology Transfer** in place
- ◆ **Partnership between (Academic) Research Institutions, Public Authorities and the Private Sector**

Summary

- ◆ Science parks *can* be tools for the development of the knowledge economy. They *can* equally well become too much of a good thing.
- ◆ Contemporary Science Parks are **demand-led** and **cluster driven**. They follow (regional) economic growth, rather than precede it

Topics for Investigation

- ◆ **Criteria for Success:** why are some Science Parks more successful than others?
- ◆ How do Science Parks stimulate and manage the **transfer of knowledge and technology** from “**Universities**” to **companies and markets**?
- ◆ Is there a “**right model**” for Science Parks ?
- ◆ Should Science Parks **specialize in one sector**? Always?
Under which conditions?
- ◆ The **role of Government** in Science Parks ? Necessary?
Welcome?