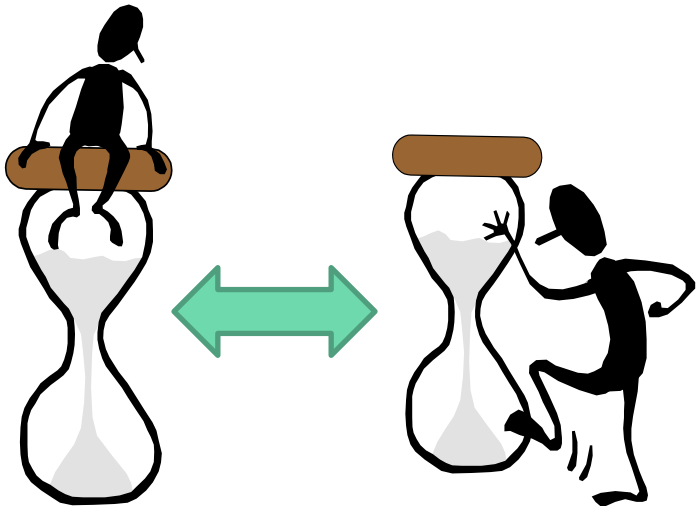


NL Agency
Ministry of Economic Affairs, Agriculture and Innovation

Monitoring Energy Innovation during its Growth to Maturity

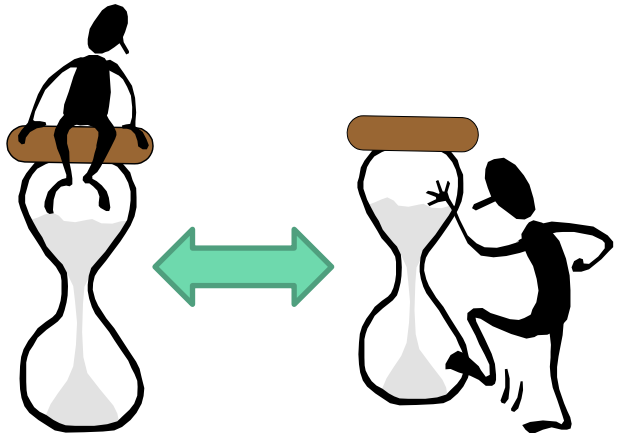
Better Appreciation of Innovation in Evaluations

IEPEC, Rome, 2012,
Dirk Both, NL Agency

14 juni 2012 Dirk Both

» *Als het gaat om duurzaamheid, innovatie en internationaal*

How can M&E help to quickly show innovation results?



A. <u>Why? (the challenge)</u>
   Innovation takes decades to pop up in statistics
   Politics need early results to maintain support

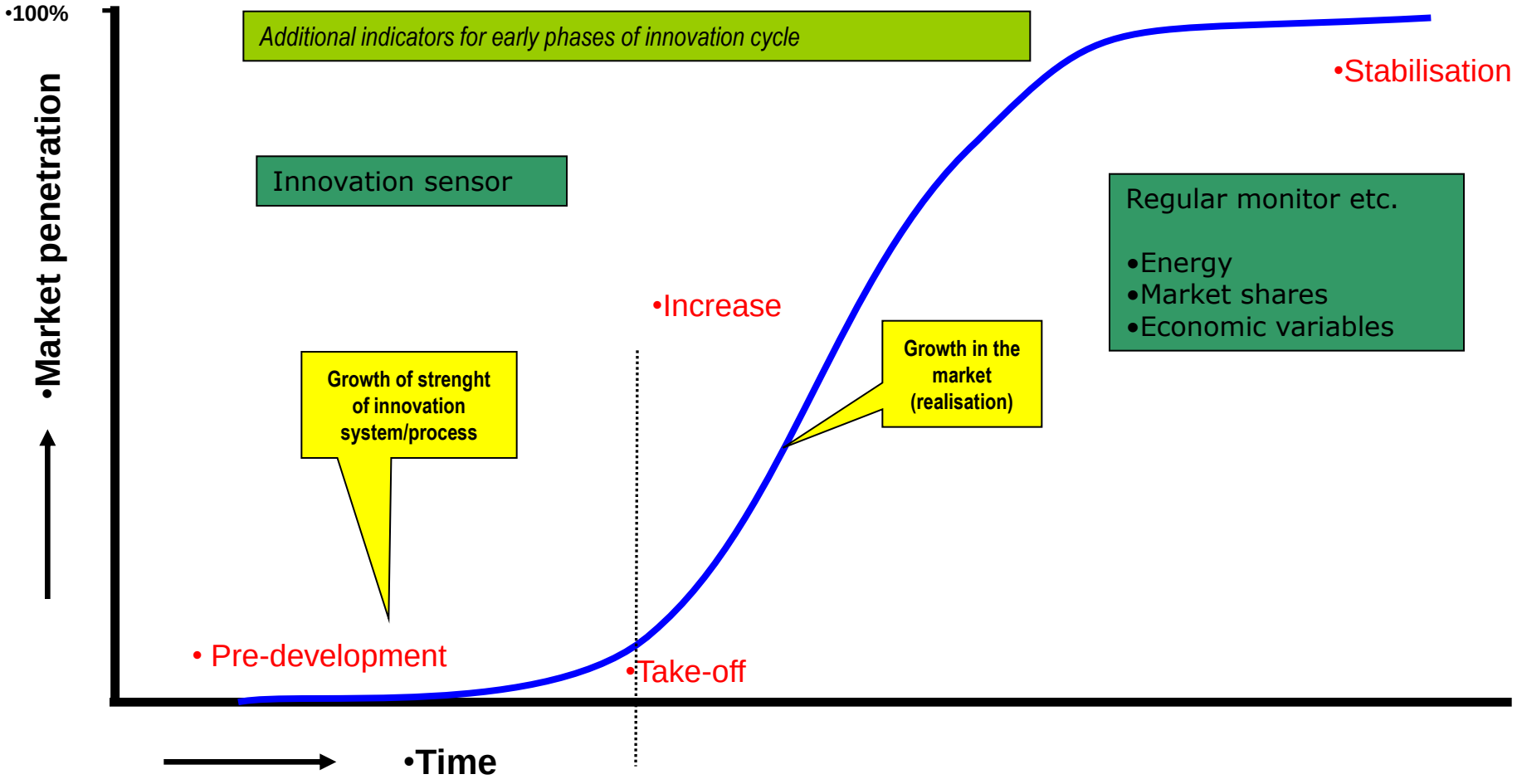
B. <u>What? (the method and examples)</u>
   Use M&E to show the growth of innovation systems

C. <u>The experiences? > it helps ….</u>
   To visualise and assess progress in practice
   In management and communication with stakeholders

A. The challenge

M&E of innovation process asks for a special approach

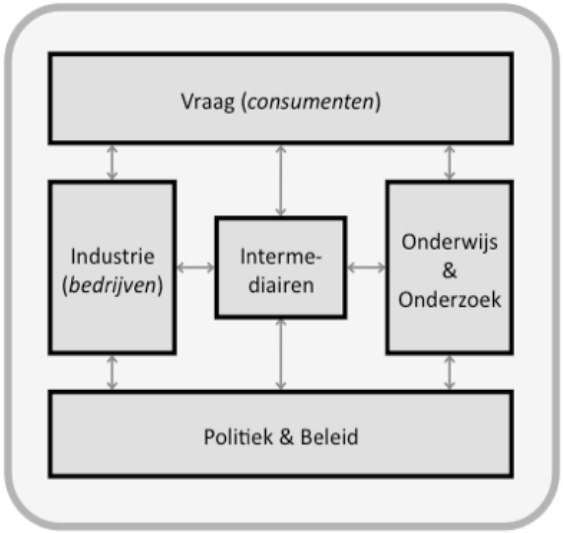
Innovation vs realisation



B. The approach and some examples

How do we follow innovation processes?

Success depends on balanced growth of the 'system' (involved parties, structures, etc)



Structure

Parties such as:
- *R&D institutes*
- *Industry*
- *Politics/government*
- *Intermediairies,*
- *Consumers*
- *Interest groups etc.*

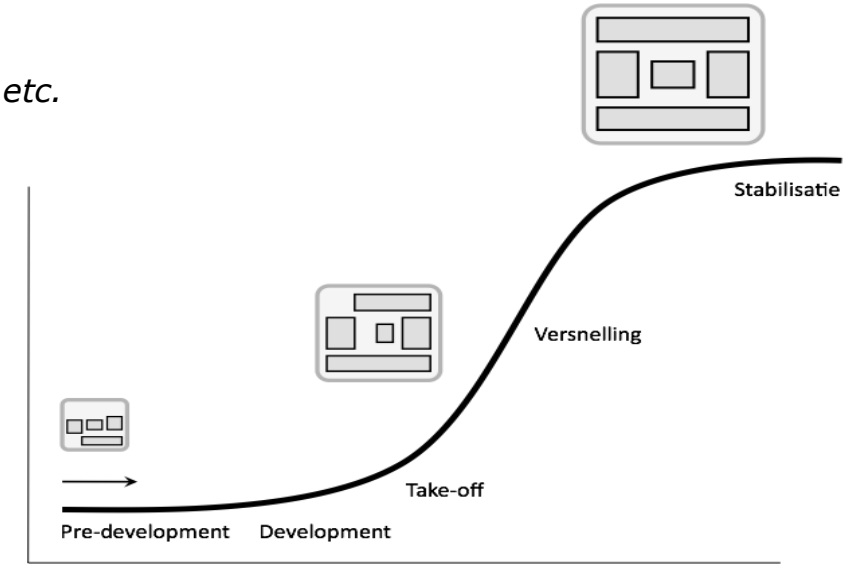
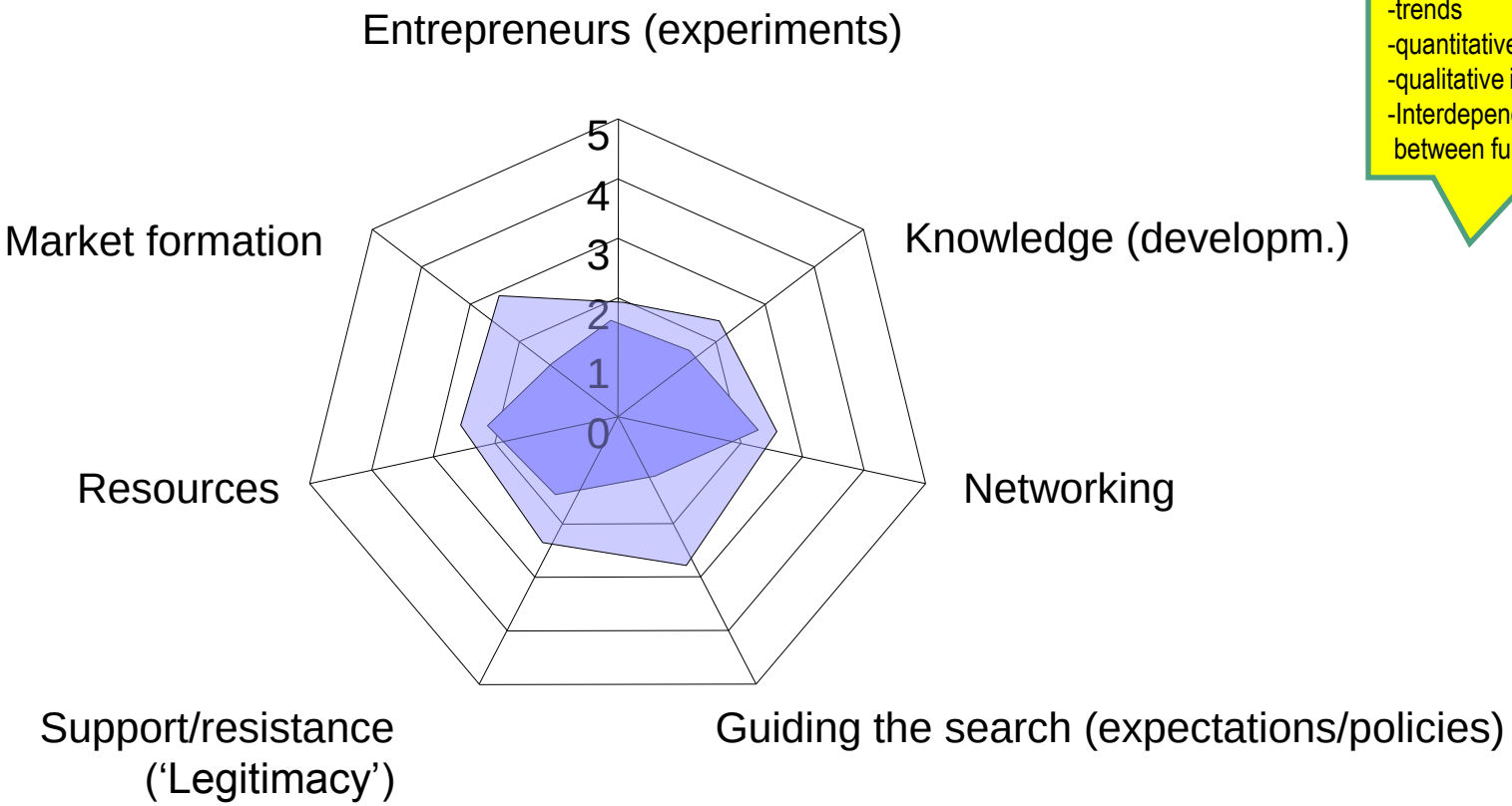


Figure: University of Utrecht

Key dimensions (functions) show where intervention may be needed

We follow the growth in strength/maturity of the innovation system

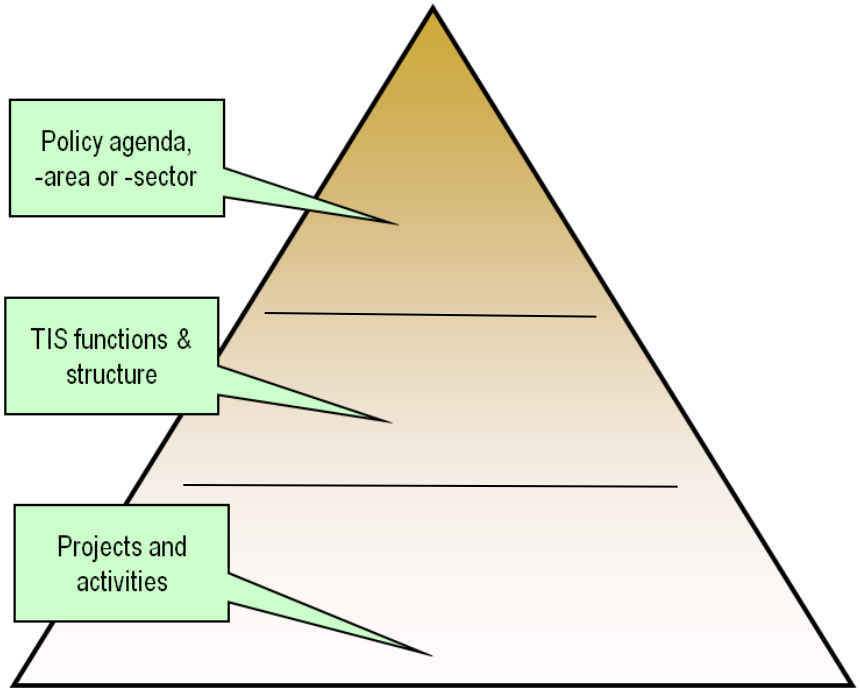
Approach gives:
-trends
-quantitative indicators
-qualitative info
-Interdependencies between functions



Information on projects & activities structured along 'system' framework
May provide useful output at various levels

In NL we collected info from innovative projects from relevant govt.schemes

Information on 3 levels



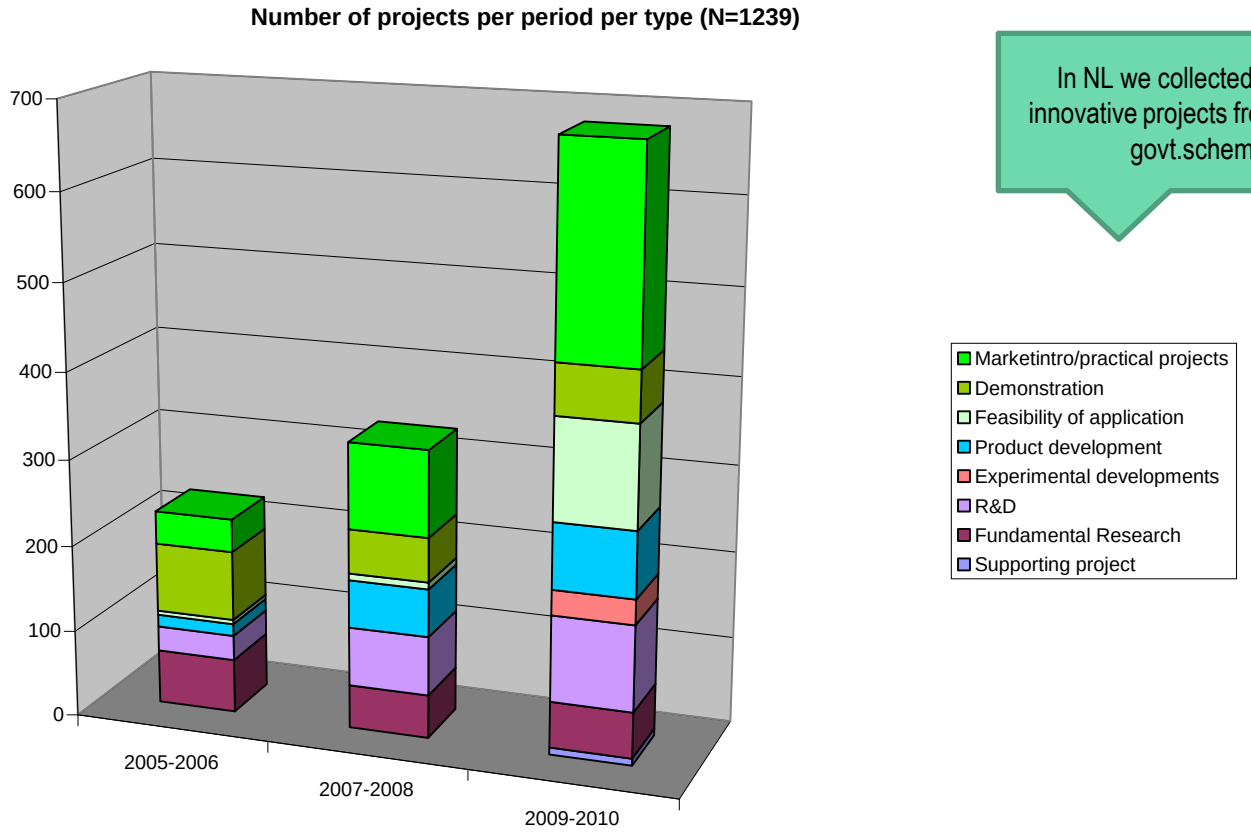
Strategical **> Directing**
e.g. Energy innovation: focus, trends, type of parties, implications for policy

Tactical **> Organising**
[e.g. TIS/product groups sch as solarPV, structure, networing, strenghts, bottlenecks in TIS

Operational **> Implementing**
[e.g. know how, solutions, good practices, issues] b.v.

Example for function 'experimenting by entrepreneurs' (1)

How does the market react? More valorization of knowledge? More experiments?

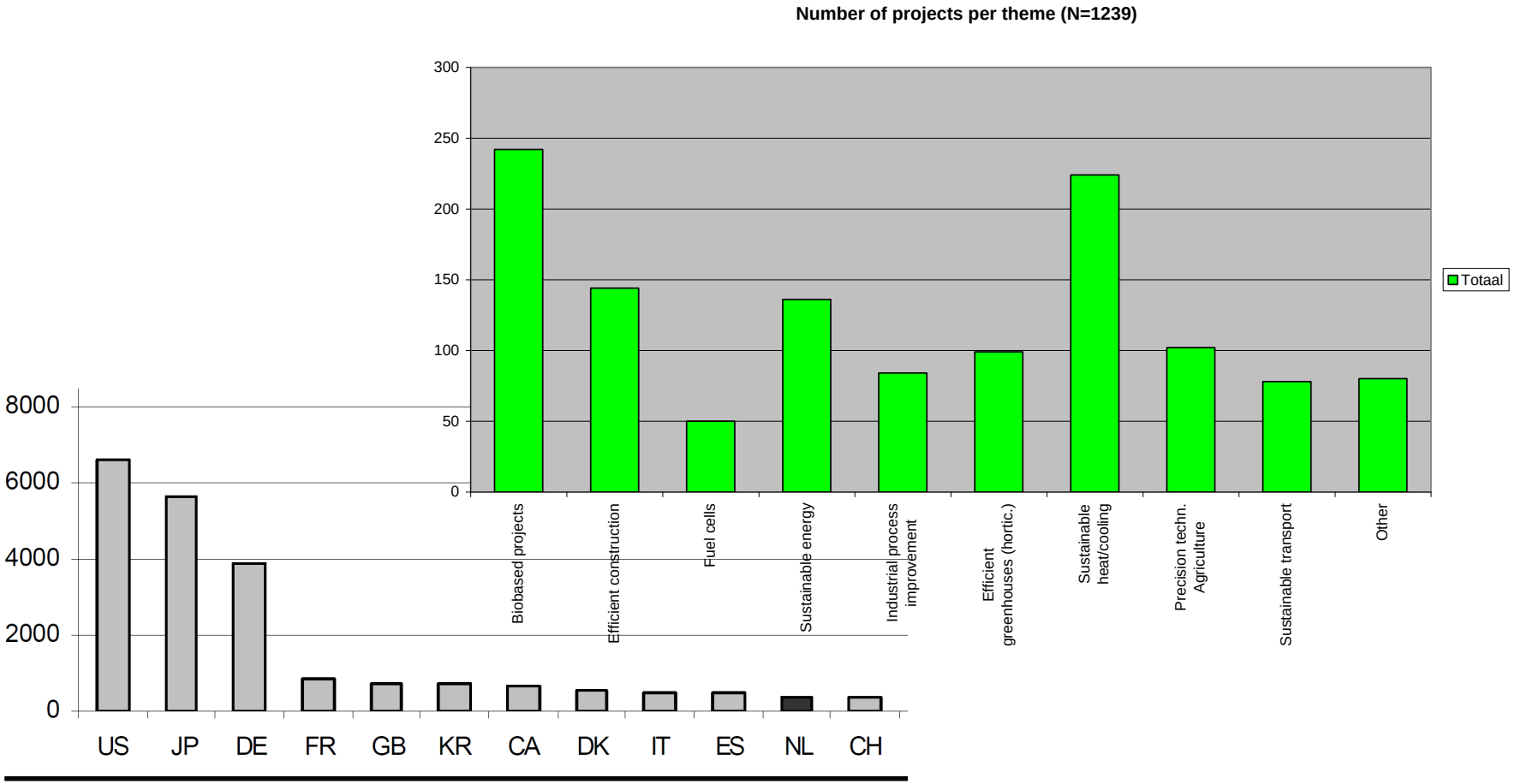


In NL we collected info from innovative projects from relevant govt.schemes

Number of newly started energy innovation projects per 2 year period and per type. Projects of types higher in the bars are further advanced along the S-curve.

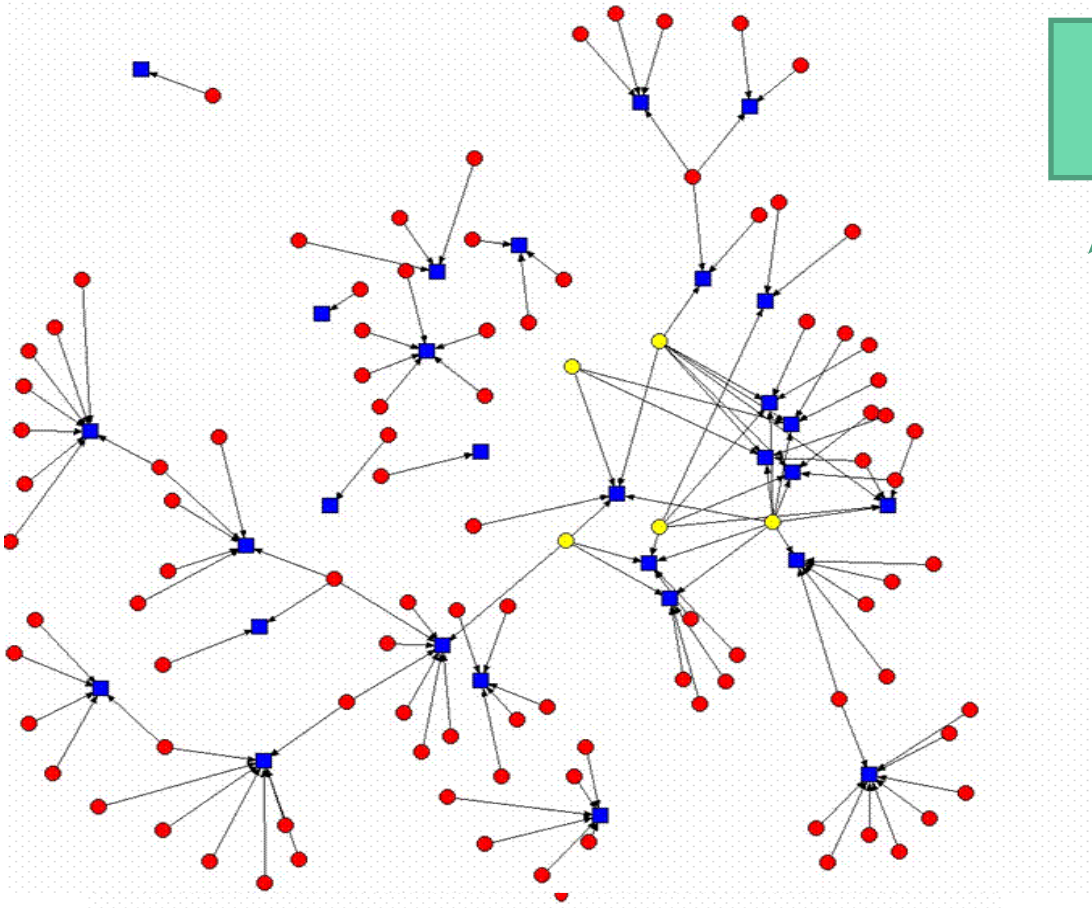
Example for function 'knowledge development''

What is the focus in developing new knowledge in projects and patents?



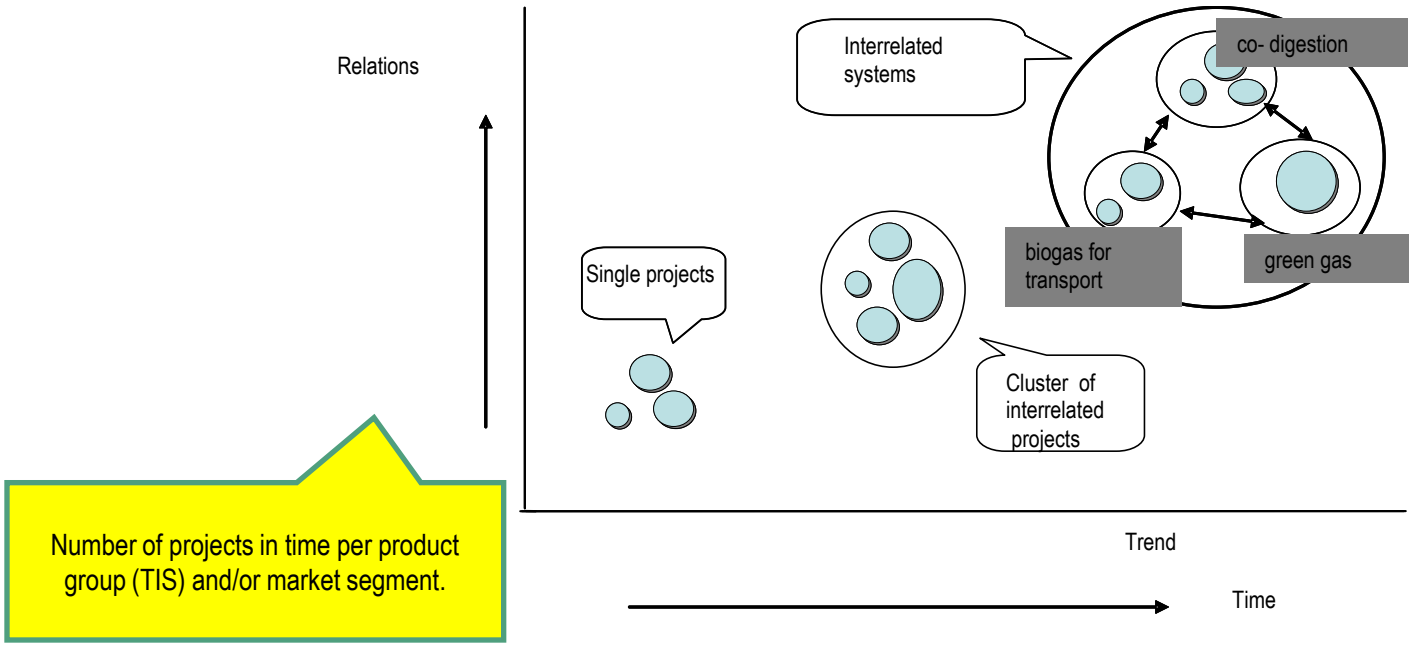
Example for function 'networking' > interactions/coalitions

…the growth of (the strength and progress) of a technological innovation system ……..



Per TIS!
Growth in # parties (/type) and type of 'coalitions'

Approach shows links and relations between product groups (TIS)



Technical innovation systems may show interrelations between innovation processes/systems

Example for function 'market formation'': How do early markets develop? Trends in top 10 investments in innovative systems (fiscal govt. Scheme)

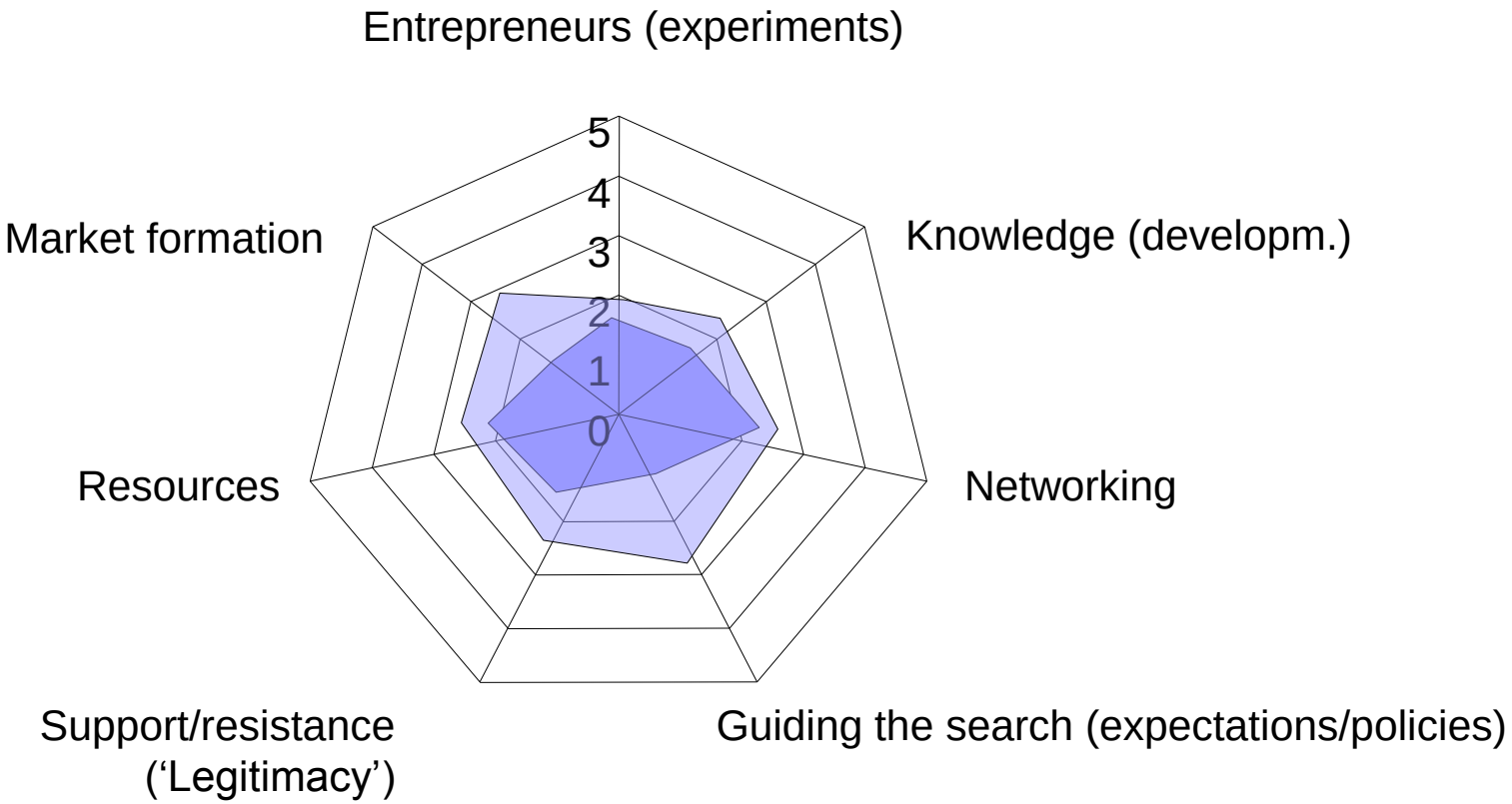
Position	Technologies	Reported investments (in million €)	% of total	# applications
1 (1)	Generic processes	211	18%	591
2 (5)	Energy performance existing housing (rental)*	189	16%	256
3 (2)	Heat pumps (buildings)	115	10%	1.639
4 (6)	Wind turbines	78	7%	147
5 (8)	Energy efficient cooling/freezing installations	71	6%	515
6 (42)	Transport for delivery gaseous CO2 to horticulture	53	5%	9
7 (12)	Solar PV systems	32	3%	760
8 (19)	Geothermal energy	27	2%	77
9 (17)	Recovery hot/cold air from ventilation	24	2%	486
10 (9)	Heat storage in aquifers	24	2%	68

Between brackets the position of 2009 is indicated.

*Temporary extension of the EIA

Overview supports joint assessment with stakeholders

What achieved? Which weaker spots? How to proceed?.



C. Experiences and conclusions

Experiences and conclusions

The pragmatic systems approach shows the dynamics!

- Visualizes progress in terms of growth (to maturity)
- Far earlier than market statistics

- Attracts attention from policy makers/management
  - *Visualisation of trends help in communication*
  - *M&E here provides insight for decision making*
- Helps joint assessment with stakeholders

- Better shows roles and interrelations of measures and processes
  - *facilitates evaluation of interactions in packages of instruments*

How to proceed?
Can the method be expanded?

- Experiences NL > being expanding to adjacent (policy) areas
- Relatively easy to accommodate shifts in policy instruments
- Uses on third level (common problems and practices) being tried out
- Work on ‘additionality’ planned/on-going

It provides ‘indications’; assessment still requires expertise!

Questions?

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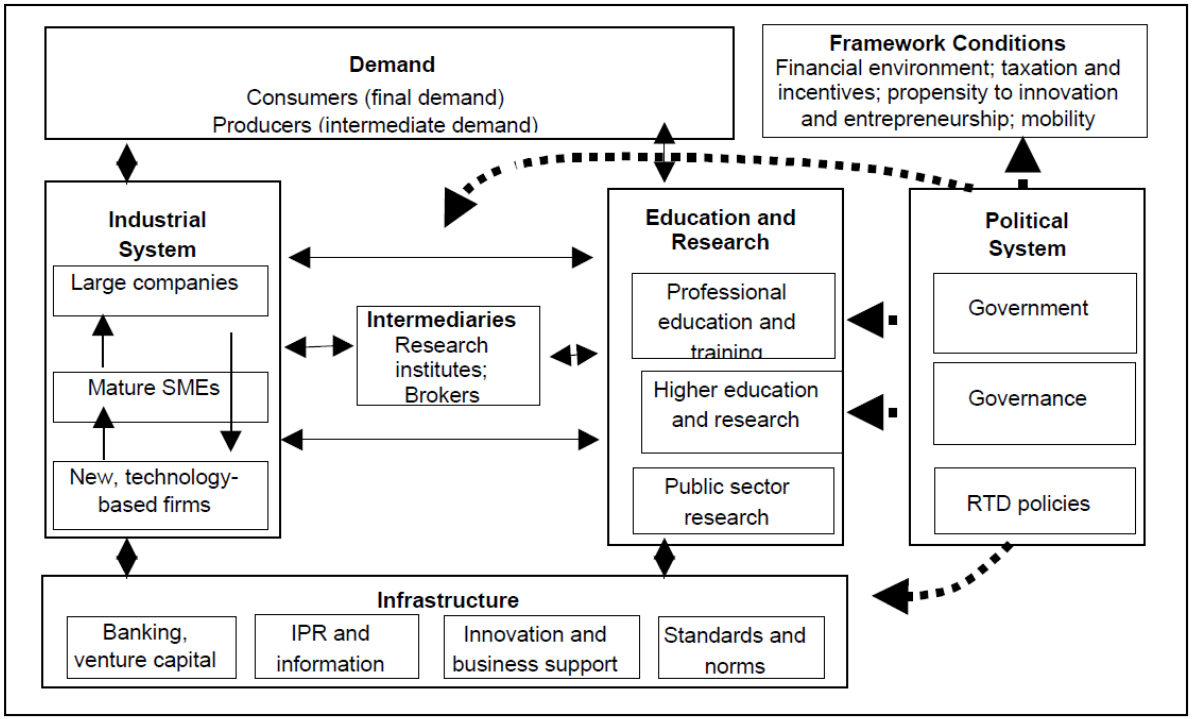
Annexes

Innovation system: structure



Example for function 'market formation''

Target markets for the R&D (green) and çloser-to-market'(blue) projects