UK Practices

Foresight strategies for regional economic development

Main Topics:

1. International best practice in regional Foresight
2. Actions to modernize traditional industries
3. Actions to stimulate creativity and enterprise
4. Actions to introduce promising new sectors

Gordon Ollivere : Moscow, 29 September 2011

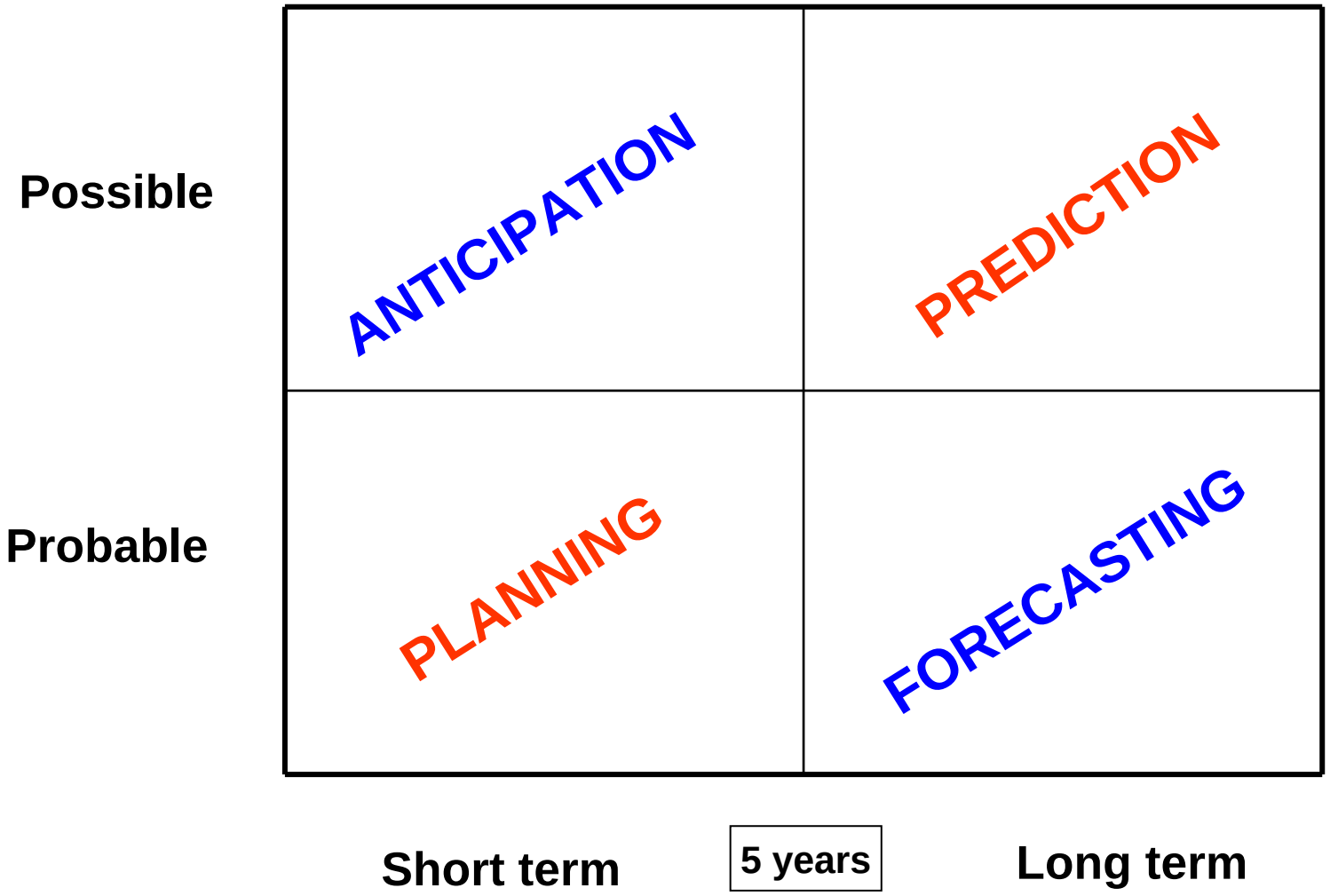
Introduction to RTC North

RTC NORTH

- Private non-profit company since 1989
- Operating across North of England
- Board of 70% industry, 30% R&D
- 50 professional staff in 4 teams
- 22 years experience in technology transfer to industry
- Credibility in the S&T community
- Leading role within international networks (TII, TTF, EEN, UN)

Sunderland **0191- 5164400**
Liverpool **0151- 6328888**
Leeds **0113- 3944676**
http://www.rtcnorth.co.uk

Perceptions of the Future



Foresight Techniques

RTC NORTH

Possible	**SCENARIO APPLICATION** •Debate key drivers •Create future scenarios •Cross-impact matrix	**HORIZON SCANNING** •Predict new technology •Apply current markets •Produce 25 year plan
Probable	**BUSINESS PLANNING** •Define existing trends •Make forward projection •Produce 3-5 year plan	**SECTOR MAPPING** •Map current and global •Evaluate and forecast •Establish key priorities

Short term | **5 years** | **Long term**

(1)International best practice in regional foresight

How to convert national policy into regional strategies and implement them as local actions.

UK Foresight Programme: History and Trends

Aim :- **To identify opportunities in markets and technologies which will enhance the nations prosperity and quality of life.**

Phase 1:	**Science push**	Expert panels (16 sectors) Delphi Survey Recommendations	1993 >
Phase 2:	**Implementation**	Regional roll-out Manufacturing 2020 Society themes (aging, crime etc)	1997 >
Phase 3:	**Prioritisation**	Disruptive technologies Knowledge based skills Sustainable development	2001 >
Phase 4	**Open Innovation**	Sharing of ideas, knowledge Internationalisation of R&D Non-technological innovation	2005>

14 Years Experience

RTC North was contracted by OST to operate the first regional foresight programme in UK. It operated continuously between 1996 and 2010 and is one of the best examples in Europe.

The main programme had five strands :

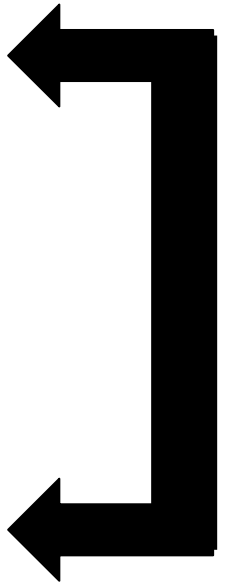
1.The flagship function	**- promotion & marketing**
2.Research and intelligence	**- knowledge gathering**
3.Foresight for policy makers & planners	**- support infrastructure**
4.Foresight for industry & commerce	**- commercial applications**
5.Foresight for education & individuals	**- science and society**

Foresight North East

THE SPACE DIMENSION

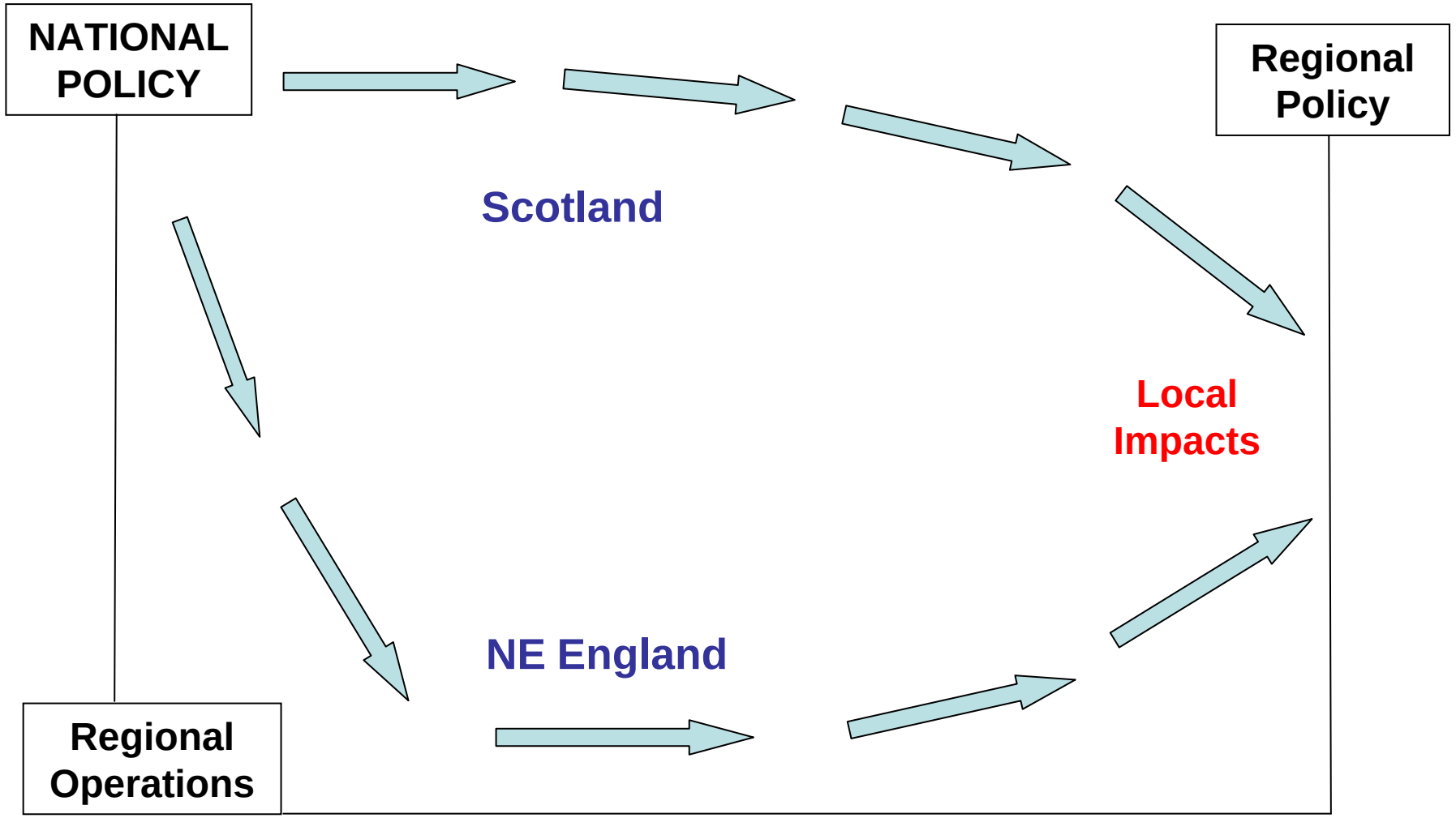
RTC NORTH

NATIONAL RESPONSIBILITIES	Market Trends
	Key Technologies
	Policy Instruments
REGIONAL RESPONSIBILITIES	Policy Deployment
	Key Sectors/Clusters
	Social Inclusion



Appropriate Communication

National Roll-out



(2) Foresight actions to modernize traditional industries

How to preserve and manage the transition of existing industries in a stagnating economy

Industrial Foresight Methods

1. **Single company:** Offsite workshops with several decision makers from the same company focusing on topics such as long term USPs, product futures, marketing strategy.

2. **Multi-company:** Full day seminars involving circa 10 people from 3 companies and allowing SMEs to compare experience and successful practices.

3. **Sector mapping:** Creation of a sector template in which all regional elements are given a value now and in the future. Completed maps are then compared with global competition, now and in the future.

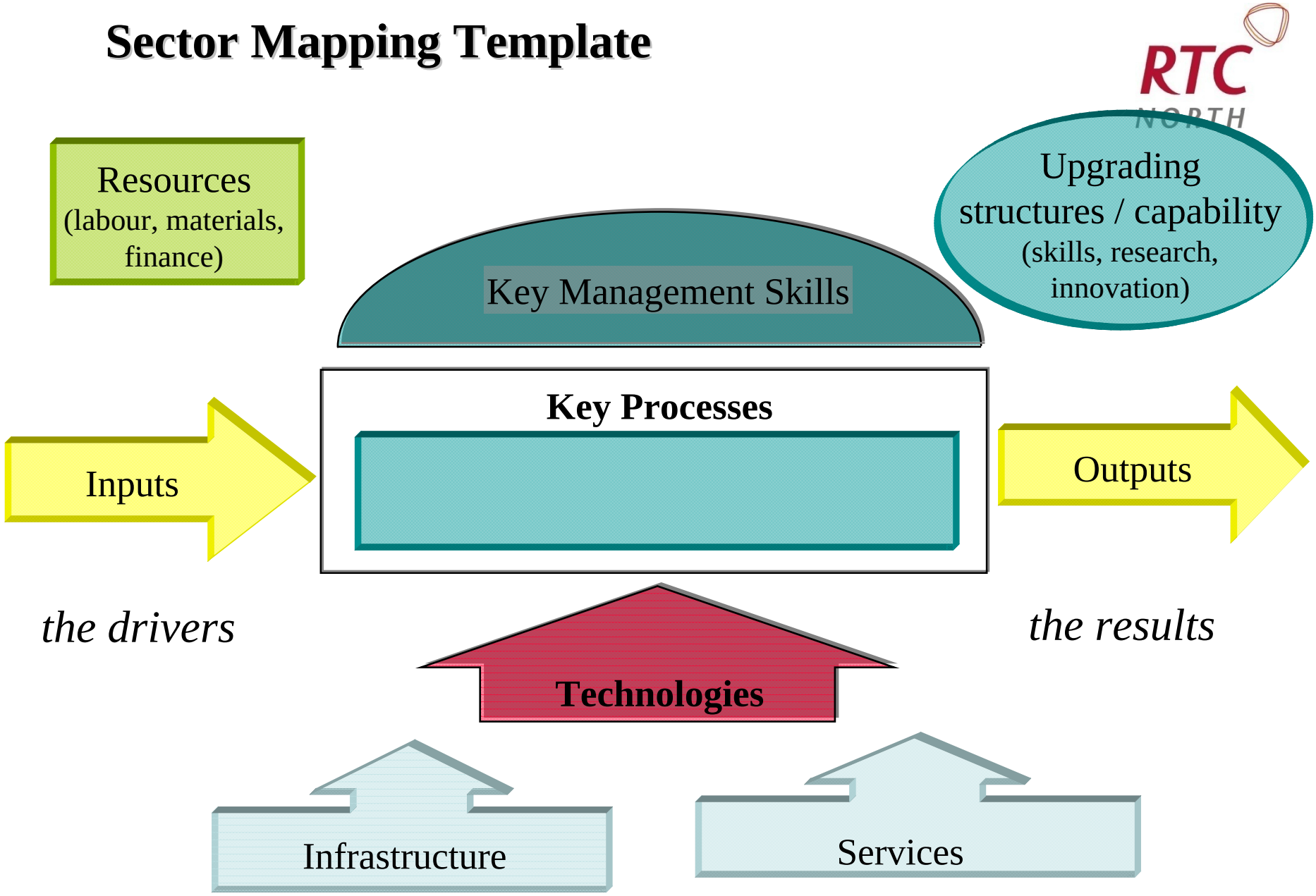
4. **Cluster scenarios:** Analysis of long term business prospects of cluster members using ‘cross impact’ matrix techniques. Strengths and weaknesses in current business plans are scored against future assumptions.

Long Range Sector Mapping

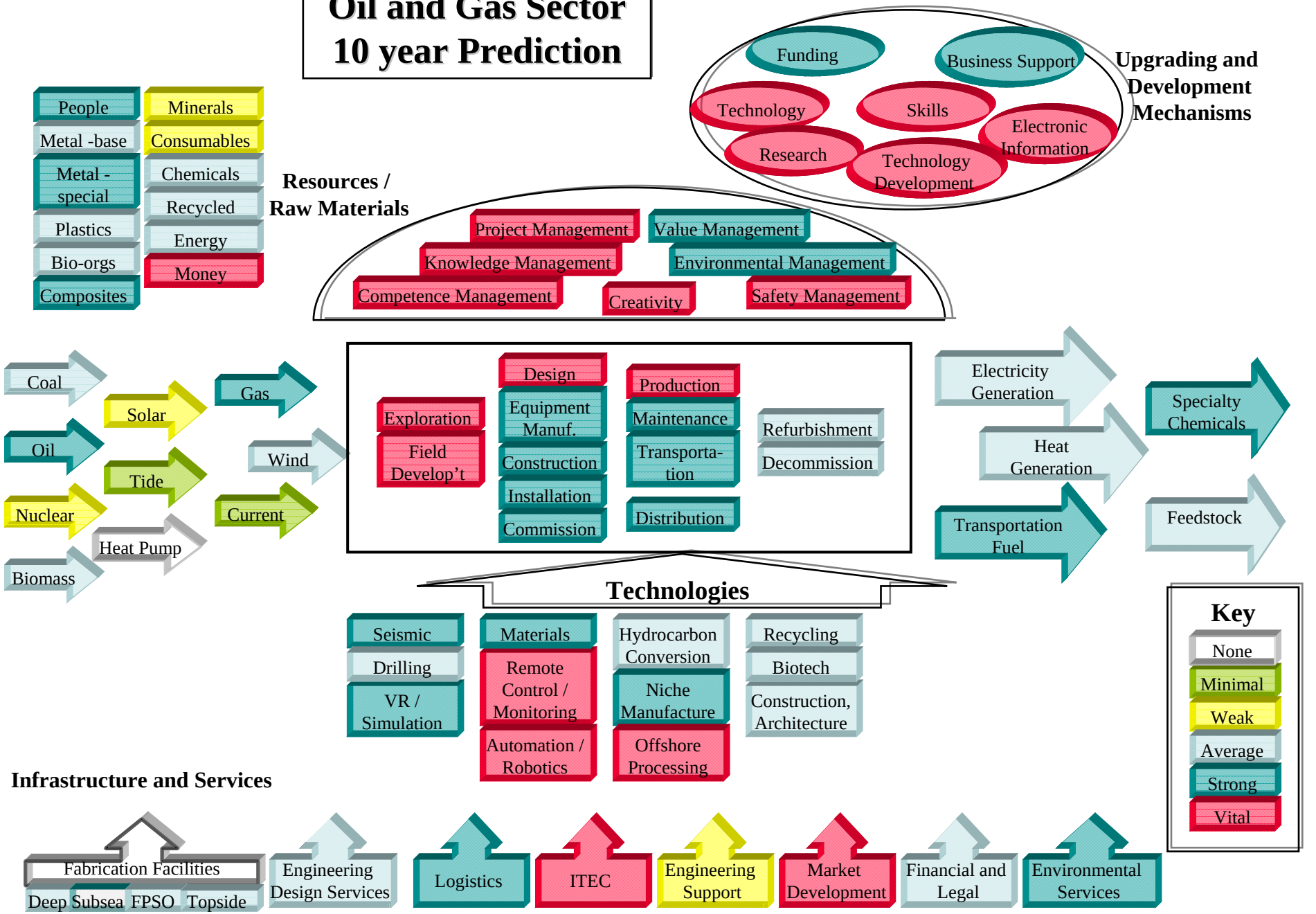
Offshore / Energy Market

- Produce template appropriate to sector
- Identify variables and assign values (1-5)
- Compare current global and regional issues
- Predict changes over 10 year period
- Produce maps to indicate value changes
- Identify potential ‘Hot spots’ and threats
- Establish Regional Priorities (1-3)

Sector Mapping Template



Oil and Gas Sector 10 year Prediction



Foresight for Energy Sector - preliminary results

1. **Actions to increase capability - 12 areas of development priority**
2. **Actions to capitalise on strengths - 04 areas of greatest opportunity**
3. **Actions to minimise threats - 02 areas of future weakness**
4. **No specific action required - 44 areas of lower priority**

Next Steps

1. ***Dissemination of results / response to questionnaires***
2. ***Endorsement of futures group by wider membership***
3. ***Definition and implementation of long term action plan***

(5) Foresight actions to support individual companies

How to assist SMEs in building creativity and foresight into their specific business plans

What if you could foresee the future?

... how would this affect your business plan?

Foresight impact on business

Individual Company Business Plan

Future Events	Strengths				Weaknesses				
	S1	S2	S3	S4	W1	W2	W3	W4	
1. Smart materials	+1								
2. Information costs	-1								
3. MOD Procurement	+1								
4. USA dependence	+2								
5. Marine revival	0								
6. Vocational skills	-2								
7. Safety issues 24/7	+1								
8. Other conditions	0								
TOTALS =	+2								

Individual Companies

"We make Fibreglass containers for road transport"

"We are experts in engineering with composite materials"

Distinctive Capability:

1. What really makes you what you are?

2. What is different (or better) about you?

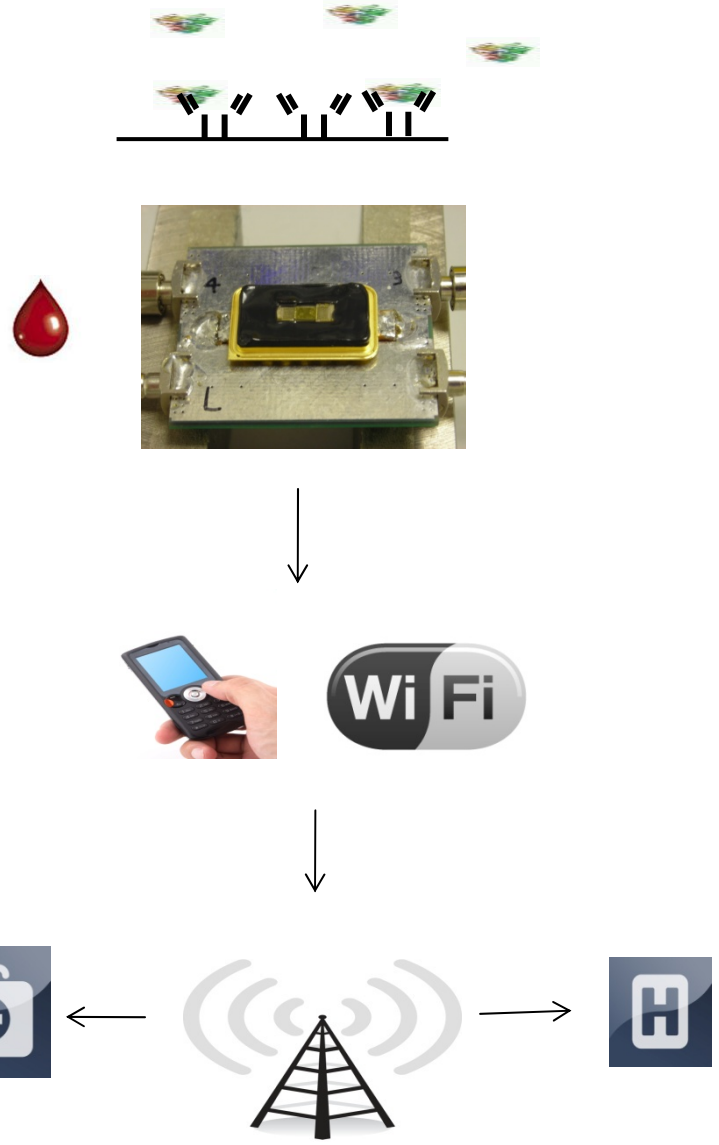
3. What do you have that cannot be bought (by your competitors)?

4. Take away your products/services – with what would you start again?

E&F Fibreglass NE England

SME Case Study (Video)

Entering New Markets



A new platform for remote hand-held medical diagnosis

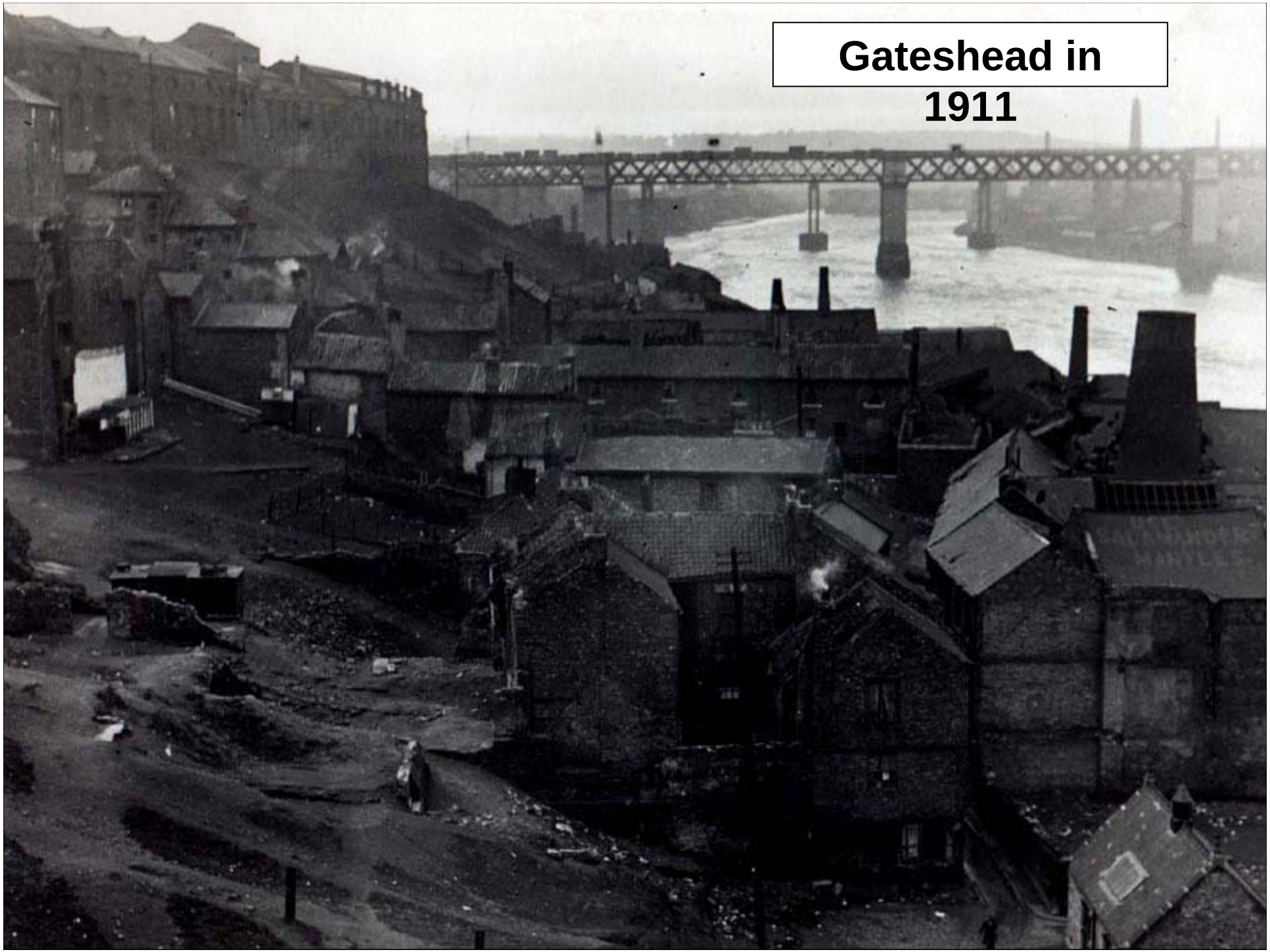
Japan Radio Company

The OJ Bio Joint Venture

The assistance provided by RTC North through UKTI's R&D Globalisation Programme has been invaluable to us and will likely benefit many more SMEs like us in the region.
Dale Athey, CEO

(3) Foresight actions to stimulate creativity and enterprise

How to foster non-technological innovation in an urban environment by developing enterprise around physical infrastructure


Gateshead in
1911

BALTIC
GATESHEAD QUAYS

BALTIC 13 JULY 2002

Contribution to Gateshead in Transition

RTC NORTH

Building on Infrastructure

Working with Business

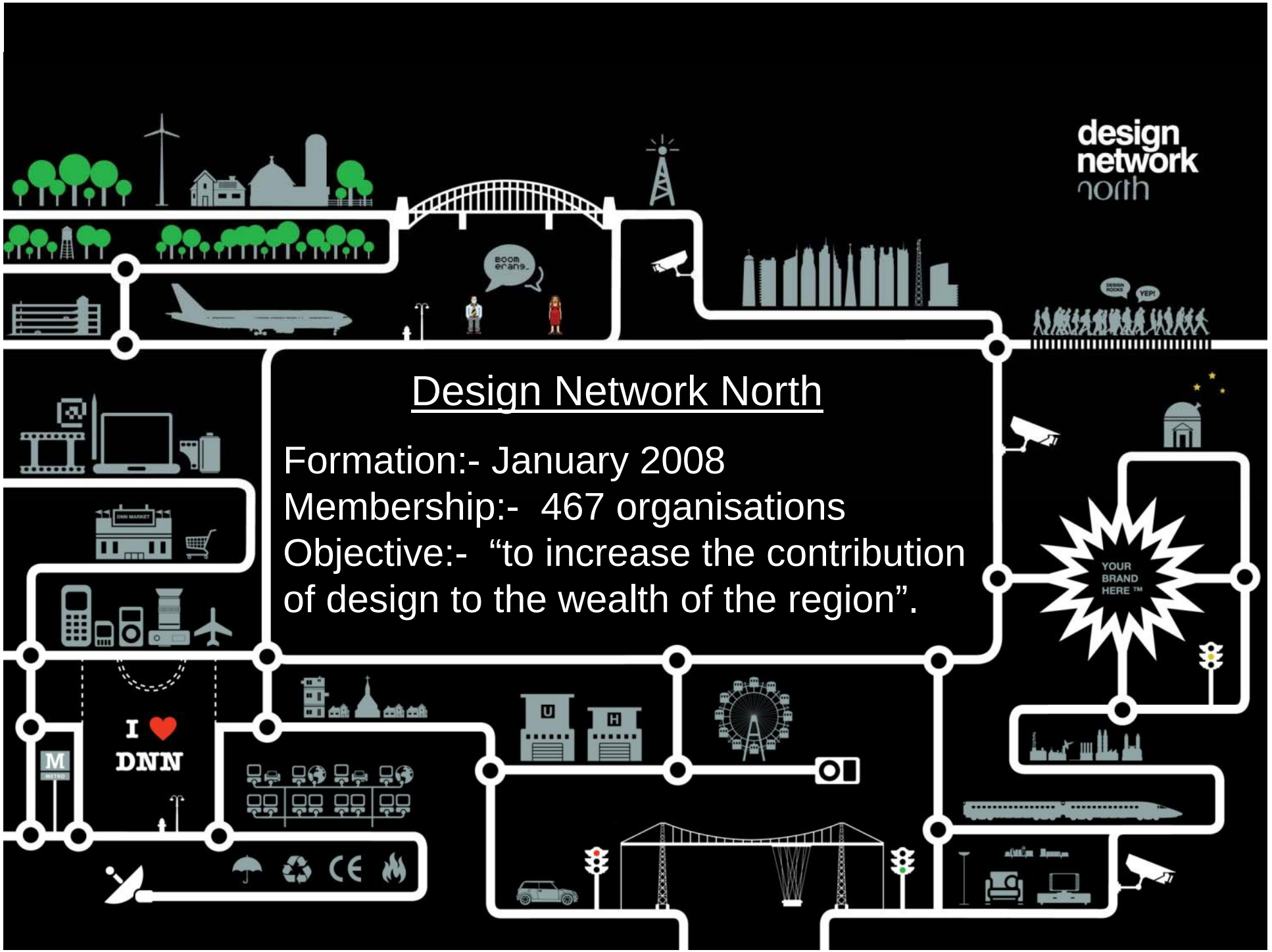
Mass participation in

New Environment for Innovation

Wealth Creation

Popularity of Enterprise

Confidence in the future



Design Network North

Formation:- January 2008
Membership:- 467 organisations
Objective:- “to increase the contribution of design to the wealth of the region”.

The Strategy Board

www.designnetworknorth.co.uk

"Our mission is to increase the contribution of design to the wealth of the region"

RTC NORTH

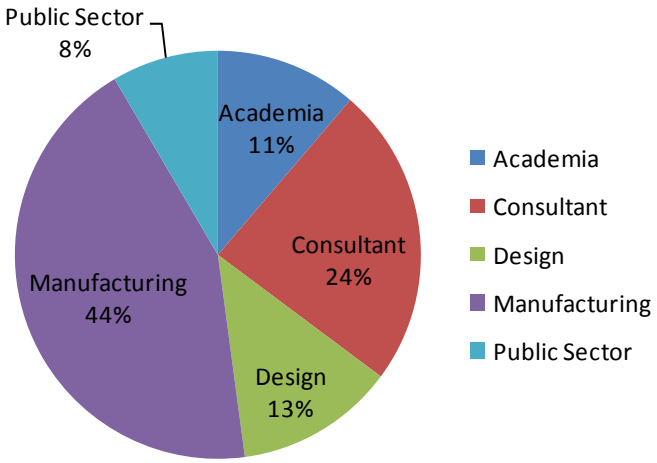
Contractor	RTC NORTH	Supported by	Gateshead Council
Industrial Partners	P&G, express group, tommee tippee, Wellstream, BLACK&DECKER, MECHETRONICS GLOBAL FORCE - LOCAL IMPACT, THE DESIGN GROUP™		
Regional Universities	northumbria UNIVERSITY, Newcastle University, UNIVERSITY OF TEESSIDE		
Design Specialists	Design Council, dba, design event, Designing Demand., DESIGN ASSOCIATION FOR NORTH EAST ENGLAND		
Associated Projects	North East mas BERR manufacturing advisory service	Cambridge IfM	Cranfield Dept of Competitive Design

‘Rise & Design’

A series of network meetings

RTC NORTH

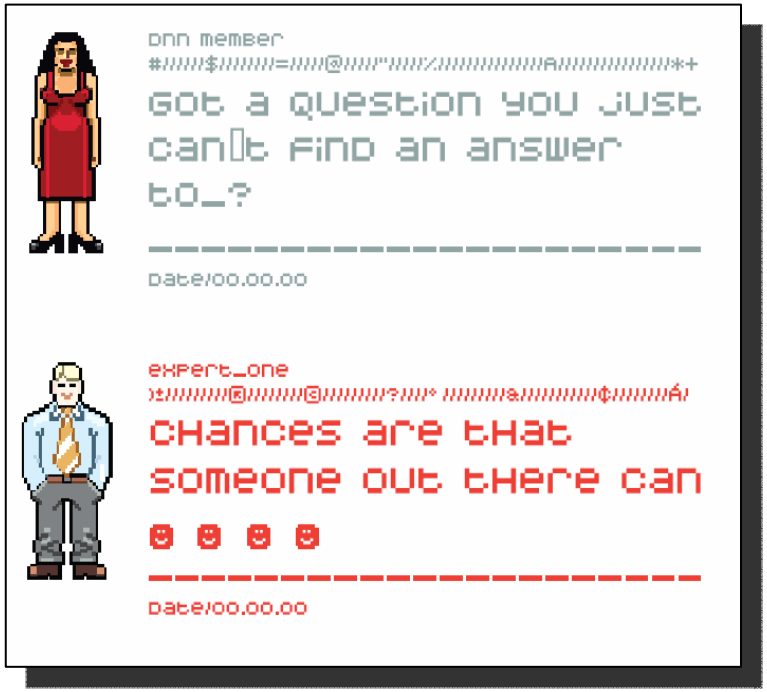
- 2nd Friday of each month
- Topics include:
  - Lessons from Automotive Design
  - Creativity through Workplace design
  - Materials and Design (Feb 2011)
  - Customer Focussed Design (Apr 2011)
  - Procurement and Tendering (May 2011)
- Attendance started at 38, last event was 116
- Total of 1,540 people have attended



‘Boomerang’

A device for local procurement

RTC NORTH



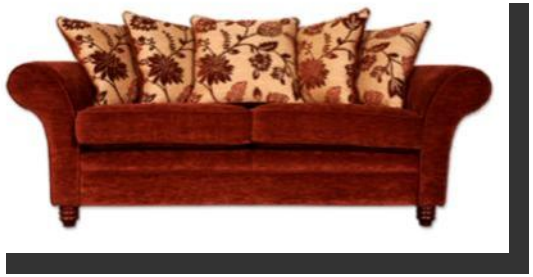
- 59 Boomerangs sent out to date:
  - *“Anyone with knowledge of CE Marking”*
  - *“Does anyone have a CO_2 monitor”*
  - *“Glass panel manufacturer*
  - *“Need someone to build a test rig”*
- Each question has had up to 20 responses.
- We go back to the requestor within 1 week

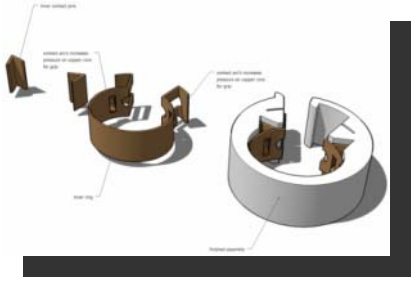
boomerang@designnetworknorth.org

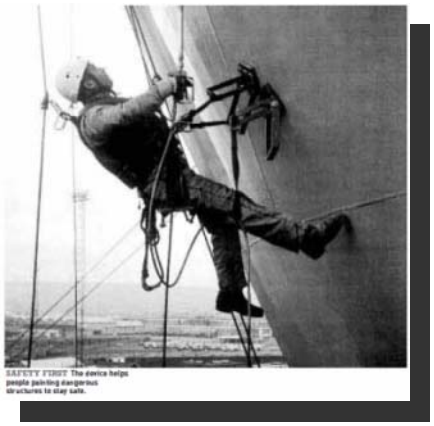
Exemplar Design Projects

Grants of £16k for product design services

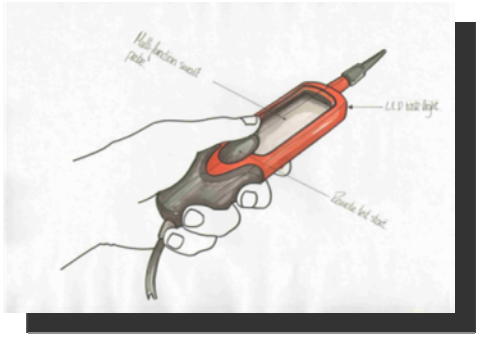
- Objective: To demonstrate how good design can generate significant business benefits:

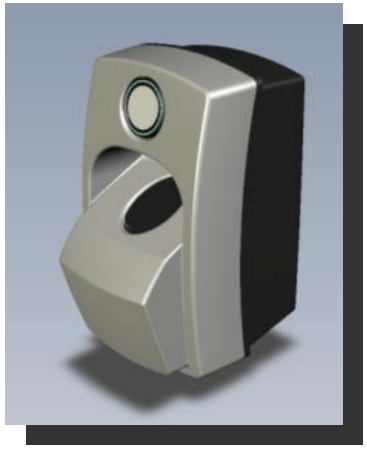


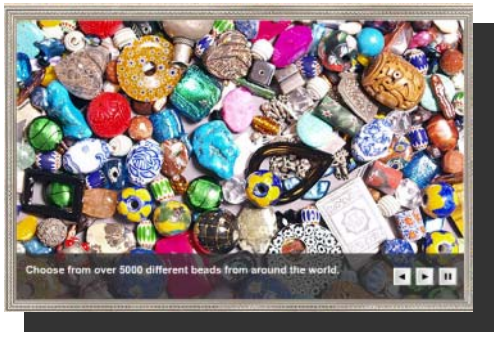




- 30 projects funded
- ~ £16k each







Engaging Schools and Community

(STEM, Foresight, Virtual Design, Enterprise Simulation)

Innovation Priorities

- Science Awareness
- Enterprise Skills
- Appreciation of Industry

In 2008/2009

❑ 1,500 children entered innovation competition
❑ 150 enterprise influencers trained
❑ 70 companies supported innovation projects

Looking Ahead : Design Centre North

Expected new location for RTC North in 2012

(4) Foresight actions to introduce promising new sectors

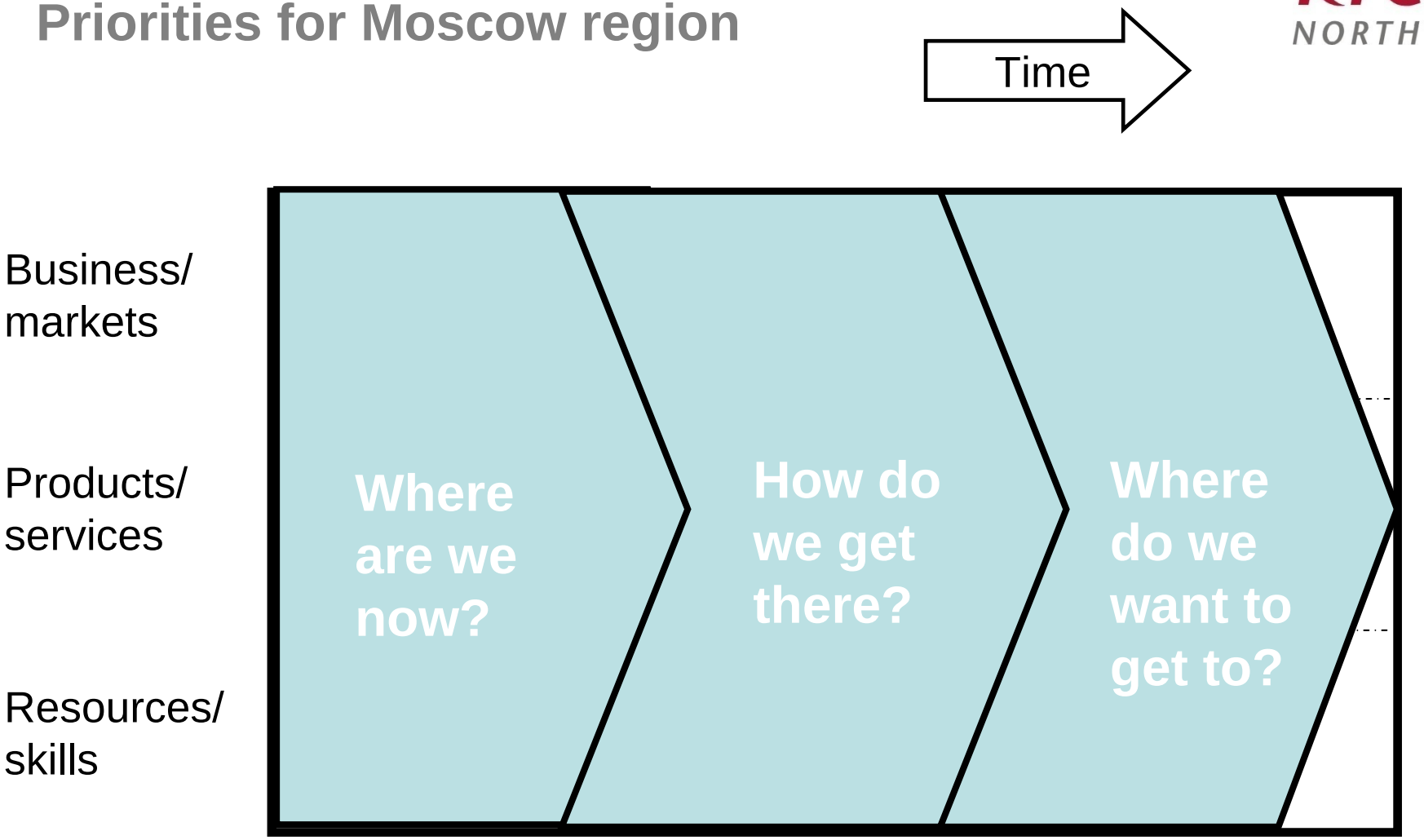
How to identify future technologies and opportunities in lead markets

Technology Centres of Excellence:

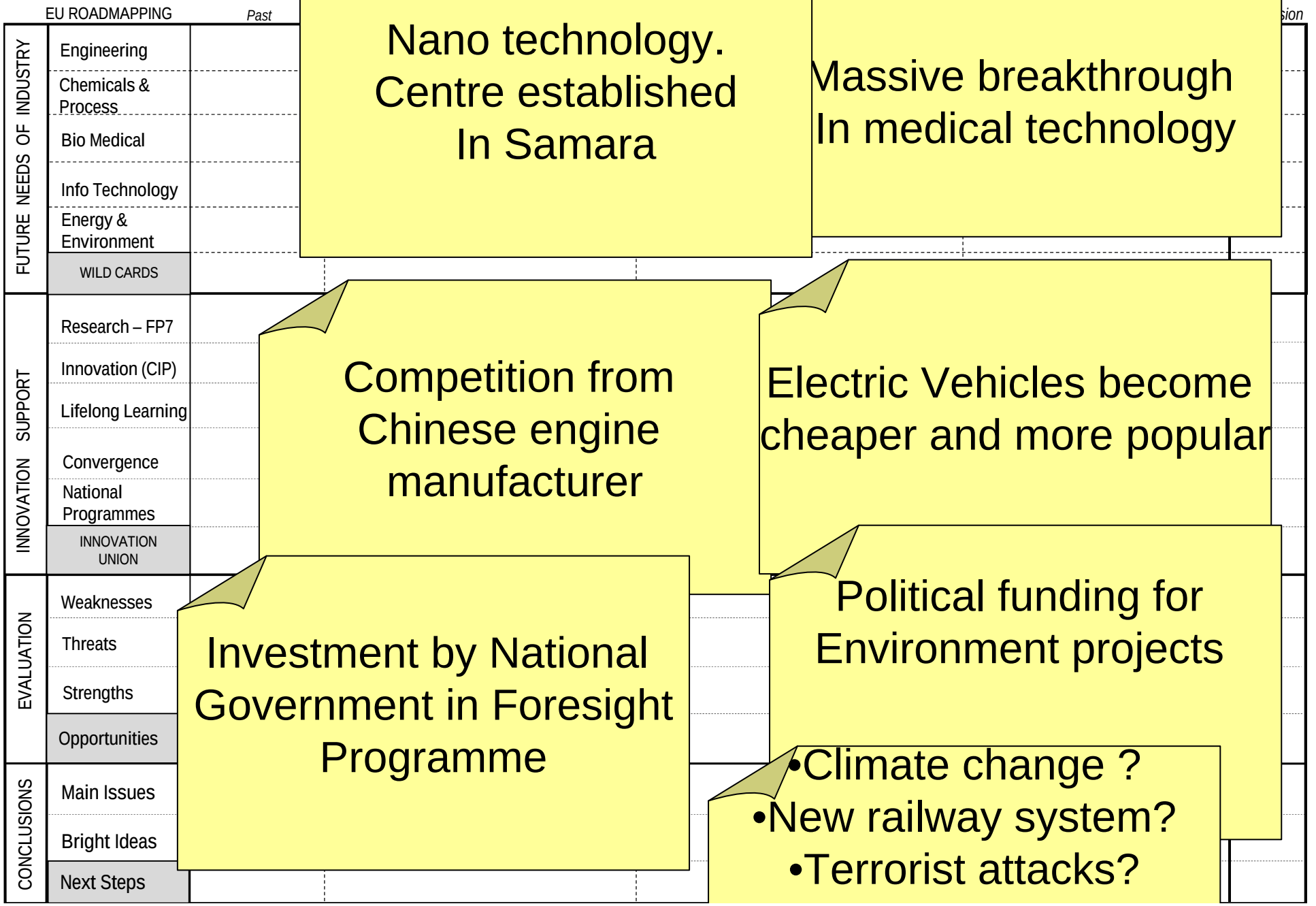
- Expensive and not always successful

Centre of Excellence	Economic Sector	Industry Platform	Research Platform	Market Reality	TOTAL	RESULT
CELS	Life Sciences, Healthcare	1	5	3	**(9)**	Just hanging on – partly due to complicating factors
CENAMPS	Nano-technology micro-systems	2	2	1	**(5)**	First centre to be abolished (2008) – no industry take up
Codeworks	Information, comms and digital	3	1	2	**(6)**	Funding withdrawn – survives only as a small firms network
NAREC	Marine and Energy technology	4	4	4	**(12)**	Succeeded in building physical infrastructure
CPI	Chemical and Process Industry	5	3	5	**(13)**	Succeeded in building strong R&D infrastructure

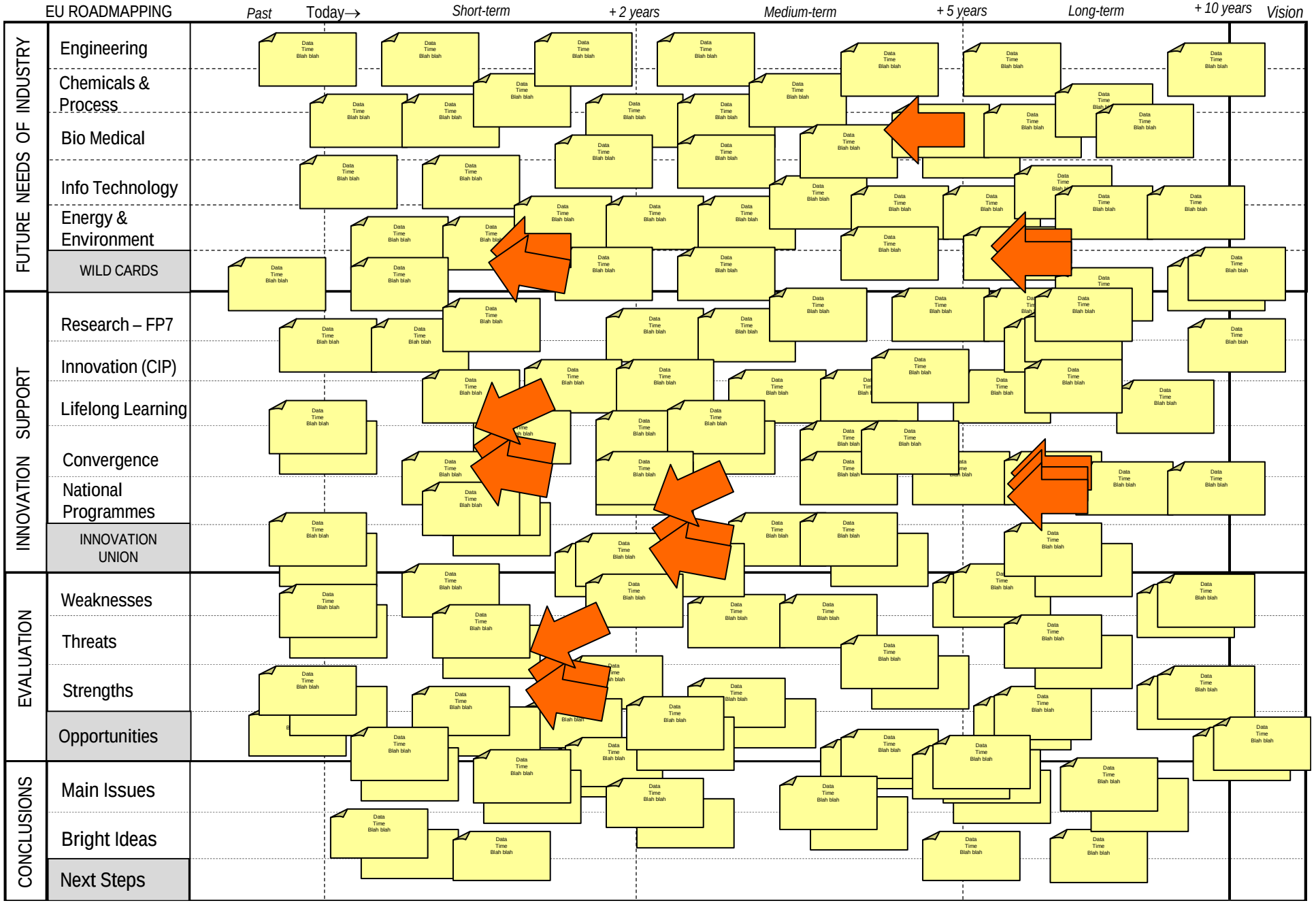
Priorities for Samara region
Priorities for Moscow region



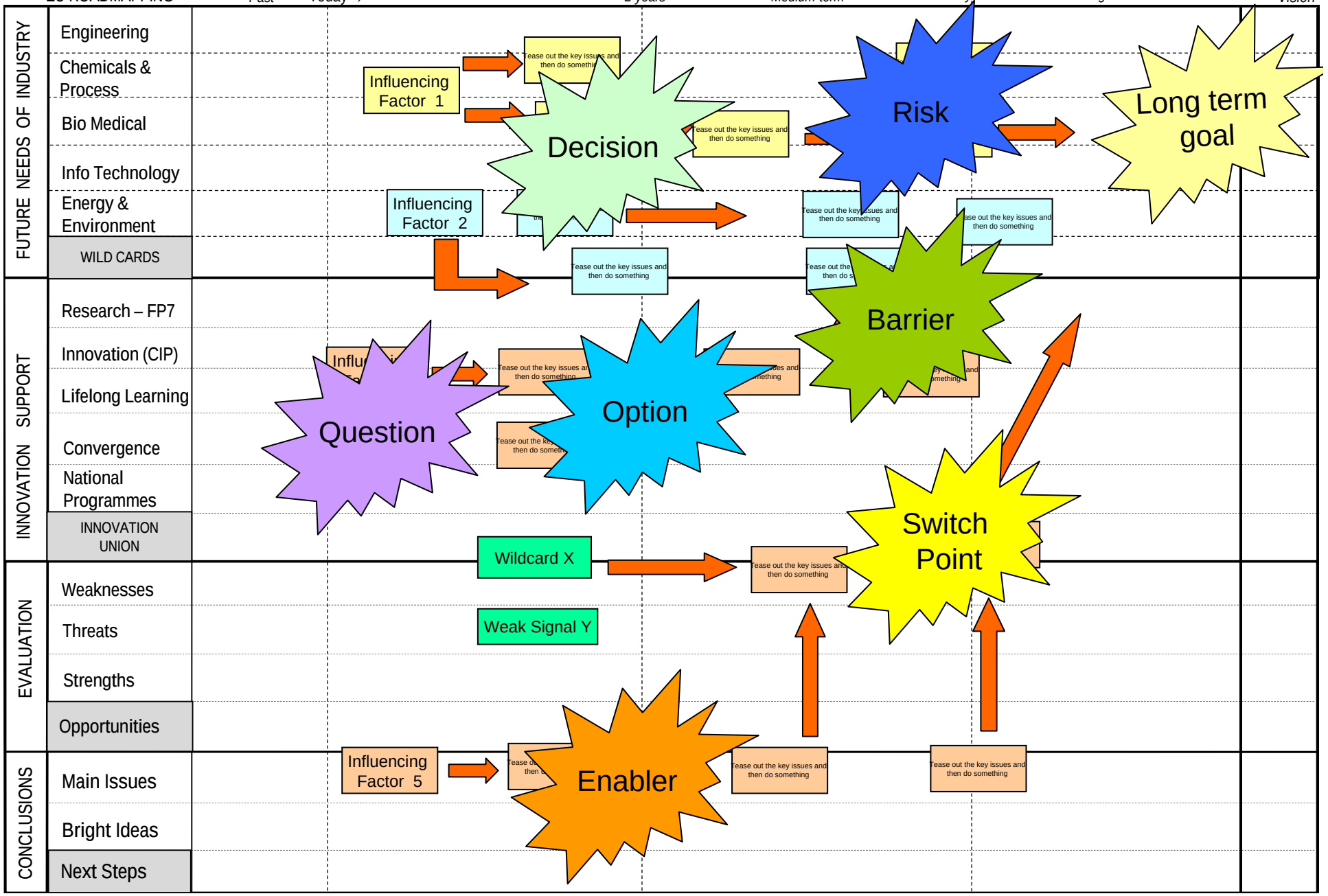
Roadmap Fram



Identify Key Issues



Single Issue Roadmap



SAMARA REGION Industrial Change 2011 - 2020		TODAY Current Status ⇩	Short Term	+2 Years	Medium Term	+5 Years	Long Term	+10 Years	PRIORITY VISION ⇩
FUTURE INDUSTRY	Information Technology								
	Nanotechnology (AE)								
	Biomedical								
	Pharmaceuticals								
	Energy & Environment								
	DRIVERS OF CHANGE								
CREATIVITY & SKILLS	Design and Creativity								
	Non-tech. Innovation								
	Entrepreneurship								
	Education and Research								
	Lifelong Learning								
	WORKFORCE CHANGE								
TRADITIONAL INDUSTRY	Oill & Gas (primary)								
	General Engineering								
	Chemical & Process								
	INDUSTRY UPGRADE								
FORESIGHT STRATEGY	Identification of Priorities								
	Allocation of Resources								
	NEXT STEPS								