

***Intelligence + Foresight = Insight:  
For Policy and Program  
Development  
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# Background of the program directors



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# Foresights Challenge – Key for the future

- “It is crucial to prove the impact of foresight on decision making” (Havas, Schartinger and Weber, 2010, page 102).
- The emphasis on making decisions today in anticipation of future environments was a dominant theme in the 2010/2011 foresight conferences and was the subject of much discussion at the forum (Foresight Leaders Forum Final Report, 2011).

# Recognizing this: Foresights newer definitions have brought in this dimension

- FORESIGHT is a participative approach to creating shared long-term visions to inform short-term decision-making processes.  
(European Foresight Monitoring Network)  
<http://www.foresight-network.eu>

And have brought in the term intelligence to assist with this.

Foresight involves constructively bringing awareness of long-term challenges and opportunities into more immediate decision-making.... Foresight is a systematic, participatory, future-intelligence-gathering and medium-to long- term vision-building process aimed at present-day decisions and mobilising joint actions (from FOREN Regional Foresight Guide, Gavigan et al 2001).

Foresight enhances such thinking by gathering anticipatory intelligence from a wide range of knowledge sources in a systematic way and linking it to today's decision making (Forlearn online foresight guide, [forlearn.jrc.ec.europa.eu/guide/0\\_home/index.htm](http://forlearn.jrc.ec.europa.eu/guide/0_home/index.htm))

But do foresighters know what CI truly is and how it can help?

# Lets start off with definitions: Competitive Intelligence

CI is the interpretation of signals from the environment for an organization's decision makers to understand and anticipate industry change. (From Competitive Intelligence NING, discussion group, [www.cici2020.com](http://www.cici2020.com))

Competitive intelligence (CI) is the process of monitoring the competitive environment and analyzing the findings in the context of internal issues, for the purpose of decision support. CI enables senior managers in companies of all sizes to make more-informed decisions about everything from marketing, R&D, and investing tactics to long-term business strategies. (Strategic and Competitive Intelligence Professionals, [www.scip.org](http://www.scip.org))

## More on CI

Effective CI is a continuous process involving the legal and ethical collection of information, analysis that does not avoid unwelcome conclusions, and controlled dissemination of actionable intelligence to decision makers (SCIP)

The proportion of companies that have systematic market intelligence has grown from 63% to 76% in two years (Global Intelligence Alliance White Paper, 2011).

Note: The survey focuses on large companies (989 respondents) from around the world and uses the process CI definition.



# Intelligence Professionals Intelligence Focus from SCIP Study (2006)

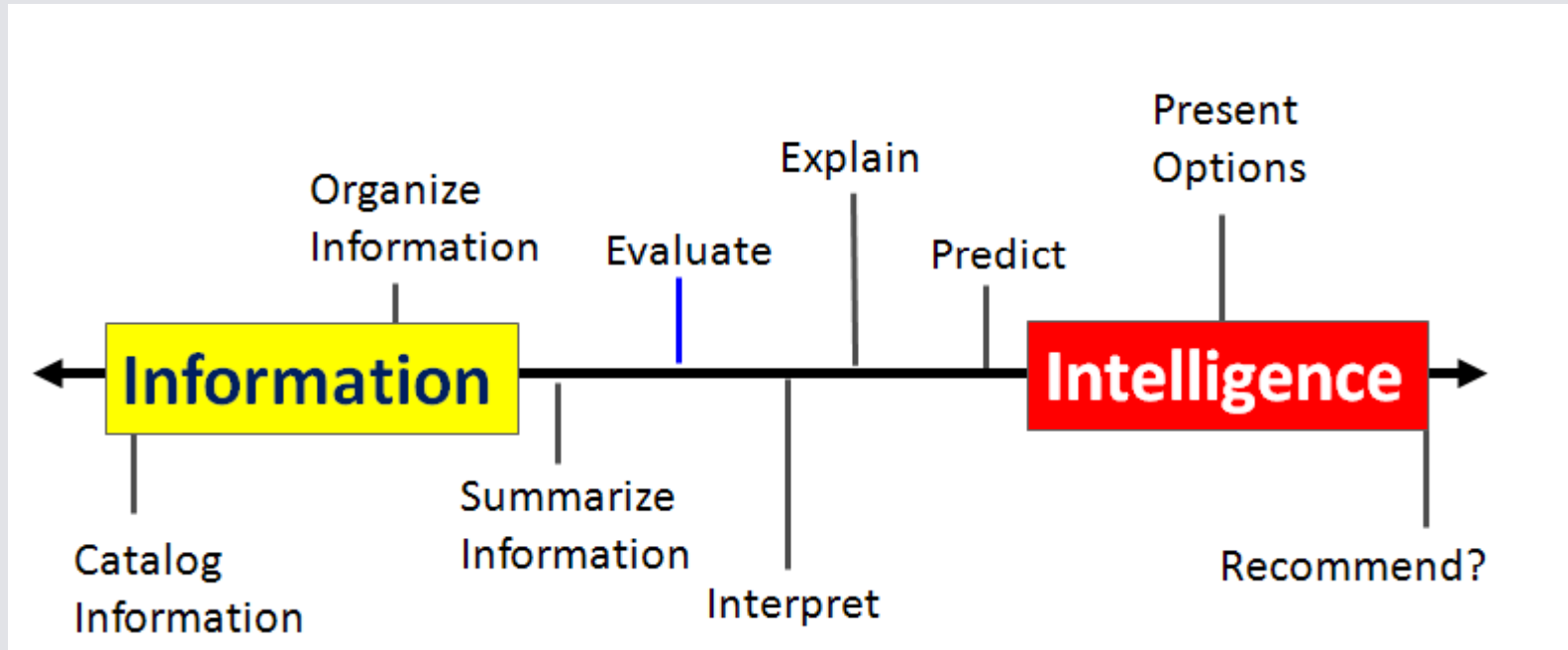
1. Company profiles
2. Competitive benchmarking
3. Early warning alerts
4. Market or industry trends
5. Customer or supplier profile
6. Technology assessment
7. Economic/Political analysis
8. Executive Profiles

How often does your department produce the following competitive intelligence products

# Decisions supported by Intelligence: From SCIP Study (2006)

	Frequently	Sometimes
Corporate or business strategy	54.1	32.7
Sale or business development	48.7	35.8
Market entry decisions	38.9	38.3
Product development	36.8	37.2
R&D/Technology	24.4	39.2
M&A, Due diligence, JV's	25.9	31.3
Regulatory/Legal	12.9	30.7

# More than Just Collection:



Source; John Pyrik

# Intelligence Methods: SCIP Survey



	<b>Freq</b>	<b>Some</b>	<b>Total</b>
<b>Competitor Analysis</b>	<b>58.8</b>	<b>24.8</b>	<b>83.6</b>
<b>SWOT Analysis</b>	<b>47.8</b>	<b>34.8</b>	<b>82.6</b>
<b>Industry Analysis</b>	<b>28.1</b>	<b>37.5</b>	<b>65.6</b>
<b>Customer Segmentation Analysis</b>	<b>29.9</b>	<b>34.1</b>	<b>64</b>
<b>Financial Ration and Statement Analysis</b>	<b>27.5</b>	<b>32.4</b>	<b>59.9</b>
<b>Customer Value Analysis</b>	<b>22.1</b>	<b>31.4</b>	<b>53.5</b>

# Continued

	<b>Freq</b>	<b>Some</b>	<b>Total</b>
<b>Scenario Analysis</b>	<b>16.2</b>	<b>33.6</b>	<b>49.8</b>
<b>Issue Analysis</b>	<b>20.9</b>	<b>27.9</b>	<b>48.8</b>
<b>Sustainable Growth Rate Analysis</b>	<b>18.1</b>	<b>28.5</b>	<b>46.6</b>
<b>Strategic Group Analysis</b>	<b>16.7</b>	<b>29.9</b>	<b>46.6</b>
<b>Product Life Cycle Analysis</b>	<b>16.5</b>	<b>29.8</b>	<b>46.3</b>
<b>Management Profiling</b>	<b>13.8</b>	<b>31.1</b>	<b>44.9</b>
<b>Value Chain Analysis</b>	<b>14.3</b>	<b>28.7</b>	<b>43</b>
<b>S-Curve (Technology Life Cycle) Analysis</b>	<b>14.2</b>	<b>28</b>	<b>42.2</b>
<b>Macroenvironmental (STEEP) Analysis</b>	<b>14.3</b>	<b>22.3</b>	<b>36.6</b>

	<b>Freq</b>	<b>Some</b>	<b>Total</b>
<b>Patent Analysis</b>	<b>13.2</b>	<b>22</b>	<b>35.2</b>
<b>Stakeholder Analysis</b>	<b>10</b>	<b>24.7</b>	<b>34.7</b>
<b>Blindspot Analysis</b>	<b>7</b>	<b>26.1</b>	<b>33.1</b>
<b>BCG Growth/Share Portfolio Matrix</b>	<b>6.2</b>	<b>19.7</b>	<b>25.9</b>
<b>Growth Vector Analysis</b>	<b>6.2</b>	<b>16.5</b>	<b>22.7</b>
<b>Experience Curve Analysis</b>	<b>6</b>	<b>16.6</b>	<b>22.6</b>

# Examples of Intelligence Projects

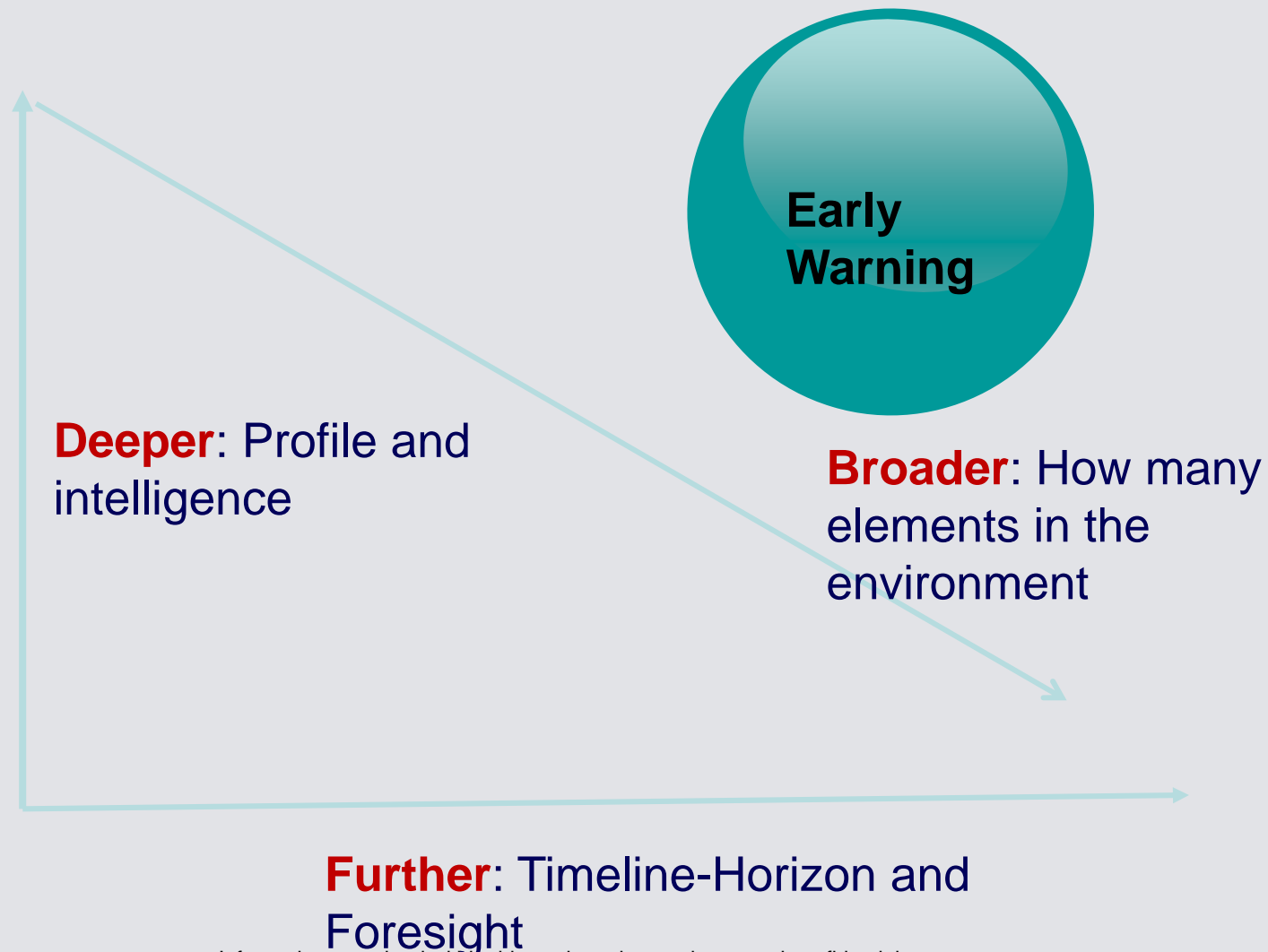
- Estimating economic changes in support of tax policy
- Investigating government support for industry
- Assessing attractiveness of a market
- Projecting direction of technology
- Profiling government/industry... leaders
- Assessing the appropriateness of a trade show
- Preparing for negotiation
- Regional capability to establish an effective cluster sector?
- Should government support the development of a marine biotechnology sector?
- Have the new security measures had an effect on trade between our region and the United States?
- Choosing R&D programs

# Recognizing strengths of foresight and intelligence, Calof & Smith combined them

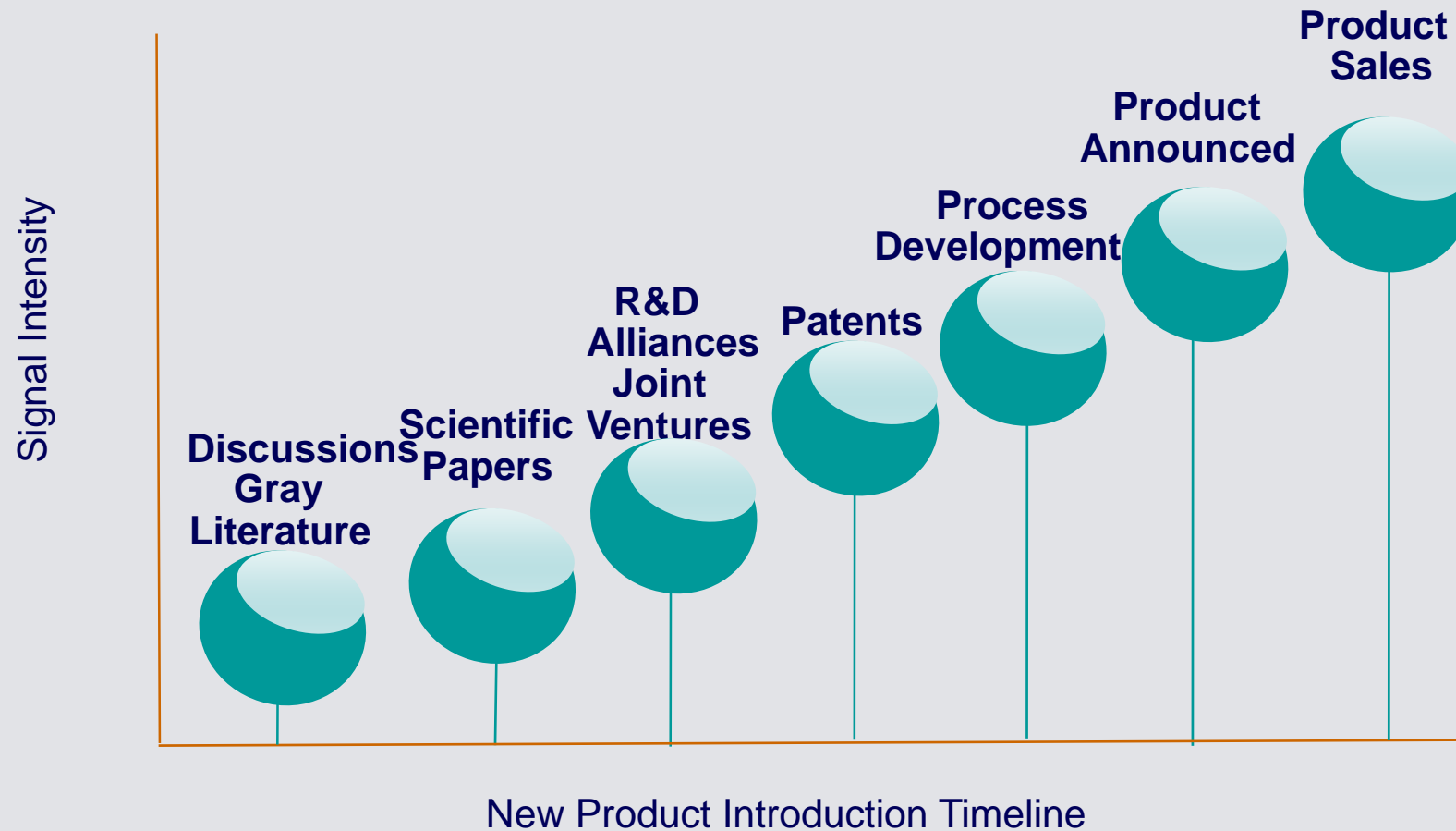
- No organization fully controls its forward and future operational environment, hence it needs the stimulus of both foresight and intelligence for agility and preparedness. Combining these two creates a new requirement and the two together create insight.
- The requirement to think **deeper** (using competitive intelligence and technology foresight techniques such as profiling, intelligence gathering from public sources, and better understanding of the prospective impacts of technology) **further** (longer timeline, more diverse horizons and domains) and **broader** (more outside-in, diversity and more elements affecting the environment).



# The Core Concept: You must think deeper, further and broader



# Further through timelining: How far out?



Adapted from Benner, 1996, Competitive Intelligence Review

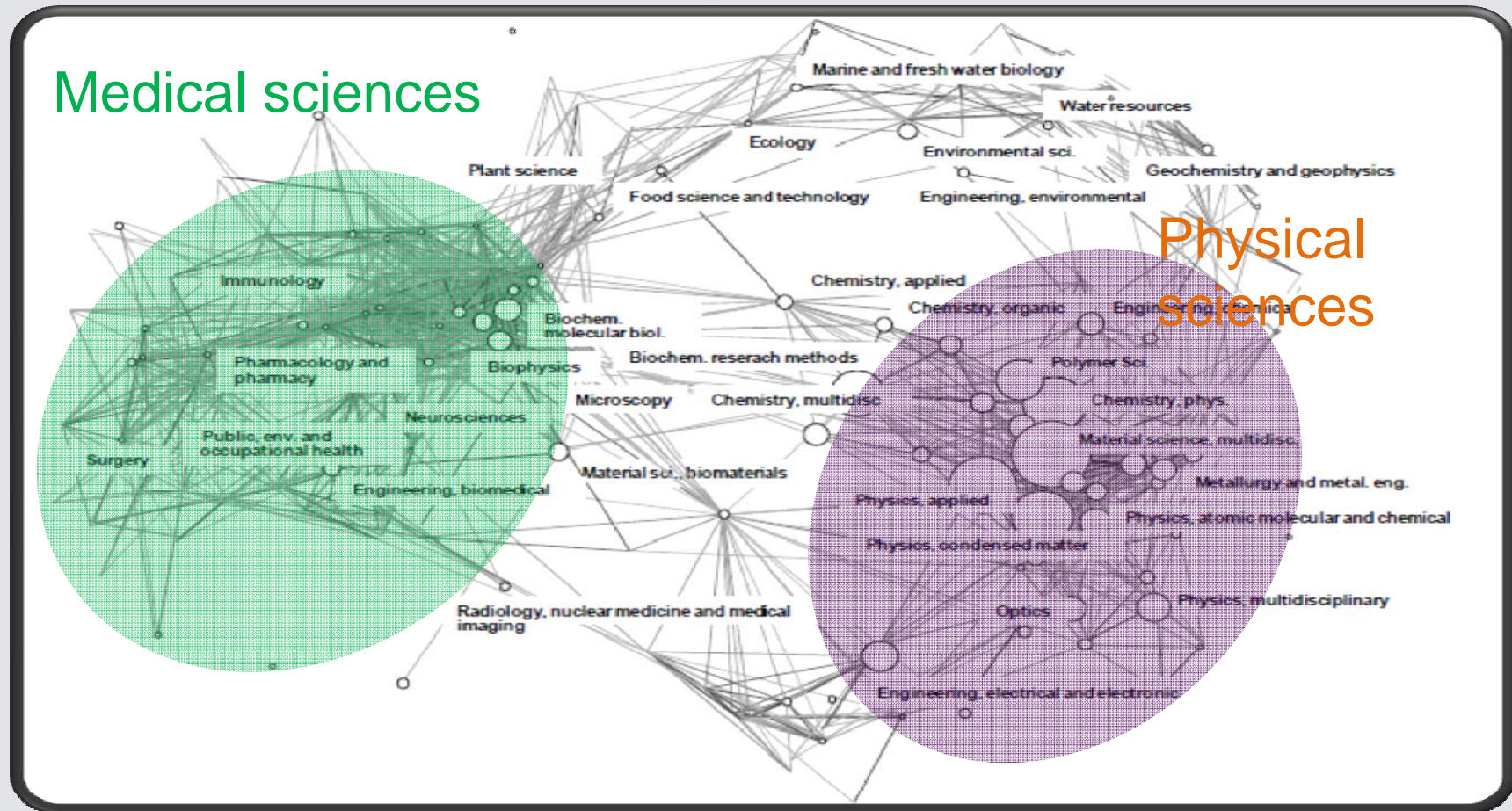
## Competitor profiling systems: Best Foods

- ✓ Financial capacity
- ✓ Strategic portfolio
- ✓ Senior management functional orientation
- ✓ Financial strengths and weaknesses

What exactly do you need to understand about the key players in the environment?

# Deeper:Structure Of Nanotechnology

(APEC By Publications Across Disciplines, 2005)



Source: Rafols and  
Porter (2009)

Information contained within this package is proprietary and confidential

# If I Am Thinking World Class Knowledge

- How far ahead are others (eg the nanotechnology patent chart)
- Where is our/our countries expertise? (the science map)
- What niche can we win-in?

# When I Am Thinking About Changing Priorities

- ✓ How long till the priorities are realized?  
(timelining and scenarios)
- ✓ Whose priorities are relevant and how do I capture changes (profiling)
- ✓ How early can I pick up on changes (early warning system)..

# Core Elements In An Insight Program

- ✓ Desired outcome: jobs, leadership, investments, clear goals and objectives, etc.
- ✓ Decisions/actions/programs you are prepared to take to support the desired outcome
- ✓ Element (s) of the environment that you need to understand (which ones, how forward looking and how deep)
- ✓ Now: you develop your insight plan.

## Three examples of the framework: Two failures and one success

- Small business venture capital credit
- Bank loan guarantee for eligible cleantech loans
- Ocean Technology outward bound



# Core Elements In An Insight Program: Answers for the Venture Capital Credit

- ✓ Desired outcome: Growth of small business as long term they support economy and are needed for future. Hope is that the program will result in venture capitalists investing in the businesses and take the credit.
- ✓ Decisions/actions/programs: Do we put forward the venture capital credit and will it work.
- ✓ Element (s) of the environment that you need to understand: Need to understand venture capitalists and small businesses (breadth); Deep profiles on intent and likely uptake , deep, deep profiles(depth), program has limited time orientation uptake is short term (forward).
- ✓ Results

# Core Elements In An Insight Program: Answers for the cleantech loan

- ✓ Desired outcome: Long term desire for cleantech industry growth. Need to get financing to firms which have the correct technology.
- ✓ Decisions/actions/programs: Design and execution of a cleantech loan guarantee (60%+ bank loan guarantee)
- ✓ Element (s) of the environment that you need to understand: Two requirements – based on understanding what technologies to support today for tomorrows needs and need to understand loan uptake.
  - ✓ Technologies to support: Multiple technologies in many countries (Broad), need to know what ones are emerging and likely futures (shallow), for the longer term a 10 year time horizon (forward):  
Technique – roadmaps
  - ✓ Loan program: Two groups to understand, company's and banks (not broad); Need to know capability and reaction (deep), over the program timeline (shorter term). Technique: profiling

## ✓ Results

# Core Elements In An Insight Program: Answers for the Oceans technology program



- ✓ Desired outcome: Accelerated growth of the Ocean Technology Sector in Newfoundland and Labrador. Currently (2006) at \$225 Million 52 companies, 1430 people. Desires \$1 Billion in revenues next 5 to 10 years. Create a different future.
- ✓ Decisions/actions/programs: Roles for industry participants, programs, research, core technologies. This is the classic shared long term vision for short term decision making. All participants are decisions makers.
- ✓ Element (s) of the environment that you need to understand: Two requirements – based on understanding what technologies to support today for tomorrows needs and need to understand role of each player.
  - ✓ Technologies to support: Multiple technologies in many countries (Broad), need to know what ones are emerging and likely futures (shallow), for the longer term a 10 year time horizon (forward):
  - ✓ Each role: 52 companies, government, academe, etc (very broad); Need to know capability and reaction (deep), over the foresight timeline (5-10 years). Envisiøning

- ✓ 2 Phases over 18 months
  - ✓ First phase – identifying major, long-term market opportunities which cluster should focus on over next 5-10 years. Discussion paper, plenary, working groups, validation plenary.
  - ✓ Second phase – Initial plenary, working groups in 8 areas identified, validation plenary, three roundtables, validation plenary, roundtable, final validation plenary to identify preferred ways to. Implement the strategy
  - ✓ In all over 100 people representing 75% of organizations in the industry
- ✓ A new emphasis on intermediate to long term strategic planning
- ✓ A shift in the way the members of the cluster think and interact which recognizes the evolving, complementary roles of each of the three constituent pillars that recognizes common purpose and cooperative actions.

## ✓ Results

- ✓ Market driven strategy identified and endorsed by the group including arctic/remote energy, next generation intelligent ship and oceans intelligence.
- ✓ Directed research programs , sponsorship, roles.
- ✓ Shared vision
- ✓ Sales already doubled

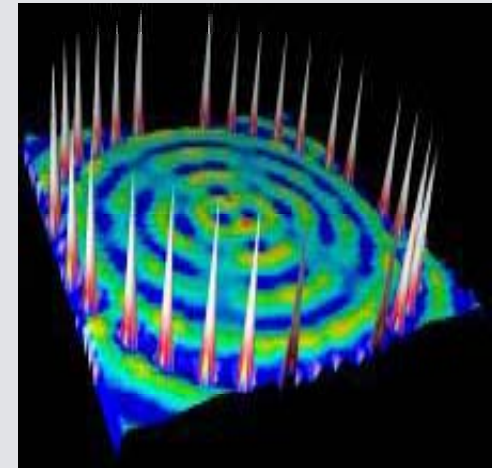
# Comments from clients of National Research Councils FTA unit (more CTI oriented)

- FTA Stops us from making big mistakes
- It is never been so evident as it is today we need information about what is going on nationally and internationally particularly when looking at new opportunities.
- FTA often helps to save months of research
- My job would not be as easy; turnaround would not be as good if I didn't have it.
- They have access to information that I will never have. I am getting stuff that really influences the direction of my report.
- This service is paramount in helping me do what I do – it's key
- FTA helps me make the best decision.

## And if it Was Removed?

- We would take more risk and this would result in bad investments.
- We will continually be surprised and suffer from lack of agility, preparedness.
- We would not be able to deliver the same level of quality services.
- It will send us back to the dark ages

- Forward looking
- Deep dive
- Short and long term
- Integrative/cross domain
- Outside-in



**How important is this when you develop policy?**



The key is that foresight and intelligence recognize that...

Programs and policies cannot succeed if they are done in the absence of environmental understanding

# It's About Decision Support

Providing insight, reasoned judgment and not just information about the environment for decision support.

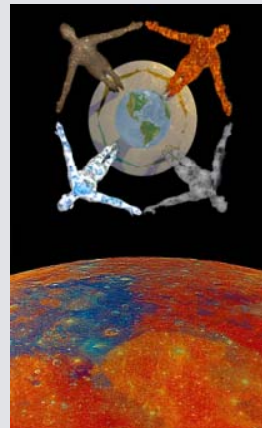
# What Do These Examples Understand?

- Government policy, no matter how well intentioned cannot succeed unless it responds to the external environment.
- You can change the environment, create capacity, but only with environmental understanding.
- At the end of the day it's about making decisions/policies that influence behaviours of stakeholders so that your future becomes a reality.

# What is Telfer up to to help in these areas?

- Foresight synergy network and Bouchard annual lecture (focus on literacy, awareness, skills)
- Synergy leaders forum final report identified 28 key needs and opportunities for foresight development.
- Development of foresight impact assessment instruments based on 54 elements (roles, critical success factors, benefits, meta measures, policy measures, organization, project, individual skills etc)
- Executive education in foresight+intelligence
- IBM performance management center.

# What it takes to make foresight and intelligence succeed



# What Policymakers Need from Foresight and Intelligence

- **Clear statements of the decision, problem or issues**
- Succinct statement of **why important now,**
- **How pivotal in the future,** it is likely to become, and why
- Any key findings that **reveal insights directly applicable (now) in 1-5 year** time frame;
- Insights from foresight has that **support additional government decisions** regarding R&D priorities, strategic technology investment domains and critical sectors;
- **Strategic alerts** about threats, complex situations, unintended consequences and organizational vulnerabilities ;
- Bottom line of **cost-effectiveness** and cost-benefit; foresight on tomorrow delivers opportunities today.

***Clarity, Brevity, Value-Insight, Direction***

# Competitive Intelligence Resources - Web

[www.scip.org](http://www.scip.org)

[www.fuld.com](http://www.fuld.com)

[www.globalintelligence.com](http://www.globalintelligence.com)

[www.foresight-network.eu](http://www.foresight-network.eu)

[www.forlearn.jrc.ec.europa.eu](http://www.forlearn.jrc.ec.europa.eu)

[www.APECtechnologyforesight.org](http://www.APECtechnologyforesight.org)

[www.Foresight.telfer.uottawa.ca](http://www.Foresight.telfer.uottawa.ca)