



Exchange of best practices of GEO education to meet changing labour market needs in Europe

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Lifelong
Learning
Programme

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About us...



Jong Kadaster



ORDEM
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ENGENHEIROS



1st FIG
Young Surveyors European Meeting
European Young Surveyors
together for tomorrow's challenges

17-18 October

Lisbon, Portugal



Objective of our paper

To tackle the mismatch in quantity and quality of graduates we can learn from each other with examples from tools, insights and methods



SAGEO

GeoSkill Plus

BACKGROUND SAGEO



The Netherlands

- In 2008 first signs of a mismatch between demands of GEO labour market and quantity and quality of students and graduates
- Establishment Geo Employment Market Foundation



Research Supply and Demand GEO Labour Market in NL 2008

- Labour market in 2008
 - Yearly turnover \pm 1.4 billion euros.
 - More than 15,000 full-time employees
- Labour market demands in 2008
 - \pm 125 graduate Vocational level
 - \pm 120 graduate Bachelor level
 - \pm 80 graduate Masters level
- Only **16 to 23%** of this demand is realized



2008 Demand Geo Industry

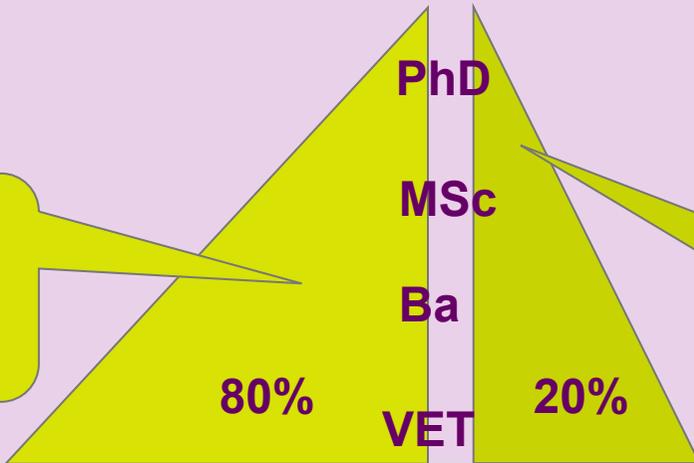
Industry:
900 M€ turnover/yr
10,000 employees.
300 employers

Government:
465 M€ turnover/yr
4.650 employees

Research:
45 M€ turnover/yr
450 employees.

Geo Employment Market Foundation

Education with GEO components

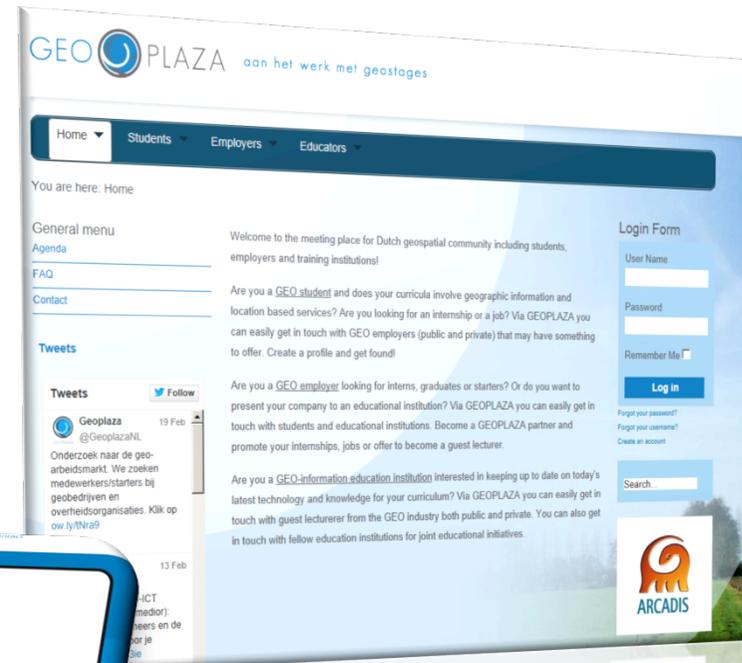


Education for GEO specialists

Geo Employment Market Foundation Results

- Establishment of **cooperation model**
 - Private sector
 - Public sector
 - Education
- **Awareness Raising** Campaign 'Go Geo'
- **Closing the gap**: New curricula and renewed programs
 - GI Minor
 - GeoMedia & Design
 - Surveying Program at VET level

Awareness Raising Activities in Netherlands



Survey 2008 - 2013

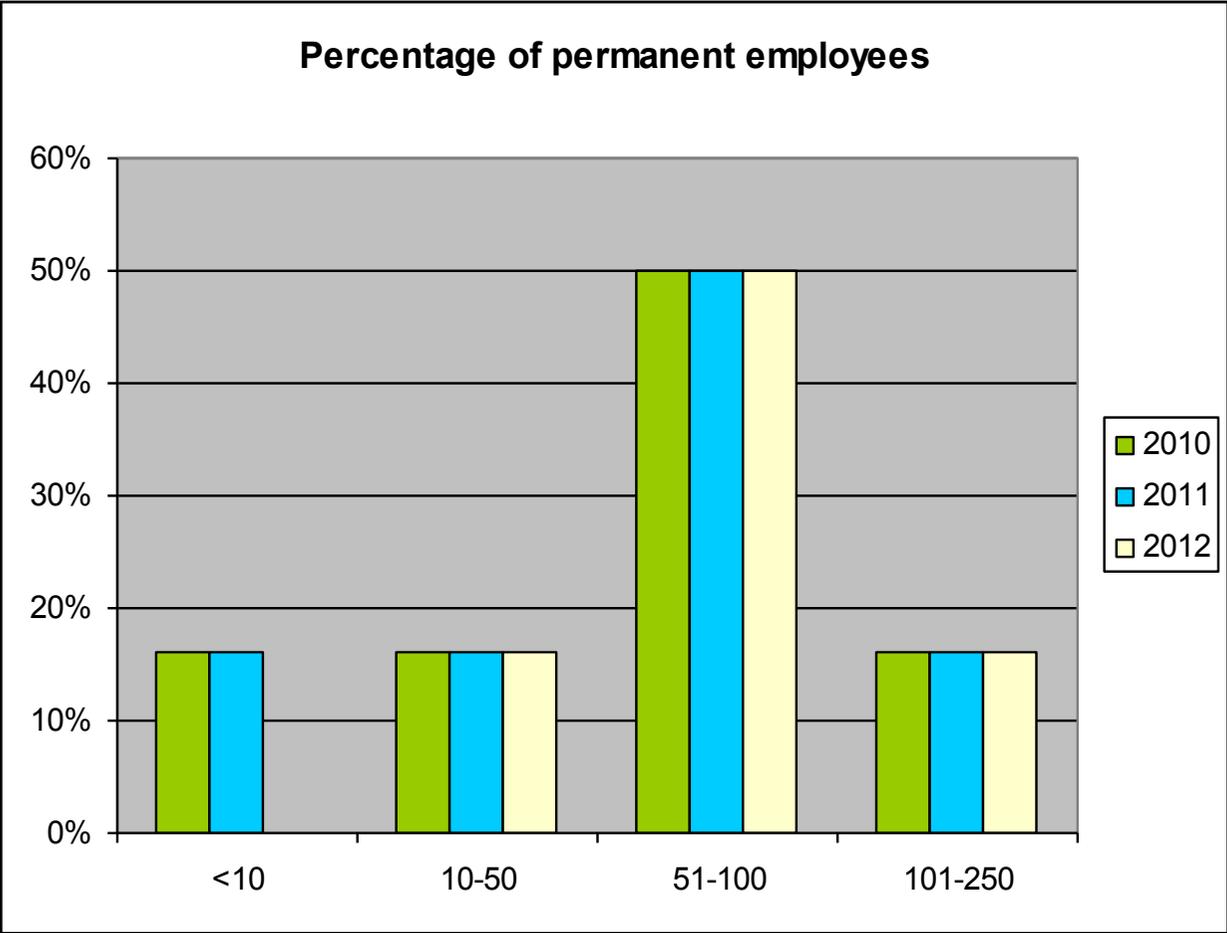
- Commissioned by Stichting Arbeidsmarkt Geo
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Introduction

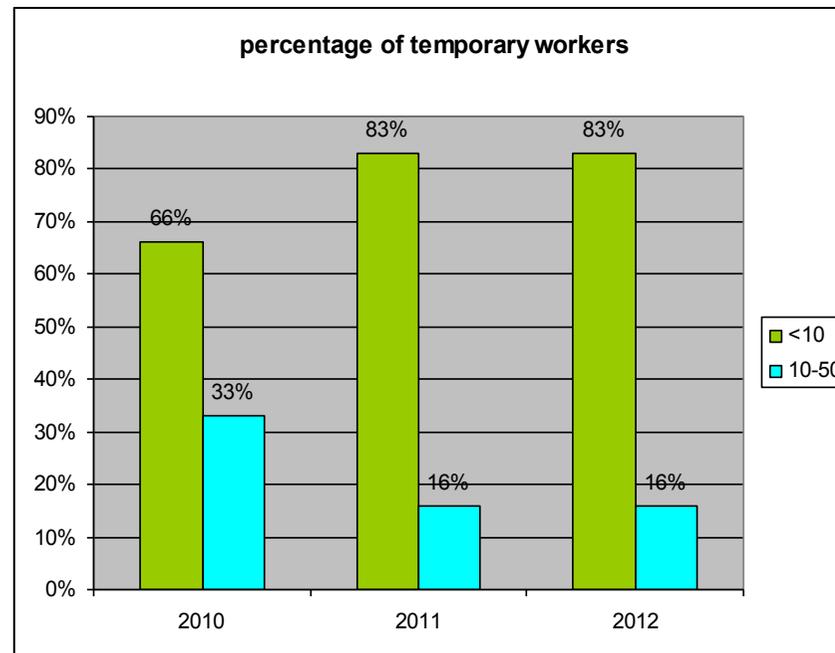
- The research is important to form an image of the **current and future labour market** for graduates and young professionals.
- The survey focused on period 2010 – 2012
- Questions were asked about the current situation and about the expected situation for the coming 5 years.

Number of permanent employees stayed the same



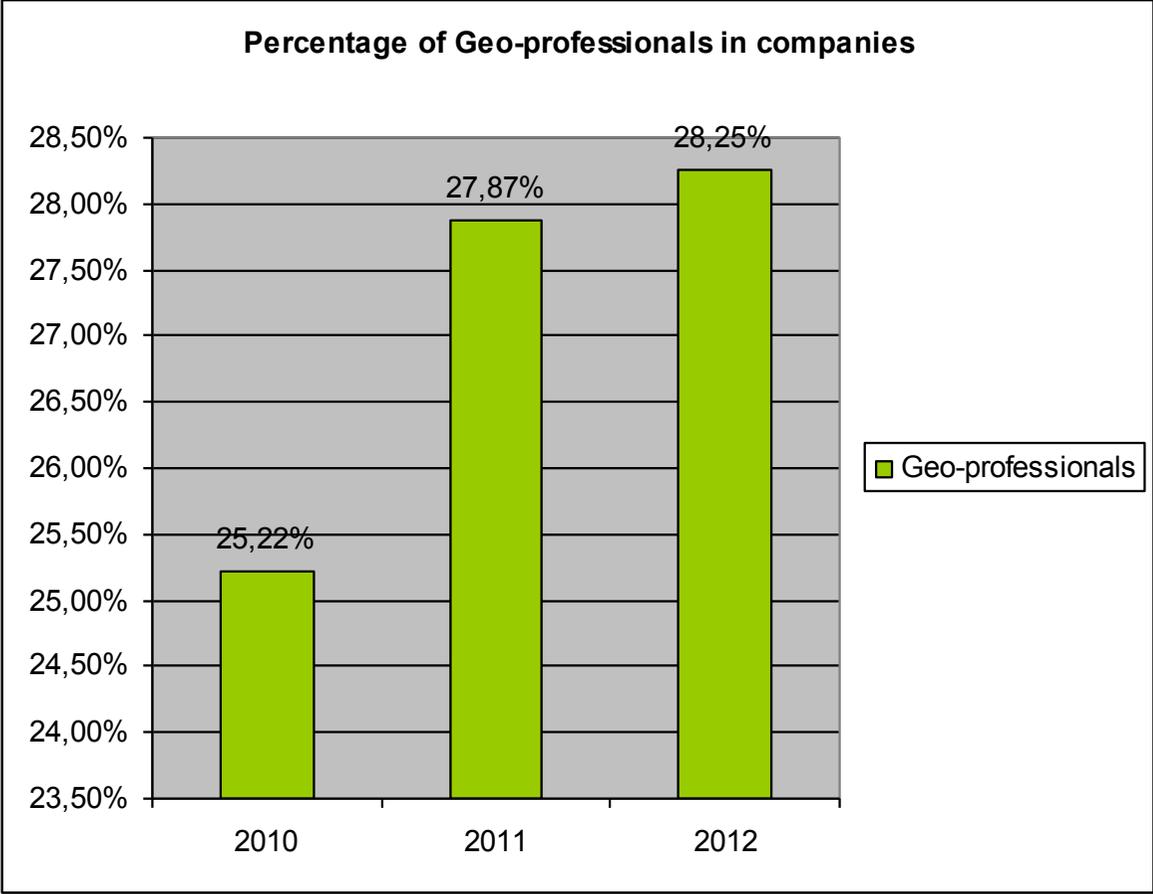
Temporary workers

- < 10 temporary employees: In the years 2010, 2011 and 2012, the number of temporary workers is declining
- > 10 temporary employees: the numbers increased from 2010-2012
- There were no companies with more than 50 temporary workers.



Development of percentage geo-professionals in companies.

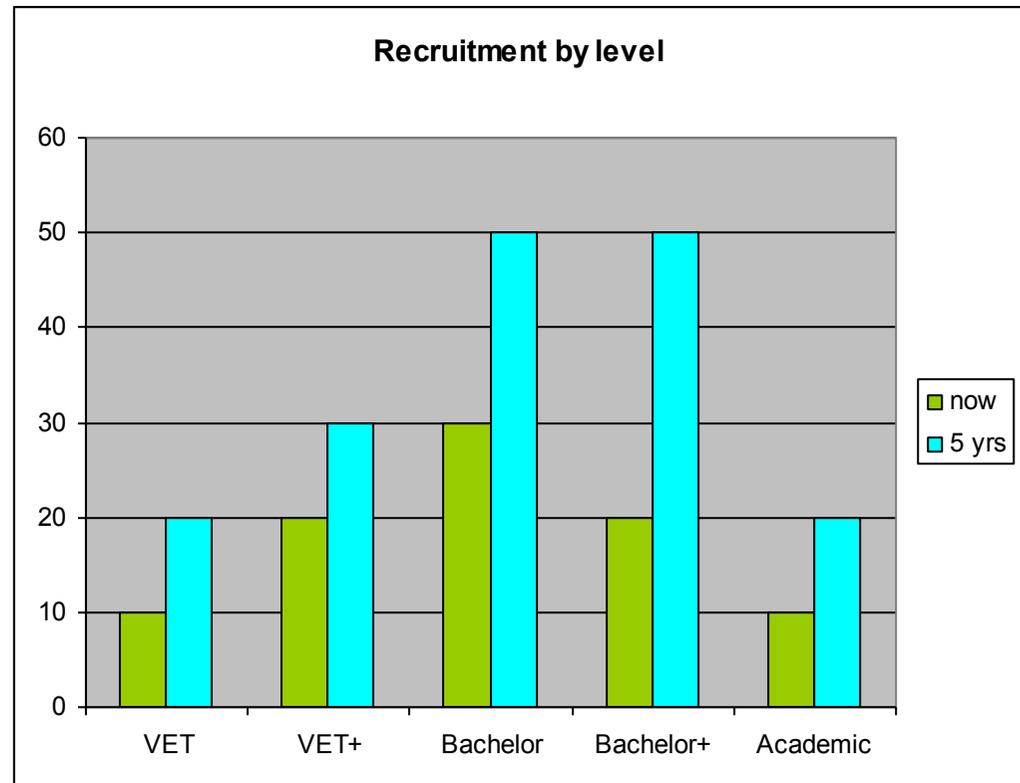
There is a light increasement since 2010



Recruitment by level

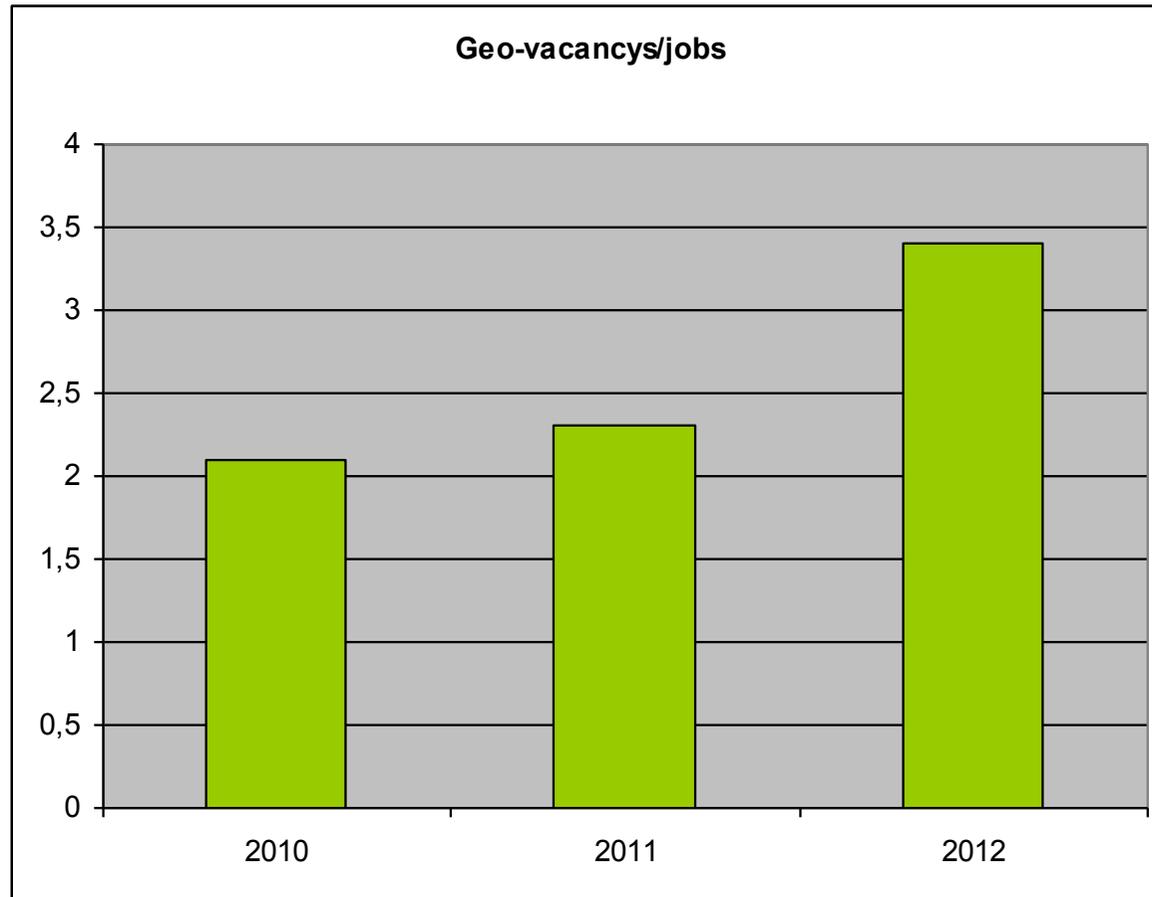
Geo-professionals divided by level of education in the current situation and the expected situation in 5 years

- In all levels there is an increase expected.
- At **Bachelor** and **Bachelor+** level the increase is expected to be the highest.



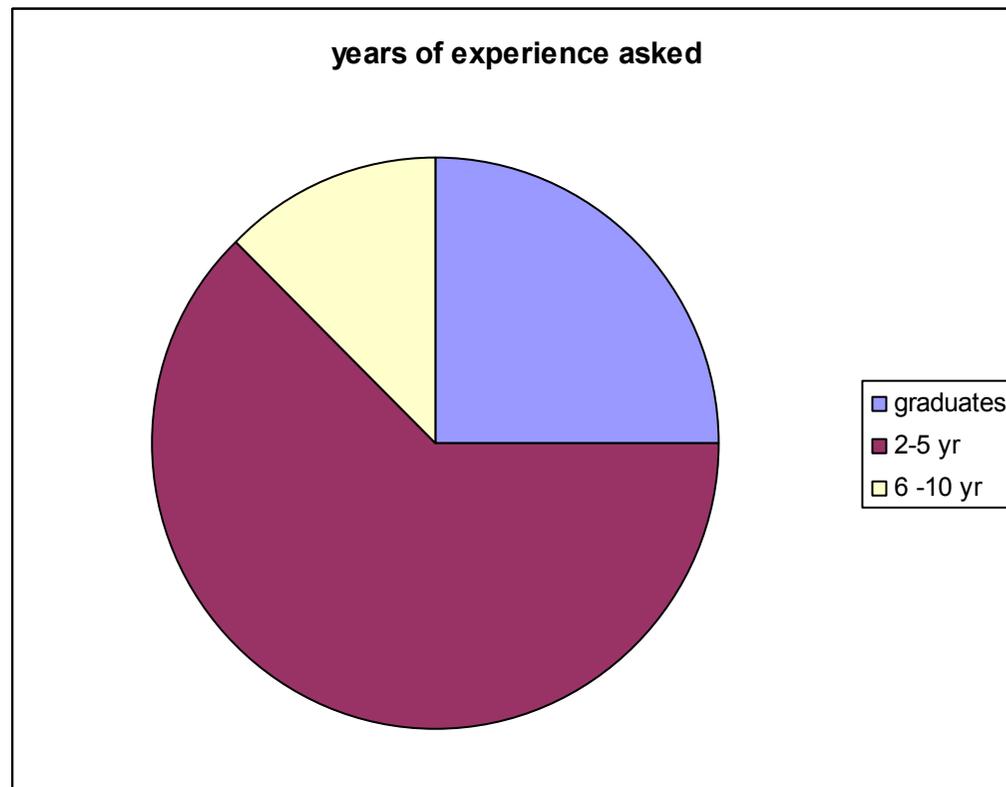
Geo vacancies/jobs

There is a slight increasement in available vacancies



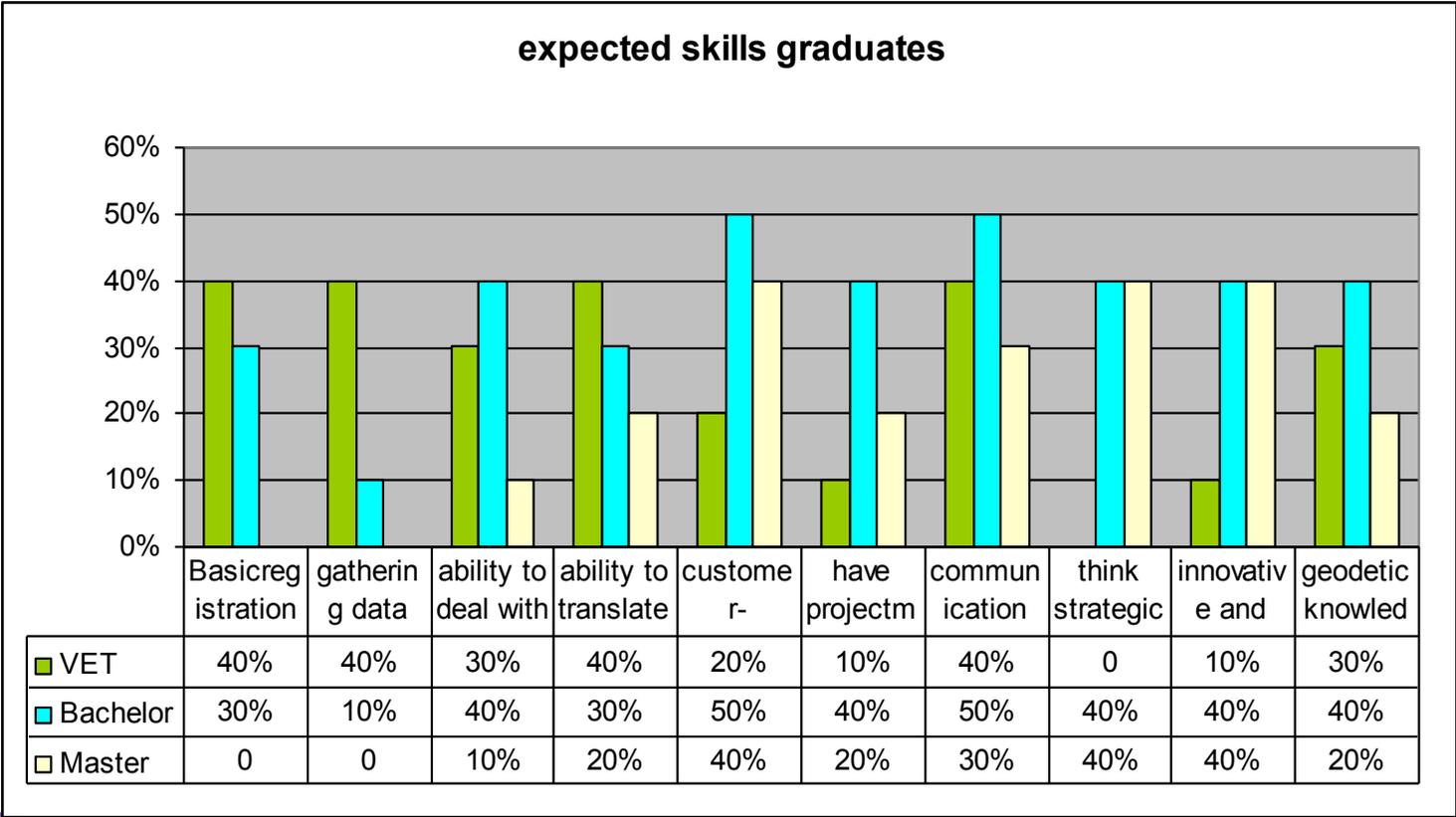
Years of experience asked in current vacancies

Workexperience remains important. But there are more vancancies for graduates than experienced employers.

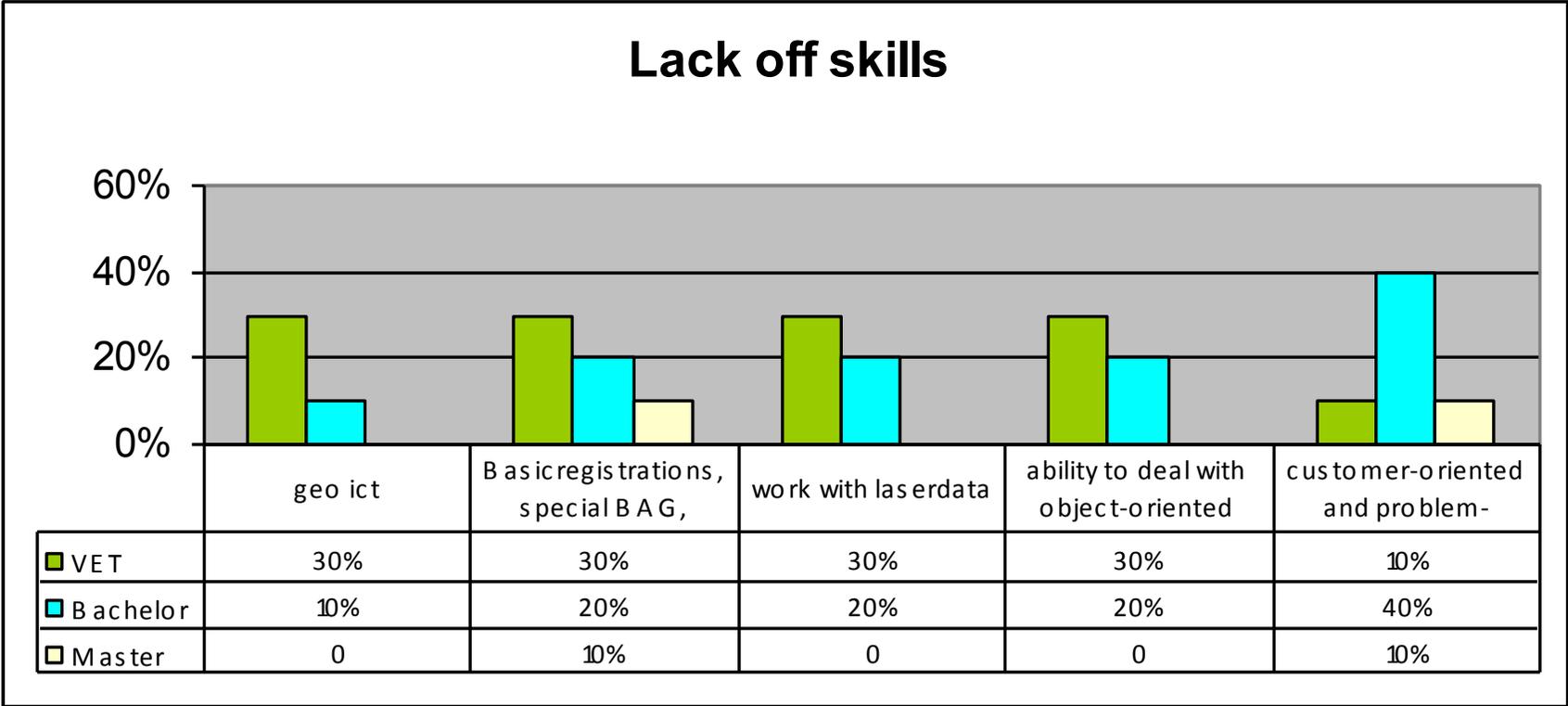


Expected skills from graduates

- VET's dont have to think strategic,
- Academics dont have to know about basic registration and gathering data
- bachelors should know about everything!



Lack off skills

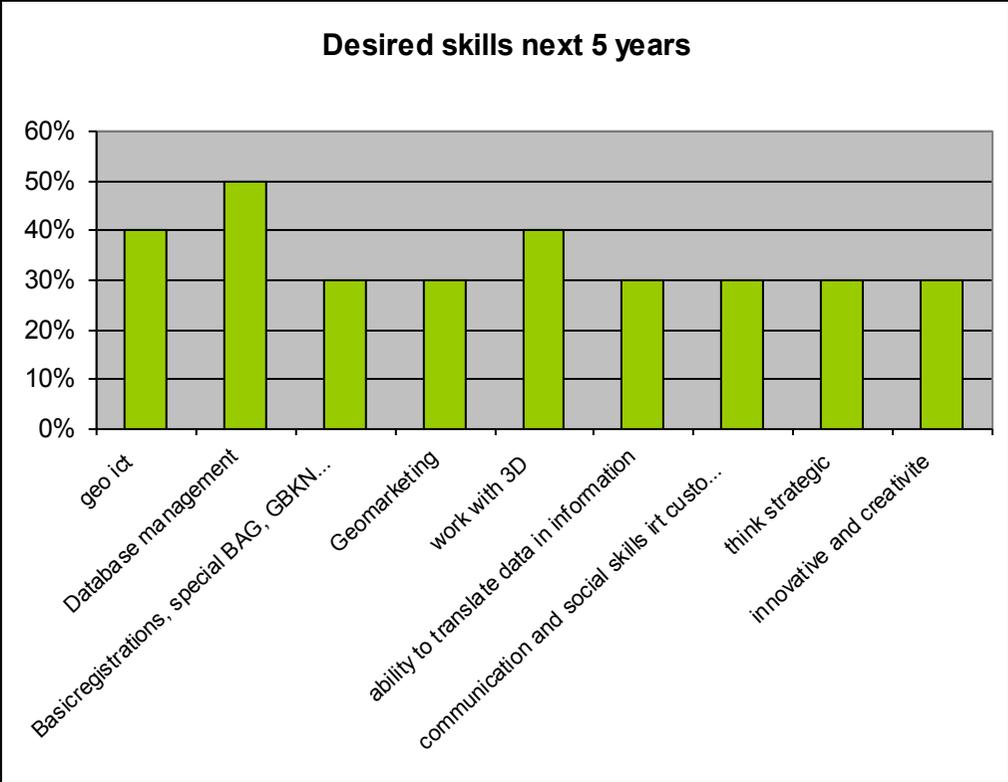


Skills desired in the next 5 years

Skills that didn't make the chart are: Remote sensing, Surveying (!!!), Visualisation and cartography, projectmanagers capacities.

Skills that are a less desired (10/20%):

Commercial gis software/ Open Source GIS, data gathering, photogrammetry, Legal aspects, work with laserdata, work with point clouds, ability to deal with object-oriented data, structure large scale data, customer-oriented and problem-solving thinking, geodetic knowledge



BACKGROUND GEOSKILLS PLUS



GEO SKILLS PLUS

GEO
Education



Labour Market



European approach

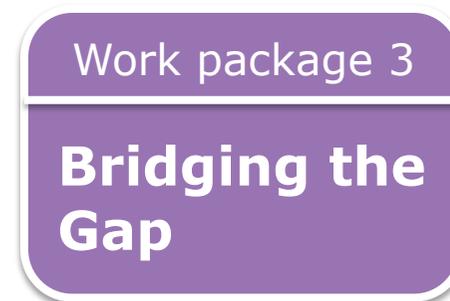
GEO SKILLS PLUS will bundle and examine additional examples

- Of cooperation
- Of raising awareness activities
- Of bridging the gap activities

... in Europe



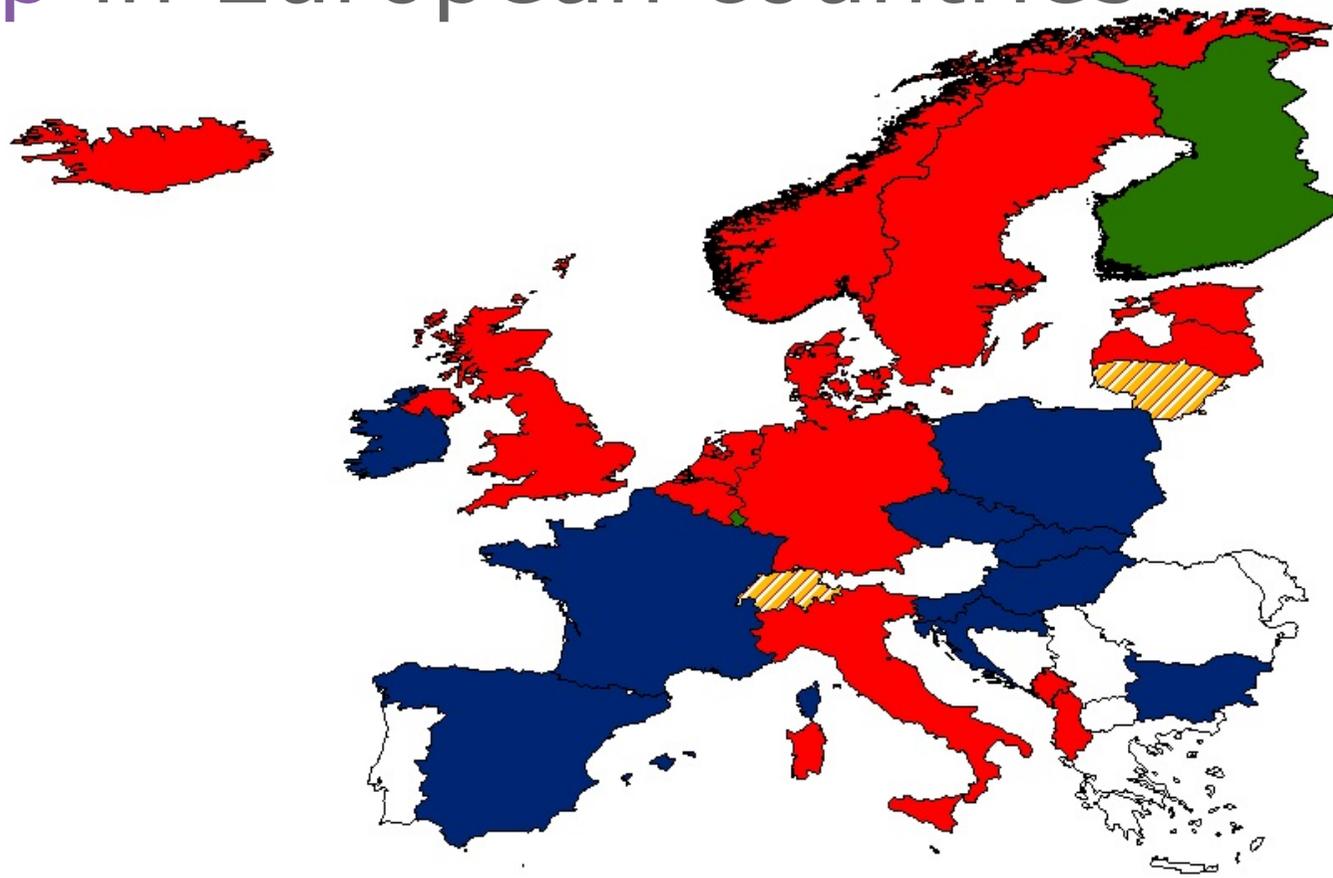
The Work Packages



Project Partners



Gap in European countries



- GAP
- 0 - NO INFORMATION
 - 1 - GAP (SHORTAGE OF GEO SPECIALISTS)
 - 2 - SURPLUS OF GEO SKILLED SPECIALISTS
 - 3 - NO GAP
 - 4 - SURPLUS OF TECHNICAL SPECIALISTS, SHORTAGE OF HIGH SKILLED SPECIALISTS

Levels of cooperation

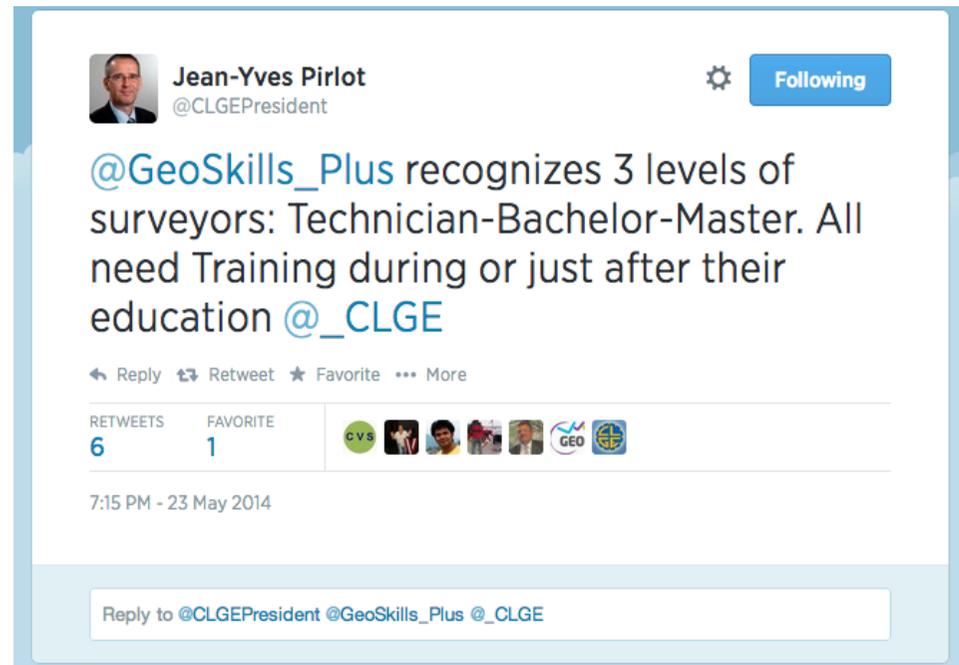
4 cooperation partners

- Business
 - Government
 - Education / Science
 - Associations
-
- National AND European Level

VET -Three levels of surveying

Differences in VET throughout Europe

- Technician
- Bachelor
- Master



Awareness Raising

Two gaps to address

- Make sure that primary school pupils and high school students are aware of the field of work
- Make sure that the graduates at different levels have the right skills that are required to enter the labour market



CONCLUSION

With the dissemination of the Dutch insights and the first results of the European project this paper contributes to a more harmonized education community and labour market, worldwide