FEMALE PARTICIPATION IN IT SECTOR.

THE USE OF YOUNG WOMEN POTENTIAL

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SEPTEMBER 25,2014

DEFINITIONS AND CONCEPTS

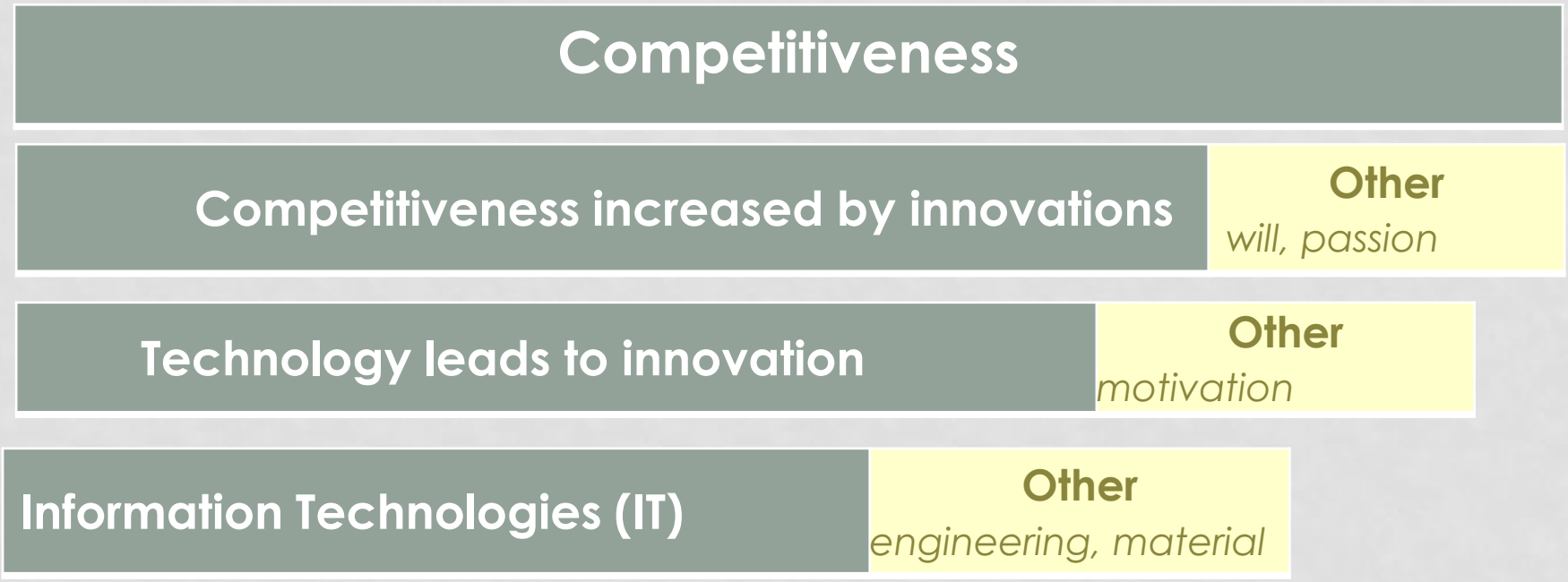
- **USED CONCEPTES**
- IT – **I**nformation **T**echnologies
- ICT – **I**nformation and Contact Technologies
- ITT – **I**nformation and **T**elecommunication **T**echnologies
- ICT – **I**nformacinės and **C**ommunication **T**echnologies

- INFORMATION and COMMUNICATION TECHNOLOGIES – technologies of digital (data) information management and processing, including computer equipment, equipment of software, electronic networks, data transmission and communication.

ICT IR INNOVATIONS

- Information and communication technologies have a huge impact on the dispersion of technologies and innovation in various sectors. This is determined by characteristic dynamics and innovations of ICT, besides, it contributes the changes in other sectors.
- The 40% of productivity growth and 25% of GDP growth in the **EU** arise from **the use** of ICT. So, it comes not primarily about the growth of the ICT sector, but on the other sectors of the economy and competitiveness of the whole economy.
- Right in the ICT sector is directly created 5 per cent of **European** GDP, which the market value – 660 billion Euros per year.

COMPETITIVENESS PROMOTED BY INNOVATION



ICT IMPACT ON PRODUCTIVITY AND GDP IN LITHUANIA

- Although, ICT sector creates 2,3 per cent of GDP **in Lithuania** directly (EU – 5 proc.) but the sector's contribution to the growth of overall productivity is much higher due to its characteristic dynamics, innovation and impacts to other sectors' changes.
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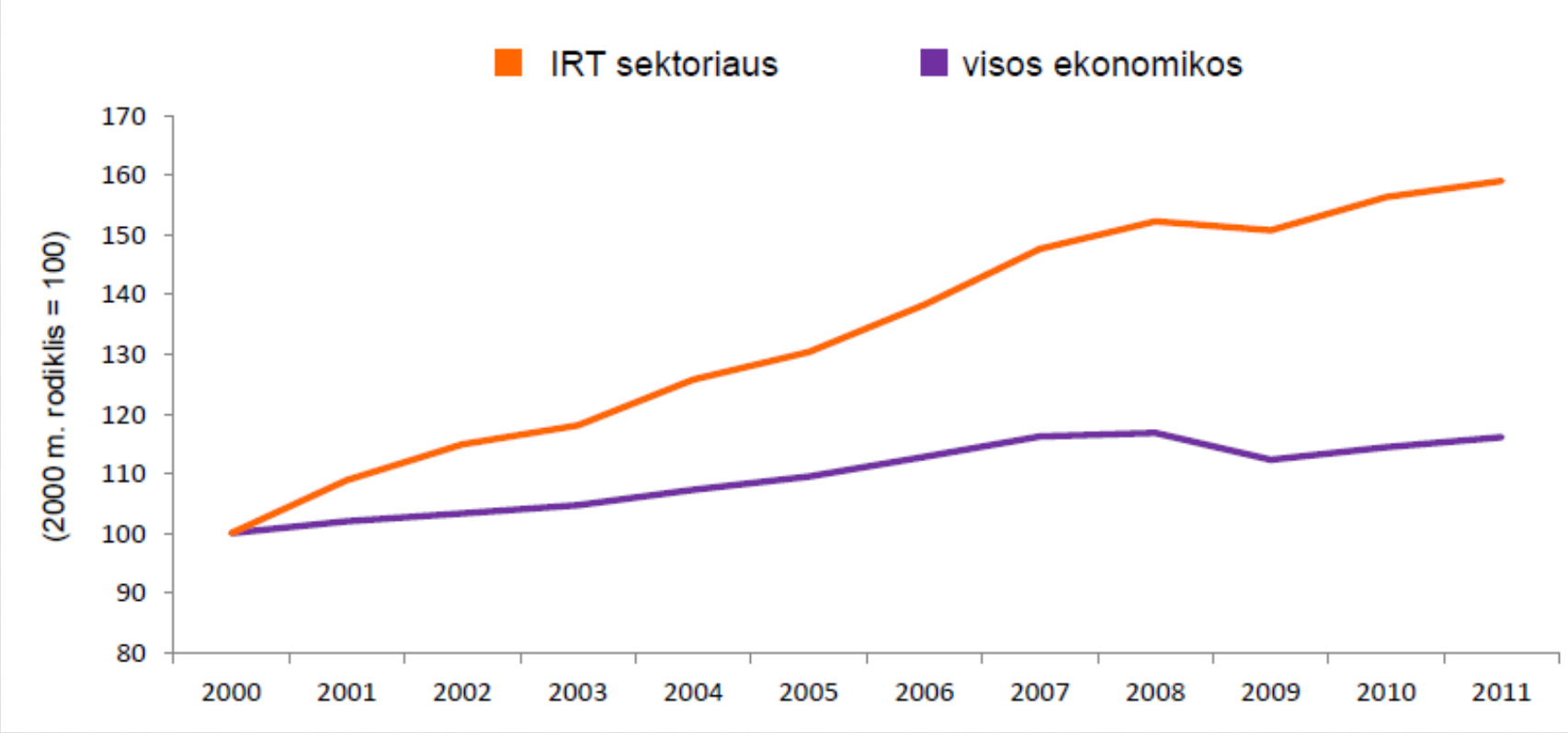
	2008	2009	2010	2011	2012*	
IT sektoriaus produkcija, mln. Lt	**5563,3**	**4734,3**	**4940,8**	**4944,0**	**4858,7**	***Output of the ICT sector, LTL million***
dalis nefinansinių įmonių sukurtoje produkcijoje, %	3,6	4,5	4,1	3,4	3,3	*per cent of the output of non-financial enterprises*
IT sektoriaus pridėtinė vertė, mln. Lt	**2180,5**	**2072,8**	**2088,9**	**2343,7**	**2565,0**	***Value added of the ICT sector, LTL million***
dalis bendroje pridėtinėje vertėje, %	2,2	2,5	2,4	2,5	2,5	*per cent of the gross value added in the whole economy*
dalis BVP, %	1,9	2,3	2,2	2,2	2,3	*per cent of GDP*

ICT SECTOR'S GROSS VALUE ADDED GROWTH IN THE EU

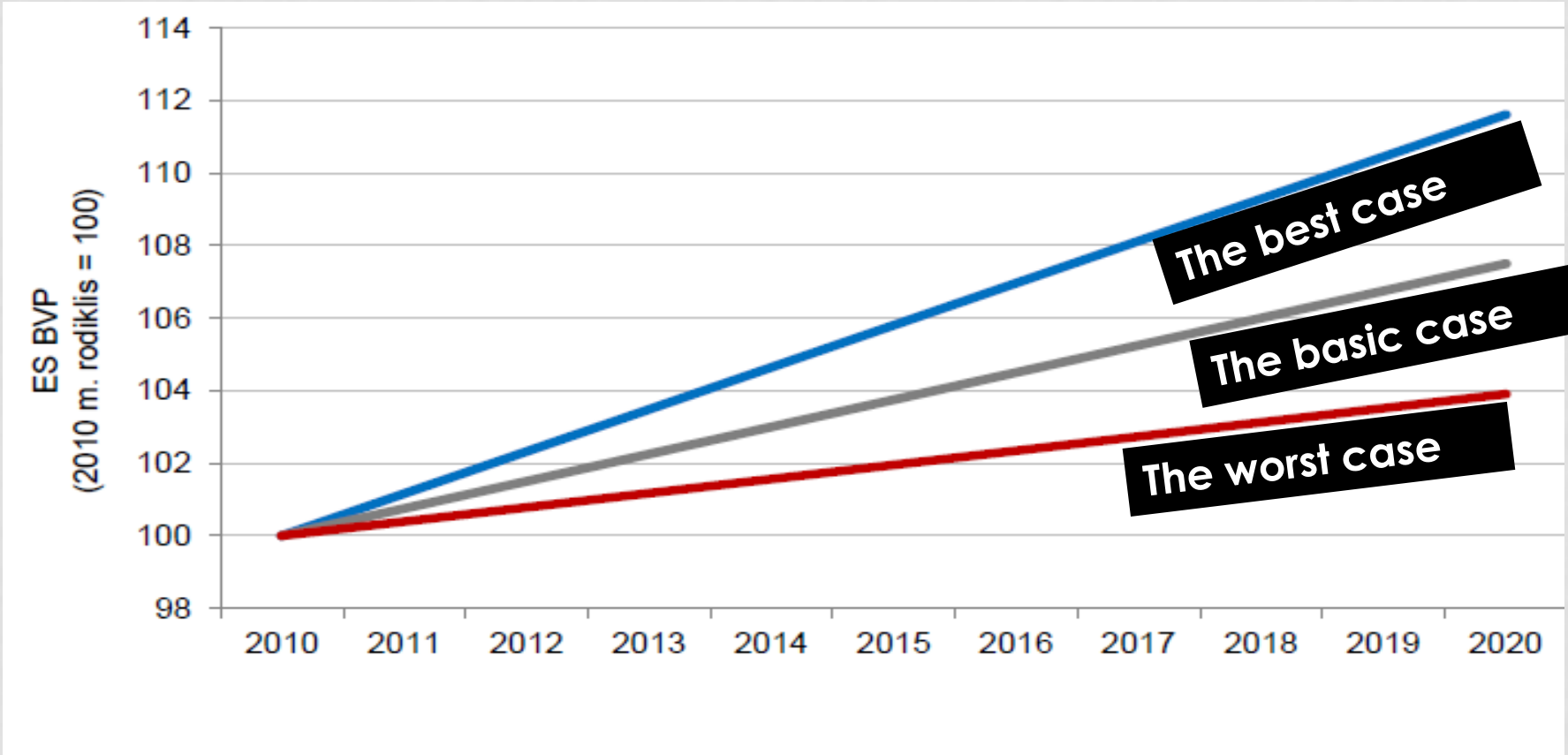
- ICT sector contributes an increasing part of **EU economy**



Year 2000 indicator= 100 . Source– Europos Komisija

FORECAST OF DGP GROWTH RELATED TO THE DIGITAL ECONOMY IN EU

It is forecasted, that the digital economy could rise GDP of EU to 4 % to the year 2020.



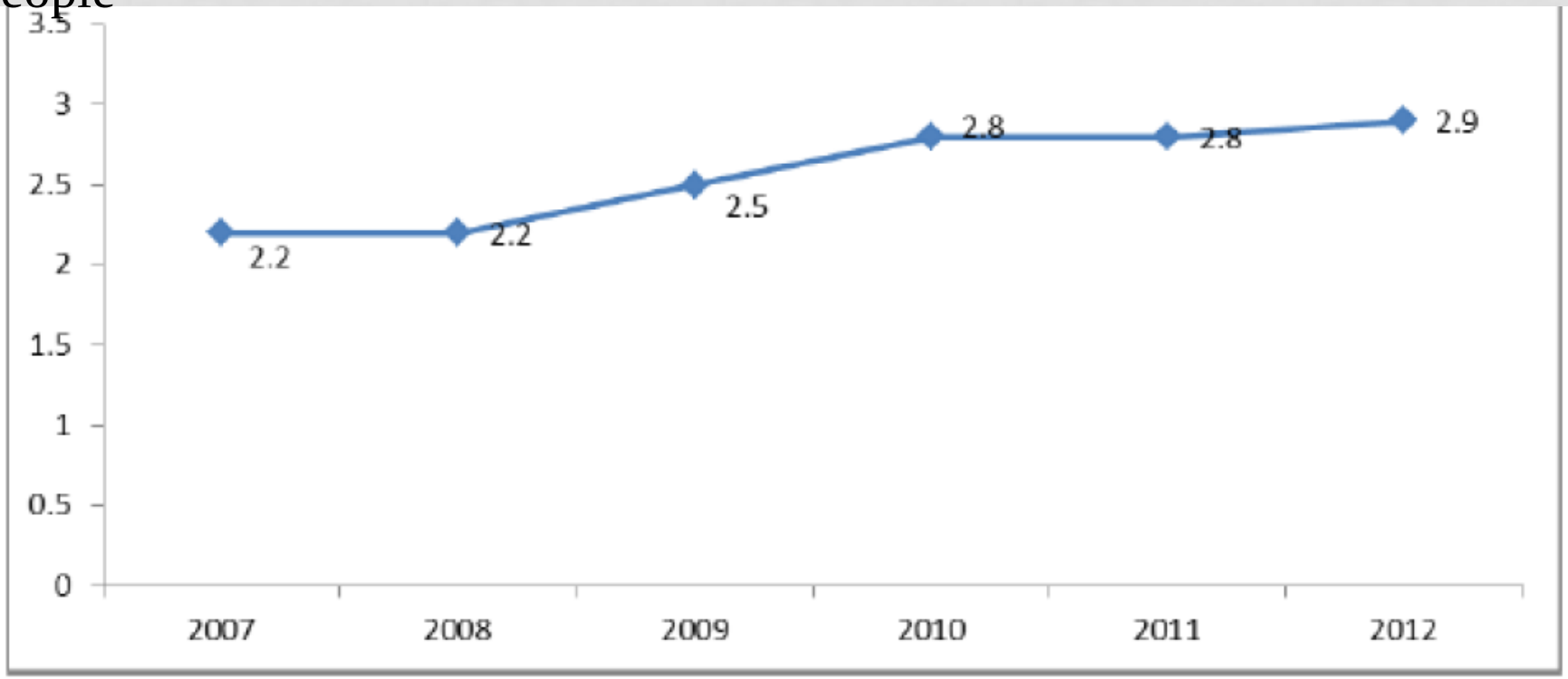
- *source – 'Copennagen Economics'*

ICT PROFESSIONALS IN THE EU, TILL 2011

3,7% EU workforce (more than 8 mln.) are ICT professionals

EMPLOYMENT AT ICT SECTOR IN LITHUANIA

In Lithuania, ICT professionals make 2,9% of all employees, 24 500 people

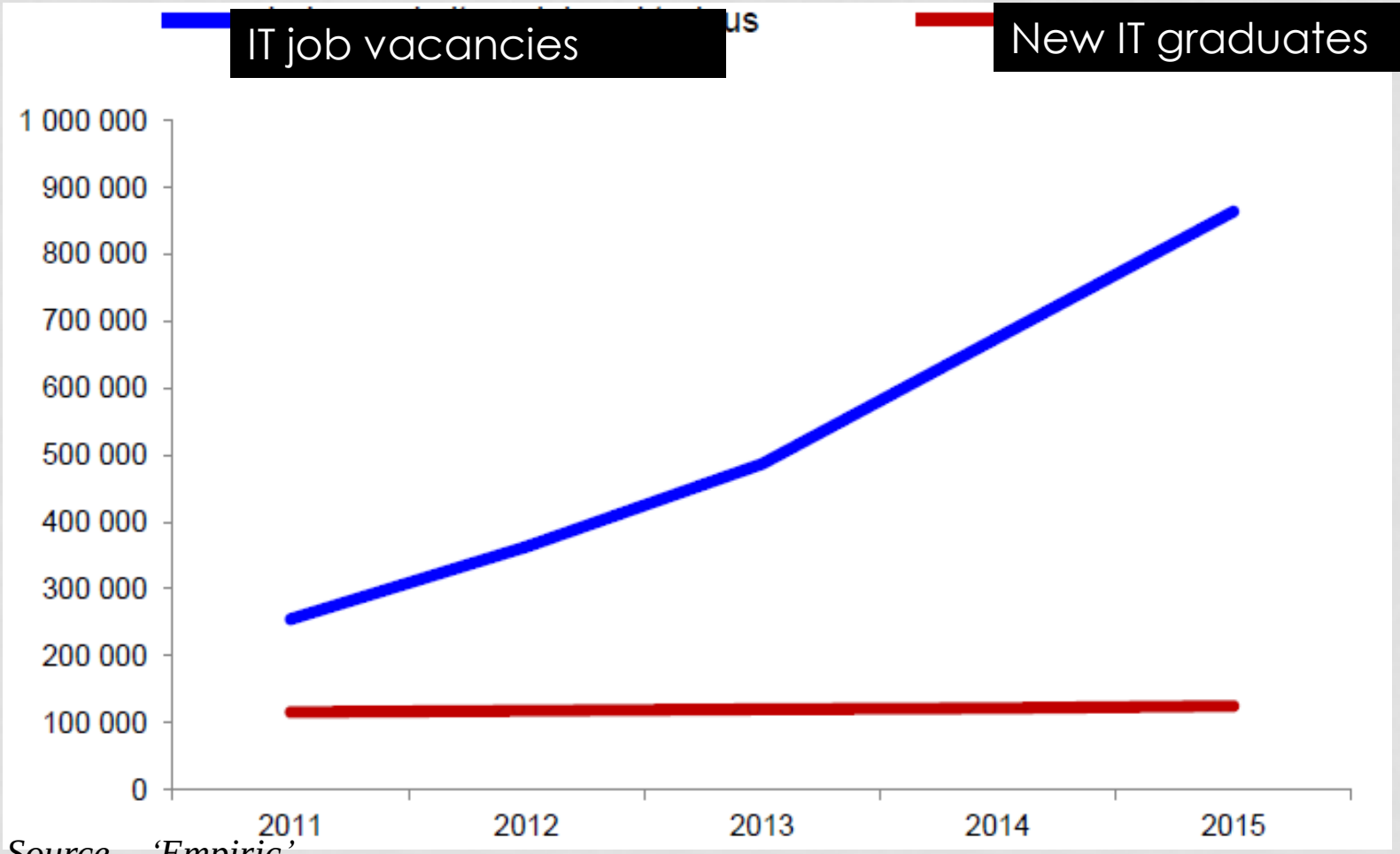


Šaltinis: Lietuvos statistikos departamentas

LACK OF ICT PROFESSIONALS

- ICT – it is one of the sectors where occuption is growing most in recent years. However, the opportunities of the further development and creating of quality positions in ICT sector is limited by the decreasing number of young professionals. This problem affects many European countries.
- It is emphasized in the digital agenda of Europe that without experienced professionals ICT sector can not grow effectively and increase the competitiveness of European economy and productivity.
- It is expected that by the year 2015 **Europe** can lack about **700 000** ICT professionals, and by the year 2020 –even about **900 000** professionals.

THE NUMBER OF VACANCIES AND GRADUATES AT DIGITAL SECTOR IN EU

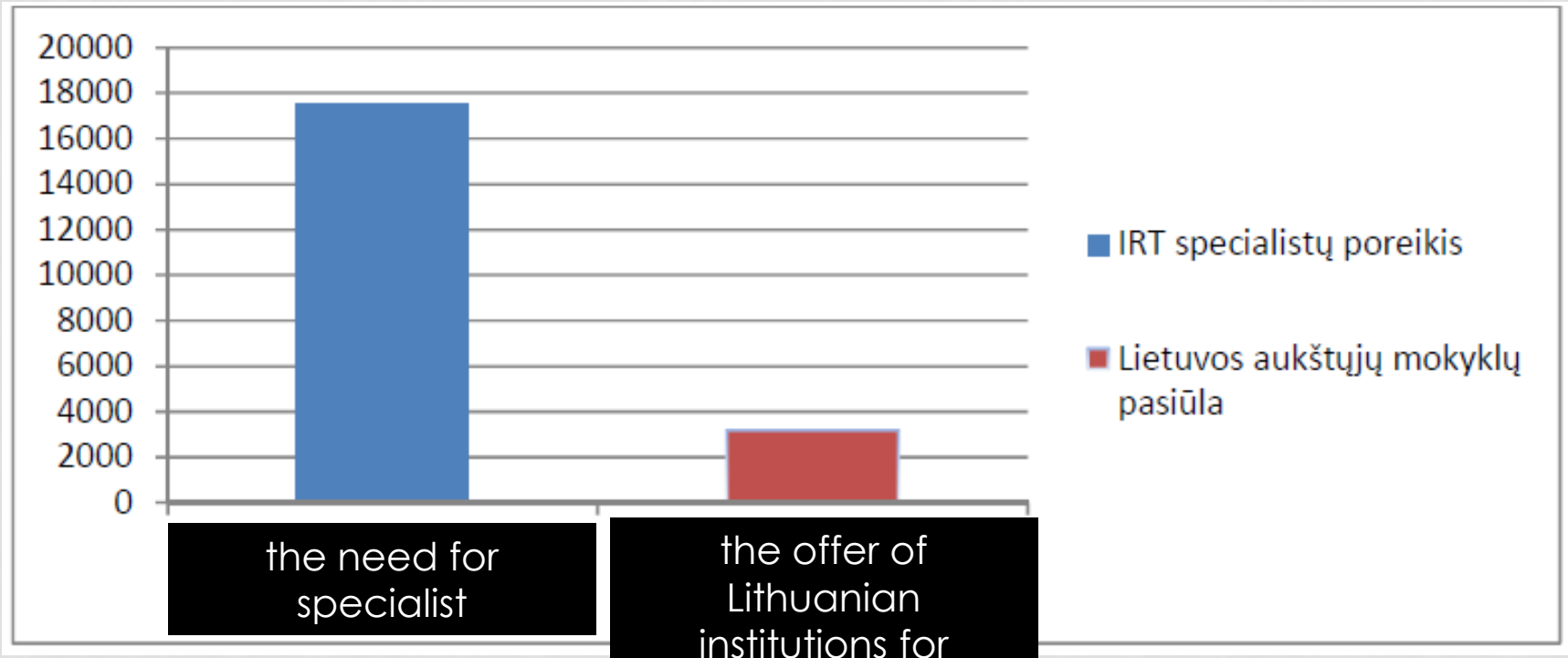


Source – 'Empiric'

DEMAND AND SUPPLAY OF ICT PROFESSIONALS IN LITHUANIA

- The lack of skilled ICT professionals, who are able to create new ICT products and services – a significant problem in **Lithuania**.
- According to survey of ICT companies conducted by INFOBALT, the demand of new ICT professionals will be about **~17500** in 2014–2016. In addition to this, it is predicted that during this period **3200** of new ICT professionals will be educated in Lithuania.
- The gap between the demand and supplay of ICT professionals will reach **14000** professionals in Lithuania. It means that the demand of ICT professionals will be five times more than the supplay.

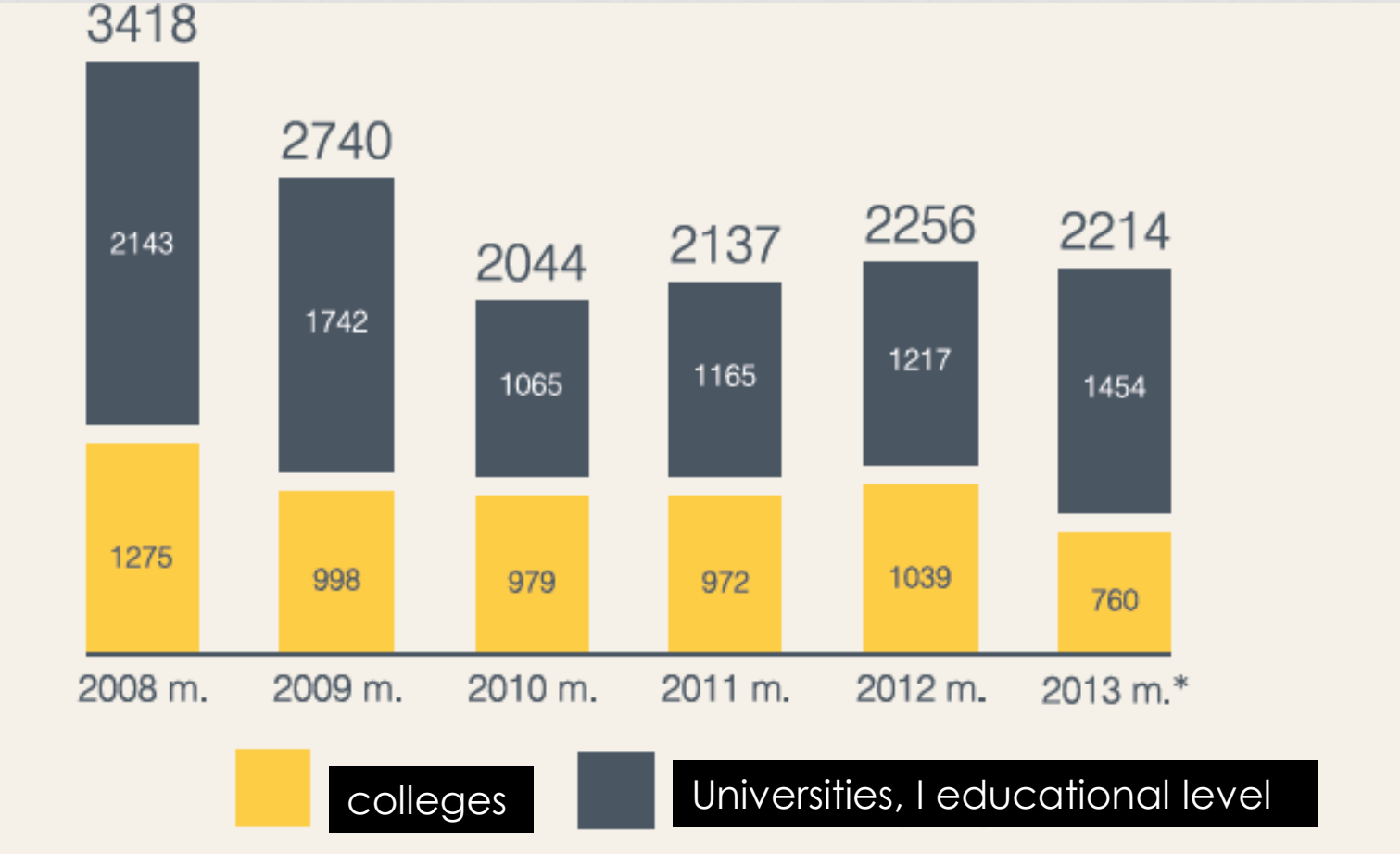
THE FORECASTED DEMAND AND SUPLLAY OF ICT PROFESSIONALS IN LITHUANIA IN 2014–2016



APPLICANTS TO THE ICT STUDIES IN LITHUANIA

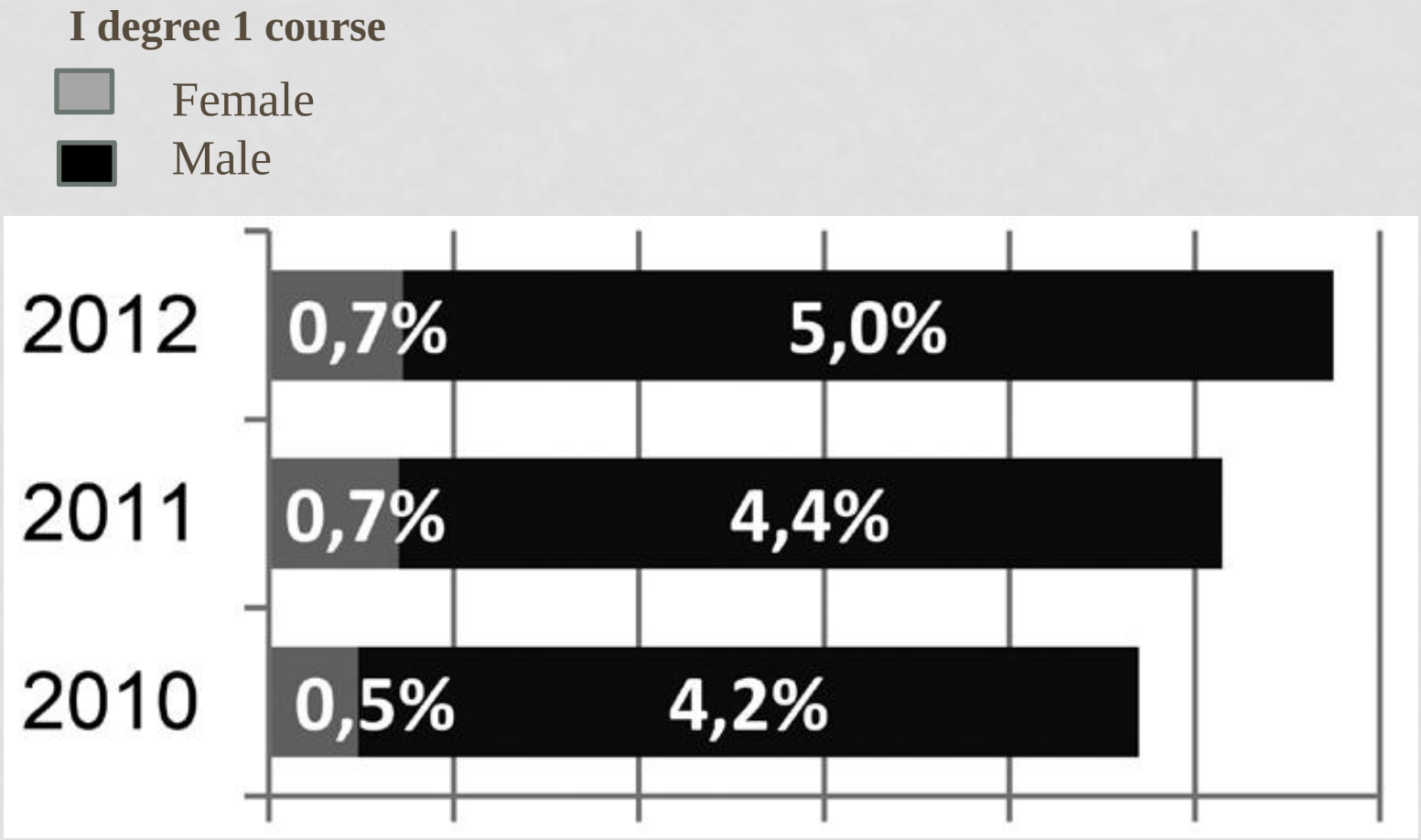
- The statistics of the first year students' of high education in Lithuania (first degree of universities and colleges) show that the ICT studies chose about **6%** of all high school students (an average during the year 2008–2012).
- The number of the first year students' at ICT programmes in the high schools was decreased in 2008–2013. In 2013 comparing to 2008, ICT programmes have chosen 35% of students' less.
- But from the year 2010, the demand of ICT studies is noticed.

THE FIRST YEAR STUDENTS IN ICT STUDIES AT HIGH SCHOOLS IN LITHUANIA



Source: LR Statistics Departament. Centre of IT education

THE ENROLLMENT BY GENDER TO ICT STUDIES IN LITHUANIA IN 2010–2012



Data source:EMIS

FEMALE IN ICT EDUCATION(LT)

- The number of girls, who choose ICT studies, is very little in Lithuania – it is only **1 per cent of all students** in a few last years.
- However, according to the Lithuanian universities'data during the period 2010–2013, the number of girls, who choose informatics is on the rise.
  - In 2010 – 11,9 per cent studying ICT;
  - In 2013 – 15,6 per cent studying ICT.

ICT SUBJECT IS NOT POPULAR AMONG STUDENTS AT GENERAL EDUCATION INSTITUTIONS IN LITHUANIA

- According to data of EMIS, only 3 per cent of all students take ICT maturity exam in the last few years (in 2010–2013) in Lithuania.

- Only **13 per cent** of all students who take ICT exam, **are girls.**

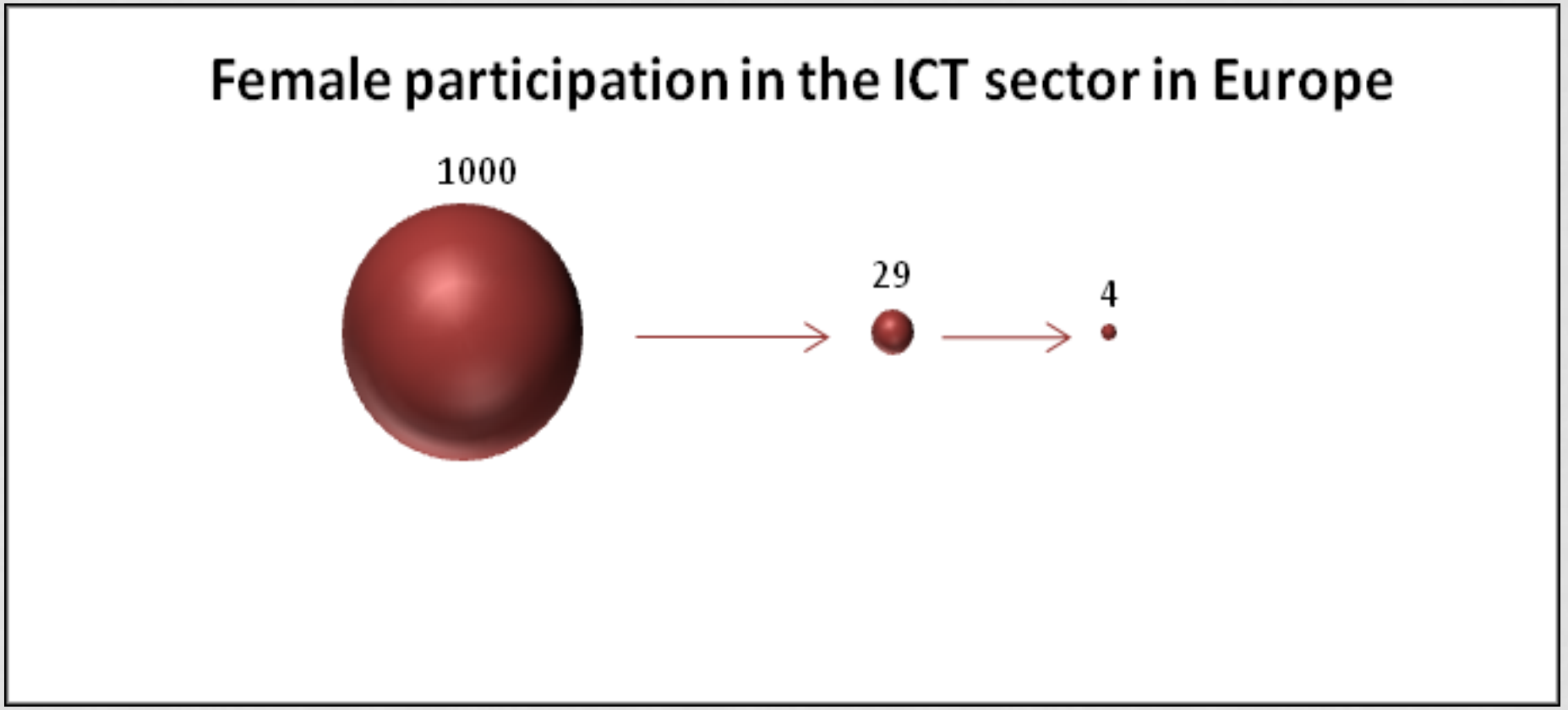
THE IMPORTANCE OF ATTRACTION OF WOMEN TO ICT SECTOR

- By increasing lack of ICT professionals, the need to attract the women into the ICT sector is emphasized in EU. In this case, the reduction of gender differences – is not only the matter of equility and human rights, it would be useful to digital industry, and women themselves as well as European economic as a whole.
- It is estimated that if the digital sector will succeed in attraction of as many women as it currently men, the annual GDP could grow to about **9 billion** Euros.
- However, the facts show, that ***firstly,*** the women do not want to choose ICT studies, and ***secondly,*** they tend to choose a lesser degree in ICT- related career.

THE NUMBER OF WOMEN WHO CHOOSE AND ARE EMPLOYED IN ICT SECTOR IN EU

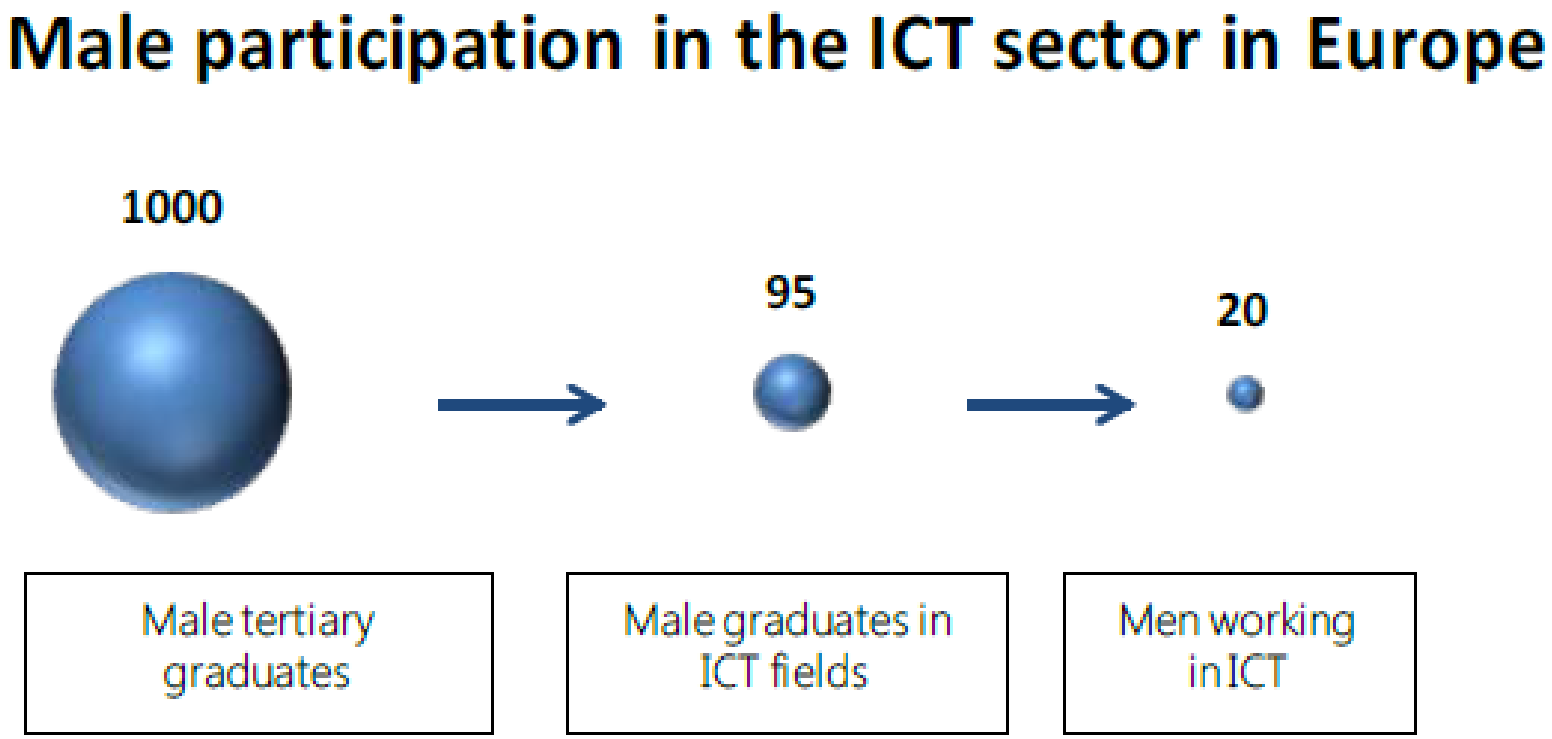
- In EU the number of girls who study ICT –related subjects is only **9,6 per cent** of all high school female students, while boys make **30,6 per cent** of all studying men.
- From 1 000 women, having bachelor degree, only 29 have got an ICT sector diploma and only 4 of them work at ICT sector.
- From 1 000 men, having bachelor degree, 95 have got an ICT sector diploma (3 times more than women), and stay at ICT position – 20 men (5 times more than women).

FEMALE PARTICIPATION IN THE ICT SECTOR IN EU



According to survey of the workforce in Europe, 2011

MALE PARTICIPATION IN THE ICT SECTOR IN EU



FEMALE BUSINESSWOMEN, BOSSES IN ICT SECTOR IN EU

In Europe, women are not active in ICT **business**

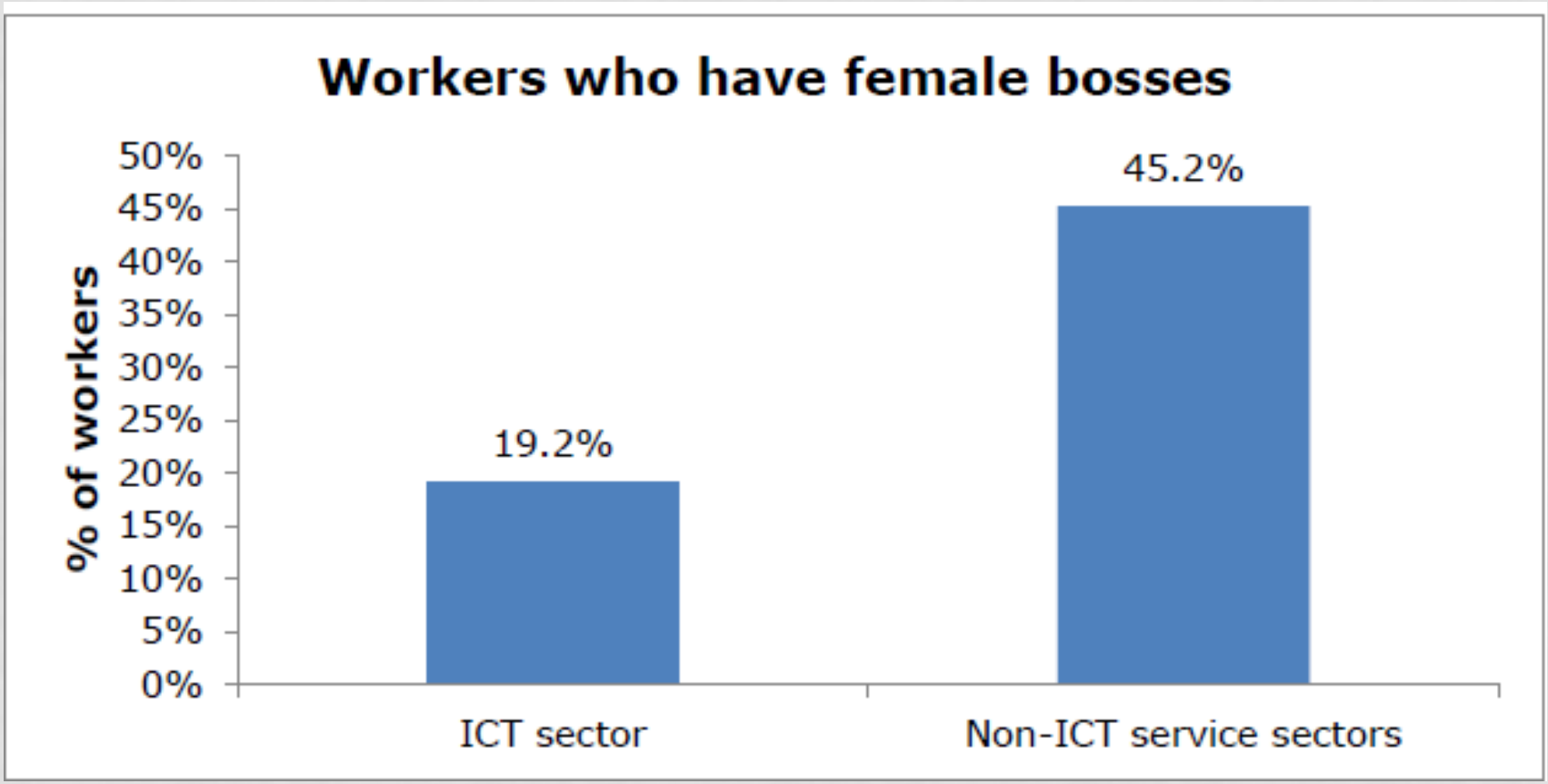
- Women includes **19 per cent** of all people in ICT business, while in other sectors there are **54 per cent** of businesswomen.

In EU, there are a few **female bosses** in ICT sector**,** although it is common to all sectors, however, compared to other industries, female bosses in ICT are at least:

- In ICT field, only **19 per cent** of women have leading positions, although in other sectors female leaders reach **45 per cent.**

- This low rate is caused by big female ‘leak’ to other business sectors – women leave the ICT sector in the early stages of their career and do not reach the leading positions as their male collegues.

FEMALE BOSSES IN ICT SECTOR IN EU



PROBLEMS, THAT HINDER THE WOMEN TO ENGAGE IN ICT SECTOR

- Cultural traditions and stereotypes (in the first place - child care, women’s non-technical mind and so on.);
- Internal barriers– social psychological factors such as lack of confidence, lack of negotiating skills, risk avoidance, negative attitude to competition;
- External barriers such as a male environment, the complexity of balance between privat and professional life, the lack of female behavior models in ICT sector.

THE MAIN PRIORITIES FOR CHANGE
(EC STUDY 'WOMEN ACTIVE IN THE ICT SECTOR')

- Priority 1. To create a new image of ICT sector.
- Priority 2. To strenghten the women's opportunities in ICT sector.
- Priority 3. To increase the number of female leaders in ICT sector.
- Priority 4 . To improve the work conditions in ICT sector.

IN CONCLUSION, THE SPEECH OF WOMEN RESEARCHERS IN ICT SECTOR

- In the western countries women use Internet 17 per cent more often than men. Women speak much more on the telephone, send much more short messages and spend more time to communicate using different programmes such as ‘Skype’. Besides, women buy much more electronic books than men, they get involved into the social network rapidly *(Intel researcher Genevieve Bell*).
- So, ‘enterprises that do not pay attention at feministic factor, are taking risk to lose a half of their clients. It is proved, that the way of thinking of women and men is different, so it would be ridiculous to ignore this field and to continue working using only 50 per cent of potential’ *(Kara Swisher, creater of the website ‘All Things Digital’).*