

The Economic value of the Dutch geo-information sector

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Objective

- Method to define and the definition the geo-information sector
- Economic value and activities of the Dutch Geo-information
- Trends and developments in the geo-information sector



Background of research



Research objectives

- Economic value and employment of Dutch the geo-information business
- Employment and use of geo-information in the governmental sector
- Innovation climate: investments and research focus



Research steps

1. Define sector with expert group
2. Develop questionnaire (business)
3. Collection of data
4. Validate outcomes



Definition

Three subsectors have been identified:

- 1) private sector
- 2) public sector
- 3) research sector

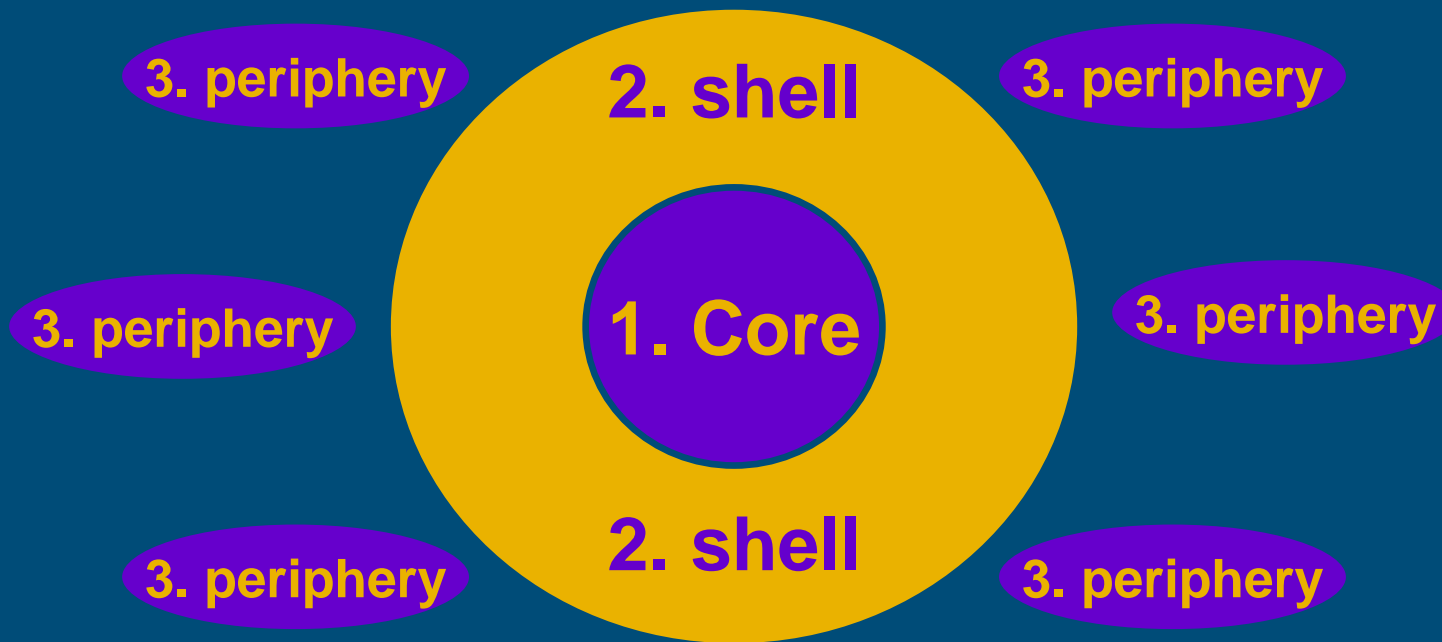
Four areas of activity

- Measuring, collecting and storing of data about geo-objects.
- Processing, editing, modeling, analyzing and managing of that data.
- Presenting, producing and distributing of the data.
- Advising, educating, researching and communicating about this process and the use of the geo-information products and services.

Geo-professional: Main task (>50%) working on geo-information products and – services.



Definition of geo-information business



Definition of the Geo-information industry

Core

- Geo-informatie is part of primary proces.
- producer or supplier of geo-information products or - service
- Value adding in the chain

Shell

- Geo-information and – service are supportive
- Use and application of geo-information
- Dependency on use of geo-information



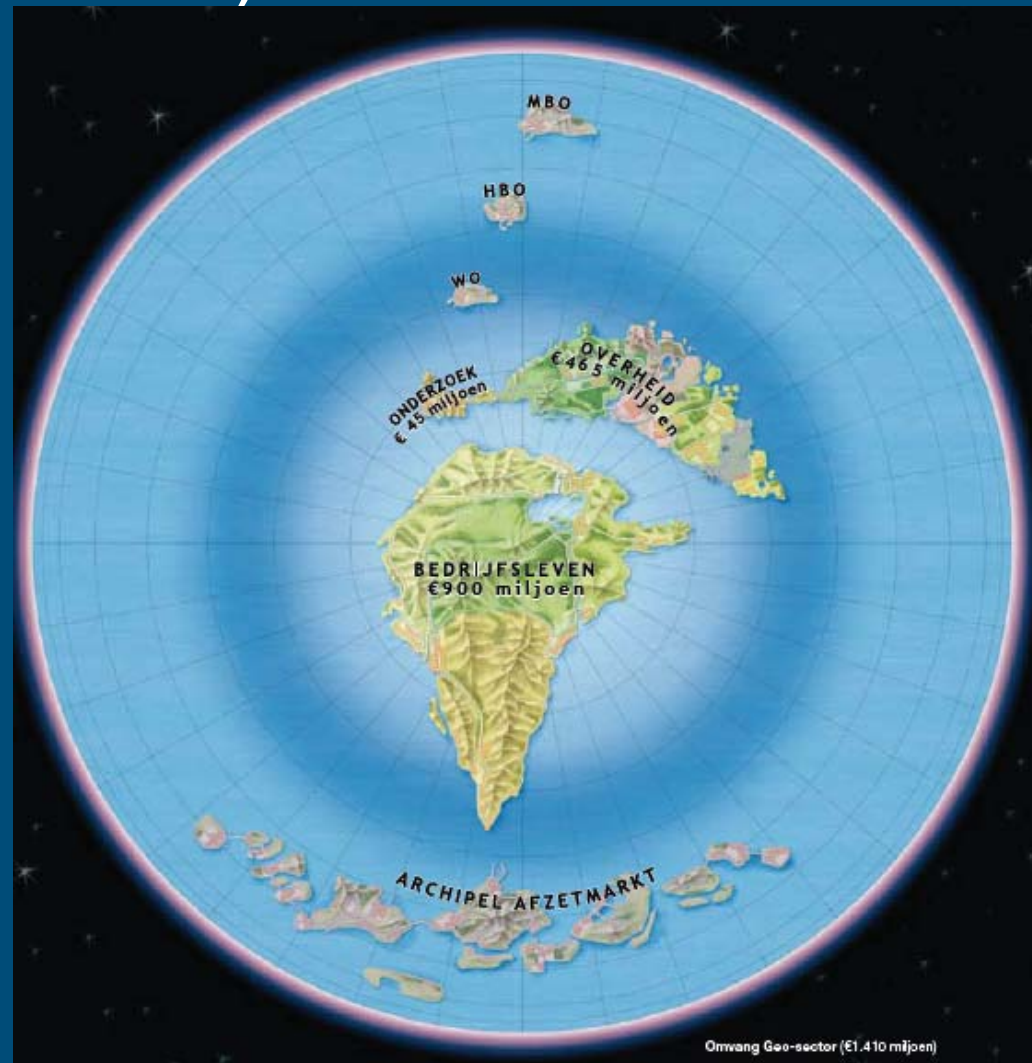
Data collection

1. Government: number of employees and their main activities using existing research (Welle Donker F, et al., 2008)
2. Research: status and potential of the geo-information research in the Netherlands (Vonk G., et al., 2008)
3. Questionnaire, based on the results of the brainstorm session, among the core of the 300 geo-information companies. with a response rate of 100



Results (Economic value)

Subsector	Value (mil)	Empl (FTE)
Business	900	9975
Government	465	4650
Research	45	450
Total value	1400	15075



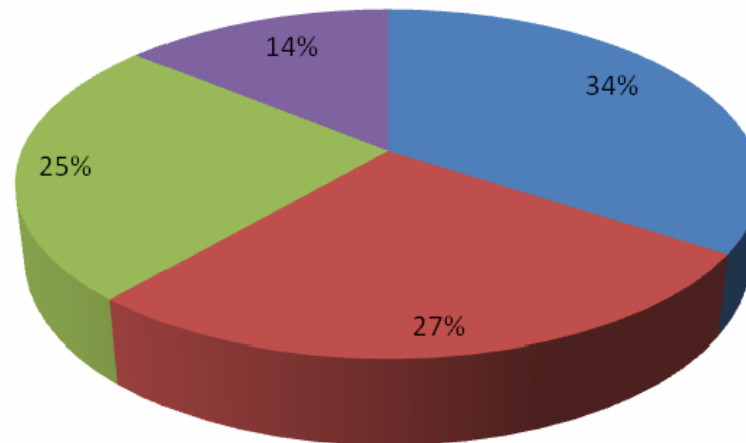
Results (Economic value)



Results (activities)

Division of turn-over per activity 2008 (%)

- Measuring, collecting and storing of data
- Processing, editing, modeling and analyzing of data
- Advising and communication about processes and use
- Presentation and distribution of the data



Results (activities)

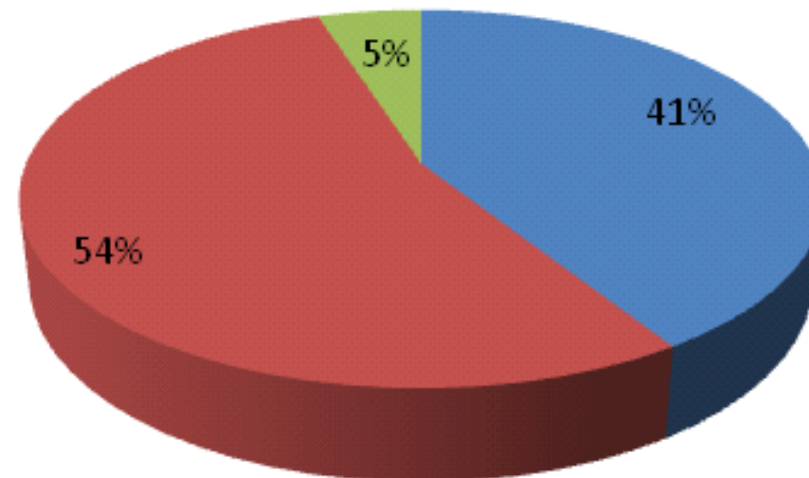
Geo-information product or – service	% companies offering product or service
Cartography/ making maps	56%
Webservices	54%
Geo-consulting use	52%
Geo-data management	51%
GIS analysis	50%
Data modelling	50%



Market

Market share geo-business

■ business to business ■ Governmental market ■ Consumer market

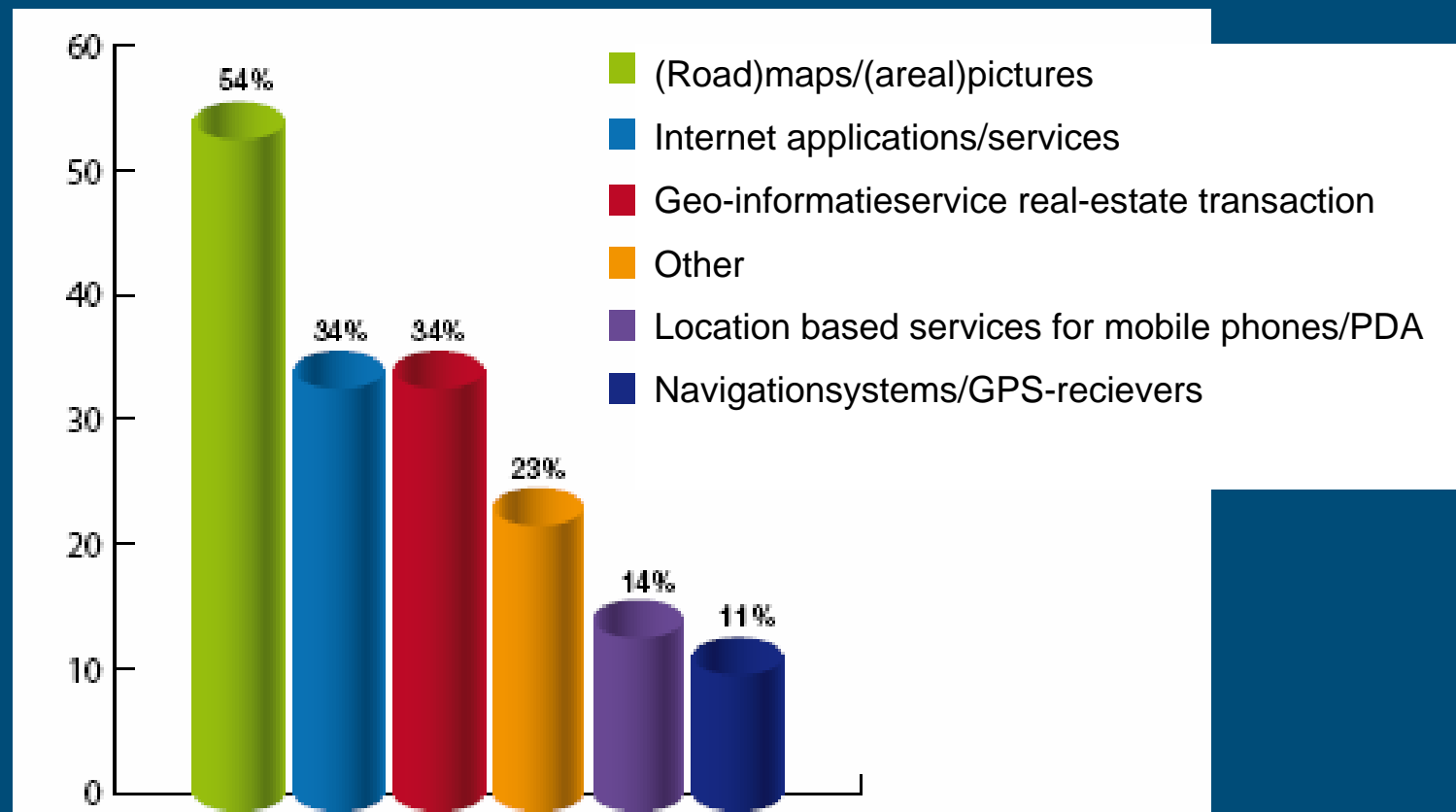


Market (business to business)

Sector	Share (%)	Turn-over in mlj.
Building and infrastructure	31%	€114
Water and Energy	14%	€52
Spatial planning	12%	€44
Environmental	10%	€38
Other	33%	€121
Totaal Business to Business	100%	€369



Market (business to consumer)



Development (R&D business)

R&D investments for geo-information products and services

Year	% R&D geo-information product and services	Total investments (€)
2008	21,2%	56 mil.
2007	21,9%	58 mil.

Development (products and services)

Geo-information products and – services with the highest growth expectations

Measuring, collecting and storing of data	
Collecting: (terrestrial)	26%
Processing, editing, modeling and analyzing of data	
GIS analysis	41%
Presentation and distribution of the data	
Development of geoservices (internet)	35%
Webservices	38%
Advising and communication about processes and use	
Geo-project management	32%
Geo-secondment	28%



Development (research)

Focus and future expectation for geo-information research (Source: NedGEOS)

N=23	Future research (5jr) (Total =100%)	Most Promising
Databases and datamodeling	12%	30%
Data processing (conversion, aggreg., transform., etc)	12%	20%
Analytical methods (geostatistics, data-mining, networkanalysis, etc)	12%	40%
Geo-computation (simulationmodel., CA/ABM/Neural networks, heuristics, uncertainty, etc)	11%	60%
Cartography en visualisation	11%	10%
Geospatial data (remote sensing and surveying, digitalization, metadata, quality)	10%	15%
GI systemdesign and development	10%	25%
Organisational en institutional aspects (GI community, adoption of standards, management)	8%	40%
Conceptual and philosophic concepts	8%	40%
GI & society (juridical, economic, ethetic, governance aspects)	6%	35%



Conclusions

- Definition, activities and results are representative (validation by expert group)
- Dutch geo-information sector an import sector with fast development and high potential (1,4 billion; 17 % growth)
- Developments: training and advising; web based developments (data exchange/services);



Future perspective

- Yearly market monitor to measure trends and developments in the geo-information sector
- Include shell of users of geo-information products and services (e.g. logistics, banks, real estate property)
- International comparison of the economic value and activities of the geo-information sector



Questions?



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