Empirical studies of business innovation: lessons for the revision of the Oslo Manual

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Eurostat G4

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The ESTAT G4 Unit

Information society statistics

- o E-business
- o Information society - enterprises
- o Information society - households
- o Postal services
- o Telecommunication

Science, Technology and Innovation statistics

- o High-tech activities
- o Innovation statistics
- o Intellectual property rights
- o Research and development statistics
- o Science and technology employment indicators

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The ESTAT G4 files on innovation

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An integrated strategy

The **G4 'impact' Task Force** is analysing the use of innovation data and identifying new needs.

CIS survey is based on the OM guidelines and aimed to fill users' needs.

The Oslo Manual revision will have to be 'evidence based' and open to users' contributions.

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The CIS survey 2016

- The Community Innovation Survey: a benchmark for innovation statistics at global level.
- Constant efforts to improve quality and impact of the CIS results.
- Long-standing challenges: reducing subjectivity, better measurement of 'innovation outcome', identifying key actors/drivers.
  - More data on 'innovation models', less attention to 'innovation intensity'.
  - Data matching and panel approach to measure innovation outcome.
  - Full integration with business statistics (FRIBS).

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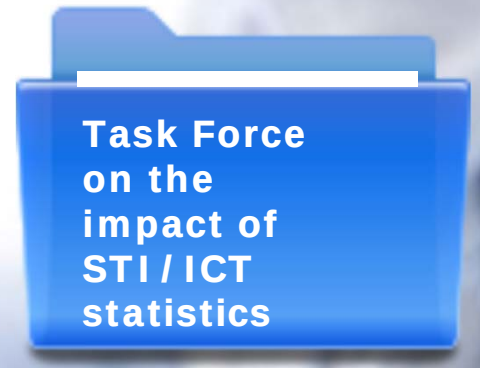
The 'impact' Task Force

- Experimental activity collecting information on the use of STI/ICT data by bibliometric methods and contents analysis.
- Focus on the 'impact' of statistics on key research areas: the impact of ICT diffusion/use on employment, the relationship between R&D investments and productivity, innovation development and impact.
- Project at a feasibility stage: a preliminary analysis of data use as main expected output.
- Identification of a 'users' community' and emerging users' needs.



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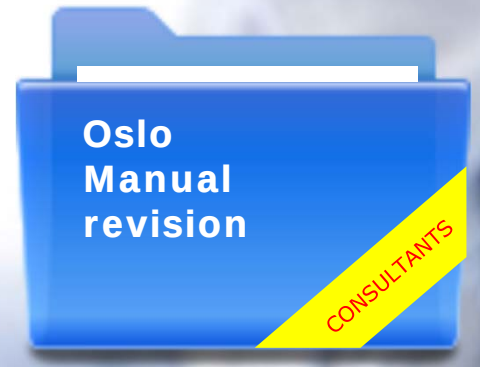
The Oslo Manual revision

- Third revision: a joint OECD-Eurostat project.
- An 'evidence based' revision, extensively involving OM stakeholders (data producers + data users).
- Coverage beyond 'business innovation'?
- 'Implementation approach': still useful?
- Back to product/process?
- Novelty thresholds to be reconsidered.
- Innovation in an open environment.



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The OM revision process

Brainstorming, opinion surveys, literature reviews.

Proposals by countries and stake-holders; circulation of position papers to develop some shared proposals.

Decision making process based on discussion (workshops) and consensus building (steering group).

Translating the conceptual papers into Manual's chapters. Revision and release of the draft.

Where we are

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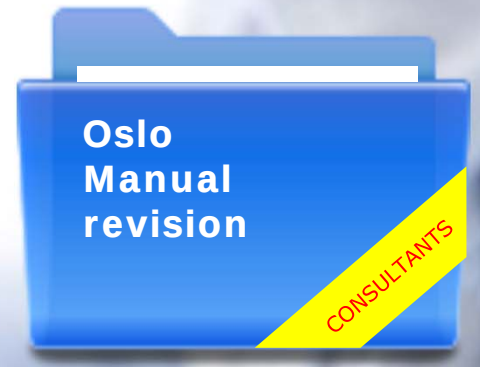
Possible key topics in OM revision

Intangible assets (IA)

- Intangibles play a key role in making innovation possible but almost no attention is paid to them in innovation statistics.
- Pilot experiences in UK and Italy suggest that IA data could be seen as complementary to innovation costs data (currently limited in the CIS to product/process costs).
- Evidence from Italy (two parallel 2012 surveys: IA and CIS): same volume for R&D expenditure; higher IA volume for non-R&D intangible investments.



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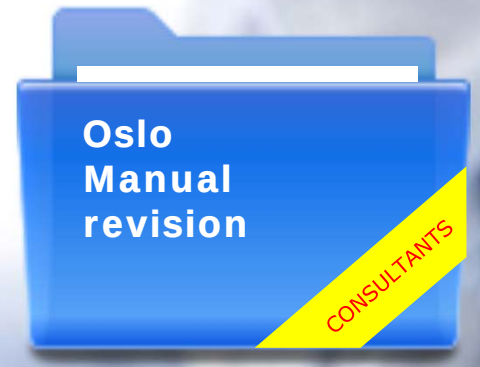
Possible key topics in OM revision

Open innovation

- Moving from the measurement of 'co-operation agreements' for innovation to a set of new indicators on the level of interaction with the 'innovation eco-system'.
- Both 'inside-out' and 'outside-in' phenomena to be measured. Focus on firms' practices (qualitative).
- The role of human resources in diffusing knowledge should be highlighted in this perspective.



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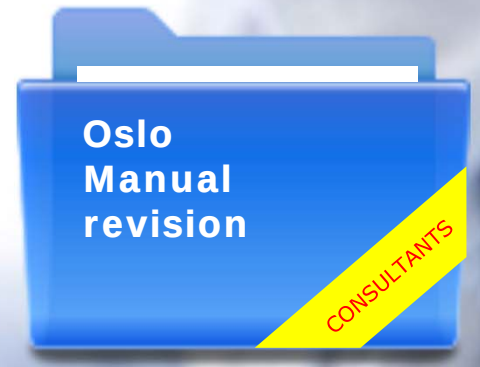
Possible key topics in OM revision

Focus on 'innovation projects'

- o Defining 'innovation project' as a measurable entity (resources/time).
- o Innovation intensity to be measured in terms of 'projects' rather than 'subjects'.
- o Innovation costs should refer to specific projects.
- o Projects' can be qualified with reference to their composition in terms of 'innovation activities'.



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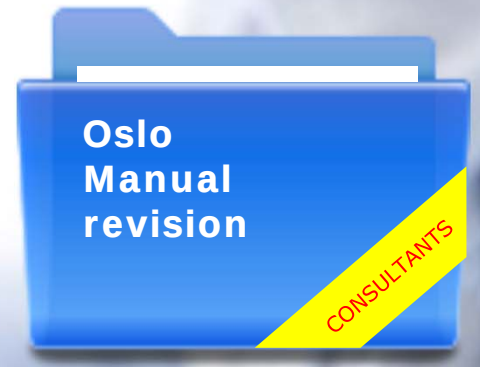
Possible key topics in OM revision

Profiling innovators

- Beyond the innovator/non-innovator divide, attention should be paid to a multiplicity of 'innovation modes'.
- The level of investment on intangibles, quantity and quality of projects and the permeability to technology flows could allow for the definition of innovation profiles.



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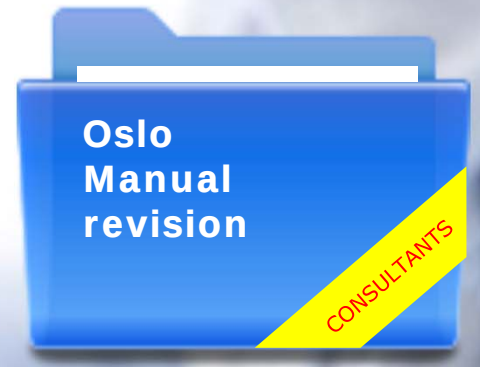
Possible key topics in OM revision

Measuring output / outcome

- Strong demand for users and poor availability of data (innovative turnover, etc.).
- Need to exploit data matching and panel surveys to allow for a two-stages measurement of the innovation output.
- Stage 1: 'expected output' as asked to innovators in surveys.
- Stage 2: 'actual output' (in terms of employment/sales growth, productivity, etc.) by matching innovation micro-data with economic micro-data with time-lag of 2-3 years.



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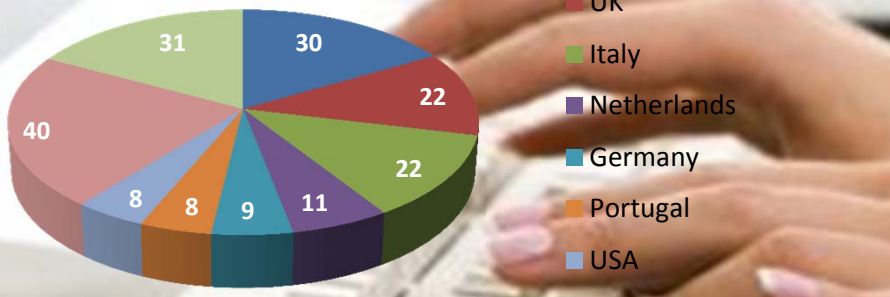
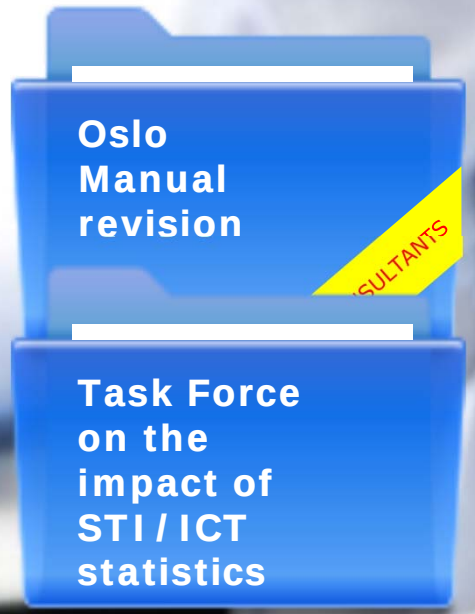
The flash survey on academic users

- Launched in September 2015.
- Target: around 430 academic researchers with at least an empirical articles on innovation published in a refereed journal over the last five years.
- More than 180 respondents. Almost all are university professors.





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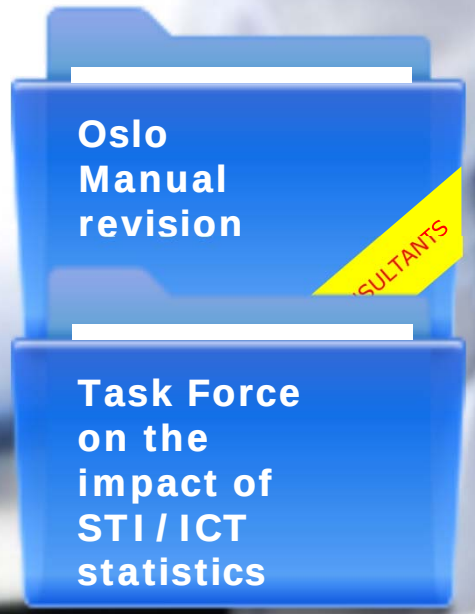
The flash survey on academic users

Respondents:

- They are experts of innovation (72.4%)
- They access innovation data mostly on the basis of a formal agreement with the data producer (institutional 27.4%, personal 25.9%).
- One out of five is working for an institution producing innovation data.
- 'Anonymised micro-data' is the most used format (27.8%) but also the access to 'raw' micro-data is quite popular (24.9%).



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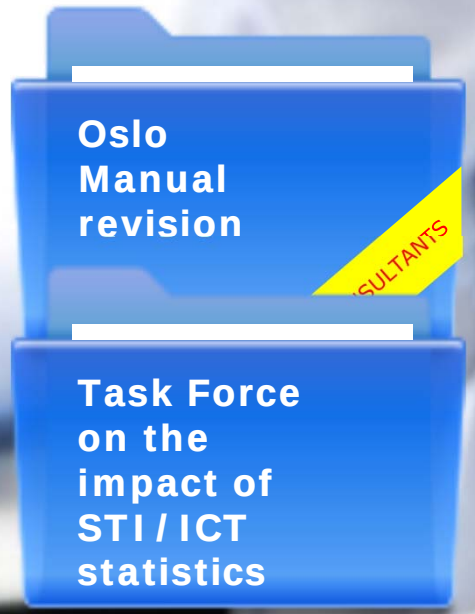
The flash survey on academic users

Respondents:

- They like to process data in their own premises (23.8% from public sources, 20.6% by importing data).
- If there are not alternatives, they move to 'protect labs', as well (17.9%).
- They like comparative, across countries, studies (70.7%).
- Good feeling with NSOs (87.3%, only 51.4% use commercial data).



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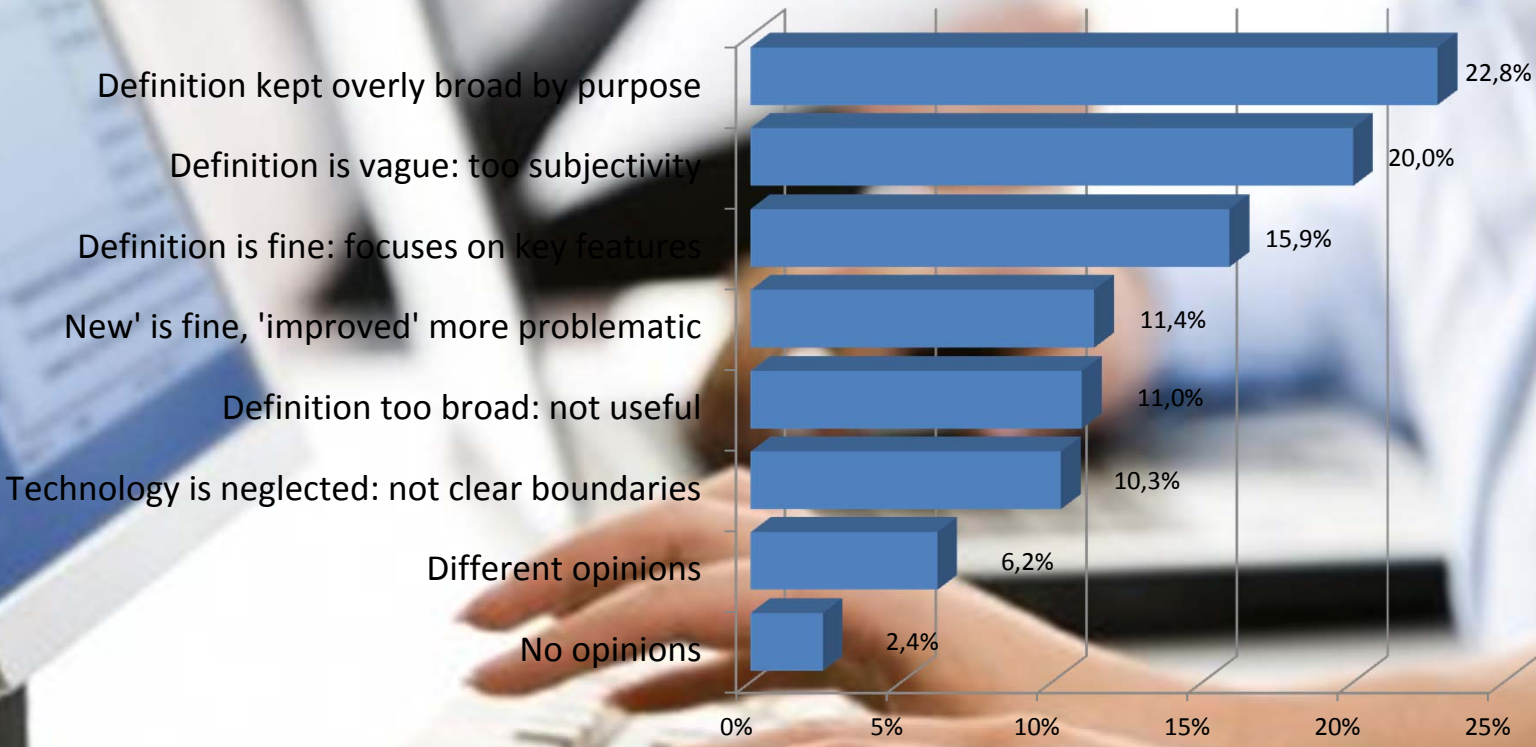
Definition of innovation



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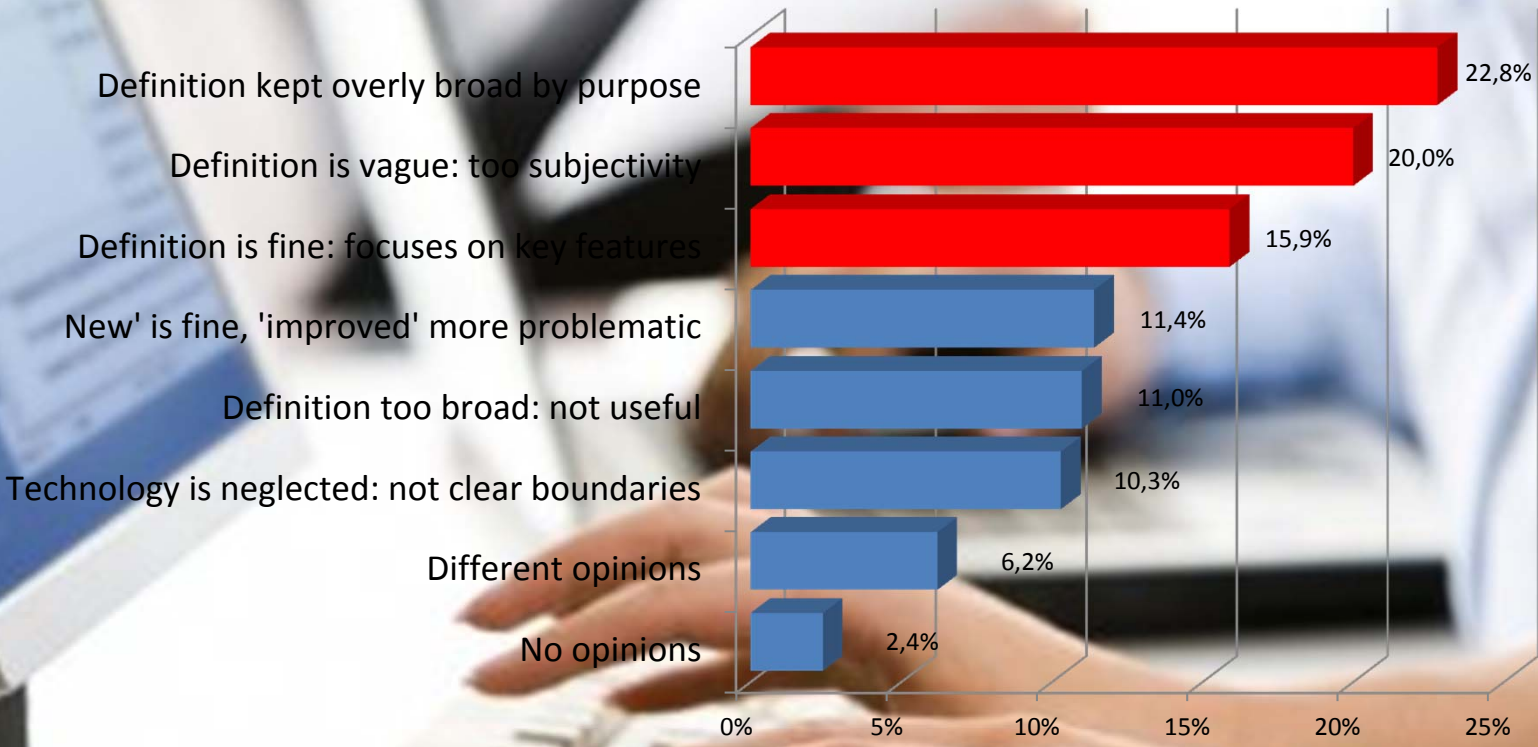

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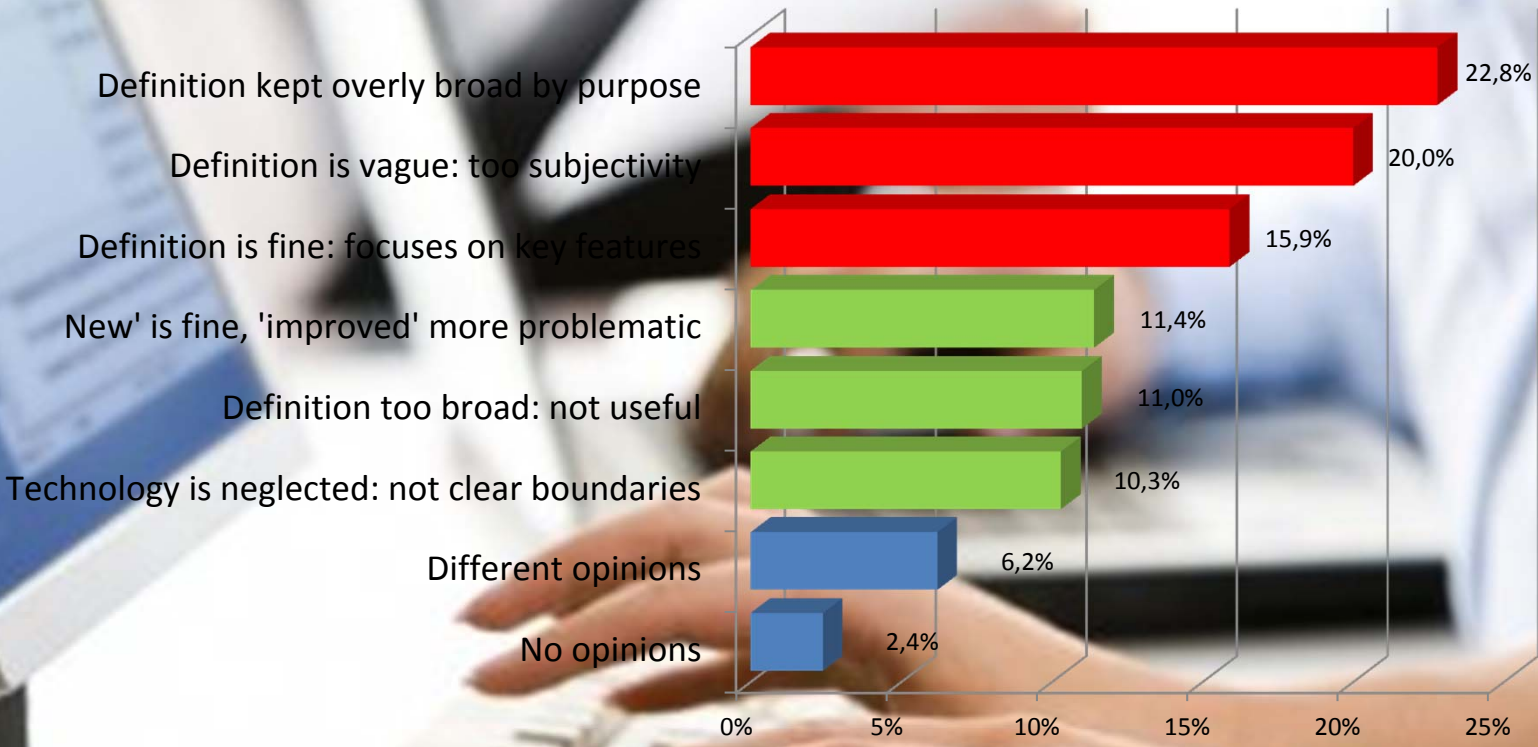

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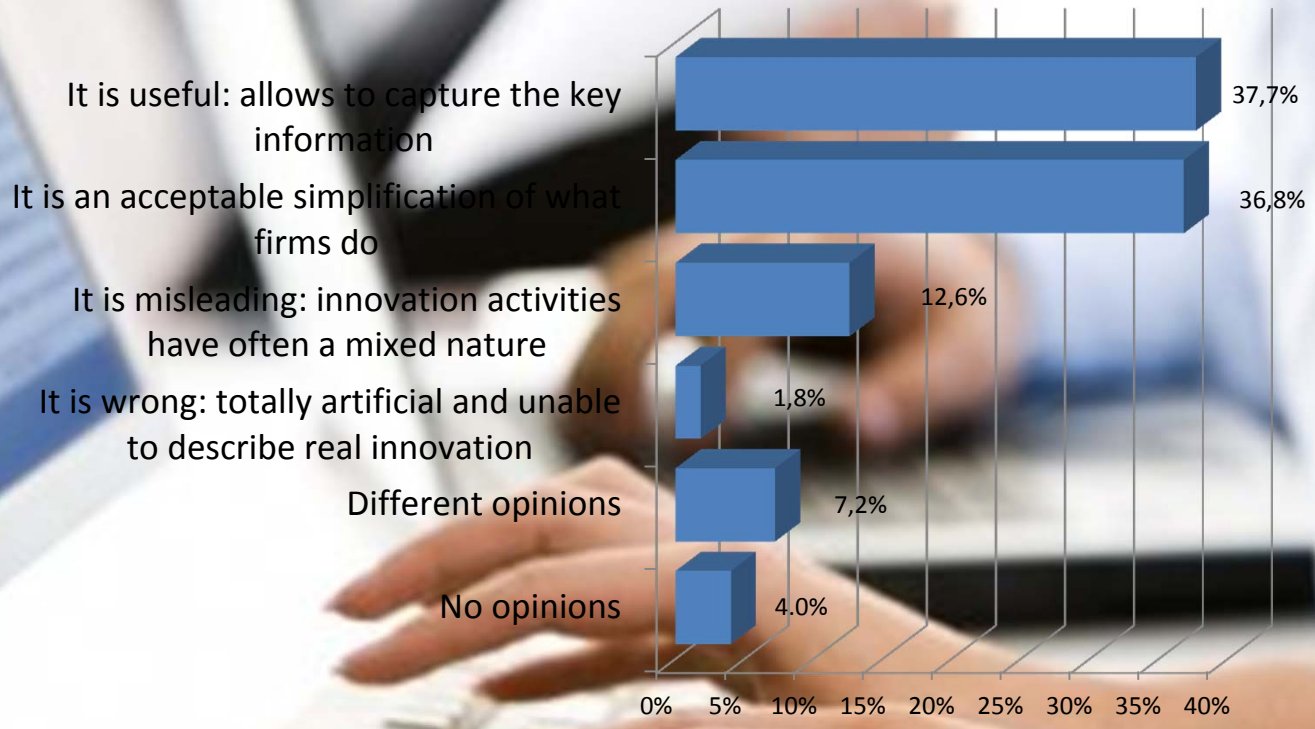
Innovation type



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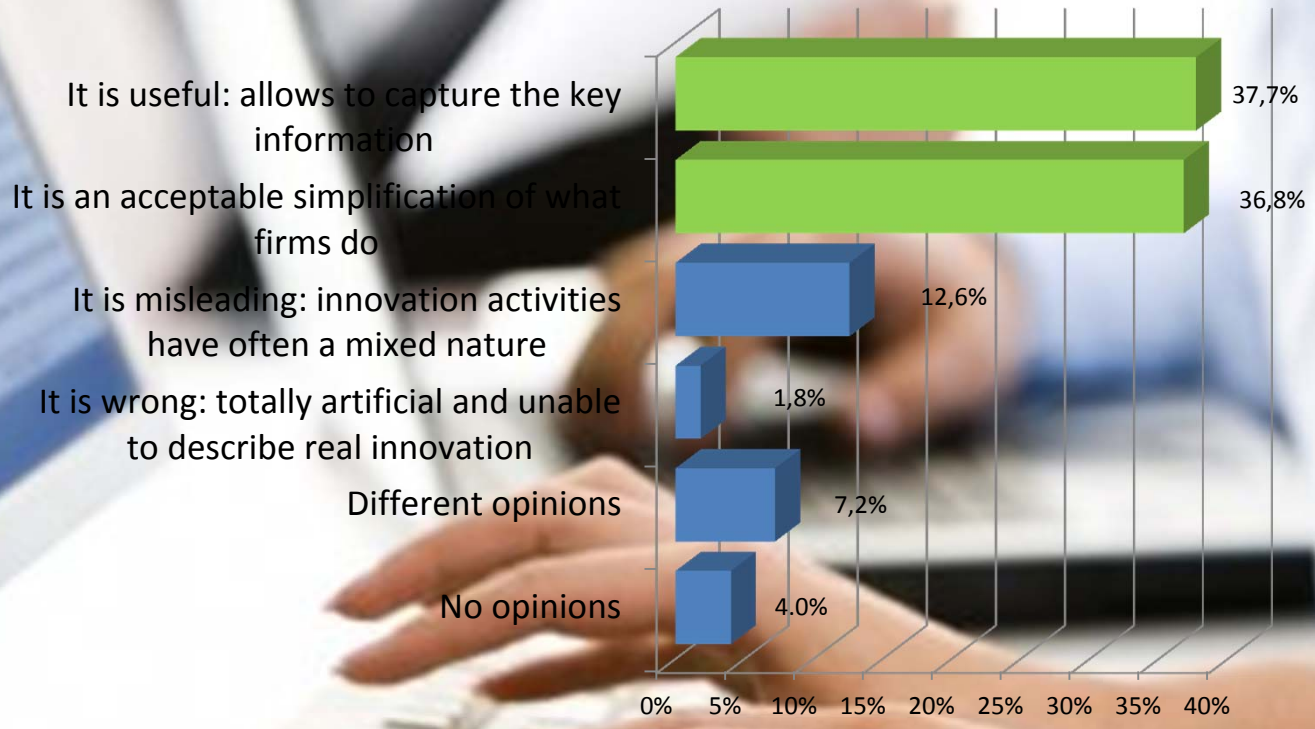
Innovation type



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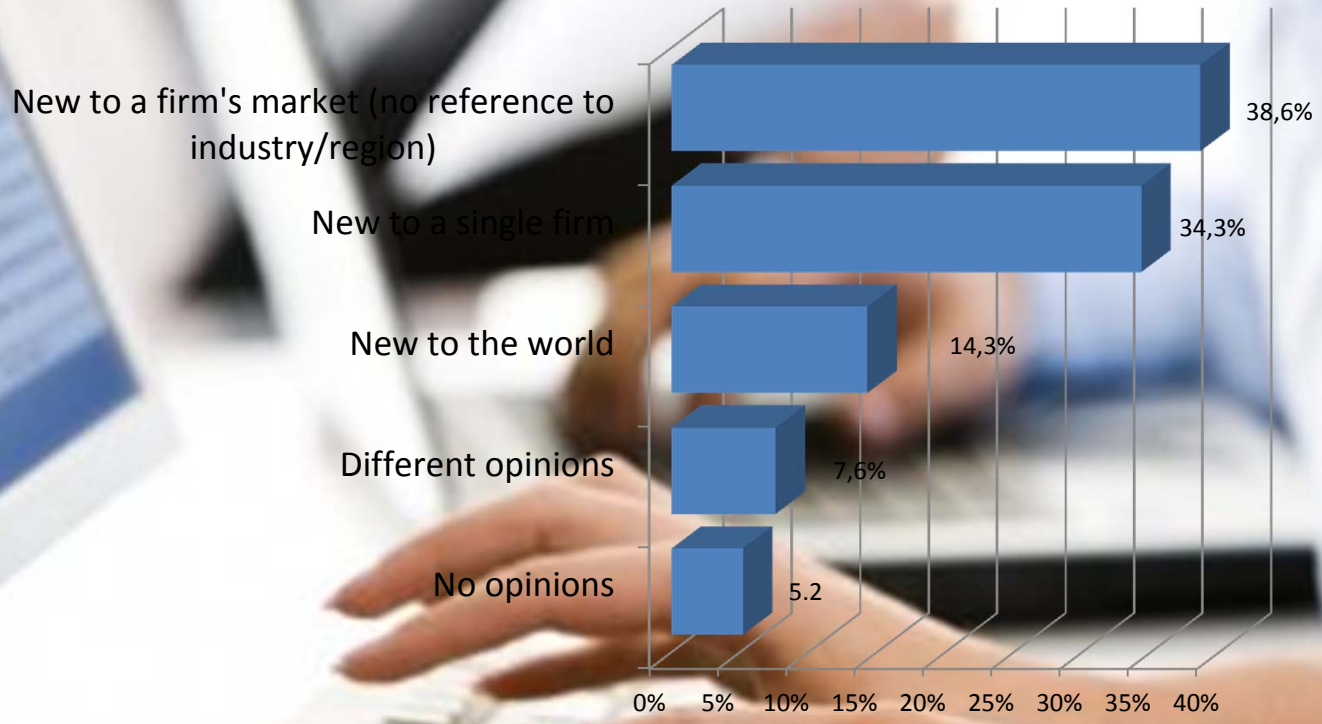
Novelty in innovation



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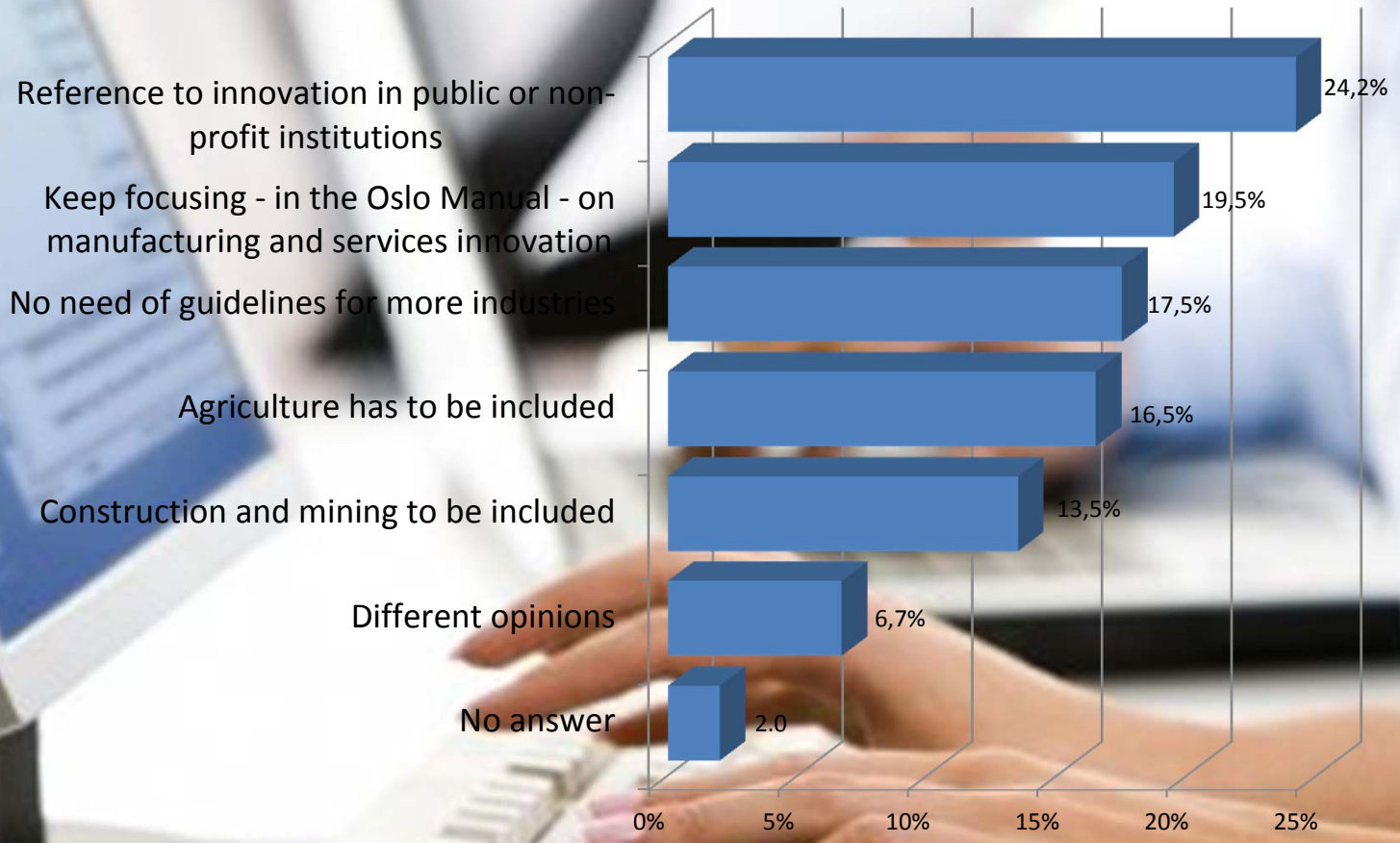
New dimensions of innovation



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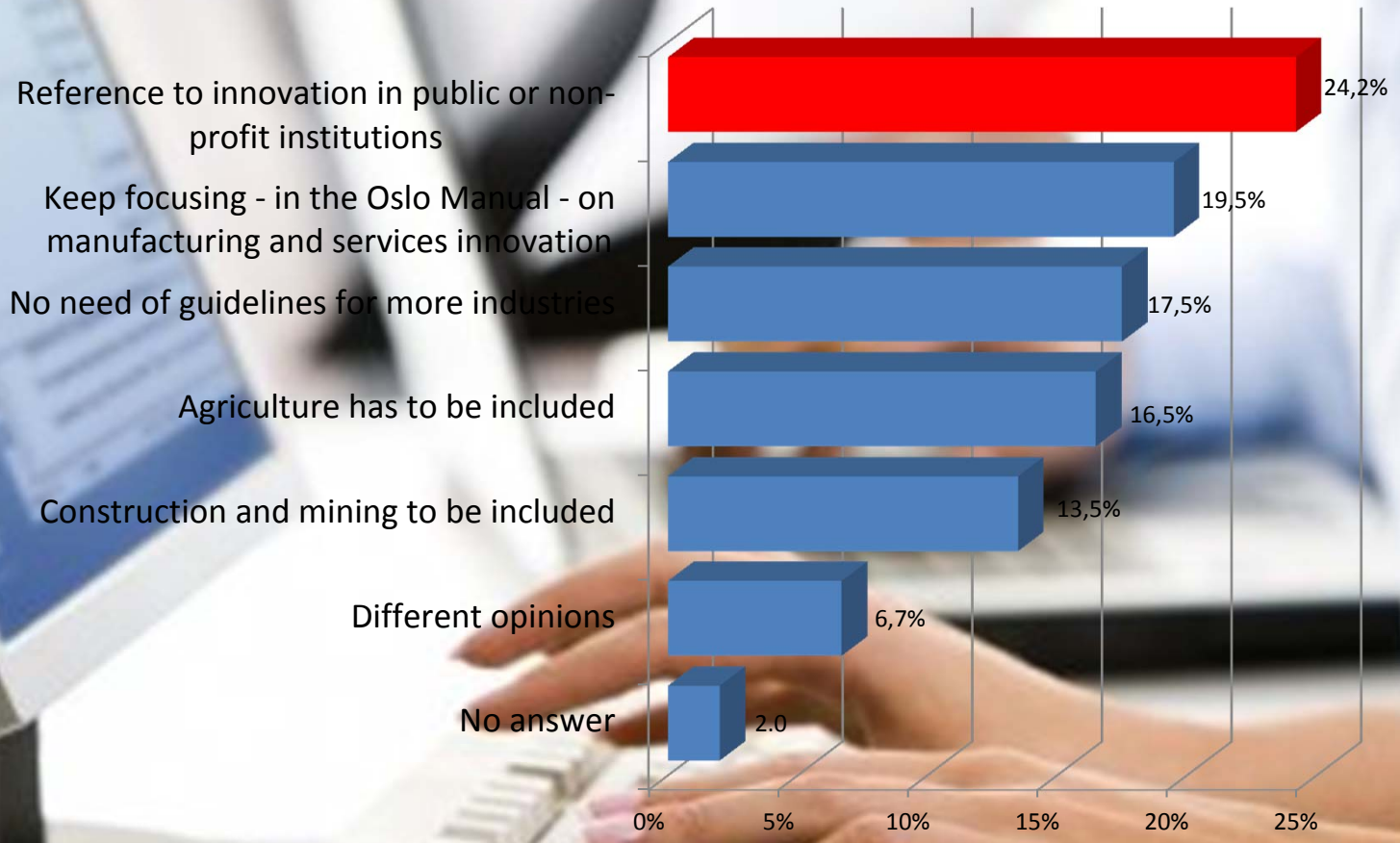

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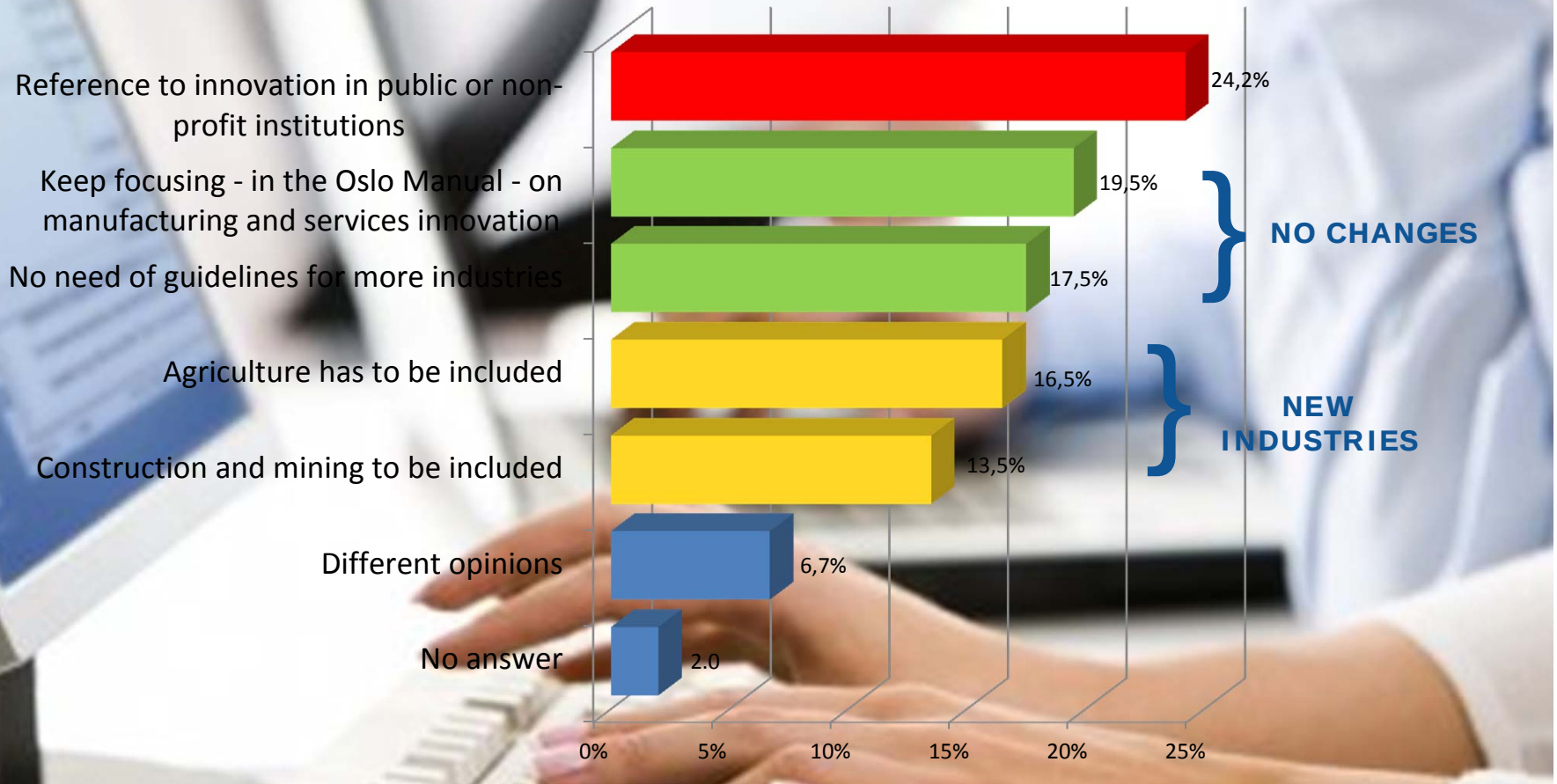

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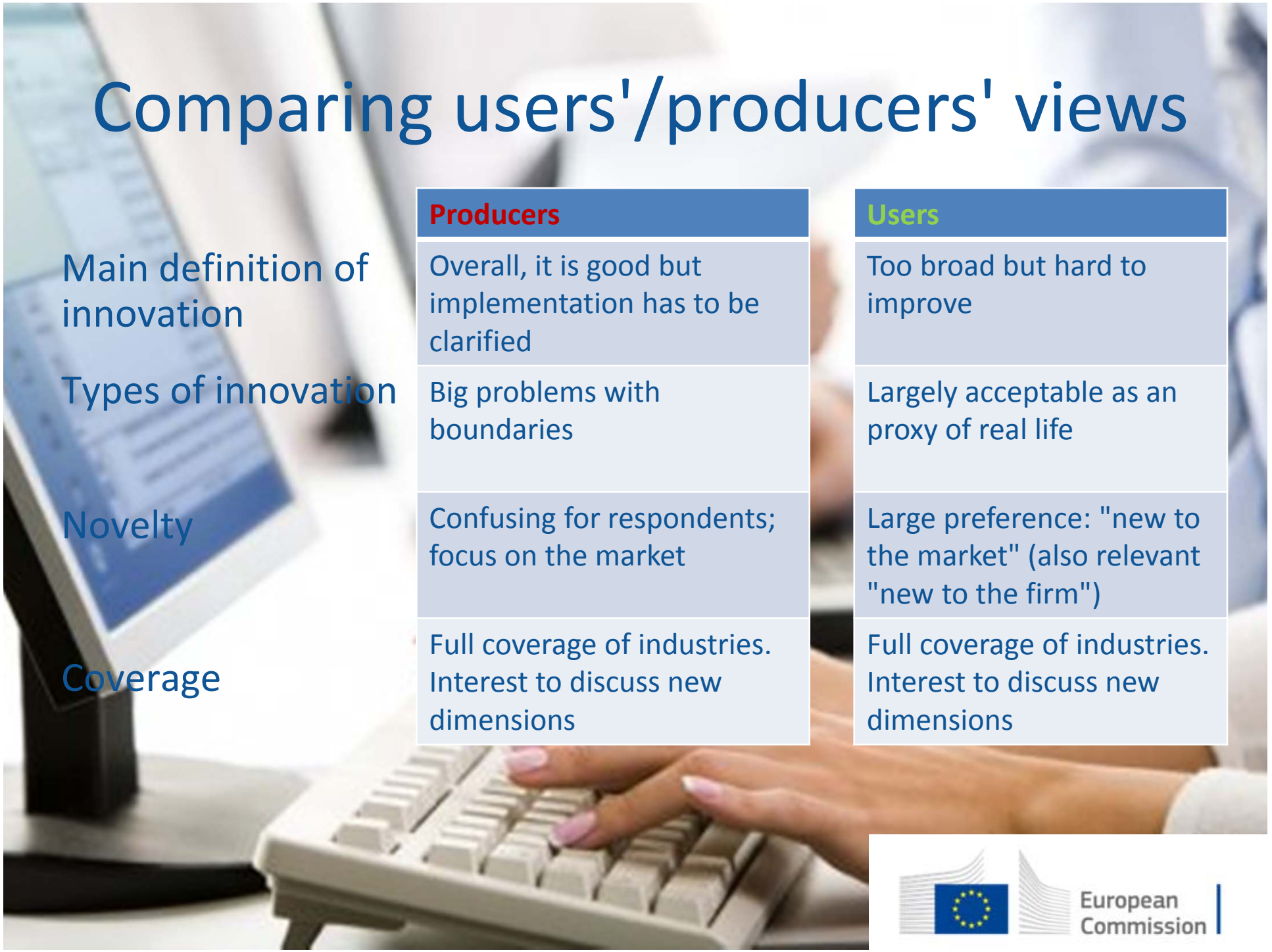
Comparing users'/producers' views

	Producers	Users
Main definition of innovation	Overall, it is good but implementation has to be clarified	Too broad but hard to improve
Types of innovation	Big problems with boundaries	Largely acceptable as an proxy of real life
Novelty	Confusing for respondents; focus on the market	Large preference: "new to the market" (also relevant "new to the firm")
Coverage	Full coverage of industries. Interest to discuss new dimensions	Full coverage of industries. Interest to discuss new dimensions



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Thank you for your attention!
Comments are welcome!
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