

Do Networks Work?

- Towards Best Practices in MNT networks

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Introduction

- TFI network studies
 - Client projects
 - Internal knowledge base

 - Why networks?
 - Cambridge Network
 - Silicon Valley
 - UK MNT Network
 - National Nanotechnology Initiative
 - NEXUS

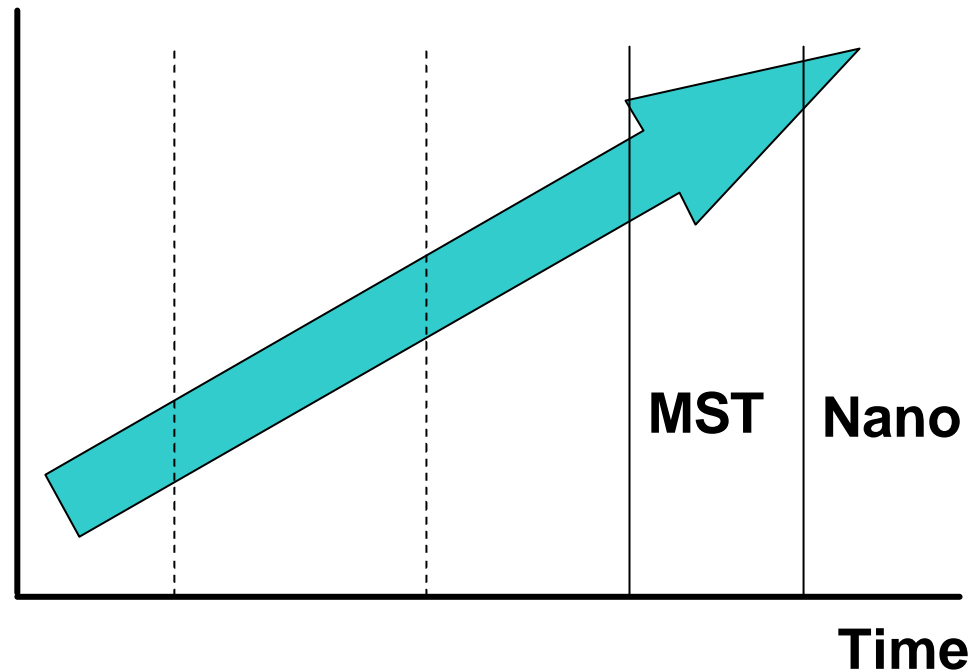
 - What are the best practices that enable networks to deliver against their objectives ?
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Technology Transfer

- Major focus on transferring technology from the research environment to commercial applications

Wealth Creation

People, Money, Time



- ... We need to do it faster, cheaper, less people

Solution – the network!

- Co-ordinate activities
- Improve communications
- Focus and direction
- Bring researchers and industrialists closer
- Strengthen industries
- More efficient utilisation of resources
- Training and skills development

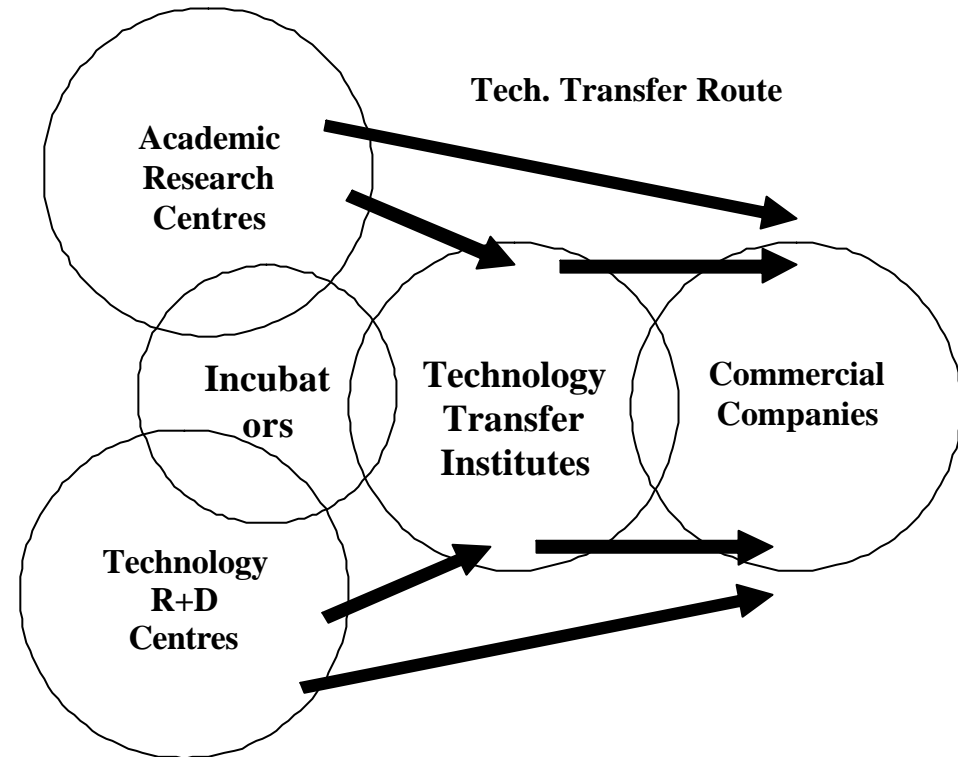


.....However, there can be some pitfalls!

A typical network design?

Networks that work

- Span technology supply chain
- High performing nodes with..
- Clear roles and well defined interactions
- Control
- Clear direction
- Funding
- Ease of access for key services



What should nodes do?

- **Technology developers**
 - Develop IP
 - Develop trained workers
 - Foster spin-outs
 - Engage with industry
 - **Industry**
 - Engage with technology developers
 - Utilise IP
 - Employ skilled workers
 - Invest in in scale up of technology
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Technology R+D Organisations



Key Factors for Success	ITRI	LETI
World Class Facilities	✓	✓
Well Funded	✓	✓
National Monopoly of Core R+D	✓	✓
High Quality People	✓	✓
Funding for Spinouts	To vol. manufacturing	Startup
Entrepreneurial people	✓	
Technology Focus	Silicon	Silicon

Academic Research

Key Factors for Success	Mesa+	DIMES
Size of team	380	260
Technology Focus areas	5	5
Revenue	€20.6M	€21M
Capital Investment	€160M	
Focus on Productivity and Results	✓	✓

Technology Transfer

Key Factors for Success	MIC	Fraunhofer IZM
Clear Technology Focus	✓ (silicon)	✓ (advanced packaging)
Visionary Leadership	✓	✓
Effective Management	✓	✓
Core Industrial Partners	✓	✓
Adjacent to University	✓ (DTU)	✓ (TUB)
IPR Strategy	Licensing	Licensing

Summary

- Networks are being developed to increase the efficiency of technology transfer
 - For a network to function well, it must be well designed, managed and funded and ...
 - Individual nodes must fit their role in the network
 - A number of best practises for nodes and networks have been identified in this paper
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