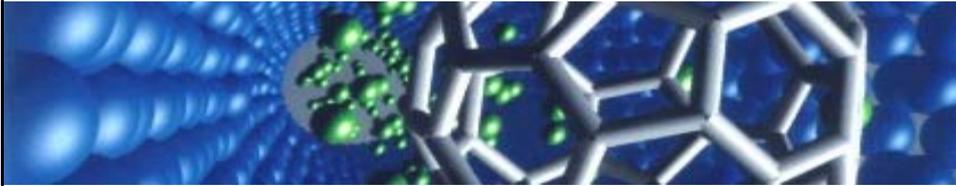


# Intangible Assets and Financing of High-Tech Start-Ups

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## Outline

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- **Intangible assets: current status**
- **The time lack**
- **Requirements and Financial Structure**
- **Venture Capital**
- **Understanding is Key!**



## Intangible Assets

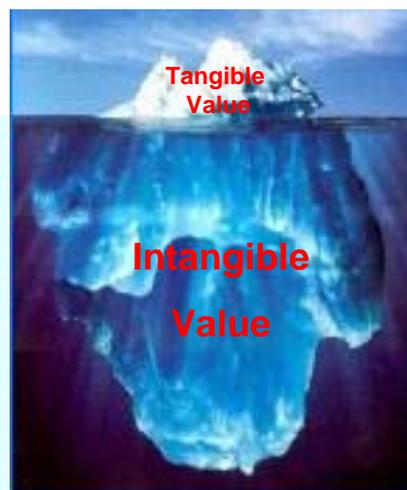
- Intellectual property rights (IPRs) are often described as intangible assets. They include amongst others company brands, patent portfolios, R&D-strategies and licensing agreements.
- Intangible assets are an increasingly important component of corporate value. They are non-physical sources of future value.

## Intangibles Add Value!

**1930** – Intangible value represented roughly 30% of the market value of major corporations.

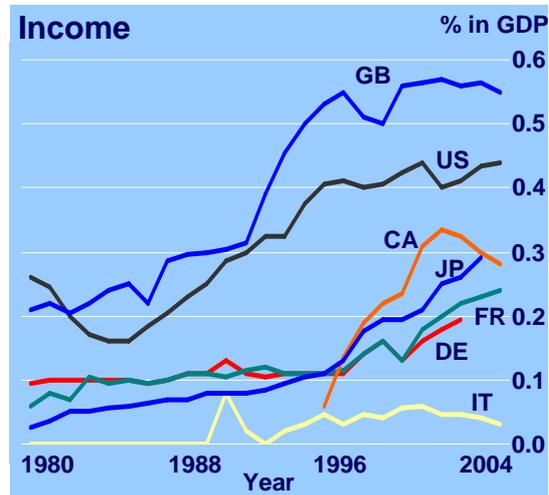
**2000** – Intangible value represented 80-85%.

**2007** – And beyond?



## Intangible Assets as Trading Goods

- Income from patents and licences can be measured in % of the GDP!
- Intangible assets becoming the character of trading goods



Sources: IMF, DB Research 2005

## Market Value of Intangible Assets

- The market value of intangible assets depends strongly on the branch and differs significantly from each other. Difficult to understand for the financial community!
- High-Tech SMEs do have often a (very) high percentage of intangible assets (the business is based on IP).
- This “value” does not appear in the balance sheet!

## The Problem of Intangible Assets

- **Big companies do not only have intangible assets but also tangible assets to secure a loan – if necessary.**
- **The determination of values for a bank loan security is based on “hard facts” (e.g. tangible assets, real estate) but not on IP.**
- **Most SMEs do have a small cashflow and most likely none or a very limited number of tangible assets to secure a loan.**
- **SMEs have a much higher risk to get bankrupt in the near future when compared with global players.**

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## Science and Technology – The time gap

**There is a fall in value because of time between first scientific publications and commercialisation**

- Transistors (10 years)
- Liquid Crystal Displays (12+ years)
- Tungsten filament light bulbs (10 years)
- Semiconductor lasers (12+ years)
- Enzyme-based glucose biosensor (10 years)

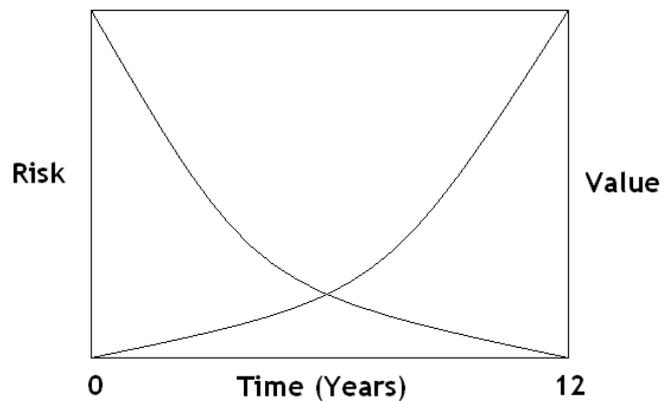
**Why is this time lapse? What goes on during this period?**

## Science and Technology – The time gap

- Patents filed and substantiated.
- Market assessment to establish a business case.
- If a business case can be made: process and production issues addressed.
- “Scale up” may pose problems, and the real costs will emerge.

**Market may change for better or worse!**

## The Time gap



**Can we quantitatively predict these curves and determine investment profile?**

Source: Prof. P. Dobson, University of Oxford, UK



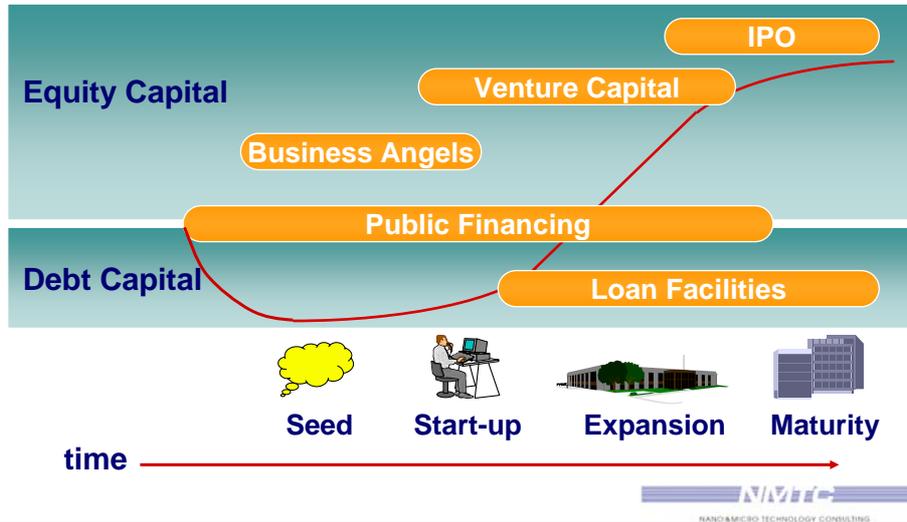
## The Time Gap

- **Time-to-market span are not predictable.**  
**Any success or failure has it's own story.**
- **Development takes longer than you think!**  
**It also costs around 10x research costs.**
- **Is there a market/business to be had?**  
**Too many scientists ignore this.**
- **Manufacture is capital intensive and it takes time.**  
**The skills are completely different from scientific research.**

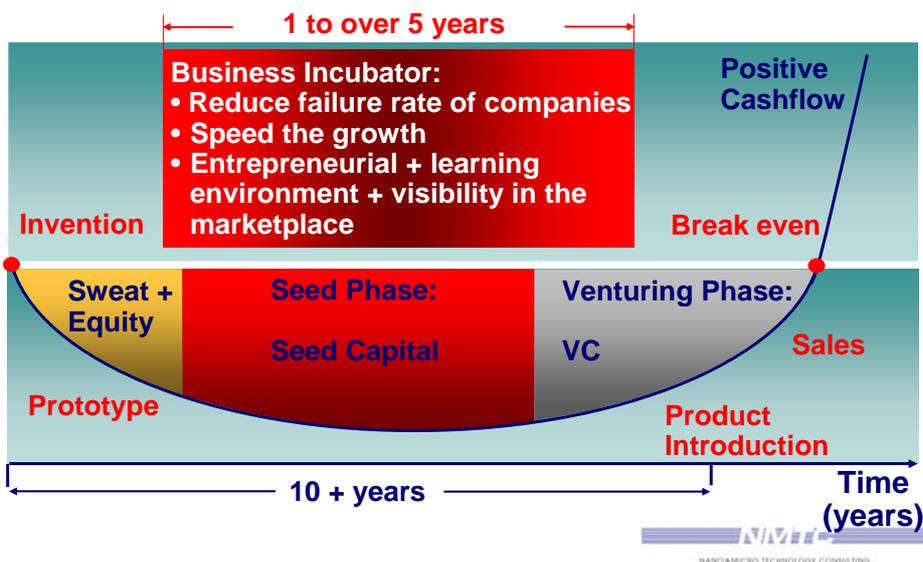
Source: partly taken from Prof. P. Dobson, University of Oxford, UK



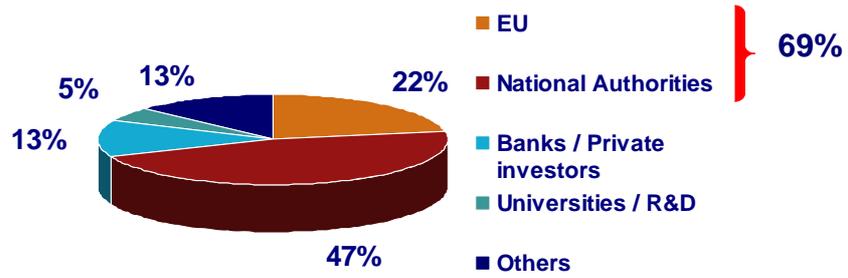
## Available Forms of External Financing



## The Valley of Death



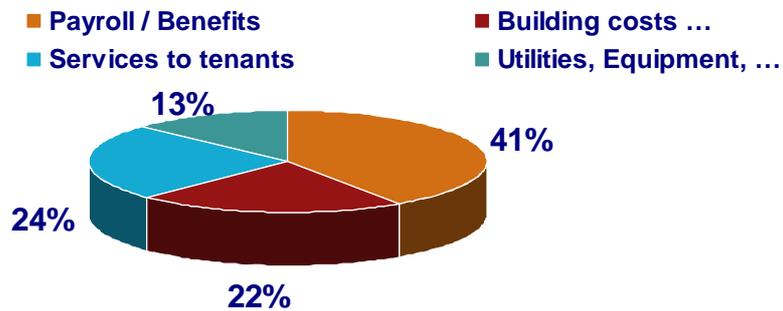
## Funding of Set Up Costs of Business Incubators



Source: Centre for Strategy & Evaluation Services, 2002



## Operating Costs of Business Incubators



Source: Centre for Strategy & Evaluation Services, 2002



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## SMEs

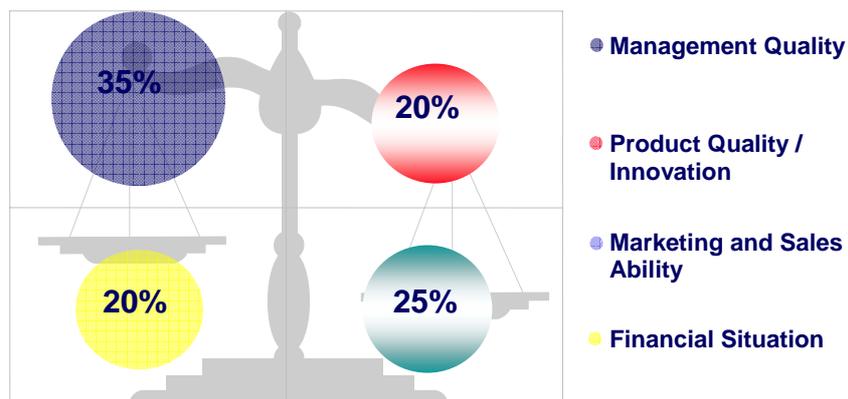
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- **99,7% of all companies have less than 250 employees**
  - **Most of the SMEs in Europe are financed by bank loans**
  - **Live fast, die young: Roughly one half of all insolvent companies are not older than 5 years**
- high risk for financial investors**

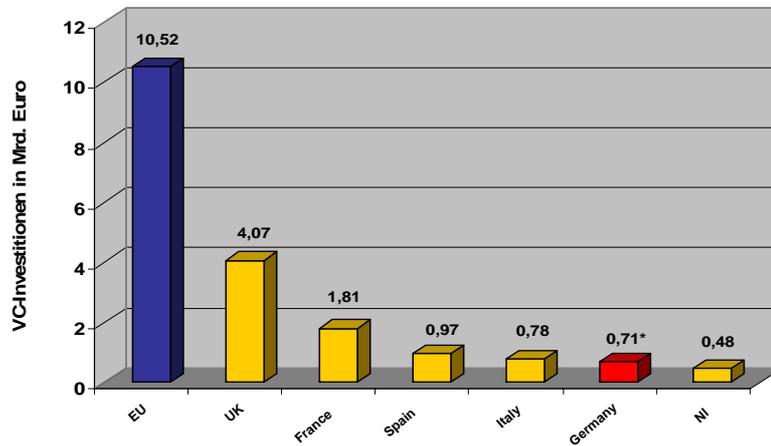
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## Success Factors of Technology Start-ups: The Bankers Point of View



## Venture Capital-Investments in Different EU Countries (in 1000 Mio. Euro)



Quelle: EVCA 2004

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## Understanding is Key!

- There is still a communication problem between high-tech SMEs and banks / VCs
- Many high-tech SMEs are technology driven and do have limited knowledge of financing issues
- Investors normally do have a very limited understanding of new technologies, chances and risks
- Some banks are currently in an industrialisation process (high standardized throughput at low costs)

## Example: Deutsche Bank Innovation Teams

- In 1998 Deutsche Bank AG founded several “Innovation Teams” (= bankers + technology experts) to
  - enhance the understanding of young high-tech innovative companies and their products, markets and risks (→ technology translators)
  - focus on several topics including Life Science, Microtechnology, Multimedia, Automation, Telecommunication, Energy / Environment
- The concept has been proved to be successful

## Example: Deutsche Bank Innovation Teams

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- In 2003/2004 most of the teams were disestablished or significantly reduced
- Possible reasons:
  - **Costs !!!**
  - **Difficulty to measure success or failure of the teams**
  - **Margin driven focus of the bank on bigger customers (not on high-tech SMEs)**

## Conclusion

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- **Intangible assets do play an increasingly important role.**
- **The real value of intangible assets especially for SMEs is difficult to determine and varies in value over time.**
- **Business incubators can help start-ups to survive and to overcome “the valley of death”.**
- **The improvement of the financial situation of European SMEs requires in a first step translators between the financial community and high-tech SMEs.**

## Contact

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