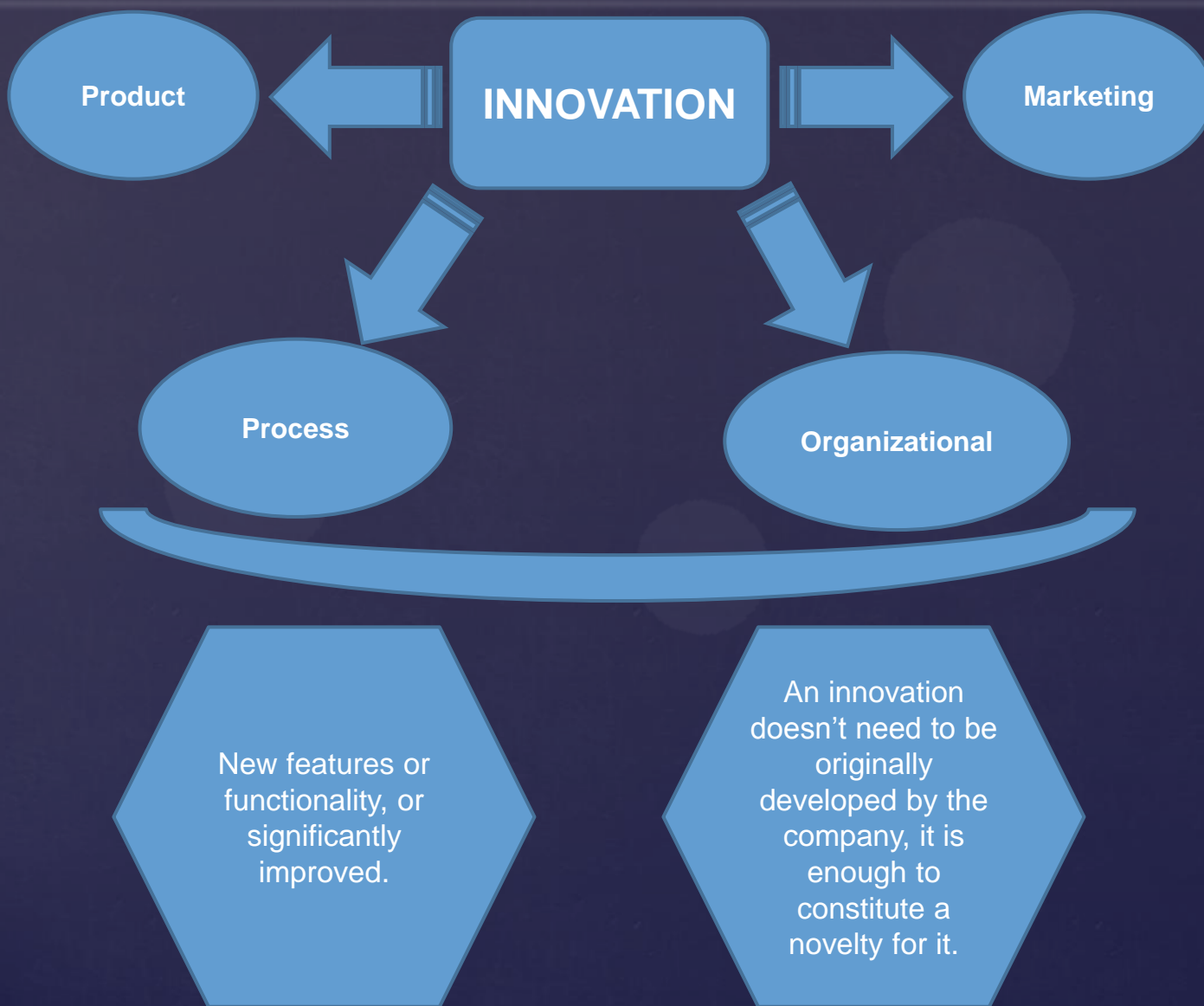


The role of users in innovation activities

Lisbon, 11th and 12th June 2015

Reunión Comité Técnico de RICYT

The role of users in innovation activities



The role of users in innovation activities



DEFINITION OF USER INNOVATION:

“Users are “firms or individual consumers that expect to benefit from *using* a product or service” (von Hippel 2005: 3). ‘User innovation’ happens when a user changes a good or service to enhance the benefit provided.”

The role of users in innovation activities

An American journalist had a habit of jogging. He used to take his baby to jogging, but soon realized that a traditional trolley could not stand the floor where he run. Then, in his garage, he replaced the wheels of the traditional cart for bicycle wheels, adapting the baby trolley for the race.

Later he created the Baby Jogger Company, introducing this model in the market: The "Baby Jogger".



The role of users in innovation activities

*Tal Golesworthy
created a valve to
his own heart and
saved his life.*



The role of users in innovation activities

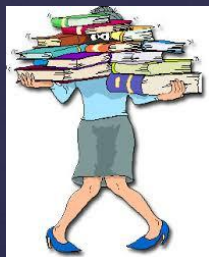
- More than a third of extreme sports club members modified or developed products for personal use (von Hippel, 2011).



Kitesurf:

Most of the innovations in this field are made by users!

- More than a quarter of librarians modified the library information systems (von Hippel, 2011).



- Aidan, 9 years old, created a hand made with Lego. North American child born without his left hand and developed a prosthesis made with Lego pieces.

User innovation (different stages, several iterations):



Statistical unit is the creator of a product or user innovator



Statistical unit is the enterprise and the importance that they give to user innovation

UI user innovation
Inquérito à Inovação de Utilizador

- ✓ User innovation survey was a pilot study conducted in 2012 by DGEEC, in collaboration with the MIT Sloan Management School and the Catholic University of Portugal;
- ✓ Our sample: highly-educated individuals:

Sample	9235
Researchers in medical sciences	5593
Doctorate holders	3642

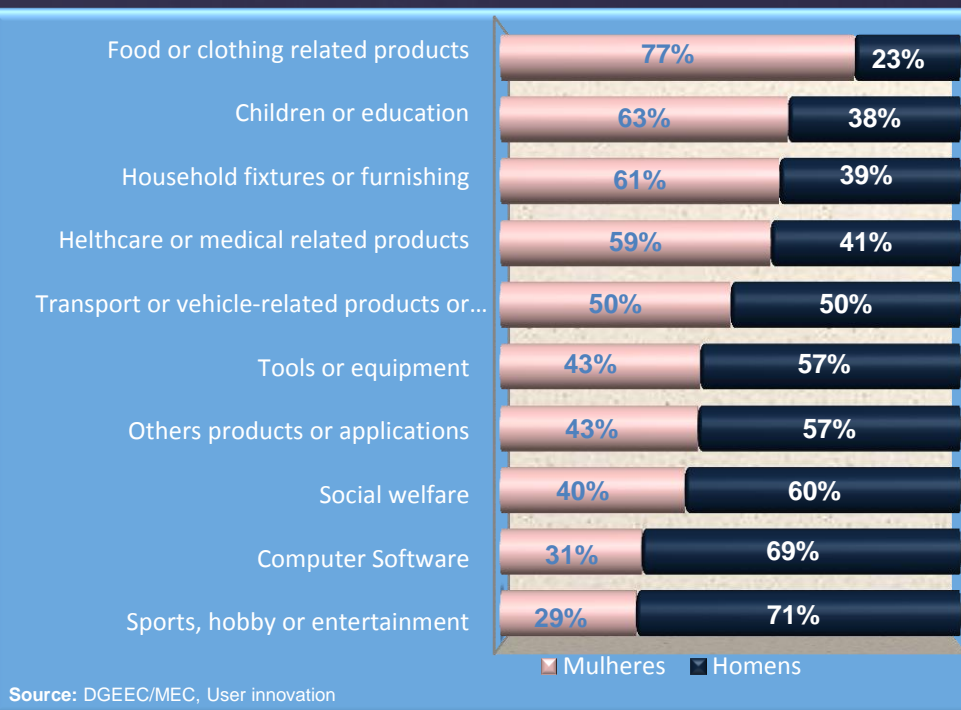
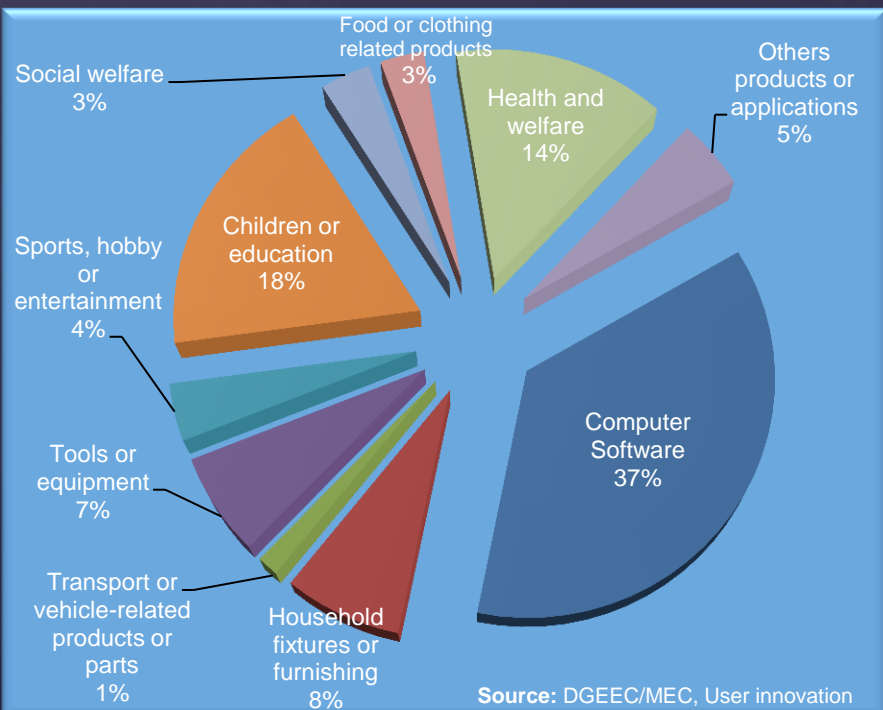
- ✓ Response rate: 26% (2423);
- ✓ Response rate of User Innovators for personal use: 18% (438).

Survey Structure:

- A. Demographic
- B. Consumer innovator
- C. Innovation process
- D. Innovation diffusion
- E. Individual traits

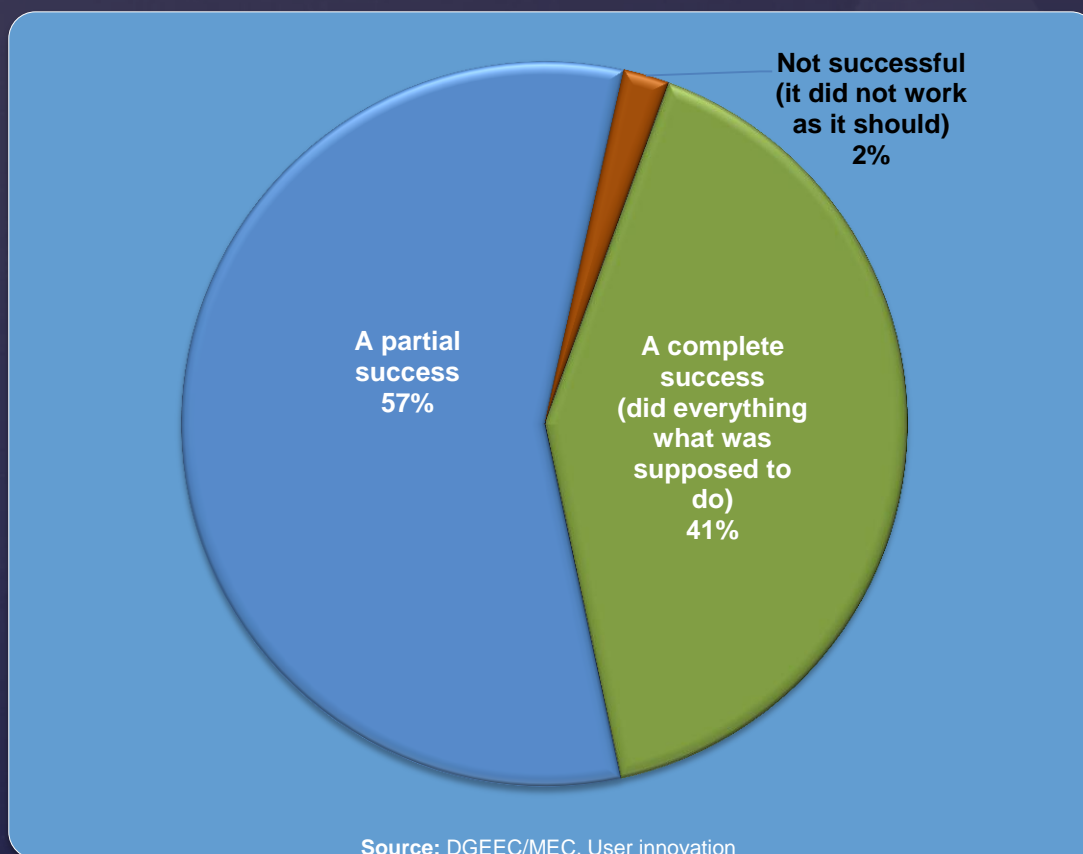
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Most significant creation for personal use (either outside, or in the context of the work)



Most people consider their innovation a success!

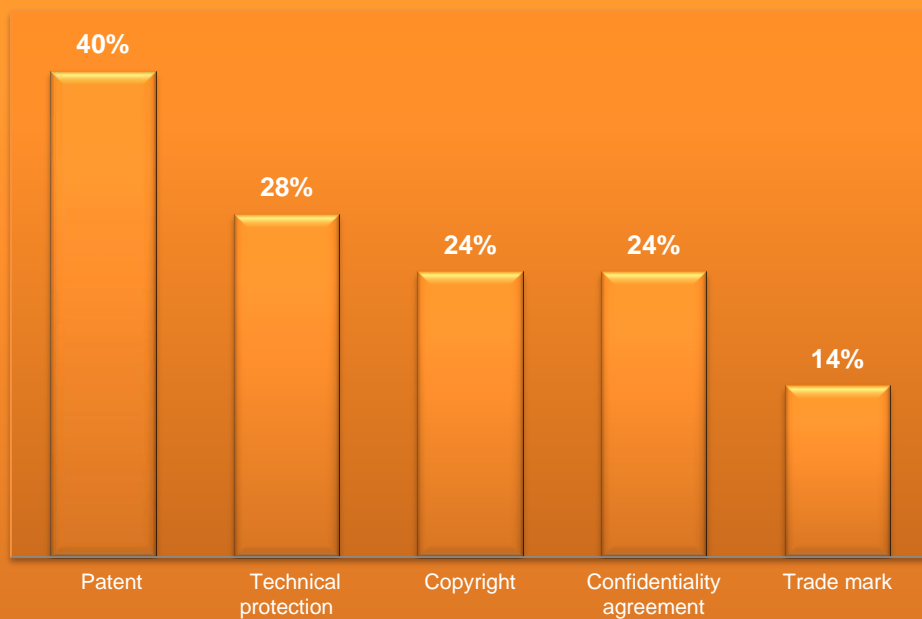
To what extent was the innovation successful?



The role of users in innovation activities

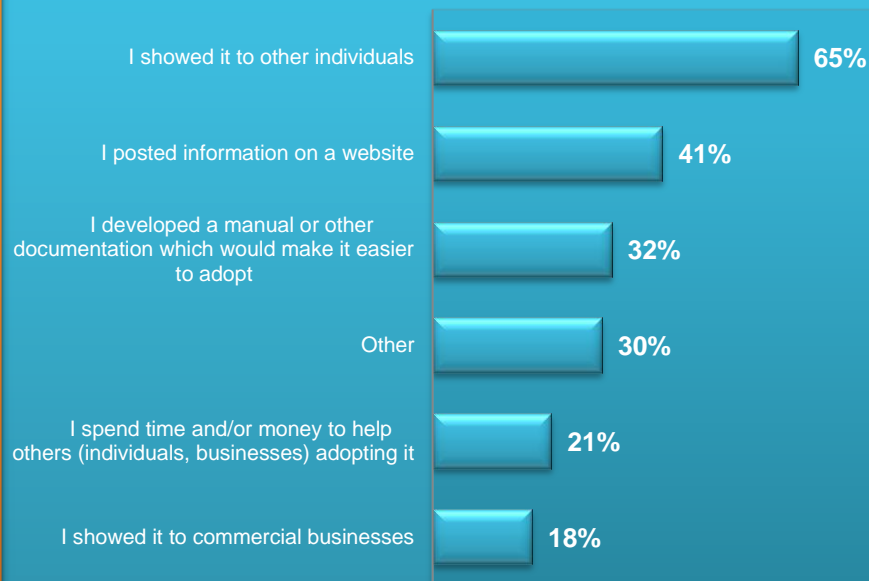
- ✓ 19% of individuals used some type of intellectual property protection, where the most used was the **Patent**;
- ✓ 53% of innovators have done some diligence to inform other people about their innovation, having mainly shown to other persons.

Intellectual property protection



Source: DGEEC/MEC, User innovation

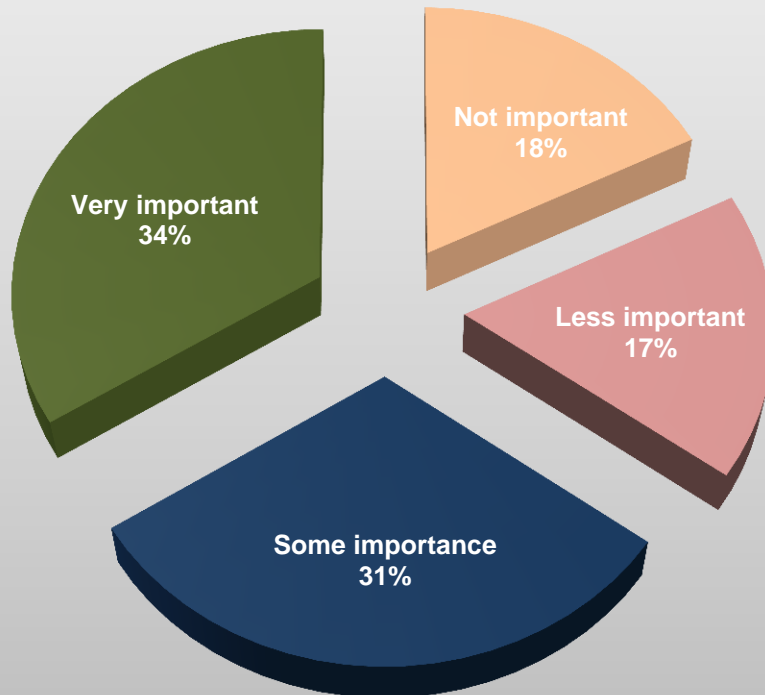
Innovation diffusion



Source: DGEEC/MEC, User innovation

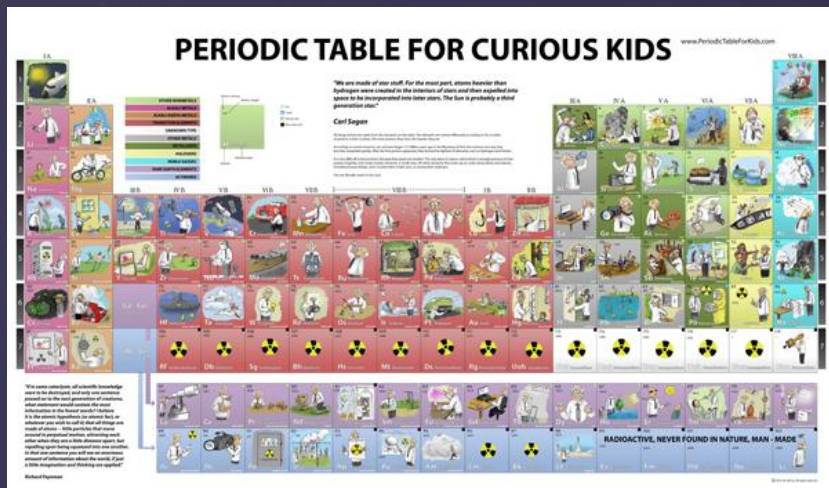
✓ Most people feel that it is very important that a firm adopts their innovation.

Importance of innovation adoption by a firm



Source: DGEEC/MEC, User innovation

The role of users in innovation activities



Periodic table for children

**A game for children
explaining brain
activities**

A new sport (Tripela)



Reasons for including questions about user innovation in the Community Innovation Survey (CIS)?

➤ Survey for the collection of official statistics of innovation.

(This survey collects information on enterprise's innovations and innovation activities during three determine years).

The role of users in innovation activities

☐ 1st question:

Importance the enterprise gives to the means used for inclusion of customer input and/or users, in their innovation activities and production of innovative products or services.

Ways and modes of including customers and users in innovation activities and production of innovative products		Degree of importance			
		High	Medium	Low	Not used
Consideration to customer and user needs and to user information	Use of customer feedback systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Use of market studies, consumer panels, focus groups and interviews, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Surveying of user needs by research methods; examination of unconscious needs and other user observation by means of ethnographical, anthropological, need and use analyses, and interviews of use situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Users as a re-source of innovation activities; joint brainstorming, development and content production	Development forums and e.g. development platforms provided by the enterprise to collect ideas from users and user communities; software and content production, crowdsourcing, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products moulded and developed by users and their commercialisation	Customers and users moulded existing products, and your enterprise was responsible for the actual development, production and market introduction of the product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Customers and users developed a new product that your enterprise took into its production and introduced on the market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ 2nd question: “Did your enterprise introduce new or modified products between 2010-2012 that were partially or entirely developed by customers? If yes, fraction of these products on total new or modified products introduced between 2010-2012?”

Effective participation of users in the firms innovation activities, such as the placing on the market of new or modified and/or developed products by users.

The role of users in innovation activities

Importance of information sources to the innovation activities of the enterprise, between 2010 and 2012 (share of enterprises with product and/or process innovation activity)	Degree of importance		
	High	Medium	Low
	%	%	%
Own enterprise or enterprise group	47	32	7
Clients or customers from the private sector	28	34	18
Suppliers of equipment, materials, components, or software	26	45	15
Conferences, trade fairs, exhibitions	14	30	20
Competitors or other enterprises in the sector	13	33	23
Clients or customers from the public sector	13	21	20
Scientific journals and trade/technical publications	9	27	27
Professional and industry associations	8	27	26
Consultants and commercial labs, or private R&D institutes	7	21	22
Universities or polytechnics	7	15	17
Government or public research institutes	5	14	17

Source: DGEEC/MEC - Community Innovation Survey 2012

The role of users in innovation activities

Most important innovation co-operation partners, between 2010 and 2012 (share of enterprises with product and/or process innovation activity)	Degree of importance
	High
	%
Suppliers of equipment, materials, components, or software	26
Other enterprises within your enterprise group	20
Clients or customers from the private sector	19
Universities or other higher education institutions	16
Government, public or private research institutes	7
Consultants and commercial labs	6
Competitors or other enterprises in your sector	4
Clients or customers from the public sector	2

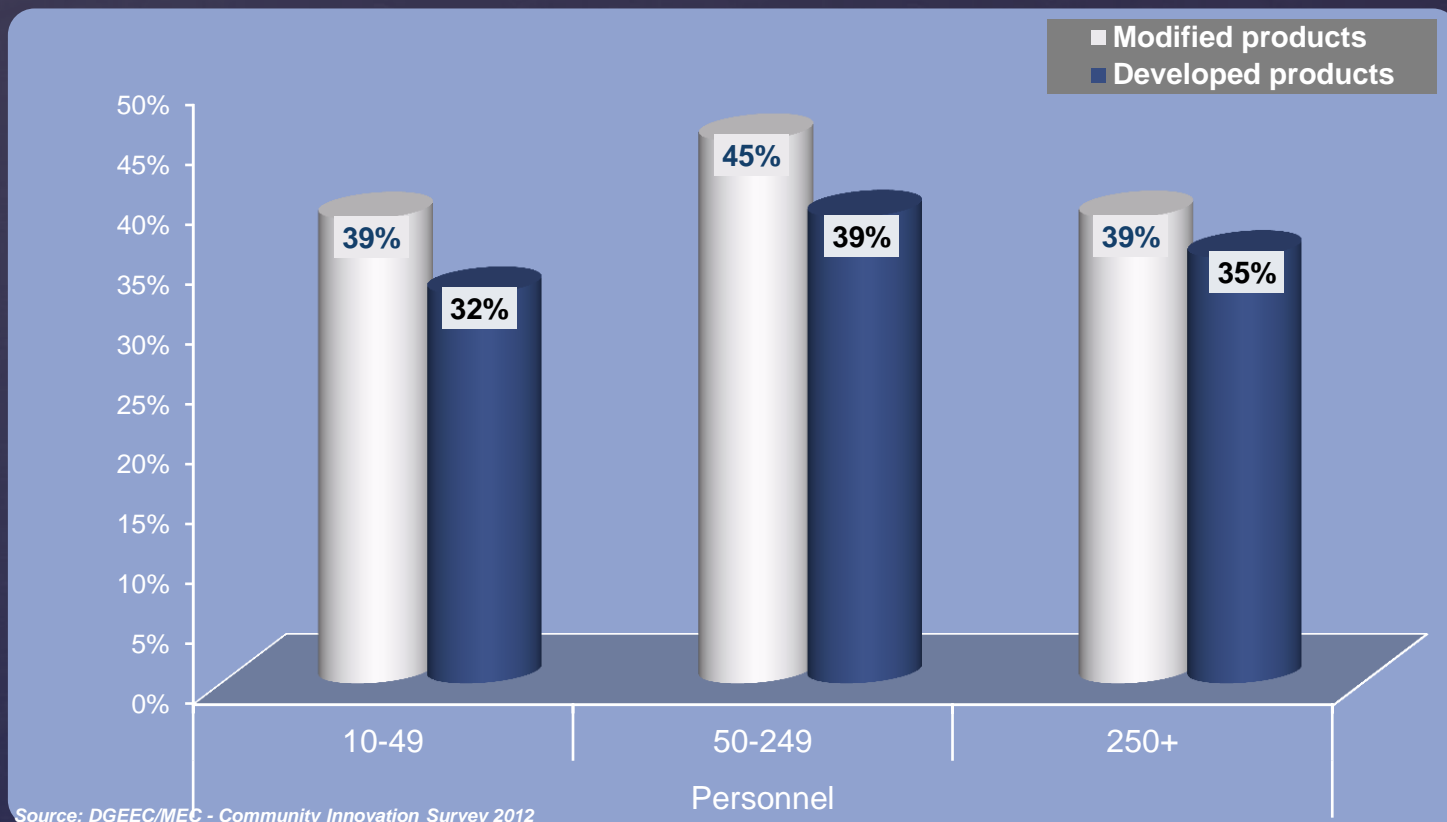
Source: DGEEC/MEC - Community Innovation Survey 2012

The role of users in innovation activities

Incorporation of users and user information in enterprises innovation activities and their importance (share of enterprises with product and/or process innovation activity)	Degree of importance			
	High	Medium	Low	Not used
	%	%	%	%
User needs and user information; customer feedback systems	36	31	10	23
Products modified by users; enterprise responsible for the production and market launch	13	27	16	44
Products developed by users; enterprise responsible for the production and market launch	12	22	16	50
User needs and user information; ascertaining unconscious needs and other user observation	10	17	17	55
User needs and user information; market surveys, consumer panels, etc.	8	19	20	53
Joint development; e.g. development platforms for collecting ideas and producing contents	4	15	16	65

Source: DGEEC/MEC - Community Innovation Survey 2012

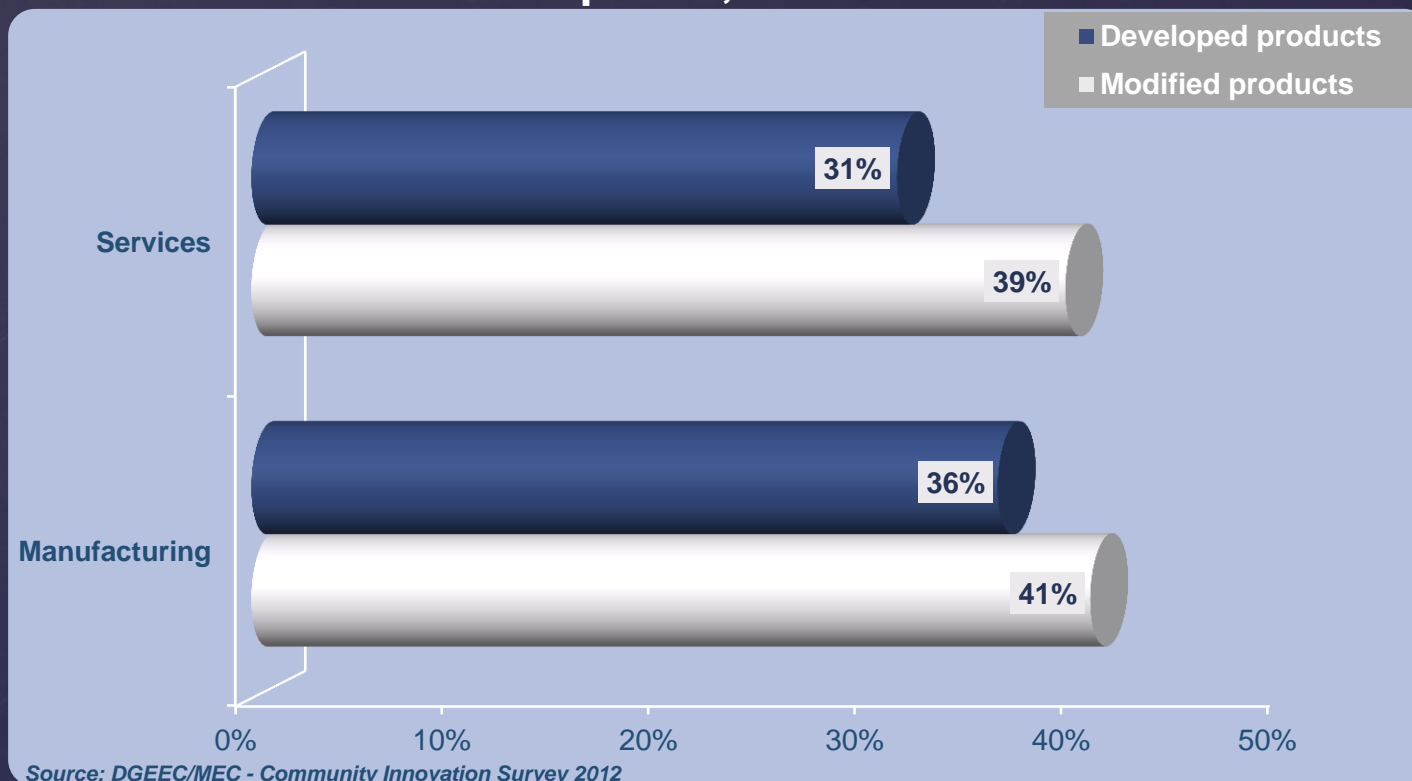
Importance of user innovations by enterprise size (personnel), 2010-2012



About 45% of innovative firms consider that the products modified by users are of high and medium importance. In general, innovation activity is more common in medium-sized enterprises, highlighting the importance of modified products on the products developed as a major source of cooperation between the company and user innovations.

The role of users in innovation activities

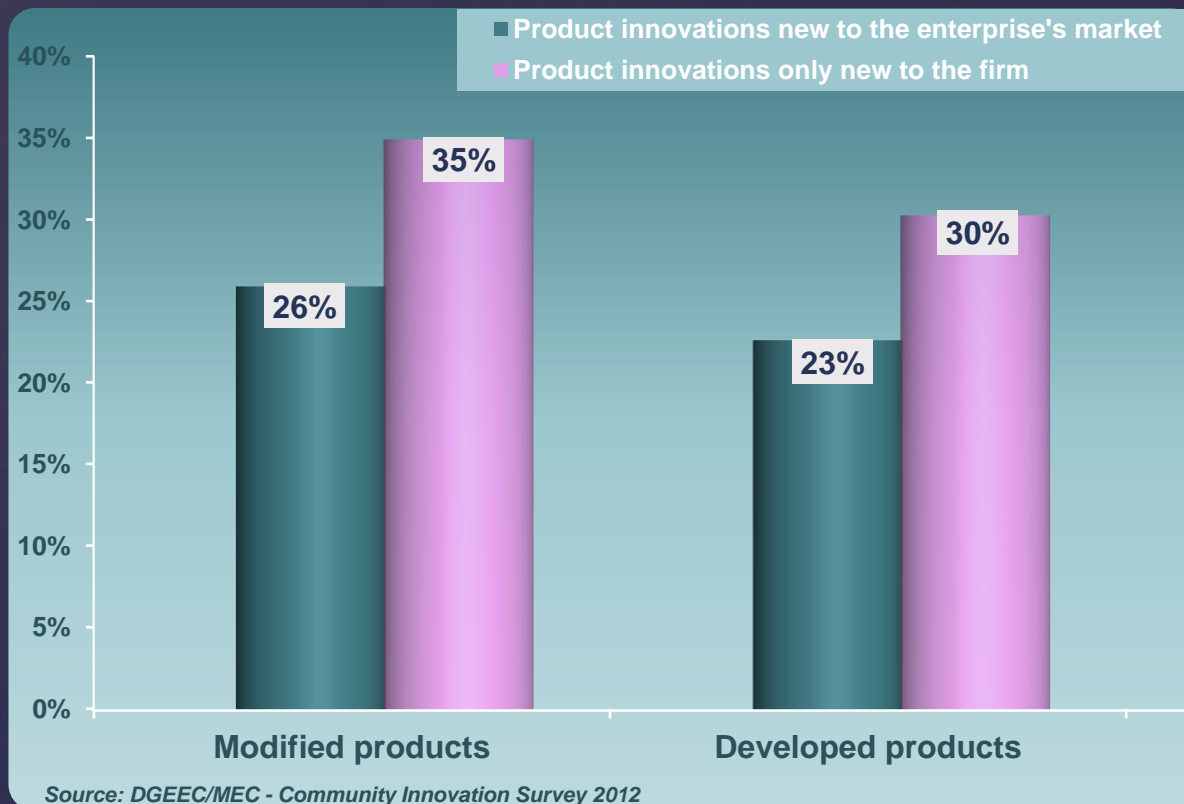
Utilization of user innovations in services and manufacturing enterprises, 2010-2012



- ✓ Modified and developed products have a similar distribution;
- ✓ Manufacturing sector is the most important in the use of user innovations;
- ✓ Manufacturing firms are slightly more active in adopting user innovations than services firms.

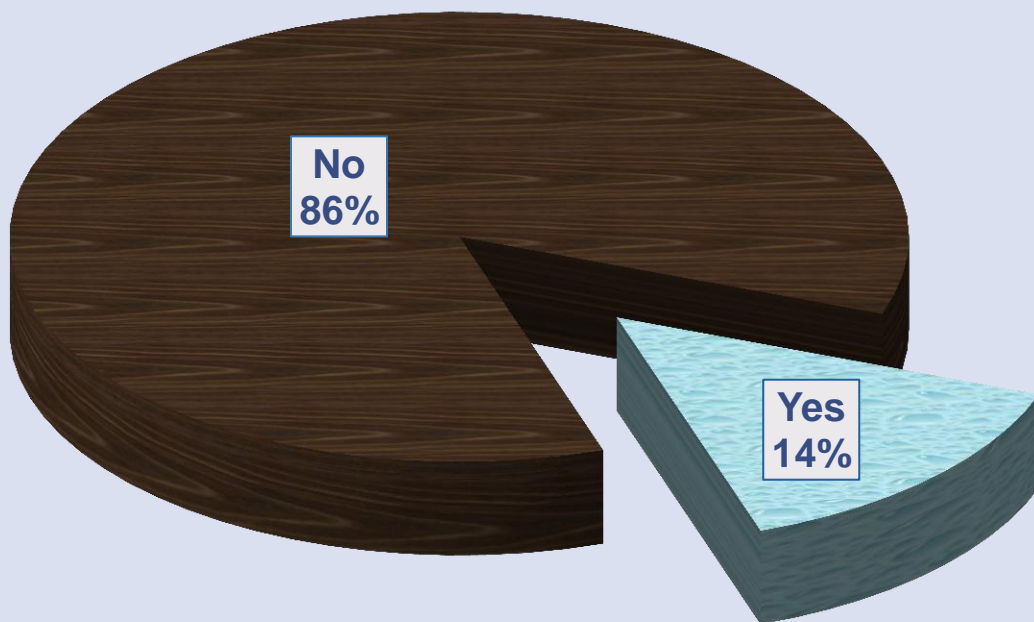
The role of users in innovation activities

Novelty aspect of user innovations, 2010-2012



- ✓ Considering high and medium importance: the key difference between user modified innovations and products developed by users is that, a somewhat larger share of respondents view user modified products as more important than pure user innovations;
- ✓ Enterprises also give more importance to new products - both modified and developed – only new to the firm, and minor to product innovations new to the enterprises market.

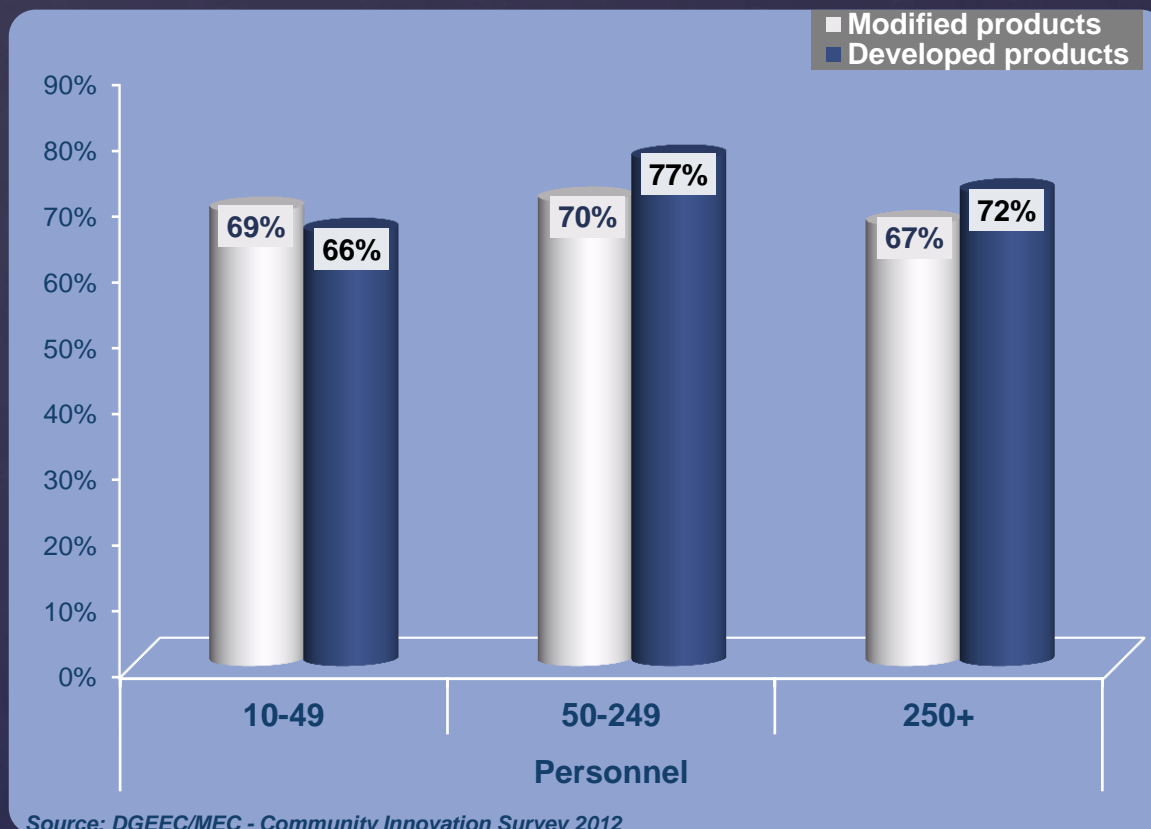
Introduction in the market of new or modified products, modified or developed by the users



Source: DGEEC/MEC - Community Innovation Survey 2012

The role of users in innovation activities

Importance of introduction on the market user innovations, by enterprise size (personnel), 2010-2012

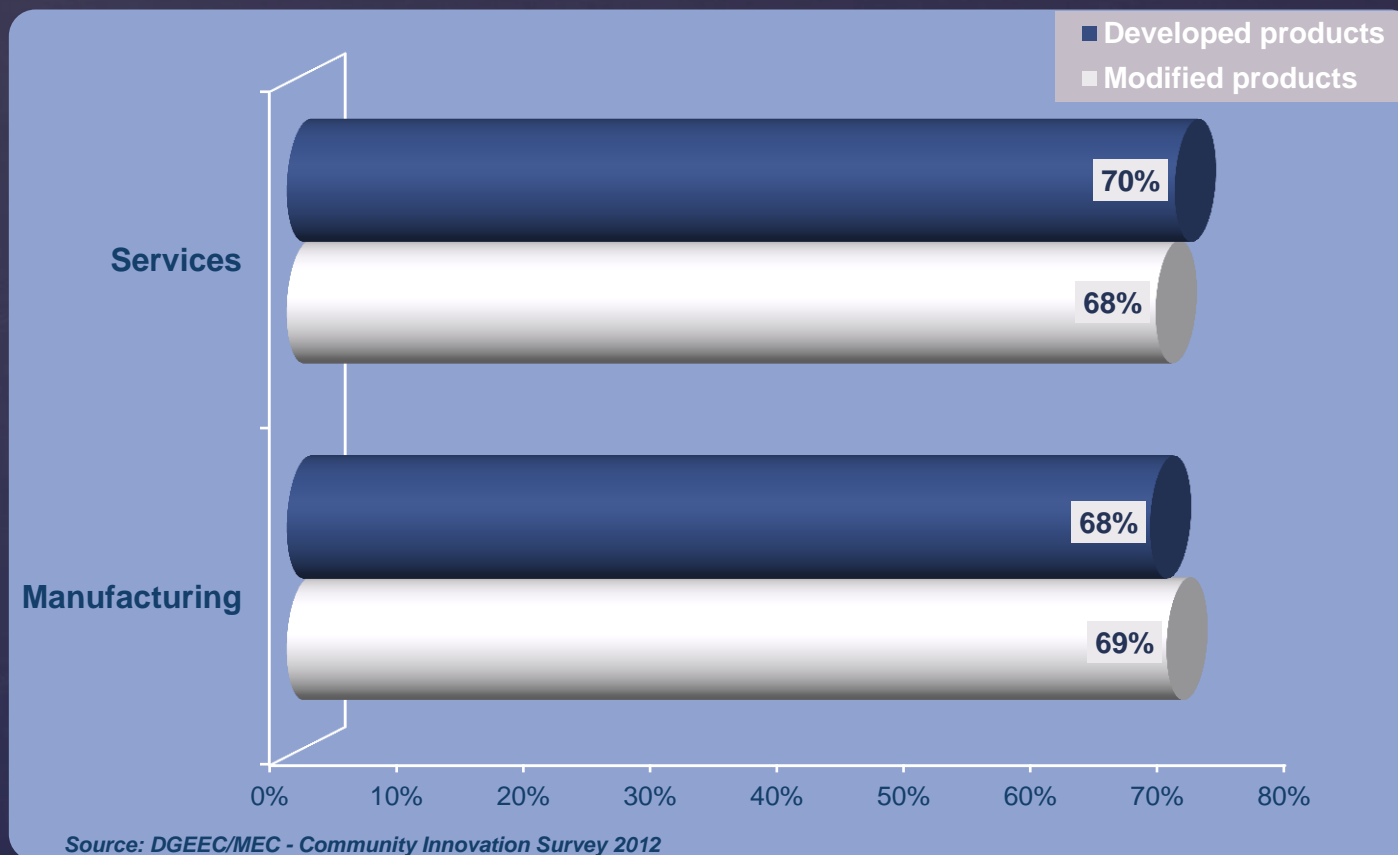


(Consider only high and medium importance)

- ✓ Up to 70% of innovating enterprises consider products developed by users as a relevant source of innovations;
- ✓ Innovation activity is more common in medium to large enterprises than in smaller ones.

The role of users in innovation activities

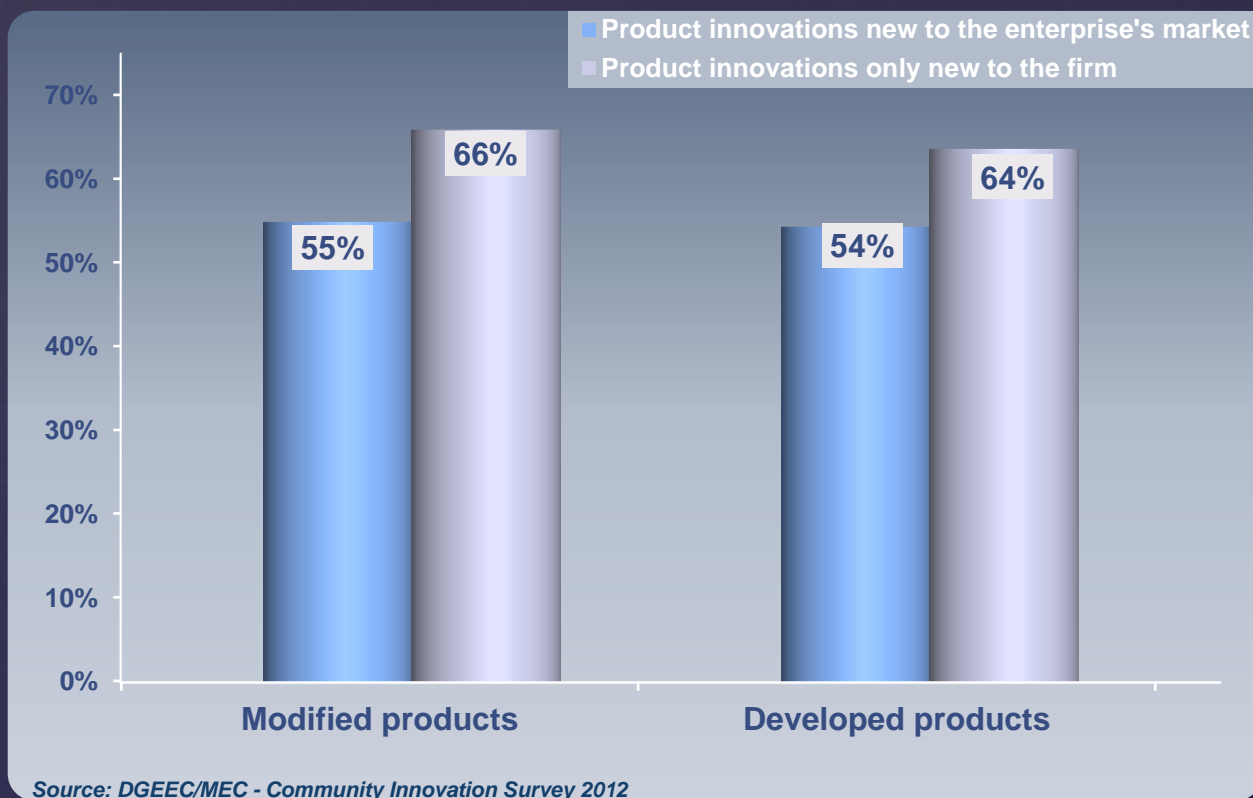
Utilization of user innovations in services and manufacturing enterprises, 2010-2012



- ✓ The distribution is similar between the modified and developed products by users;
- ✓ For services enterprises the developed products by users are slightly more important in introduction on the market.

The role of users in innovation activities

Novelty aspect of user innovations, 2010-2012



- ✓ The share of importance between modified or developed products to the type of innovative enterprise is similar;
- ✓ The important observation is that the influence of user modified or developed innovations was greater for enterprises that reported product innovations, only new to the firm.

Conclusions:

User innovation pilot survey:

- ❖ User innovation pilot survey captures both product and service innovation;
- ❖ 18% of the individual respondents claim that they have innovated for personal use;
- ❖ Most people feel that it is very important that a firm adopts their innovation.

CIS survey:

- ❖ First time it was added questions about user orientation in innovation activities and in production of innovative products in CIS survey;
- ❖ 64% of firms (with innovation activity) use some kind of user information on their innovation activities, that, shows a fundamental role of users in the enterprises innovation;
- ❖ 14% indeed introduced products modified or developed by users;
- ❖ The results shows that users have a strong participation in the innovation process;
- ❖ This data also demonstrates a part of innovation that is not being accounted for and contemplated.

Obrigado!
Gracias!
Thank you!

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