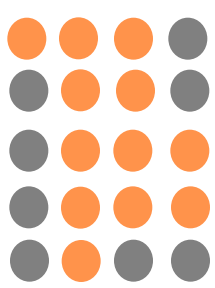


Israel's Innovation Survey 2006-2008: Methodology and Findings

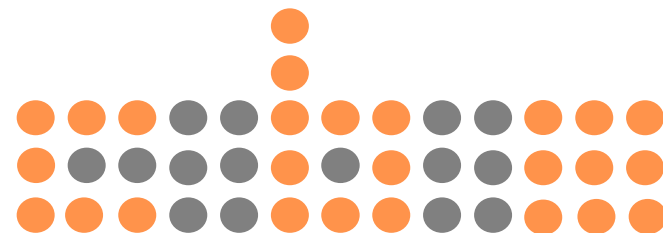


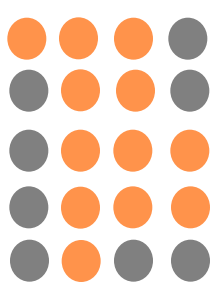
◆ By Evyatar Kirschberg,
Director of Science and Technology
Sector (STS).



Contents

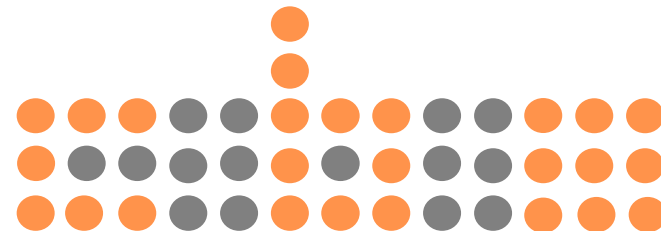
- ◆ Goals and objectives
- ◆ Population, frame and sampling methodology
- ◆ Combining a various of surveys:
Innovation - R&D - ICT Usage - Manpower structure
- ◆ Data collection and QA procedure
- ◆ Some findings
- ◆ Shaping policy

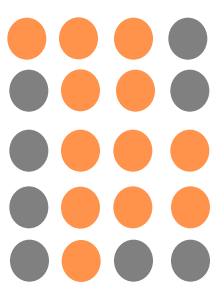




Goals and Objectives

- ❖ Examine the extent and nature of innovative activity among Israeli enterprises.
- ❖ Secondary objectives:
 - ❖ Policy needs
 - ❖ Comparable data
 - ❖ OECD



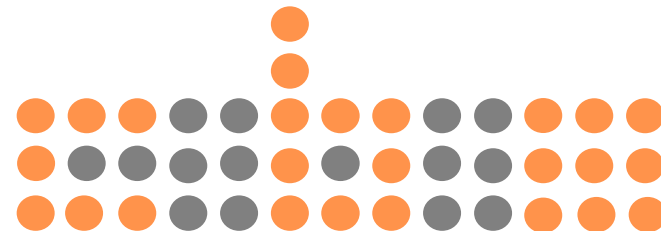


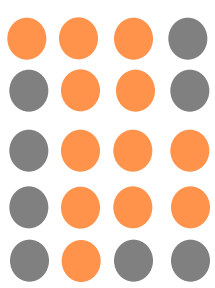
Population, Frame and Sampling Methodology

◆ Population:

All enterprises with 10 employees or more (with the exception of ISIC 72 and 73),

Operating in the business sector industries (excluding Agriculture and Diamonds).



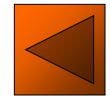


Population, Frame and Sampling Methodology

◆ Frame:

Based on the Business Register.

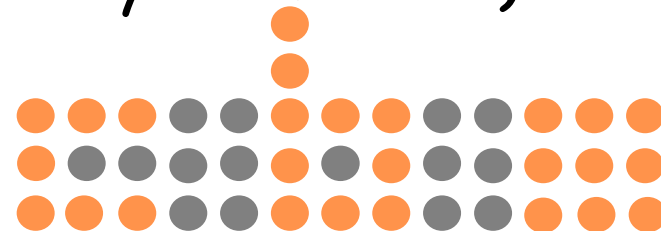
- ◆ About 24,000 enterprises.

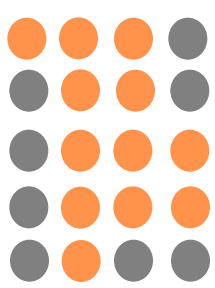


◆ Sample:

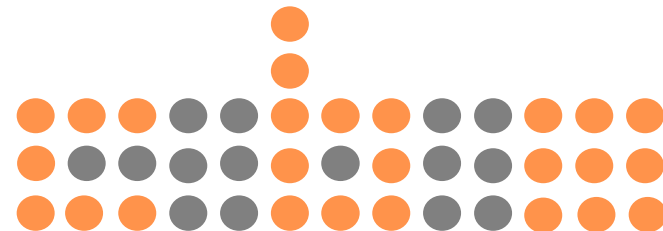
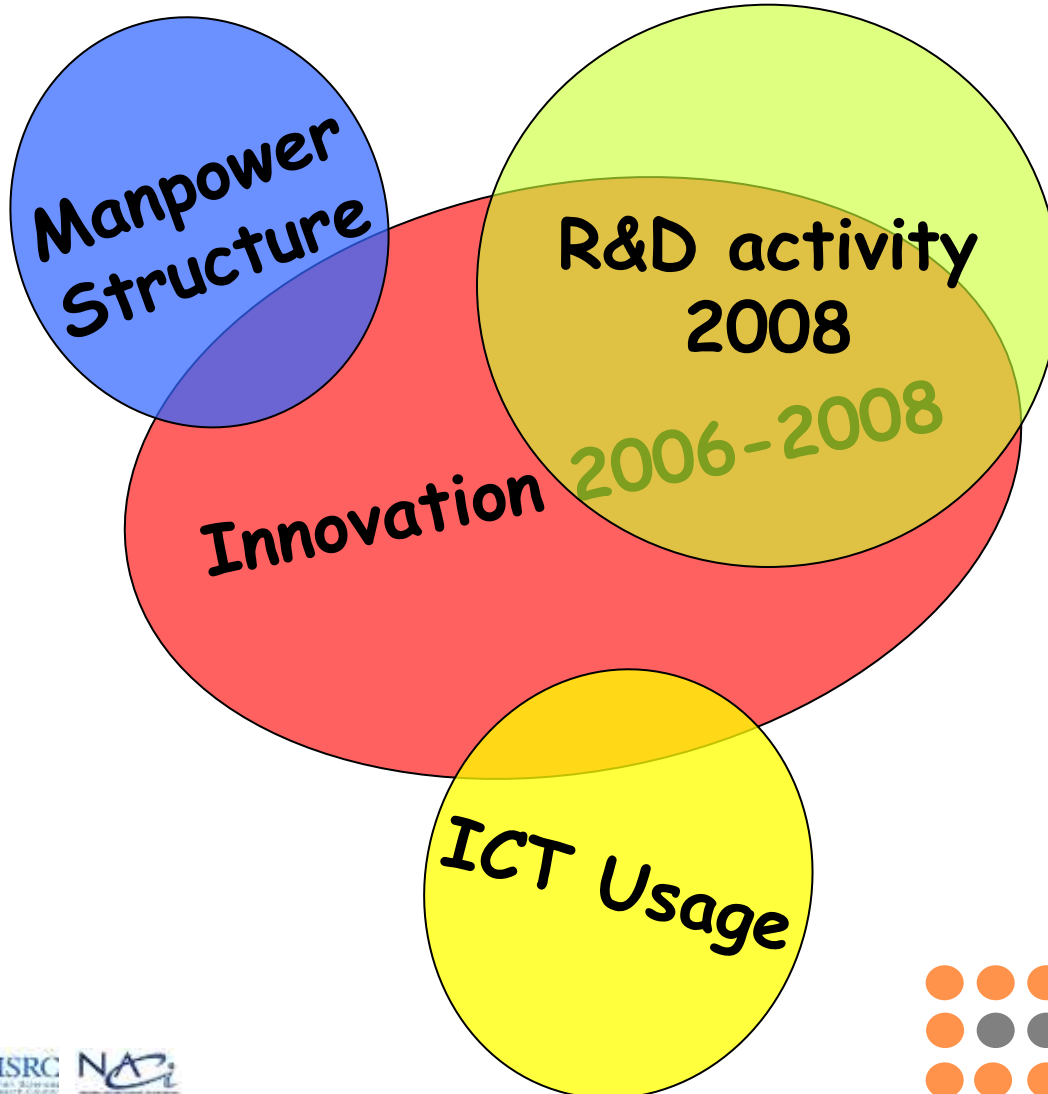
Random stratified (industries and size) sampling.

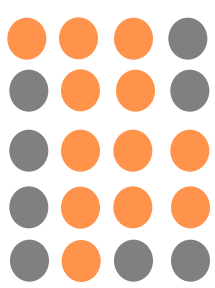
- ◆ 2,670 enterprises
- ◆ 11.3% Sampling rate (4%-29% by industries)



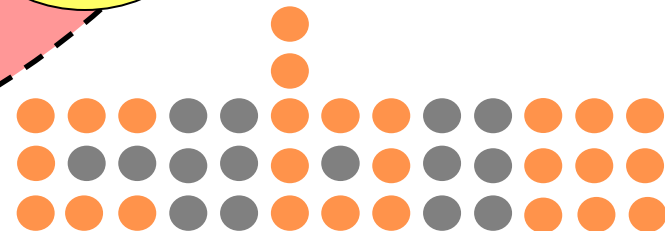
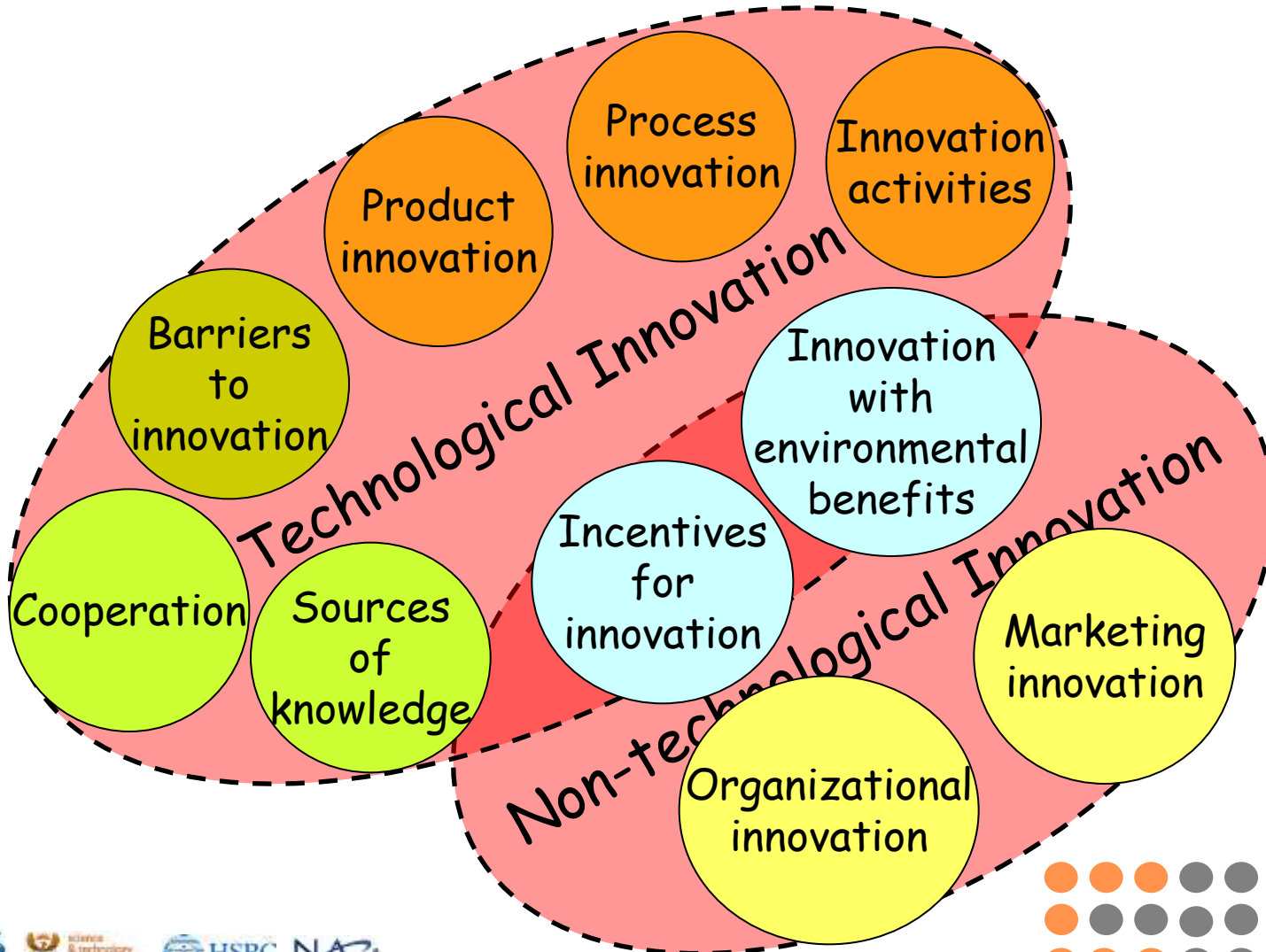


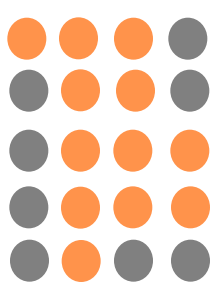
Combining a various of surveys





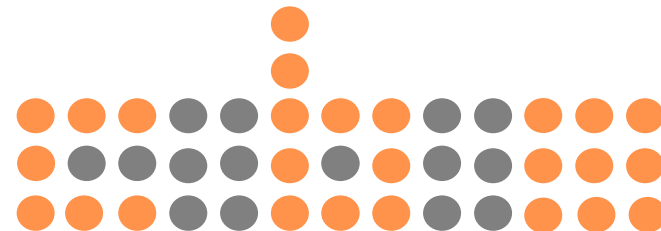
Combining a various of surveys

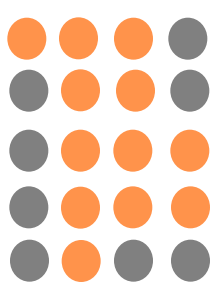




Data collection and QA process

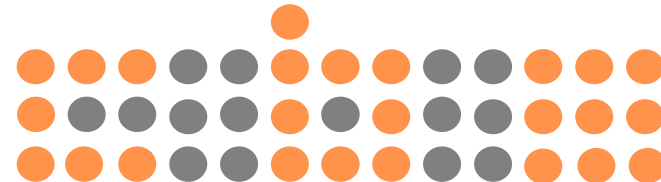
- ◆ Phase I: Developing a draft questionnaire based on the CIS2008 and the Oslo Manual.
- ◆ Phase II: A broad discussion with representatives in the fields of policy-making, higher education, and business.
- ◆ Phase III: Interviews with representatives of 11 companies.
- ◆ Phase IV: A pre-test, which included 100 companies.

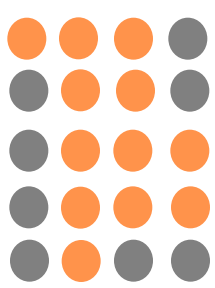




Data collection and QA process

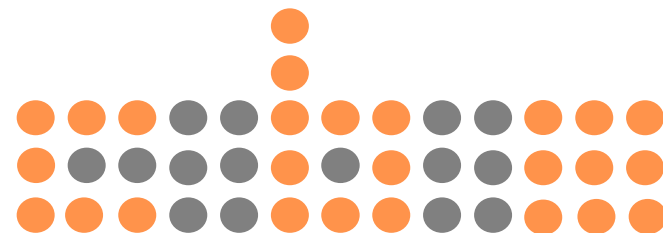
- ❖ Data was collected by mail and phone interviews.
- ❖ QA process:
 - ❖ Comparison of quantitative and administrative data (revenue, wages, employees, and funding from governmental sources).
 - ❖ Logical tests.
 - ❖ Analysis of relationship.
- ❖ **About 25%** of the questionnaires were sent back to the enterprises for clarifications.

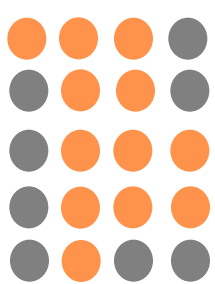




Data collection and QA process

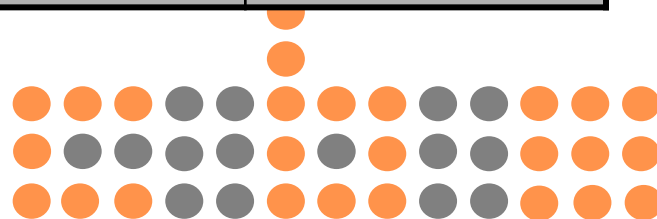
- ◆ 90.2% of total enterprises fully answered the questionnaire.
- ◆ 5.8% of enterprises in the sample were closed.
- ◆ Weighting procedure made by using probit regression to attached 'nearest neighbor' data.

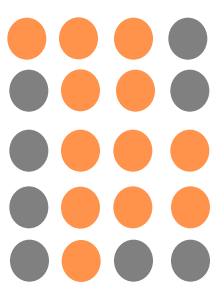




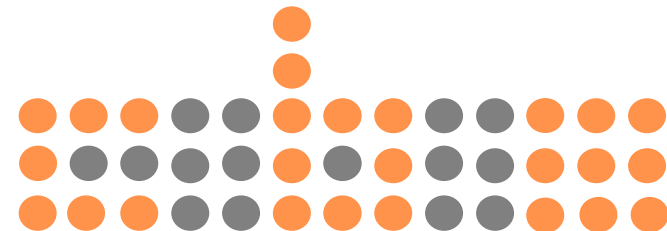
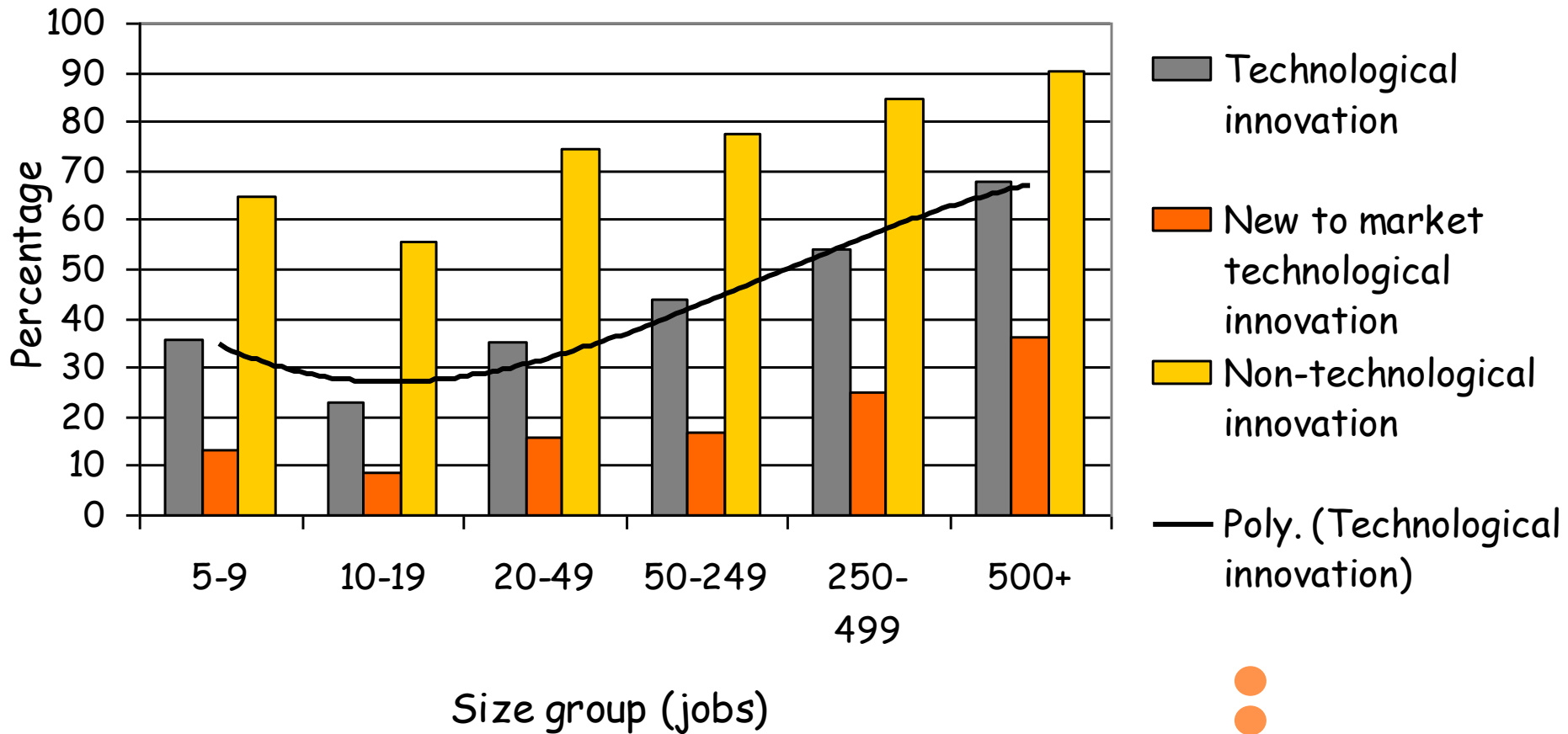
Findings - Main Indicators

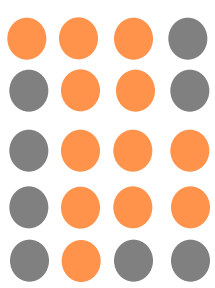
	Manufacturing	Services
Innovation Rate (% of enterprises engaging in technological innovation activity)	47.1%	34.5%
Percentage of enterprises with successful technological innovation	42.5%	29.8%
Percentage of New-to-Market product innovators (as % of product innovators)	16.6%	25.9%
Co-innovating enterprises (as % of total technological innovation active enterprises)	33.5%	37.6%
Expenditure on innovation activities	US\$ 13.0 billion	US\$ 4.6 billion
Innovation expenditure as % of turnover of all technological innovation active enterprises	15.7%	18.1%
Turnover from sales of new or improved products	US\$ 32.2 billion	US\$ 14.4 billion



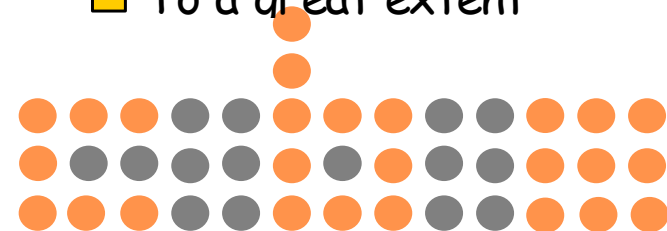
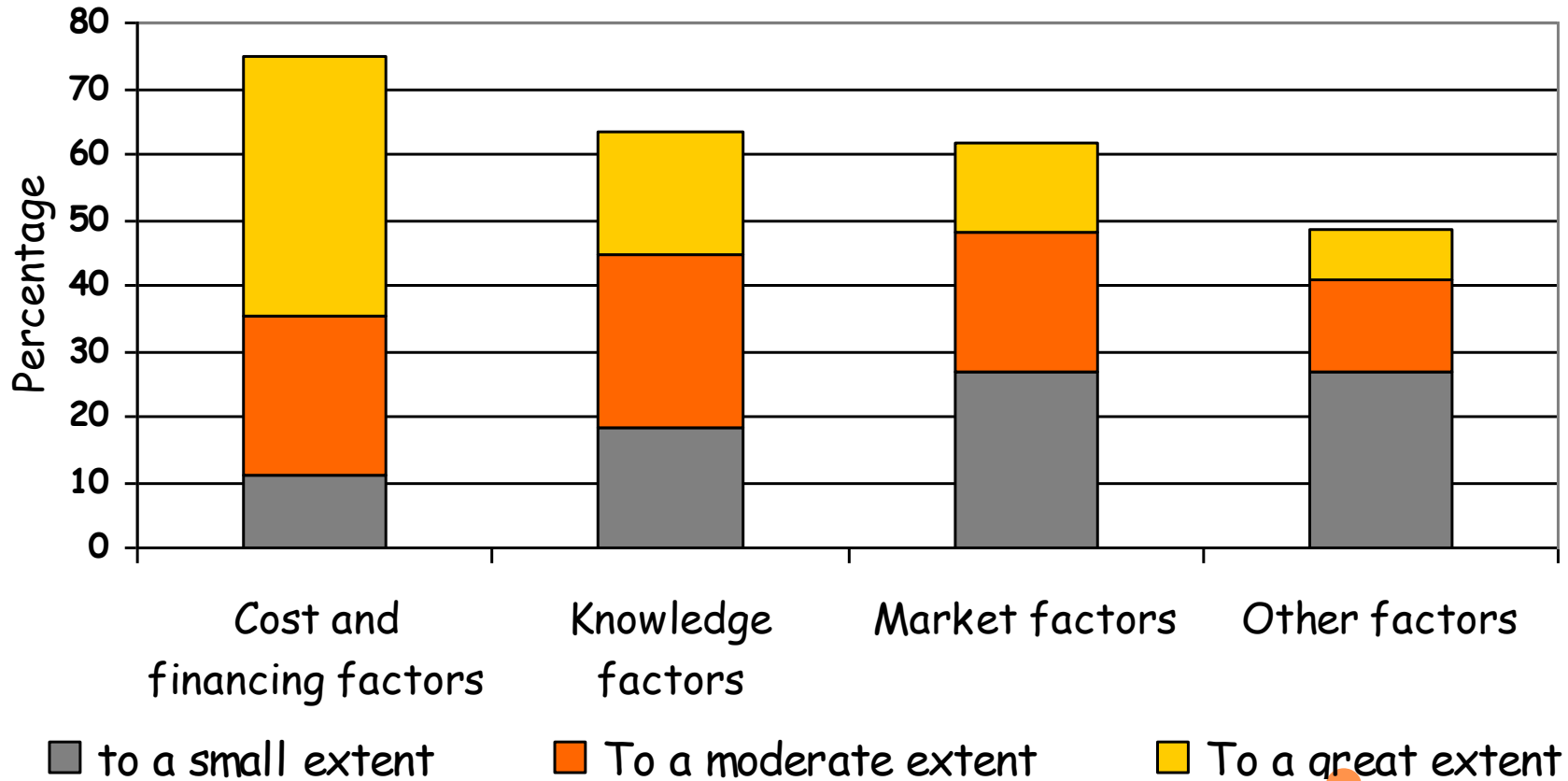


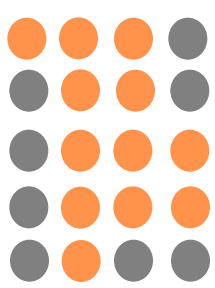
Technological and non-technological innovation by size, 2006-2008



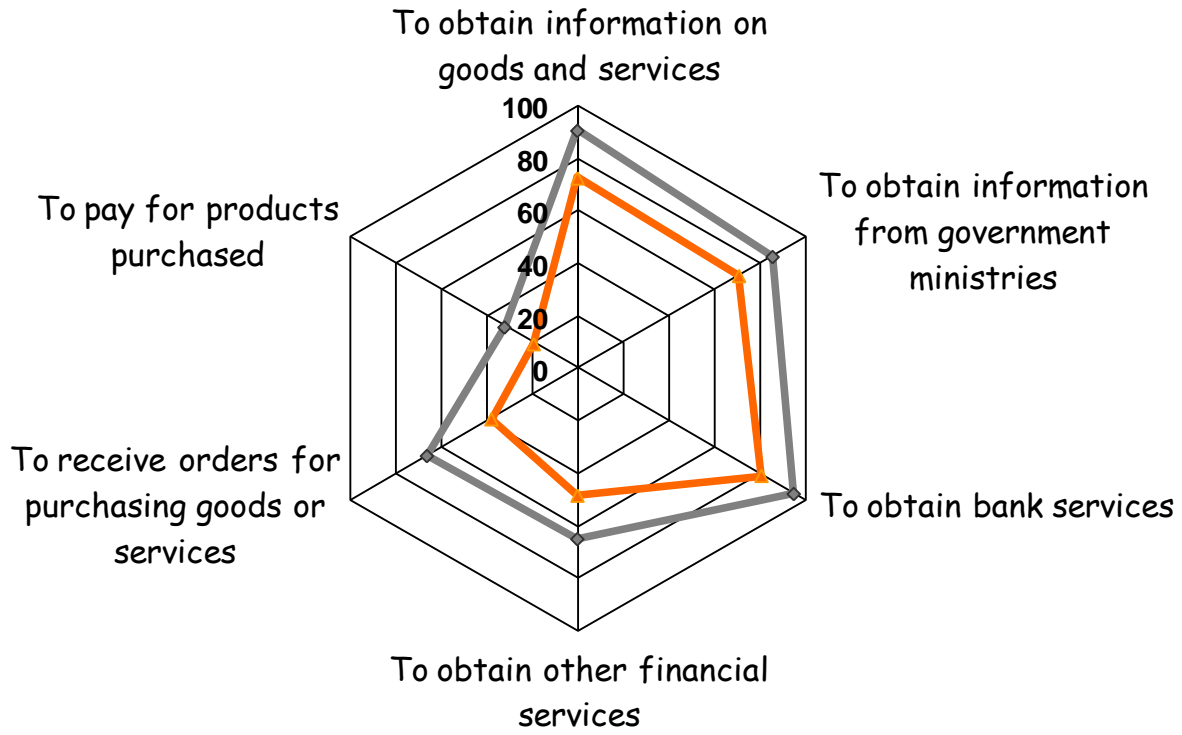


Barriers to innovation activities, 2006-2008

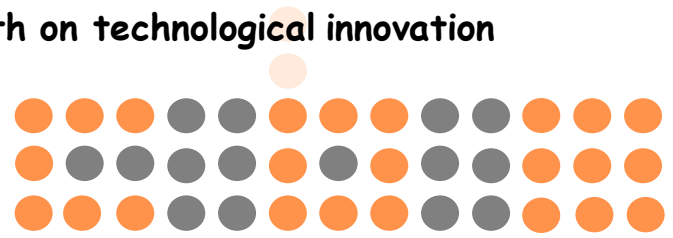


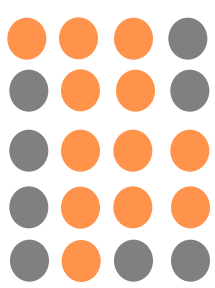


Uses of internet for external communication by technological innovation



◆ Technological innovating enterprises ◆ Enterprises with on technological innovation

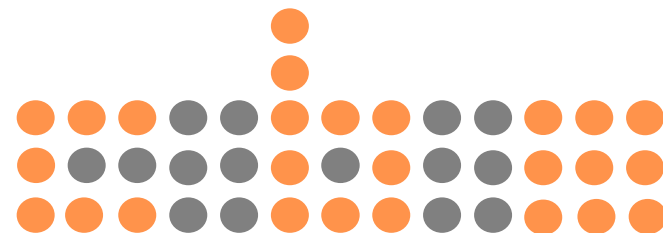


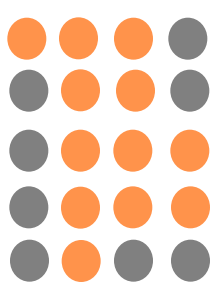


Findings - Open Innovation

- ❖ 17% of the enterprises used open innovation.
- ❖ 15% of the enterprises co-operated with external factors.
- ❖ 20% of the enterprises were in the Research and Development industry.

Innovator type	Co-developing
Technological	21%
Product	22%
Process	15%





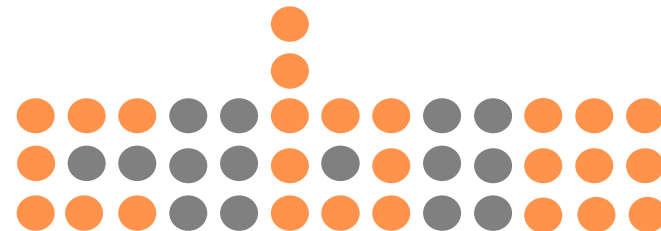
Shaping policy

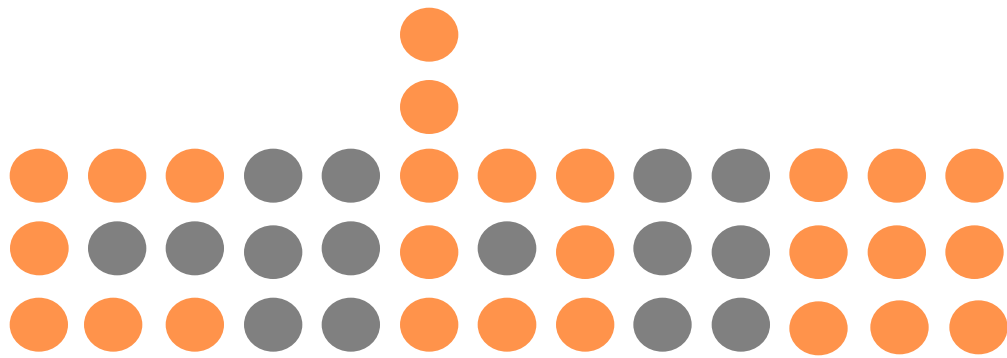
❖ CIS's policy impact

“One of the main barriers to the use of the CIS by the policy community is a lack of indicators and analyses that are relevant to policy needs...” (Anthony Arundel).

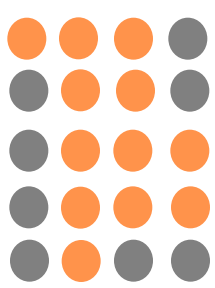
❖ So, what do we do?

- ❖ New data and indicators
- ❖ Research oriented





Thanks for
listening! 🐑



Sampling Frame, by Industry

Industry	Enterprises	Distribution
Total Business sector	23,699	100.0
Total Manufacturing	4,950	20.9
Technological intensity:		
High technology	509	2.1
Medium-high technology	569	2.4
Medium-low technology	1,682	7.1
low technology	2,190	9.2
Electricity, Water supply and Construction	2,602	11.0
Wholesale and Retail trade, Repair of motor vehicles, Motorcycles and personal and household goods	6,095	25.7
Thereof:		
Wholesale	2,826	11.9
Retail	2,140	9.0
Accommodation services and Restaurants	2,685	11.3
Transport, Storage and Communications	1,468	6.2
Banking, Insurance and Other financial institutions	620	2.6
Business activities	5,278	22.3
Thereof:		
Computer and related services	1,909	8.1
Research and development	658	2.8

