

2004-06
Scottish Innovative Actions Programme

The Innovating Nation
21 – 23 February 2007

Highlands and Islands Enterprise
Scottish Enterprise
SCOTTISH PARLIAMENT
EUROPEAN UNION
PROJECT FINANCED BY THE EUROPEAN UNION

2004-06
Scottish Innovative Actions Programme

Workshop:
How can Innovation
Policy be
implemented?

2004-06
Scottish Innovative Actions Programme



Business Environment Mapping

David Robson
Scottish Enterprise

Priority Industries Evaluation
Business Environment Mapping

Scottish Enterprise



Business Environment Mapping

Companies do not operate in Isolation

Data gathered as part of the baseline will cover all the aspects of the Business operating Environment.

- I These assets are constructed from:
 - Ø People (Human Capital)
 - Ø Things (Physical Capital)
 - Ø Know how (Intellectual Capital)
 - Ø Money (Financial Capital)
 - Ø Global positioning (Market Capital)
 - Ø Growth of Networks (Social Capital)
- I The physical spread may be on a Global scale or very localised.
- I Each Component clearly defined – common understanding
- I Project Part Financed through Innovative Actions European Funding
- I Developed understanding of importance of business operating environment



Business Environment Mapping

Innovation System (Business Environment Mapping)

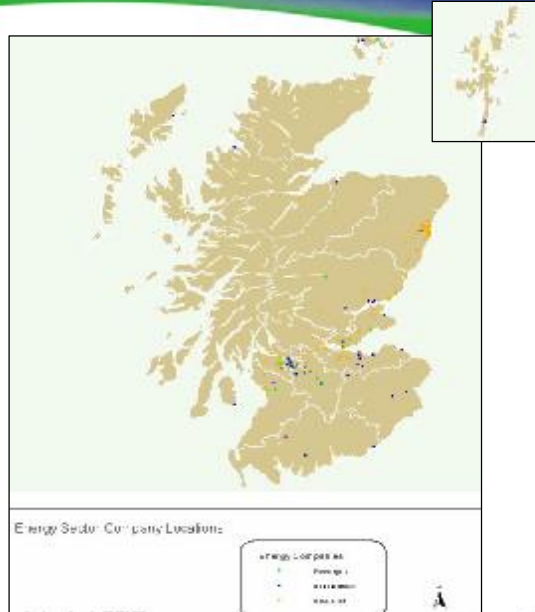
- I Funding (**Financial Capital**)
Current picture of equity investment, including levels of investment, active investors. Indicative time and costs to commercialisation, Later stage company issues.
- I Skills and Recruitment (**Human Capital**)
Map the recruitment challenges and skills requirements (Futureskills). Number and type of graduate numbers (SHEFC). High level recruitment.
- I Assets and Infrastructure (**Physical Capital**)
Mapping physical assets including incubator centres, test rigs, support labs etc. (Competitive Place)
- I Intellectual assets (**Knowledge Capital**)
Innovation and R&D performance in Scotland c/f to OECD competitors.
IP landscape for Scotland
Research funding and numbers in academic institutes
- I Global market Position (**Market Capital**).
Success/failure information on FDI, from SDI reports, exporting levels.
- I Networks (**Social Capital**)
Study of industry bodies and inter-organisation joint working.
Social Network Analysis.



Business Environment Mapping

Physical Capital

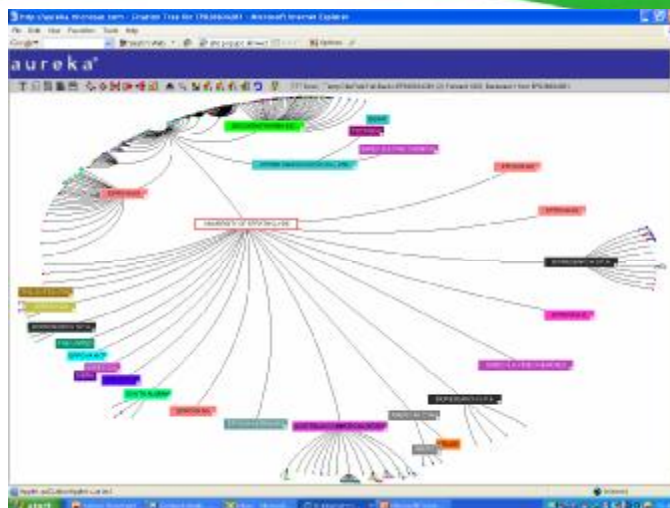
Mapping the physical assets
e.g. Company base

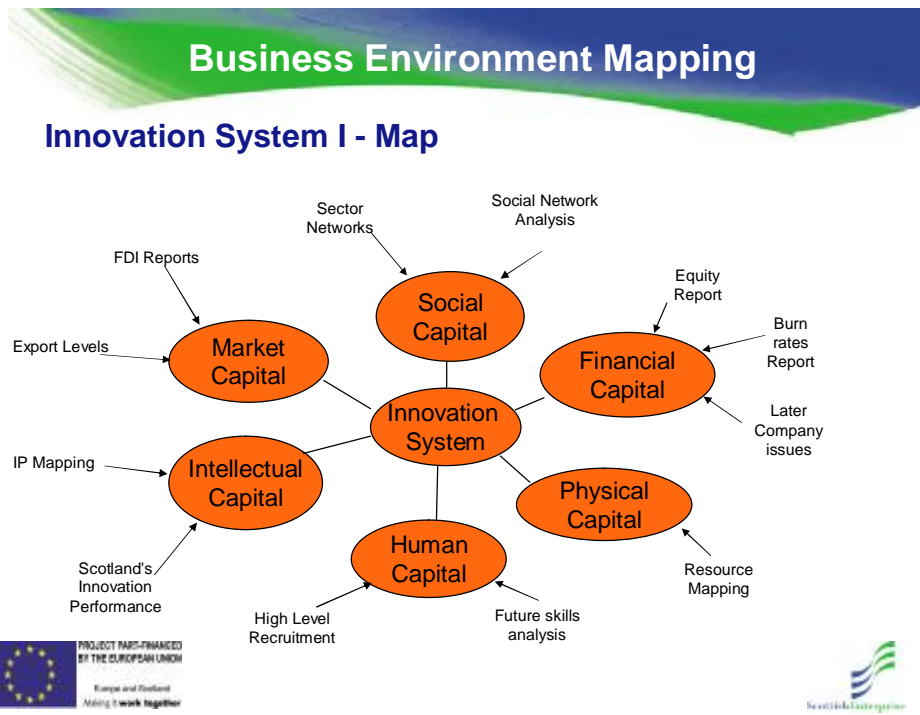
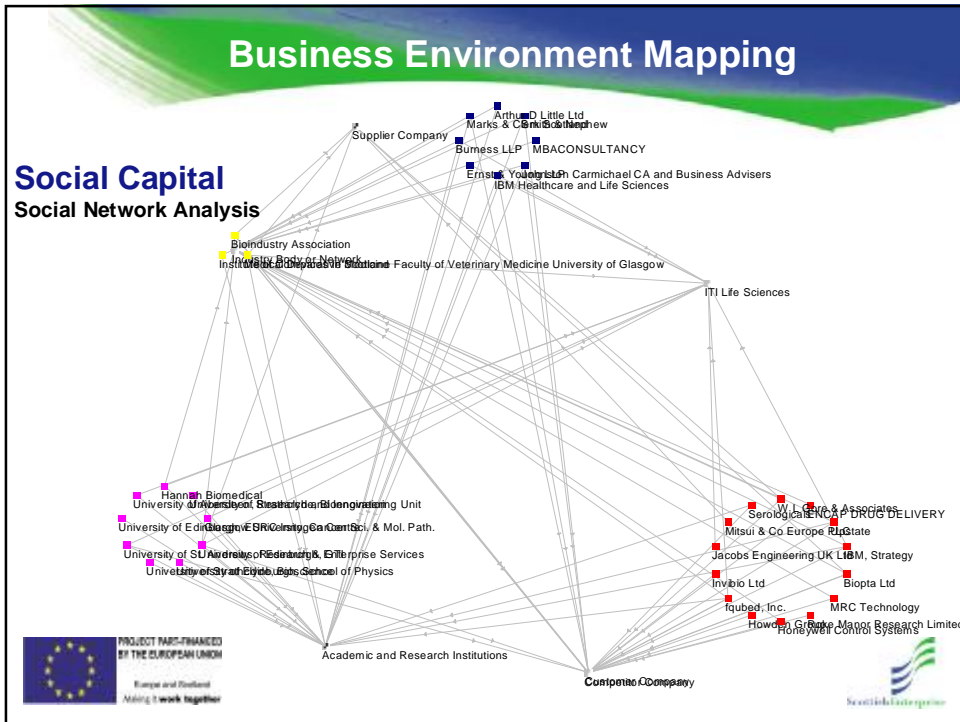


Business Environment Mapping

Intellectual Capital

Citation Mapping





Business Environment Mapping

Policy Response – addressing the systemic causes

	Pre start	Start Up	Ave. Bus.	Growth Bus.	Corp Elite
Funding	Proof of Concept	Ent Fellow		R&D Tax Credits	Co - Invest
Skills & Recruitment		ITIs		Tech Grants	
Physical Infrastructure				R&D for SMEs	R&D for MNCs
Intellectual Assets		HEI - SME links		ITIs	
Global Market position				Global Scot Netwrk	
Networks					



Market Weakness **High** **Med** **Low**



Business Environment Mapping

How is this being used?

- I Evidence based strategy
 - Ø Summarising Key issues and messages for each sector
- I Mapping of systemic strengths and weaknesses
 - Ø Help develop systemic interventions
- I Current “snap shot” of business environment
 - Ø “Hard data on soft issues”
- I Doesn't give all the answers – but raises the right questions
 - Ø Why is it like this?
 - Ø Is this a problem for the sector?
 - Ø What can SE (or others) do?
- I Tracks changes to see programme impact alongside company and research data
 - Ø Tracks overall change in the sector
 - Ø Indicators that the Business Environment is improving
 - Ø Evidence of how SE interventions are contributing



Workshop: How can Innovation Policy be implemented?

Mapping the Scottish Innovation Landscape Tom Tumilty Scottish Executive

MAPPING THE SCOTTISH INNOVATION SYSTEM

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MAPPING THE SCOTTISH INNOVATION SYSTEM

Key questions:

- Is there a “Scottish Innovation System”?
- Who are the main actors?
- What roles do they play?
- What actions do they carry out?
- What are the strengths and weaknesses?
- What are the policy implications?



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MAPPING THE SCOTTISH INNOVATION SYSTEM

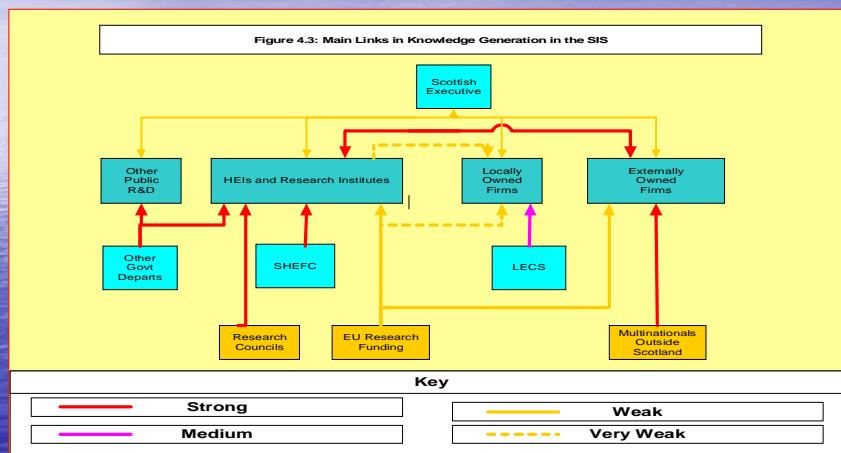
Benchmarking the SIS: Key findings:

- Scotland is in the top quartile of EU regions for the overall regional innovation index, but only because,
- Scotland is in the top quartile of EU in terms of indicators dominated by public investment decisions, whereas
- Scotland is in the third quartile for BERD



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MAPPING THE SCOTTISH INNOVATION SYSTEM



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MAPPING THE SCOTTISH INNOVATION SYSTEM

STRENGTHS OF THE SIS:

- Knowledge Generation capacity of the system is high
- Policy innovation within the system is relatively strong (ITIs singled out)
- R&D support measures are fairly comprehensive
- But, too little emphasis on encouraging partnership between firms and on university/company interaction (despite SCORE and SEEKIT)



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MAPPING THE SCOTTISH INNOVATION SYSTEM

WEAKNESSES OF THE SIS:

- Low levels of BERD – particularly in indigenously-owned SMEs
- Low levels of innovation networking between firms and between firms and universities
- Hence, mismatch between outputs of research-active HEIs and the absorptive capacity of SMEs



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WEAKNESSES OF THE SIS: cont.

- Profound difference between Central Belt and “rural” areas
- Differences between levels of investment in R&D between knowledge-generating and knowledge exploiting organisations result in an imbalance –
 - University sector more like a “core” EU region
 - But, corporate sector more like a “peripheral” location



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MAPPING THE SCOTTISH INNOVATION SYSTEM

- Do we adopt a “systemic” approach rather than treat individual market failures?
- Can we align universities’ strategic missions with needs of Scottish economy – without sacrificing research excellence?
- How do we increase firms’ absorptive capacity?
- Can we include rural areas in the system?



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