
ICT market analysis

2015.03.31.

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*Professional
coordination:*



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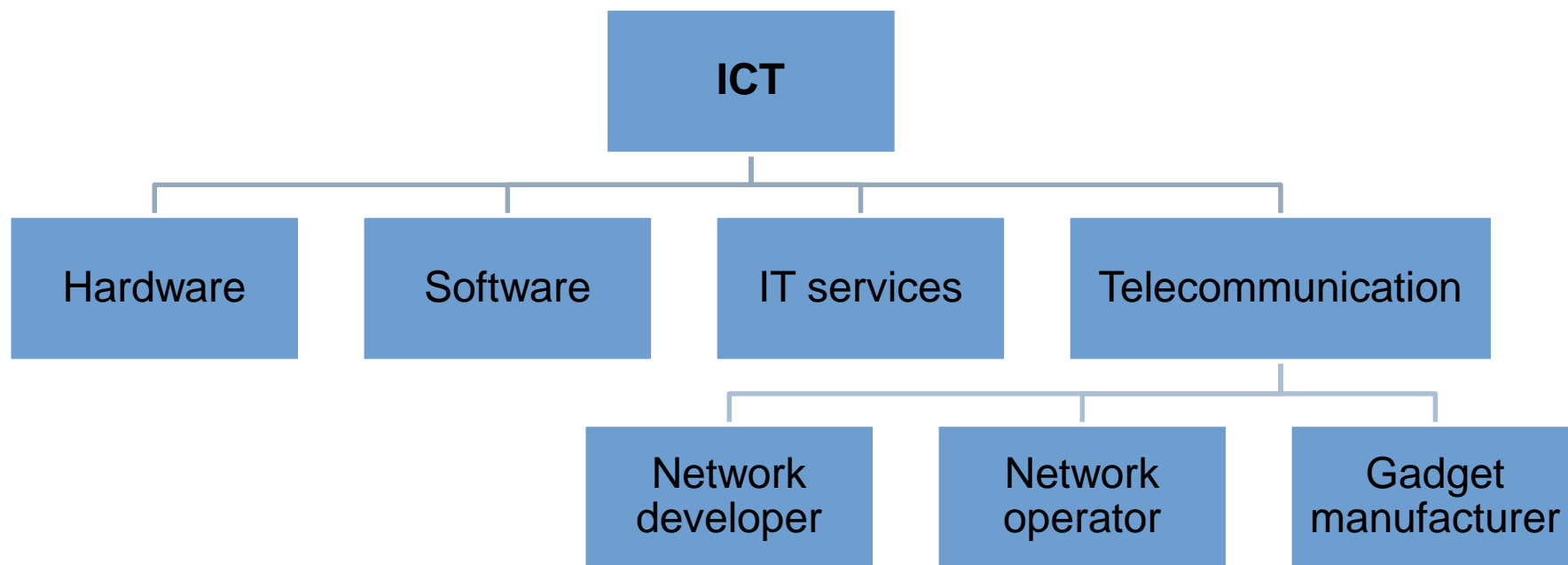
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Agenda



Global analysis

ICT revenue

- **Historically 2009-2013**
- Share of sectors 2013
- Forecast 2014-2018
- By countries 2013

ICT profit

ICT employees

Sector analysis

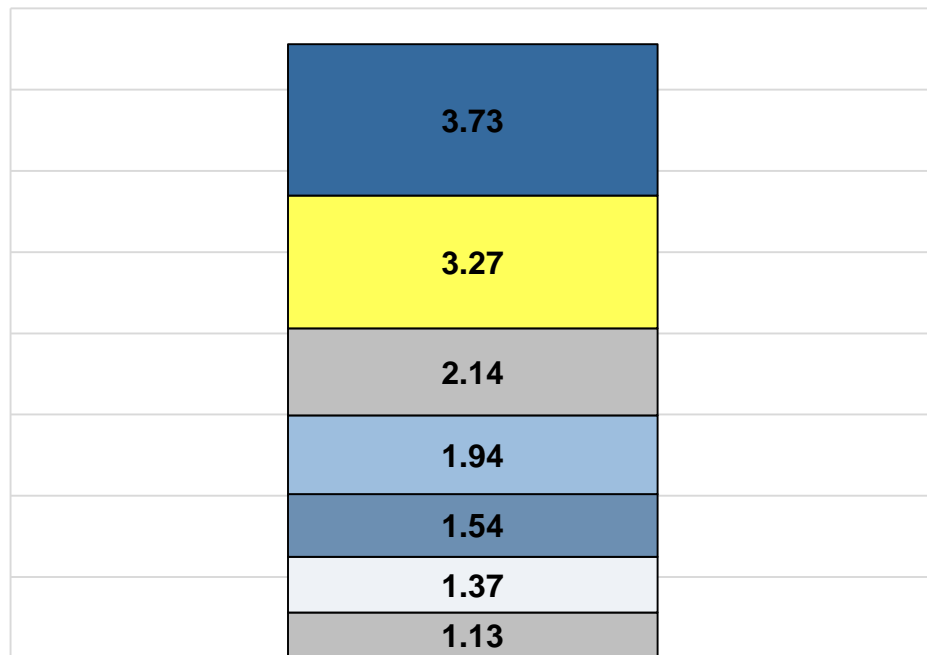
Europe analysis

Romania analysis

Global ICT industry revenue

The global ICT industry revenue reached EUR 3.274 billion in 2013, a 3.31% increase compared to 2012.

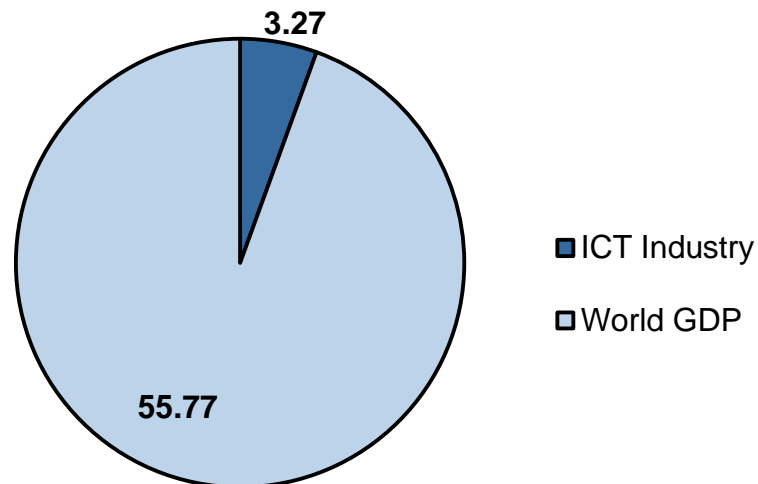
The top industries by revenue in 2013
(trillion EUR)



Revenue

- FMCG
- Life Insurance
- Oil and Gas
- Automobile
- Utilities
- Banking
- ICT

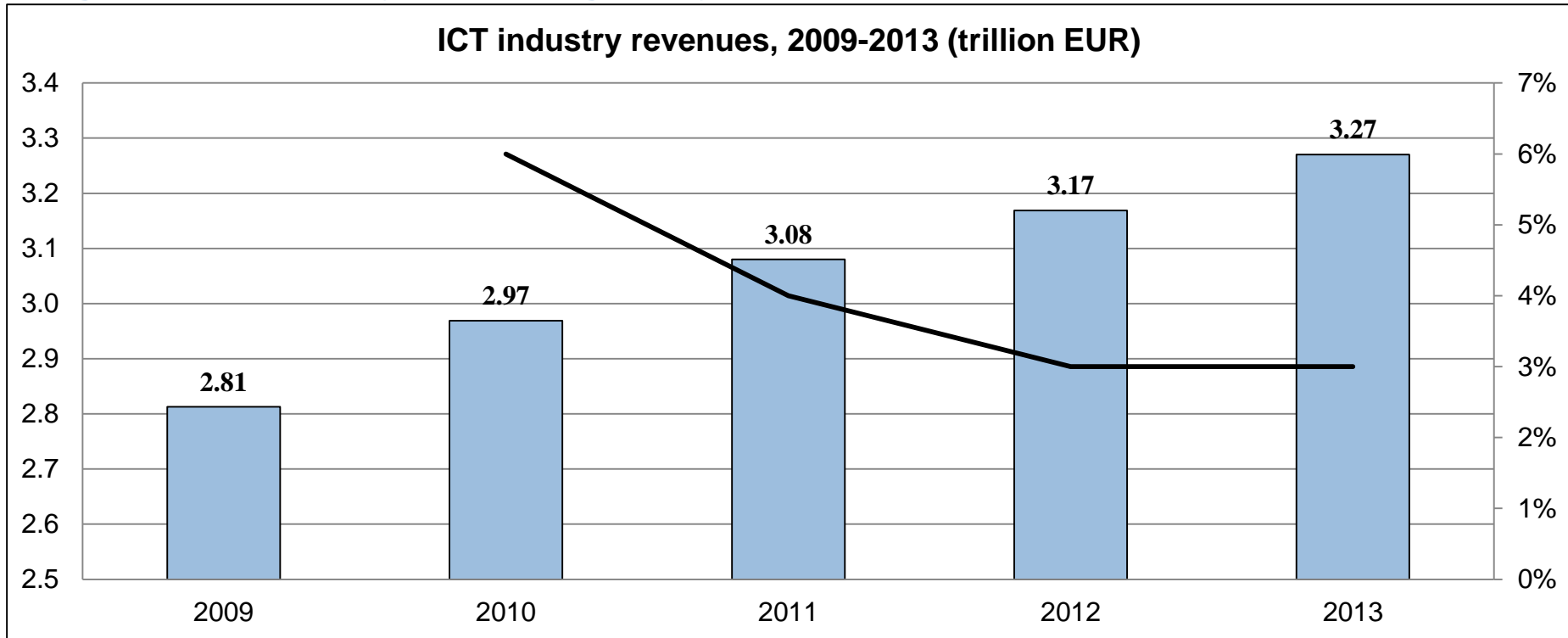
The size of the ICT industry in 2013,
(trillion EUR)



In the last decades, the ICT industry was the fastest growing industry in the world, and is expected to become the biggest.

Global ICT revenue from 2009 to 2013

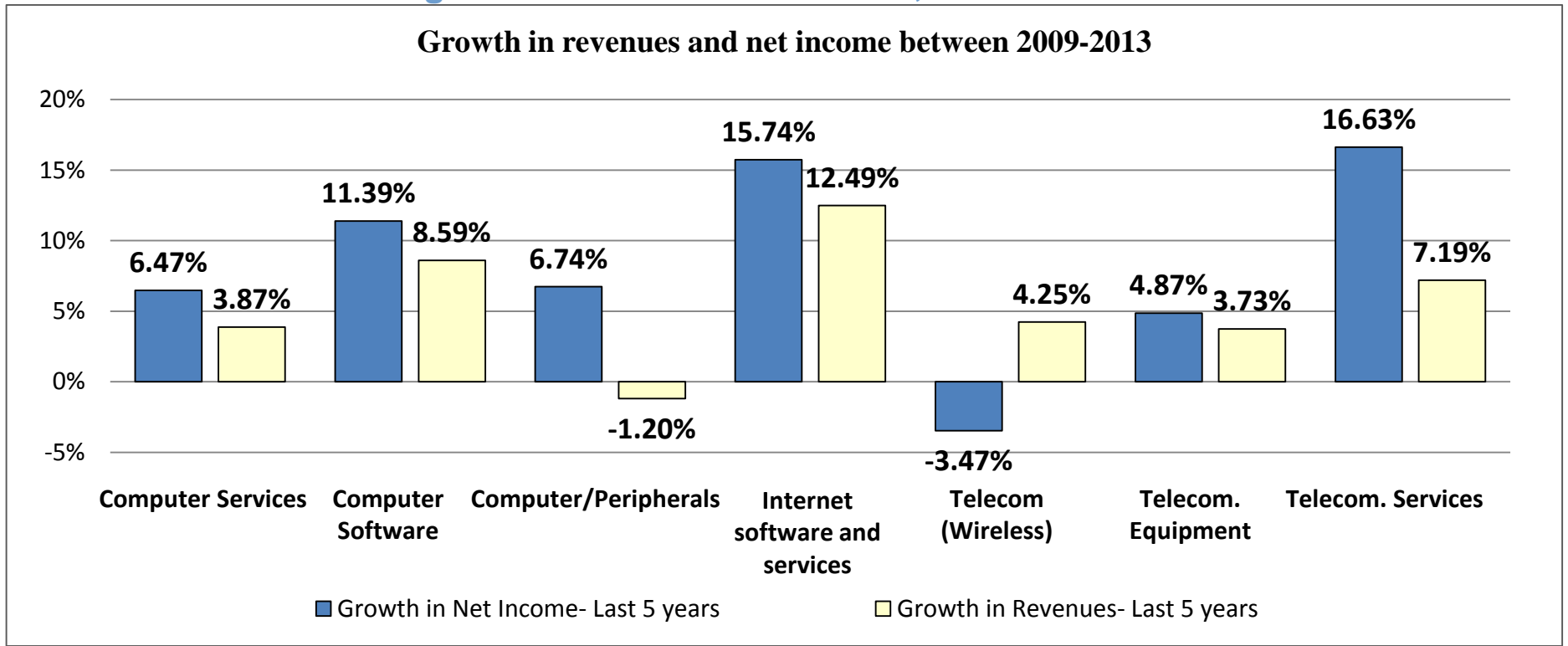
The global ICT industry revenues grew by 14.08% in the 2009-2013 period.



The global ICT industry revenue grew **EUR 461 million**, at a **4% CAGR** from 2009 to 2013. In the 2009-2013 period the average industry revenue was **EUR 3.06 trillion**.

Global ICT revenue and net income growth between 2009-2013

The internet software and services grew the most in revenues, 12.5%, and the telecom. Services achieved the highest increase in net income, 16.6% from 2009 to 2013.



The **internet software and services**, and the **computer software** grew the most in **revenues** from 2009 to 2013. The **telecom services**, **internet software** and **computer software** increased the most their **net income**.

Global analysis

ICT revenue

- Historically 2009-2013
- **Share of sectors 2013**
- Forecast 2014-2018
- By countries 2013

ICT profit

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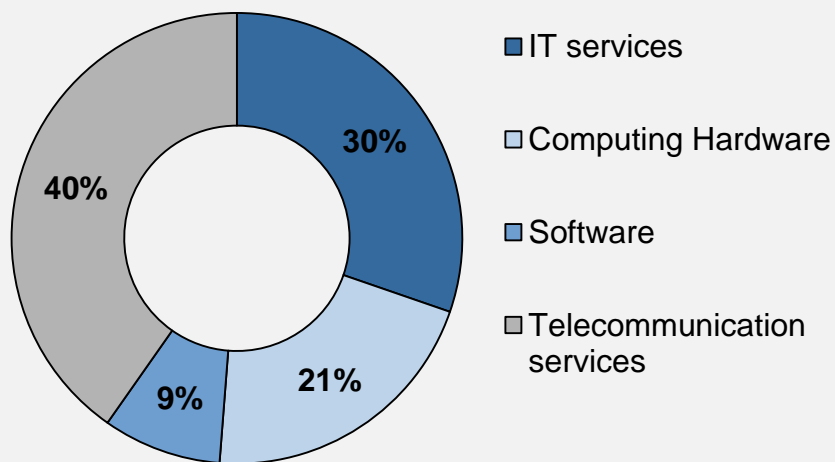
Europe analysis

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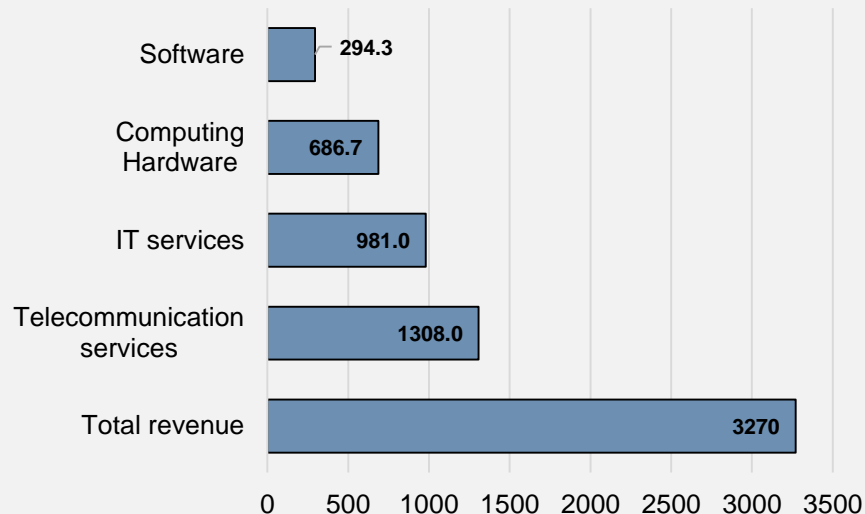
Global ICT industry revenue

The global ITC sector registered growth at a 4% CAGR. In 2013 the total ICT revenue reached EUR 3720 billion.

ICT segments share of the total industry in 2013



Revenue of ICT sector by segments in 2013 (billion EUR)



In the ICT industry, the highest revenue is generated by the telecommunication services sector, followed by the IT services sector, as their cumulative market share is 70%.

Global analysis

ICT revenue

- Historically 2009-2013
- Share of sectors 2013
- **Forecast 2014-2019**
- By countries 2013

ICT profit

ICT employees

Sector analysis

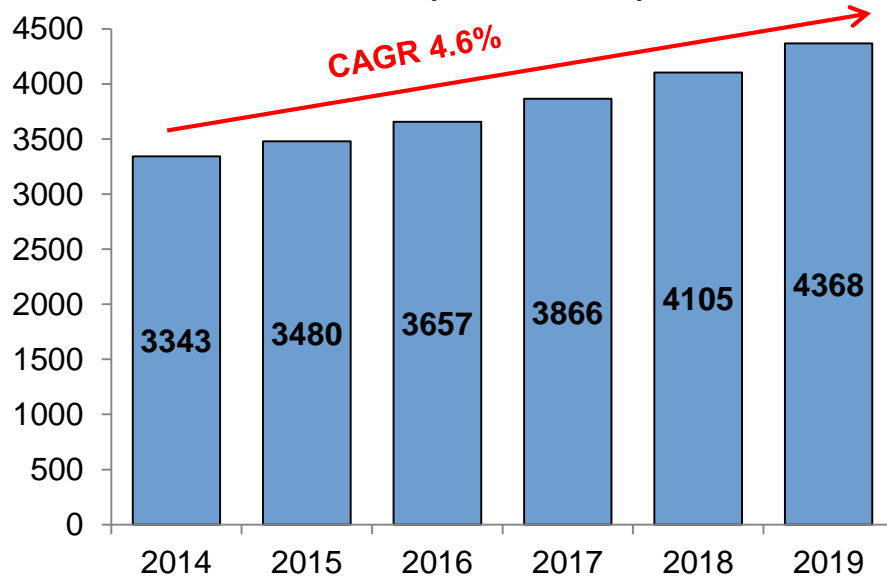
Europe analysis

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Global ICT industry revenue forecast between 2015-2019

The global ICT industry grew only by 2.1% in 2014, but expects a growth at a 4.6% CAGR in the 2015-2019 period.

Global ICT industry revenue forecast, 2015-2019 (billion EUR)



- **Public Cloud** spending will double by **2018**, reaching **EUR 102 billion** worldwide with a **CAGR of 23%**;
- **25 billion** of connected “**Things**” will be in use by 2020 – will support total IT Services spending by **EUR 211 billion**;
- Semiconductors within the Internet of Things will grow from **EUR 6.1 billion in 2015** to more than **EUR 36.1 billion by 2020**;

The global ICT industry experienced a slow-down in 2013, due to the Eurozone debt crisis. Industry experts predict, that the ICT sector will register a yearly growth around 3-7% in the 2015-2019 .

Global analysis

ICT revenue

- Historically 2009-2013
- Share of sectors 2013
- Forecast 2014-2018
- **By regions 2013**

ICT profit

ICT employees

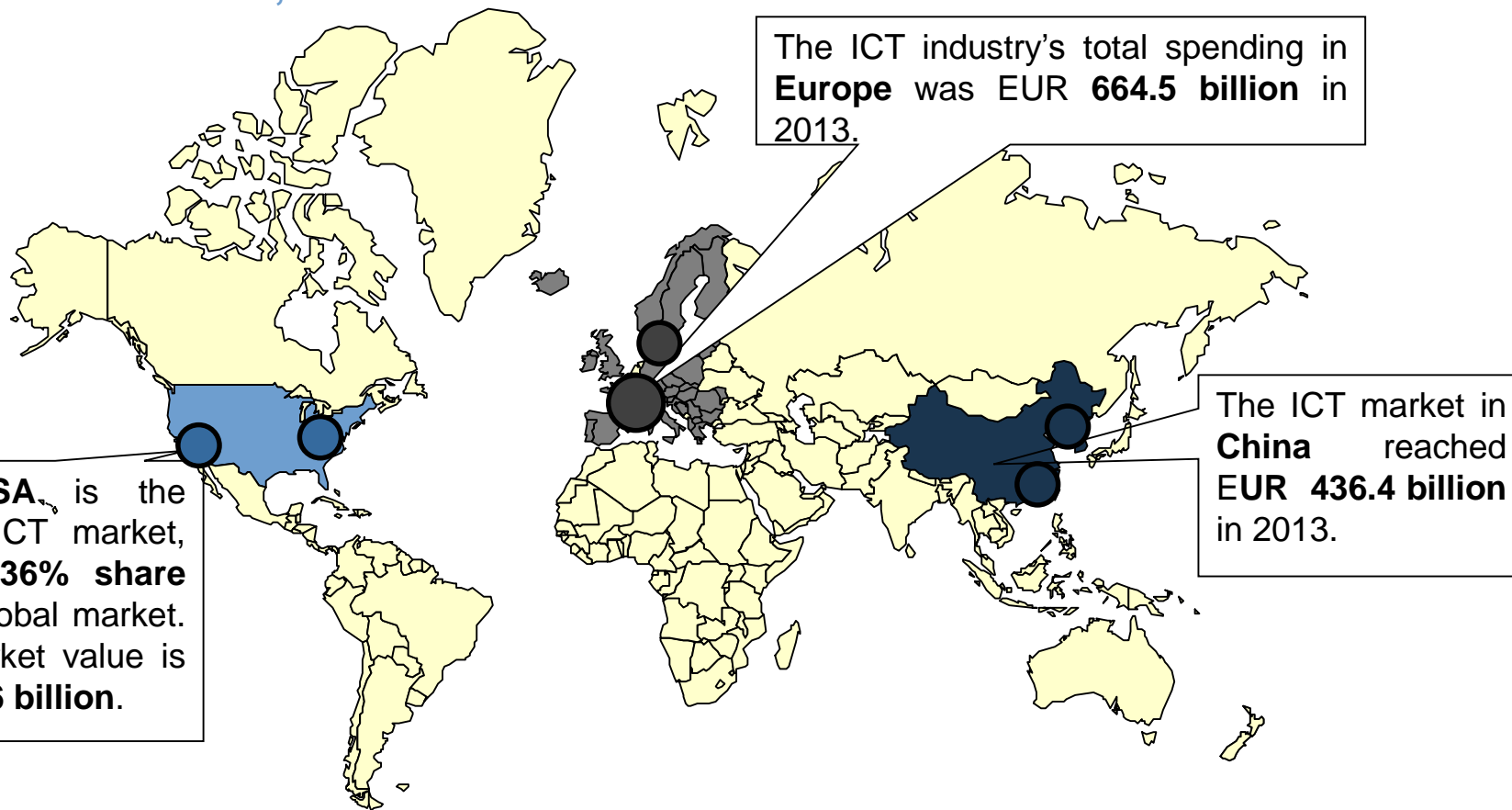
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ICT industry total revenue in the US, Europe, and China

USA is the largest ICT industry region, with a EUR 896 billion in revenues, while Europe has EUR 664.5 billion, and China has EUR 436.4 billion in revenues.



In the United States, Europe and China, the ICT industry is the largest market, and will continue to grow more in the future. These regions should focus further on the ICT sector, as it has the best investment opportunities.

Global analysis

ICT revenue

ICT profit

- **Historically 2009-2013**
- Share of sectors 2013

ICT employees

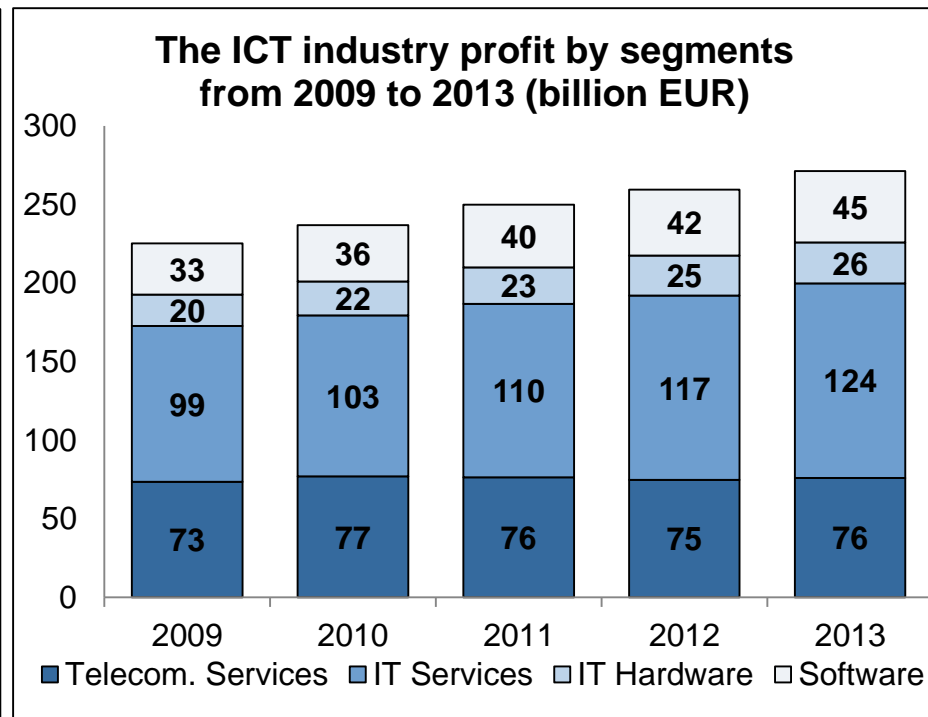
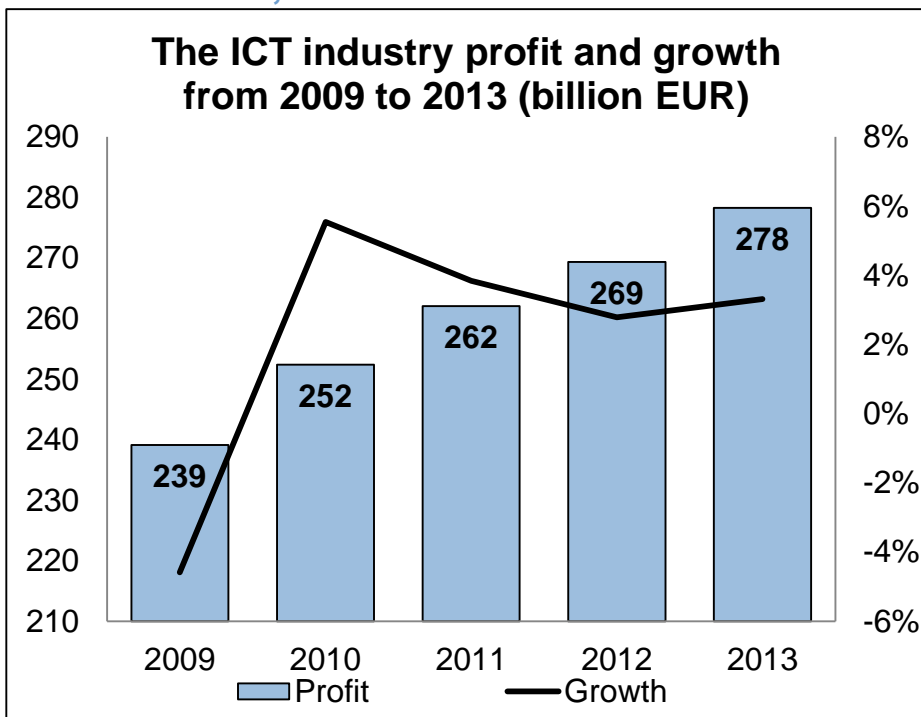
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The global ICT industry profits between 2009-2013

The global ICT industry registered growth at a 3.1% CAGR in the 2009-2013 period, after falling 4.6% in 2009, due to the financial crisis.

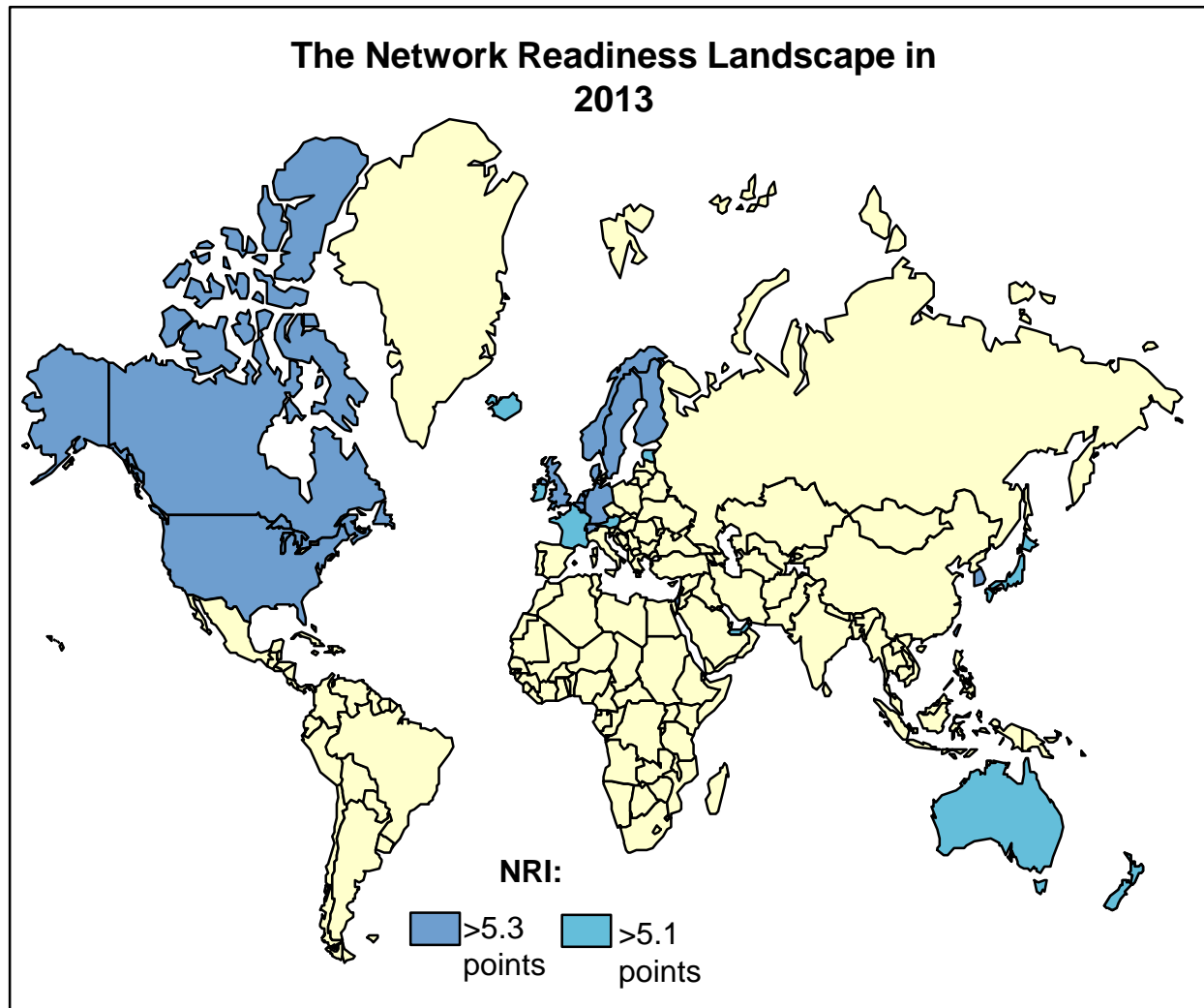


The global ICT industry experienced a setback, and a growth slow-down, due to the financial crisis. The most profitable segments were the software, with a 16.9% profit margin, and the IT Services, with a 14.9% profit margin.

Influential countries for global ICT industry development

Due to the business-friendly approach, investments in ICT infrastructure, and a highly skilled population Finland is the top ranked country in the NRI.

- The **Network Readiness Index**, (NRI) ranges from (worst) **1 to 7** (best) – ranks the countries based on their **capacity to exploit opportunities of the ICT industry**, or how **desirable** they are for **ICT companies**.
- **NRI** includes categories such as: **infrastructure, skilled workforce, governmental regulations;**
- Top performers are the **Nordic countries** and the **Asian Tigers;**



Global analysis

ICT revenue

ICT profit

- Historically 2009-2013
- **Share of sectors 2013**

ICT employees

Sector analysis

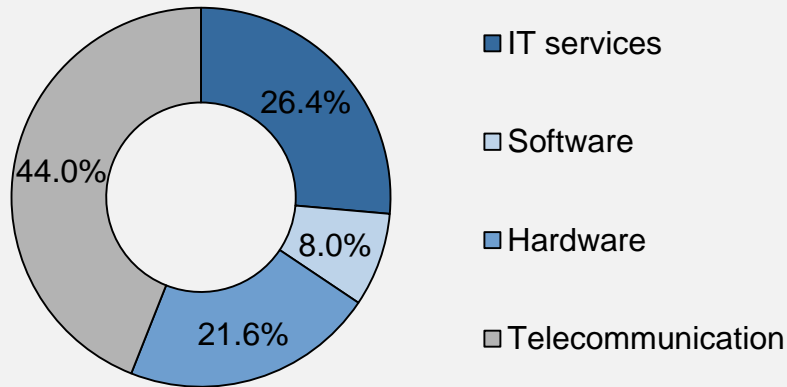
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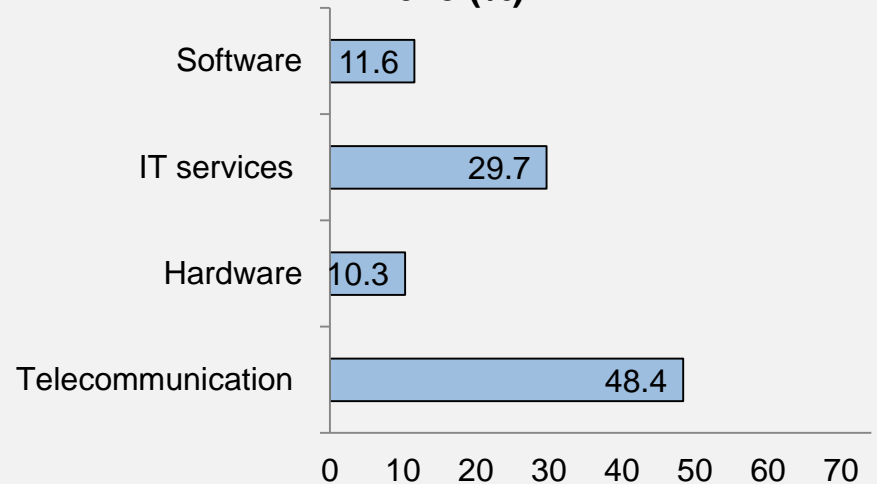
ICT Industry profit by segments in 2013

The distribution of the global ICT industry profit shows, that the telecommunication sector accounts for almost 48.4% of the total profit in 2013.

ICT revenue distribution by segments in 2013



ICT profit distribution by segments in 2013 (%)



The ICT industry profit was **EUR 229 billion** in 2013. The **Hardware** sector had EUR **23.6** billion, the **Telecommunication** sector had EUR **110.8** billion, the **Software** sector had EUR **26.5** billion, and the **IT services** had EUR **68.1** billion in profits.

The **Telecommunication** sector is the biggest segment of the ICT industry, accounting for 44% of the total ICT revenue, and 49% of the ICT profit in 2013.

Global analysis

ICT revenue

ICT profit

ICT employees

- **Historically 2009-2013**
- Share of sectors 2013
- Forecast 2014-2019

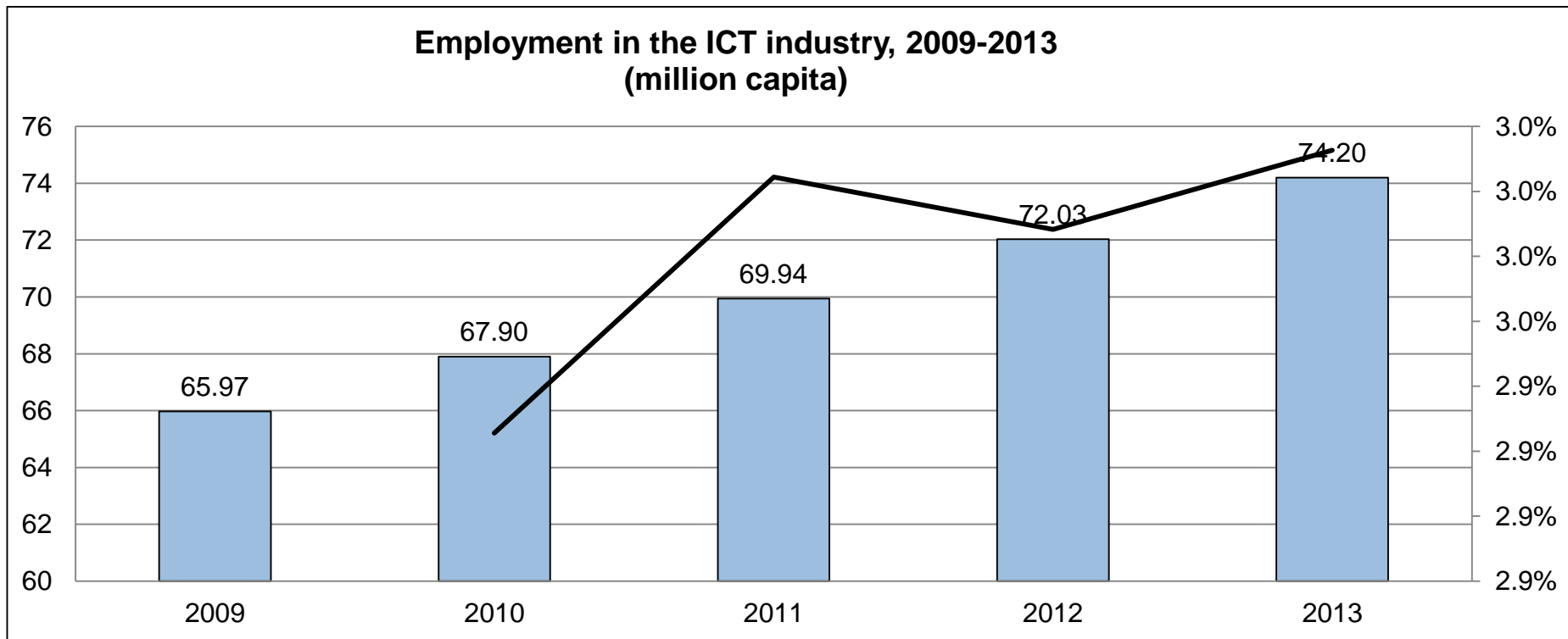
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Employment in the ICT industry between 2009-2013

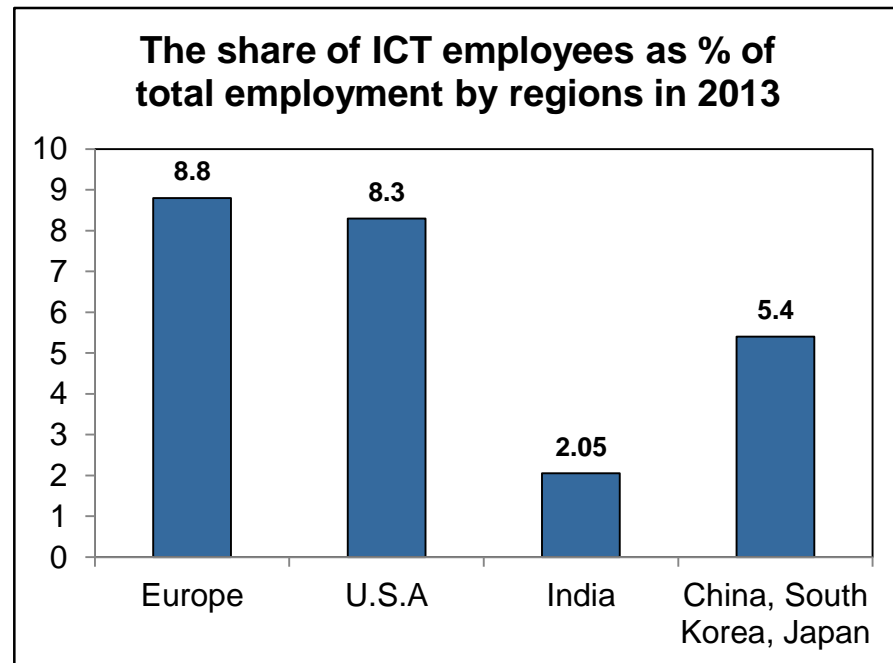
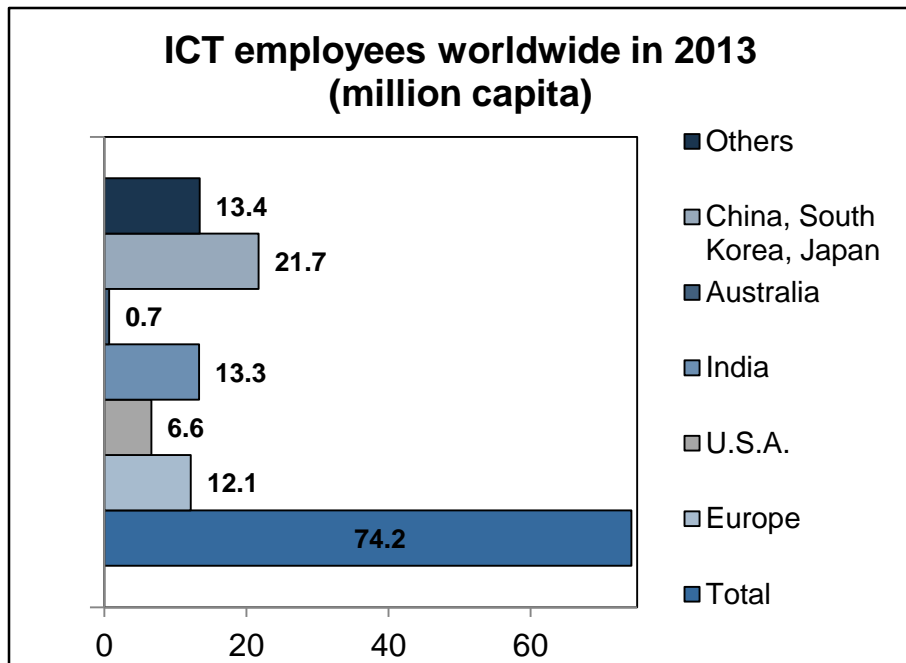
The employment in the ICT industry shows a constant growth at a 3% CAGR in the 2009-2013 period. The total number of employees reached 74.2 million in 2013.



The ICT sector grew at a **3% CAGR**(USA: 2%, EU: 8%). Only 20% of the ICT jobs are located in the EU, and in the U.S.A., while most of the jobs are located in Asia, e.g., India, China, Japan and South Korea.

The ICT sector employment by regions in 2013

The number of employees, in the ICT industry, was nearly 74.2 million in 2013. The share of ICT employees of the total employment was the highest in Europe, with 8.8%, .



The ICT companies in Asia are the biggest employers of human capital worldwide, due to the hardware manufacturing, and the ICT services segments. More than **50%** of the employees in the ICT industry are working in **Asia**.

Global analysis

ICT revenue

ICT profit

ICT employees

- Historically 2009-2013
- **Share of sectors 2013**
- Forecast 2014-2019

Sector analysis

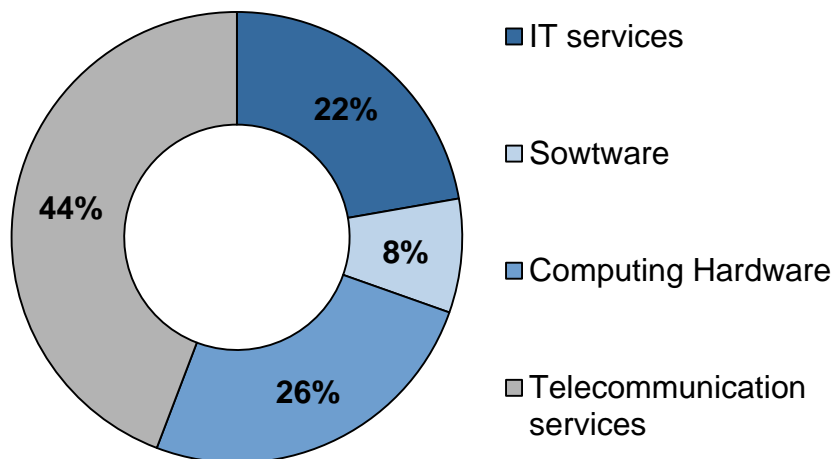
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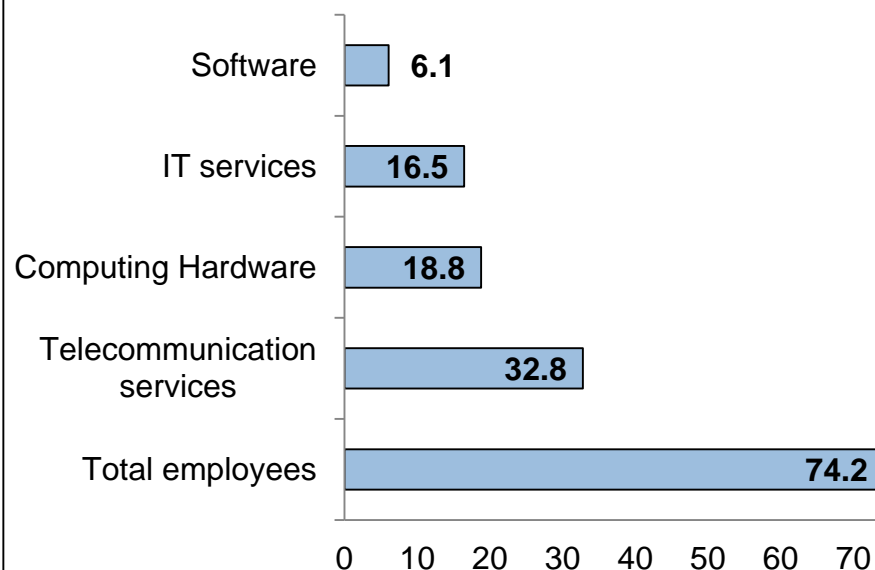
Global ICT employees by segments in 2013

In 2013, 74.2 million people were employed in the ICT industry, showing a steady growth at a 3% CAGR in the 2009-2013 period.

The number of employees by ICT segments as a % of total ICT employment in 2013



The number of ICT employees by segments in 2013 (million capita)



The biggest employer in the ICT industry is the **telecommunication services** sector, which employed **44%** of the people working in the industry, followed by the **computing hardware** sector with **26%**.

Global analysis

ICT revenue

ICT profit

ICT employees

- Historically 2009-2013
- Share of sectors 2013
- **Forecast 2014-2019**

Sector analysis

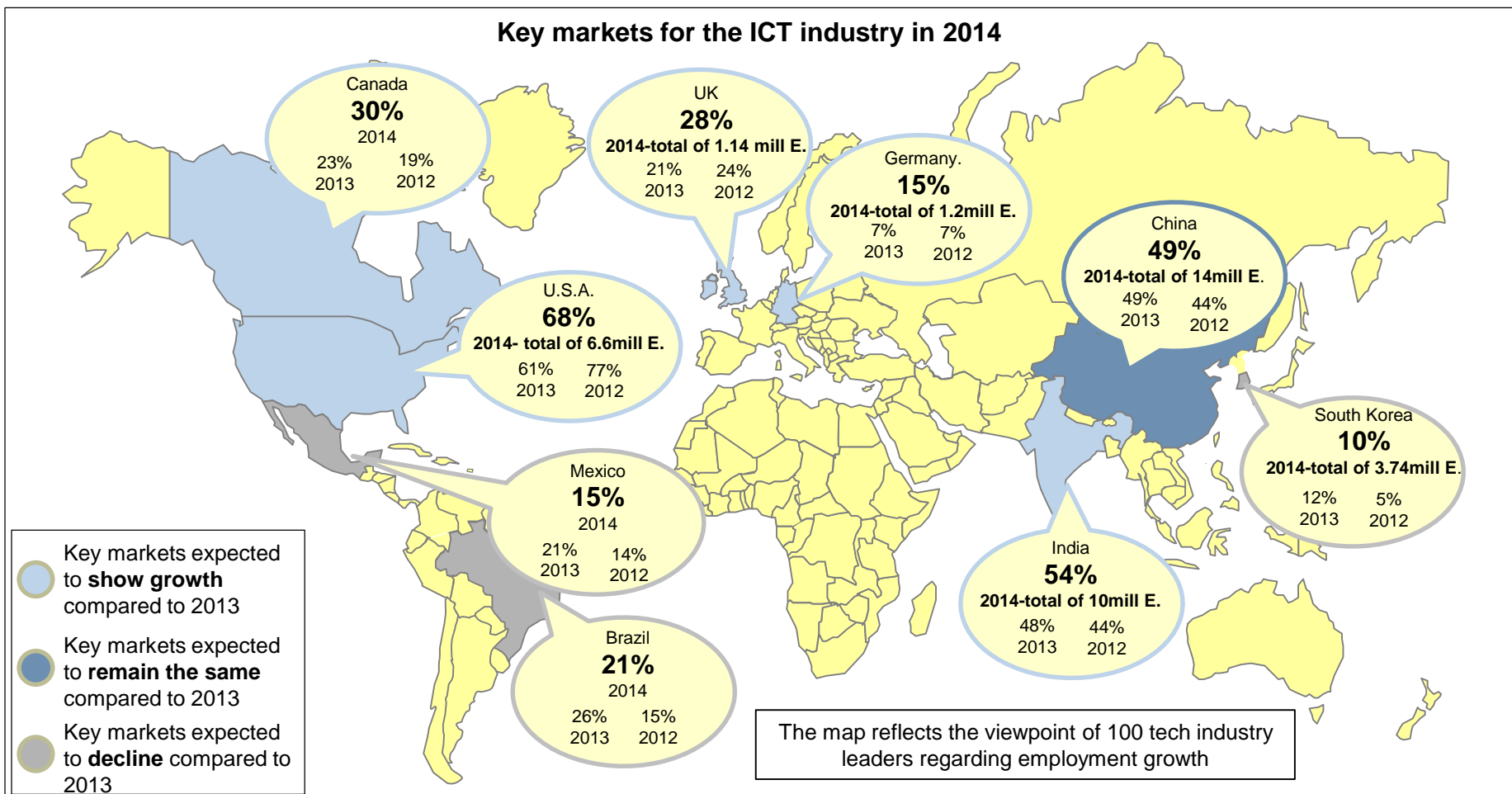
Europe analysis

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ICT employment hubs, and the expected employment growth in the sector

The U.S., India, and China are expected to be the leading locations for ICT job growth. India and China are presently the leading countries, with the most ICT employees.

Key markets for the ICT industry in 2014



According to the industry leaders, the highest growth in ICT employment, are going to be in India, in the U.S.A., and in Germany.

Global analysis

ICT revenue

ICT profit

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Sector analysis

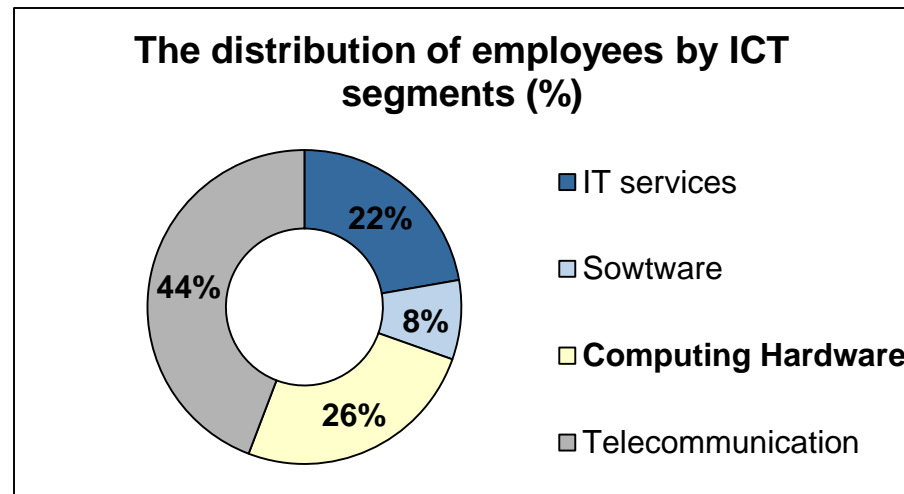
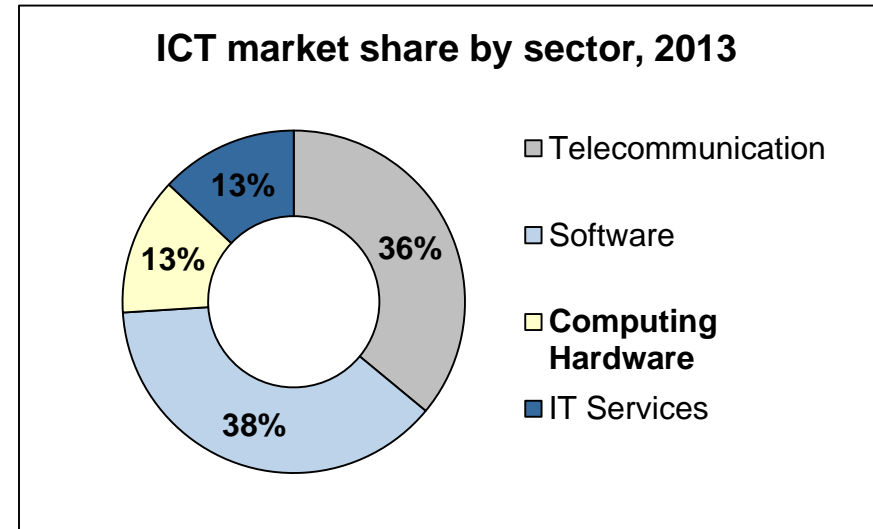
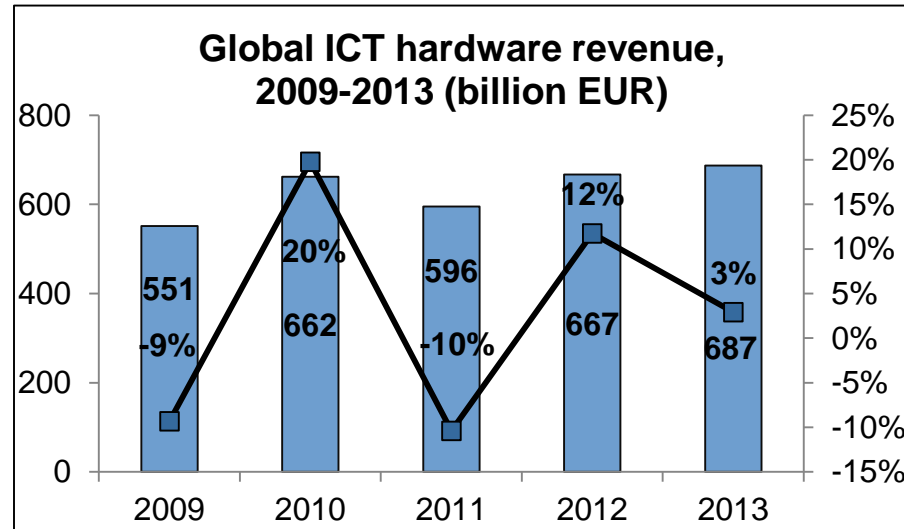
- **Hardware**
- Software
- IT services
- Telecommunication

Europe analysis

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The Computing Hardware industry at a glance

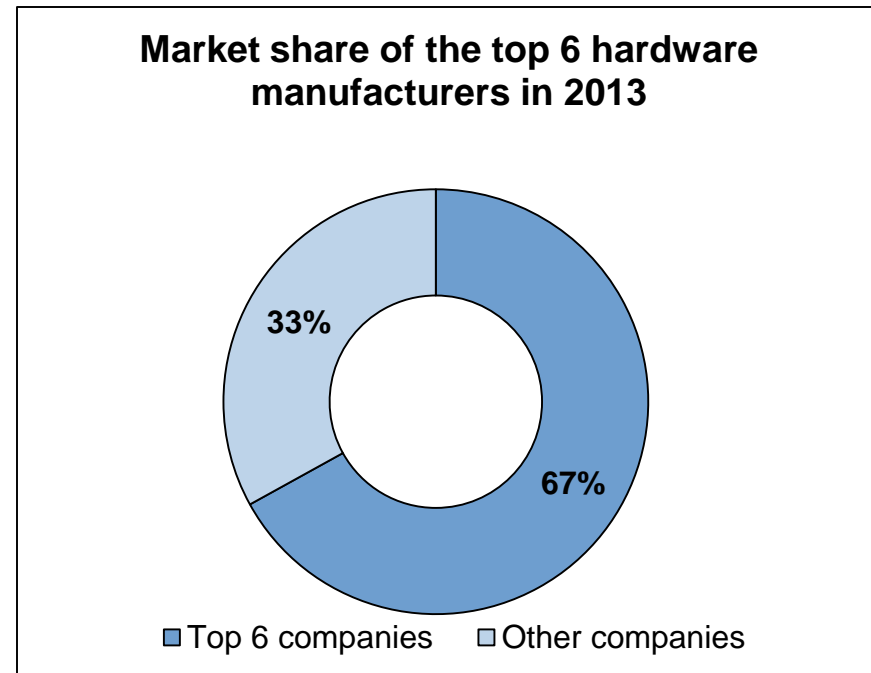
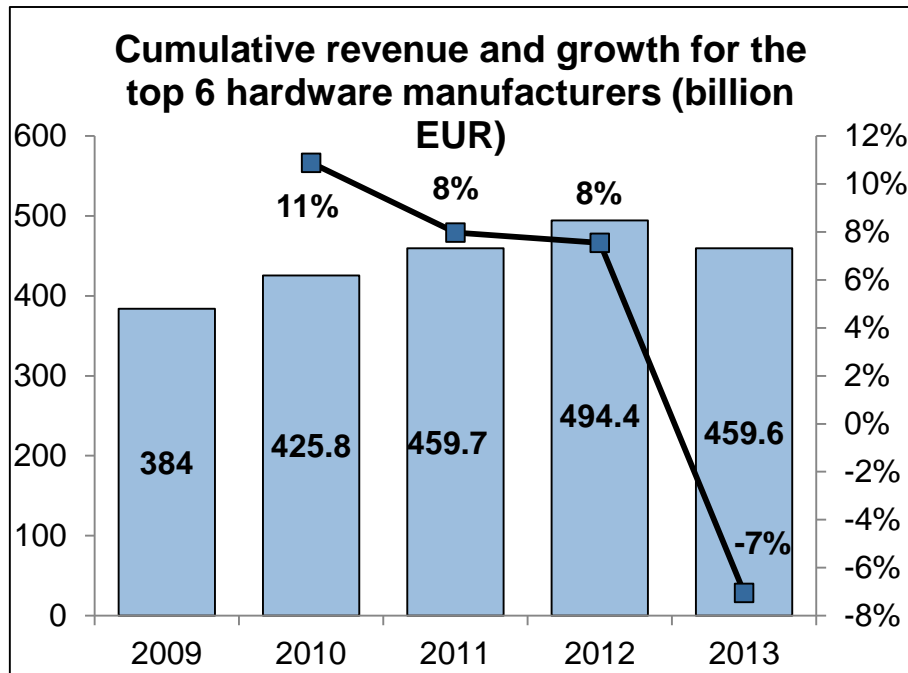
The value of the global ICT hardware market is constantly growing, with a yearly average of 4% in the 2009-2013 period.



- The global Computing Hardware segment registered growth at a **4% CAGR** from 2009 to 2013.
- The segment had a **13%** share of the ICT industry revenues in 2013.
- The Computing Hardware segment employs **3.3 million** people worldwide.

Market concentration – hardware market in 2013

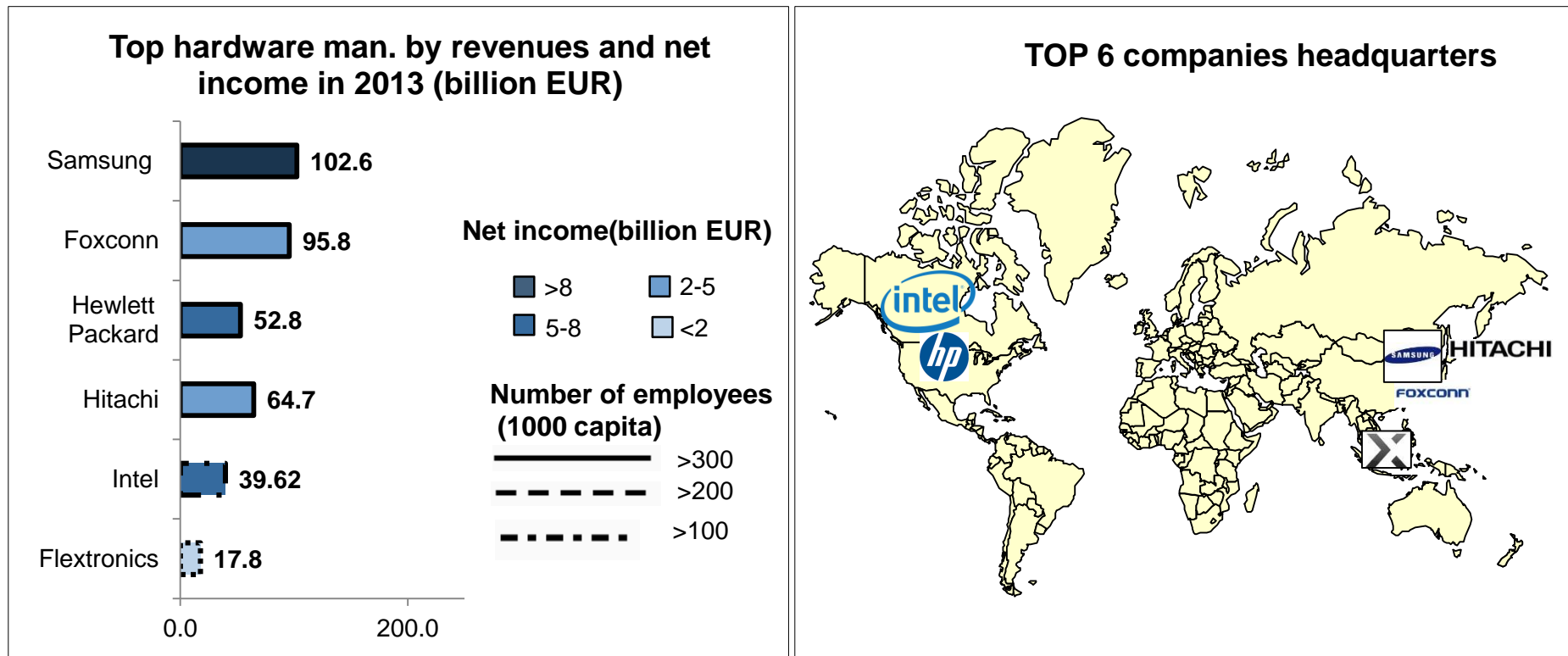
The top 6 hardware manufacturers had a EUR 460 billion cumulative revenue in 2013, and had registered a growth at a 3.6% CAGR between 2009-2013.



The top 6 hardware manufacturers cumulative revenue was **EUR 460 billion** in 2013, accounting for **67%** of the total hardware segment. The hardware industry is a highly concentrated ICT segment.

The global hardware market leaders in 2013

Four of the top six hardware manufacturers are located in eastern Asia, and two are based in the USA.

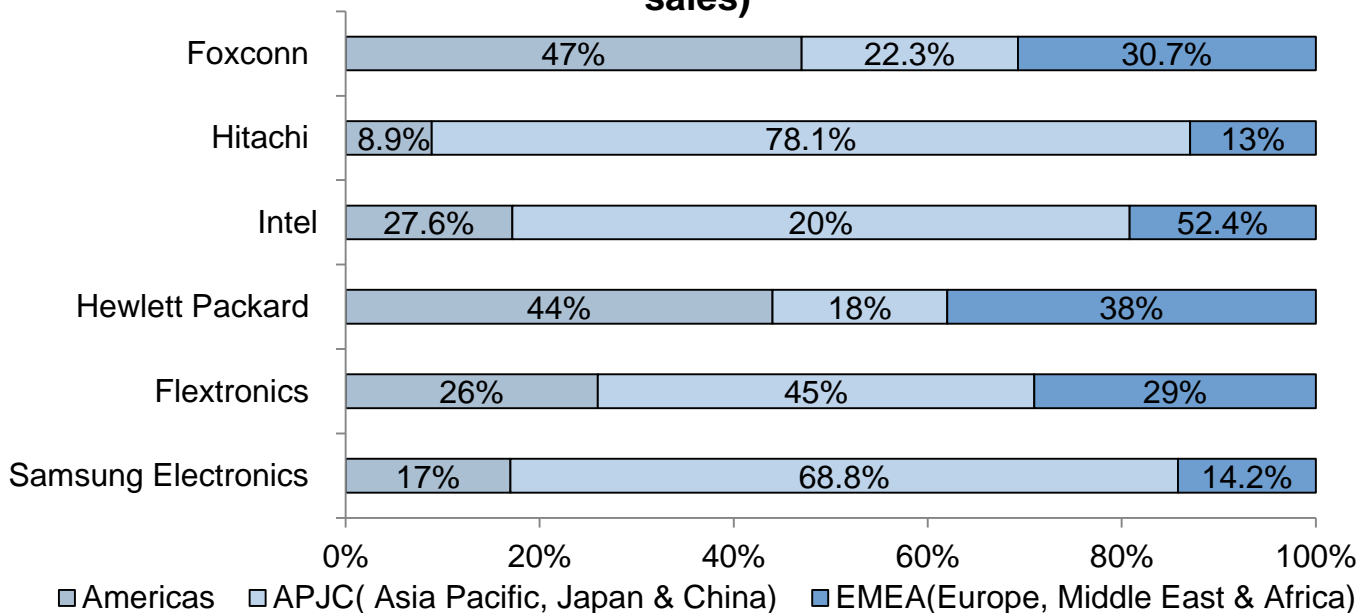


Samsung was the market leader in terms of revenue and profit, with a total revenue of **EUR 102.6 billion**, and a **EUR 21.03 billion in profits**. The runner-up was Foxconn, with **1.23 million employees**.

Top hardware man. revenue spread by geographical areas

The top hardware manufacturers generate most part of their revenue on the continent, where their headquarters are based.

Revenue distribution by geographic areas in 2013 (in % of total sales)



	Headquarters
	Taiwan
	Japan
	USA
	USA
	Singapore
	South Korea

Samsung realized **68.8%** of its revenue in Asia, whereas, Hitachi realized **78.1%**. Hewlett Packard is the biggest hardware manufacturer in the US, where it generates 44% of its revenues.

Top 6 hardware manufacturers by revenue, 2009-2013

The top 6 hardware manufacturers had a EUR 477 billion cumulative revenue in 2013. Samsung Electronics occupied the first place in 2013.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Samsung	→	→	→	↑1	↑1
2.	• Foxconn	→	→	→	↓1	↓1
3.	• Hewlett and Packard	→	→	→	→	→
4.	• Intel	→	↑1	→	→	↑1
5.	• Hitachi	→	↓1	→	→	↓1
6.	• Flextronics	→	→	→	→	→



<p>Foxconn reached the second place, due to becoming the main supplier for Apple.</p>	<p>HP had a decrease in revenues in 2011-2012 because of the downward trend for PCs.</p>	<p>Samsung Electronics reached the first place only in 2013.</p>
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Top 6 hardware manufacturers by net income, 2009-2013

The top 6 hardware manufactures had a EUR 34 billion cumulative net income in 2013. Samsung Electronics occupied the first place between 2009 and 2013.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Samsung	➡	➡	➡	➡	➡
2.	• Intel	⬆️1	⬆️1	⬆️1	➡	⬆️1
3.	• Hewlett and Packard	⬆️1	➡	⬆️3	⬆️3	⬆️1
4.	• Foxconn	➡	⬆️1	⬆️1	➡	➡
5.	• Hitachi	➡	⬆️1	⬆️1	⬆️2	➡
6.	• Flextronics	➡	➡	⬆️1	⬆️1	➡

<p>Downward trend for PCs - Hewlett and Packard had a EUR 12 billion loss in 2012.</p>	<p>After adapting to the new trends in 2012, HP comes back on the board to the third place.</p>	<p>Samsung Electronics dominates the first place between 2009-2013.</p>
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Global analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

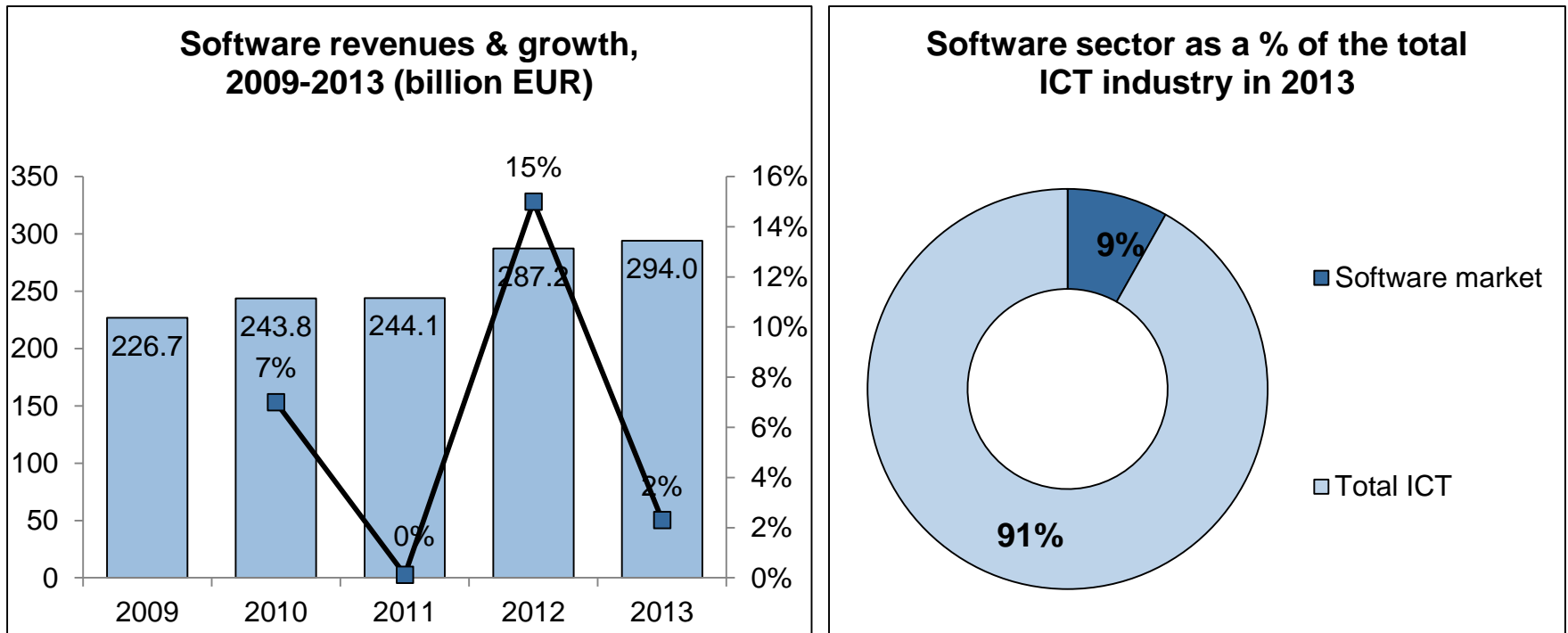
- Hardware
- **Software**
- IT services
- Telecommunication

Europe analysis

Romania analysis

The software market at a glance

The software revenues grew 22.80 % from 2009 to 2013. Software sector constitutes 9% of the total ICT industry in 2013.

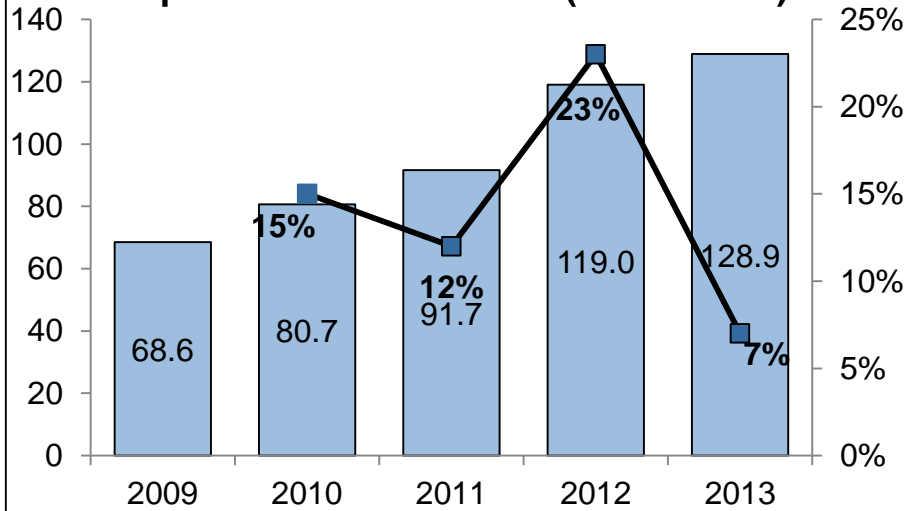


In **2012**, the **software sector** registered its highest revenue of **EUR 287.2 billion**, a **15% increase** compared to **2011**. The software sector grew at a **6% CAGR** in the 2009-2013 period.

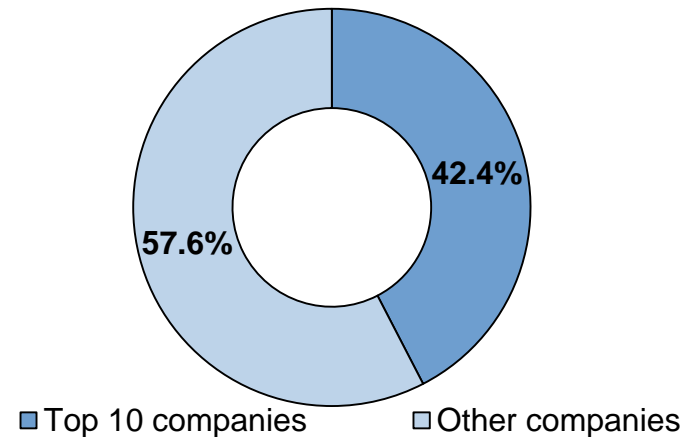
Market concentration –the software sector in 2013

The top 10 software companies had a EUR 128.94 billion cumulative revenue in 2013, and grew 53.2% from 2009 to 2013.

Cumulative revenue and growth for the top 10 software vendors (billion EUR)



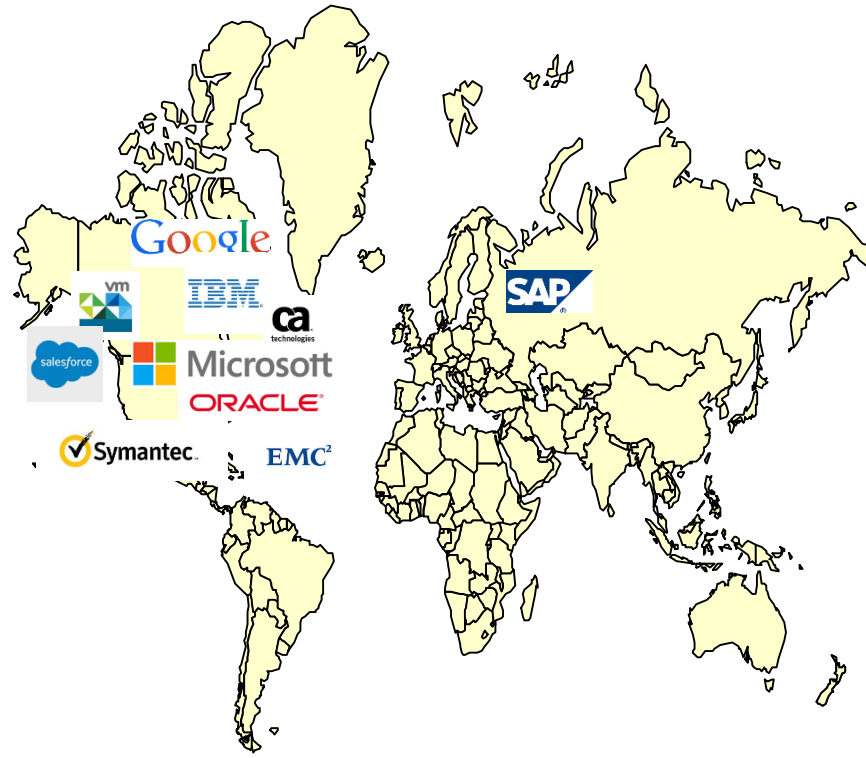
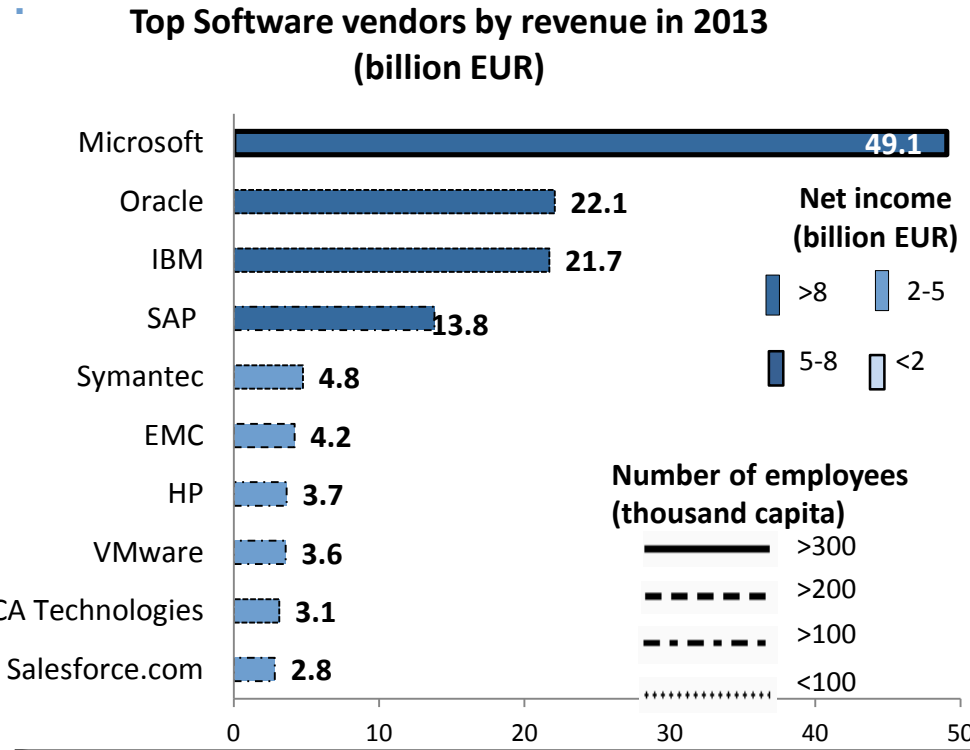
Market share of the top 10 software vendors in 2013



The software market is highly concentrated, with the top 10 vendors, e.g., Microsoft, Oracle, IBM, SAP, Symantec and EMC having a market share of **42.4%** in 2013. The total software sector revenue was **EUR 307.09 billion**, while the top 10 software companies total revenue in reached **EUR 128.94 billion** in 2013.

Top 10 software vendors by revenue in 2013

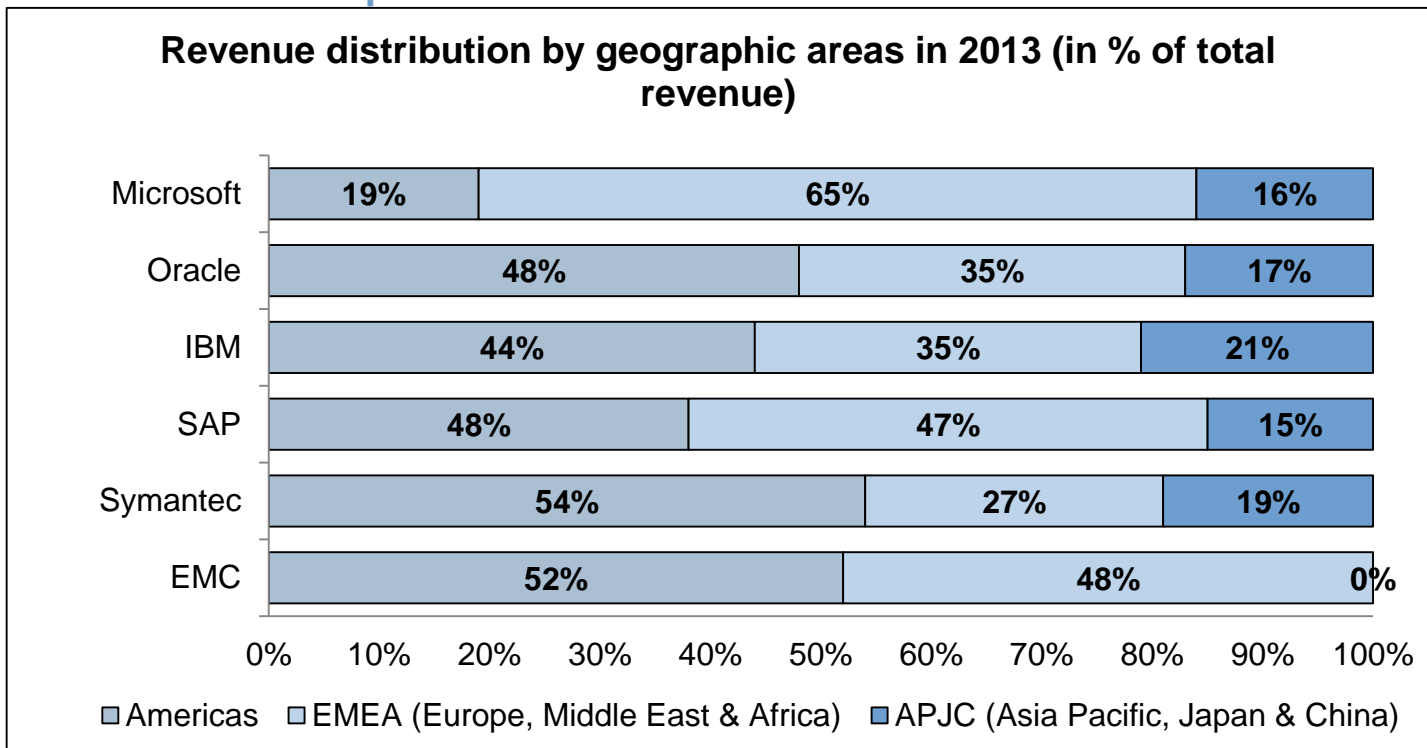
Microsoft was the software market leader, with a revenue of EUR 49.1 billion in 2013. 90% of the top 10 software companies are based in the USA.




From the top 10 software vendors, **9** companies have their headquarters in the **USA**, only **SAP** is based in **Germany**. The leading software company is Microsoft, with **EUR 49.05 billion** in revenues, and with **334 thousand employees**.

Software revenue distribution by geographic areas in 2013

The top 10 software companies realize the biggest part of their revenues on the continent, where their headquarters are based.



	Headquarters
	USA
	USA
	USA
	Germany
	USA
	USA

Most of the vendors realize the largest % of their revenue in the **USA**, where they are based. Microsoft and SAP realize the largest part of their revenue in Europe.

Top 10 Software vendors by revenue, 2009-2013

Microsoft was the leading software vendor from 2009 to 2013, with EUR 49.05 billion in revenues in 2013.

Global rank	• Company	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Microsoft	→	→	→	→	→
2.	• Oracle	↓ 1	→	↓ 1	→	↓ 2
3.	• IBM	↑ 1	↓ 8	↑ 1	→	↓ 6
4.	• SAP	→	↑ 1	→	→	↑ 1
5.	• Symantec	↓ 2	→	→	→	↓ 2
6.	• EMC	↓ 4	↓ 5	→	→	↓ 9
7.	• HP	→	↓ 5	→	→	↓ 5
8.	• VMware	—	↑ 4	↓ 1	→	↑ 3
9.	• CA Technologies	↓ 3	↑ 3	↑ 1	→	↑ 1
10.	• Salesforce.com	↓ 14	↓ 3	↓ 2	→	↓ 19

Microsoft was the leader between 2009-2013. In 2010, the 5th place was occupied by Ericson, while **Nintendo** took the 8th place.

In 2010, Salesforce.com and CA Technologies were outside of the top 10, whereas VMware was not even in the top 25. In 2012, IBM increased its position to **2nd**.

Salesforce.com, in 2013, occupied the 10th place. EMC, in 2012, managed to take the 6th place.

Global analysis

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Sector analysis

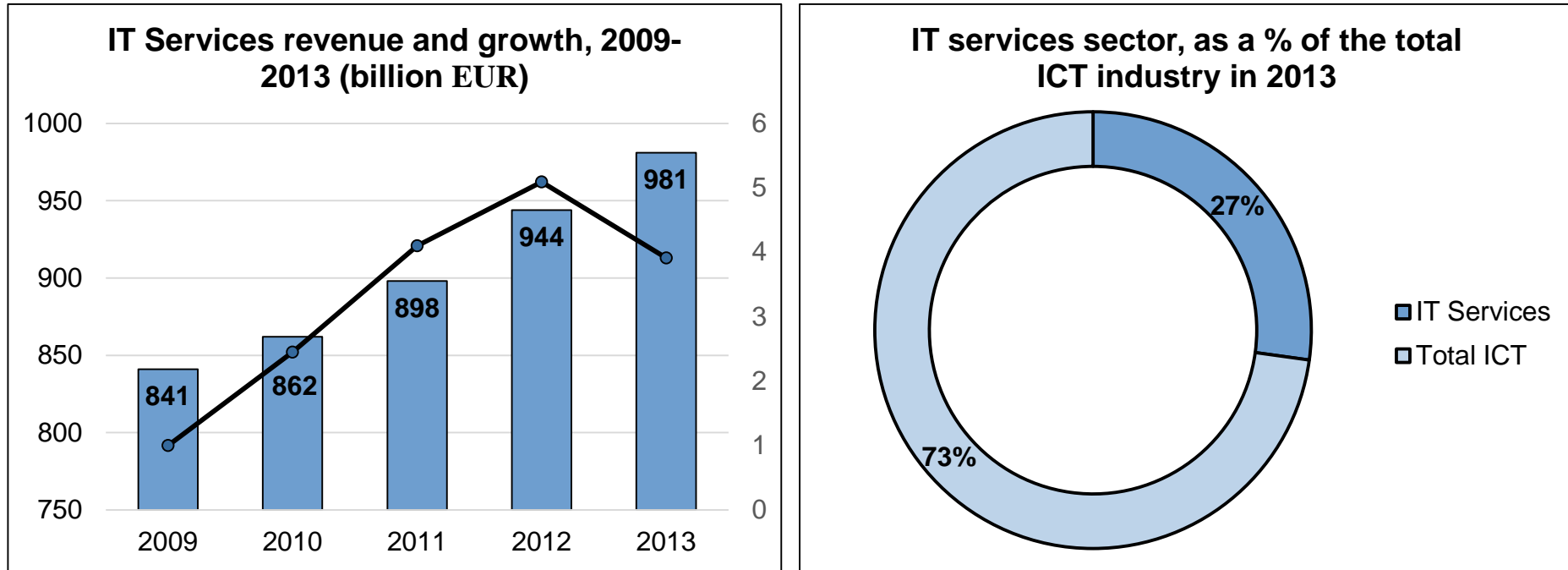
- Hardware
- Software
- **IT services**
- Telecommunication

Europe analysis

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The IT services market in 2013

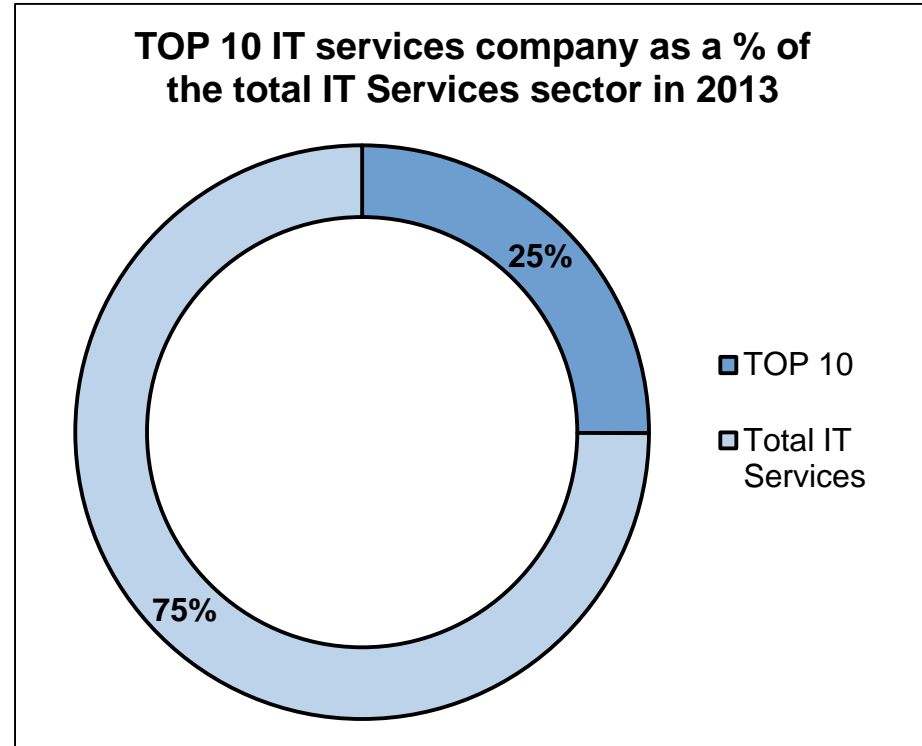
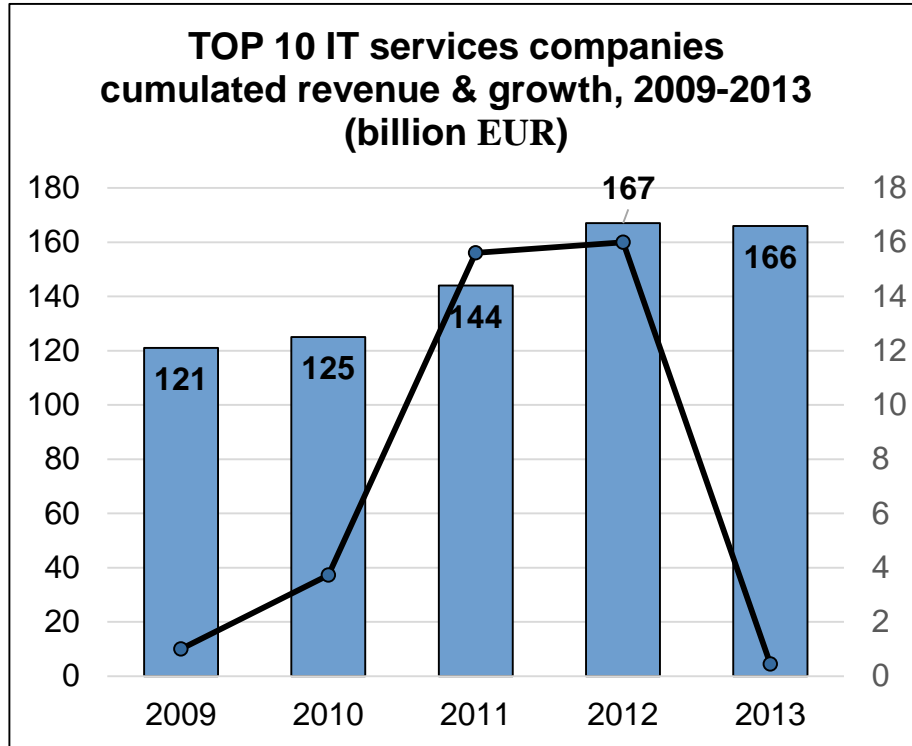
The IT services sector grew 16% from 2009 to 2013, and accounted for 27% of the total ICT industry in 2013.



The IT services industry constitutes **27%** of the worldwide ICT industry, based on total revenue, in 2013. The IT Services industry has been growing constantly since 2009. In this period, **the increase in revenues was EUR 140 billion, a 16.6% growth.**

Market concentration – the IT services industry in 2013

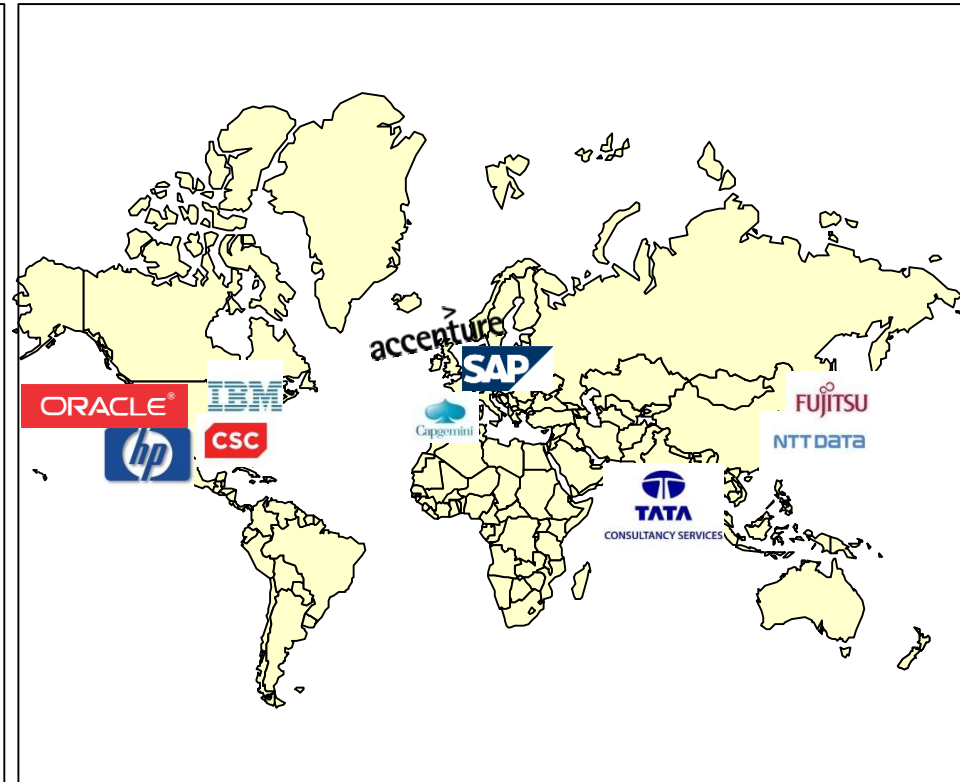
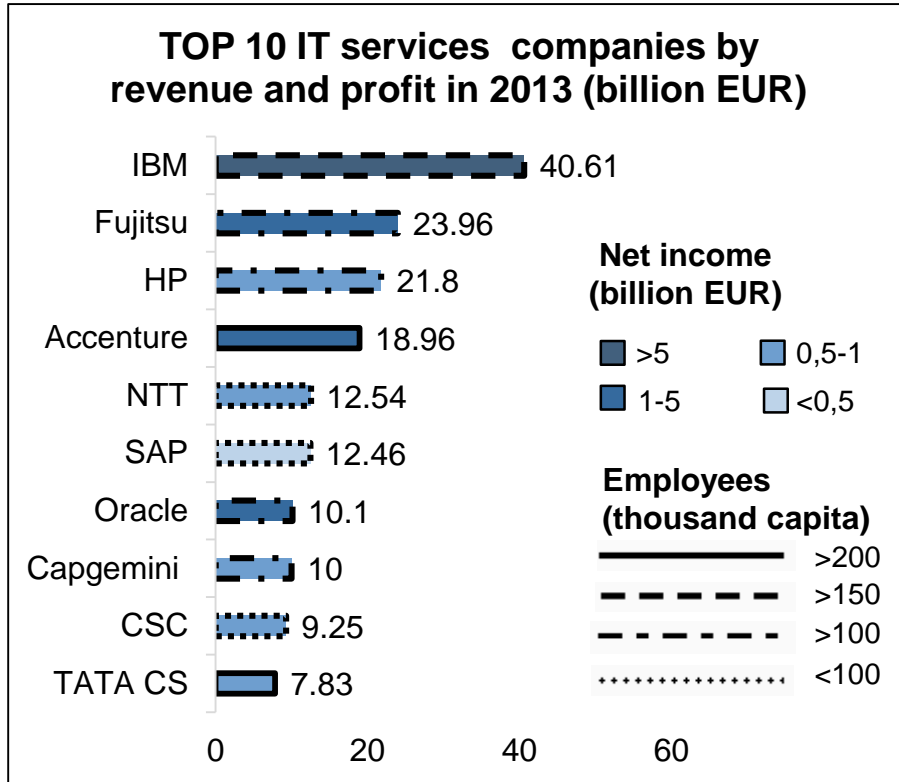
The TOP 10 leading IT services companies grew at a 7.4% CAGR in the 2009-2013 period, and reached EUR 166 billion in cumulative revenues in 2013.



The TOP 10 IT services providers cumulative revenue was EUR 166 billion, with a combined market share of 25%, in 2013. Thus, the market was moderately concentrated.

Top 10 IT services providers by revenue in 2013

40% of the top 10 IT services companies are based in the US, 30% in Europe, and 30% have their headquarters in Asia.

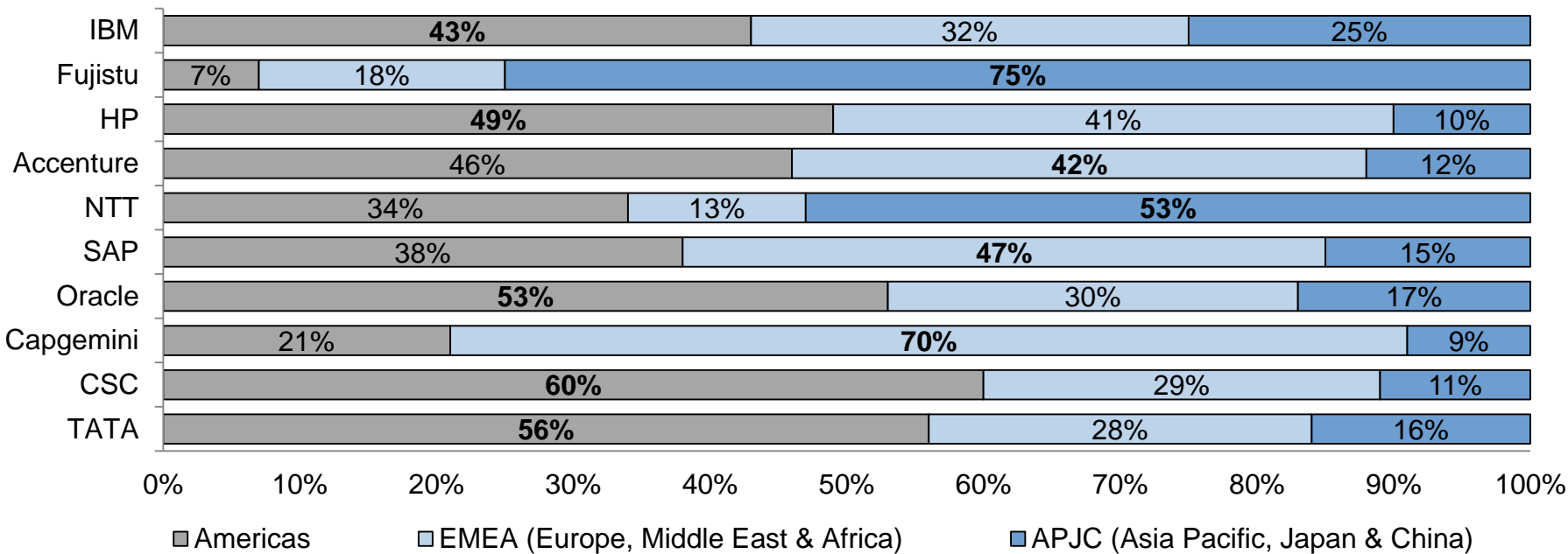


The IT services industry consists of 10 dominant players. The top vendor was **International Business Machines**, with a **total revenue** of more than **EUR 41 billion**, **EUR 7.26 billion in profits**, and **190.000 employees** in 2013.

IT services providers revenue by geographic areas in 2013

The top 10 IT services vendors are present globally.

Revenue distribution by geographic areas in 2013 (in % of total revenue)



Most of the top 10 companies realized the **largest percentage of their revenue** on the **continent**, where they are **based**.

Top 10 IT services providers by revenue, 2009-2013

The TOP 10 leading IT services companies ranking by revenue in the 2009-2013 period.

Sequence	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• International Business Machines	→	→	→	→	→
2.	• Fujitsu	→	→	→	↑ 1	↑ 1
3.	• Hewlett Packard	→	→	→	↓ 1	↓ 1
4.	• Accenture	→	→	→	→	→
5.	• NTT	→	→	↑ 2	↑ 2	↑ 4
6.	• SAP	→	↑ 2	→	↑ 1	↑ 3
7.	• Oracle	→	↑ 1	→	↑ 1	↑ 2
8.	• Capgemini	↑ 2	↓ 1	↓ 2	↓ 1	↓ 2
9.	• CSC	→	↓ 1	↓ 2	↓ 2	↓ 5
10.	• TATA	→	↑ 2	↑ 2	↑ 3	↑ 7

The aggressive targeting of renewals and new business, particularly in continental Europe, assisted **TATA Consultancy Services** to rise 7 positions in the rankings.

Top 10 IT services providers by net income, 2009-2013

The TOP 10 IT services companies rankings by net income was relatively stable in the 2009-2013 period. During this period, IBM was the detached leader.

Sequence	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• International Business Machines	→	→	→	→	→
2.	• SAP	→	→	↓ 2	↑ 2	→
3.	• Oracle	→	↑ 3	→	→	↑ 3
4.	• Accenture	→	→	↓ 2	↑ 2	→
5.	• TATA	→	→	↑ 3	↓ 3	→
6.	• Hewlett Packard	↓ 3	→	↑ 1	↓ 1	↓ 3
7.	• Computer Sciences Corporation	→	→	↓ 1	↑ 1	→
8.	• Capgemini	↑ 1	→	→	→	↑ 1
9.	• Fujitsu	↓ 1	→	→	→	↓ 1
10.	• Nippon Telegraph and Telephone	→	→	→	→	→

IBM remained the leader in the 2009-2013, while **Accenture**, **TATA**, **CSC** and **NTT** held their positions as well. **Oracle** achieved the biggest growth, rising up 3 positions. Only HP and Fujitsu lost position in the 2009-2013 period.

Global analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

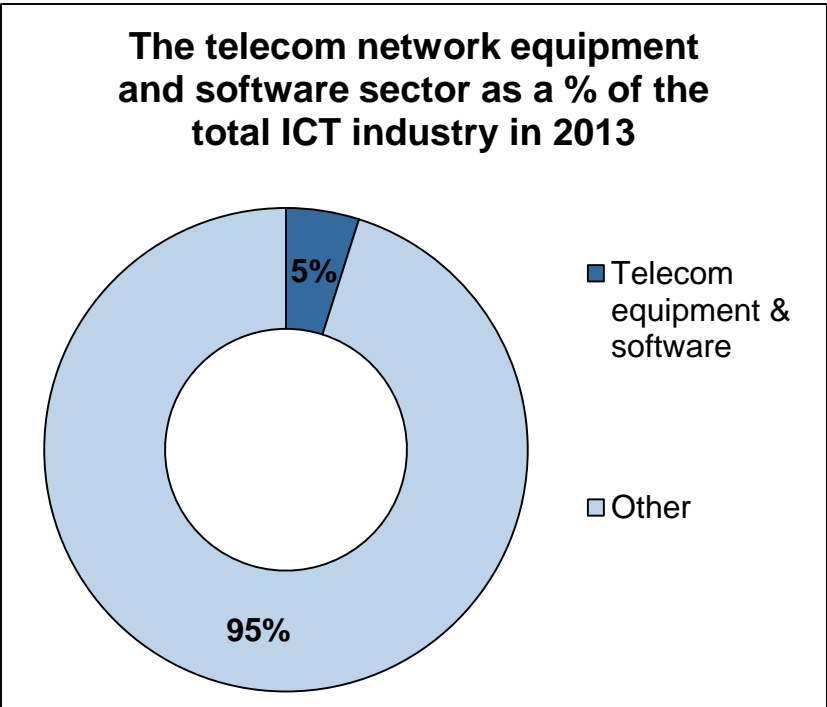
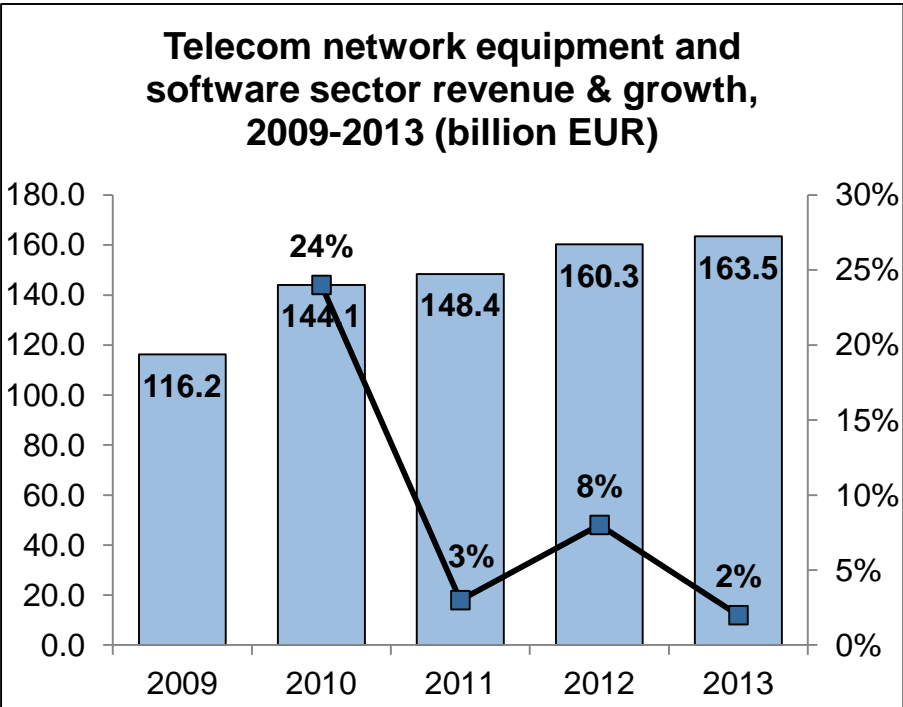
- Hardware
- Software
- IT services
- **Telecommunication**
 - **Network developers**
 - Network operator
 - Gadget manufacturer

Europe analysis

Romania analysis

The telecom network equipment and software market in 2013

The telecom network equipment and software market is expected to grow at a 4.9% CAGR from 2013 to 2017, when it is forecasted to reach EUR 198 billion.

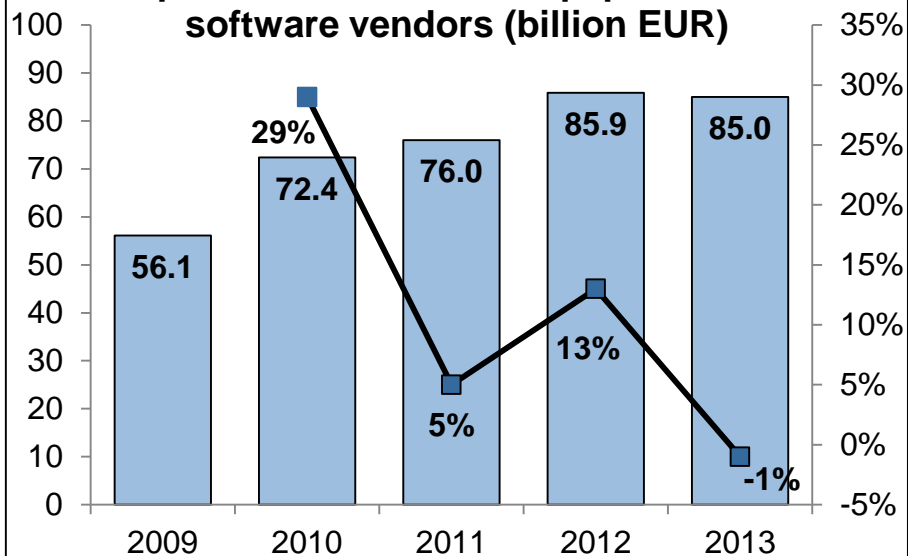


The Telecom network equipment and software industry constitutes **5%** of the worldwide ICT industry, based on total revenue in 2013. The sector registered growth at a **7.1% CAGR** from 2009 to 2013, due to the recession following the 2008 financial crisis.

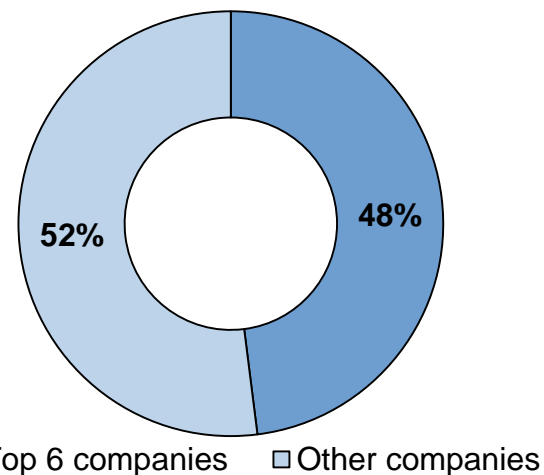
Market concentration – telecom equipment market in 2013

The top 6 telecom network equipment and software vendors had a EUR 85 billion cumulative revenue in 2013, and had registered growth at a 8.7% CAGR between 2009-2013.

Cumulative revenue and growth for the top 6 telecom network equipment and software vendors (billion EUR)



Market share of the top 6 telecom network equipment and software vendors in 2013

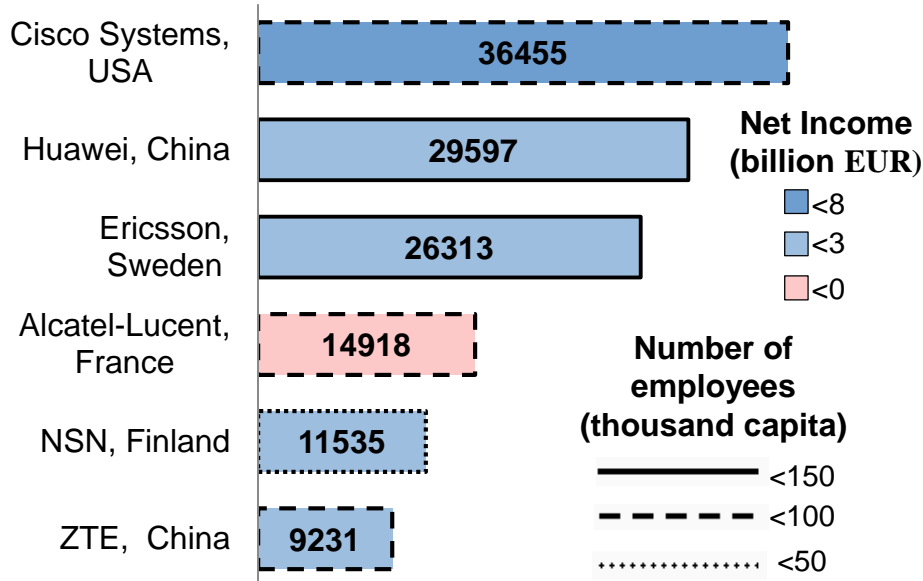


The telecom network equipment and software market is **highly concentrated**, with the top 6 vendors **Cisco Systems, Ericsson, Huawei, Alcatel-Lucent, ZTE and NSN** having a market share of **52%** in 2013.

The telecom network equipment & software market in 2013

From the top 6 telecom equipment vendors, 3 companies are based in Europe, 2 are based in China and 1 is based in the USA, offering products and services in more than 170 countries globally.

Top Telecommunication Equipment vendors by revenues and net income in 2013 (million EUR)

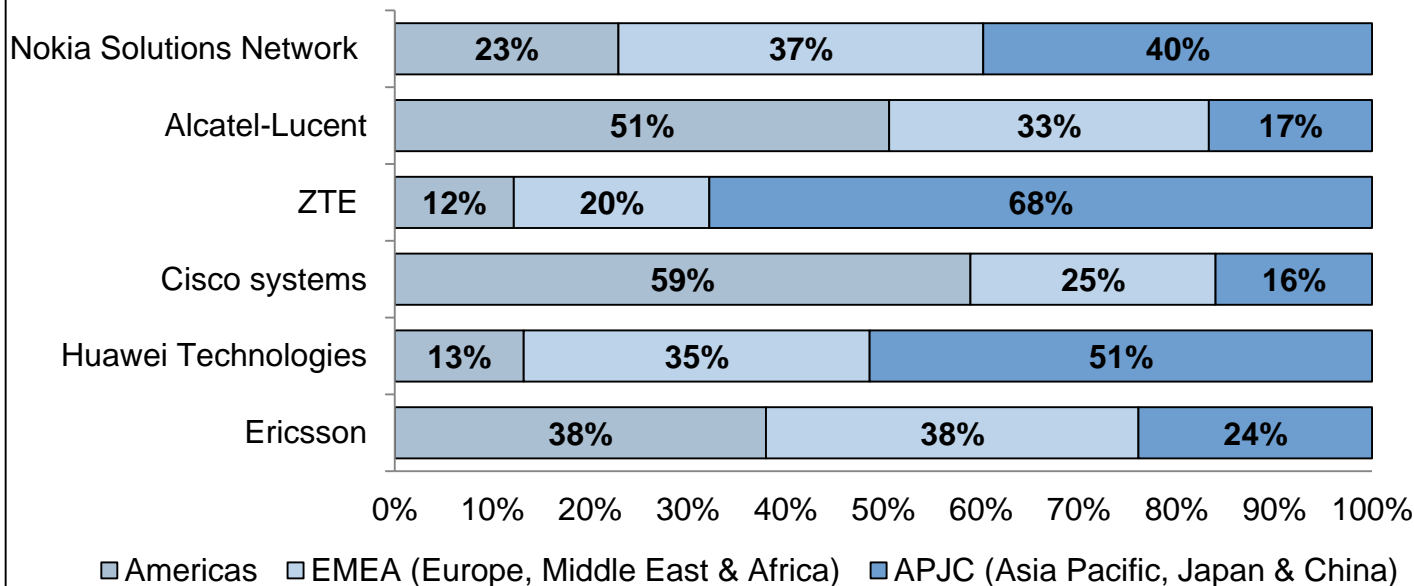


The telecom network equipment and software market has 6 dominant players; the top vendor, in 2013, was Cisco Systems, with a total revenue of more than EUR 36 billion.

Telecom equipment revenues by geographic areas in 2013

The top telecommunication network equipment and software vendors are present in each major geographic area.

Revenue distribution by geographic areas in 2013 (in % of total revenue)



	Headquarters
	Finland
	France
	China
	USA
	China
	Sweden

Most of the vendors realize the largest % of their revenue on the continent, where they are based. The Chinese vendors are not as successful, as the European vendors in the USA.

Top 6 telecom network equipment vendors by revenue

Cisco Systems was the leading telecom network equipment vendor from 2009 to 2013, boasting with a 19% market share, as the second biggest vendor Huawei had 11% market share.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Cisco Systems	→	→	→	→	→
2.	• Huawei Technologies	→	→	↑ 1	→	↑ 1
3.	• Ericsson	→	→	↓ 1	→	↓ 1
4.	• Alcatel-Lucent	→	→	→	→	→
5.	• Nokia Solutions Network	↑ 1	→	→	→	↑ 1
6.	• ZTE Communication Equipment	↓ 1	→	→	→	↓ 1

The **top 3** telecom network equipment vendors have a cumulative **market share of 37%**, as opposed to the **bottom 3** vendors, with **15%**;

Huawei Technologies posted **higher revenues** than Ericsson, although it had a **negligible presence** in the **USA**, in 2012;

Top 6 telecom network equipment vendors by net profit/loss

Only the top 3 telecom network equipment vendors were profitable in the 2009-2013 period, after the revenues and profits dropped, due to the financial crisis.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Cisco Systems	→	→	→	→	→
2.	• Huawei Technologies	→	↓ 1	↑ 1	→	→
3.	• Ericsson	→	↑ 1	↓ 1	→	→
4.	• ZTE Communication Equipment	→	↓ 1	↑ 1	→	→
5.	• Nokia Solutions Network	→	→	↑ 1	→	↑ 1
6.	• Alcatel-Lucent	→	↑ 1	↓ 2	→	↓ 1

Alcatel-Lucent was hit by the Eurozone debt crisis – **y/y revenues** in Europe fell, with **16.5%**, and **gross profits** fell, with **18.9%** in **2012**;

Nokia Solutions Network had continued its **divestment strategy** of the non-core businesses between 2009-2012 – losses from **discontinued operations**;

ZTE realized losses, due to its heavy **investment** and expansion **strategy** in **2012**;

Global analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

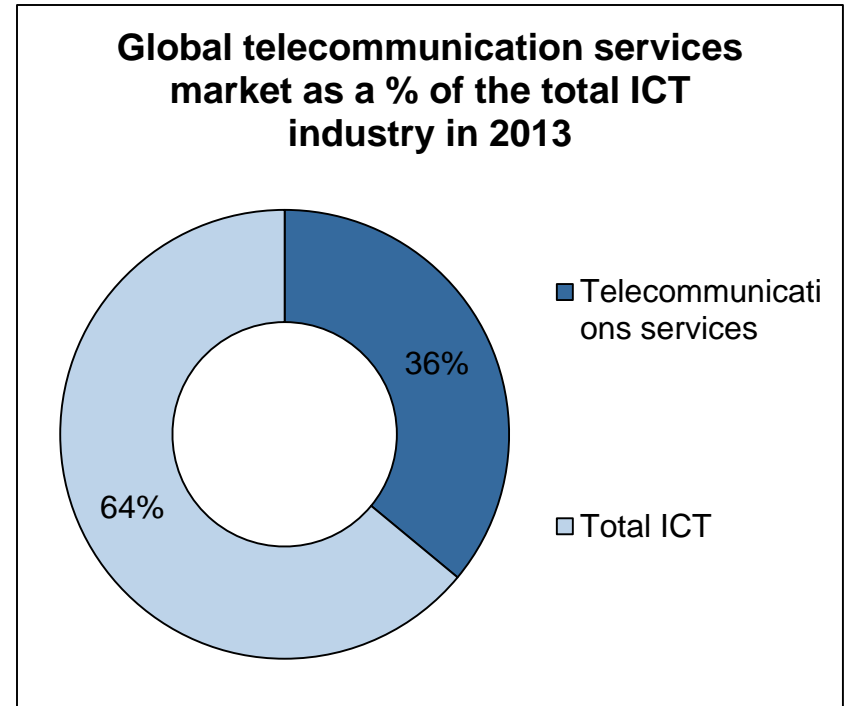
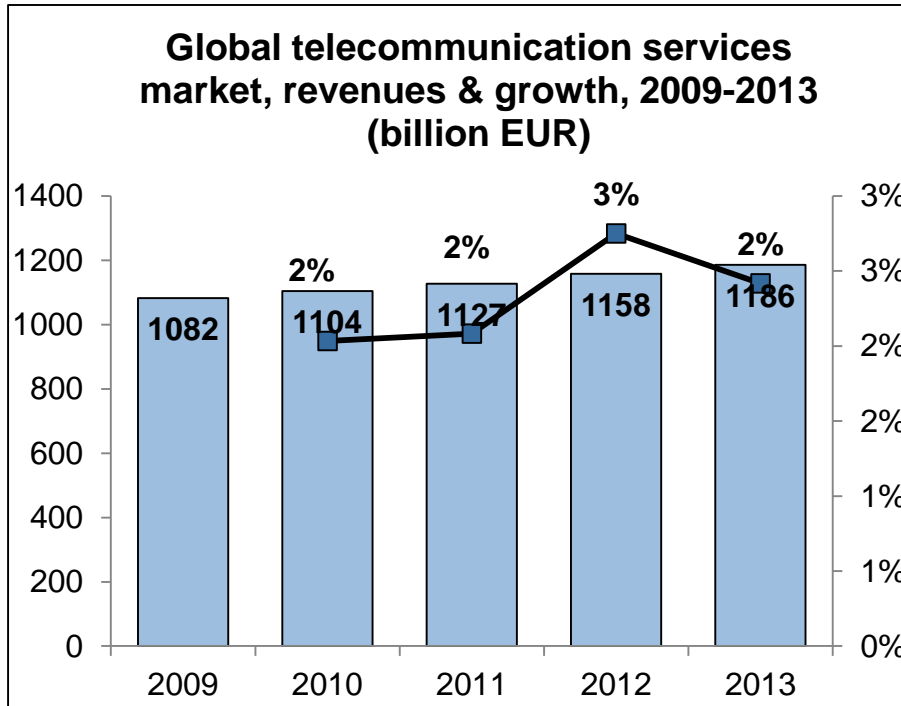
- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - **Network operator**
 - Gadget manufacturer

Europe analysis

Romania analysis

Telecommunication services market in 2013

The value of the global telecommunications services market is constantly growing, with a yearly average of 2%. In 2013, the size of the market was EUR 1183 billion.

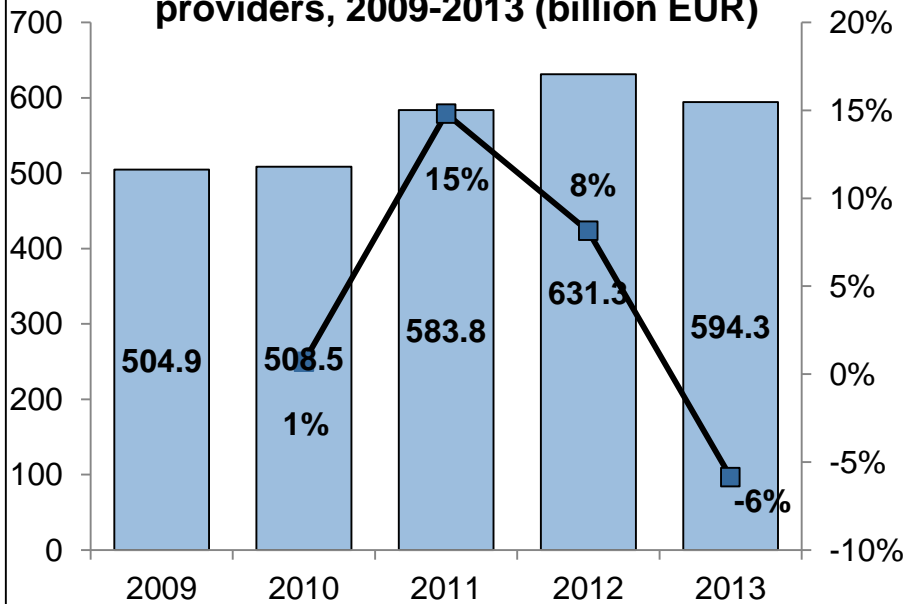


The global telecommunication services market is showing a constant growth at a **2% CAGR**. In the EU, there has been a **2%** decrease, while the emerging markets show an increase by **7%**.

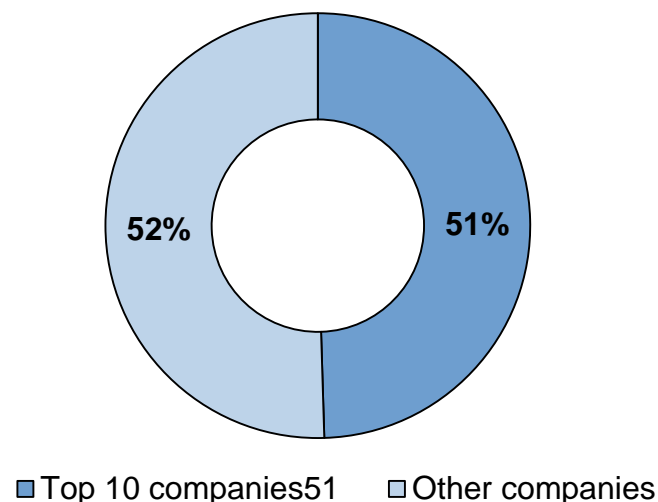
Market concentration – telecommunication services market

The top 10 telecommunication services providers had a EUR 594.3 billion cumulative revenue in 2013, and had registered a growth at a 3% CAGR between 2009-2013.

Cumulative revenue and growth for the top telecommunication services providers, 2009-2013 (billion EUR)



Market share of the top 10 telecommunication services providers in 2013

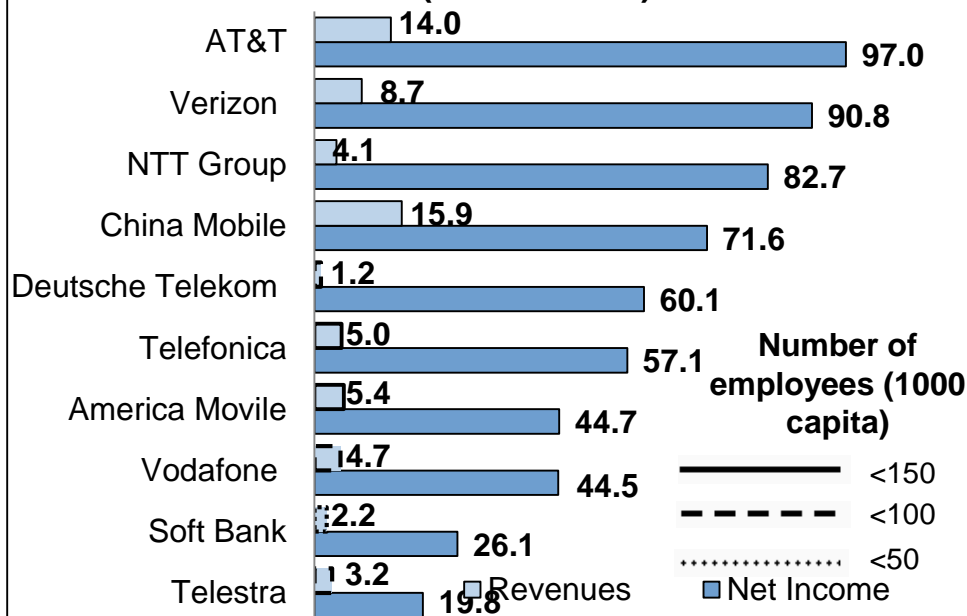


The leading Telecom services companies are: Verizon, China Mobile, AT&T, Vodafone and Soft Bank. The top companies are headquartered in the USA, in Europe, and in Asia.

The telecommunication services market in 2013

The top two telecommunication services providers by revenue are from the US, the third and fourth placed are located in Asia. The first European company is ranked only fifth.

Top Telecommunication services providers by revenues and net income in 2013 (million EUR)



The telecommunication services market consist of 6 dominant players; the top provider in 2013 was AT&T, with a total revenue of EUR 97 billion.

Top 10 telecom services providers by revenue, 2009-2013

The leading company between 2009 and 2013 was AT&T, with a market share of 8.1%.

Sorrend	• Vállalat neve	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• AT&T	↑1	↓1	→	↑1	↑1
2.	• Verizon	↑1	↓1	→	↑1	↑1
3.	• NTT Group	↓2	↑2	→	↓2	↓2
4.	• China Mobile	→	→	↑1	→	↑1
5.	• Deutsche Telekom	→	↓2	→	↑1	↓1
6.	• Telefónica	→	↑6	↓1	↓1	↑4
7.	• America Movil	→	↓1	↓1	↑1	↓1
8.	• Vodafone	→	↓1	↑1	↓1	↓1
9.	• Soft Bank	→	↓1	→	→	↓1
10.	• Telestra	→	↓2	→	→	↓1

Between 2009 and 2013, the US based companies became the leaders of the ranking by revenue. In 2010, Telefonica won full control over Vivo, a phone venture in Brazil.

Top 10 telecom services providers by revenue, 2009-2013

Every Telecommunication service provider had a positive net profit between 2009 and 2013 with the exception of Deutsche Telekom. The highest profit is generated by China Mobile.

Sorrend	Vállalat neve	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1.	China Mobile	↓ 1	↑ 1	→	→	→
2.	AT&T	↑ 2	↓ 7	↑ 4	↑ 1	↑ 1
3.	Verizon	↓ 1	↑ 1	↓ 1	↑ 1	↓ 1
4.	Telefonica	→	→	↓ 3	↑ 3	→
5.	Vodafone	→	→	↑ 3	↓ 3	→
6.	America Movil	→	→	↑ 1	↓ 1	→
7.	NTT Group	→	→	↑ 1	↓ 1	→
8.	Telestra	→	↓ 1	→	↑ 1	→
9.	Soft Bank	→	→	↑ 2	↓ 1	↑ 1
10.	Deutsche Telekom	→	→	↓ 1	→	↓ 1

Each of the top 10 companies managed to be profitable, except for Deutsche Telekom in 2011, due to the recognition of an impairment loss of EUR 7.4 billion on T-Mobile USA, a consequence of the planned merger with MetroPCS.

Global analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - Network operator
 - **Gadget manufacturer**

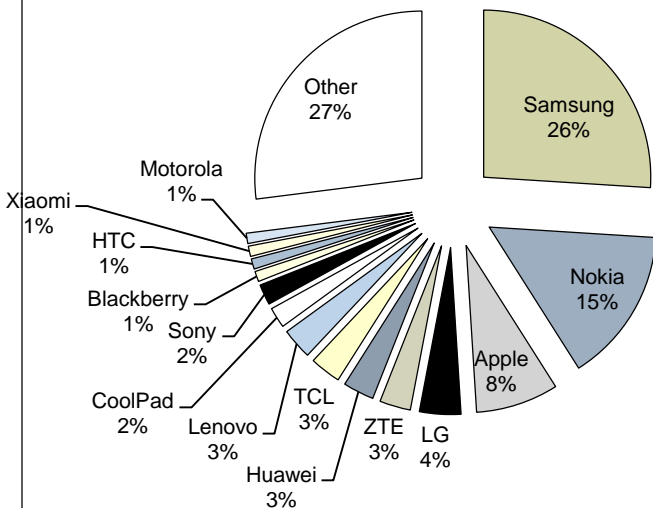
Europe analysis

Romania analysis

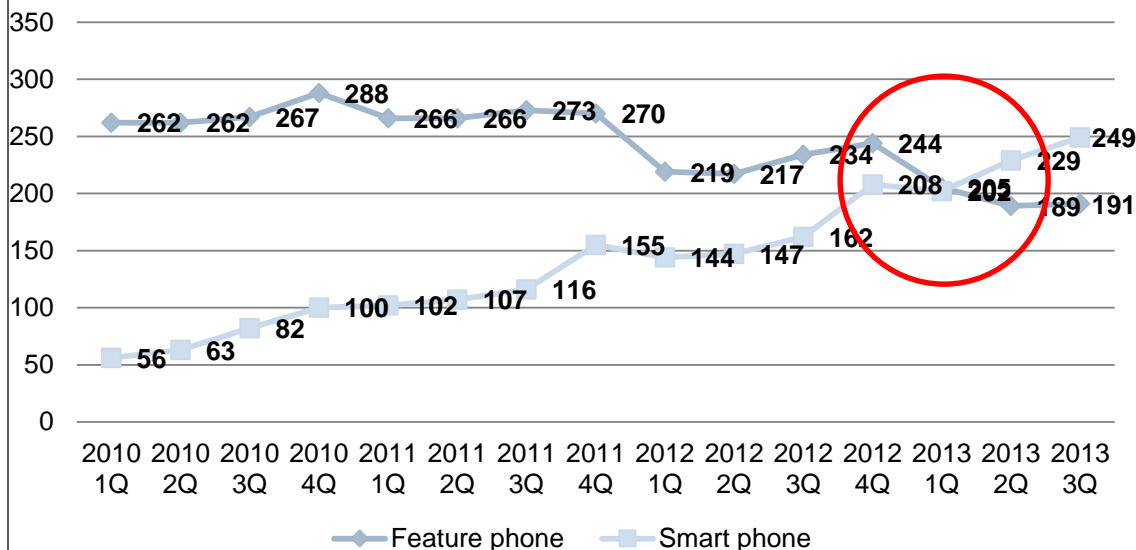
The world's biggest handset makers

The handset market shifted from the feature phone era to the new generation of smartphones. The turning point was 2013.

Third party market share by OEM

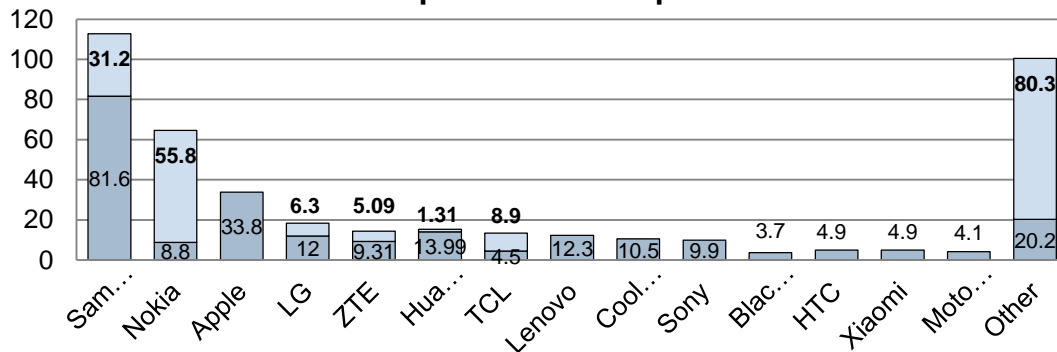


Smartphone vs. feature phone shipment (million units)



Due to the changing trends, the top manufacturers became smartphone oriented.

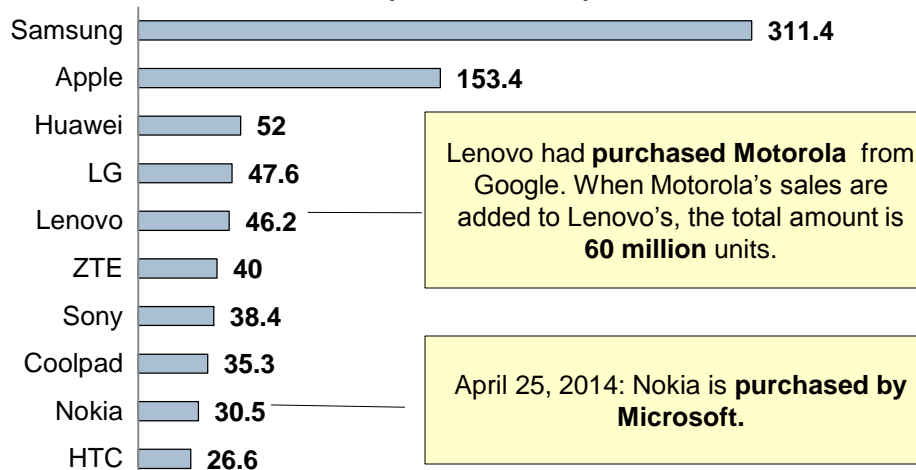
Third quarter OEM shipments



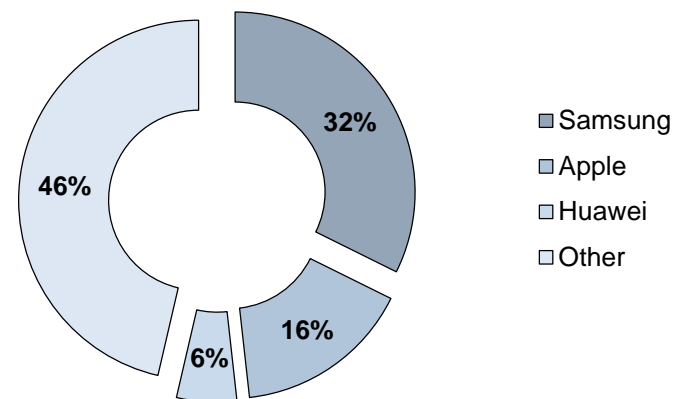
The biggest smartphone manufacturers - overview

The handset market is concentrated, and showed an average growth rate of 42%. Samsung was the leader in unit sales, which is based on Android.

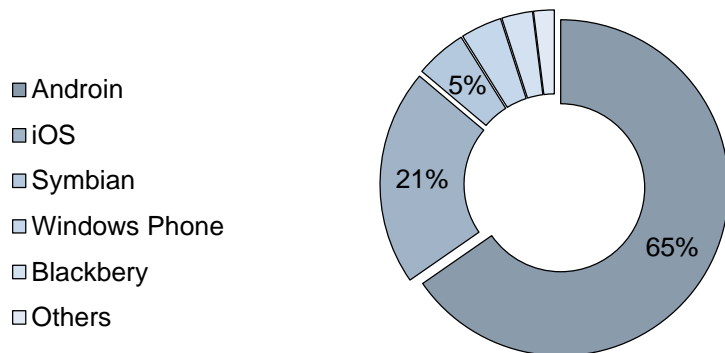
Top 10 Smartphone manufacturers by unit sales in 2013 (million units)



Market share by sold units in 2013

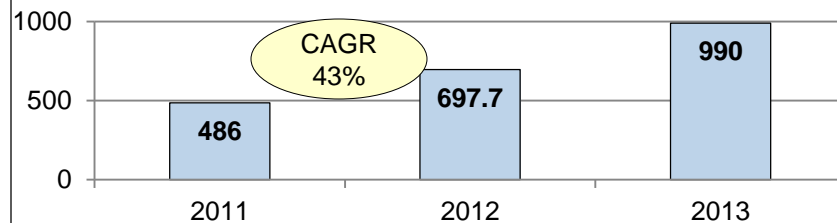


Operating system market shares 2013



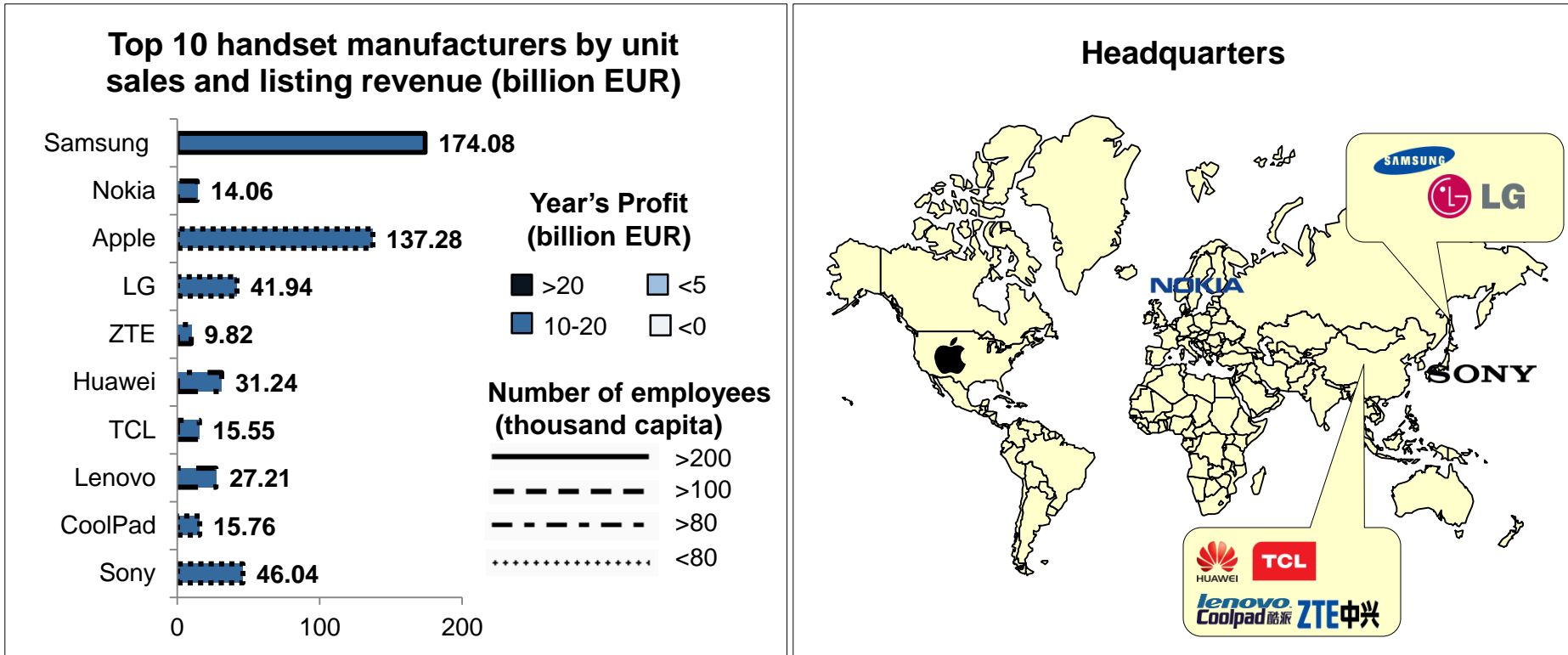
The Smartphone market is highly concentrated, the top three companies realized more than half of the total amount of sales.

Market growth between 2011 and 2013 (million units)



Top 10 handset man. by unit sales and revenue in 2013

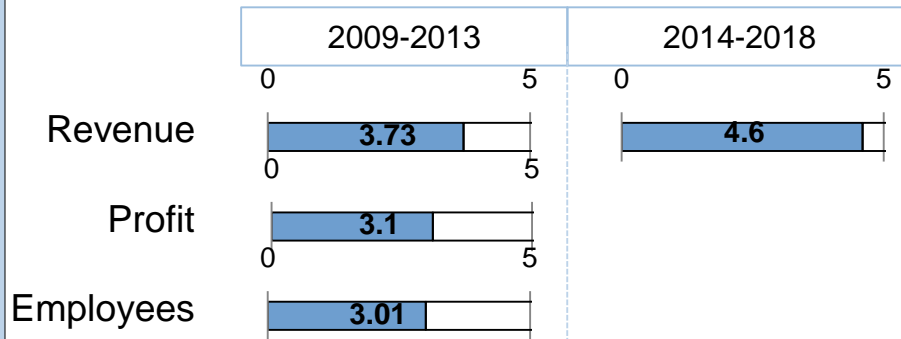
The top 10 mobile phone manufacturers have a cumulated revenue of EUR 512.98 billion. The leading company is Samsung with a revenue of EUR 174 billion, and the highest unit sales.



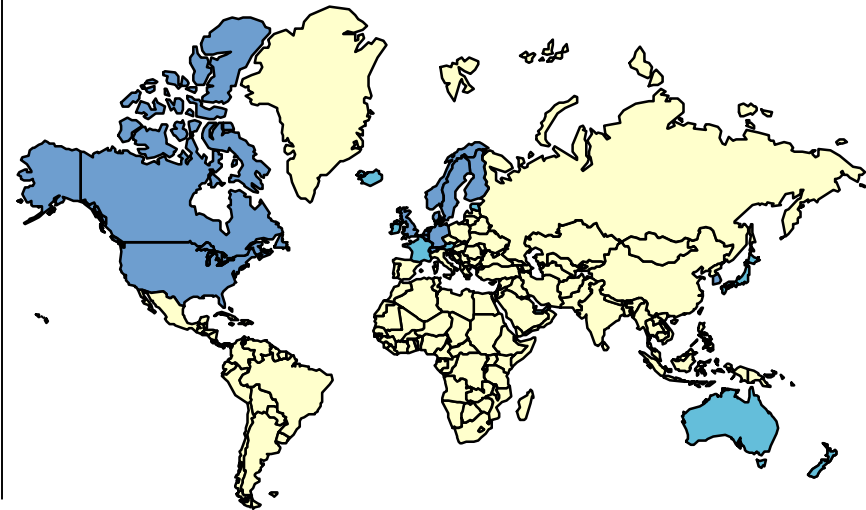
70% of the leading mobile manufacturers are based in Asia. The global leader is Samsung, with a revenue of **EUR 174 billion**, a net profit of **EUR 23 billion**, and **275 000 employees**.

Global ICT market summary (1)

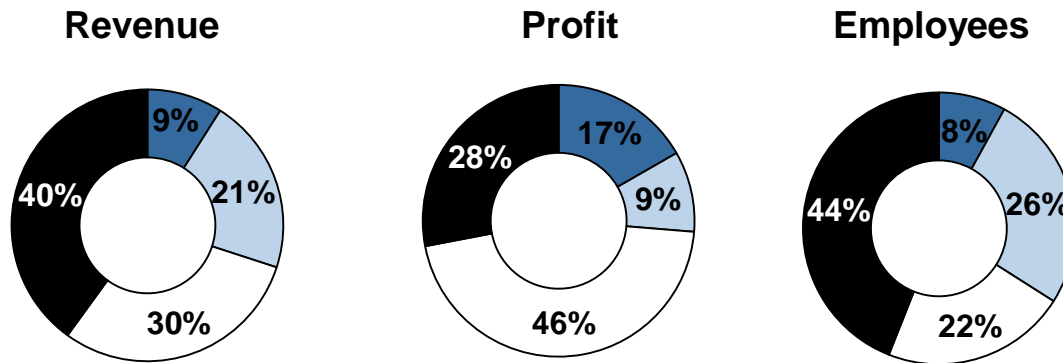
Average yearly change (% , 2009-2018)



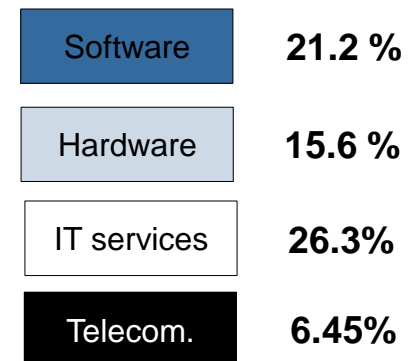
The Global Network Readiness Landscape, 2013







The subsectors average proportion of the total ICT by revenue, profit, employees (% , 2009-2013)



The subsectors profit rates (% , 2009-2013)



Global ICT market summary (2)

	Average yearly change (%, 2009-2013)		Concentration Top 10 (%)	Top companies	
	Revenue	Profit		Top 3 by revenue ('13)	Top developing companies by revenue ('09-'13)
Software	7.08	7.72	 42	Microsoft, Oracle, IBM	VMware
Hardware	4.3	6.28	 67*	Samunsg, Foxconn, HP	Foxconn
IT services	4.4	7.12	 2	IBM, Fujitsu, HP	NTT
Telecom.	-0.3	0.2	 51	AT&T, Verizon, NTT	Telefónica

'operators

Global analysis

European analysis

ICT revenue

- **Historically 2009-2013**
- Forecast 2014-2018
- By countries 2013

ICT profit

ICT employees

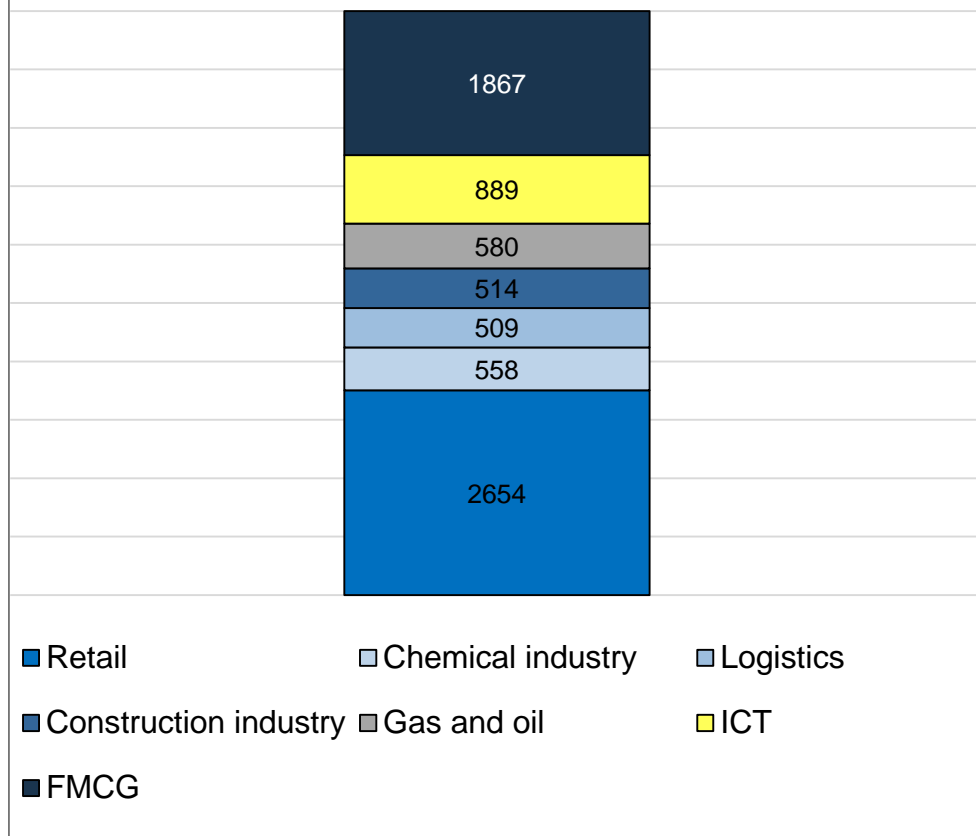
Sector analysis

Romanian analysis

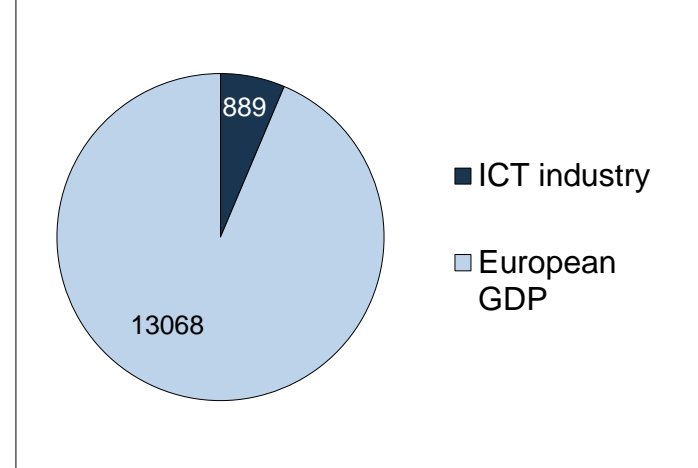
ICT industry overview by revenue in 2013 - Europe

The ICT market is the third biggest industrial sector in Europe. In 2013, the revenue of this market was EUR 889 billion.

The top industries by revenue in 2013, (billion EUR)



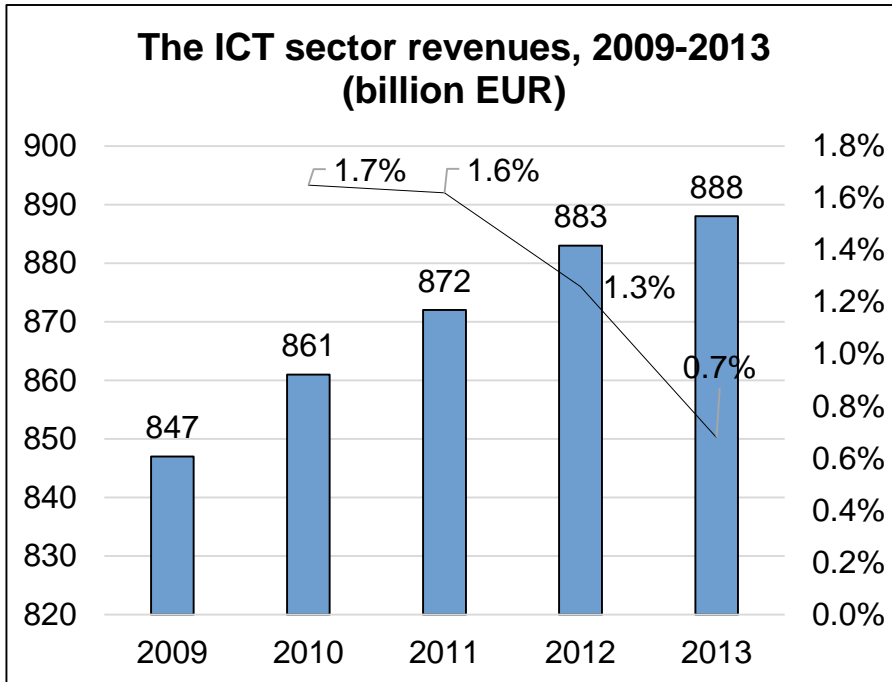
The size of ICT industry in 2013, (billion EUR)



- The ICT industry accounts for 6.08% of the European GDP.
- From the industrial sectors, the ICT industry **follows** most strictly the **global trends**.

Historical changes of the ICT sector – by revenue

The European ICT sector market size grew at a 1.17% CAGR between 2009-2013, and accounts for more than 20% of the global ICT industry.



The **ICT sector** is increasing continuously, due to the growing **need for informatical appliances and softwares**.

The **European ICT sector** market size by revenue was **EUR 889 billion in 2013**, accounting for **21.3%** of the global ICT sector.

Following the **financial crisis in 2008**, the income of the ICT market dropped in 2009. Afterwards, made a steady recovery, as the need for **ICT products** grew in mechanized environments, e.g., **in factories and in markets**.

Global analysis

European analysis

ICT revenue

- Historically 2009-2013
- **Forecast 2014-2018**
- By countries 2013

ICT profit

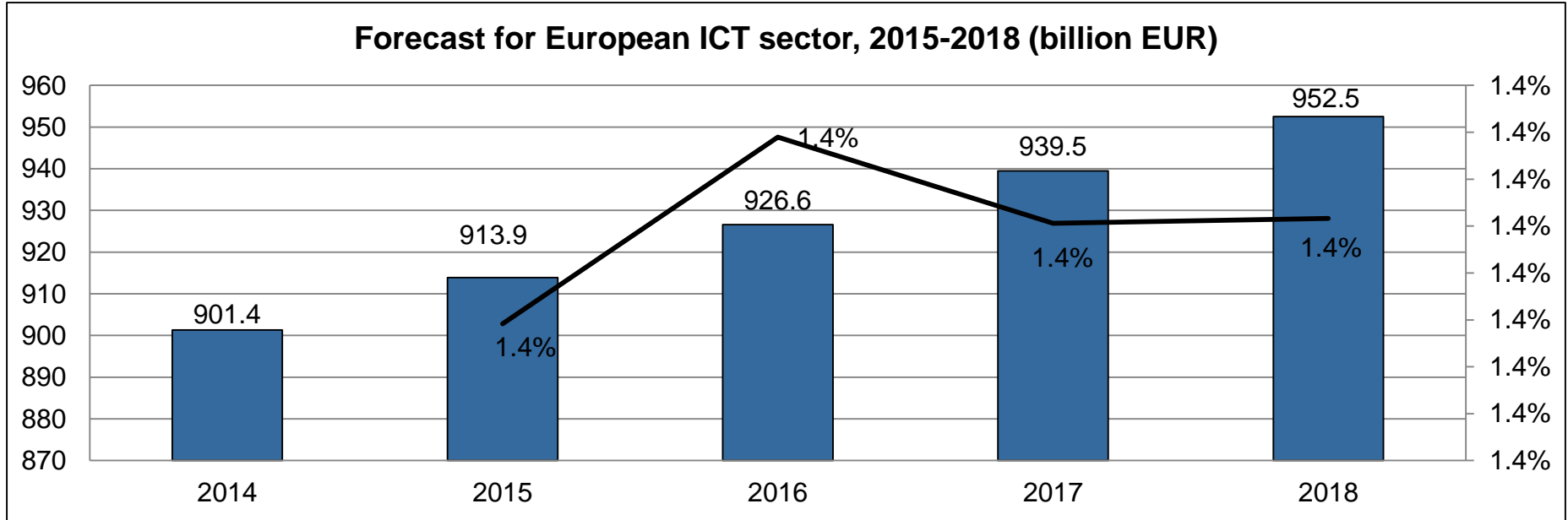
ICT employees

Sector analysis

Romanian analysis

ICT sector in Europe - forecast

Due to the new subventions for start-ups, and to the permeation of new software, the European ICT market is expected to reach EUR 952.52 billion in 2018.



The ICT market is expected to reach **EUR 952.52 billion** in 2018, considering the growth of the previous years.

Due to the steady growth of educated users, the market can be affected by the permeation of **Open Source Software**, which allow users to improve their own software.

The growing EU support for **start-ups** in the ICT sector can also lead to further industry growth.

Global analysis

European analysis

ICT revenue

- Historically 2009-2013
- Forecast 2014-2018
- **By countries 2013**

ICT profit

ICT employees

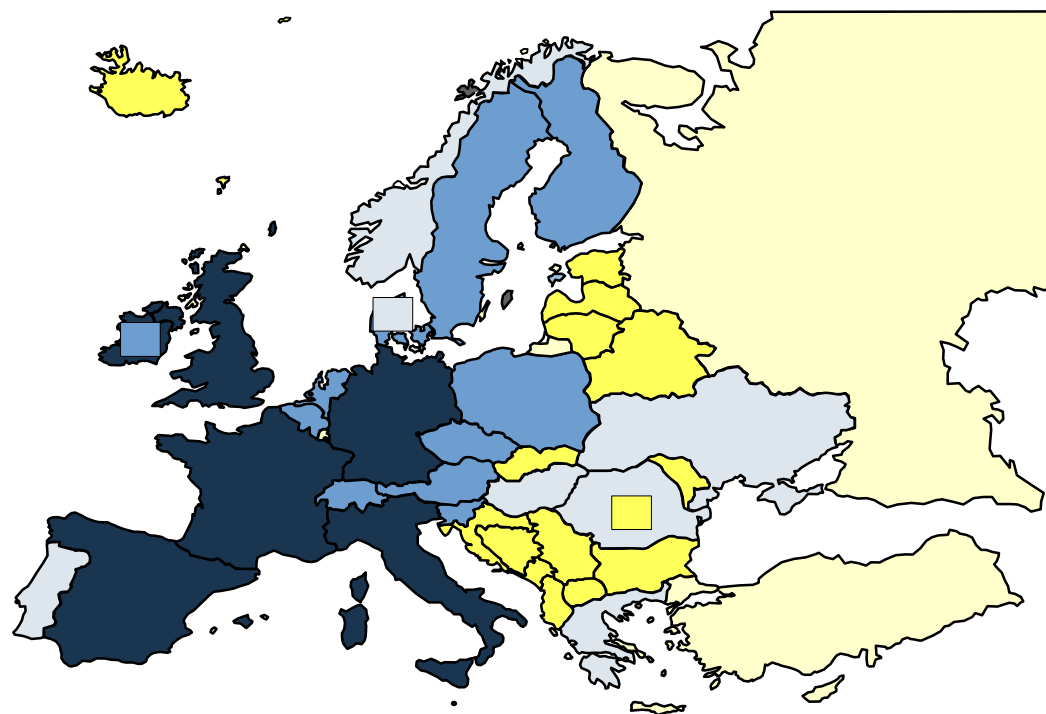
Sector analysis

Romanian analysis

European ICT industry in 2013 by revenues

Germany had the highest revenue in Europe, as all countries registered increasing revenues. Ireland revenue grew over EUR 70 billion in 2013.

Country revenues from the ICT industry in 2013 (billion EUR)



The revenues in the European ICT market have been increasing constantly, and reached **EUR 889 billion** in 2013. **Germany** had the highest revenue of **EUR 152 billion**, while **Ireland** revenue grew over **EUR 70 billion**. **Romania's** ICT revenue was more than **EUR 4 billion**.

Global analysis

European analysis

ICT revenue

ICT profit

- **Historically 2009-2013**
- By countries 2013

ICT employees

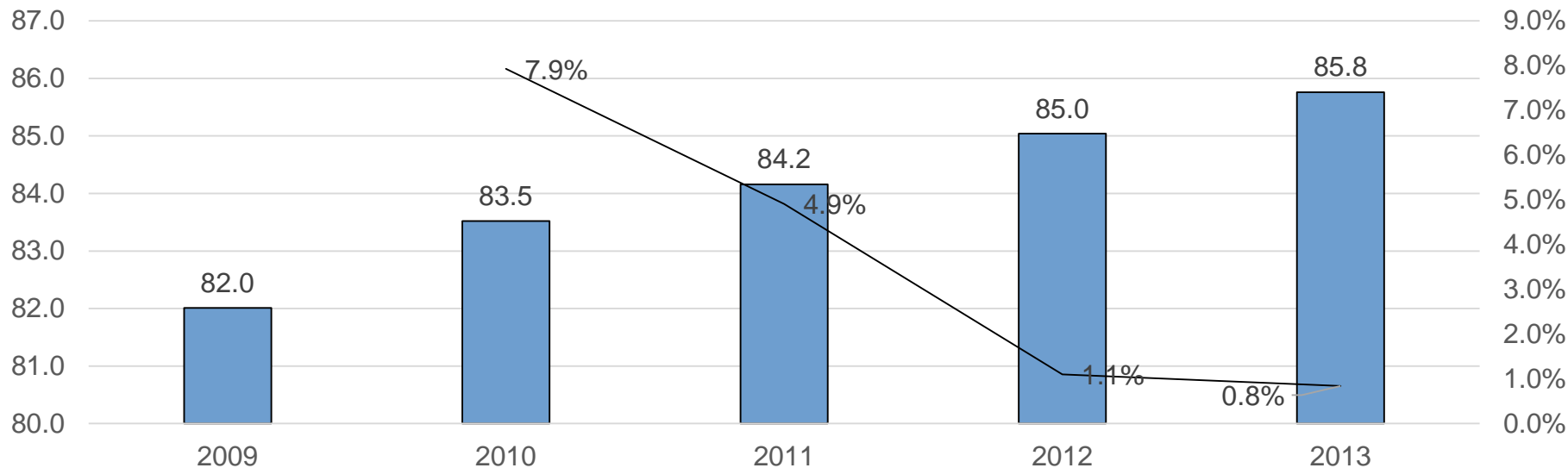
Sector analysis

Romanian analysis

ICT market size in Europe - by profit

The European ICT sector profit reached EUR 85.8 billion in 2013. The ICT industry profits grew at a 3.7% CAGR in the 2009-2013 period.

European ICT industry profit and growth, 2009-2013 (billion EUR)



There has been a moderate increase in revenues and profits in the European ICT industry between 2009-2013. The industry **profit margin** is **15%**, at the same levels as the top industries, which have a **profit margin** between **15-20%**. The rapid growth is, due to the increasing mechanization of the industries.

Global analysis

European analysis

ICT revenue

ICT profit

- Historically 2009-2013
- **By countries 2013**

ICT employees

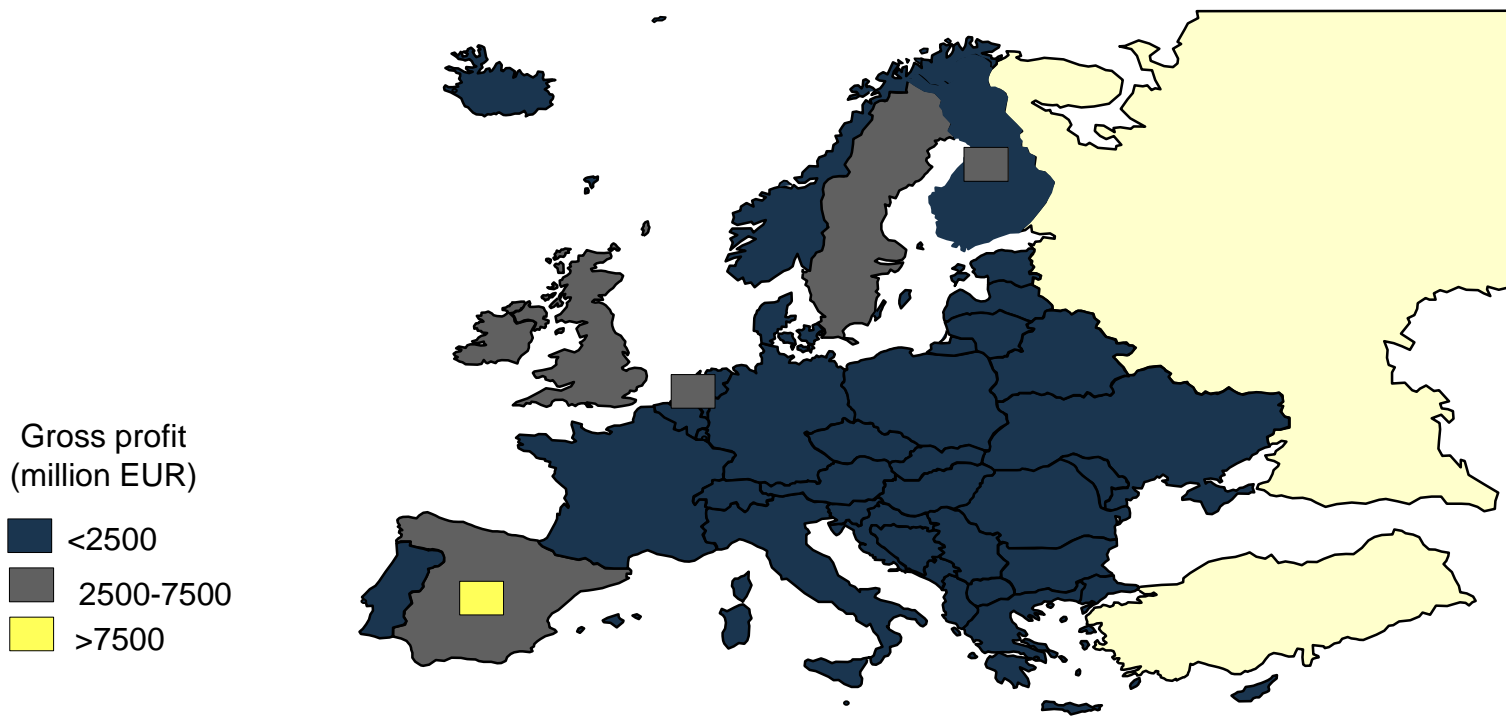
Sector analysis

Romanian analysis

European ICT industry profits by country, 2009-2013

2013 was a bad year for the ICT industry. Spain managed to stay on top, but many countries experienced decreased profits, and some of them registered losses.

European ICT industry profits by country, 2009-2013 (million EUR)



In the last 5 years, the UK had the most profitable ICT market, while many other countries registered constant but smaller profits e.g., Germany, Spain, Ireland, and Netherland.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

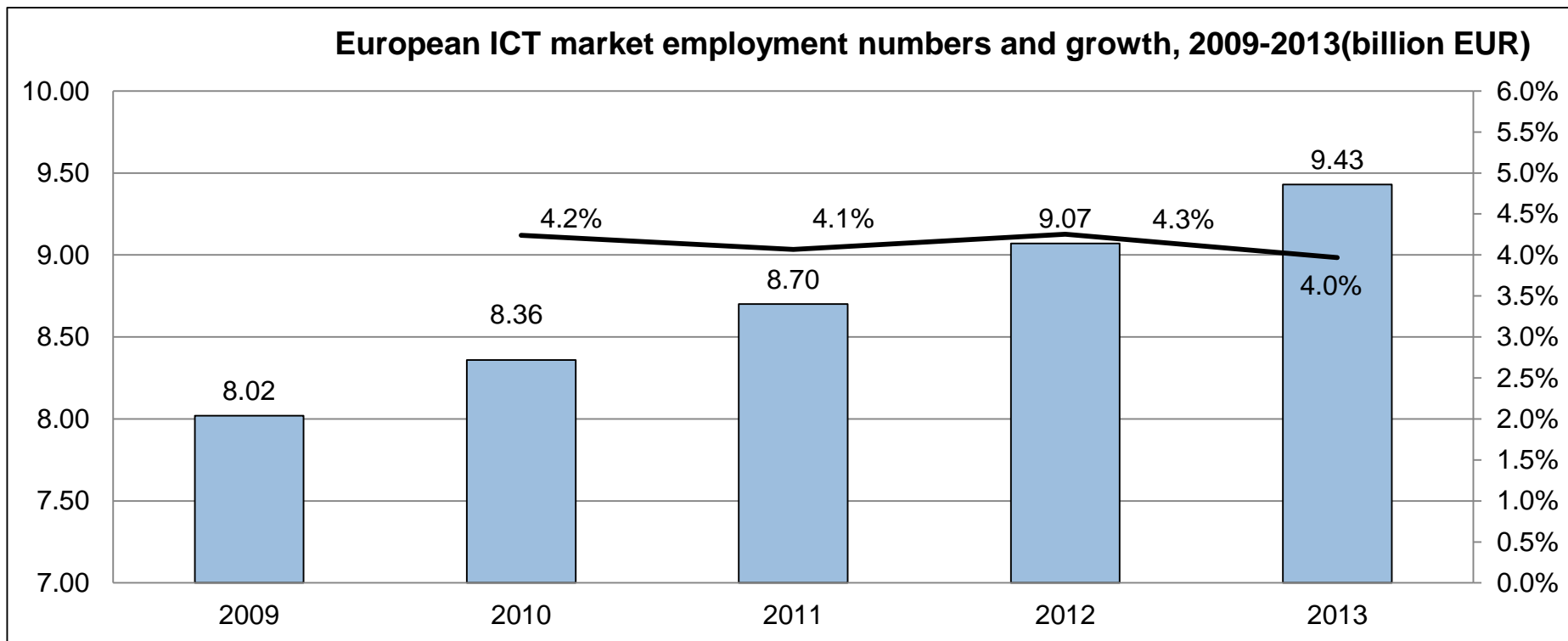
- **Historically 2009-2013**
- By countries 2013

Sector analysis

Romanian analysis

European ICT sector employment

The European ICT market has been on the rise, due to the low-cost but highly skilled labor available in this region, and the geographical and cultural proximity.



The number of ICT jobs have **increased by 4.02%** since **December 2011**, and have risen by **3.96%** since **December 2012**. Today's work force is different in many ways, e.g., **the length of service** expected of ICT candidates.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

- Historically 2009-2013
- **By countries 2013**

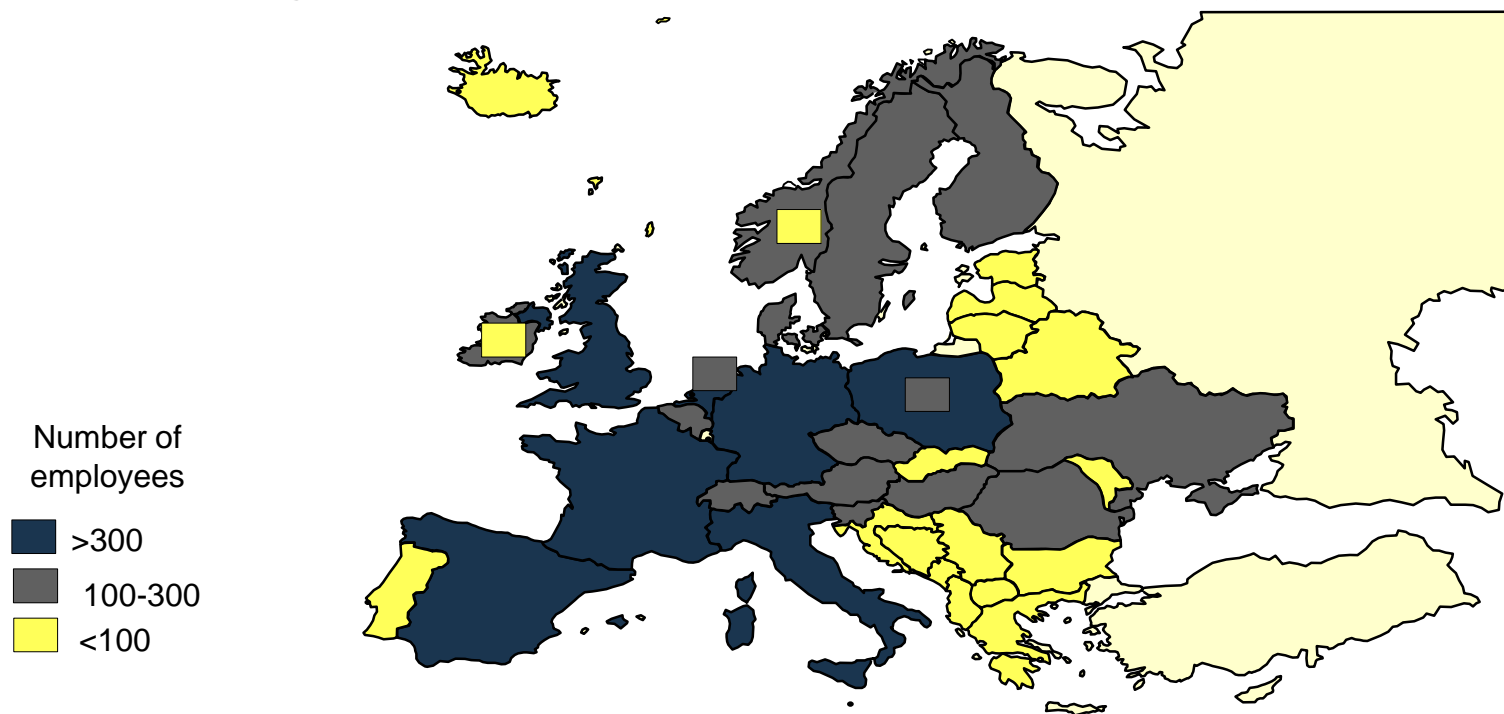
Sector analysis

Romanian analysis

European ICT industry by employees in 2013

UK has the highest number of employees in the European ICT market. Netherland's employee number has increased over 300 thousand and Ireland's over 100 thousand.

The largest ICT markets in Europe based on number of employees (thousand capita)



The most ICT employees work in the **UK**, over 1.4 million followed by **Germany, France, Italy, Spain, and Poland**. The total European ICT employment number was **9.43** million in 2013. The number of employees in the **Netherlands** has grown **over 300 thousand**, and in **Ireland** has reached **100.5 thousand**. Romania has over **100 thousand** ICT employees.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

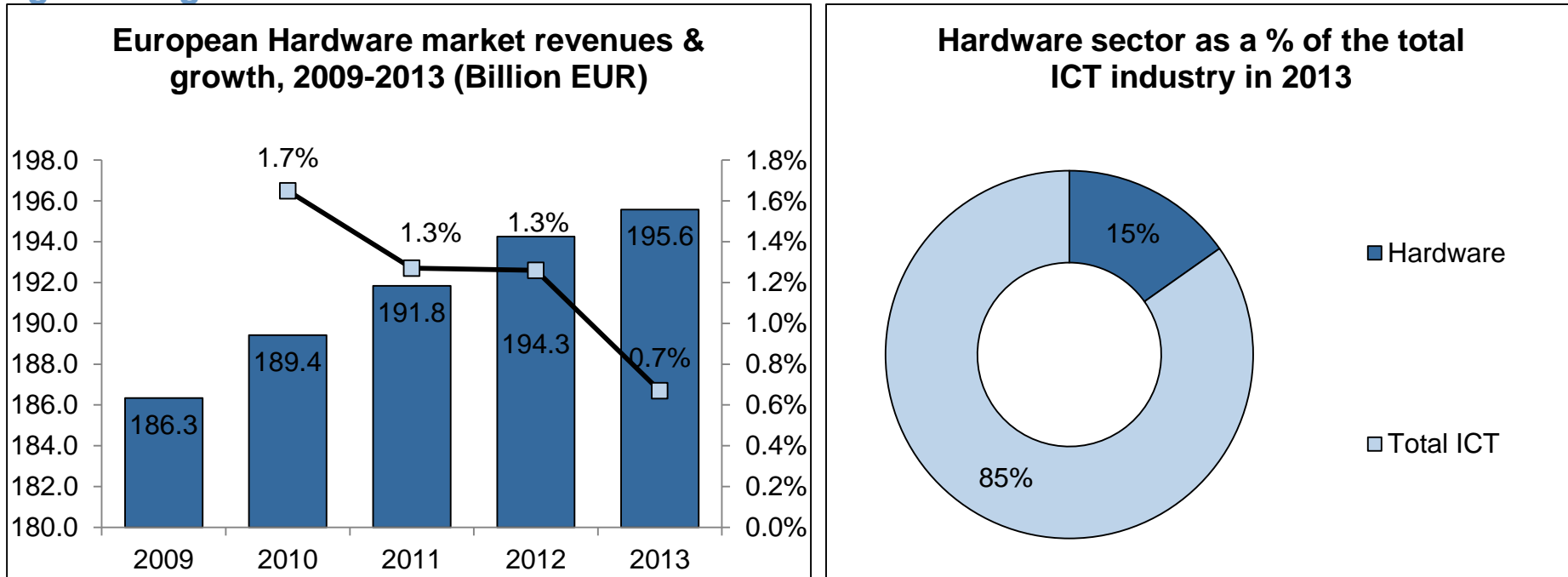
Sector analysis

- **Hardware**
- Software
- IT services
- Telecommunication

Romanian analysis

Hardware market in Europe by revenue, 2009-2013

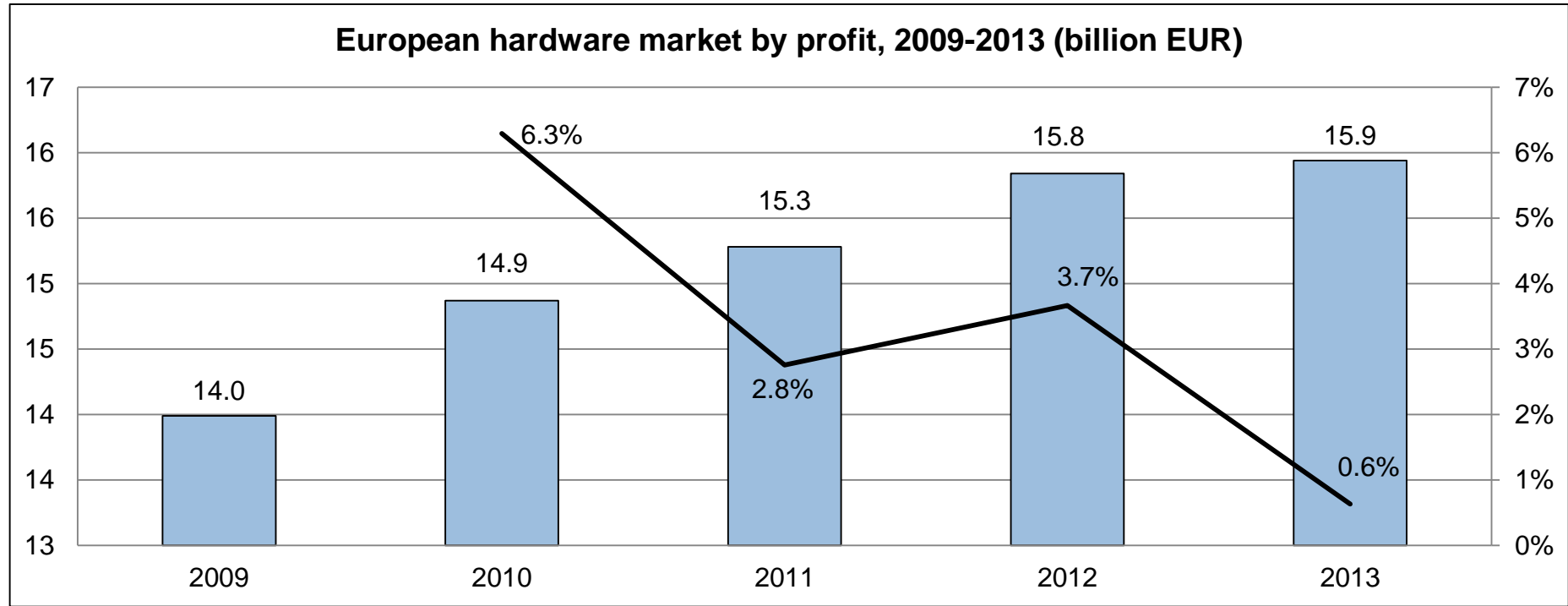
The European hardware market had a total revenue of EUR 159.58 billion in 2013, and registered growth at a 5 % CAGR between 2009-2013.



The Hardware market constitutes **15%** of the European ICT industry in 2013. The European hardware sector is expected to grow at a **6.8% CAGR** in the **2013-2018** period, as the technological evolution generates high growth in sales.

European hardware market by profit

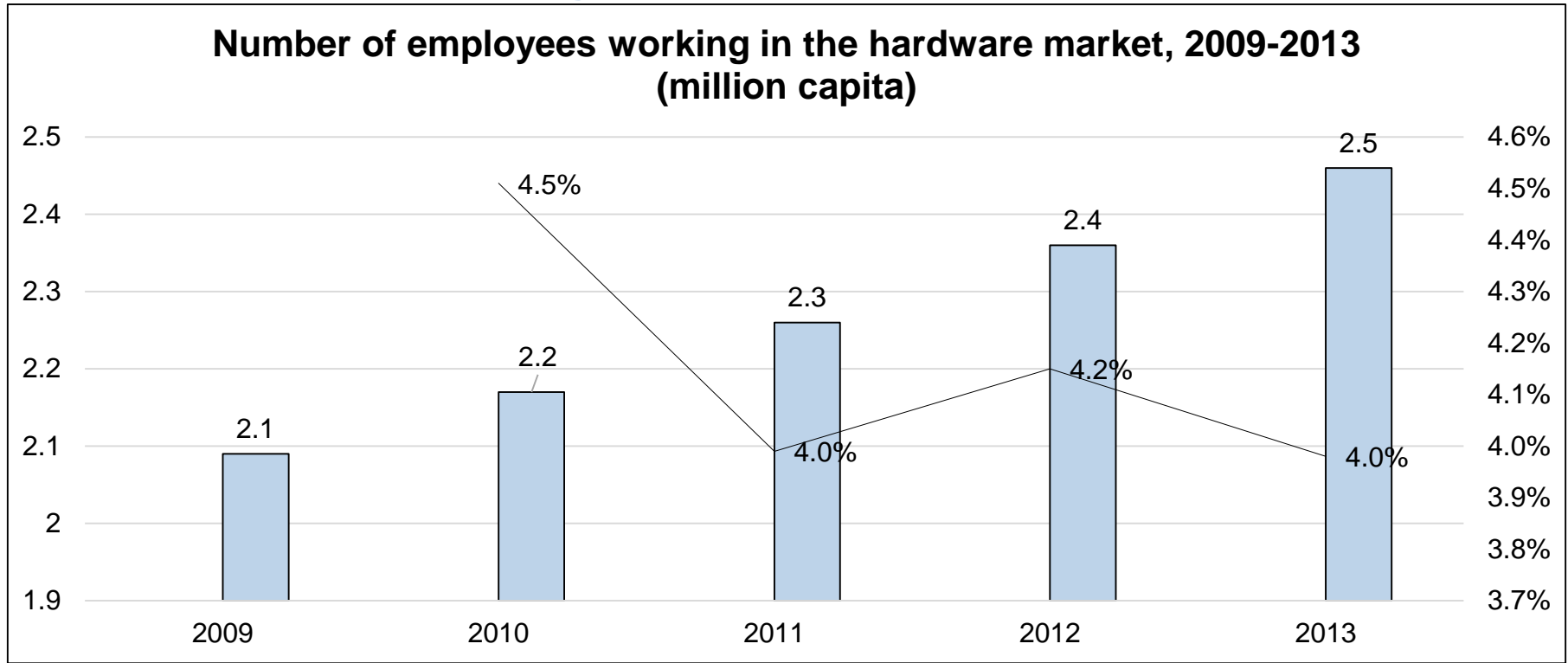
The European hardware industry registered a total growth of 15.2% in the 2009-2013 period, after falling 5.7% in 2009, due to the financial crisis.



The **European ICT hardware industry profits have increased by 3.6% since December 2011**, and by another **0.7%** since **December 2012**. The European ICT hardware industry experienced a setback, and a growth slow-down due to the financial crisis.

Hardware market in Europe by employment

The hardware sector has the highest employment numbers in the ICT industry, as it is the most human capital intensive segment.

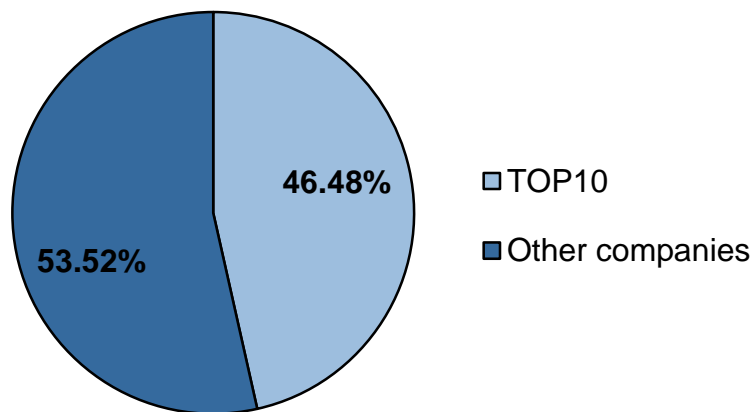


The growth of the ICT industry implies the growth of the hardware sector, as the demand for physical platforms grows.

Market concentration – European hardware man. in 2013

The top 10 hardware manufacturers aggregate market share is 46.48%, therefore the market is moderately concentrated,. The leading companies are all multinationals.

The top 10 hardware manufacturers market share in 2013



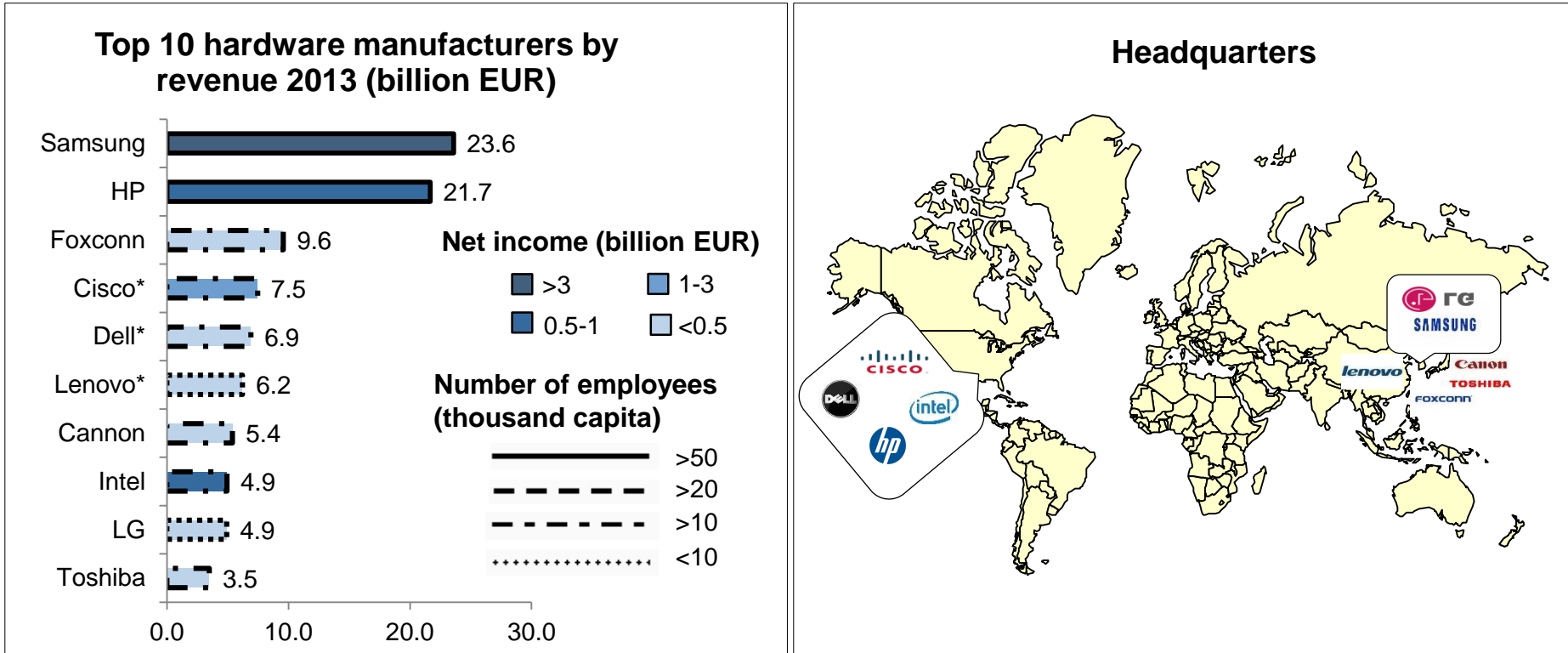
In 2013 the top 10 hardware companies cumulative revenue was:

EUR 90.91 billion

The top 10 hardware manufacturer own **46.48%** of the total hardware market in Europe, the market is **moderately concentrated**. The top 10 hardware manufacturers are **multinationals**, and their cumulative revenue was **EUR 90.91 billion** in 2013.

Top 10 hardware manufacturers by revenue in Europe, 2013

The top 10 hardware manufacturers have their headquarters in Asia, 60%, and in the USA, 40%. Samsung had the highest revenue and net income in 2013.



The top 10 hardware manufacturers are based in **Asia, 60%**, and in the **USA, 40%**. The market leader is **Samsung**, based in **South Korea**, with revenues from the European market of **EUR 23.59 billion**, and net income of **EUR 3.14 billion** in 2013 .

Top 10 hardware manufacturers by revenue, 2009-2013

The top 10 hardware manufacturers ranking by revenue shows a moderate fluctuation between 2009-2013. In 2013, Samsung was the market leader followed by HP and Foxconn.

Ranking	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Samsung	→	→	→	↑1	↑1
2.	• HP	→	→	→	↓1	↓1
3.	• Foxconn	↑1	→	↑1	→	↑2
4.	• Cisco*	↓1	→	↑2	↑1	↑2
5.	• Dell*	↓3	↑1	↑1	↓1	↓2
6.	• Lenovo*	→	↑3	↑2	↑1	↑6
7.	• Cannon	↑1	↓1	→	↓1	↓1
8.	• Intel	↑1	↑1	→	→	↑2
9.	• LG	→	↓1	→	↑1	→
10.	• Toshiba	↓1	↓1	↑2	↓1	↓1

All hardware manufacturers have **changed** their position in the rankings, except LG, in the 2009-2013 period. **Samsung** and **HP** remained in the first and second position throughout this period. **Lenovo** had the biggest rise up in rankings, as Dell, HP, Cannon and Toshiba lost positions.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

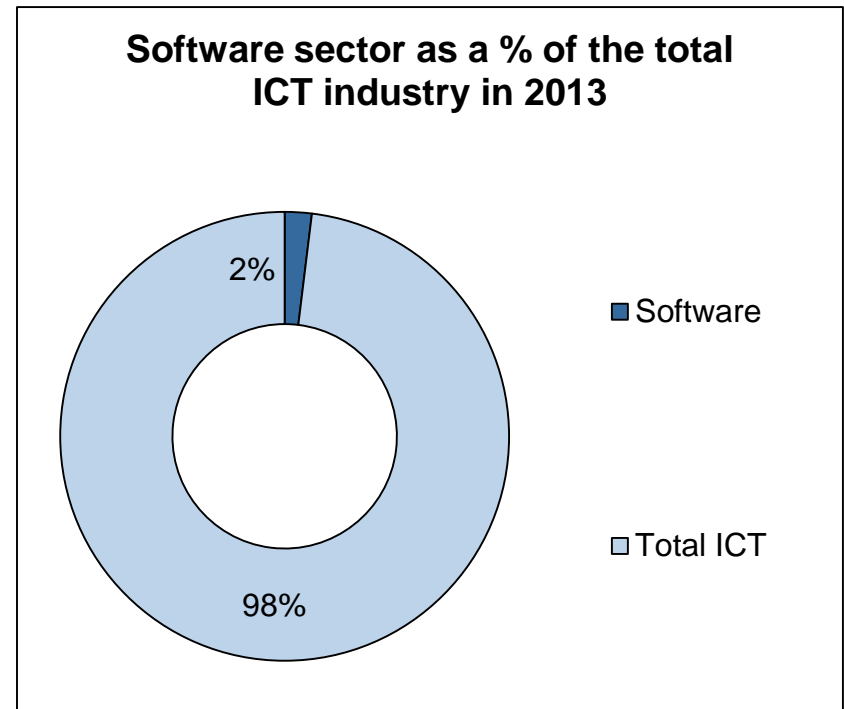
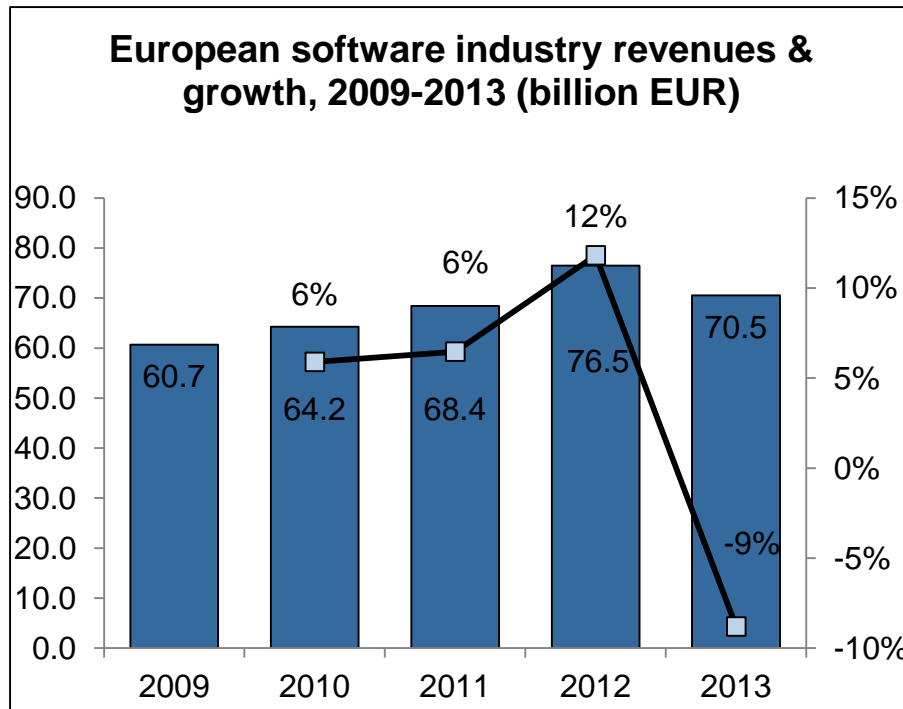
Sector analysis

- Hardware
- **Software**
- IT services
- Telecommunication

Romanian analysis

Software market in Europe by revenue, 2009-2013

The European software market had a total revenue of EUR 70.52 billion in 2013, and grew at a 15.38% CAGR between 2009-2013.

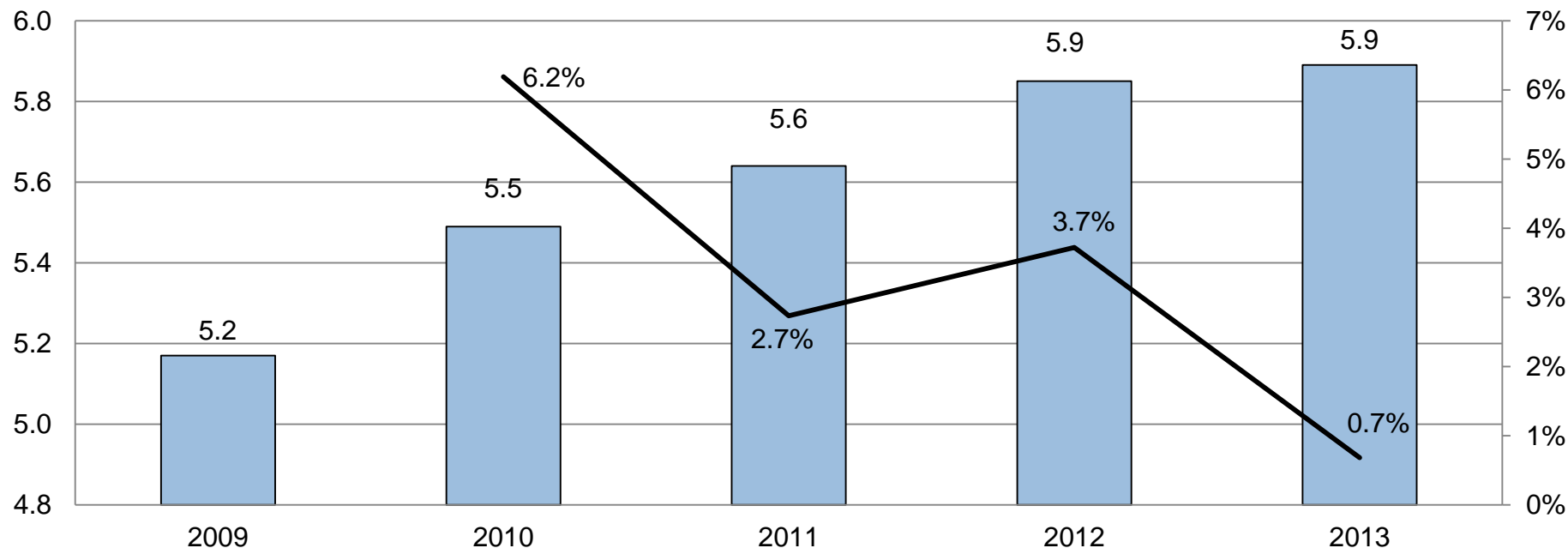


In the **2010-2012** period, the European software market experienced an increase by **19.02%**, due to the high market penetration of the **CRM systems**.

European software market by profit, 2009-2013

The European software industry registered a total growth of 18.8% from 2009 to 2013, after falling 4.5% in 2009, due to the aftereffects of the financial crisis.

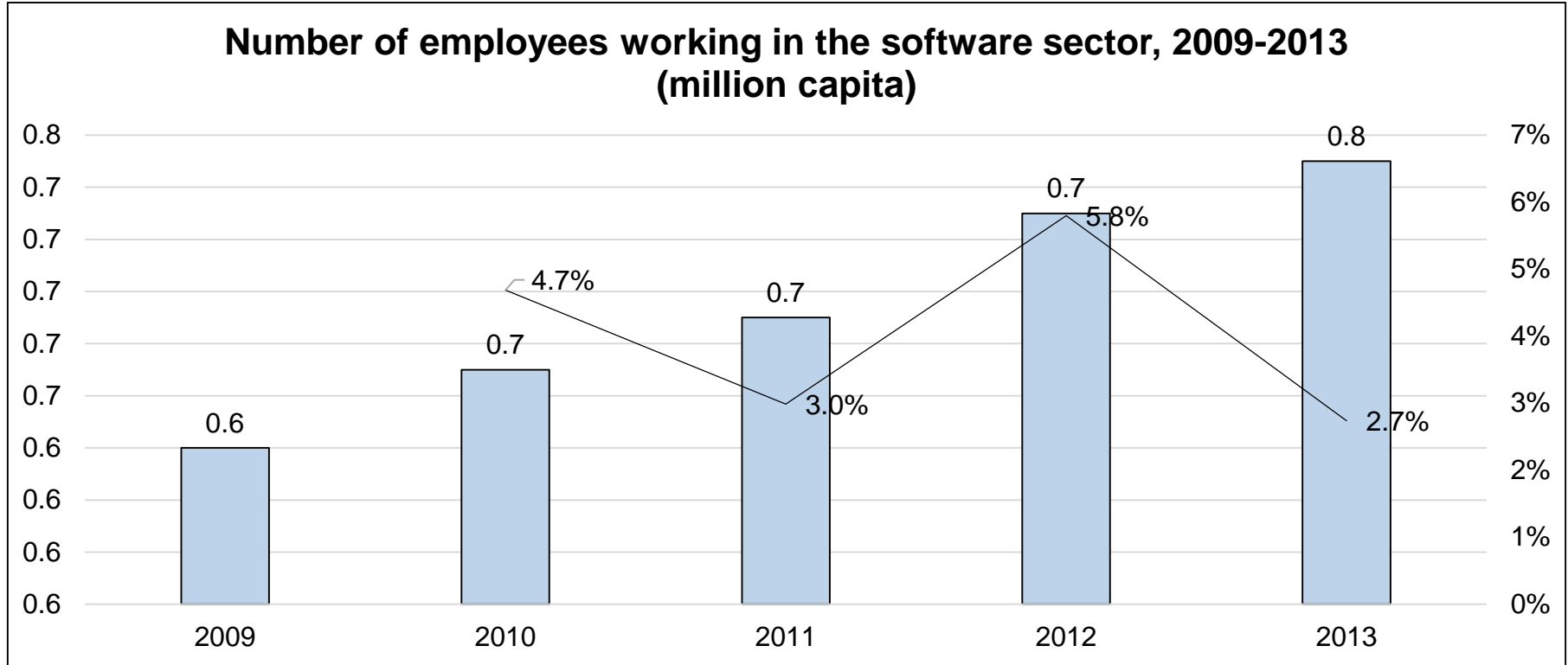
European software market profit and growth, 2009-2013 (billion EUR)



The European software industry has **increased by 4.6%** since **December 2011**, and by another **1.7%** since **December 2012**. The European software industry experienced a setback, and a growth slow-down due to the financial crisis.

Software market in Europe by employees, 2009-2013

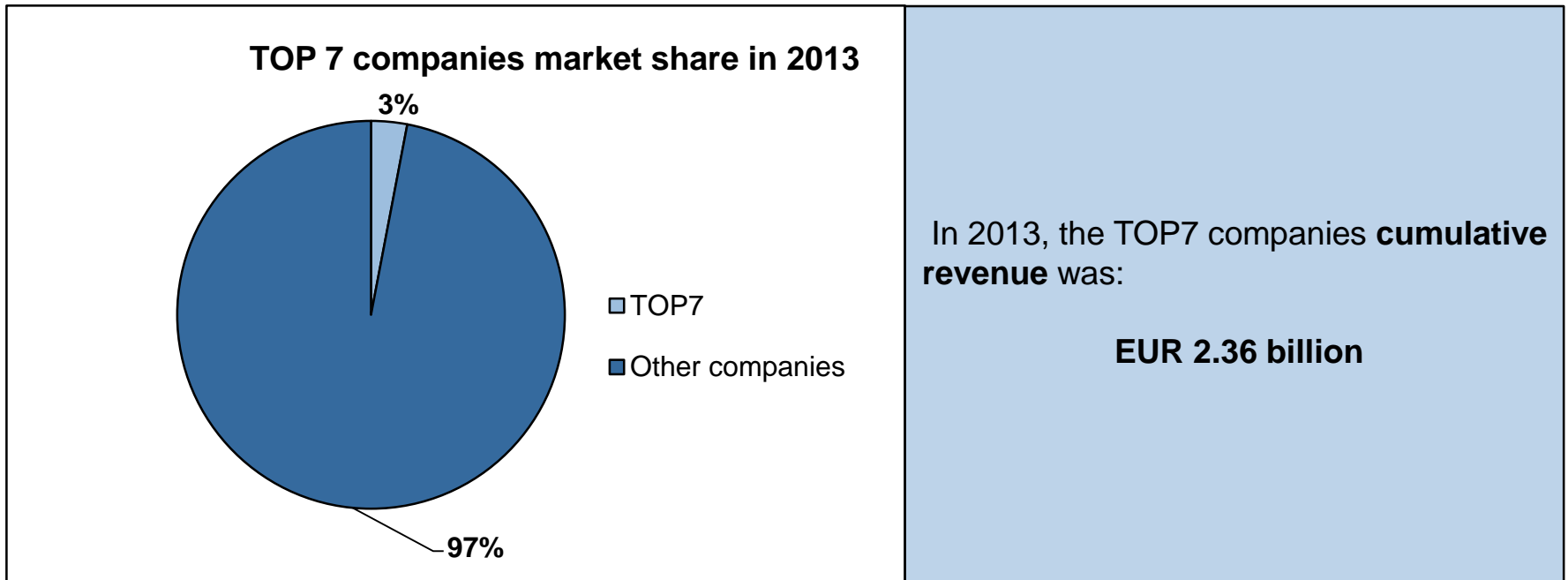
Although the number of employees working in the software sector is not outstandingly high, their part is crucial, and their numbers are constantly growing.



The demand for software is higher than ever, new applications and programs are introduced each day. The software sector employees develop them, and keep them running.

Market concentration - European software developers, 2013

The European software development market is scattered, as the TOP 7 developers own only 3% of the software market.

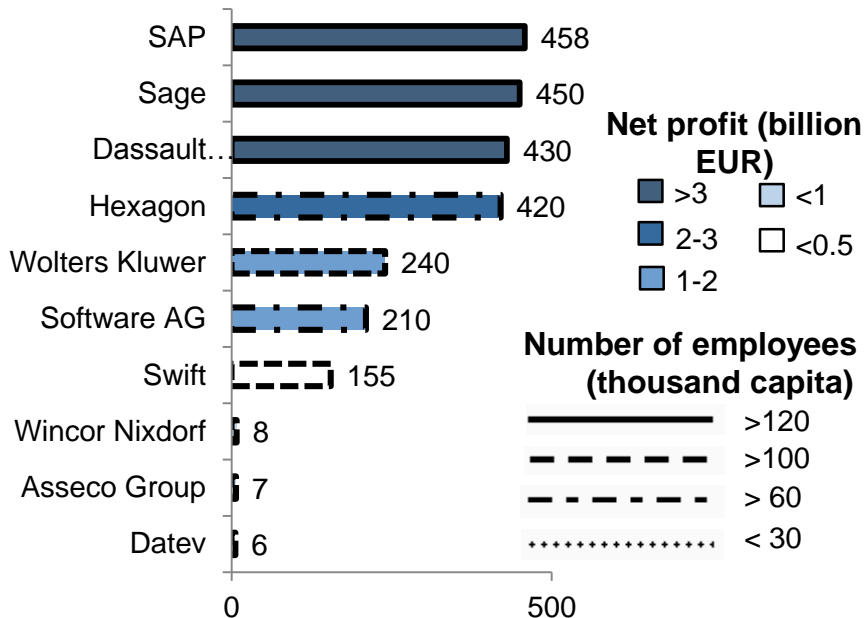


The TOP 7 developers own 3% of the market, therefore the concentration is really low. The leading developers are **multinational companies**, hence the market is **very fragmented**.

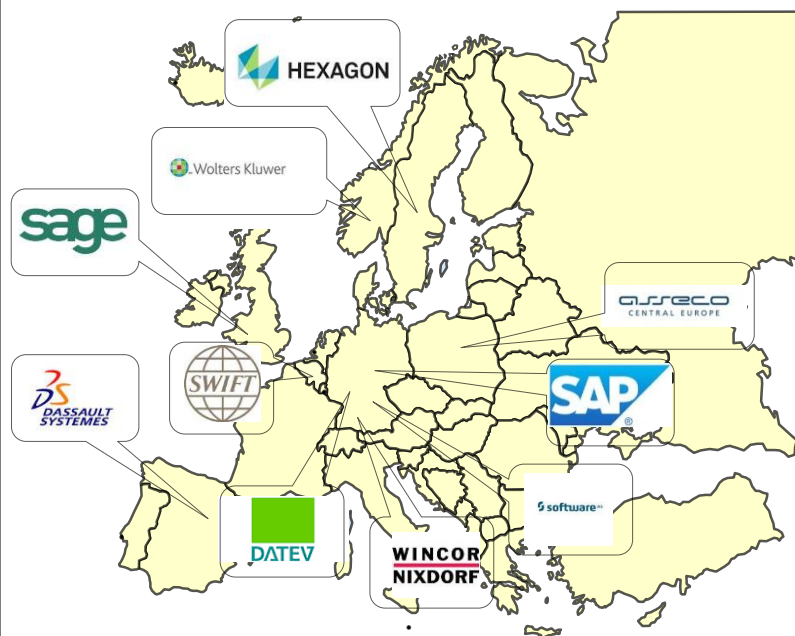
Top 10 European software developers by income in 2013

All top 10 software developers are based in Europe. The industry leader company was SAP, with a revenue of EUR 4.58 billion in 2013 .

Top 10 european software developers by income in 2013 (million EUR)



Top 10's headquarters



The leading European software developer is SAP, with EUR 4.58 billion in revenues, EUR 3.32 billion in profits, and 156 thousand employees in 2013.

Top 10 European software developers by income, 2009-2013

The top 10 European software developers ranking by income shows great changes during the 2009-2013 period, only SAP, Sage and Dassault Systems could maintain their top positions.

Sequence	• Company's name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• SAP	→	→	→	→	→
2.	• Sage	→	→	→	→	→
3.	• Dassault Systems	→	→	→	→	→
4.	• Hexagon	↓ 2	→	→	↑ 1	↓ 1
5.	• Wincor Nixdorf	→	↓ 3	↑ 4	→	↑ 1
6.	• Asseco Group	↓ 1	↓ 1	→	↑ 2	→
7.	• Software AG	↑ 3	→	↓ 4	→	↓ 1
8.	• Datev	↑ 1	↑ 2	↓ 1	↓ 2	→
9.	• Wolters Kluwer	↑ 1	→	→	↓ 2	↓ 1
10.	• Swift	↑ 1	↑ 4	→	↓ 4	↑ 1

Wincor Nixdorf, Software AG could **increase** their **sales** despite the unfavorable economic conditions, and declining purchasing power, while the **income** of other companies, e.g., **Wolters Kluwer and Swift** dropped significantly.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

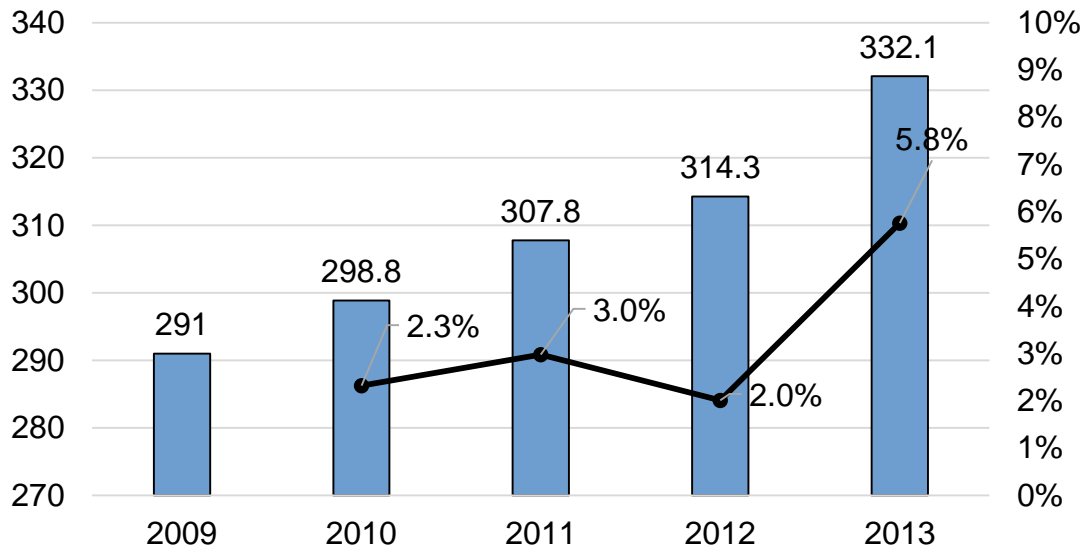
- Hardware
- Software
- **IT services**
- Telecommunication

Romanian analysis

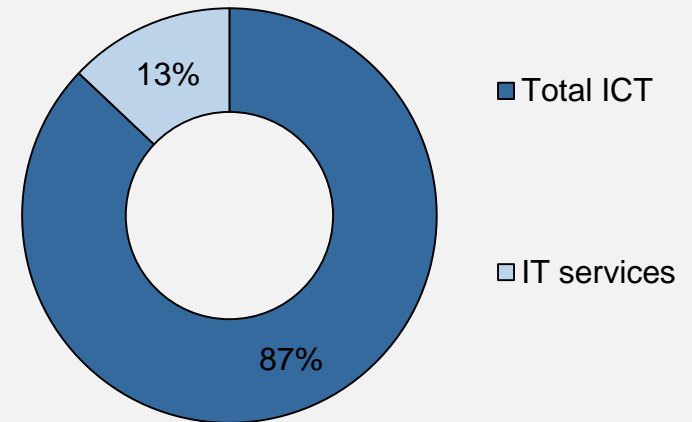
The European IT services sector by revenues, 2009-2013

Profit generated in Europe by the IT services sector, examined between 2009 and 2013, in billions of euros. Which reached 322.09 Bill. € by 2013.

European IT services sector revenue and growth, 2009-2013 (billion EUR)



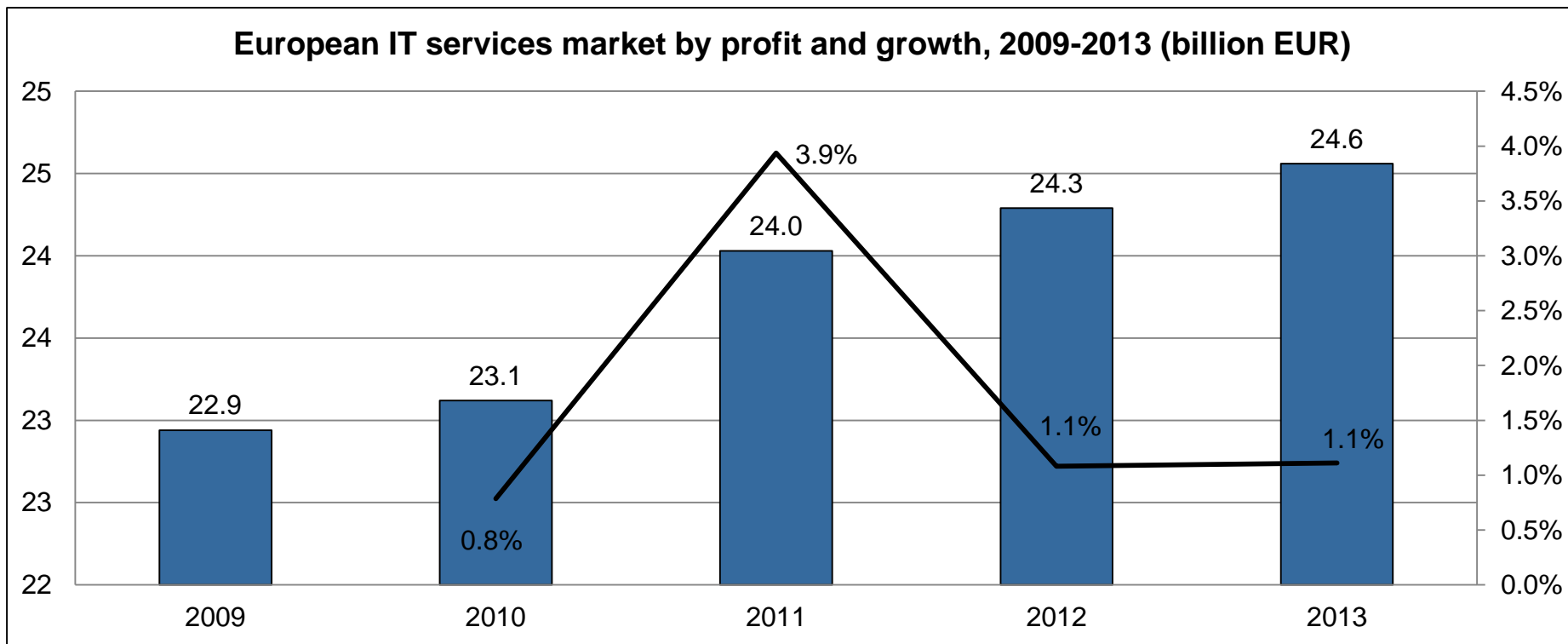
IT services share of the total European ICT industry in 2013



The European IT services sector is constantly **growing**, as more and more small firm are using **IT services**, observable in the growing profit rate of the IT service providers.

European IT services market by profit, 2009-2013

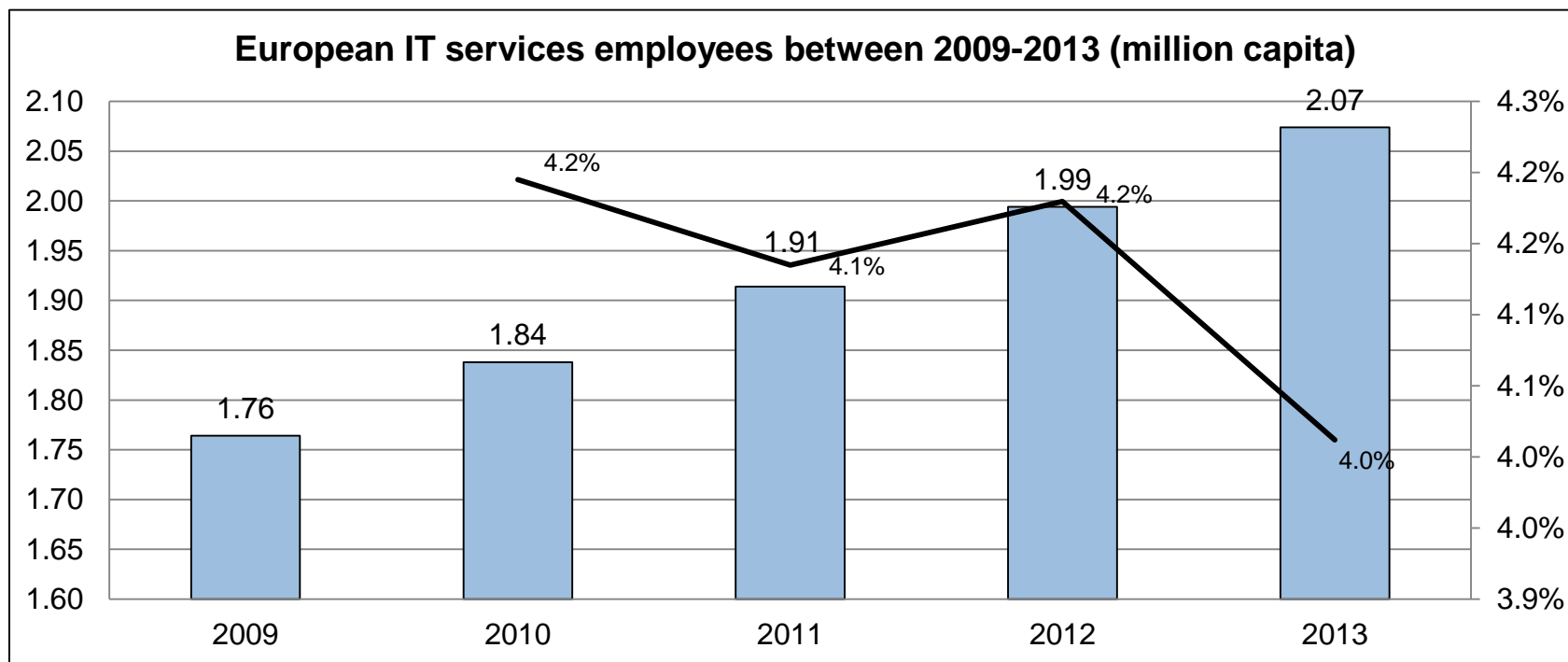
The European IT services market had a total profit of EUR 24.56 billion in 2013, growing at a 1.73 % CAGR in the 2009-2013 period.



Between **2010-2011**, the European IT services market grew by **3.92%**, because of the implementation of the **River Information Services**.

The European IT services sector employment, 2009-2013

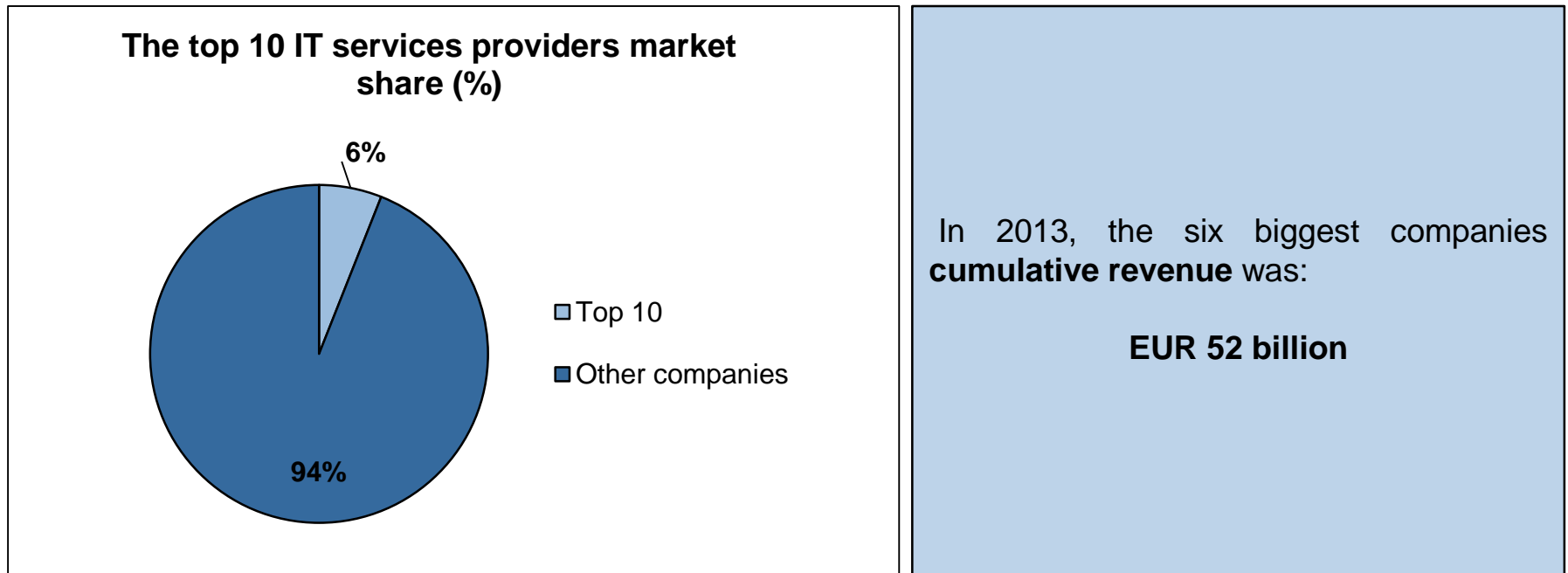
The number of employees in the IT services sector has been increasing constantly in the 2009-2013 period. The sector had over 2 million employees in 2013.



The IT services employees represent **22%** of the total ICT employment. The **IT services** sector employs around **2.07** million capita. The number of employees increased by **310 thousand capita** from 2009 to 2013.

Market concentration – European IT services providers in 2013

The Top 10 European IT services providers cumulative revenue was more than EUR 52 billion in 2013.

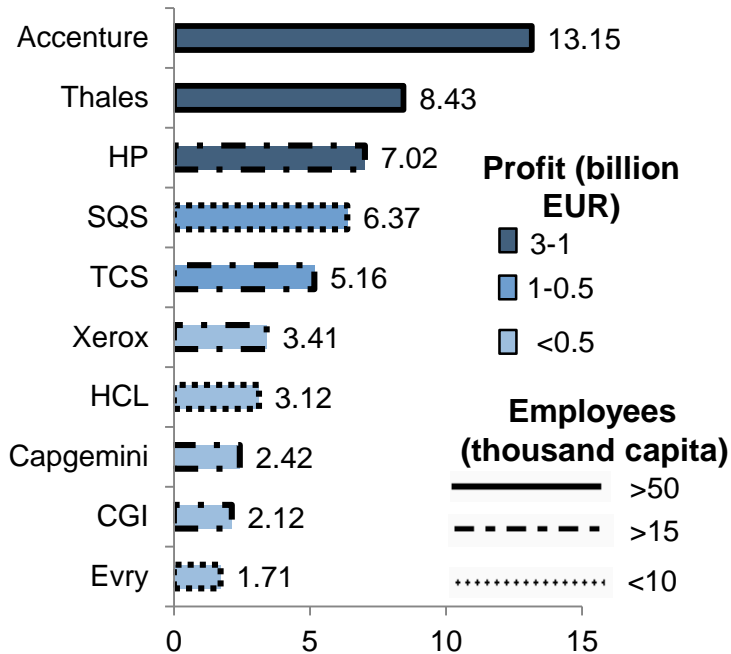


The Top 10 IT services providers have a **near 6%** market share, which indicates that the market is scattered, and consists of many small companies. A good example Romania, where the IT services market consists primarily of small providers.

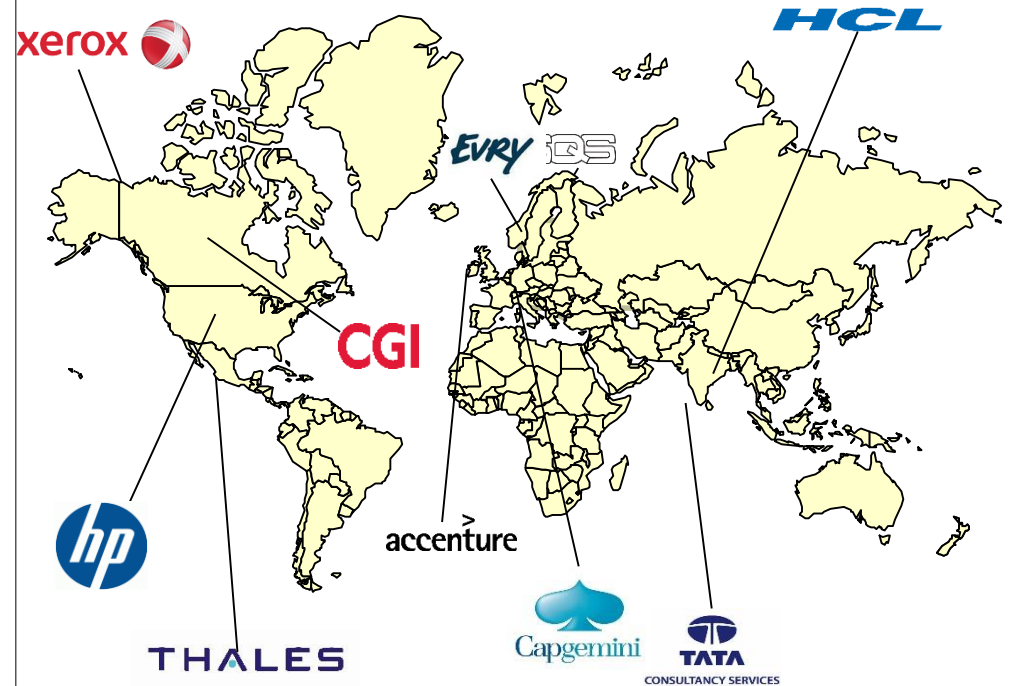
Top 10 European IT services providers in 2013

40% of the top 10 IT services providers are based in North America, 40% are located in Europe, and 20% hail from Asia.

Top 10 IT services providers revenue in 2013 (billion EUR)



TOP 10's headquarters



The European IT services industry leader is **Accenture**, with a revenue of **EUR 13.15 billion**, and with over **50 thousand employees** worldwide in 2013.

The top 10 IT services providers by revenue, 2009-2013

The ranking by revenue of the top 10 IT services providers shows a moderate fluctuation in the 2009-2013 period.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Accenture	→	→	↓	↑	→
2.	• Thales	↓	↑ ²	→	→	↑ ¹
3.	• HP	↑	↓ ²	→	→	↓ ¹
4.	• SQS	↑	↓	→	→	→
5.	• TCS	→	→	→	↑	↑ ¹
6.	• Xerox	→	→	→	↓	↓ ¹
7.	• HCL	-	-	↑	↑ ³	↑ ³
8.	• Capgemini	→	→	→	↓	↓ ¹
9.	• CGI	→	→	→	↓ ¹	↓ ¹
10.	• Evry	→	→	→	↓ ¹	↓ ¹

Accenture, Thales, HCL increased their market share, because they have followed the **market trends**, reflected by higher sales in the 2009-2013 period. The constantly growing IT services market intensifies the competition.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

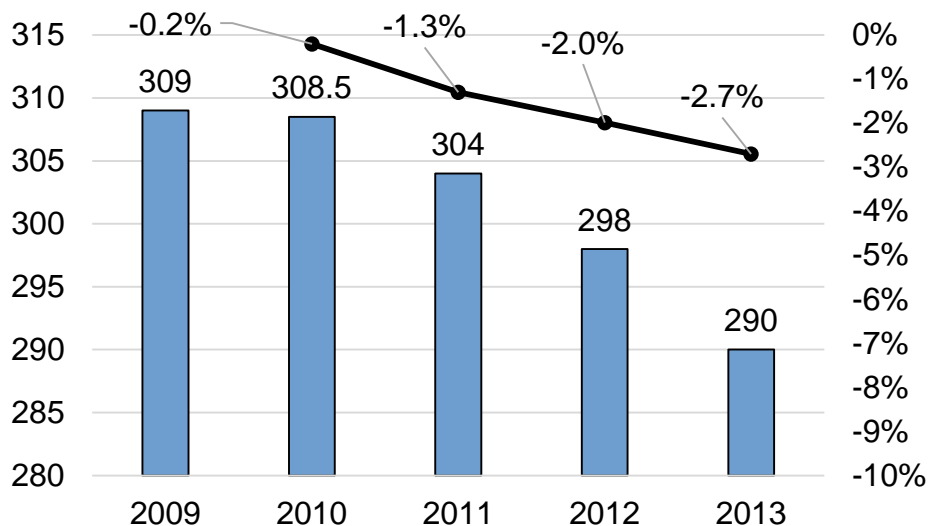
- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - Network operator
 - Gadget manufacturer

Romanian analysis

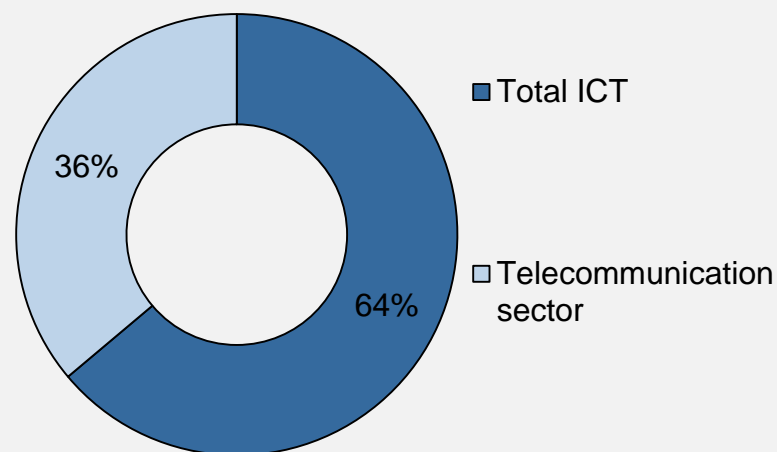
The telecommunication industry by revenue, 2009-2013

The European telecom industry fell by a yearly average of -1.55% in the 2009-2013 period, and decreased to EUR 290 billion in 2013.

Telecom industry revenues and changes, 2009-2013 (billion EUR)



The telecom sector share of the total European ICT industry in 2013

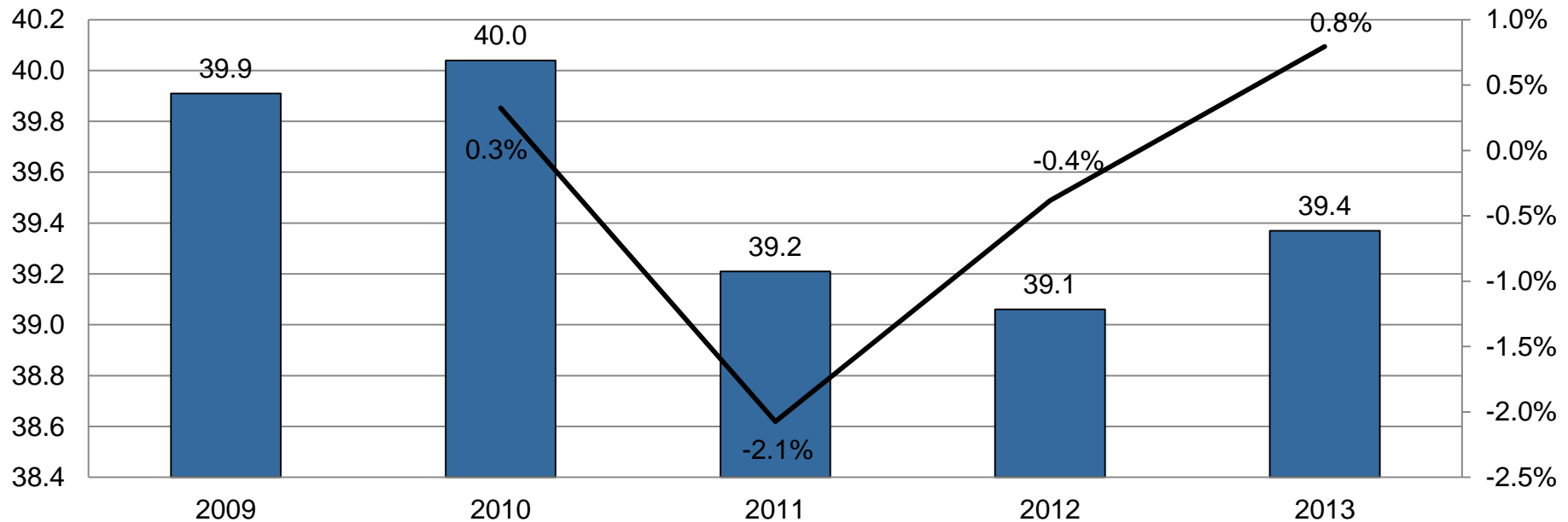


The **European telecom industry constricted with 6.1%** from 2009 to 2013, due to the sharp competition, and the decrease of the advertising market.

The European telecom industry by profit, 2009-2013

The European telecommunication market had a total profit of EUR 39.4 billion in 2013, as it fell by a yearly average of -0.35% in the 2009-2013 period.

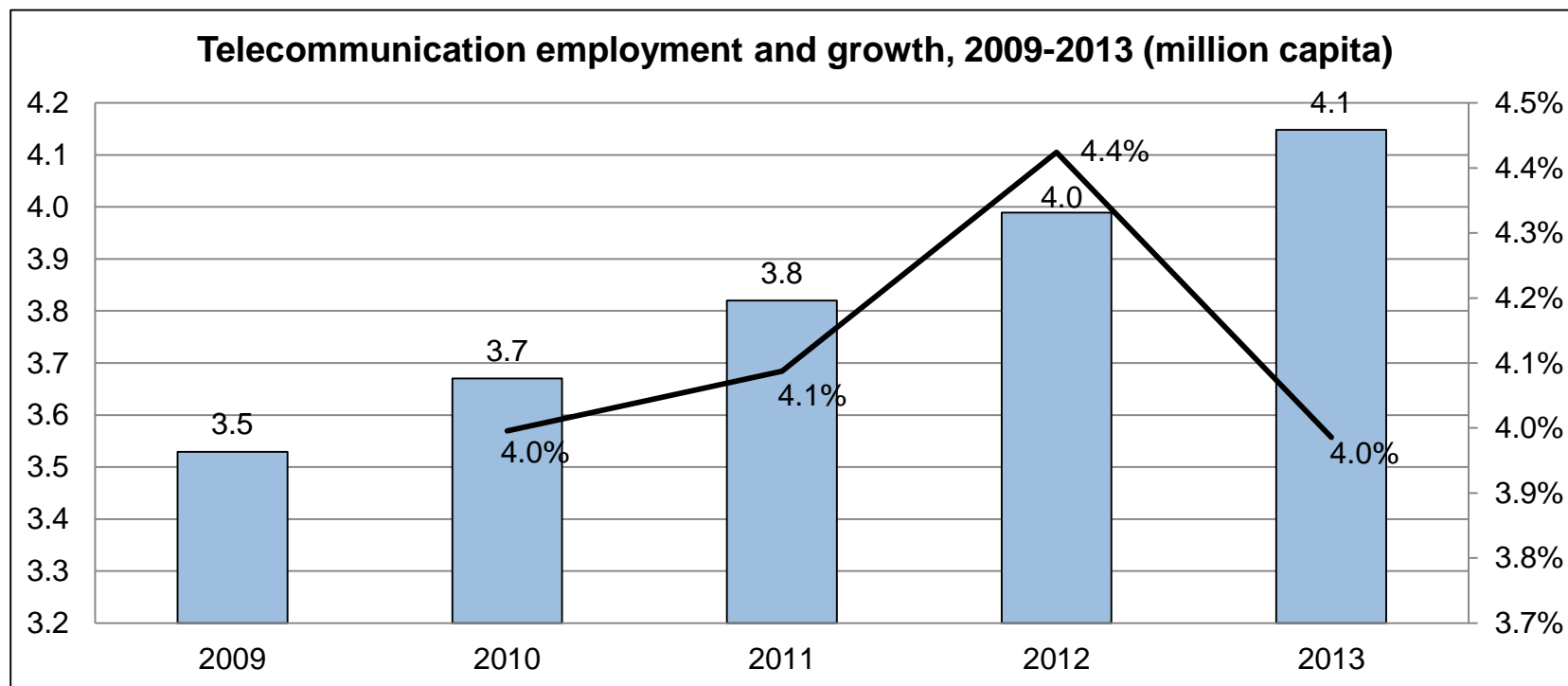
European telecommunication market by profit and changes, 2009-2013 (billion EUR)



The telecom industry suffered a **-2.5%** loss, in the **2011-2012** period, due to the **heavy investments** made by the big telecom companies.

The telecommunication industry employment data, 2009-2013

The number of employees in the telecommunication sector is increasing constantly by a 4.13% yearly average in the 2009-2013 period.



The telecommunication sector employment represents **44%** of the total ICT employment. The **telecommunication** sector has the highest number of employees, around **4.15 million capita** in 2013. The number employees increased by **619 thousand capita** from 2009 to 2013.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

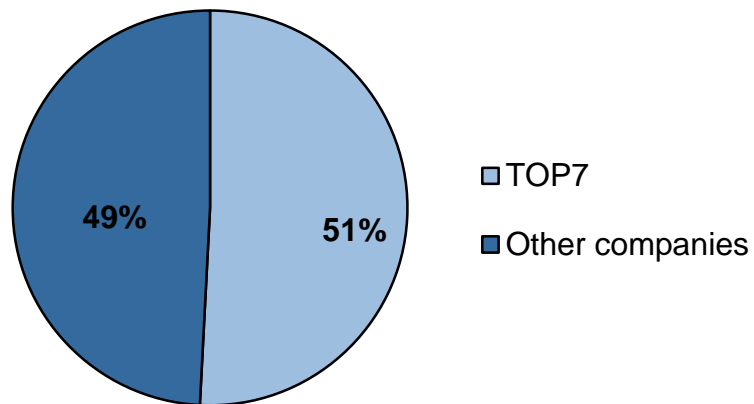
- Hardware
- Software
- IT services
- **Telecommunication**
 - **Network developers**
 - Network operator
 - Gadget manufacturer

Romanian analysis

Market concentration - European network developers in 2013

The European network development market is highly concentrated, as the TOP 7 network developers had a 51% aggregate market share in 2013.

TOP7 network developers market share in 2013



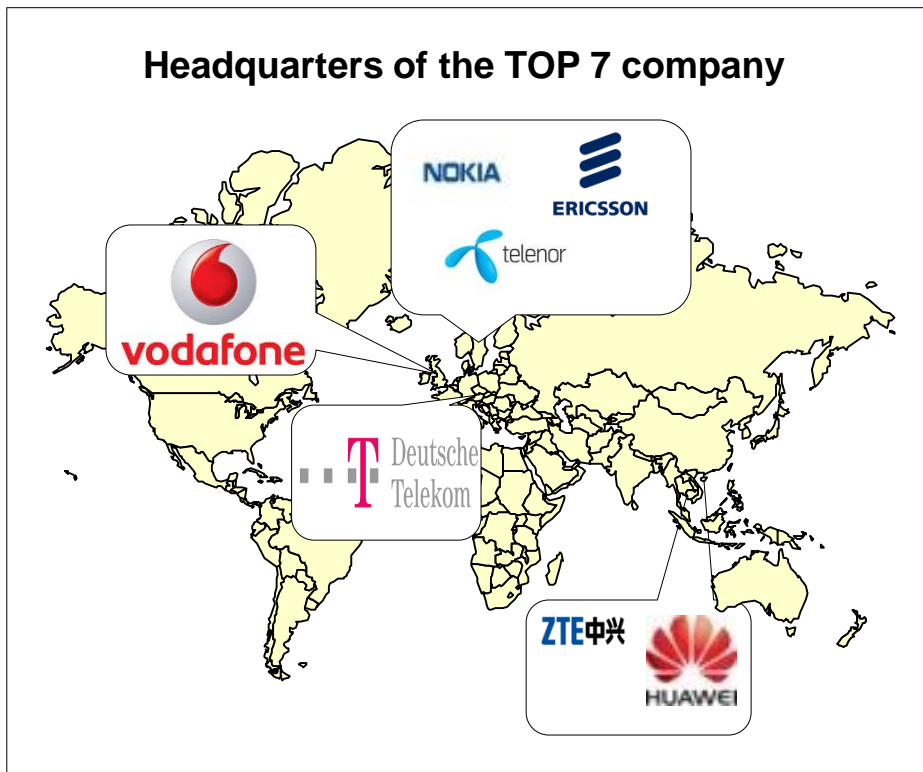
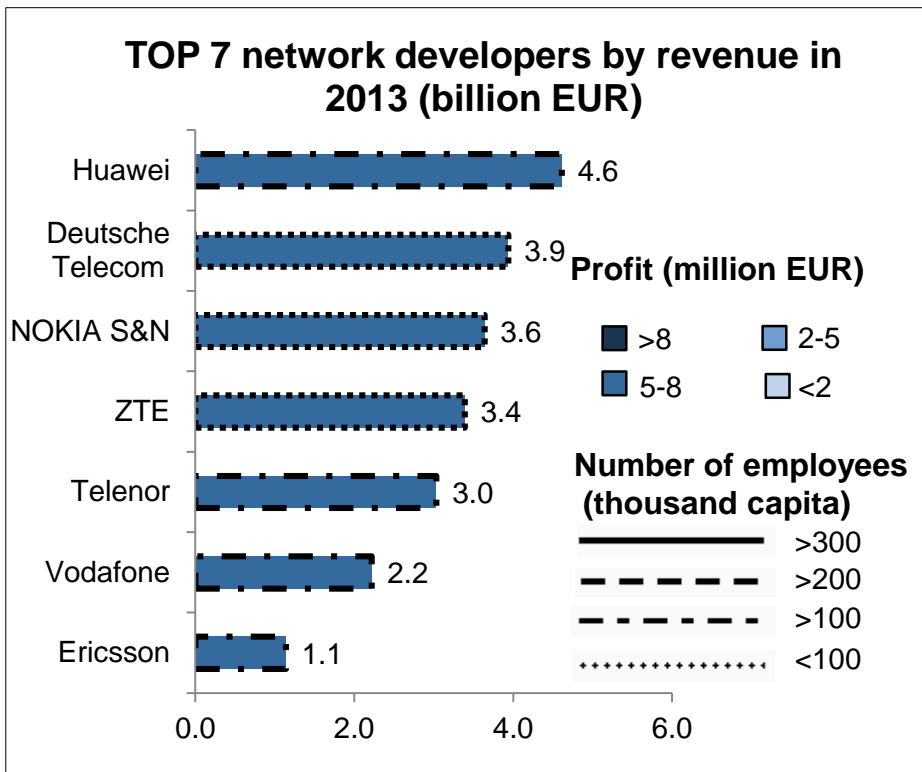
In 2013, the TOP7 companies **cumulative revenue** was:

EUR 52.4 billion

The TOP7 company owns 51% of the total network development market, therefore the concentration is **high**. The leading companies are all **multinational** companies.

Top 7 network Developers in Europe by revenue, 2013

From the TOP 7 network developers two are based in Asia and five are headquartered in Europe. The leader is Huawei, with a revenue of EUR 4.6 billion in 2013.



The market leader in the network development sector is Huawei, with a total revenue of EUR 4.6 billion, and had 151 thousand employees in 2013.

Top7 network developers by revenue, 2009-2013

The TOP7 European network developers ranking is stable in the 2009-2013 period, and Huawei maintained its leading position throughout the years.

Ranking	Name of the company	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Huawei	→	→	→	→	→
2.	• Deutsche Telecom	→	→	→	→	→
3.	• Nokia S&N	→	↓ 1	→	↑ 1	→
4.	• ZTE	→	↑ 1	→	↓ 1	→
5.	• Telenor	→	→	→	→	→
6.	• Vodafone	→	→	→	→	→
7.	• Ericsson	→	→	→	→	→

The top 7 network developers ranking by revenue was stable, because all the companies use the same technology and approximately spend the same amount on R&D.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

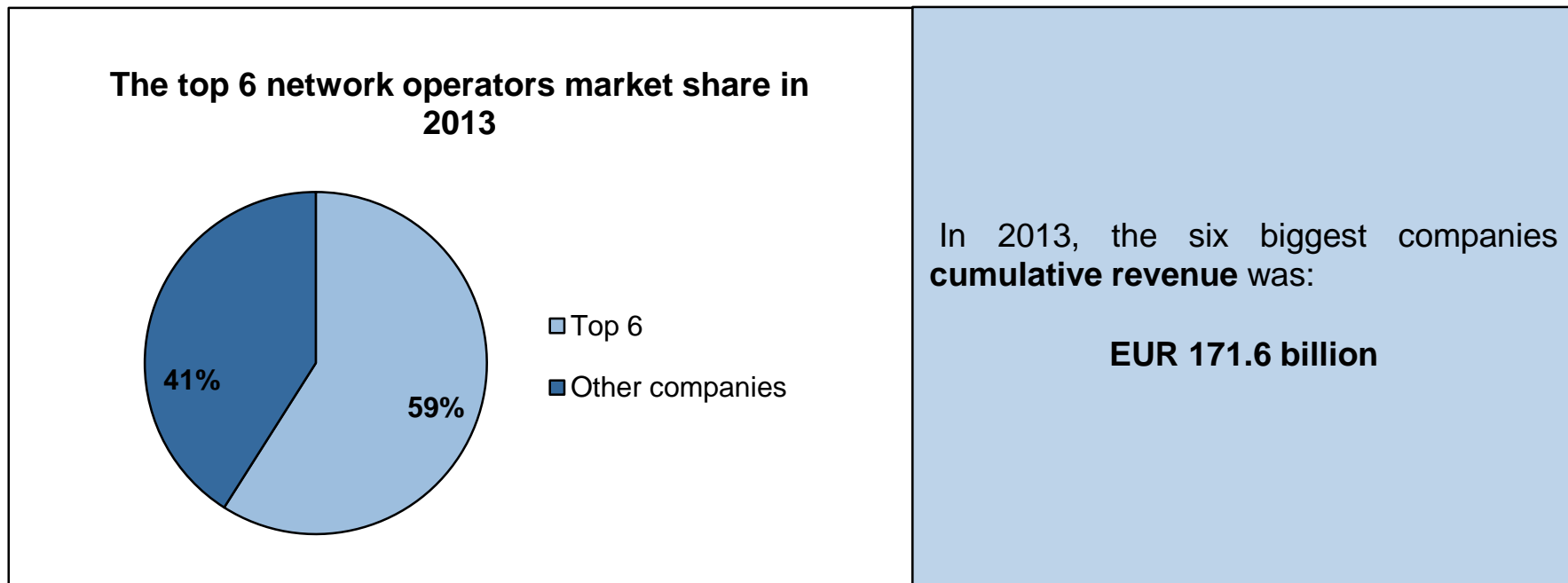
Sector analysis

- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - **Network operator**
 - Gadget manufacturer

Romanian analysis

Market concentration – network operator market in 2013

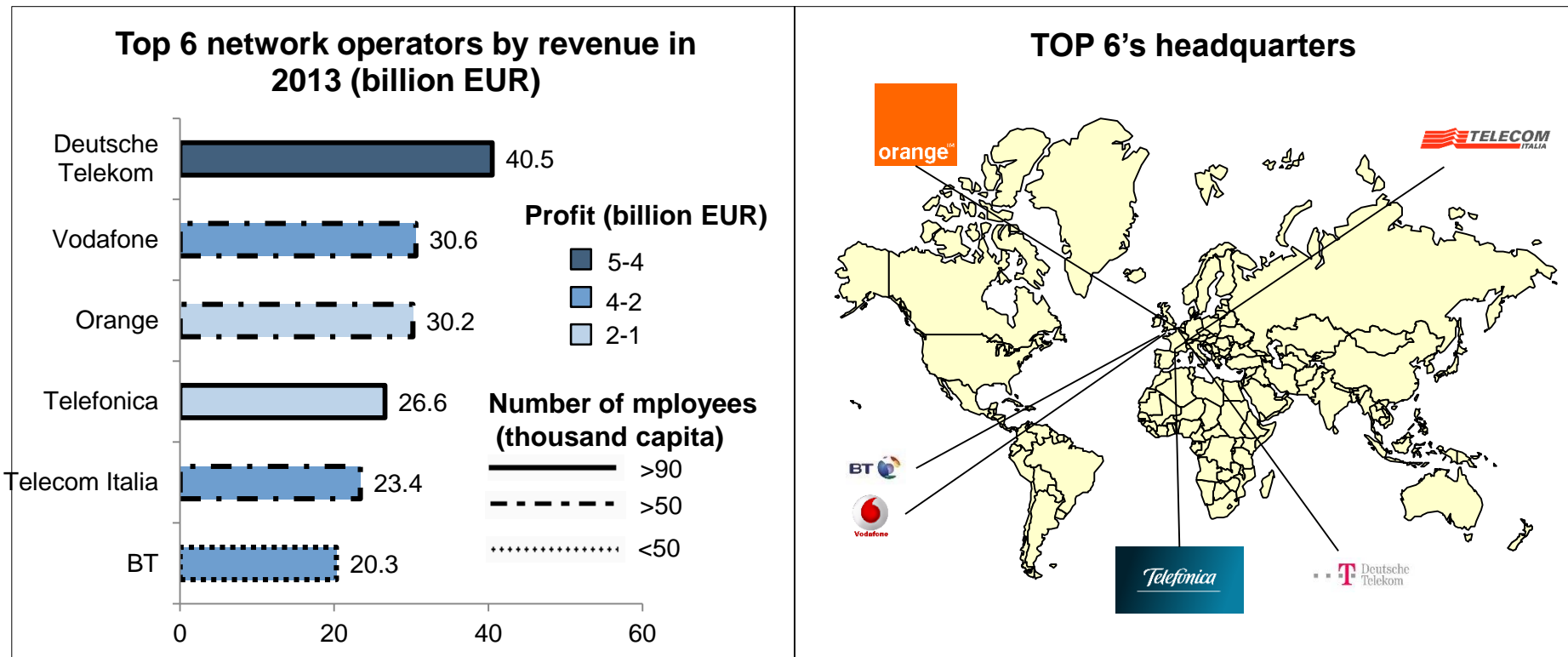
The Top 6 European network operators cumulative revenue was more than EUR 171 billion in 2013.



The Top 6 network operators have a **near 60%** market share, thus the European network operator market is highly concentrated.

Top 6 European network operators by revenue in 2013

The top 6 European network operators cumulative revenue was EUR 270.6 billion in 2013. The industry leader is Deutsche Telekom, with a revenue of EUR 40.5 billion in 2013



The top 6 network operators **profit margins** are between **2.75%** and **11.92%**, which shows the difference between the companies in terms of operational efficiency and market strategy.

The top 6 network operators by revenue, 2009-2013

The top 6 network operators ranking by revenue showed little fluctuation in the 2009-2013 period. Deutsche Telekom maintained its leading position, while Vodafone moved up 3 positions in the ranking.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Deutsche Telekom	→	→	→	→	→
2.	• Vodafone	↑2	→	→	↑1	↑3
3.	• Orange	→	→	→	↓1	↓1
4.	• Telefonica	→	→	↑2	→	↑2
5.	• Telekom Italia	↓1	→	↓1	→	↓2
6.	• BT	↑1	→	↓1	→	→

Deutsche Telekom, Vodafone and Telefonica have **increased** their market share from 2009 to 2013. As the telecom industry as a whole has been contracting in the last 5 years, the competition on the market is going to strengthen in the future.

Global analysis

European analysis

ICT revenue

ICT profit

ICT employees

Sector analysis

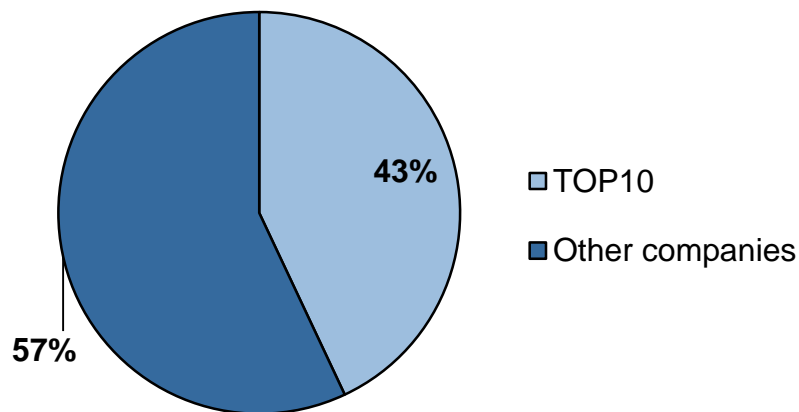
- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - Network operator
 - **Gadget manufacturer**

Romanian analysis

Market concentration - gadget manufacturers in 2013

The European gadget manufacturer market is moderately concentrated, as the 10 biggest gadget manufacturers aggregate market share was 43% in 2013.

The top 10 gadget manufacturers market share in 2013



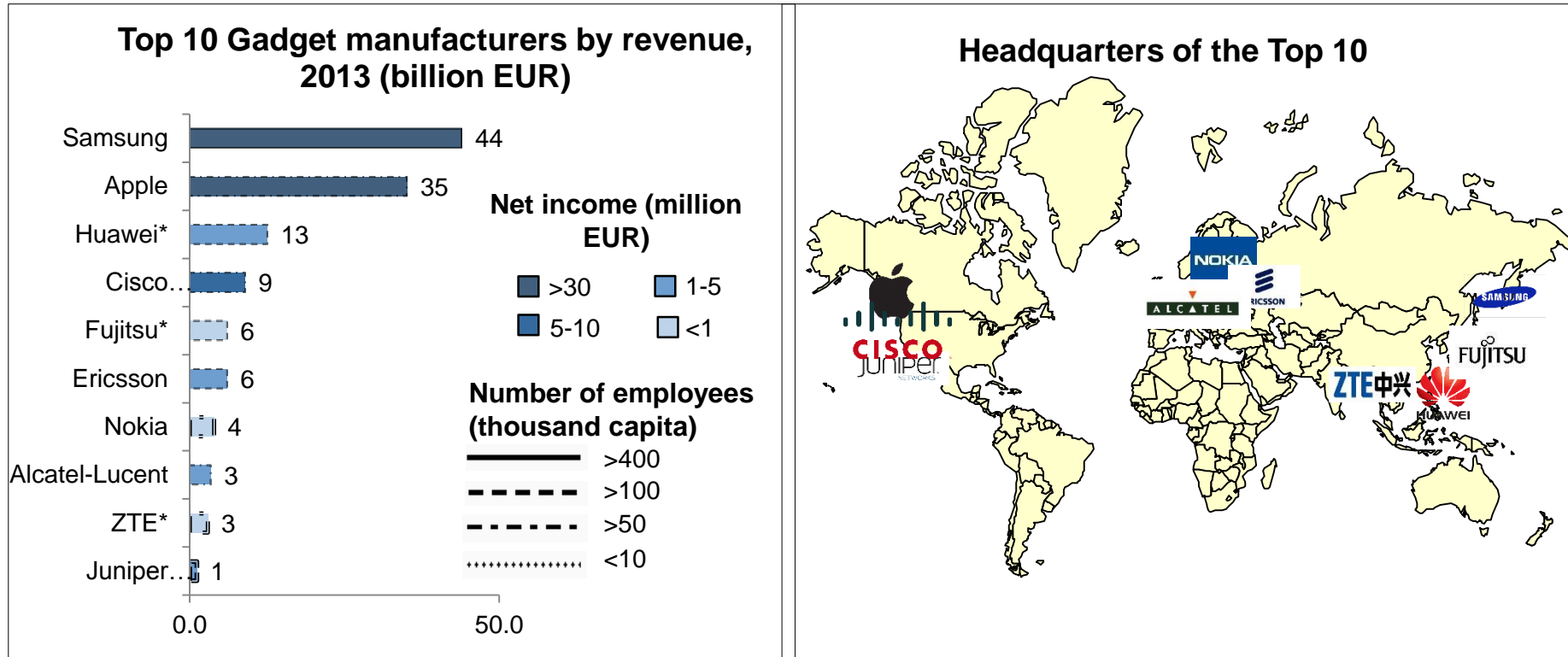
In 2013, the ten biggest gadget manufacturers **cumulative revenue** was:

EUR 123 billion

The TOP 10 gadget manufacturers total market share is 43%, thus the market is moderately concentrated. All the top 10 manufacturer are multinational companies.

Top 10 gadget manufacturers by revenue in 2013

Samsung and Apple are the leaders on the European gadget manufacturing market, as the Europe based companies, e.g., Nokia, Alcatel and Ericsson lag behind.



The leading manufacturers are based in **South Korea**, in the **USA**, and in **China**. **Apple** had the biggest profits, whereas Samsung had the highest revenue of EUR 44 billion in 2013.

Top 10 gadget manufacturers by revenue in Europe, 2009-2013

The landscape of the gadget manufacturer market changed dramatically in the 2009-2013 period, as Samsung maintained its leading position and Apple moved up three places in the ranking.

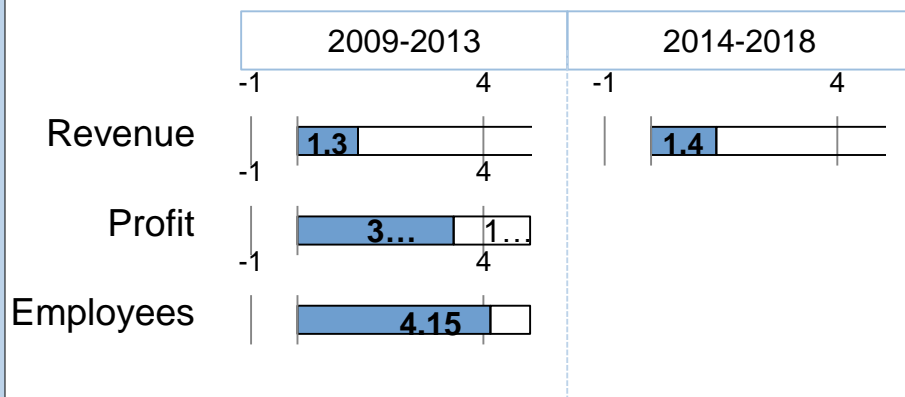
Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Samsung	→	→	→	→	→
2.	• Apple	↑3	→	→	→	↑3
3.	• Huawei	↑1	→	→	→	↑1
4.	• Cisco Systems	↑1	↑1	→	→	↑2
5.	• Fujitsu	↑1	→	↑1	→	↑2
6.	• Ericsson	↓5	→	↑1	→	↓4
7.	• Nokia	↓1	↓1	↓2	→	↓4
8.	• Alcatel Lucent	→	→	→	→	→
9.	• Zte	→	→	→	→	→
10.	• Juniper networks	→	→	→	→	→

Samsung maintained its top position, as Apple, Huawei, Cisco Systems and Fujitsu have recently experienced a growth in revenues on the European market in the 2009-2013 period. Ericsson and Nokia had fallen from the top in the past 4 years.

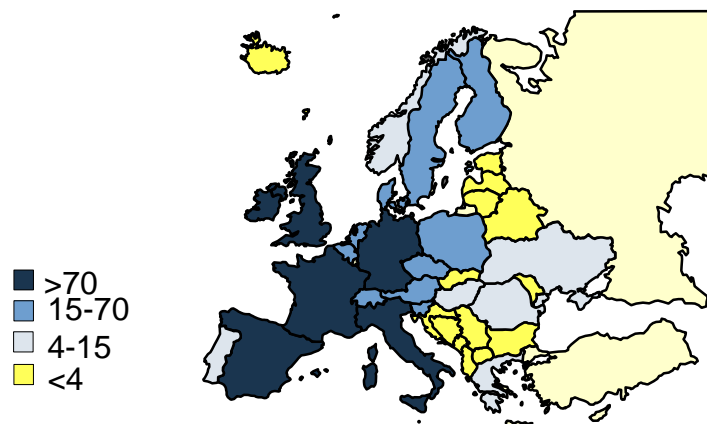
Europe's ICT market summary (1)

Total ICT

Average yearly change (% , 2009-2018)

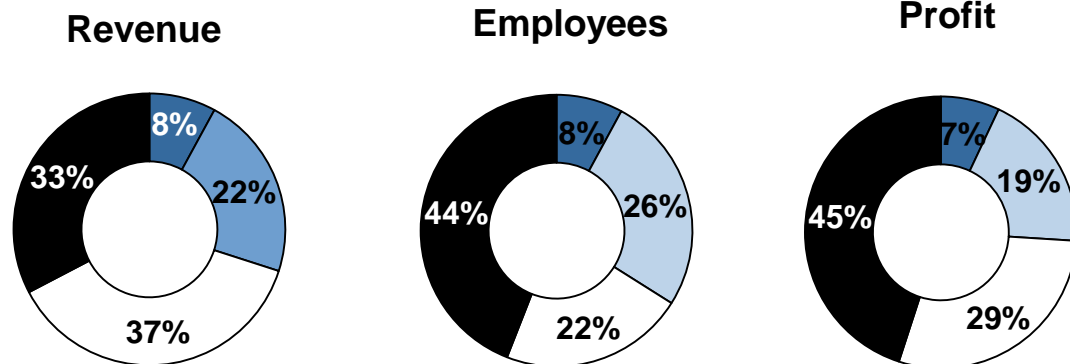


ICT sector revenue spread in Europe (% , 2013)

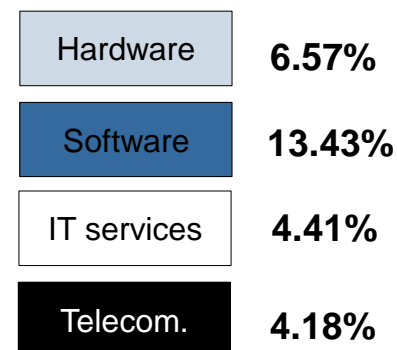


ICT Subsectors

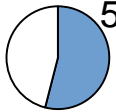

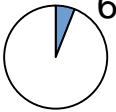
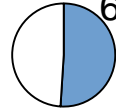
The subsectors average proportion of the total ICT by revenue, profit & employees (% , 2009-2013)



The subsectors profit rates (% , 2009-2013)



Europe's ICT market summary (2)

	Average yearly change (%, 2009-2013)			Concentration Top 10 (%)	Top companies	
	Revenue	Profit	Employees		Top 3 by revenue ('13)	Top developing companies by revenue ('09-'13)
Hardware	1.25	3.35	4.16	 54	Samsung, HP, Foxconn	Lenovo
Software	3.75	3.33	4.06	 3	SAP, Sage, Dassault Sys.	-
IT services	3.27	1.73	4.13	 6	Accenture, Thales, HP	HCL
Telecom.	-1.53	-0.35	4.13	 60	Telekom, Orange, Vodafone	-

Global analysis

European analysis

Romanian analysis

ICT revenue

- **Historically 2009-2013**
- Forecast 2014-2018
- By countries 2013

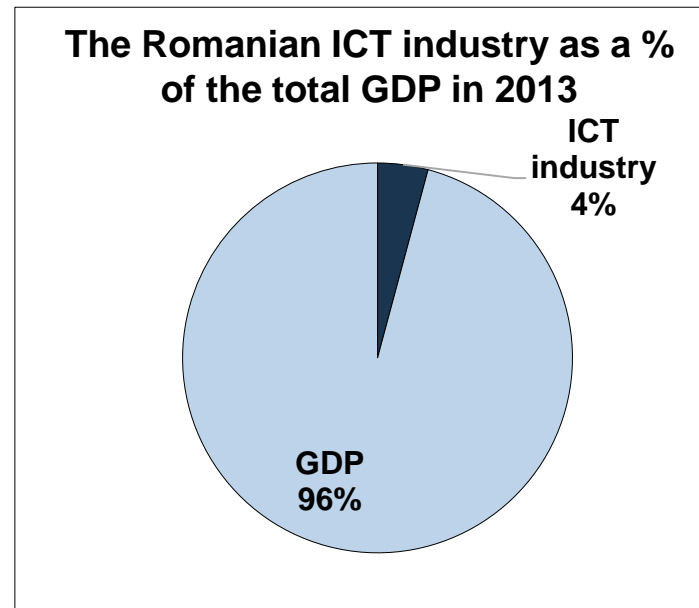
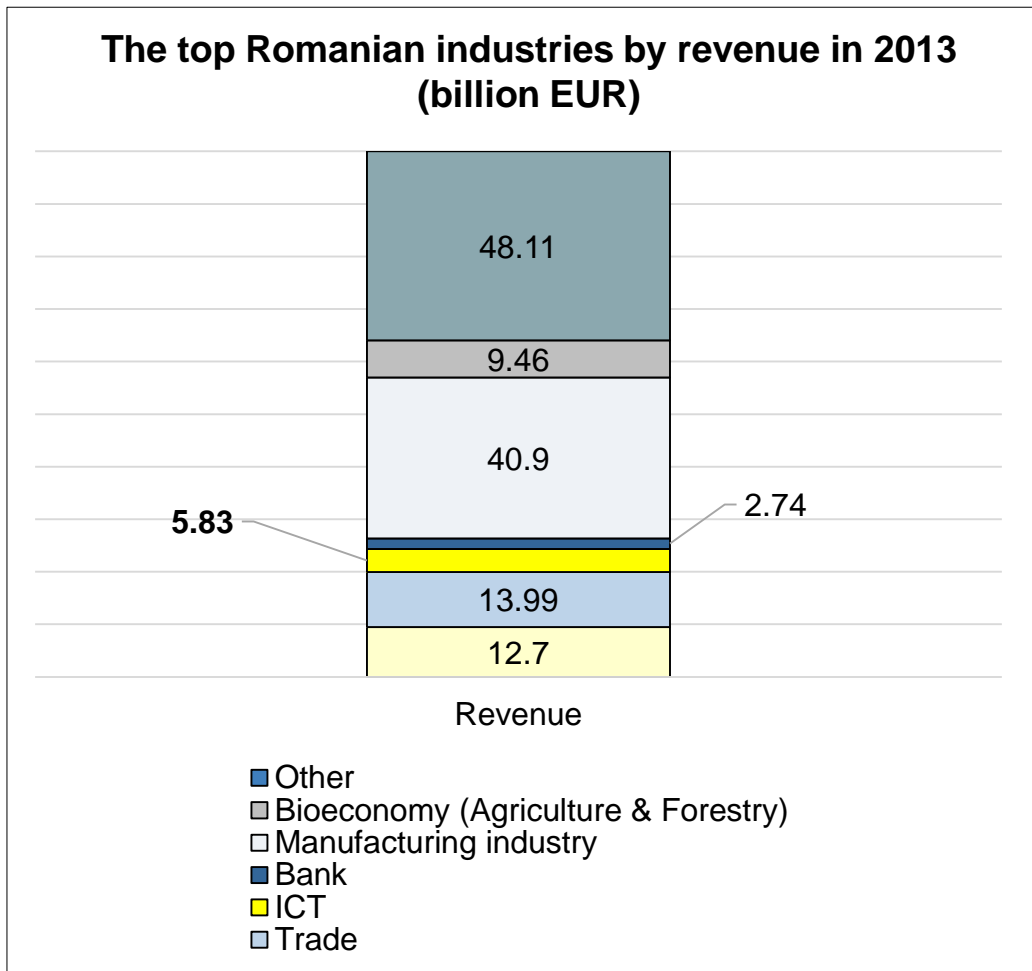
ICT profit

ICT employees

Sector analysis

ICT industry overview - Romania

The ICT industry in Romania reached EUR 5.83 billion in 2013, which represented 4.36% of the total GDP. The ICT industry is the 5th largest industry in Romania.

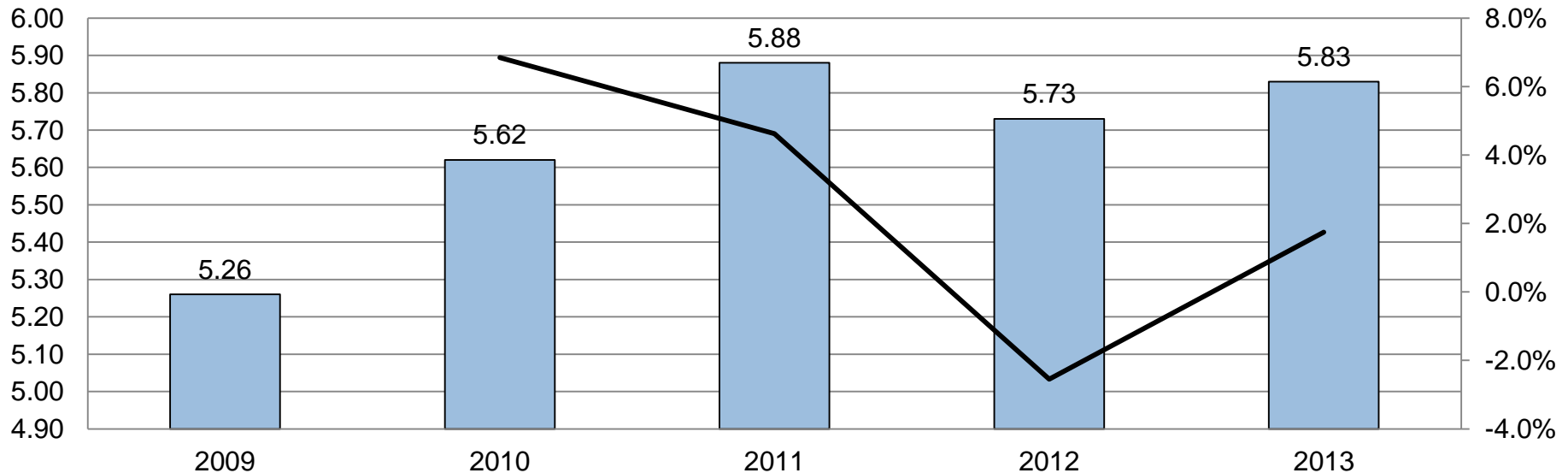


- The ICT industry registered a faster growth than the GDP.
- Among the industrial sectors, only the ICT industry **follows** closely the **global trends**.

The ICT industry revenues between 2009-2013 in Romania

The ICT sector registered a growth at a 2.7% CAGR in the 2009-2013 period and reached EUR 5.83 billion in 2013.

The Romanian ITC industry by revenue between 2009-2013 (billion EUR)



The revenue growth of the Romanian ICT industry showed a significant variation in the 2009-2013 period. From 2009 to 2011 the ICT industry grew at a 6% CAGR followed by a 2.6% decline in 2012. The cutback was due to the contraction of the Telecommunication sector. In 2013 the ICT industry registered a weak growth of 1.7%. In the 2009-2013 period the Romanian ICT industry registered a 13.5% growth in revenues from EUR 4.14 billion in 2009 to EUR 5.83 billion in 2013.

Global analysis

European analysis

Romanian analysis

ICT revenue

- Historically 2009-2013
- **Forecast 2014-2018**
- By countries 2013

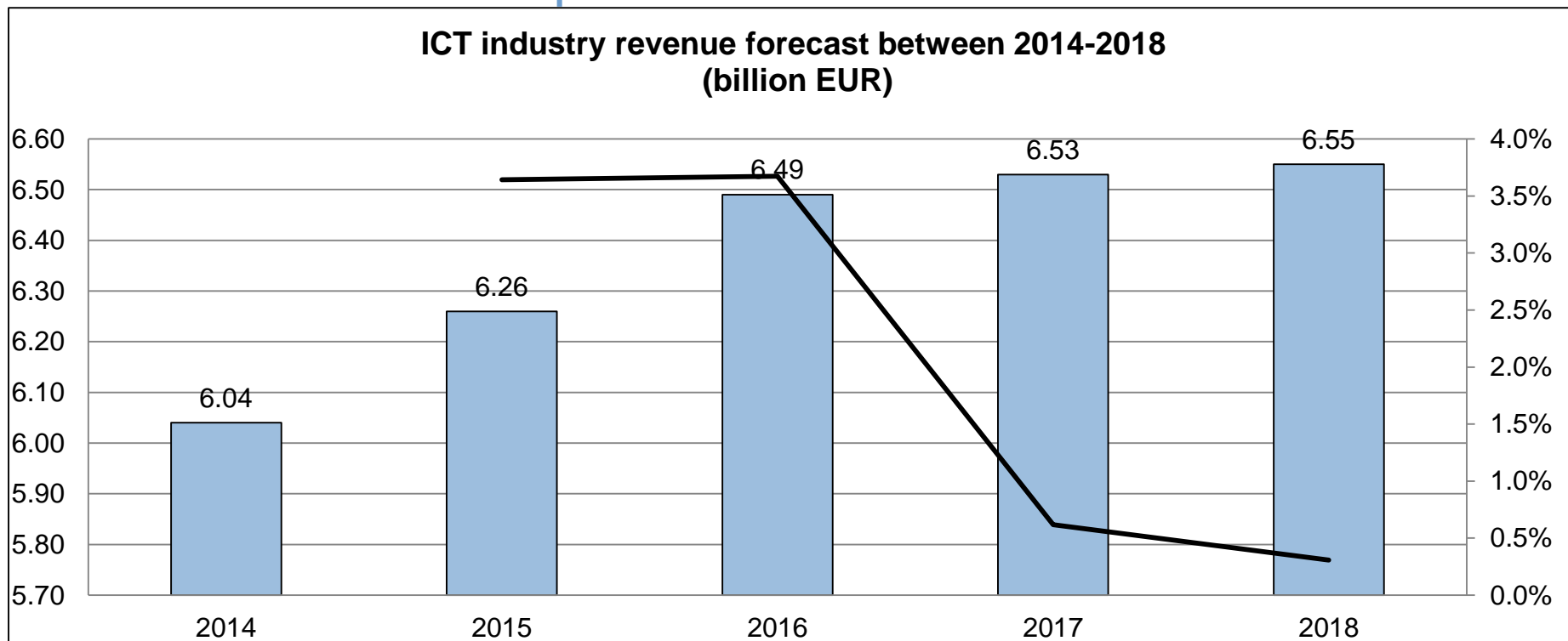
ICT profit

ICT employees

Sector analysis

The ICT industry in Romania - forecast

The Romanian ICT industry has a significant growth potential, as it is expected to grow at a 2.05% CAGR in the 2014-2018 period.



- The ICT industry is expected to grow at a 2.05% CAGR in the 2014-2018 period.
- The Romanian ICT industry growth shows a decreasing trend from 2014 to 2018.

Global analysis

European analysis

Romanian analysis

ICT revenue

- Historically 2009-2013
- Forecast 2014-2018
- **By counties 2013**

ICT profit

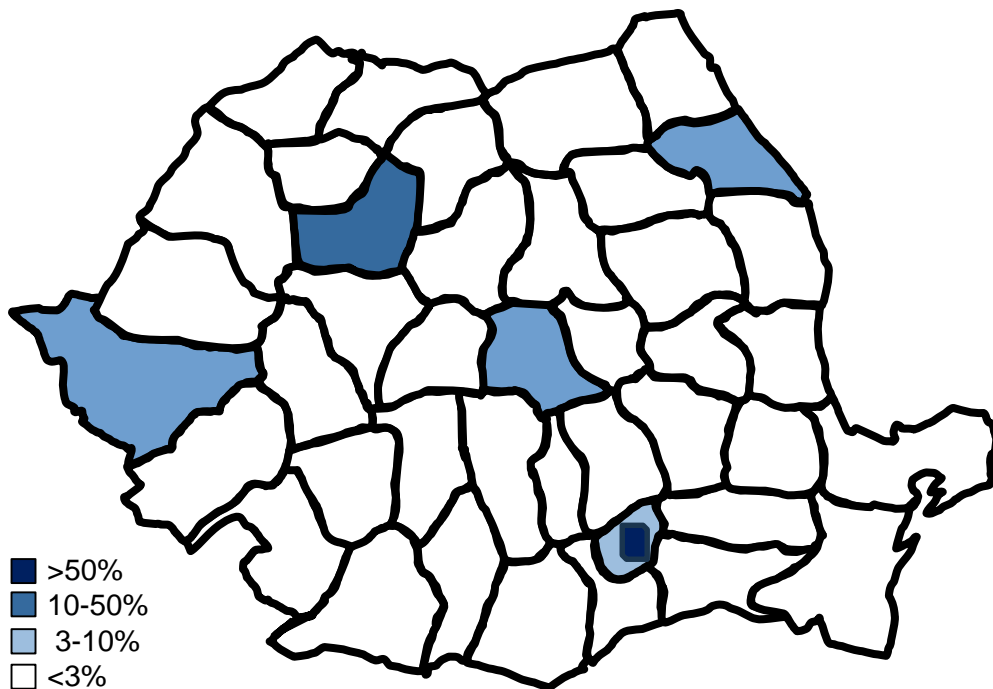
ICT employees

Sector analysis

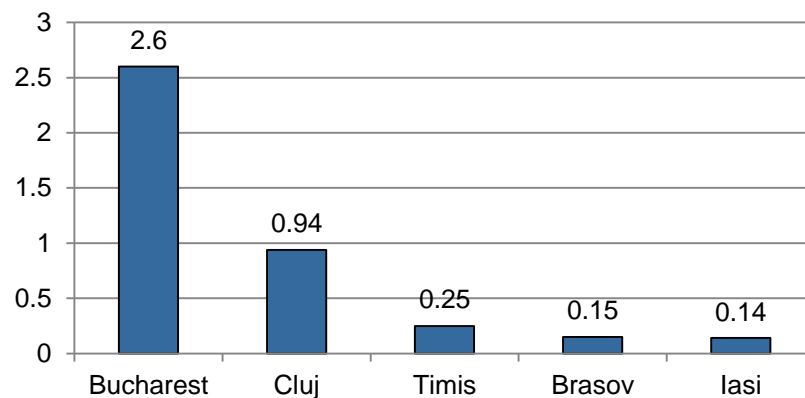
The ICT industry revenue distribution by counties in 2013

Bucharest is the leading city by ICT revenue followed by Cluj, the fastest growing city in the past 5 years, with 21%.

ITC sector revenue distribution in Romania, 2013



The Romanian ICT industry revenue distribution among the top counties in 2013



The top 5 ICT regions in Romania sum up 4.08 billion euro, which represents 91% of the total ICT industry revenue in Romania. **Cluj** accounts for 21% of the total revenue.

90% of the Romanian ICT industry revenues are realized in 5 counties. The Romanian capital, Bucharest, accounts for 58% of the total industry revenue, although Cluj-Napoca has registered the biggest growth since 2009.

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

- **Historically 2009-2013**
- By counties 2013

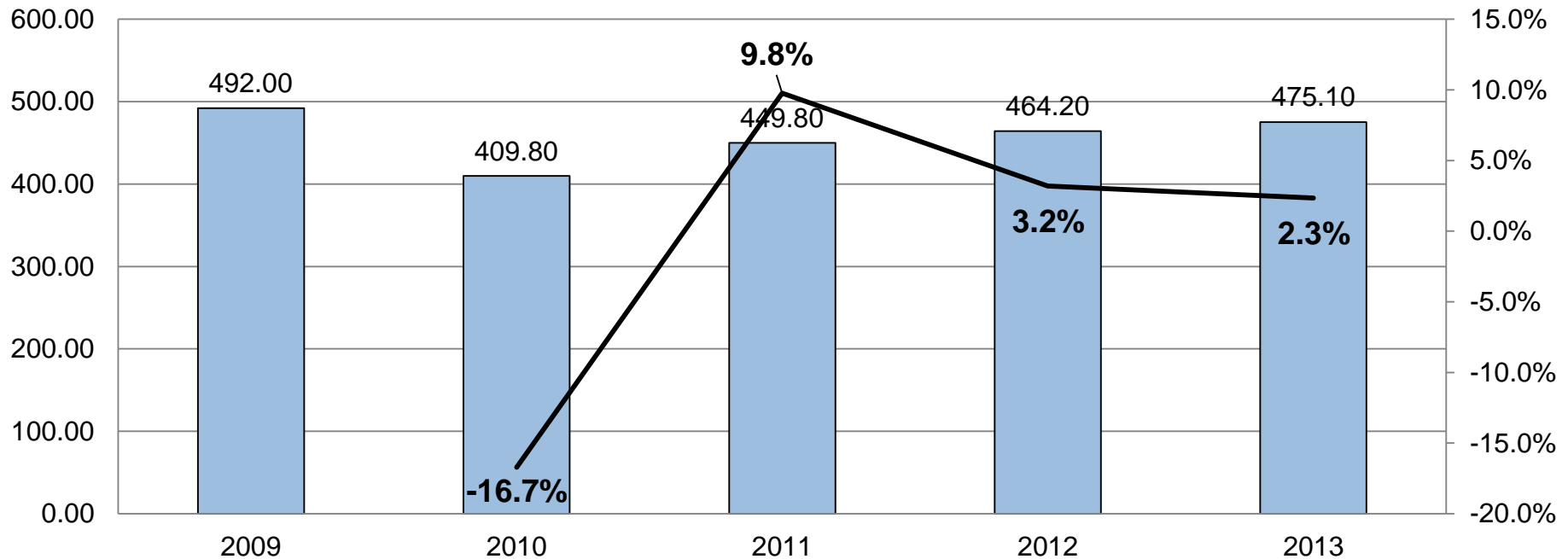
ICT employees

Sector analysis

The Romanian ICT industry profits between 2009-2013

The Romanian ICT industry profits fell by an average 0.35% annually in the 2009-2013 period. In 2013 the ICT industry registered a total profit of EUR 475 million.

The Romanian ICT industry profits between 2009-2013 (million EUR)



In 2010 the Romanian ICT industry profits fell by 16.7% due to the financial crisis.

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

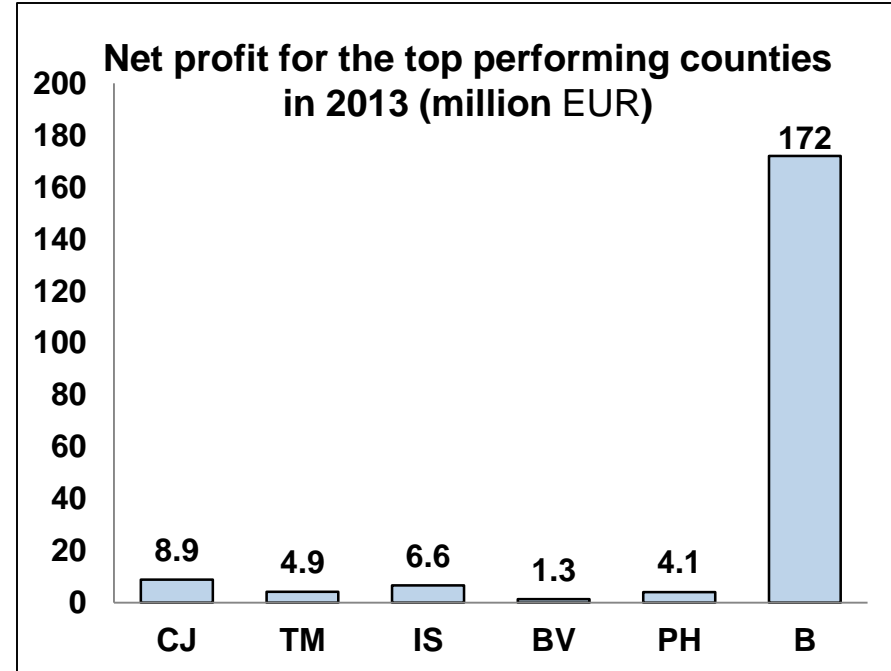
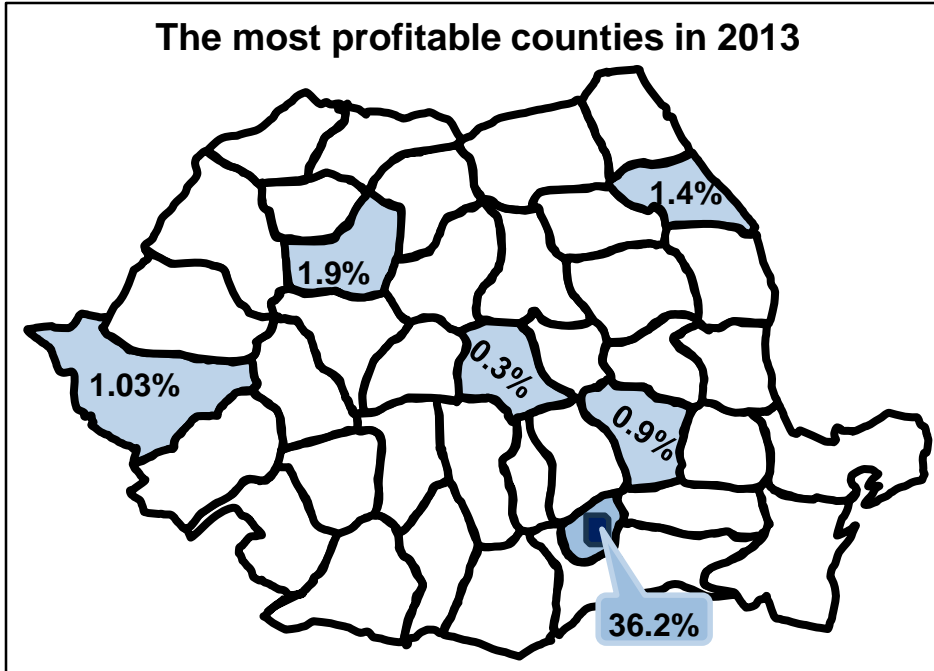
- Historically 2009-2013
- **By counties 2013**

ICT employees

Sector analysis

The ICT industry profit distribution by counties in 2013

In 2013 the ICT sector realized a net profit of EUR 475.1 million. Bucharest is the detached leader in terms of profits, and it is also the most developed county in Romania.



The capital, Bucharest, is the detached leader with a share of 38.7% of the total ICT industry profits, followed by Cluj with 2%, and Timis with 1.1%. The majority of the 18 000 ICT companies registered in Romania are based in Bucharest. The top 5 counties have more than 50% of the total industry profits.

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

ICT employees

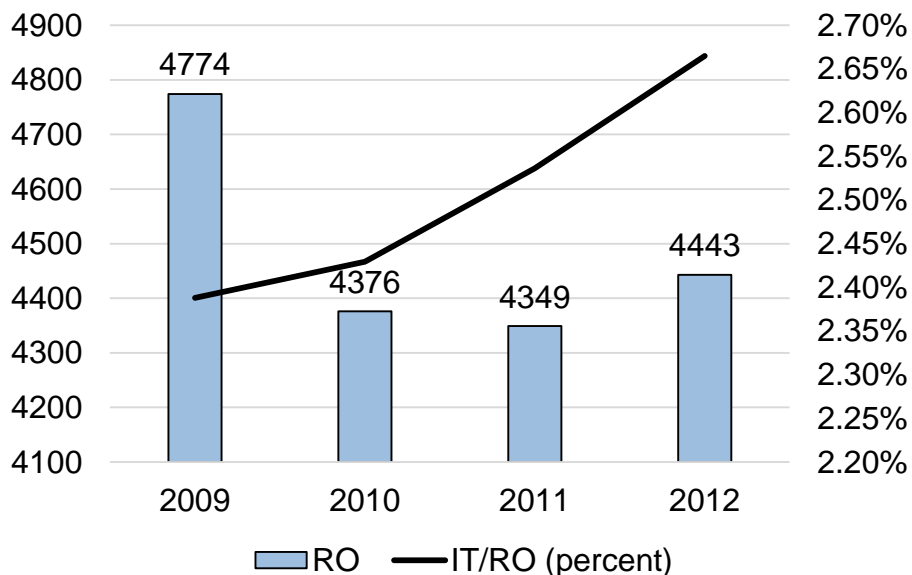
- **Historically 2009-2013**
- By counties 2013

Sector analysis

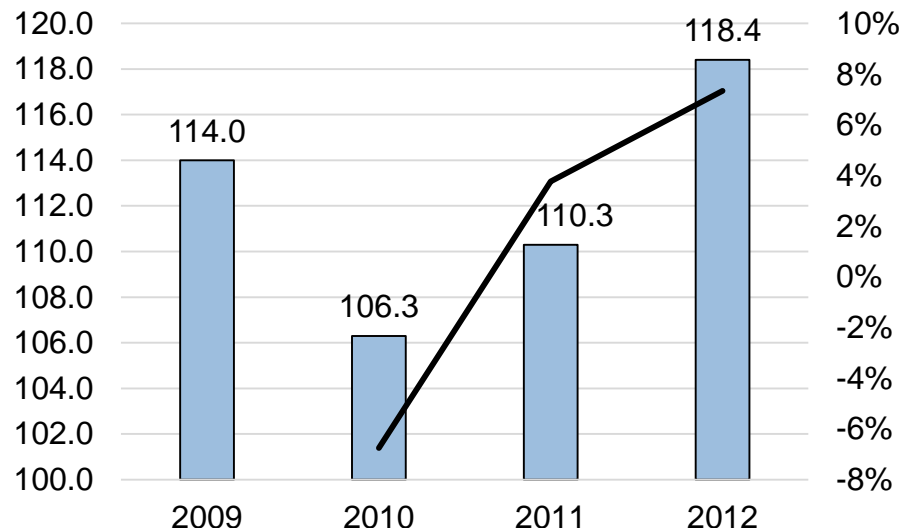
Romanian ICT sector employment statistics from 2009 to 2012

The employment rate in the Romanian ICT sector has shown consistent growth since 2010, despite the fact that the overall employment rate of the country has varied.

The Romanian ICT employment rate between 2009-2012 (1000 capita)



The number of employees in the ICT sector between 2009-2012 (1000 capita)



Compared to the overall employment statistics, the number of employees in the ICT sector shows a consistent rise. Through the last **3 years**, there was a **constant growth** regarding employment numbers, the **2012/2011** increase being as high as **7,34%**.

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

ICT employees

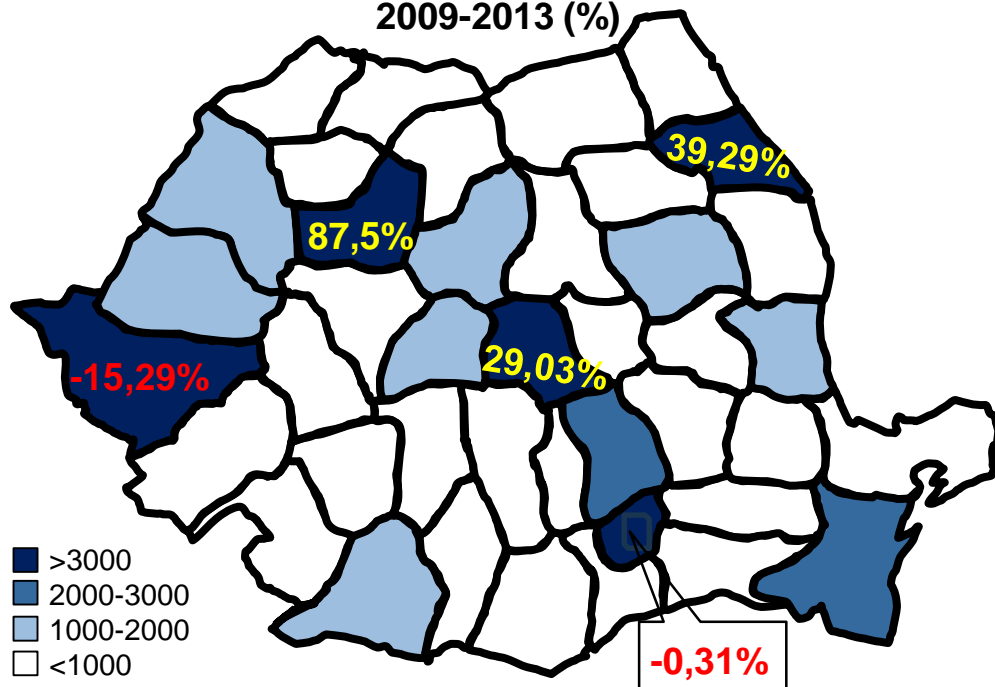
- Historically 2009-2013
- **By counties 2013**

Sector analysis

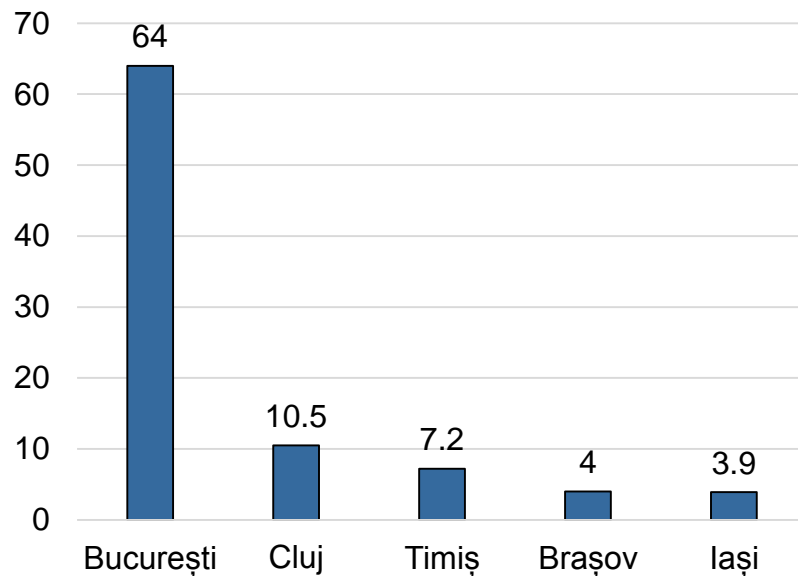
The Romanian ICT sector employment statistics by counties

The Romanian ICT sector is heavily concentrated, the vast majority of IT specialists working in the capital. However, Cluj is showing great growth potential.

The changes of ICT employee numbers between 2009-2013 (%)



TOP 5 counties by number of ICT employees in 2013 (1000 capita)



In the 2009-2013 period, **Bucharest** had the biggest employee pool in the ICT sector, around **64.000** capita. During that period, **Cluj** had experienced the **biggest boom**, as the number of **ICT employees** almost **doubled**.

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

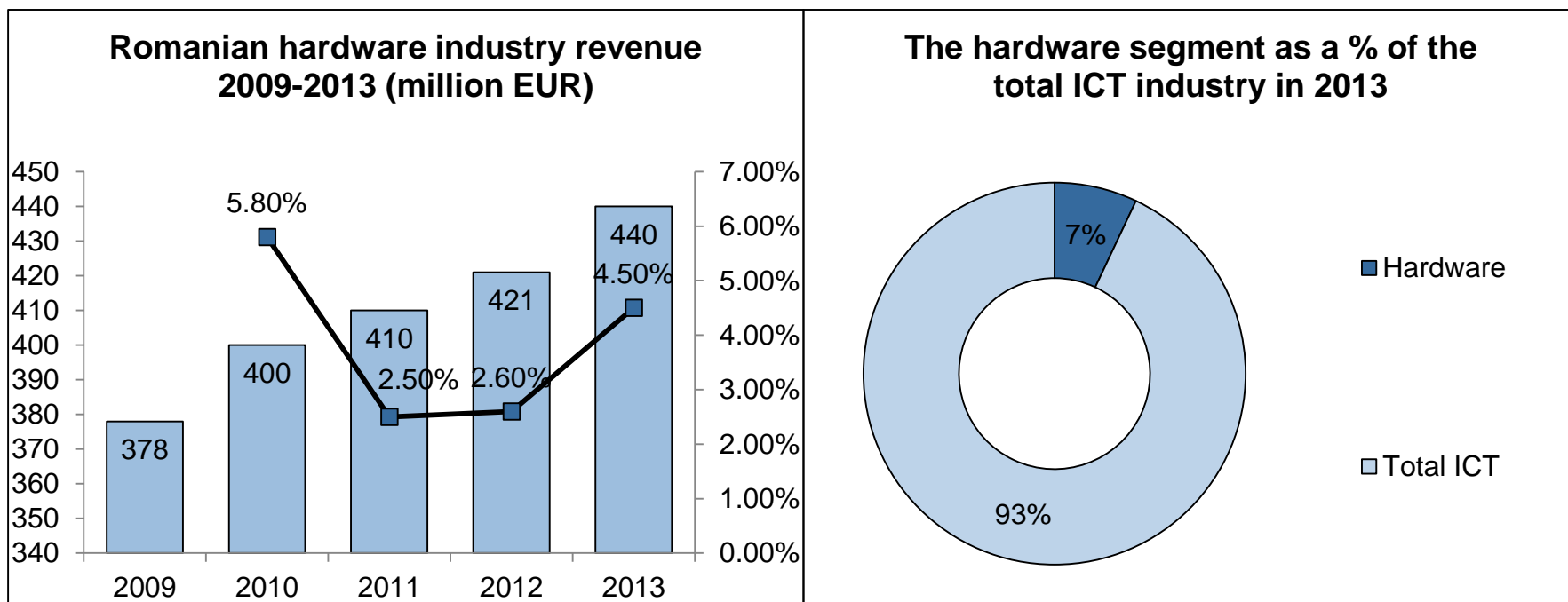
ICT employees

Sector analysis

- **Hardware**
- Software
- IT services
- Telecommunication

The Romanian hardware industry revenues between 2009-2013

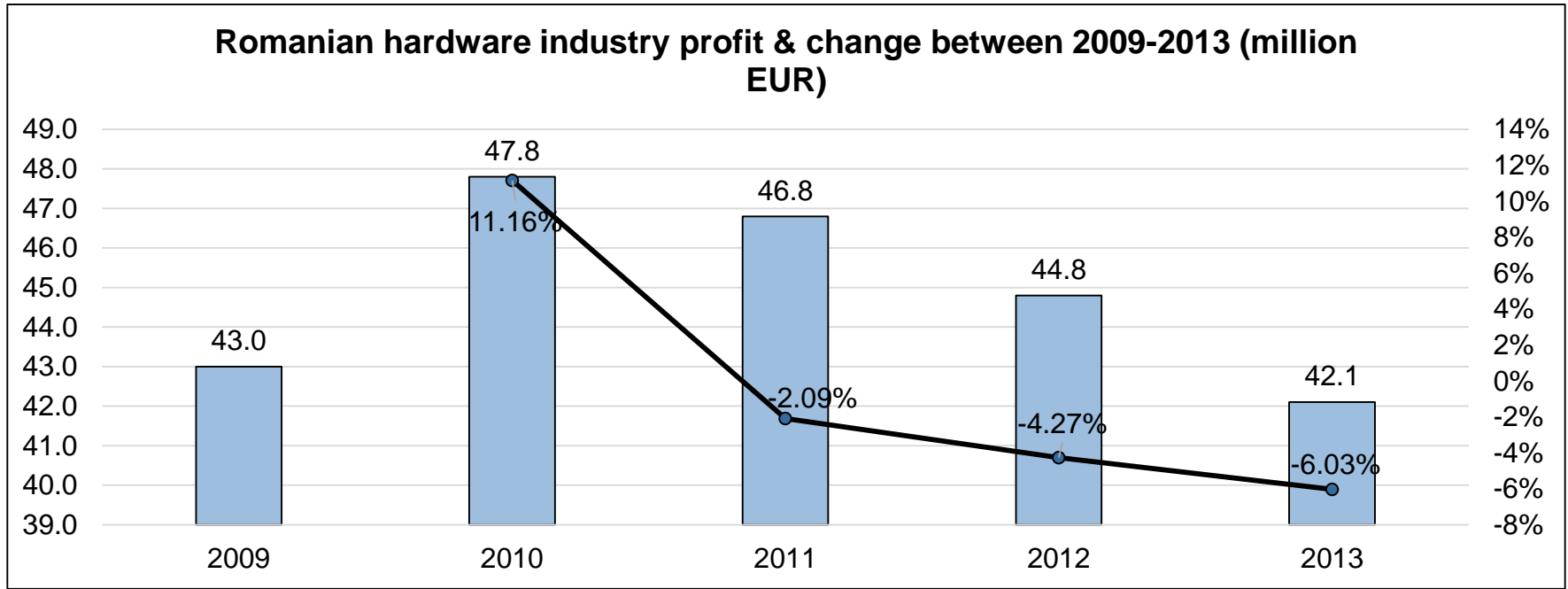
The hardware industry grew at a 3.85% CAGR in the 2009-2013 period, reaching EUR 440 million in revenues.



The hardware industry accounts for 7% of the total Romanian ICT industry revenues in 2013. The sector registered a total growth of 16.4% between 2009-2013, reaching EUR 440 million in 2013.

The average profit rate of the Romanian hardware industry

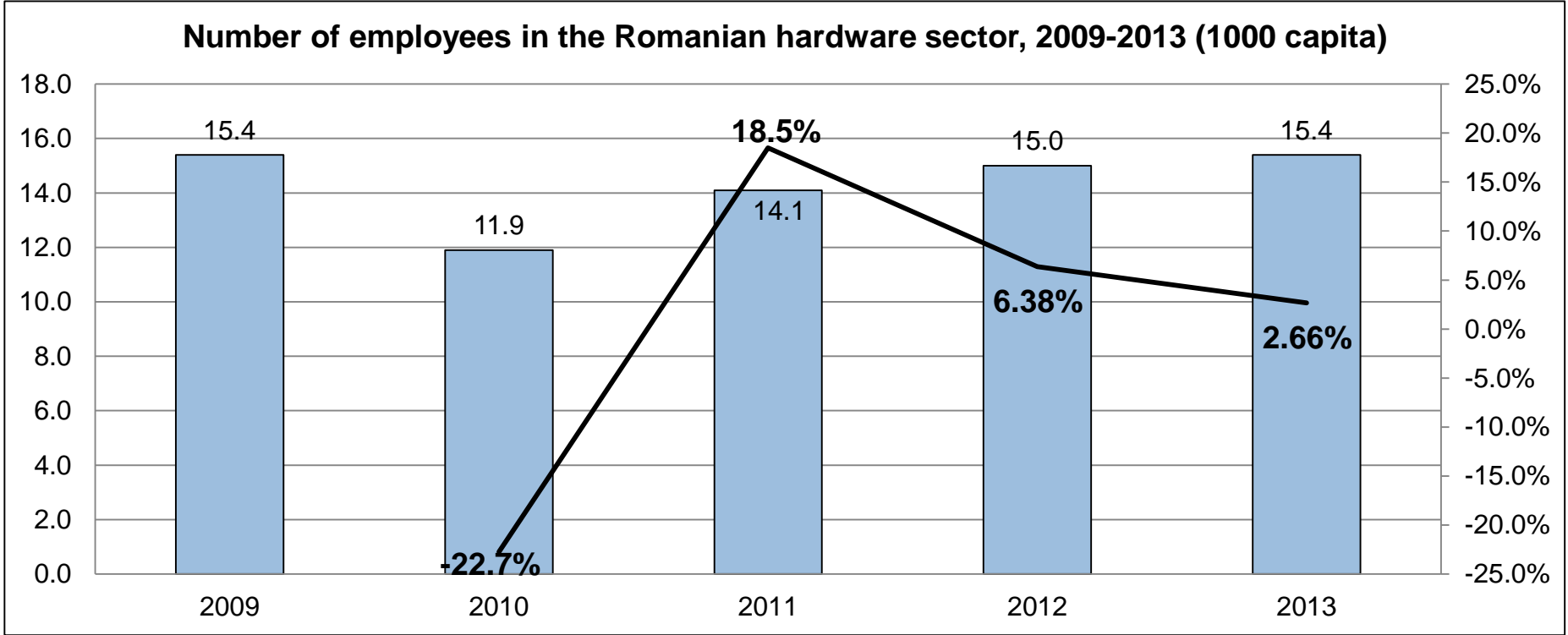
The Romanian Hardware industry profits fell by 2.09% from 2009 to 2013. The Hardware market profit rate decreased at a 0.31% CAGR.



The **average profit margin** of the Romanian Hardware industry is **9,57%**. The Romanian Hardware industry **profits** followed a **decreasing trend** from **2010 to 2013**.

Number of employees in the hardware sector in Romania

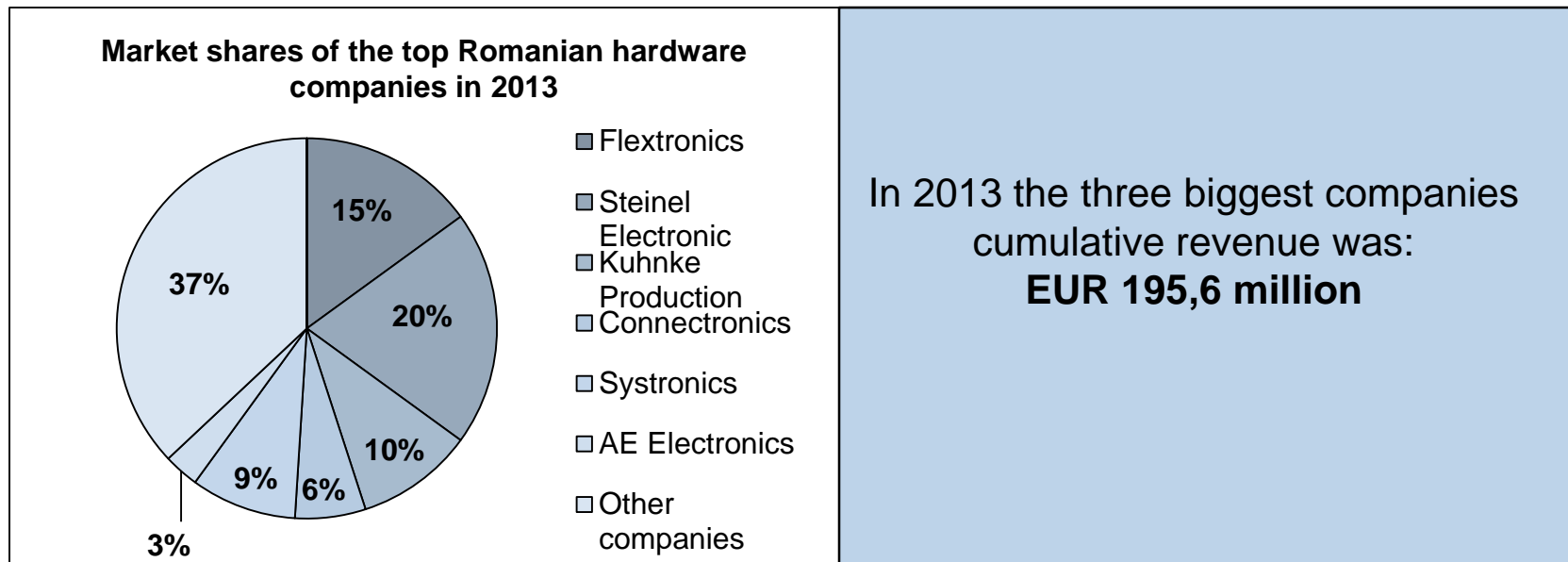
From 2010 to 2013, the number of employees in the hardware sector registered a growth at a 9.2% CAGR, reaching the pre crisis employment level in 2013.



From 2009 to 2010 the number of employees fell by 22.7%, but in the next years increased constantly, amounting to 15 400 employees in 2013.

Market concentration – Romanian hardware sector in 2013

The Romanian hardware market is highly concentrated, as the three largest hardware companies had a 45% market share in 2013.

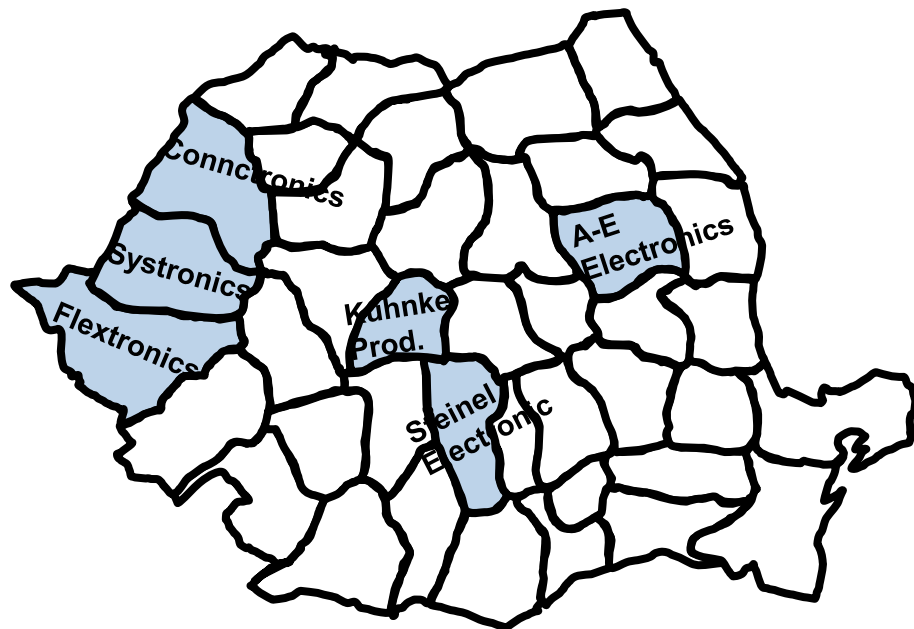


- The three biggest companies, Flextronics, Steinel Electronic and Kuhnke Production, have a 45% cumulative market share.
- The other companies revenue, though significant, fell short of the top 2.

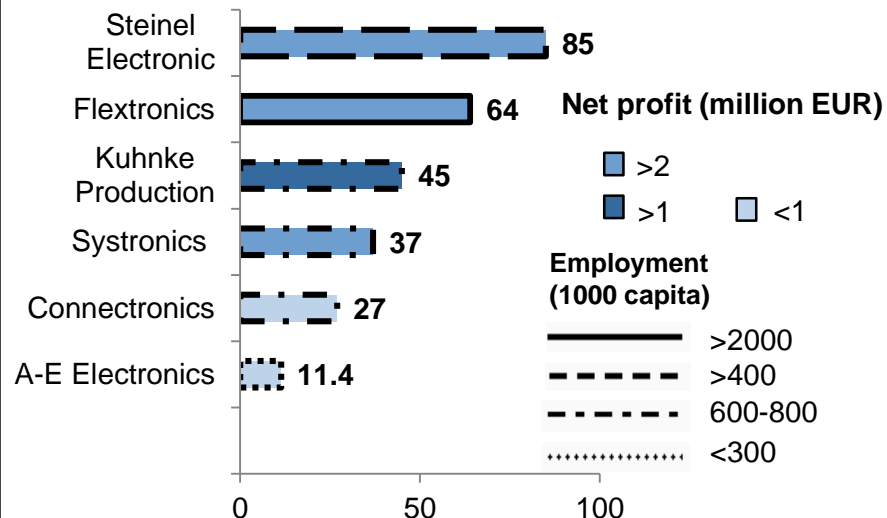
TOP Romanian hardware Companies in 2013

The biggest hardware company in Romania, Steinel Electronics, is located in Arges. The other 5 companies are registered in other developed counties, e.g., Timis and Sibiu.

The top Hardware companies' headquarters



Top 6 Hardware Companies by revenue in 2013 (million EUR)



The leading company, Steinel Electronics, has the highest revenue of EUR 85 million and a profit of EUR 2.4 million. Based on the number of employees Steinel Electronics is in the middle, with its 453 employees, compared to Flextronics, which has 2697 employees.

TOP hardware companies by revenue 2009–2013

Analyzing the TOP 6 Hardware Companies based on factors like profit, revenue and the number of employees, we can see the rank changes of the last 5 years.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Steinel Electronic	→	↑ 1	→	→	↑ 1
2.	• Flextronics	→	↓ 1	→	→	↓ 1
3.	• Kuhnke Production	→	→	→	→	→
4.	• Systronics	→	↑ 1	↓ 1	↑ 1	↑ 1
5.	• Connectronics	→	↓ 1	↑ 1	↓ 1	↓ 1
6.	• A-E Electronics	→	→	→	→	→

- In case of the Top Hardware companies the first, the third and the last place is constantly occupied by the same company.
- The other companies change their position frequently because of the similar size of the competition.

Top hardware companies by net profit 2009–2013

As opposed to the ranking by revenue, Steinel Electronics loses its leading position to Flextronics in term of net profits.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Flextronics	→	↑ 1	→	→	↑ 1
2.	• Steinel Electronic	→	↓ 1	→	→	↓ 1
3.	• Systronics	↓ 1	→	↑ 3	→	↑ 2
4.	• Kuhnke Production	↓ 1	↑ 2	↓ 1	→	→
5.	• A-E Electronics	→	↓ 2	→	→	↓ 2
6.	• Connectronics	↑ 2	→	↓ 2	→	→

- In 2010 there was a position-change between Flextronics and Steinel Electronic. Afterwards, Flextronics succeeded to keep the first place.
- Systronics increased its net profits, and moved up two position in the rankings between 2009-2013.
- Connectronics was surpassed by the competition in 2012 and ended up in the bottom.

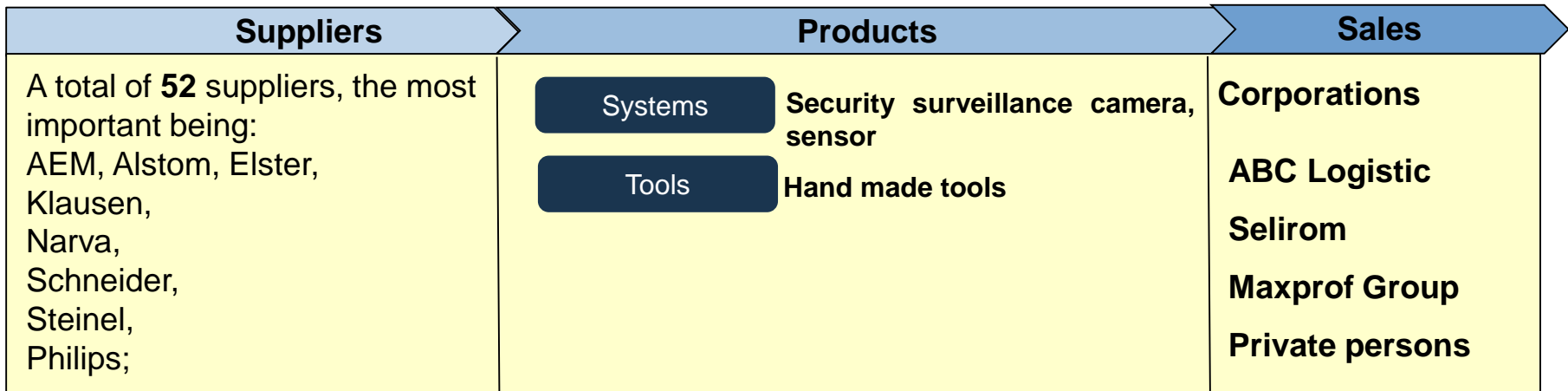
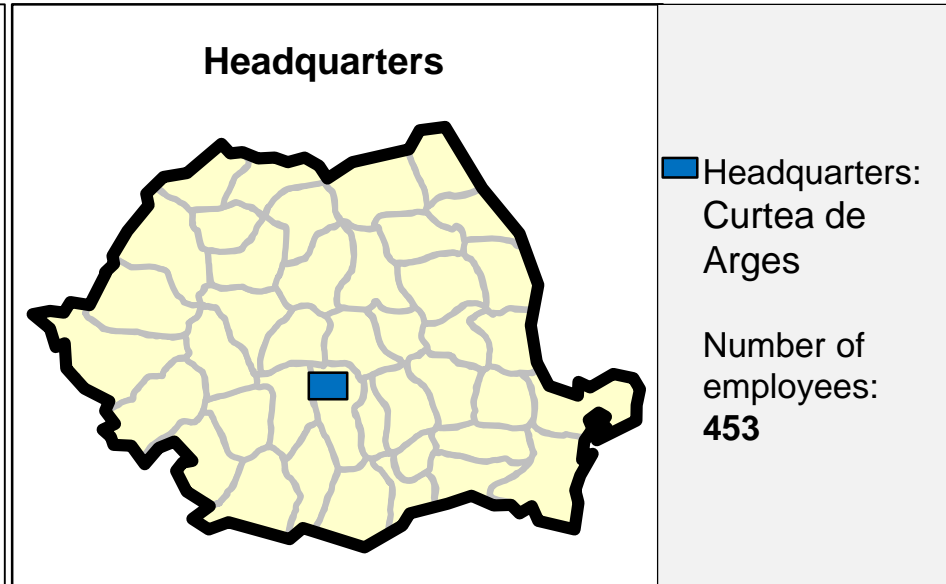
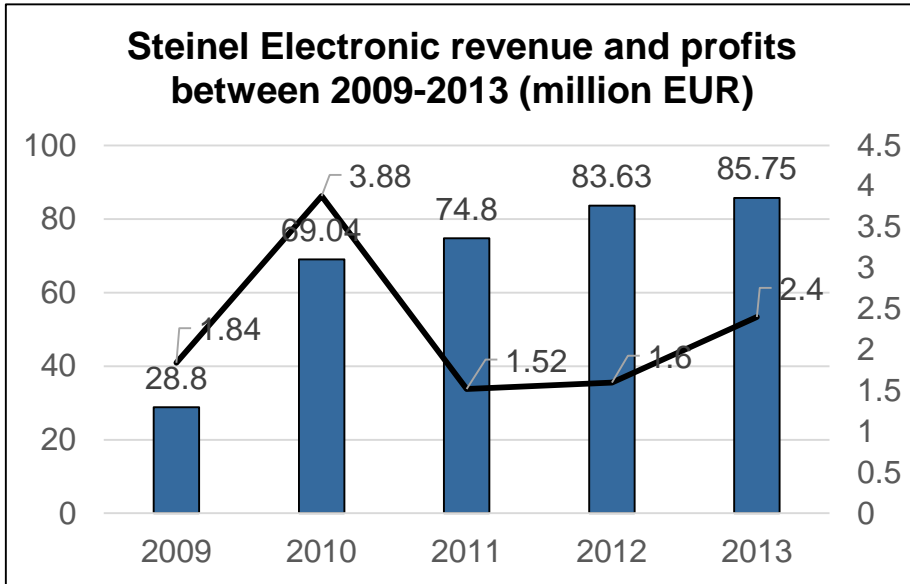
Top hardware companies by employment 2009–2013

Steinel Electronics was surpassed in terms of number of employees and lost three positions in the rankings.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Flextronics	→	→	→	→	→
2.	• Connectronics	↑ 1	→	→	→	↑ 1
3.	• Kuhnke Production	→	→	→	↑ 1	↑ 1
4.	• Systronics	→	→	→	↑ 1	↑ 1
5.	• Steinel Electronic	↓ 1	→	↓ 1	↓ 1	↓ 3
6.	• A-E Electronics	→	→	→	→	→

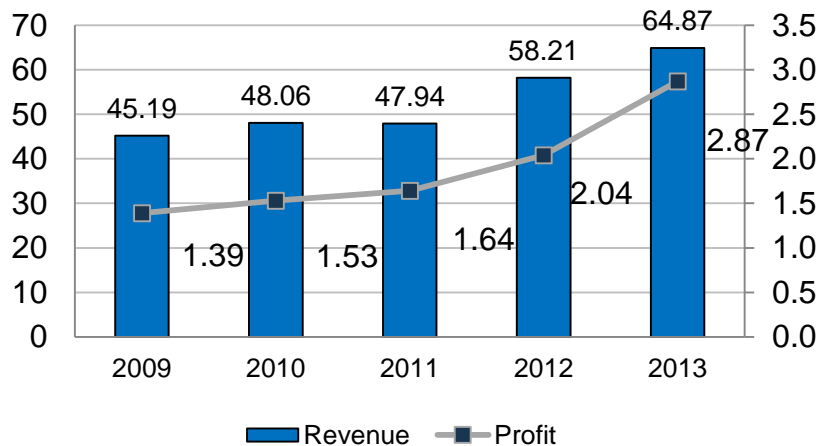
- Flextronics preserved its leading position as the biggest employer in the Romanian ICT industry.
- Connectronics, Kuhnke Production and Systronics increased the number of employees in the 2009-2013 period.
- Only, Steinel Electronics reduced its number of employees.

Steinel Electronics is based in Curtea de Arges, and it is the biggest Romanian hardware company with a revenue of EUR 85.75 million in 2013.

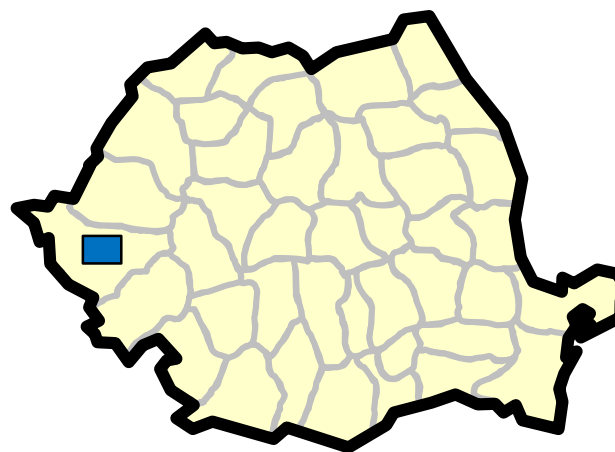


Flextronics had a total revenue of EUR 64.87 million in 2013. Flextronics primary focus is on the Medical Inventories market.

**Revenue and profit, 2009-2013
(million EUR)**



Headquarters



■ Headquarters:
Timisoara

-Factory:
Timisoara

Number of employees:
2697

Suppliers

Tyko, Future, Copper Busman,
Nxp-, On-, Rohm
semiconductors
Kemet, Koa , Molex

Products

Ellectronics

Telecommunication system

Medical inventories

Part of cars

Flextronics LM1-S-C02/62786

Sales

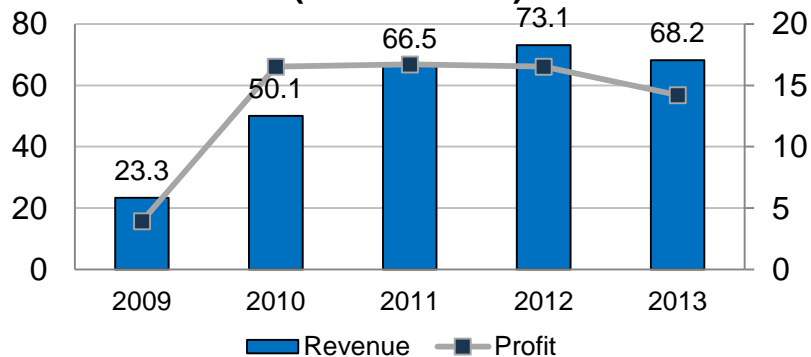
Export in Europe
Alcatel-Lucent,
Philips Medical,
SMA Solar
Technology

Kuhnke Production



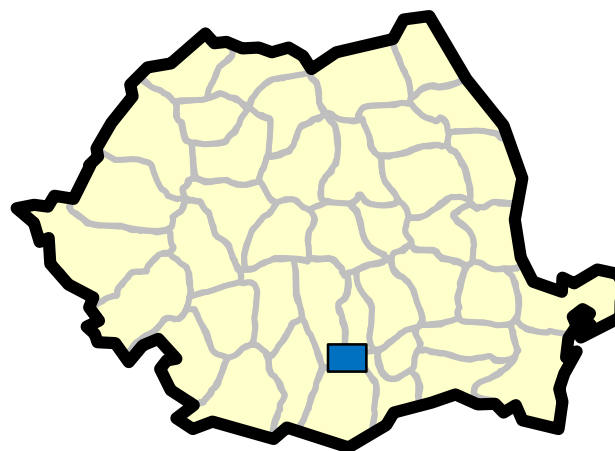
Kuhnke Production is the third biggest hardware manufacturing company in Romania with a EUR 68.2 million in revenues in 2013.

Revenue and profit, 2009-2013
(million EUR)



-Due to an investment in 2011 the profits fell accentuated by a 6.7% drop in revenues in 2013.

Headquarters



■ Headquarters:
- Joita,
Giurgiu,

Number of employees:
246

Suppliers

- Business segments: hardware licenses, license renewals and product support;
- Services division: consulting, education & demand hosting;
- Main suppliers: mostly from Romania;

Products - Brand

Electronics

Laptop - Sager

Telecommunication system

CPU - Samsung

Medical inventories

Hard disk drives - Toshiba

Part of cars

Cooling solutions - Asus

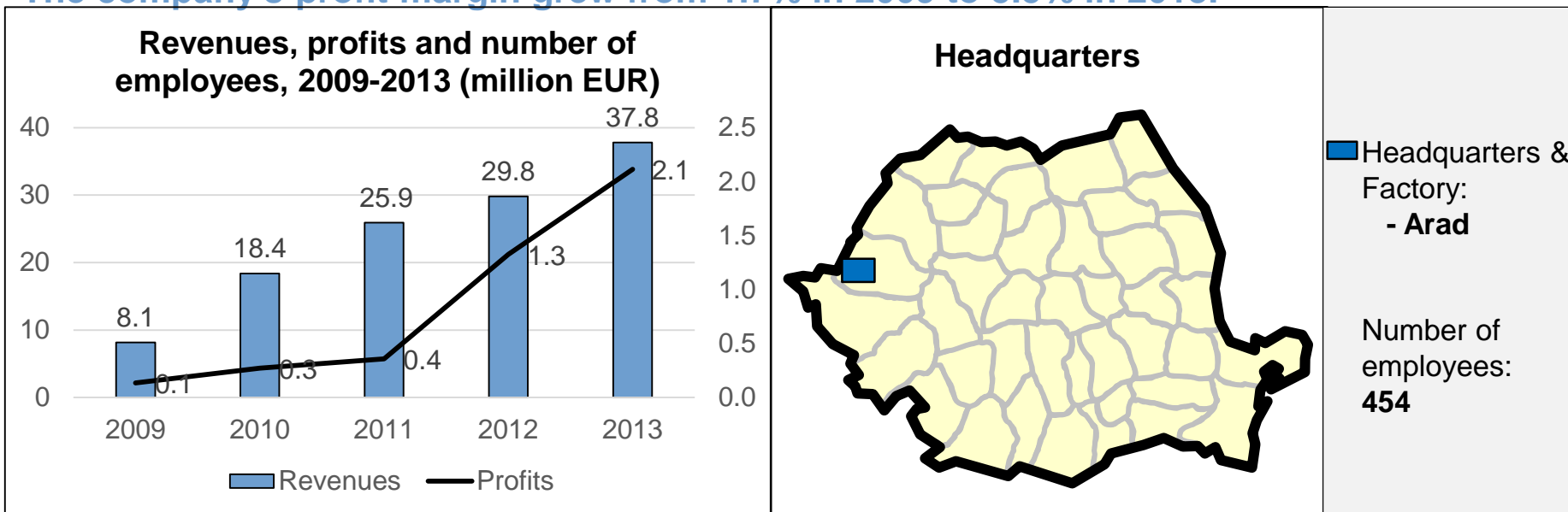
Sales

B2B

Samsung, Medtronic,
Hyatt, Hilti, Rosche;

Systronics Romania

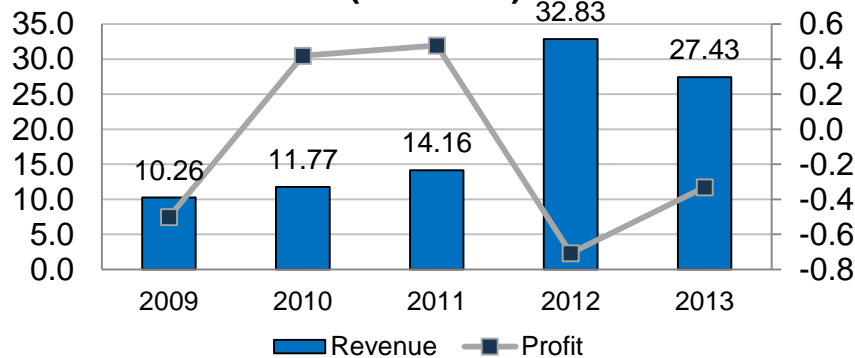
Systronics Romania is a steadily growing and highly specialized hardware manufacturer. The company's profit margin grew from 1.7% in 2009 to 5.5% in 2013.



Partners	Products	Sales
<ul style="list-style-type: none"> Cicor Technologies 	<div style="background-color: #334d5d; color: white; padding: 5px; display: inline-block; border-radius: 10px;">Electronics</div> <p>-Printed Circuit Boards</p>	<p>B2B</p> <p>Owned by Cicor Technologies; Up until 2006 only exported to Italy, Germany, France & Switzerland;</p>

Connectronics Romania is the biggest* company, based in Oradea. Connectronics had EUR 27.4 million in revenues in 2013.

Revenue and profit, 2009-2013
(million €)



The revenue in 2012 grew with 232% as a result of the production growth and new partnerships. The revenue in 2013 fell because of investments bigger than EUR 2 million.

Headquarter



Headquarter:
-Oradea

Number of employees:
837

Suppliers

Airaya, AvaLan Wireless, Citel, Ceragon, CyberPower, Eband, DDB Unlimited, Elfiq, Elk River, Engage, Exalt, Fujinon, ICC, Icron& others

Products

Cables

Electronic components

Boards

Interface and test equipment

Sales

Alcatel-Lucent,
Marconi
Philips,
Stork,
Eia,
Other telecommunication companies

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

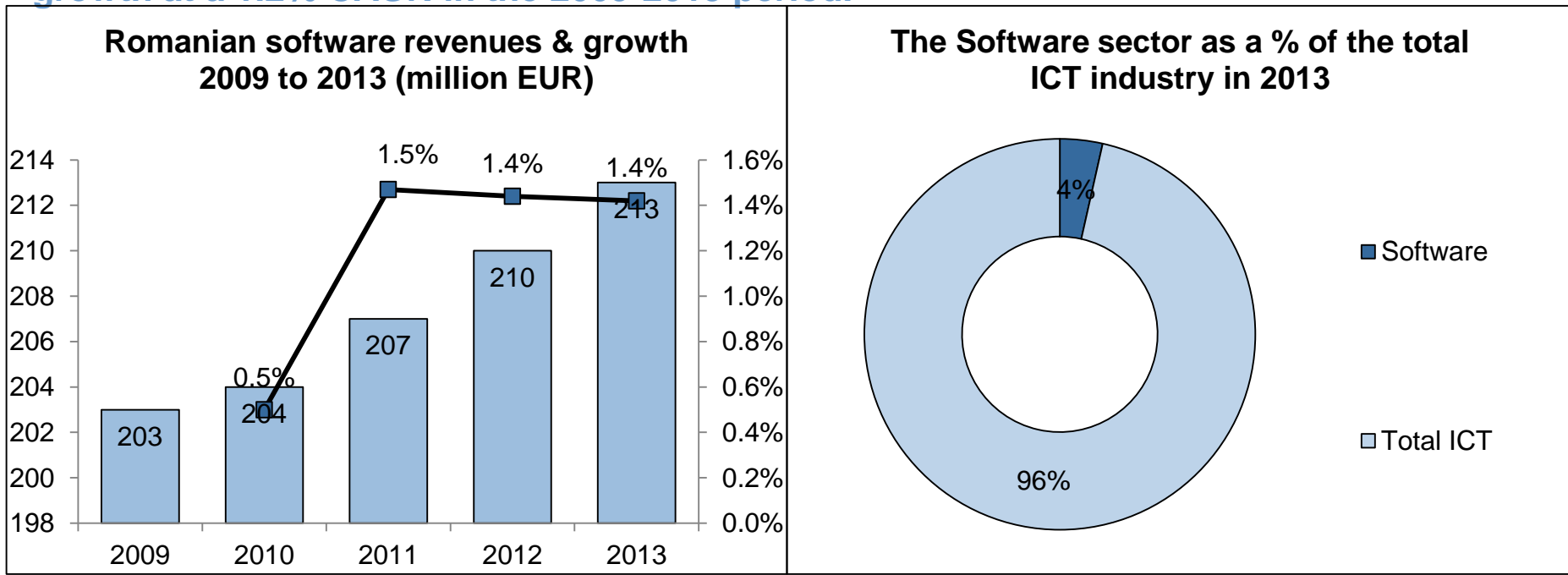
ICT employees

Sector analysis

- Hardware
- **Software**
- IT services
- Telecommunication

Software industry revenues between 2009-2013 in Romania

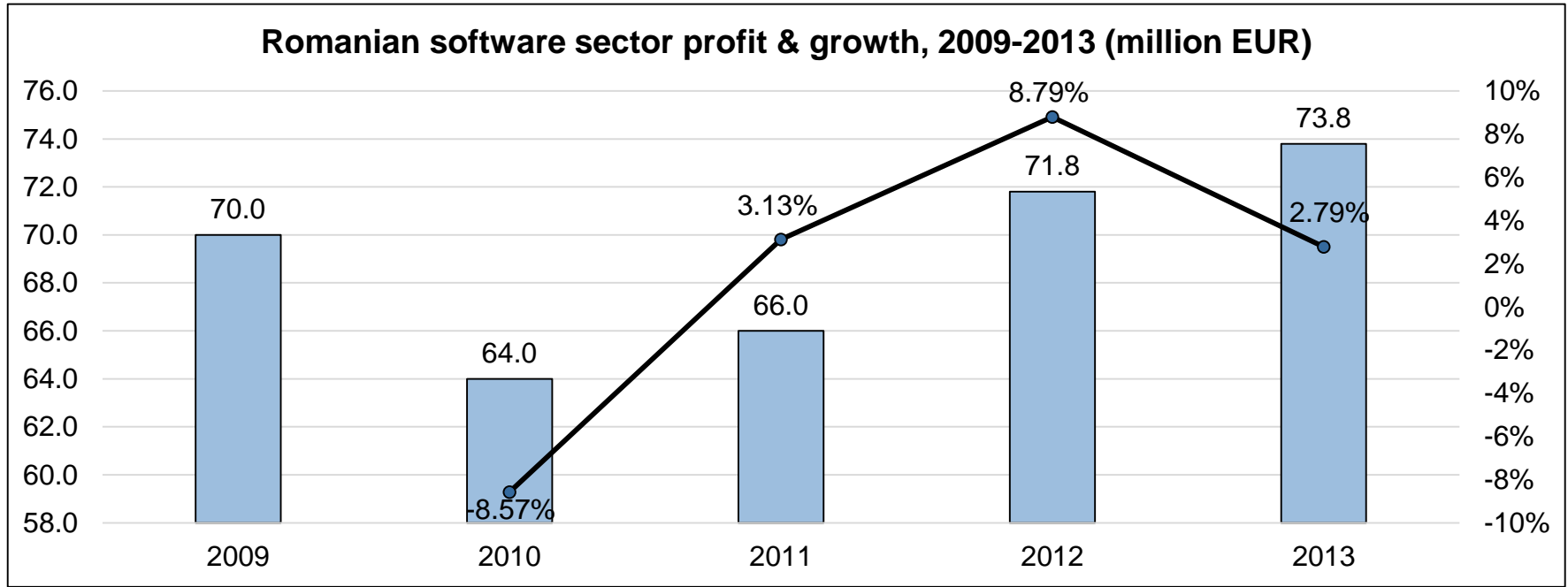
The Romanian software industry reached EUR 213 million in revenues in 2013, with a growth at a 1.2% CAGR in the 2009-2013 period.



The Romanian software industry grew with a **1.22% CAGR** in the 2009-2013 period, amounting to a **total growth of 4.9%**. The software market reached **EUR 213 million** in revenues by 2013, which represents **4% of the total ICT sector** in Romania.

The profits of the Romanian software industry, 2009-2013

The Romanian software industry profit rate increased by 5.39% from 2009 to 2013. The software market profit grew at a 2.37% CAGR.

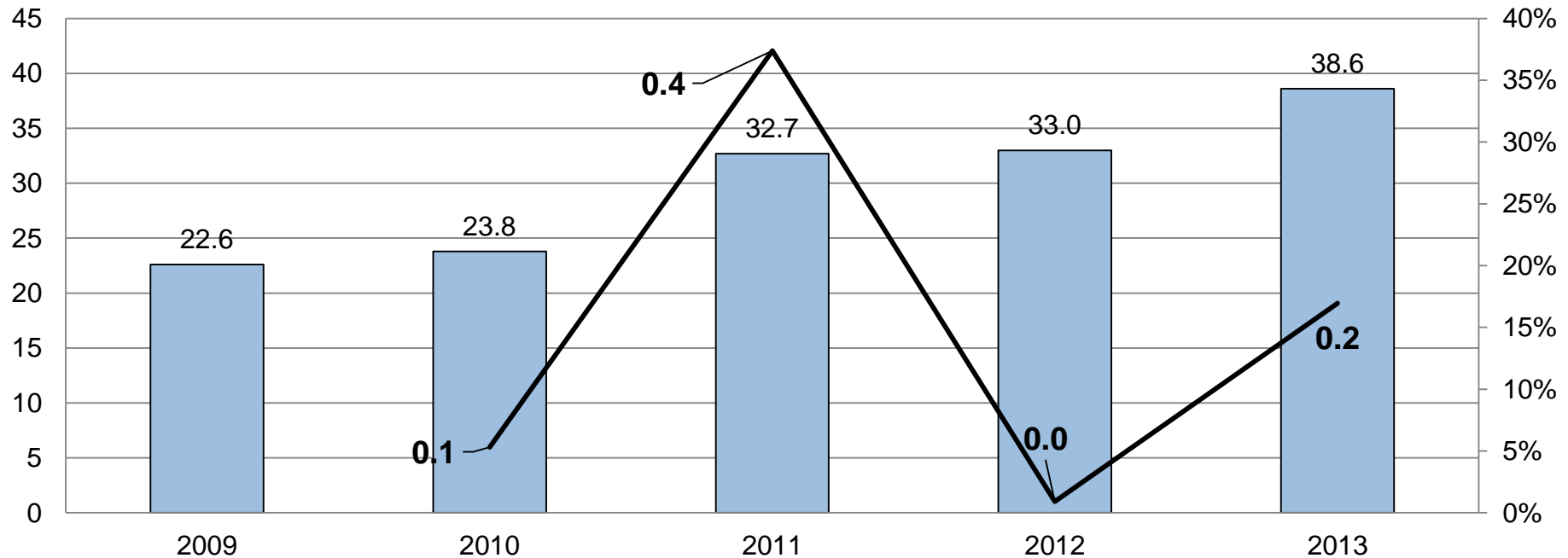


The overall **profit margin** of the Romanian software industry is **34.47%**. In the past 5 years the revenue of the Romanian software industry showed a **steady growth**, rising by **4.9%** from **2009 to 2013**. The **profit rate dropped** in **2010**, but overall it **increased** by **5.39%** in the **2009-2013** period.

Number of employees in the software sector in Romania

From 2009 to 2013, the number of employees in the software sector continuously increased.

Number of employees in the Romanian Software sector, 2009-2013 (1000 capita)

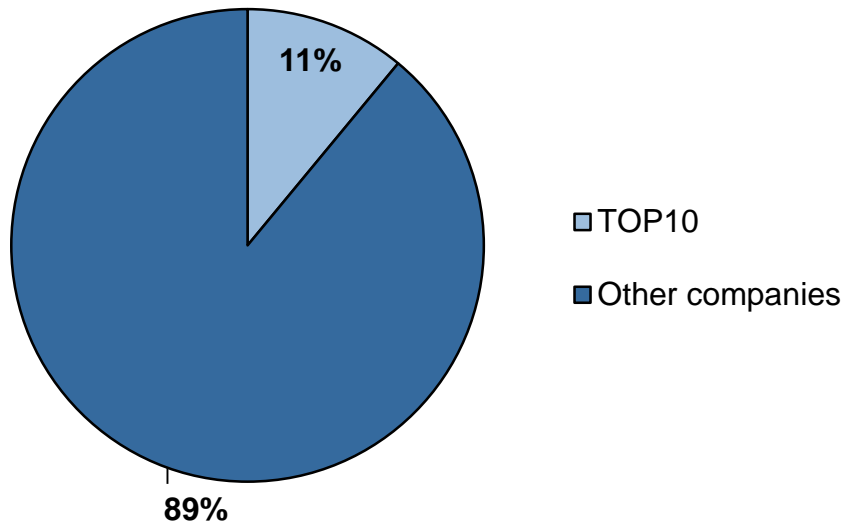


In 2013 the software industry had a total of 38.6 thousand employees, growing at a 15.14% CAGR between 2009 and 2013.

Market concentration – Romanian software sector in 2013

The Romanian software industry is weakly concentrated, as the cumulative market share of the ten biggest software companies was only 11% in 2013.

The top 10 companies cumulative share of the Romanian software market in 2013



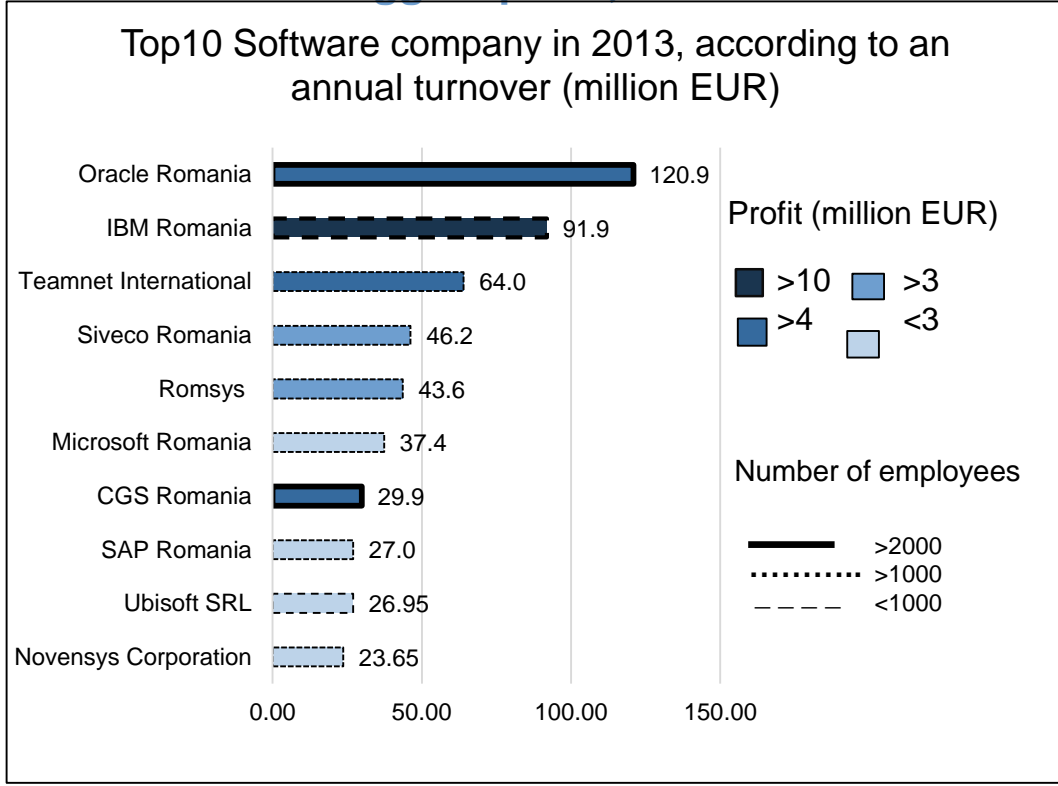
In 2013 the ten biggest companies cumulated revenue was:

EUR 511 million

- The **Oracle, IBM, Teamnet, Siveco, Romsys, Microsoft, CGS, SAP, Ubisoft and Novensys** cumulative market share is only **11%**, therefore, it is a **highly competitive market**.

Top 10 software company in Romania by revenues in 2013

90% of the top 10 companies are from Bucharest. The leading company is Oracle, but IBM has the biggest profit, and CGS has the most employees in 2013.



Oracle is the leading company, with a **EUR 120 million** in revenues, **2276 employees** and **EUR 4.70 million** in profit. However, **IBM Romania** has **EUR 10.73 million** profit. **Teamnet** is the only company, which is not based in the capital, instead is based in **Prahova**.

Top 10 software company in Romania by revenues

The ranking of the top 10 software companies shows significant fluctuation in the 2009-2013 period, only Oracle Romania and IBM Romania have preserved their position.

Nr.	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	Oracle Romania	→	→	→	→	→
2.	IBM Romania	→	→	→	→	→
3.	Teamnet International	↑ ²	↑ ¹	↑ ²	→	↑ ⁵
4.	Siveco Romania	→	↑ ¹	→	→	↓ ¹
5.	Romsys	→	↓ ¹	↓ ³	↑ ¹	↓ ¹
6.	Microsoft Romania	↓ ¹	↓ ¹	↓ ¹	↑ ¹	↓ ¹
7.	CGS Romania	-	↓ ¹	↓ ¹	↑ ¹	↓ ¹
8.	SAP Romania	↓ ³	→	↑ ¹	↑ ¹	↓ ¹
9.	Ubisoft	↓ ³	→	↓ ¹	↑ ¹	↓ ³
10.	Novensys Corporation	↓ ³	↑ ¹	↑ ²	↓ ⁵	↓ ⁵

Teamnet International was the only company, that could **increase its sales** during the unfavorable economic conditions, while the revenues of other companies, e.g., **Siveco**, **Romsys**, and **SAP** significantly **decreased** in the **2009-2013 period**.

Top 10 software company in Romania by profit

The ranking of the top 10 software companies shows significant fluctuation in the 2009-2013 period, only IBM Romania has preserved its leading position.

Nr.	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	IBM Romania	→	→	→	→	→
2.	CGS Romania	-	→	↑ 1	→	↑ 1
3.	Oracle Romania	↑ 3	→	↓ 8	↑ 7	↑ 2
4.	Teamnet International	↓ 1	↑ 2	↑ 2	→	↑ 3
5.	Romsys	↓ 2	↓ 3	→	↑ 2	↓ 3
6.	Siveco Romania	→	↑ 2	↑ 1	↓ 3	→
7.	SAP Romania	↓ 2	↓ 3	↑ 3	↓ 2	↓ 4
8.	Microsoft Romania	↓ 5	↑ 2	↓ 1	↓ 2	↓ 1
9.	Ubisoft	↓ 2	↑ 1	→	→	↓ 1
10.	Novensys Corporation	↓ 5	↓ 1	↑ 2	↓ 2	↓ 6

Novensys, Microsoft and Ubisoft saw a huge **decrease** in their **profits** in **2010**.

Oracle employed **500 people** in **2012**, as a result, registered a **EUR 3.33 million loss**.

Top 10 software company in Romania by employees

The ranking of the top 10 Romanian software companies shows high fluctuation in the 2009-2013 period.

Nr.	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	CGS Romania	-	↑ 1	→	→	↑ 1
2.	Oracle Romania	→	↓ 1	→	→	↓ 1
3.	IBM Romania	→	↓ 1	↑ 1	↑ 1	↑ 1
4.	Ubisoft	↓ 1	↓ 1	↓ 1	↑ 1	↓ 2
5.	Siveco Romania	↓ 2	↑ 2	→	↓ 2	↓ 2
6.	Microsoft Romania	↓ 1	↓ 1	→	↑ 1	→
7.	Novensys	↓ 2	↑ 1	→	↑ 1	→
8.	SAP Romania	↓ 2	→	→	↑ 2	→
9.	Romsys	↓ 2	↓ 1	→	→	↓ 3
10.	Teamnet International	↓ 2	↑ 1	→	↓ 4	↓ 5

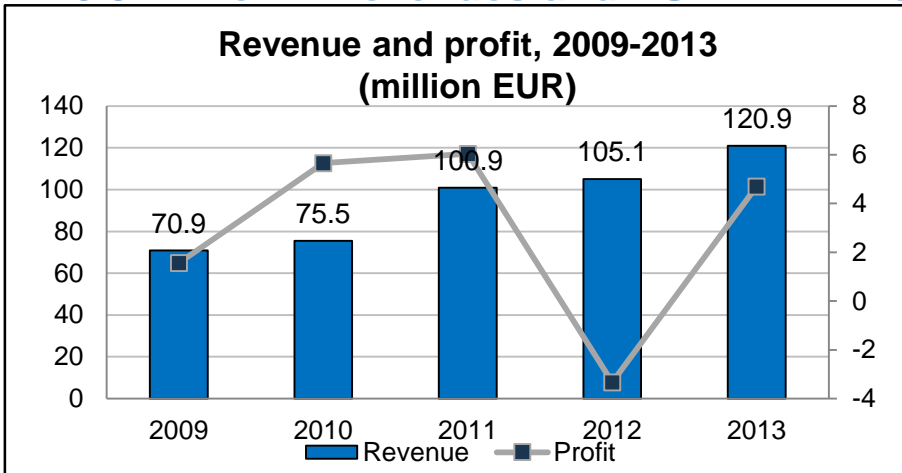
CGS Romania and IBM Romania increased the number of their employees. **Microsoft, Novensys and SAP** kept they initial positions.

Teamnet International reduced the number of its **employees with 100**, while its competitors were hiring or preserving the number of their employees.

Oracle Romania



Oracle Romania is the biggest software and IT service company in Romania, with EUR 120.9 million in revenues and EUR 4.7 million in profits.



- Due to an investment Oracle suffered a loss in 2012, but in 2013 became profitable again.

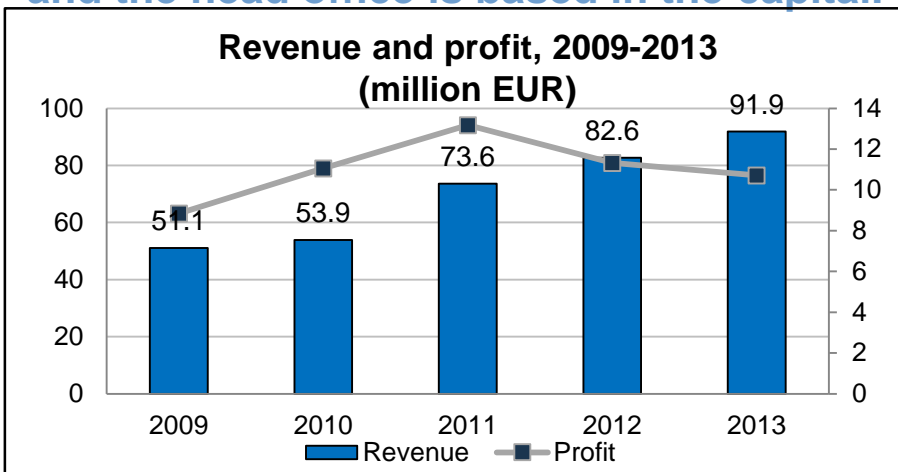
Headquarters

Headquarters:
- Bucharest

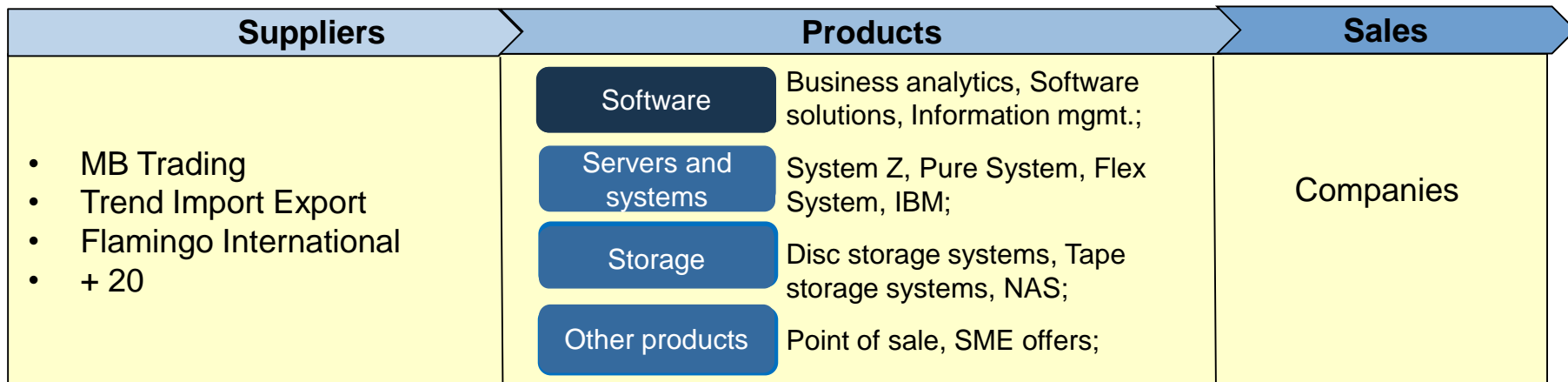
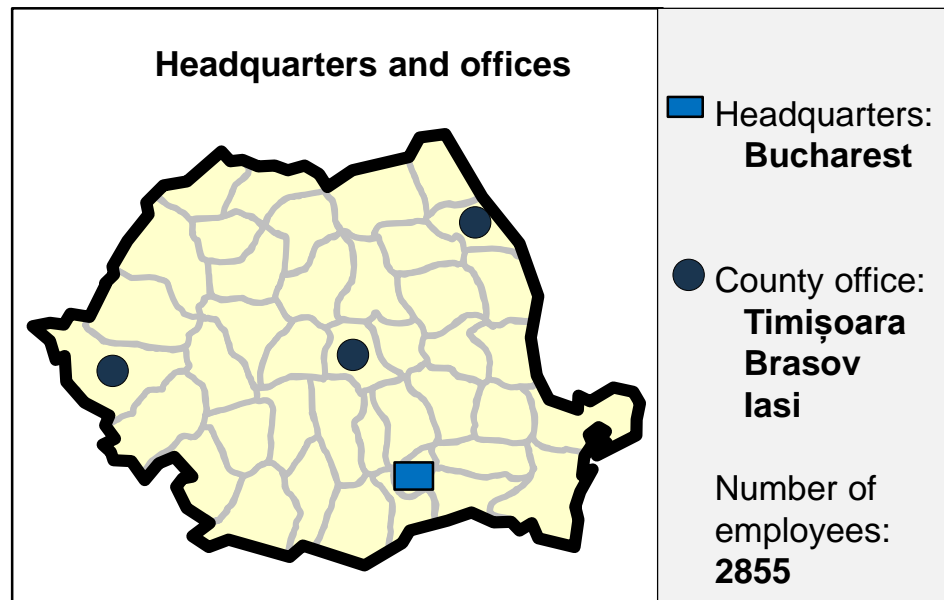
Number of employees:
2276

Suppliers	Products	Sales
<ul style="list-style-type: none"> Diamond partner: Evoline, Accenture, + 6 Platinum partner: Wipro Technologies, Trend Import, + 34 Gold partner: Software Development, Logika, +22 	<ul style="list-style-type: none"> Software: Application, Oracle Database 12c, Oracle Extradata, Db Machine; Servers and systems: Oracle Solaris, Oracle Linux, SUN x86, Sun Blade, Oracle VM; Storage: Apps for ZFS storage, SAN storage, Flash storage; Middleware: Oracle Fusion Middleware; 	Companies

IBM has been present on the Romanian market for 15 years, it has 3 offices countrywide, and the head office is based in the capital.



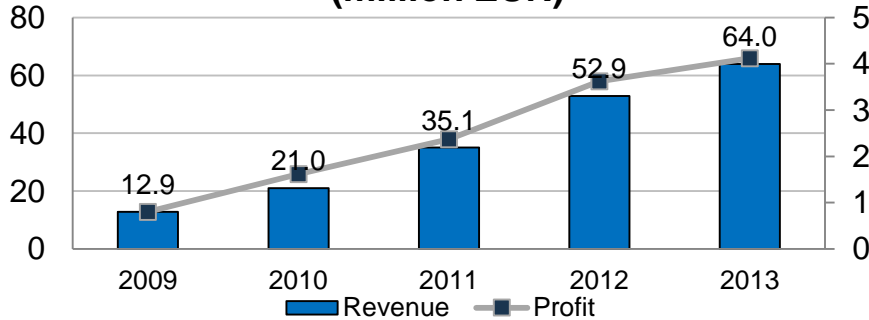
- The revenue has been growing continuously, and Oracle has been profitable between 2009-2013, despite the unfavorable market conditions.



Teamnet Romania

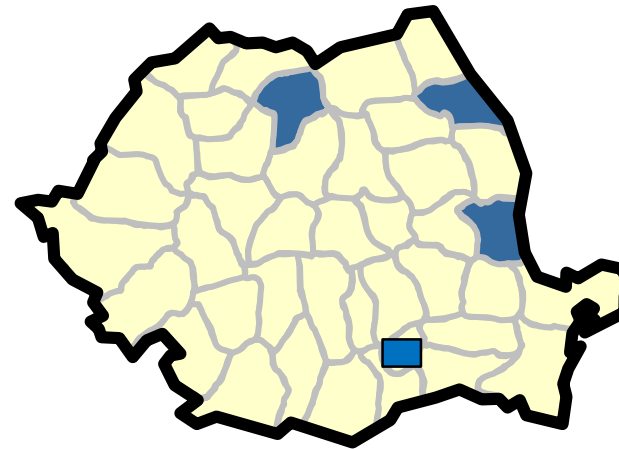
Teamnet is the third biggest Romanian software company, had an income of EUR 64 million, which grew at a 124% CAGR over the years, and a profit of EUR 4.12 million in 2013. Teamnet has 4 offices in Romania and 5 in other countries.

Revenue and profit, 2009-2013
(million EUR)



- Teamnet had a continuous growth over the years, both the income and the profit grew significantly in the 2009-2013 period.

Headquarters



■ Headquarters:
- Bucharest

■ Offices
- Bistrita
- Iasi
- Galati

■ Number of employees:
536

Suppliers

IBM, Oracle, Microsoft
Partner, Fujitsu, Esri, ELO,
BitDefender, Savision

Software service

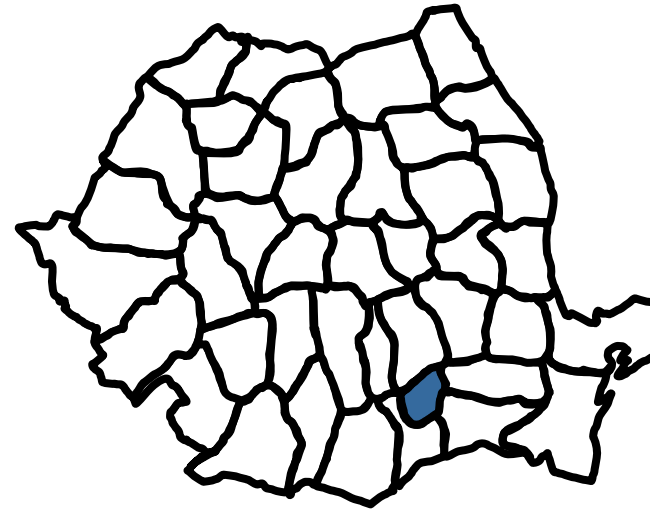
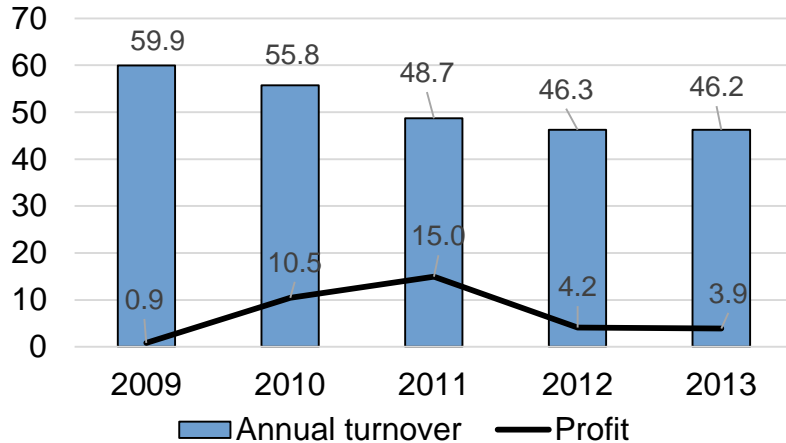
Products

- The employees register;
- The Armonia suit;
- River Information Services;
- The pensions product;
- The integrated environmental product;
- Emergency Situations-a product;

Sales

Companies

Revenue and profit between 2009-2013 (million EUR)



■ **Headquarters:**
Bucharest

Number of employees: 765

Suppliers

- EdTech 20
- Alison (Ireland)
- 10 companies from UK (Brightwave, Classroom Monitor, etc.)
- Cursio, FindCourses (Sweden)
- InfoMentor (Iceland)
- Itycom (Switzerland)
- Labster, Serious Games Interactive (Denmark)
- Sofatutor (Germany)

Products

Enterprise Application Suite

eLearning

eCustoms

eHealth

eAgriculture

eBusiness.

Sales

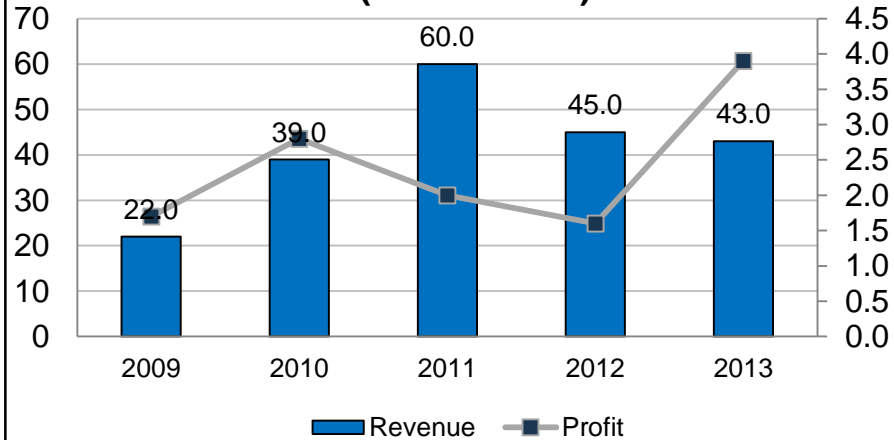
More than 1.500 from 4 continents

- BRD Group Societe Generale
- DOBROGEA GROUP
- Ursus Breweries
- HOLCIM România
- MedLife
- Black Sea Terminal Georgia
- CARPATAIR
- Etc.

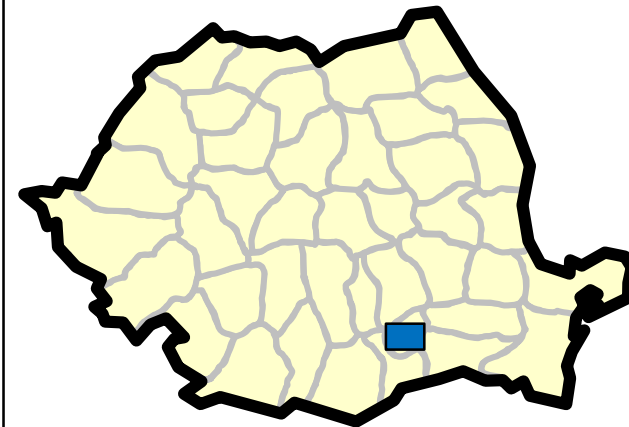
Romsys

Romsys had an exceptional year in 2011, when the revenue reached EUR 60 million 46% more than in 2010. The profit has increased by almost 50% in the 2009-2013 period.

Revenue and profit, 2009-2013
(million EUR)



Headquarters



Headquarters:
Bucharest

Number of employees:
187

Suppliers

- SAP
- Oracle
- Symantec
- Cisco
- Fortinet
- EMC
- Citrix
- VMware
- Checkpoint

Products

- Business Solutions
- Infrastructure Solutions
- SAP & Oracle Solutions
- Automation & Self Service
- iBanking

Sales

- ING
- BCR
- BRD
- Eon
- Rompetrol
- Electrica
- Orange
- Vodafone
- Romtelecom

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

ICT employees

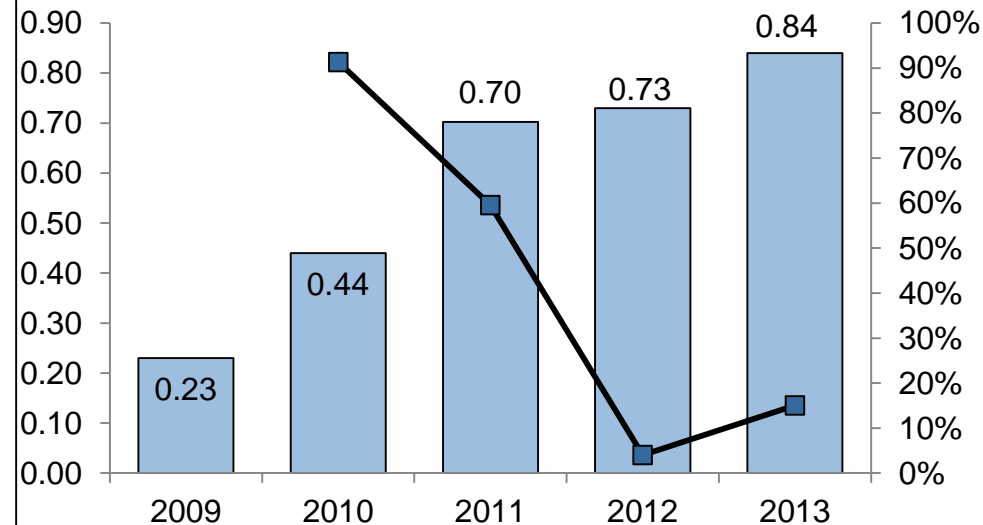
Sector analysis

- Hardware
- Software
- **IT services**
- Telecommunication

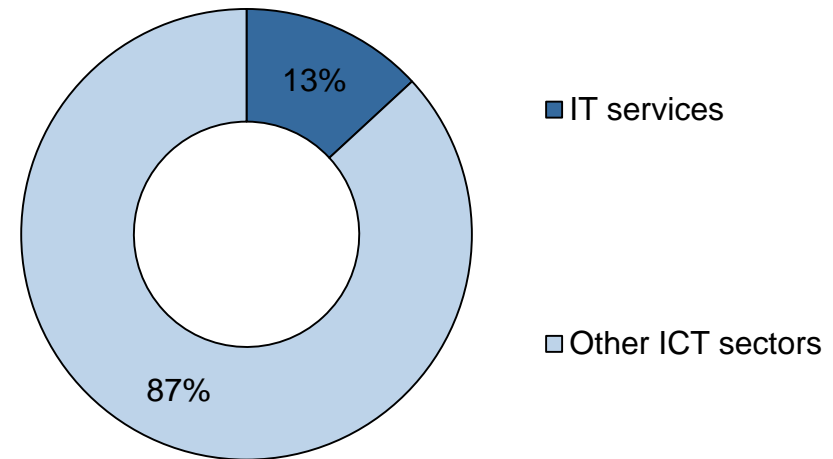
The Romanian IT services industry between 2009-2013

The IT services sector constitutes 13% of the total ICT industry, as industries started increasingly to buy IT services. The sector grew at a 42.2% CAGR in the 2009-2013 period.

IT services industry by revenue in 2009-2013
(billion €)



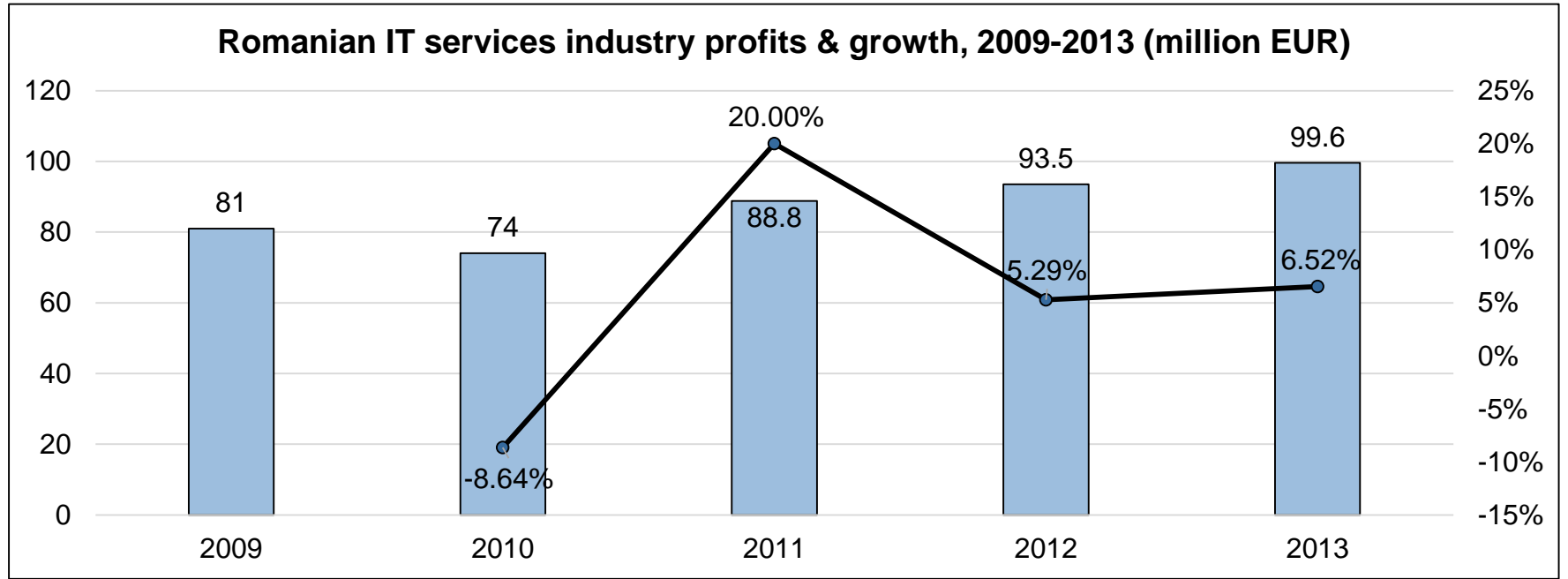
IT services sector as a % of the total ICT industry in 2013



- The IT services industry is continuously growing is due to the fact that more and more **industries are using IT services.**

The overall profit rate of the Romanian IT services industry

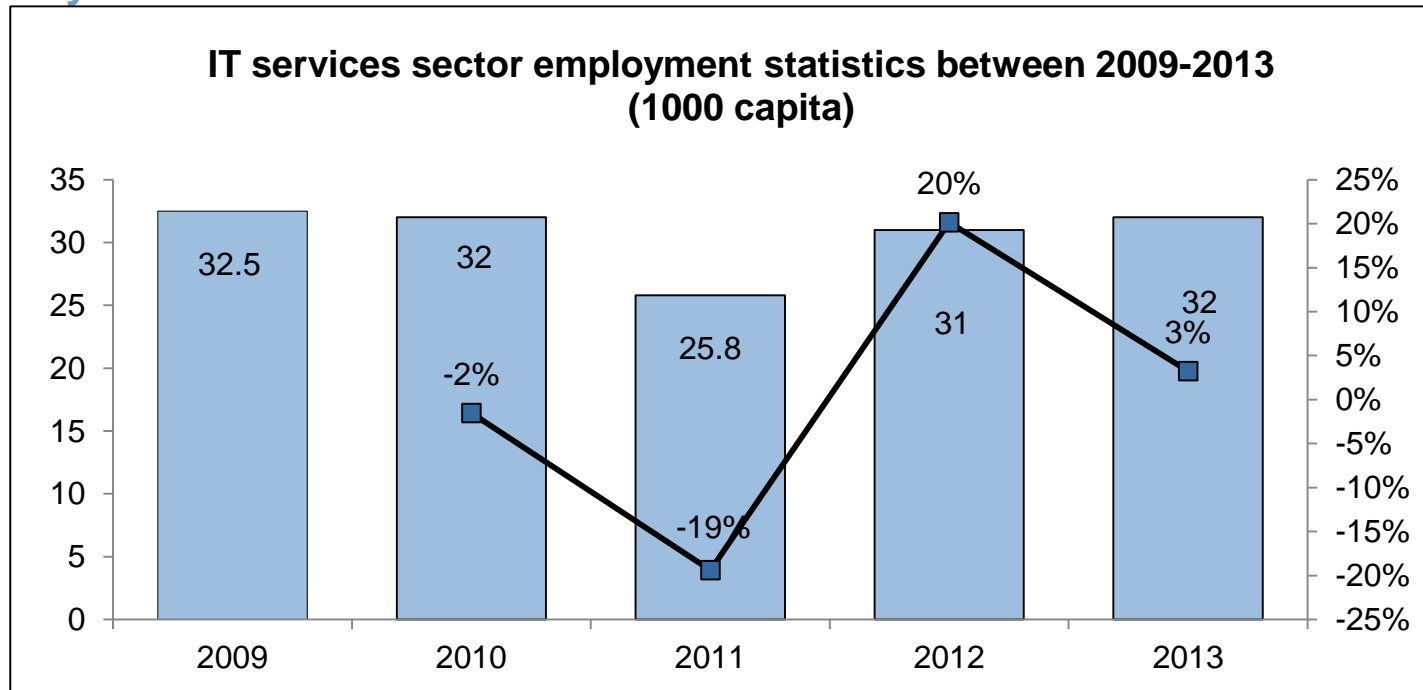
The profit of the IT services industry increased by a total 22.96% from 2009 to 2013. The IT services industry profits grew at a 5.79% CAGR, and reached EUR 99.6 million in 2013.



The overall **profit margin** of the IT service industry is **33.98%**. In the past 5 years the profit of the Romanian IT service industry showed **continuous growth**, increasing by **22.96%** from **2009 to 2013**.

Romanian IT services sector employment statistics

The number of employees in the Romanian IT services sector increased at a 0.62% CAGR in the past 5 years.

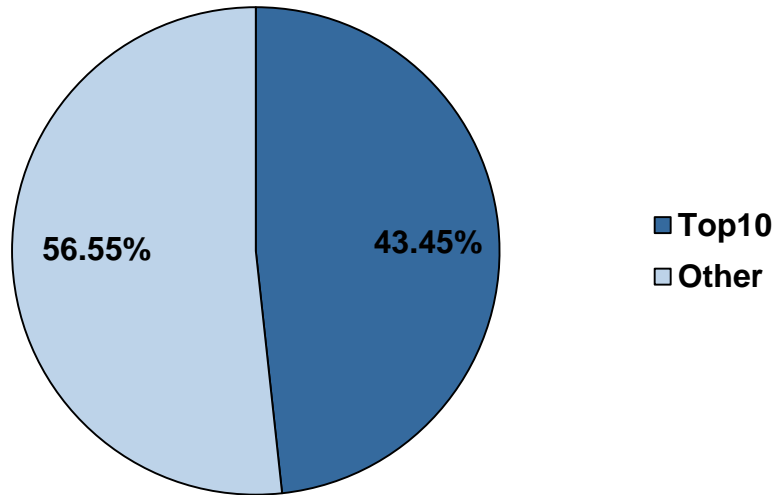


The sector's employment has undergone some changes every year between 2009 and 2013. The Romanian IT service sector employment decreased by **0.62%** in this period.

Market concentration – Romanian IT services sector in 2013

The Romanian IT services industry is highly concentrated, as the top 10 companies have a cumulative market share of 43.5% in 2013.

The top 10 companies market share of the IT services sector in 2013

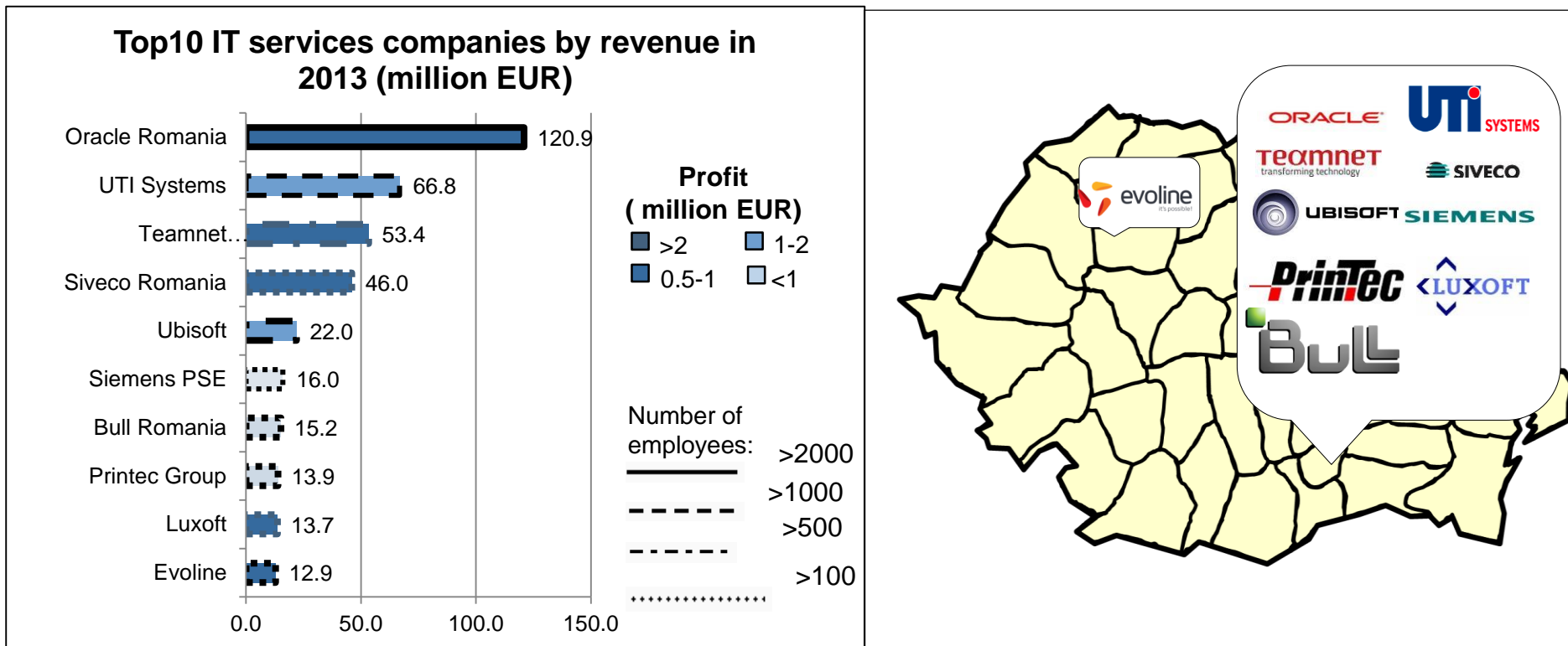


The **cumulative revenue** for the top 10 IT services companies in 2013 was **EUR 365.04 million** which represents **43.45%** of the total industry revenues.

The Romanian **IT services sector** has **EUR 840 million in revenues in 2013**, while the **top 10 companies** cumulative revenue was **EUR 365.04 million**, which accounts for **43.45%** of the total revenue. The **top 10** is dominated by **Oracle Romania**, which generates **12.6%** of the total industry income.

Top 10 IT services companies in Romania in 2013

All the top 10 IT services companies are based in Bucharest, and they have a total income of EUR 365 million. Oracle is the leading company, with EUR 120 million income, a profit of EUR 4.71 million, and had 2276 employees in 2013.



All the leading IT services companies have their headquarters in the Romanian capital, Bucharest, and their cumulative revenue amounted to EUR 365 million in 2013.

Top 10 IT services companies by revenue, 2009-2013

Oracle maintains its leading position through the 2009-2013 period, while Teamnet climbs up 7 positions, as a result of big expansions outside of Romania.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Oracle Romania	→	→	→	→	→
2.	• UTI Systems	↑ 1	→	→	→	↑ 1
3.	• Teamnet international	↑ 4	↑ 1	↑ 2	→	↑ 7
4.	• Siveco Romania	↓ 1	→	↓ 1	→	↓ 2
5.	• Ubisoft	→	→	↓ 1	→	↓ 1
6.	• Siemens PSE	→	↓ 1	→	→	↓ 1
7.	• Bull Romania	→	↓ 1	→	→	↓ 1
8.	• Printec group	↓ 1	→	→	→	↓ 1
9.	• Luxoft	→	→	↓ 1	↑ 1	→
10.	• Evoline	→	→	↑ 1	↓ 1	→

Oracle maintained its **first position** between 2009-2013 with a continuous growth over the years.

Teamnet had the biggest growth, through these years, due to a massive expansion, **opening offices outside of Romania**.

Top 10 IT services companies by profits, 2009-2013

The companies, which expanded, and opened new offices improved their ranking. Oracle purchased 5 smaller companies in 2012, which resulted in losses for the year.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Oracle Romania	↑4	→	↓9	↑9	↑4
2.	• Teamnet international	↑3	→	↑2	↑1	↑6
3.	• Siveco Romania	↑4	→	↑1	↓1	↑4
4.	• UTI systems	↓1	→	↑3	↓3	↓1
5.	• Luxoft	↓1	→	↓2	↓1	↓4
6.	• Evoline	↓1	→	↑1	↓1	↓1
7.	• Siemens PSE	↓1	↑1	→	→	→
8.	• Ubisoft	↑1	→	↑1	→	↑2
9.	• Printec Group	↓5	→	↑1	↓1	↓5
10.	• Bull Romania	↓5	→	↑1	↓1	↓5

In 2012 Oracle **purchased 5 smaller companies** to increase their product offering, which resulted in losses for 2012. They recovered their leading position in 2013.

Teamnet had the biggest profit growth since 2009. They **opened after 2010 many new offices outside Romania**, which brought bigger income and profit.

Top 10 IT services companies by employees, 2009-2013

Due to a big international expansion Teamnet hired 400 new employees during the 2009-2013 period.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Oracle Romania	→	→	→	→	→
2.	• Siveco Romania	→	→	→	→	→
3.	• Teamnet international	↑1	↑2	↑2	↑2	↑7
4.	• UTI Systems	→	→	→	↓1	↓1
5.	• Ubisoft	→	→	→	↓1	↓1
6.	• Luxoft	→	→	↓1	→	↓1
7.	• Evoline	→	→	↓1	→	↓1
8.	• Siemens PSE	→	↓1	→	→	↓1
9.	• Bull Romania	→	↓1	→	→	↓1
10.	• Printec Group	↓1	→	→	→	→

The first 2 companies maintained their position, both having more than 1000 employees. Over the years they both hired at the same rate.

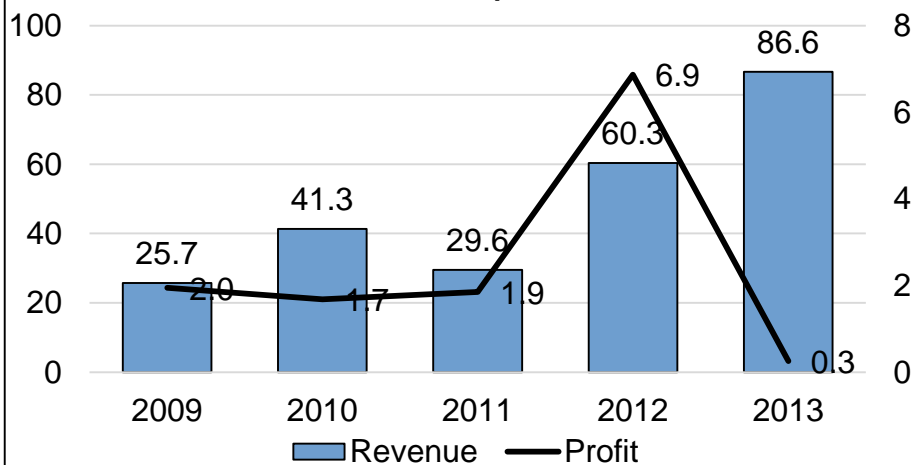
Teamnet followed a consequent hiring strategy and managed to have over 500 employees in 2013, as opposed to less than 100 in 2009.

UTI Systems in Romania



The UTI Systems In Romania is the largest security systems manufacturer, its total revenue was EUR 86.6 million in 2013 .

Revenue & Profit, 2009-2013 (million EUR)



Headquarters



Headquarters:
- Bucharest

Number of employees:
1,801

Suppliers

Partners:

- Nokia/Checkpoint, Oracle, Fujitsu Siemens, Microsoft
- IBM – software and hardware (Websphere, DB2, Lotus, Tivoli)
- Cisco, Alcatel, RSA, HP, Rainbow, Solari di Udine

Products

Communications and Information Security

Modern Communication Infrastructures

Software Applications

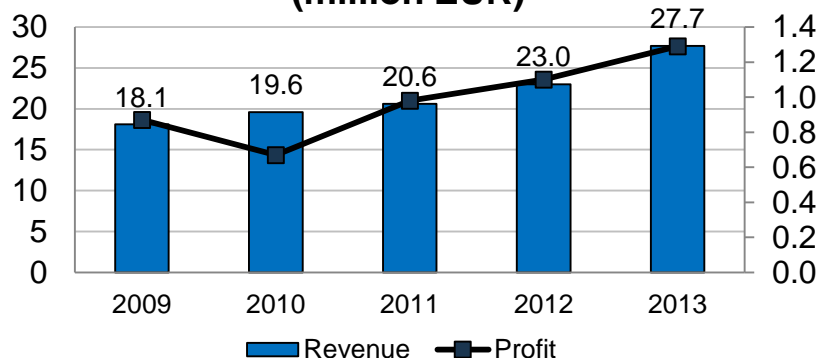
- Zerus
- ICAR
- SIPRUS
- SAPPHIRE
- certSAFE
- shellSAFE
- gateSAFE
- emailerSAFE
- Info-Kiosk

Sales

- Government of Romania
- Ministry of National Defence
- Romtehnica, Dacia, N.A.S.R., Air Force, Cernavoda, Parliament's Palace, Cotroceni

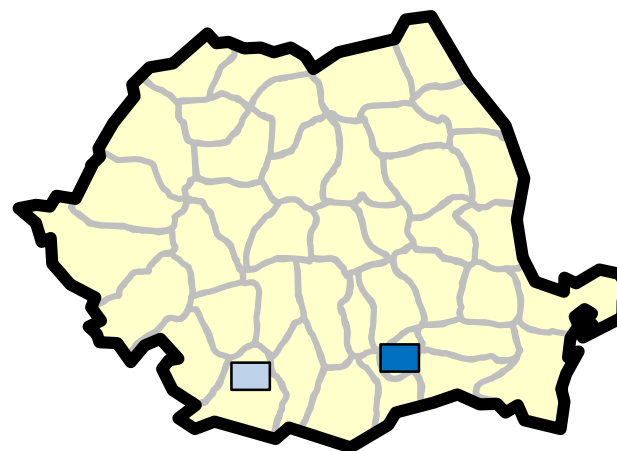
Ubisoft Romania is the 5th largest software company in Romania. Ubisoft Romania registered a 9.8% CAGR in the 2009-2013 period.

Revenue and profit, 2009-2013
(million EUR)



- In 2008 Ubisoft made an investment, they opened a new studio in Craiova. Despite the financial crisis they had a 9.8% CAGR between 2009 and 2013.

Headquarters & Studio



- Headquarters:
- Bucharest
- Studio:
- Craiova

Number of employees:
1086

Suppliers

- Virtual Reality European Center from Brest
- S.C. NRTech S.R.L.

Products

- Tom Clancy's H.A.W.X
- Blazing Angels
- Silent Hunter
- Chess Master
- Rayman Raving Rabbids

Sales

Main global distribution partner:
- Gem Logistics

Main local distribution partner:
- Best Distribution

Local market share: 1,79%

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

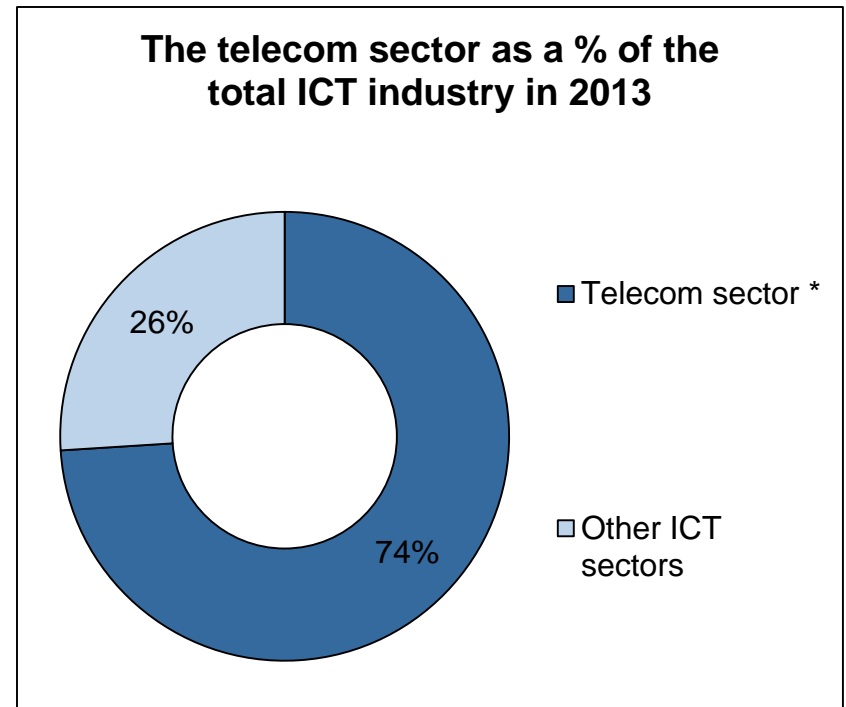
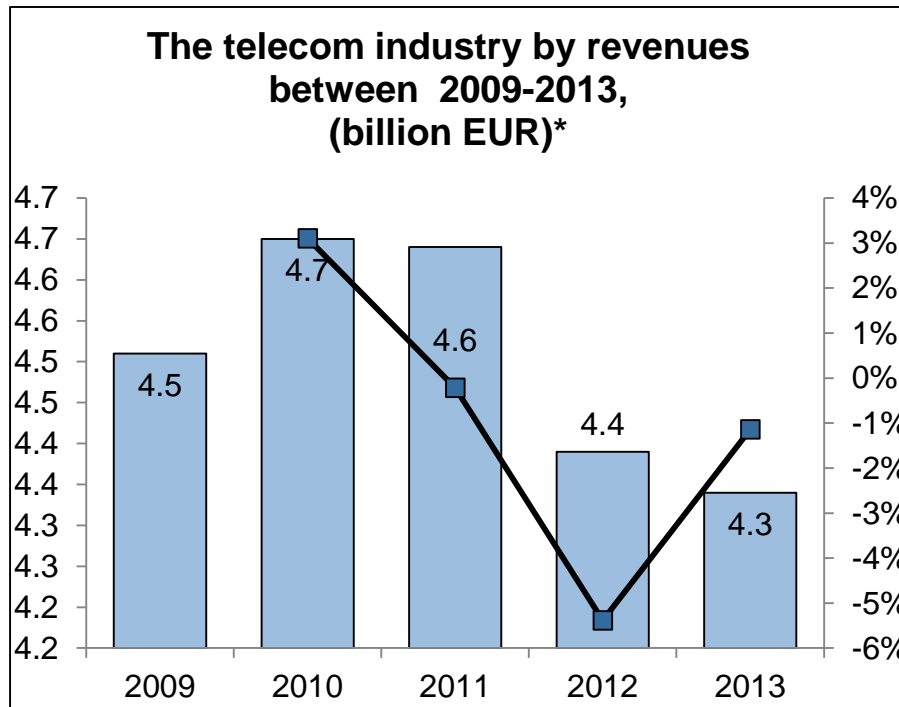
ICT employees

Sector analysis

- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - Network operator
 - Gadget manufacturer

Romanian telecommunications industry, 2009-2013

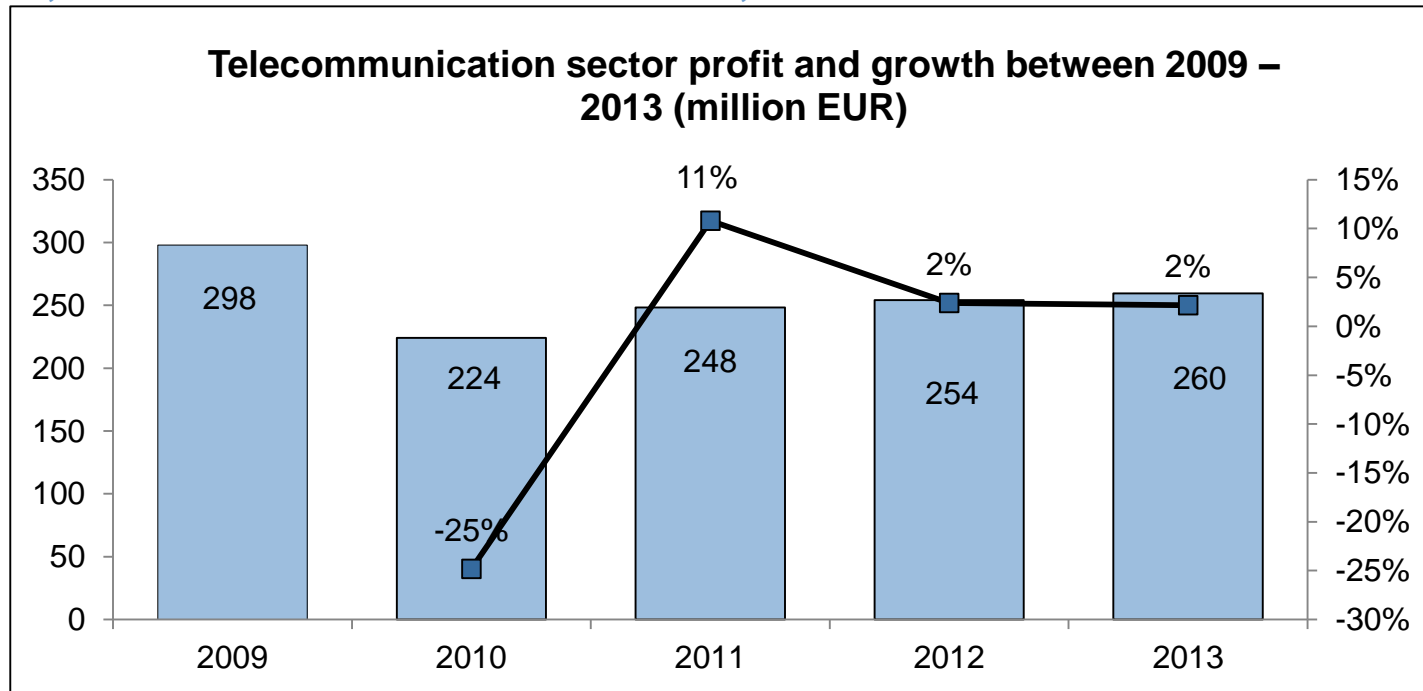
The Romanian telecom industry decreased by an average -0.91% annually in the 2009-2013 period, as the sector has been constricting since 2010.



- The telecom industry's economical boom was in 2007, from that point on the market became increasingly saturated, there are barely regions of the country, where there is no signal coverage.
- The growth of the telecom industry is slower than the growth of the ICT industry, as the **market is saturated**.

The overall profit rate of telecommunication industry

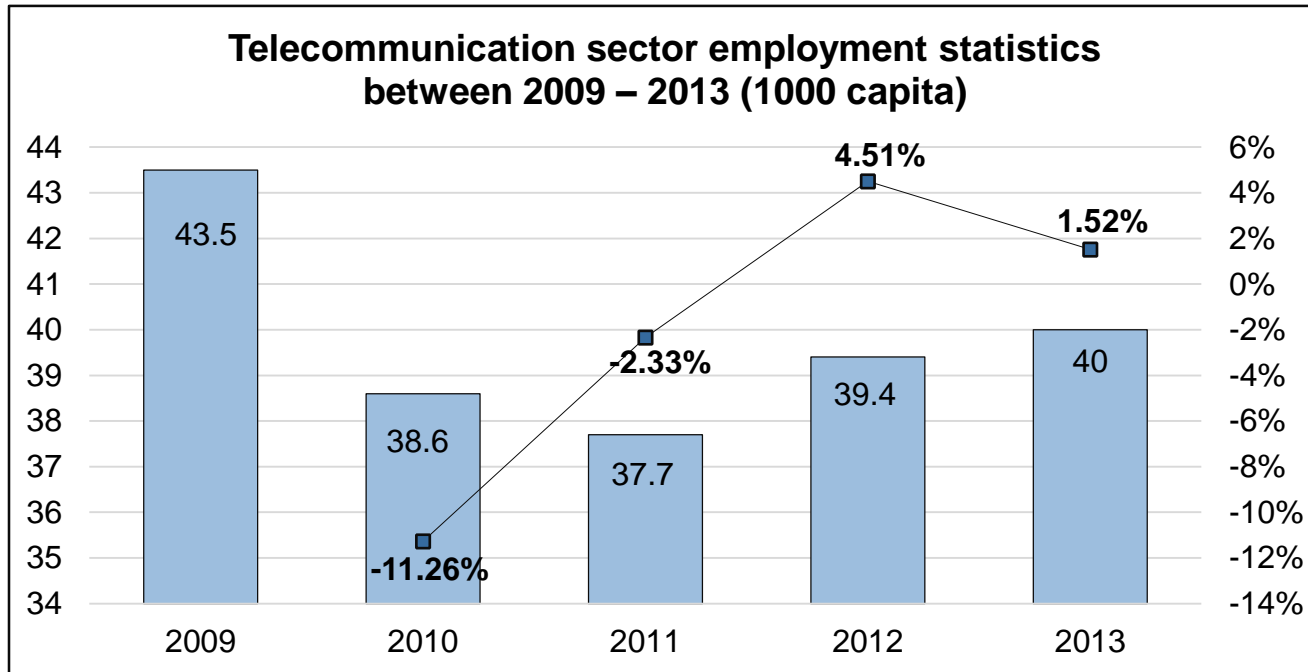
The telecom industry profits decreased by 12.89% from 2009 to 2013. However, the profits grew at a 5,1% CAGR between 2011 and 2013, after the 2010's downturn.



The overall **profit margin** of the telecommunication industry is **5.71%**. The Romanian telecommunication industry profit growth rate decreased at a **1.99% CAGR** from **2009 to 2013**. The profit of the telecom industry **decreased** by **12.89%** from **2009 to 2013**.

Telecommunication sector employment statistics in Romania

The telecommunication sector had around 40.000 employees in the last three years. The number of employees has decreased by a 1.98% yearly average since 2009.



In **2010** there was a serious **decline**, of **11.26%**, in the number of telecom employees. Between 2011 and 2013, the number of the telecom industry employees **increased** gradually at a **3% CAGR**.

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

ICT employees

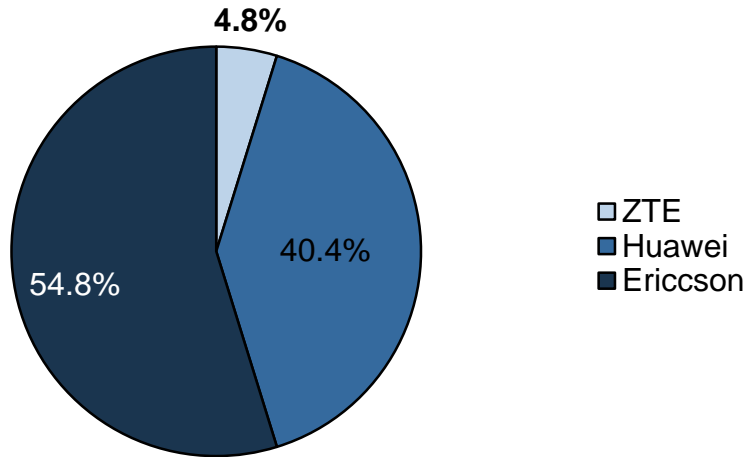
Sector analysis

- Hardware
- Software
- IT services
- **Telecommunication**
 - **Network developers**
 - Network operator
 - Gadget manufacturer

Market concentration - Romanian network developers

The Romanian network developer market is highly concentrated, as the market leader, Ericsson, has 54.79% market share, and there are only three players in the market.

Network developers market share in 2013



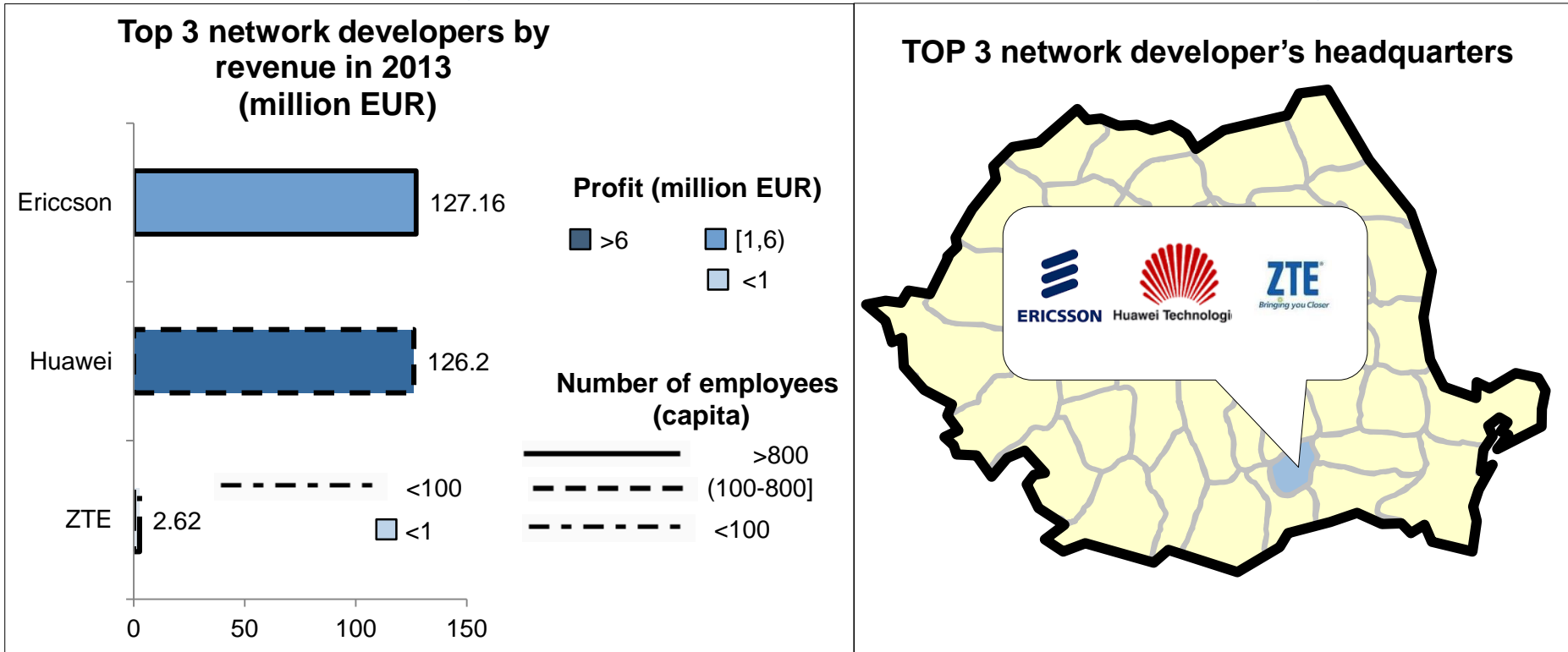
- In 2013, the three network developer cumulative revenue reached:

EUR 264.47 million

- Ericsson dominates the market, with a 54.79% market share, as provider for Orange and Vodafone, the two main players of the network operators market.
- ZTE has only 4.79% market share, but it is investing in Romania, in order to accomplish higher coverage.

Top 3 network developer company- overview

All network developers have their headquarters in Bucharest. Ericsson is the Romanian network developer industry leader, based on revenue, and number of employees in 2013.



Ericsson is the leading Romanian network developer by **revenue** , **EUR 127.16 million**, and by **the number of employees, 1726 capita**. In 2013, Huawei realized the biggest profit, **EUR 21.53 million**.

Top 3 network developers by revenue, profit and employees

The Romanian network developer industry can be characterized by a strong competition among big players.

Revenue	Company name	2009-2010	2010-2011	2011-2012	2012-2013	09-13
1.	• Ericsson	→	→	→	→	→
2.	• Huawei	→	→	→	→	→
3.	• ZTE	→	→	→	→	→

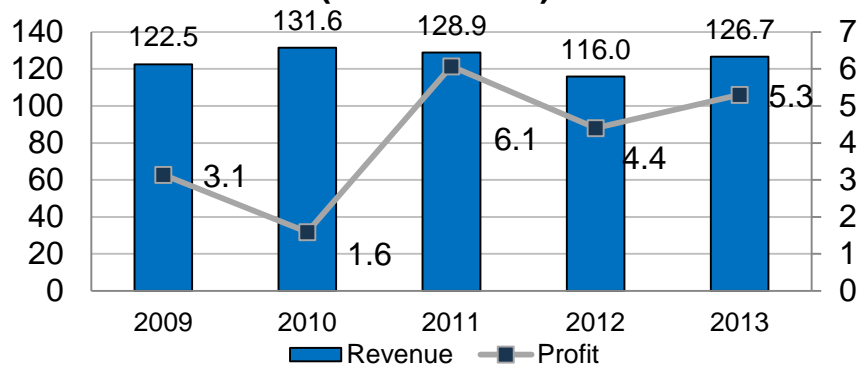
Profit	Company name	2009-2010	2010-2011	2011-2012	2012-2013	09-13
1.	• Ericsson	→	→	→	↓ 1	↓ 1
2.	• Huawei	→	→	→	↑ 1	↑ 1
3.	• ZTE	→	→	→	→	→

Employee	Company name	2009-2010	2010-2011	2011-2012	2012-2013	09-13
1.	• Ericsson	→	→	→	→	→
2.	• Huawei	→	→	→	→	→
3.	• ZTE	→	→	→	→	→

Analyzing the players' revenue and number of employees from 2009 till 2013, we can conclude, that there is no change in the rankings, as the market is extremely saturated, and the parties know each other very well.

Ericsson had a total revenue of EUR 70.4 million in 2013. Ericsson focuses mainly on big and medium sized companies.

Revenue and profit, 2009-2013
(million EUR)



- The **revenue** had decreased in 2012, because of the **political scandal**, in which the company was involved.

Headquarters



Headquarters:
- Bucharest

Number of employees:
1726

Suppliers

Products

Sales

Modems

M7450

Orange Romania

Infrastructure

Core Site

Romtelecom

IP Network

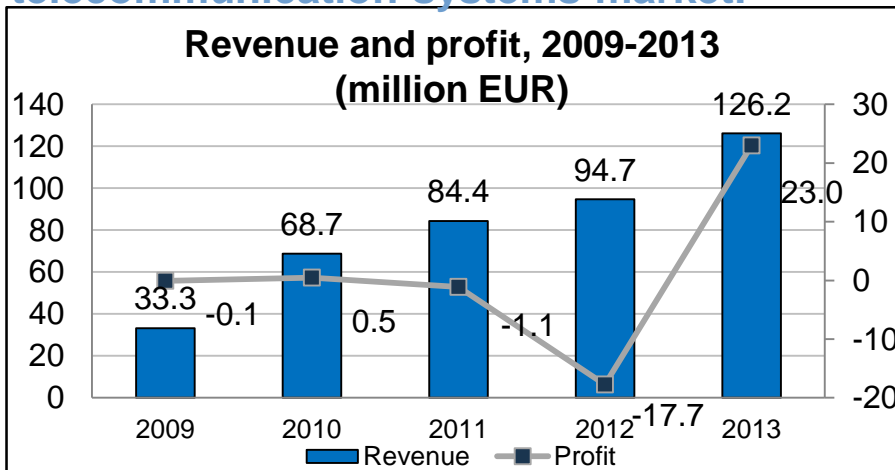
IP Edge

Cosmote

Television and Video

Fabric System

Huawei had a total revenue of EUR 126.2 million in 2013. Huawei is focused mainly on the telecommunication systems market.

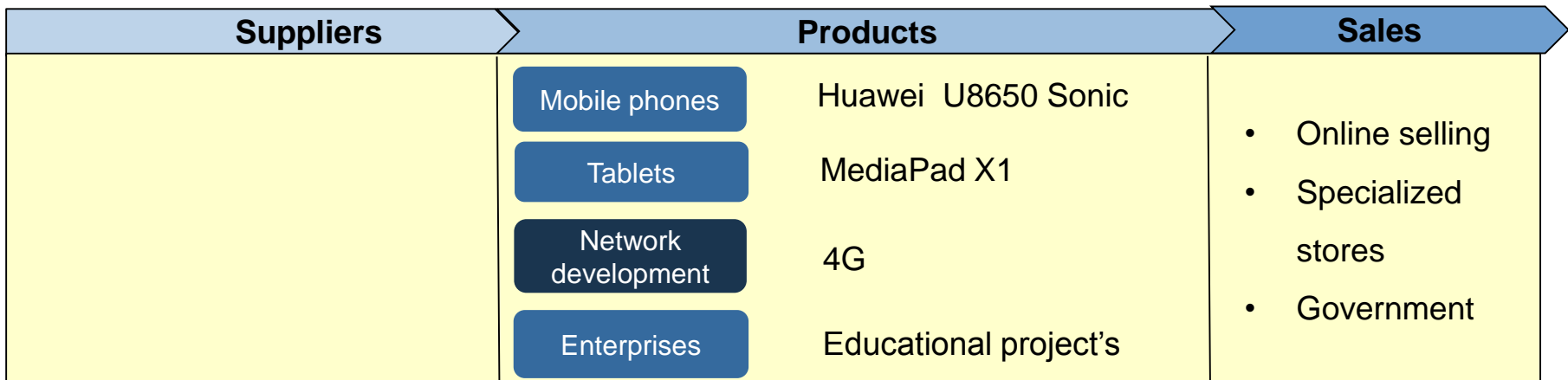


The revenue has been continuously growing from 2009 to 2013. Between 2010-2012, the profit decreased, because of the investments made by the company.

Headquarters

Headquarters: **Bukarest**

Number of employees: **753**



Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

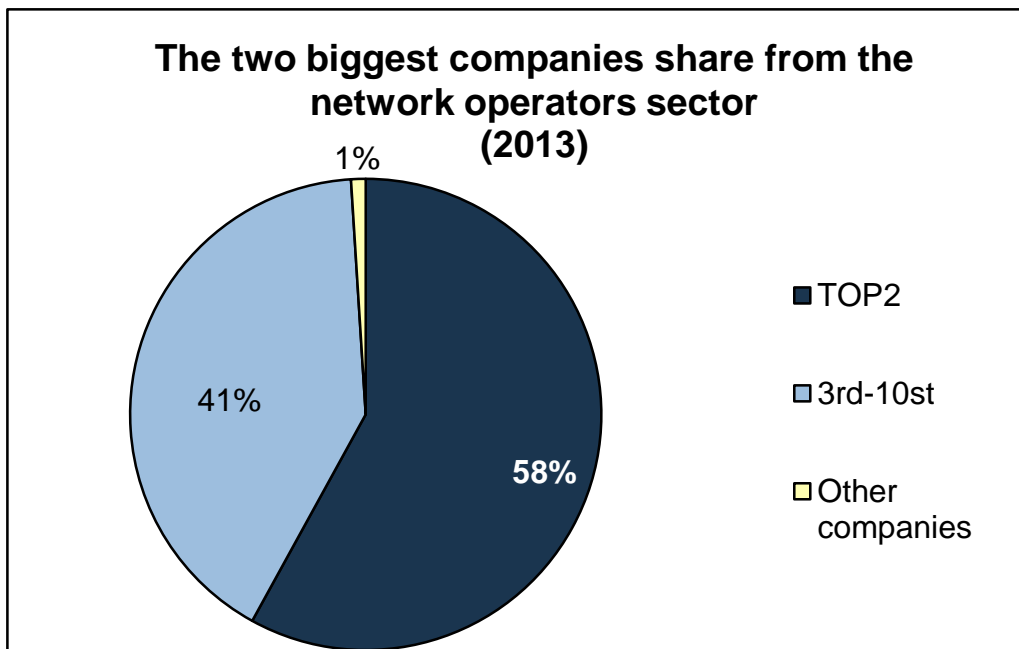
ICT employees

Sector analysis

- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - **Network operator**
 - Gadget manufacturer

Market concentration - Romanian network operators

The Romanian network operators market is saturated, as the two biggest companies had a market share of 58% in 2013.



In 2013, the two biggest companies cumulative revenue was:

EUR 1712,97 million

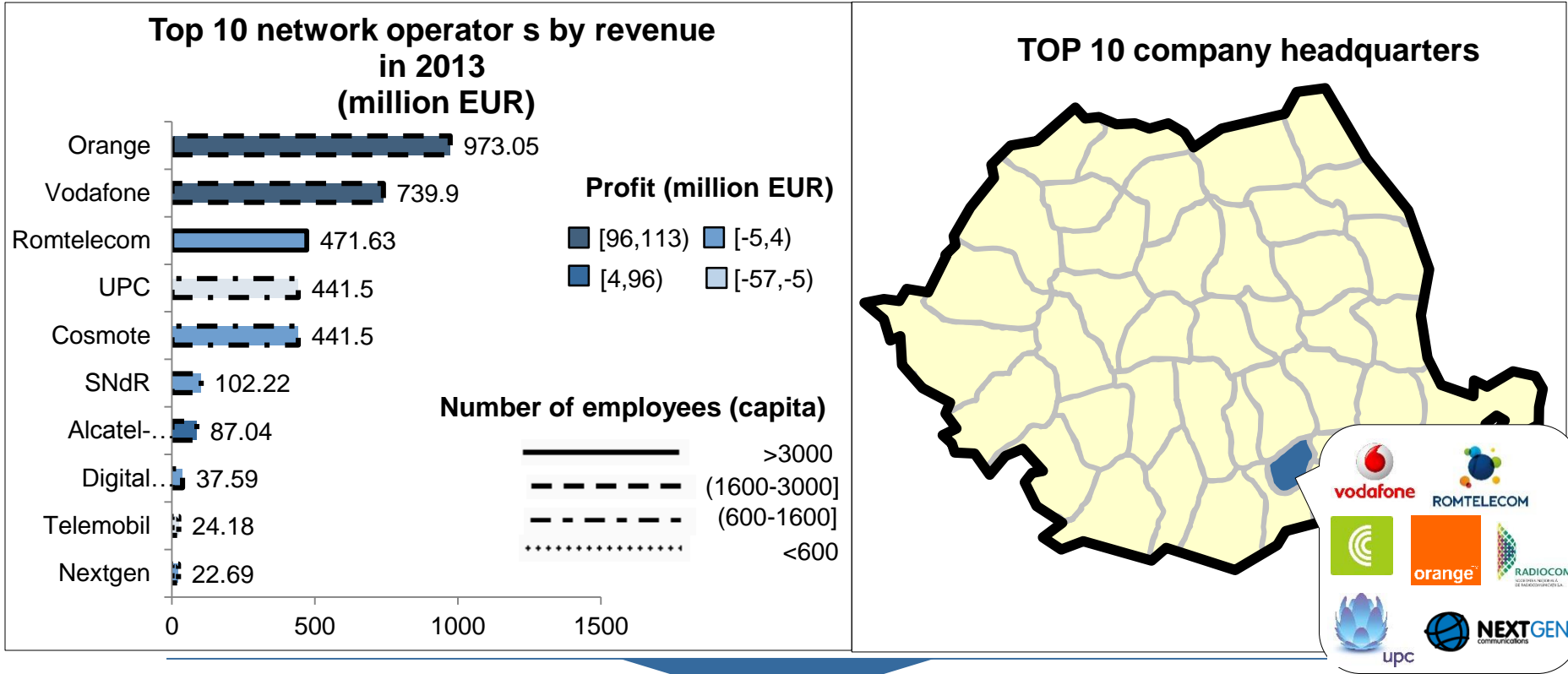
The top 10's cumulative revenue was:

EUR 2973,98 million

- **Orange and Vodafone** have together **58% market share**, therefore, the market is **highly concentrated**.
- The biggest Romanian network operators are subsidiaries of huge multinational companies.

Top 10 network operators - overview

90% of the top10 network operator are based in the capital. The industry leader is Orange Romania, with its EUR 973.05 million in revenues in 2013 .



The leading company, **Orange**, has the highest revenue, EUR 973.05 million, and profit, more than EUR 112 million. **Romtelecom** is the biggest employer, with 9000 employees in 2013.

Top 10 network operators by revenue, 2009-2013

The three biggest player preserve their position in the 2009-2013 period, whereas the other players are in strong competition, with each other.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Orange	→	→	→	→	→
2.	• Vodafone	→	→	→	→	→
3.	• Romtelecom	→	→	→	→	→
4.	• Cosmote	→	→	→	↓ 1	↓ 1
5.	• UPC	↑ 1	→	→	↑ 1	↑ 2
6.	• Alcatel-Lucent	↓ 1	↓ 1	→	↑ 1	↓ 1
7.	• Societate Natioanal de Radiocomunicatii	→	↑ 1	→	→	↑ 1
8.	• Digital Cable System	↑ 1	→	→	→	↑ 1
9.	• Telemobil	↓ 1	↓ 1	→	↑ 1	↓ 1
10.	• Nextgen Communication	→	↑ 1	→	↓ 1	→

- The **top three** positions are dominated by the **same players** from 2009 to 2013.
- The companies can better their ranking, only by **acquiring market share** from each other.

Top 10 network operators by profit, 2009-2013

The network operators ranking by profit shows a great fluctuation in the 2009-2013 period, as the profit rates decrease, and the smaller players are losing ground.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Orange	→	→	→	→	→
2.	• Vodafone	→	→	→	→	→
3.	• Alcatel-Lucent	→	→	↓ 3	↑ 3	→
4.	• Romtelecom	↓ 5	→	↑ 6	↓ 3	↓ 2
5.	• Cosmote	↓ 2	↑ 2	→	↓ 3	↓ 3
6.	• Nextgen Communication	↑ 1	↓ 2	↓ 2	↑ 4	↑ 1
7.	• Digital Cable System	↑ 3	→	↓ 3	→	→
8.	• Societate Natioanal de Radiocomunicatii	↑ 2	→	↓ 2	↑ 4	↑ 4
9.	• Telemobil	↑ 1	→	↓ 2	↑ 1	→
10.	• UPC	→	→	↑ 6	↓ 6	→

There are several players, who have high profit in one year, and low in the following year, due to **the changing market condition**. Furthermore, the leading companies' market share is steadily growing, while the **smaller players lose ground**.

Top 10 network operators by employees, 2009-2013

Romtelecom has been the biggest employer in the 2009-2013 period, as the second and third biggest preserve their initial position.

Order	Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Romtelecom	→	→	→	→	→
2.	• Vodafone	→	→	↓ 1	↑ 1	→
3.	• Orange	→	→	↑ 1	↓ 1	→
4.	• Societate Natioanal de Radiocomunicatii	→	→	↓ 1	↓ 1	↓ 2
5.	• UPC	→	→	↑ 1	→	↑ 1
6.	• Alcatel-Lucent	→	→	→	↓ 2	↓ 2
7.	• Cosmote	→	→	→	→	→
8.	• Digital Cable System	→	→	→	↑ 3	↑ 3
9.	• Telemobil	↓ 1	→	→	→	↓ 1
10.	• Nextgen Communication	↑ 1	→	→	→	↑ 1

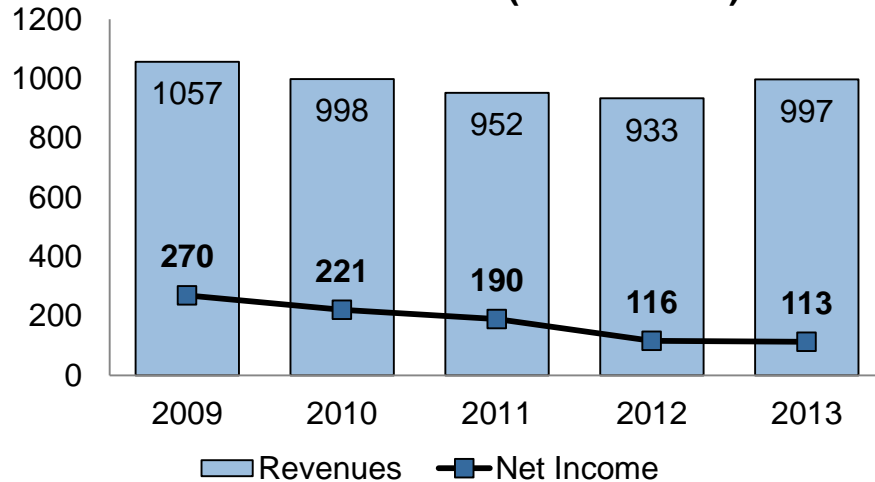
- The fluctuation in the ranking is low, and the **first three** companies have **stable positions**.
- **Romtelecom** is the detached leader, it has **31.7%** more employees than the **runner-up Vodafone**.

Orange Romania SA.



Orange Romania, a subsidiary owned in 96.8% by the Orange Group (France), is the leading network operator provider in Romania, with a market share of 39.9% in 2013.

Orange Romania by revenue and profit between 2009-2013 (million EUR)



Headquarters



Headquarters:
Bucharest

Number of employees:
2688

Stores:
600 in each county

Suppliers

Products

Sales

- **Euro GSM & Say** – indirect distribution channels;
- **Money Gram** – money transfer program;
- **SES Astra** – satellite operator;
- **Cisco Systems, Huawei & Alcatel** – network equipment vendors;

- Mobile subscription & PrePay;
- Mobile Internet & 4G;
- Mobiles, Tablets & Accessories;
- Orange TV;
- Business Solutions;

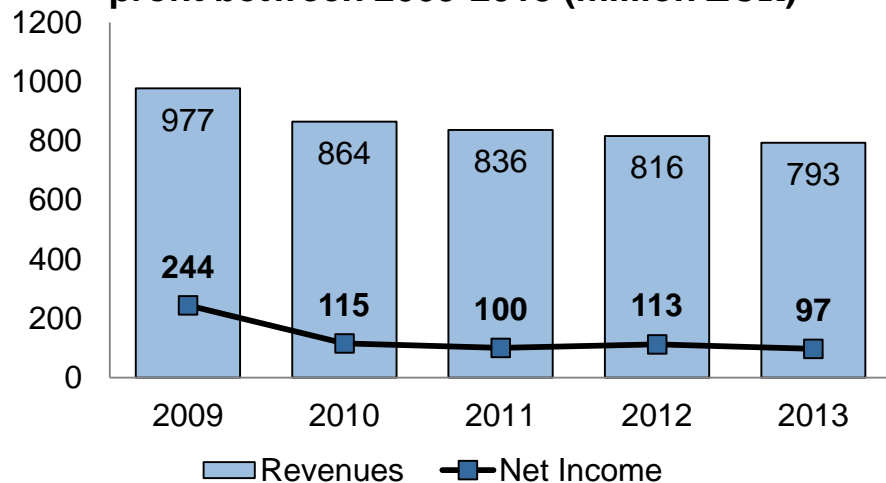
- **39.9%** market share in Romania;
- **10.4 million** clients;
- **6.5 €/month ARPU** in 2013;

Vodafone Romania SA.

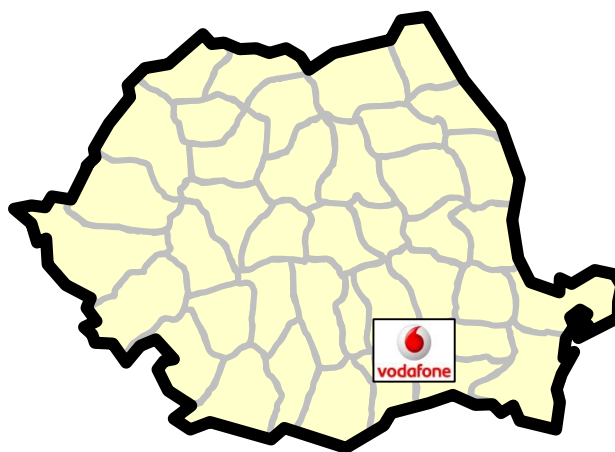


Vodafone Romania is the second largest network operator provider in Romania, with a market share of 32.1% in 2013.

Vodafone Romania by revenue and profit between 2009-2013 (million EUR)



Headquarters



Headquarters:
- **Bucharest**

Number of employees:
2882

Stores:
610 in each county;

Partners

- **eMAG** – online ICT retail;
- **Franchise** partners;
- **GBM** partners & **Telesales** partners – APS, Blue Point Telecom & others;
- **Huawei** – telecom network equipment and services provider;

Products

- Mobile subscriptions & PrePay;
- Mobile Internet & 4G;
- Mobiles, Tablets, Laptops & Accessories;
- Business Solutions;

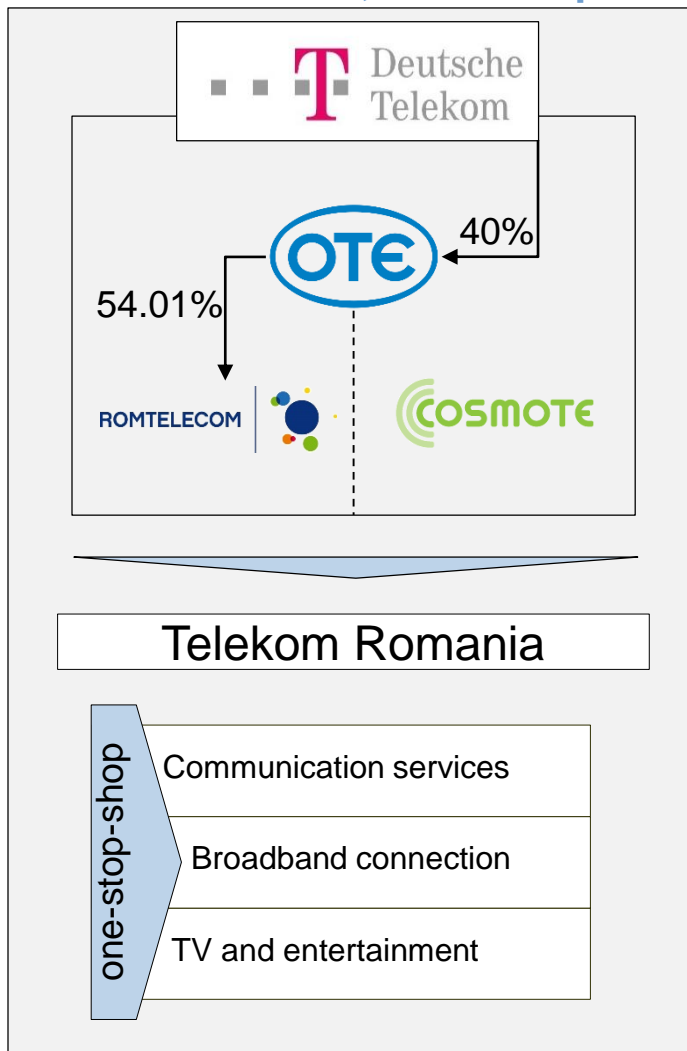
Sales

- **Market leader** with **32.1%** market share;
- **8.2 million** clients;
- **4.3 million** subscribers;
- **6.3 €/month ARPU** in 2013;

Telekom Romania Communications



On 13.09.2014. Cosmote and Romtelecom merged, and formed Telekom Romania Communications, a one-stop-shop network operator, offering mobile and fix solutions.



Headquarters

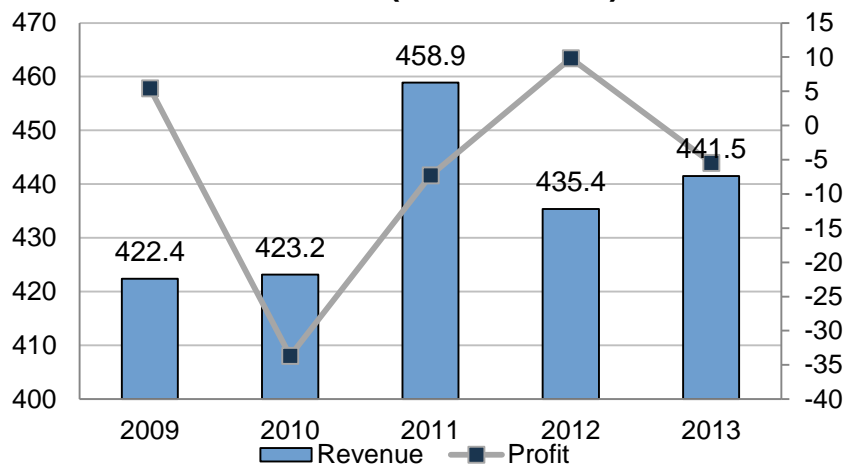
- Bucharest

Number of employees:
10710

Telekom is expected to become the biggest competitor of RDS, the only other company, with a product portfolio of mobile and fix solutions.

Cosmote Romania, owned by OTE, had a consumer based market share of 22.9% and a revenue of EUR 441 million in 2013.

Cosmote revenue and profit between 2009-2013 (million EUR)

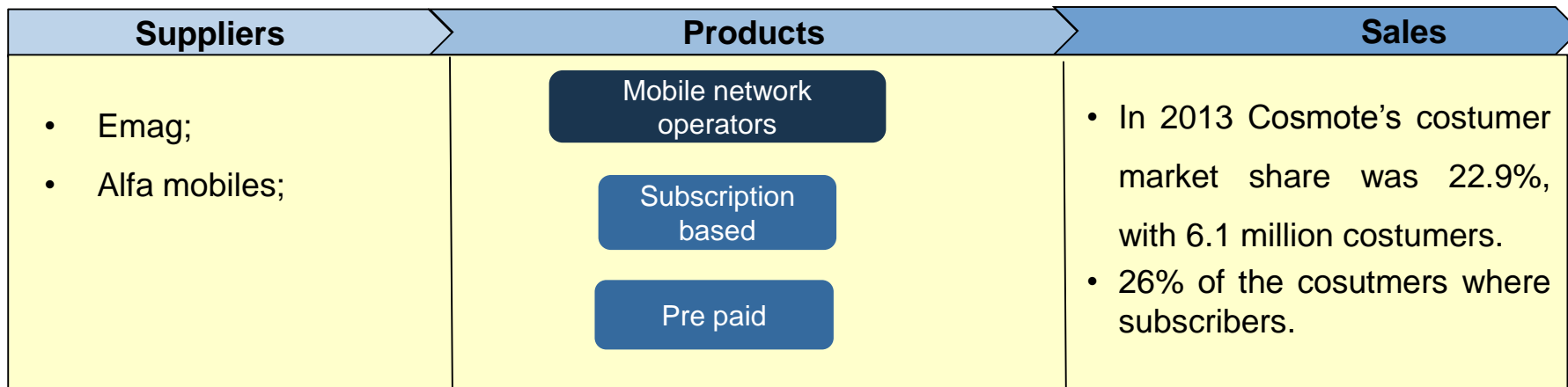


headquarters



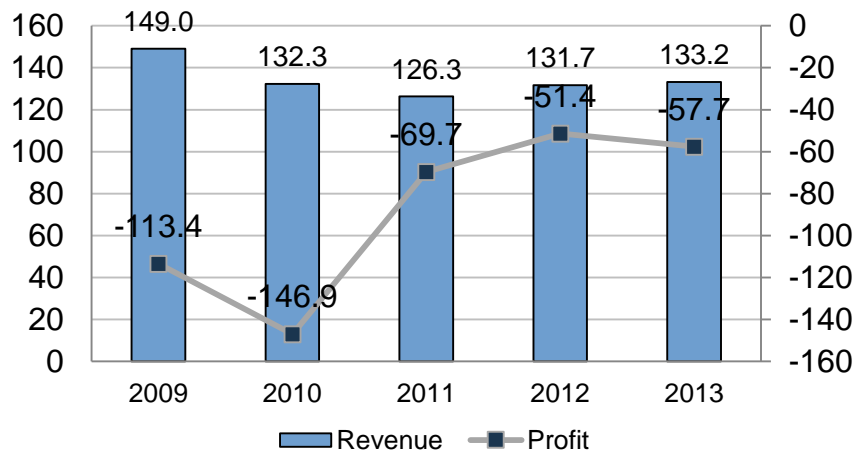
■ headquarters:
- Bucharest

Number of employees:
1336

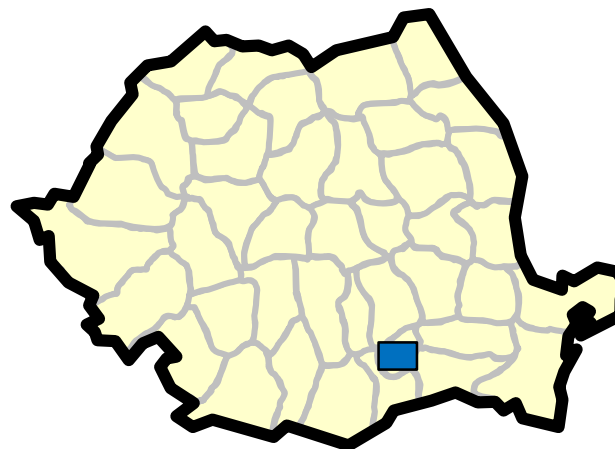


UPC Romania is the second largest cable television operator in Romania, after RCS&RDS. UPC Romania had EUR 30.24 million in revenues in 2014.

**Revenue and profit, 2009-2013
(million EUR)**



Headquarters



■ Headquarters:
Bucharest

Number of employees:
1641

Stores:
200 in each county

Suppliers

- Evoline
- Accenture
- Wipro Technologies
- Trend Import
- Software Development
- Logika

Products

Telephone subscribers

Internet subscribers

DTH

Digital cable

Analog cable

Sales

- **16%** market share in Romania;
- **1.14 million** clients;

Global analysis

European analysis

Romanian analysis

ICT revenue

ICT profit

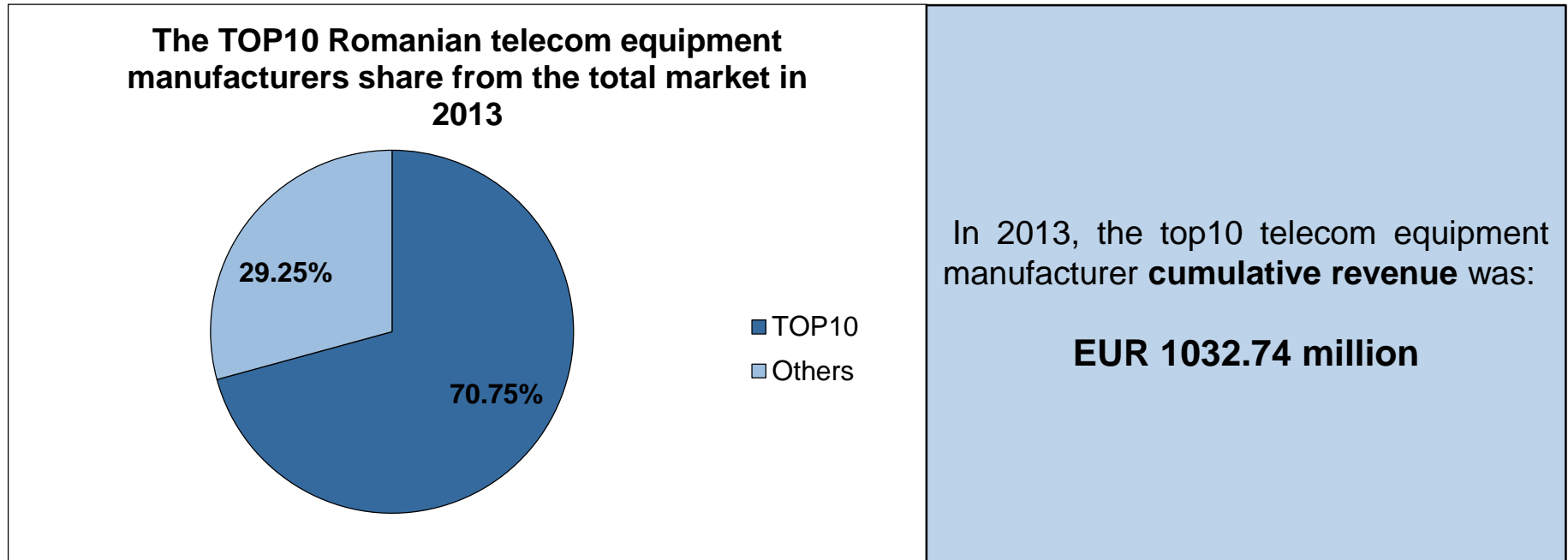
ICT employees

Sector analysis

- Hardware
- Software
- IT services
- **Telecommunication**
 - Network developers
 - Network operator
 - **Gadget manufacturer**

Market concentration - telecom gadget manufacturers in 2013

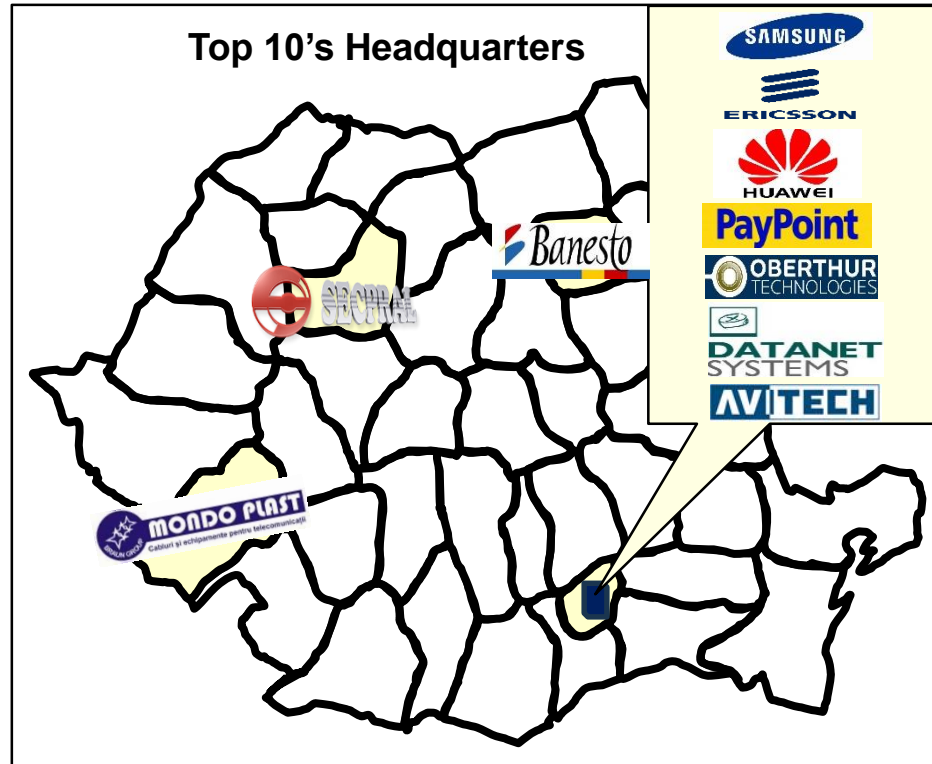
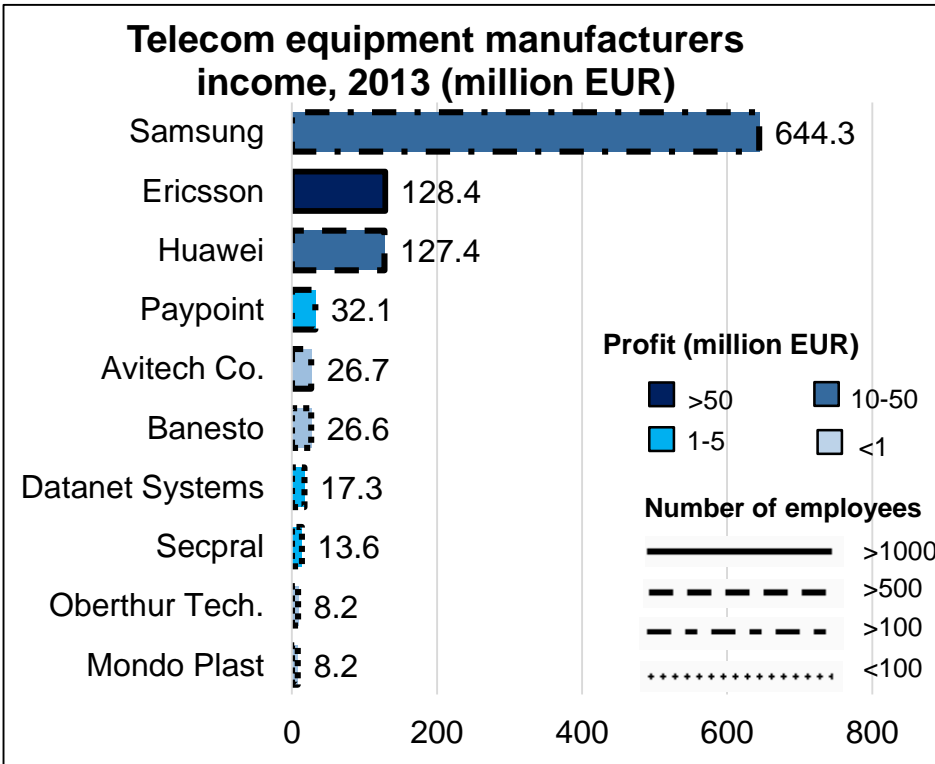
The TOP 10 telecommunication equipment manufacturers had a cumulative market share of 70.75% in 2013, thus the market is highly concentrated.



The **Romanian telecom equipment manufacturer** sector is highly concentrated, as the **TOP 10** companies revenue is higher than **EUR 1 billion**, and their **cumulative market share** is **70.6%**.

The Romanian telecom gadget manufacturers in 2013

Samsung, as the market leader, had the biggest income EUR 644 million in 2013. However, Ericsson had the biggest profit and was the biggest employer.



70% of the top 10 companies are based in **Bucharest**. **Ericsson** has the most employees, **1726** people, and the biggest profit, **EUR 54** million.

Top 10 telecommunication gadget man. by revenue, 2009-2013

The top 10 telecom gadgets manufacturers ranking by revenue showed relative stability at the top positions, and high fluctuation at the last ones.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Samsung	↑ 10	→	→	→	↑ 10
2.	• Ericsson	↓ 1	→	→	→	↓ 1
3.	• Huawei	→	→	→	→	→
4.	• Paypoint	↓ 2	→	→	→	↓ 2
5.	• Avitech Co.	↓ 1	↑ 1	↓ 1	↑ 2	↑ 1
6.	• Banesto	↑ 2	↓ 2	↑ 2	↓ 1	↑ 1
7.	• Datanet Systems	↓ 2	↑ 1	↓ 1	↓ 1	↓ 3
8.	• Secpral	↓ 3	→	→	→	↓ 3
9.	• Oberthur Technologies	↓ 1	→	↓ 1	↑ 1	↓ 1
10.	• Mondo Plast	↓ 1	→	↑ 1	↓ 1	↓ 1

2009 – Samsung started **direct sales**
– Increased **smartphone** sales

30x Revenue growth

Top 10 telecommunication gadget man. by profit, 2009-2013

The top 10 ranking has undergone significant changes, especially at the upper positions. Huawei, Samsung, and Paypoint had increased their profits the most.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Ericsson	↓ 1	↑ 1	↓ 1	↑ 1	→
2.	• Huawei	↑ 2	↓ 3	→	↑ 8	↑ 7
3.	• Samsung	↑ 4	↓ 1	↑ 1	↓ 2	↑ 2
4.	• Secpral	↓ 2	↑ 1	→	↓ 1	↓ 2
5.	• Datanet Systems	↓ 2	↑ 1	→	↓ 1	↓ 2
6.	• Paypoint	→	↑ 1	↑ 2	↑ 1	↑ 4
7.	• Banesto	↓ 1	→	↓ 1	↑ 2	→
8.	• Avitech Co.	↓ 1	↑ 2	↓ 1	→	→
9.	• Mondo Plast	→	→	→	↓ 3	↓ 3
10.	• Oberthur Technologies	↑ 1	↓ 2	→	↓ 5	↓ 6

2009 – First full year – Increased sales 198,56% growth	2012 – Invested in SIM cards & software innovation Decreased profitability	2012 – 4G network sales – 2G and 3G modernization – released the Ascend 34,5% revenue growth
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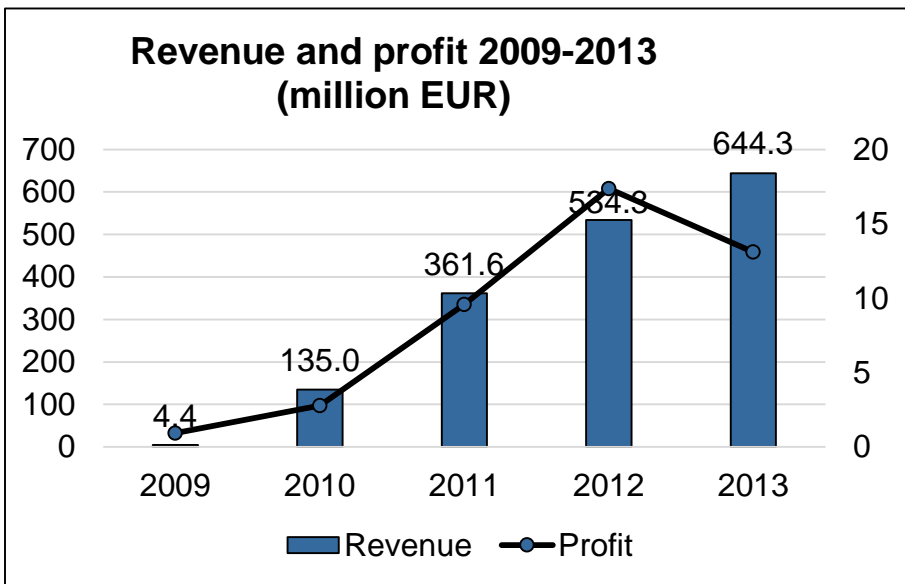
The telecommunication gadget man. by number of employees

The top 10 ranking hasn't undergone significant changes, only the middle ranks saw some changes in the 2009-2013 period.

Rank	• Company name	2009-2010	2010-2011	2011-2012	2012-2013	2009-2013
1.	• Ericsson	→	→	→	→	→
2.	• Huawei	→	→	→	→	→
3.	• Avitech Co.	↑ 1	→	→	→	↑ 1
4.	• Samsung	↑ 1	→	↑ 1	→	↑ 2
5.	• Paypoint	↓ 1	→	↓ 1	→	↓ 2
6.	• Secpral	→	→	↑ 1	→	↑ 1
7.	• Mondo Plast	↓ 1	→	↓ 1	→	↓ 2
8.	• Datonet Systems	↓ 1	↑ 1	→	→	→
9.	• Oberthur Technologies	↑ 1	↓ 1	→	→	→
10.	• Banesto	→	→	→	→	→

Ericsson is the only company, which has more than 1000 employees, namely **1726 employees**. As a result, **Ericsson** has more employees, than the other **9 companies** together, which have **1444 employees**.

Samsung is the leading telecommunication equipment manufacturer in Romania, with an EUR 644 million income, thanks to the increased sales of smartphones.



Headquarters

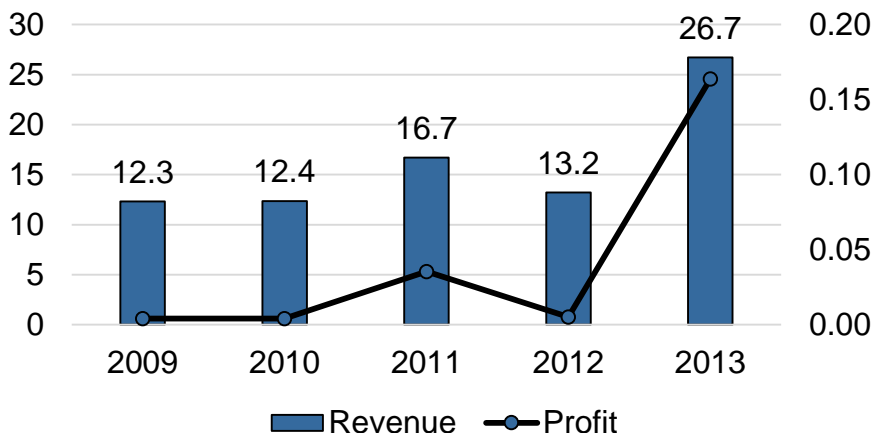
Headquarters:
- Bucharest

Number of employees:
128

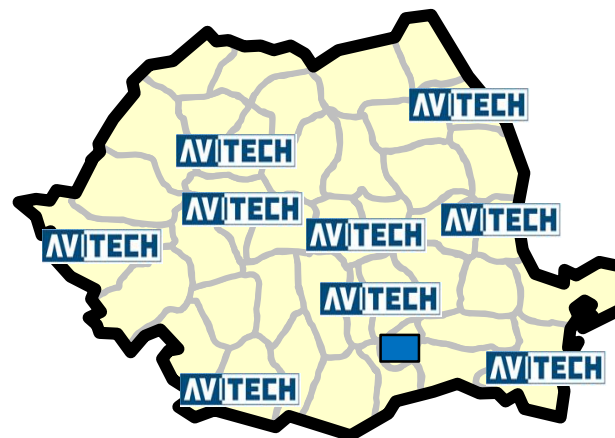
Suppliers	Products	Sales
<p>Samsung has 1600 suppliers worldwide, and 10 in Romania:</p> <ul style="list-style-type: none"> • Romsoft • Solution Plus • I.A.N. • Meda Consult, etc. 	<ul style="list-style-type: none"> Mobile phones Tv/Audio/Video Photo camera Electrical appliances 	<p>Distributors:</p> <p>ASBIS Romania, Genco Trade, HAT Group, Deck Computers</p>

The Avitech Co. operates in the telecommunication equipment industry, in the B2B segment, and has 500 projects countrywide.

Revenue and profit 2009-2013
(million EUR)



Headquarters and offices



■ Headquarters:
Bucharest
- 9 offices
country

Number of employees:
197

Suppliers

160 suppliers in total. The most important ones are:

- **Beyerdinamic**
- **Sanyo**
- **Cisco**
- **Avaya**
- **Samsung**
- **Bosch, etc.**

Products

- Systems** security, safety, automations
- IT** cabling, networking, VoIP
- Maintenance**
- Audio-visual equipments**

Sales

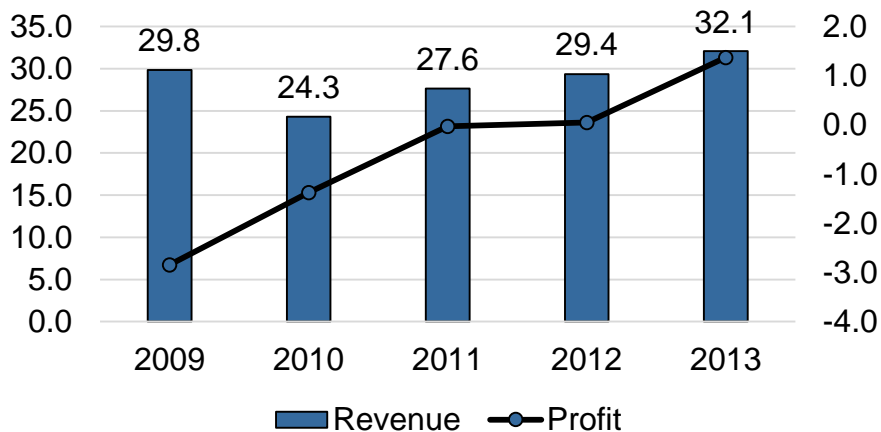
Corporations (real estate, retail, telecom etc.)

Governmental Institutions

Educational Institutions

The Paypoint Services has more than 8.750 paypoint retailers in Romania ensuring a national coverage.

Revenue and profit 2009-2013 (mil. Euro)



Headquarters



Headquarters:
Bucharest

Number of employees:
112

Suppliers

Products

Sales

Payment terminals

Retail payment & services

Online and mobile payment solutions

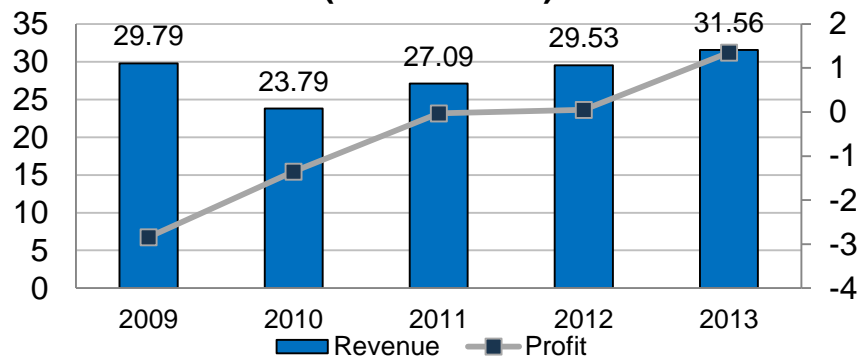
Online credit and debit card payments

80 partners in Romania:

- E-on
- Blue air
- Orange
- Vodafone
- UniCredit & others

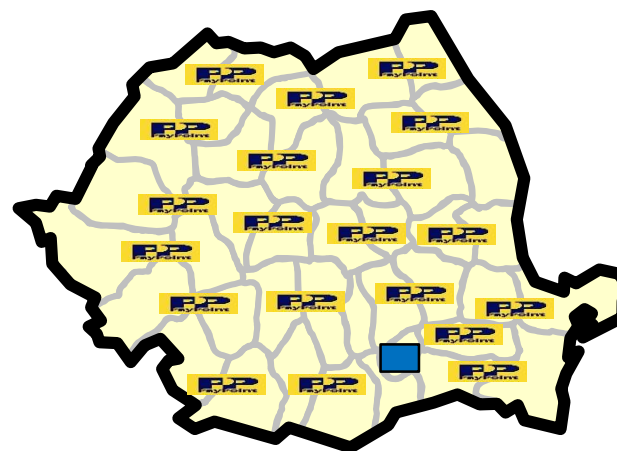
PayPoint Romania reached its highest revenue EUR 31.56 million and profit EUR 1.35 million in 2013. Romanian bill payment transactions were up by 53.5%, and reached EUR 39.1 million.

**Revenue and profit, 2009-2013
(million EUR)**



In 2013, PayPoint Romania reached its highest revenue EUR 31.56 million, and highest profit EUR 1.35 million.

Headquarter



■ Headquarter:
- Bucharest

Number of employees:
112

Suppliers

Products

Sales

Payments terminals

Retail payments & services

Online and mobile payment solutions

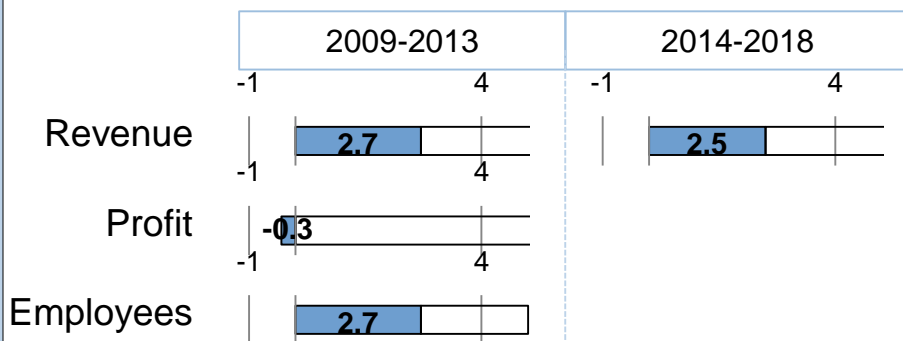
Online credit and debit card payments

85 partners in Romania:

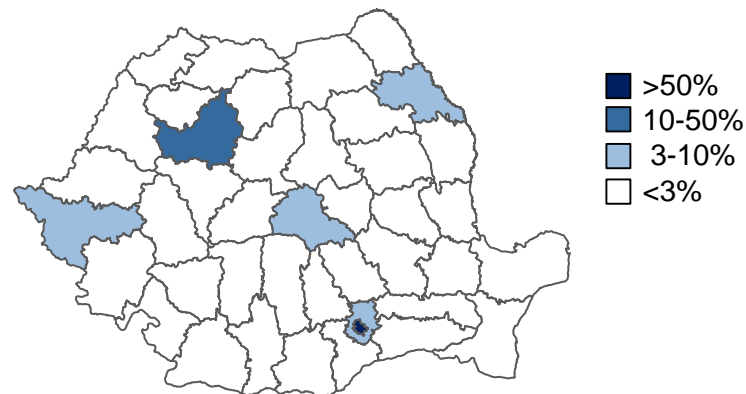
- E-on,
- RCS&RDS,
- Orange,
- Vodafone,
- Avon,
- UniCredit & others

Romania's ICT market summary (1)

Average yearly change (% , 2009-2018)

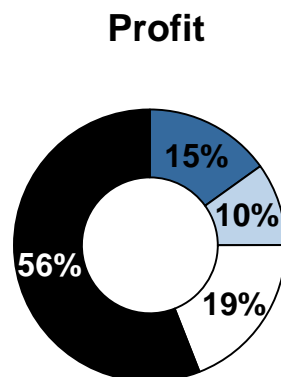
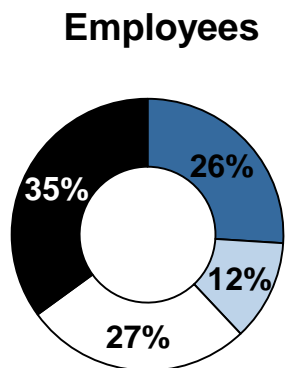
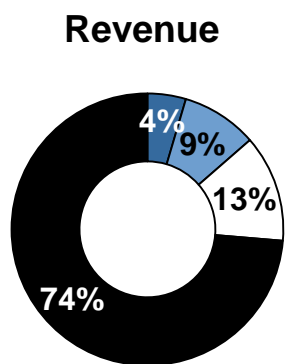


ITC sector revenue spread in Romania (% , 2013)



Total ICT

The share of the ICT subsectors from the total industry revenue, profit & employees (% , 2009-2013)



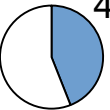
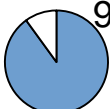


The subsectors profit rates (% , 2009-2013)

Hardware	9.6%
Software	34.5%
IT services	34.0%
Telecom.	5.7%

ICT Subsectors

Romania's ICT market summary (2)

	Average yearly change (%, 2009-2013)			Concentration Top 10 (%)	Top companies	
	Revenue	Profit	Employees		Top 3 by revenue ('13)	Top developing by revenue ('09-'13)
Hardware	3.9	-0.3	1.2	 63*	Steinel Elect., Flextronics, Kuhnke Prod.	-
Software	1.2	1.5	15.1	 11	Oracle, IBM, Teamnet	Teamnet
IT services	42.4	5.8	0.6	 44	Oracle, Uti Sys, Teamnet	Teamnet
Telecom.	-0.9	-2.4	-1.9	 90	Orange, Vodafone, Samsung	Samsung

ICT summary

		World		Europe		Romania		
Yearly change (%) '09-'13)								
Hubs		North Amerika, Canada, Australia, Western Europe		Western Europe		Bucharest, Cluj		
Subsectors	Proportion of ITC (% '09-'13)	Largest	Smallest	Largest	Smallest	Largest	Smallest	
		Rev.	40%	9%	45%	5%	74%	4%
		Prof.	46%	9%	45%	7%	56%	10%
	Employ	44%	8%	40%	7%	33%	10%	
	Profitability (% '09-'13)	Largest	Smallest	Largest	Smallest	Largest	Smallest	
	26%	6%	13%	4%	35%	7%		
Average growth* (% '09-'13)	Largest	Smallest	Largest	Smallest	Largest	Smallest		
7%	-0,1%	4%	1%	20%	-2%			
Concentration ratio (% '09-'13)	Largest	Smallest	Largest	Smallest	Largest	Smallest		
53%	25%	60%	3%	90%	11%			
Top companies	<ul style="list-style-type: none"> Samsung, Foxconn, HP IBM, Microsoft, Oracle IBM, Fujitsu, HP AT&T, Verizon, NTT 	<ul style="list-style-type: none"> Samsung, Foxconn, HP SAP, Sage, Dassault Sys. Accenture, Thales, HP Telekom, Orange, Vodafone 	<ul style="list-style-type: none"> Steinel, Flextronix, Kuhnke Prod Oracle, IBM, Teamnet Oracle, Uti Sys., Teamnet Orange, Vodafone, Samsung 					

*of the revenue, profit and employment

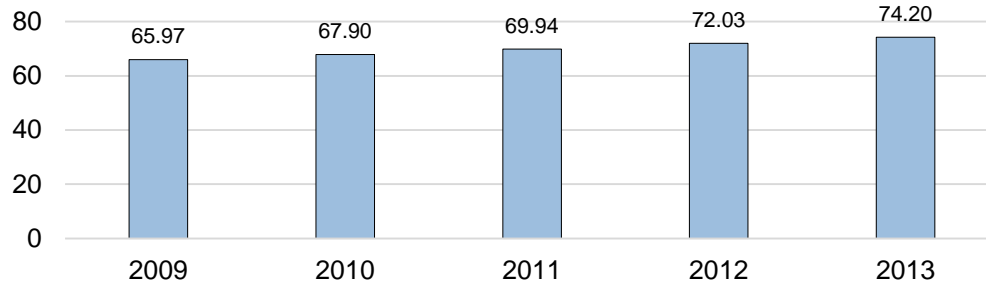
WriteIn ('Thank you!');
ReadIn;
End.

Appendix

Employment in the ICT industry, 2009-2013

The ICT industry shows a constant growth at a 3% CAGR. In 2013 the total number of employees was 74.2 million.

Employment in the ICT industry, from 2009 to 2013
(million capita)



The ICT sector had a **CAGR** of 3% (USA: 2%, EU: 8%).

Only 20% of the jobs in the industry are in the EU and the U.S.A., while most of the jobs are in Asia. (India, China, Japan and South Korea)

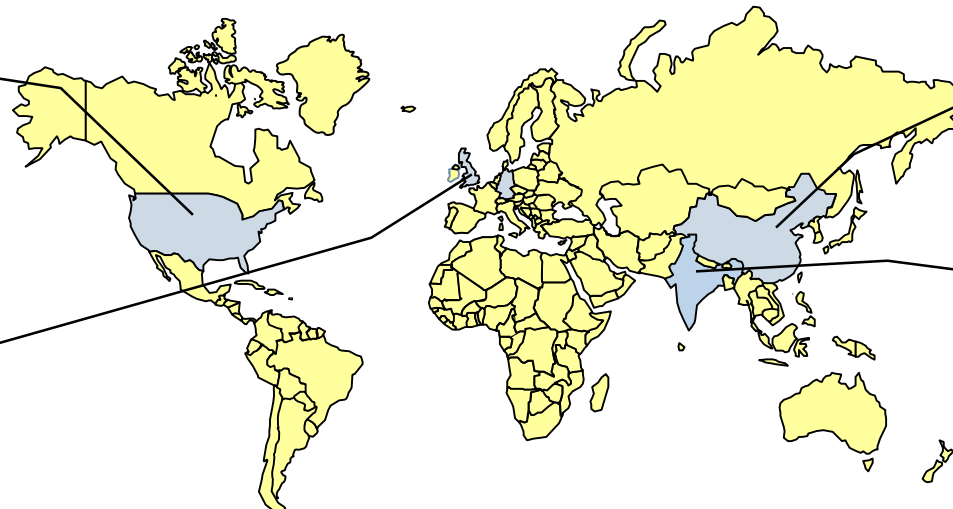
U.S.A.

The U.S tech industry grew by 119.000 jobs in the first half of 2014

EU

In the EU the most jobs are in the UK and in Germany, with 2.3 million employees.

The worlds IT hubs



China

By 2013 China reached 10.6 million employees in the ICT sector.

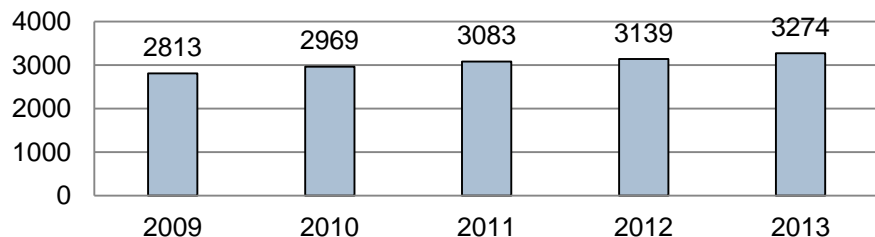
India, Bengalore

Nearly 40% of India's ICT industry is in Bengalore, with 10 million jobs.

Global ICT revenue (old version)

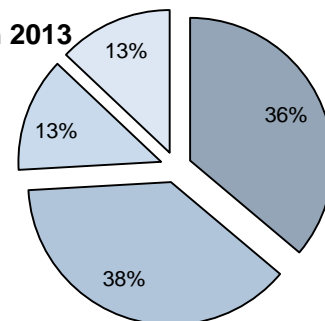
The global ICT sector has an average growth of 4% per year. In 2013 the total ICT revenue was EUR 3274 billion.

Global ICT revenue from 2009 to 2013
(billion EUR)

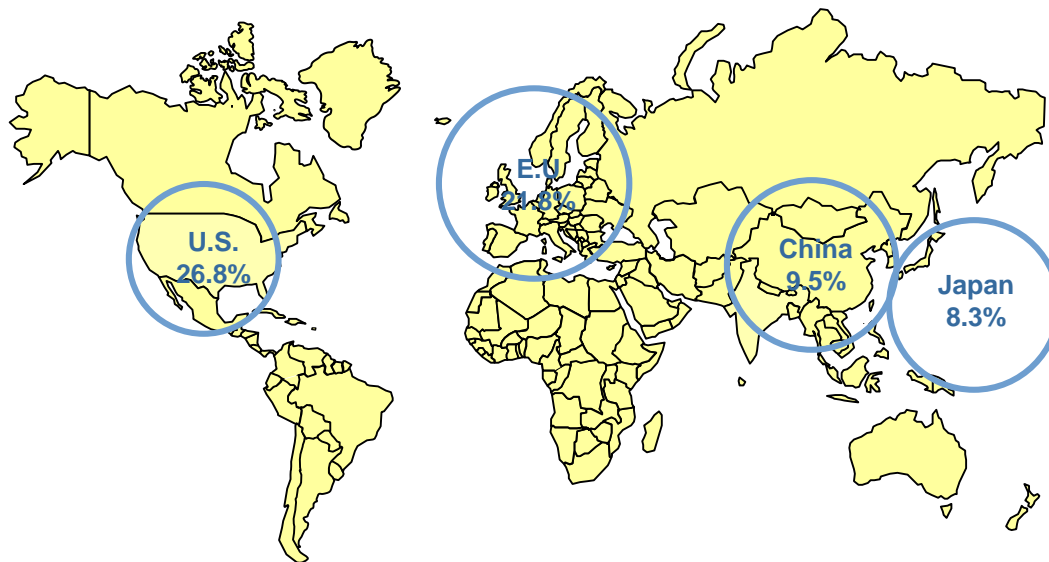


ICT market share by sector in 2013

- Telecommunication
- Hardware
- Software
- Services



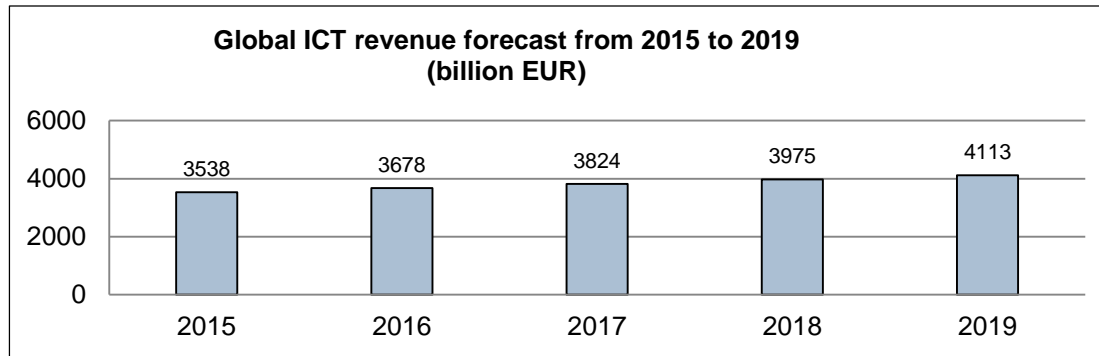
ICT revenue achieved by selected countries in 2013



The global ICT market is growing by 4%/year. The most important regions are the USA, the EU, China and Japan.

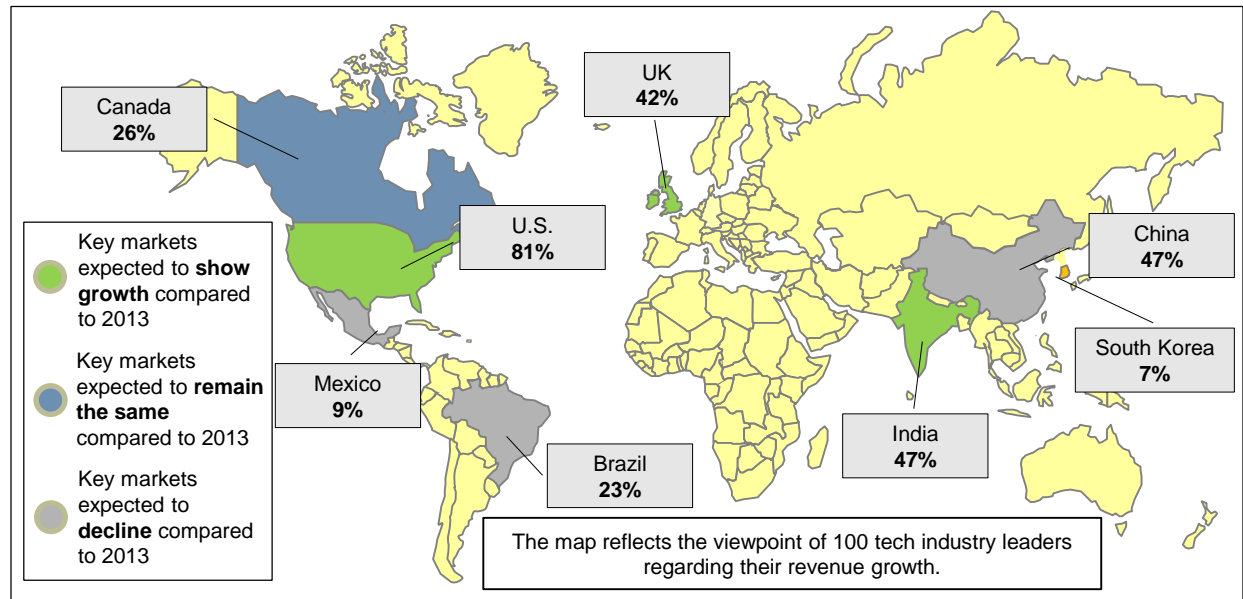
Global ICT revenue forecast between 2015-2019

The expected average growth in revenue of the worldwide ICT sector is 3.9%. The generated revenue is going to reach EUR 4113 billion in 2019.



The global revenue of the ICT sector is expected to grow by an average rate of 3.9%, reaching EUR 4113 billion in 2019. The new ICT-hubs play an important role in the creation of future revenue.

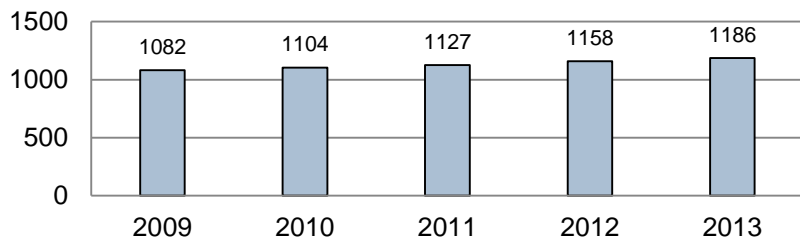
According to the industry leaders, the US and China will drive the highest growth in revenue for the companies. Due to the economical and political changes in different markets, the geographic outlook have shifted.



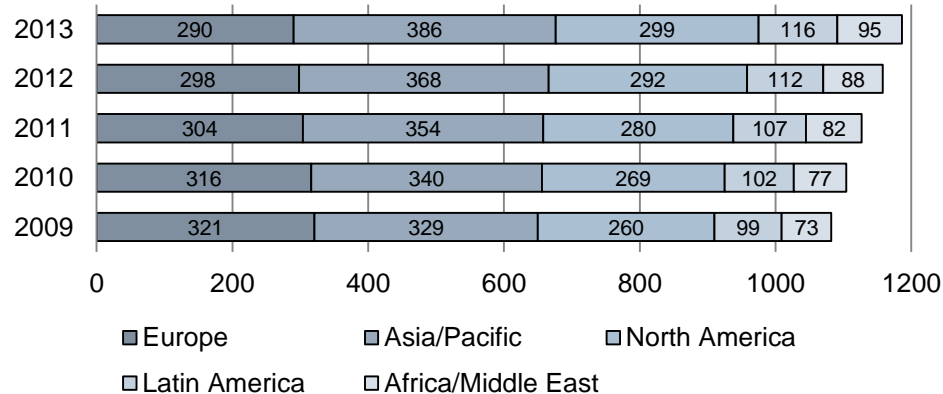
Telecommunications services

The value of the global telecommunications services market is constantly growing by a yearly average of 2%. In 2013, the size of the market was EUR 1183 billion.

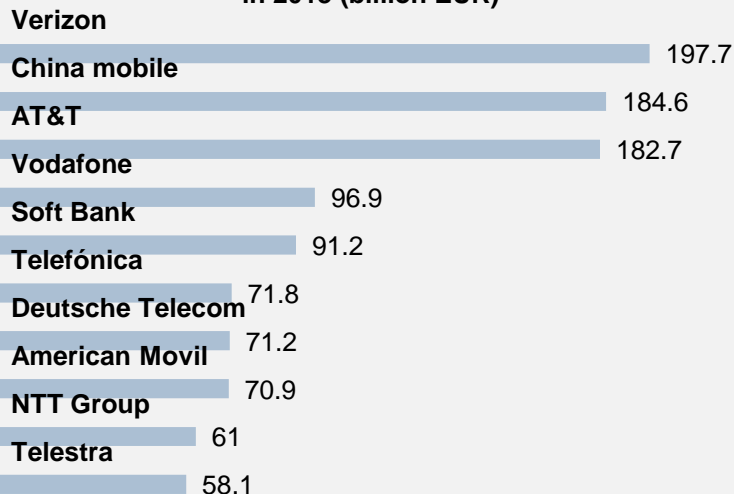
Global telecommunication services market value, 2009-2013 (billion EUR)



Global telecommunication services market value by regions, 2009-2013 (billion EUR)



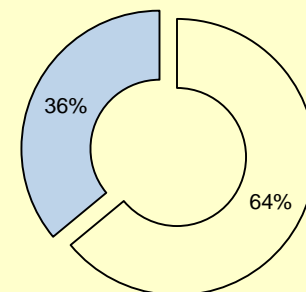
Top 10 telecom companies of the world by market value in 2013 (billion EUR)



The global telecommunication services market is showing a constant growth at a 2% CAGR. In the EU there was a 2% decrease, while the emerging markets show an increase by 7%.

The sector market value is **36%** of the total value of the ITC market.

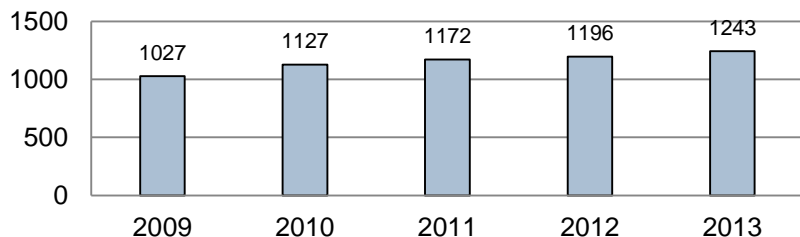
Market share



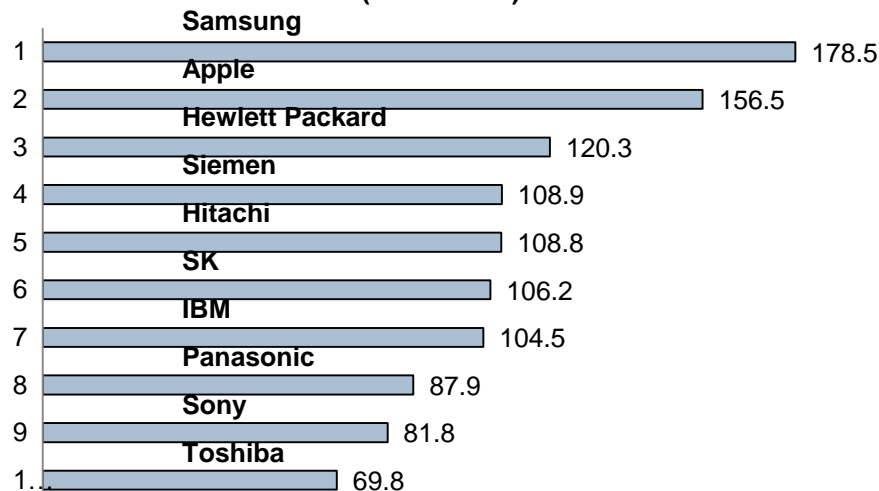
ICT Hardware

The value of the global ICT hardware market is constantly growing with a yearly average of 4%. In 2013 the size of the market was EUR 1243 billion.

Global ICT hardware market revenue, 2009-2013
(billion EUR)

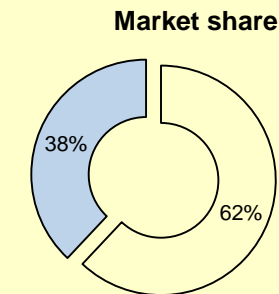


Top 10 ICT hardware brands by revenue in 2013
(billion EUR)



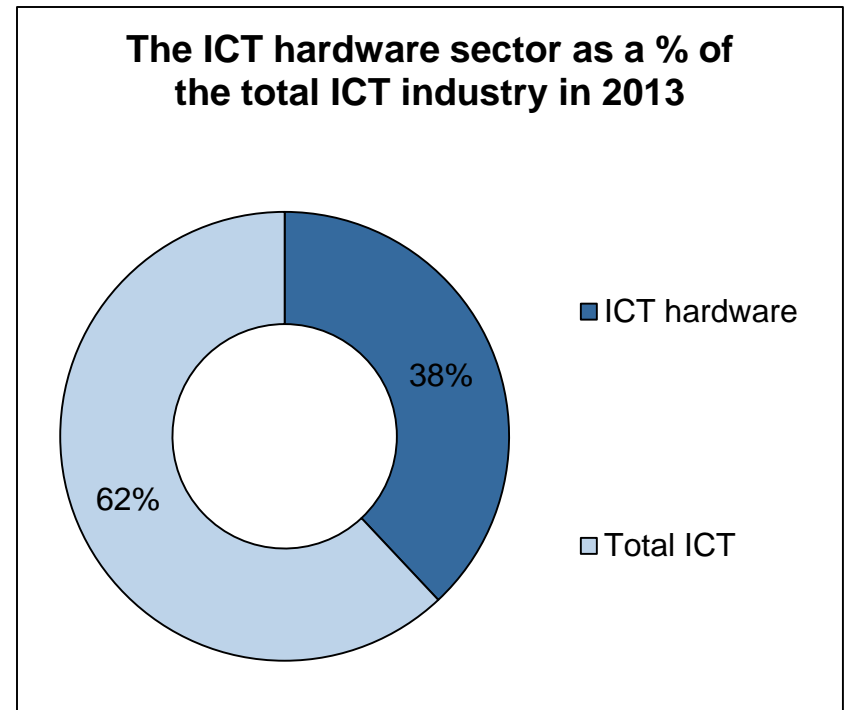
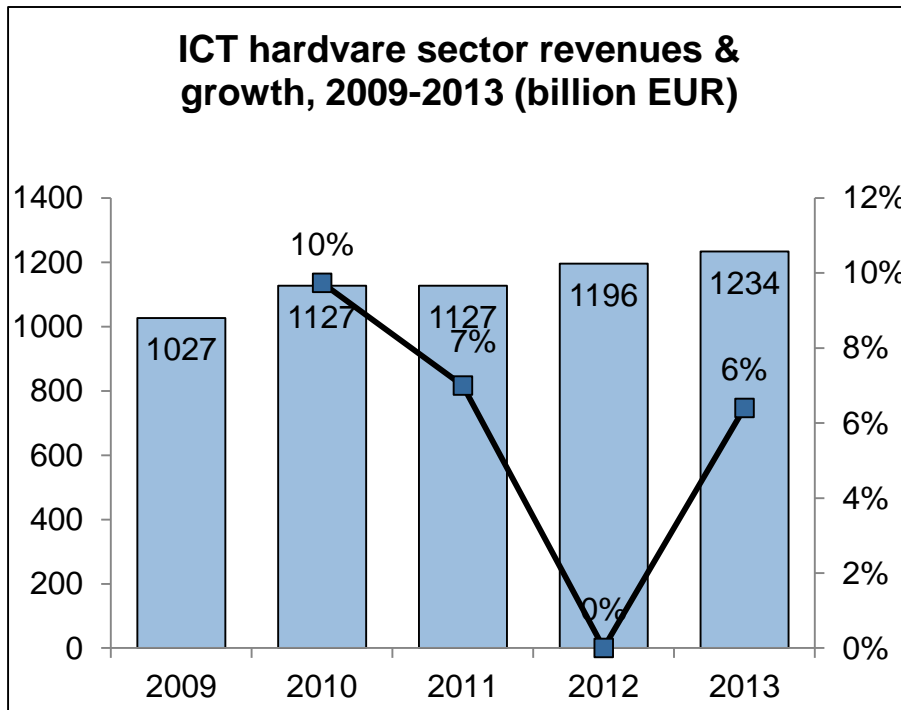
The global ICT hardware market revenue grew at a 4% CAGR in the 2009-2013 period.

The sectors market value is **38%** of the total value of the ITC market.



ICT hardware market in 2013

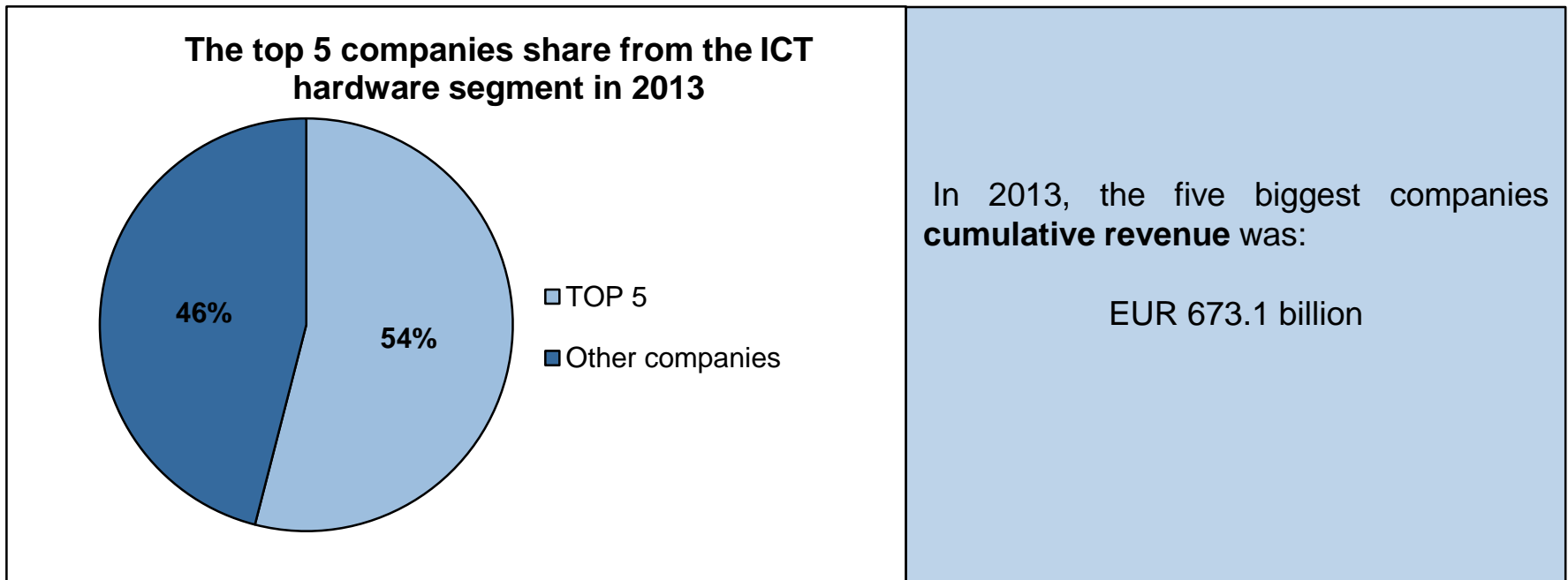
The value of the global ICT hardware market is constantly growing, with a yearly average of 4%. In 2013, the size of the market was EUR 1243 billion.



The global ICT hardware market revenue grew at a 4% CAGR in the 2009-2013 period. The sector market value is **38%** of the total value of the ICT market.

Global ICT hardware- market share

The global ICT hardware market is saturated, the top 5 companies own 69.5% of the total market.



The leading hardware companies are: Samsung, Apple, Hewlett Packard, Siemens and Hitachi. The companies are headquartered in the US and in Asia.

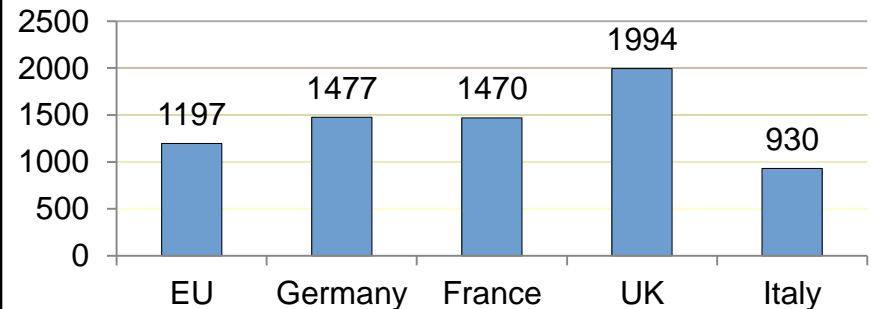
The European ICT market in 2013

The Information and Communication Technology market had a 2% growth in 2013. The revenue in the European market was EUR 901 billion in 2013.

European ICT market statistics 2013

- The Information and Communication Technology market had a **2%** growth in 2013 compared to 2012.
- The revenue was **EUR 901 billion**, which is the biggest revenue ever achieved.
- **Germany** is the market leader with **EUR 152 billion** in revenues and represents 20.6% of the EU market.
- Germany is followed by **France, UK, and Italy**.

Average spending per capita on ICT products in 2013 (EUR)

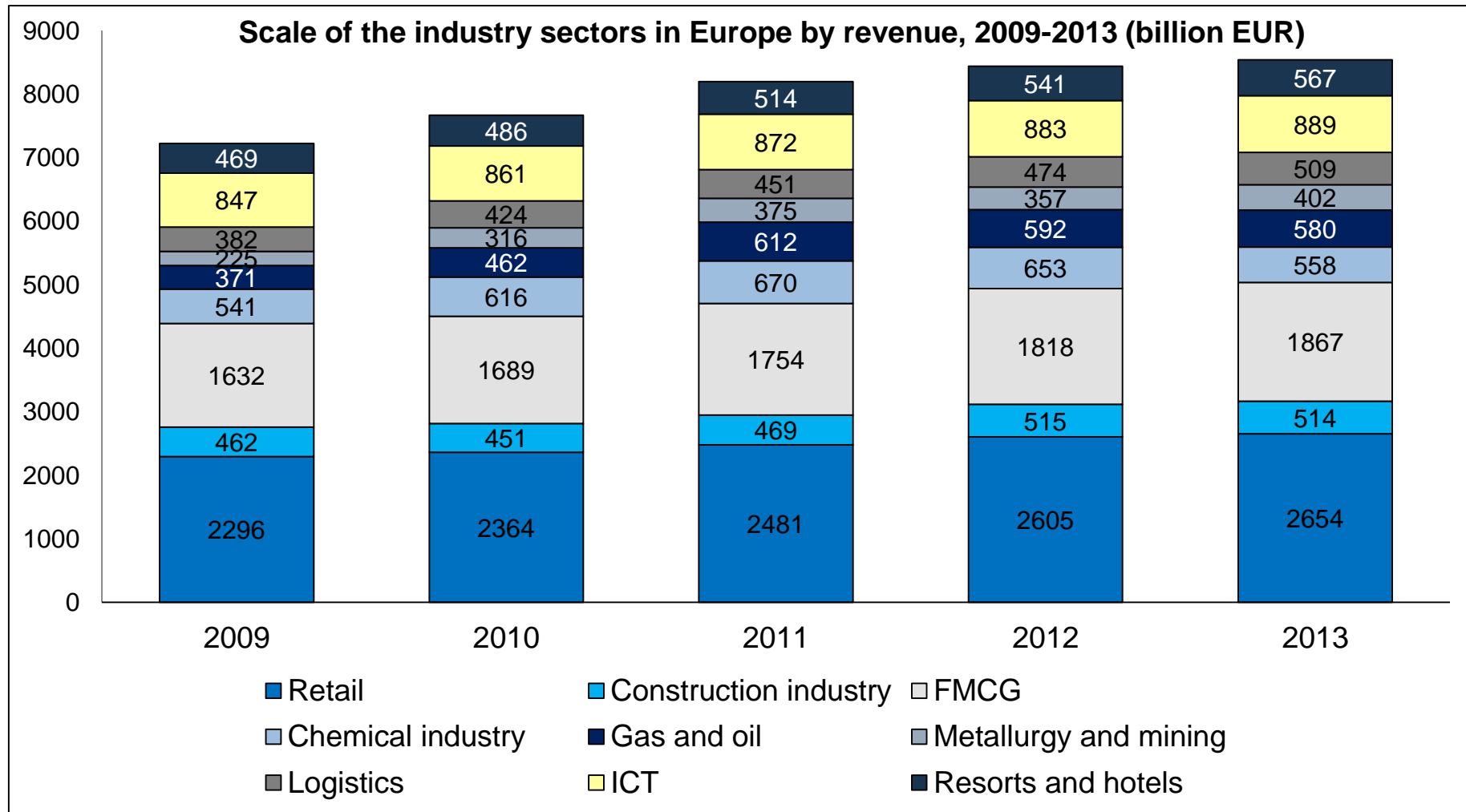


In the **UK** people spend **the most** on ICT products, followed by Germany and France. They spend above the EU average, while **Italy**, the fourth largest, spends **under** the average.

The European ICT market is **growing** every year, and registered its **highest** ever revenue of **EUR 901 billion in 2013**. The European market leader is **Germany**, with **EUR 152 billion** in revenues. The **English** spend the most per capita on ICT products.

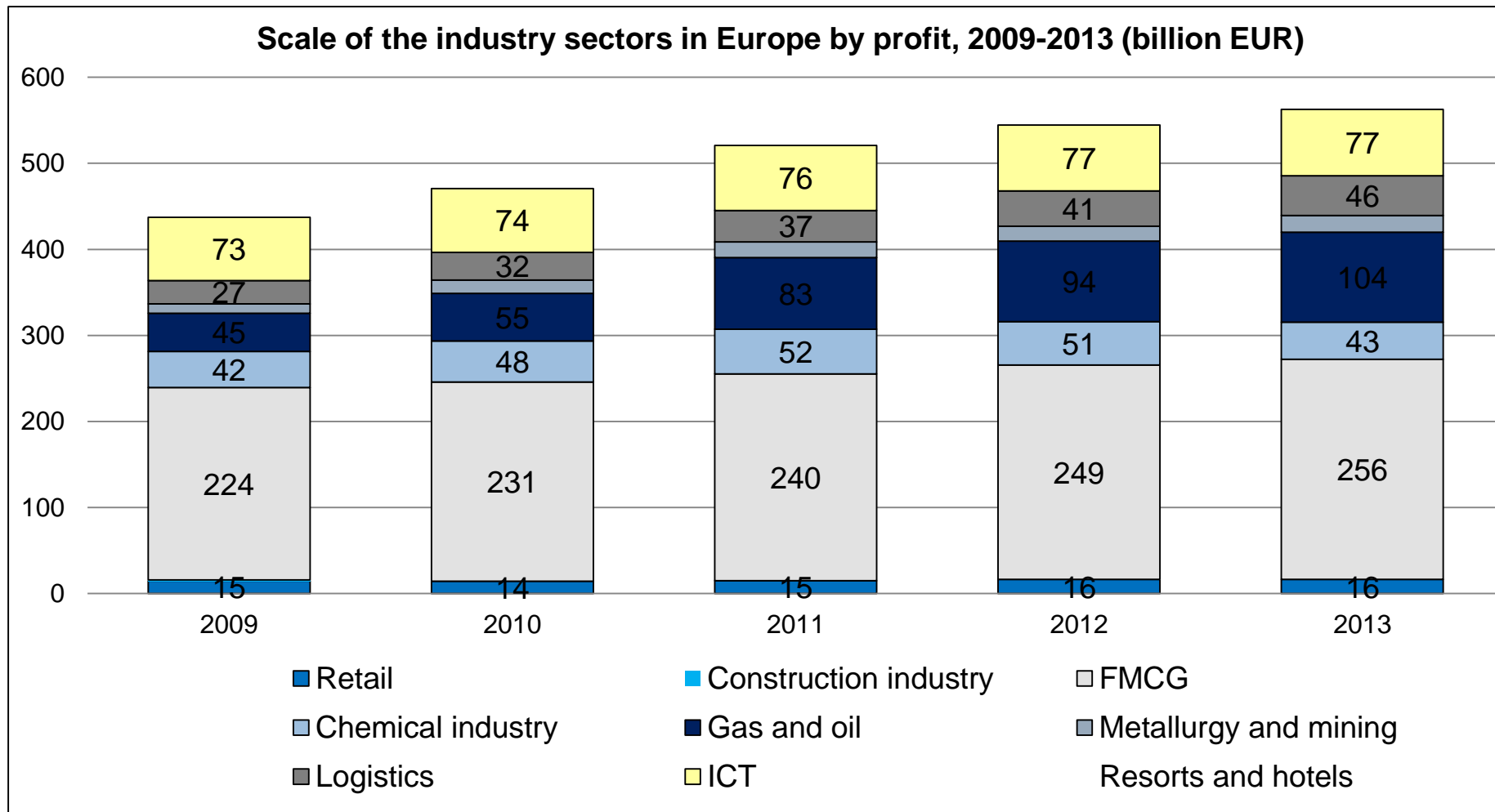
The European ICT market by revenue, 2009-2013

The ICT market is the third biggest industrial sector in Europe, with a 4.8% growth from 2009 to 2013 period. In 2013, the revenue reached EUR 889 billion.



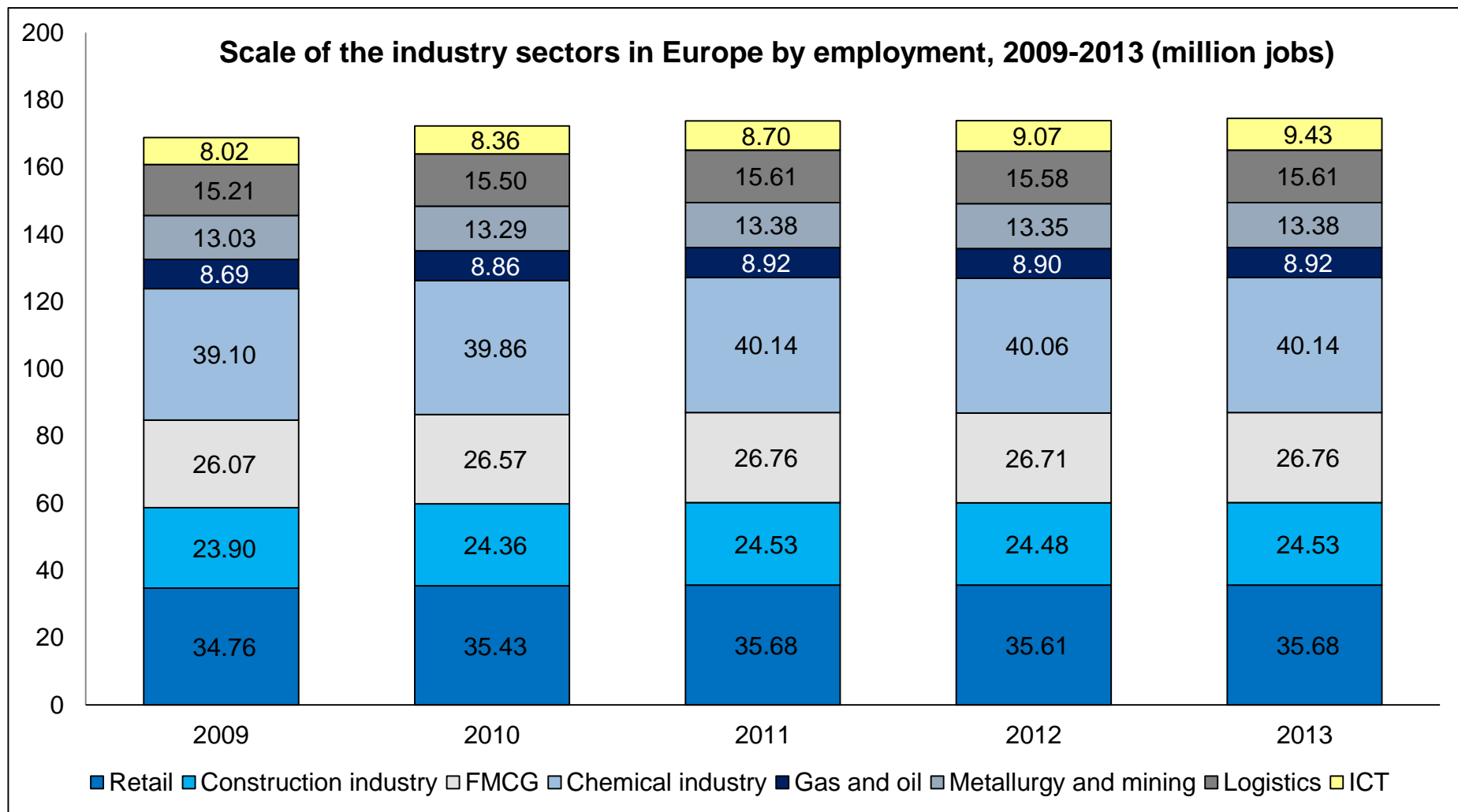
The European ICT market by profit, 2009-2013

The ICT markets has the second biggest profit among the industrial sectors, with a 13.64% growth from 2009 to 2013. In 2013, the profit reached EUR 46.25billion.



European ICT market employment, 2009-2013

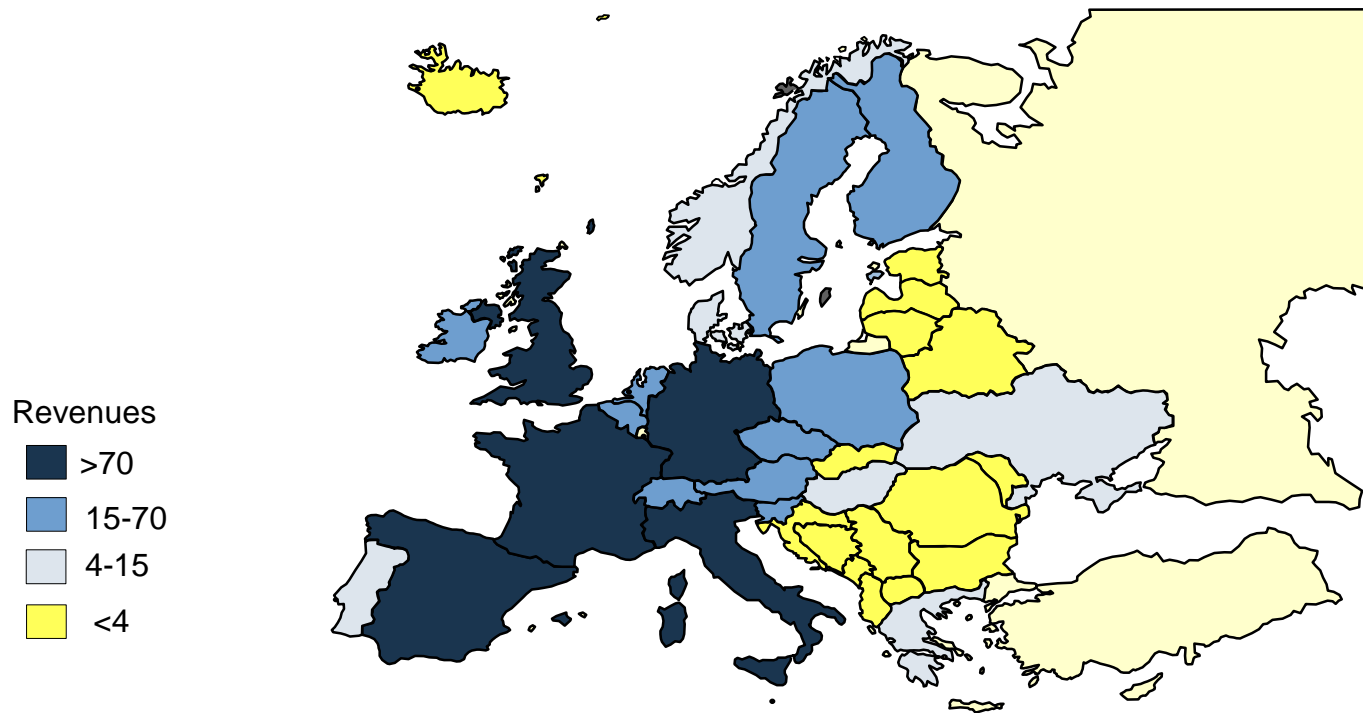
The ICT market is the sixth biggest industrial sector in Europe in terms of employment, with a 2.66% growth from 2009 to 2013. In 2013, the ICT sector had 35.68 million jobs.



European ICT industry by revenues in 2009

The revenues in Europe are constantly increasing. Germany had the highest revenue in Europe and was followed by France, UK, Spain and Italy.

The countries ICT revenue in in 2009 (billion EUR)

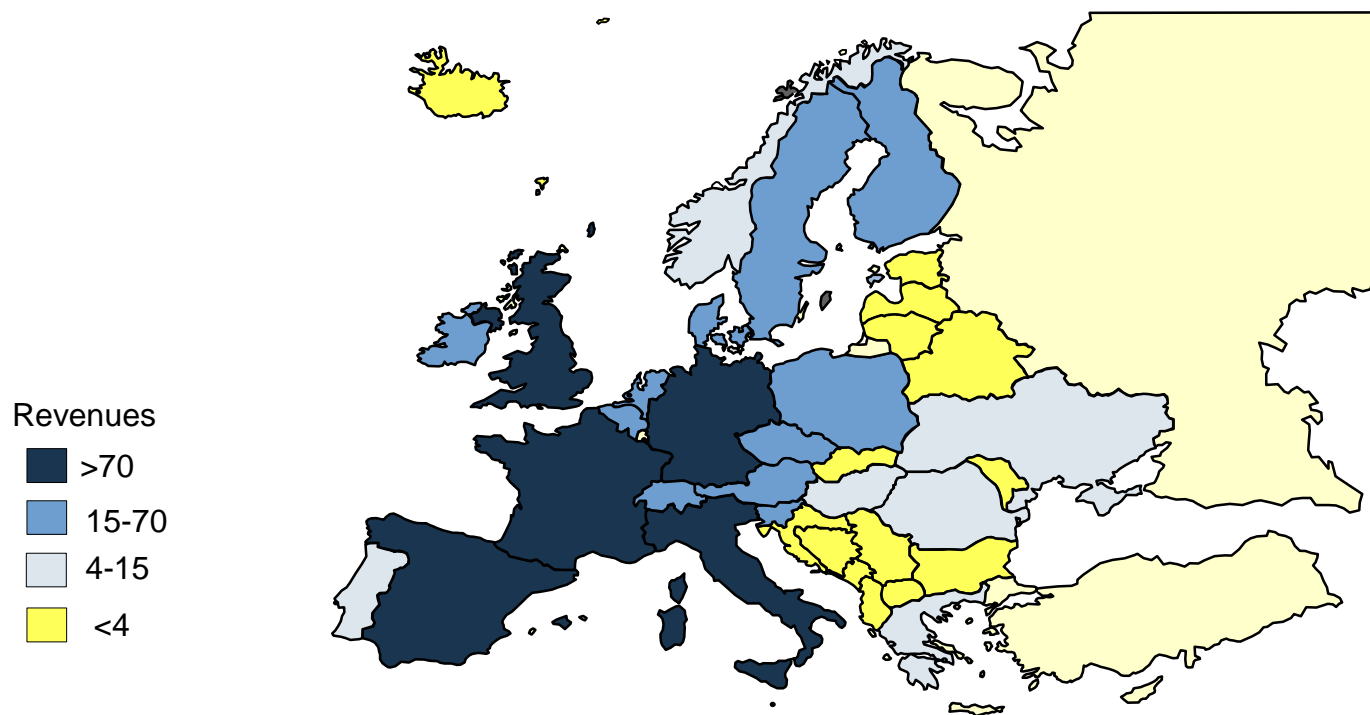


The revenues in the European ICT market are constantly increasing, and reached **EUR 847 billion** in 2009. **Germany** had the highest revenue of **EUR 128 billion**, followed by the UK, France, Spain and Italy.

European ICT industry by revenues in 2010

Germany had the highest revenue in the European ICT market. Denmark revenue has grown over EUR 15 billion. Romania's revenue has grown over EUR 4 billion.

The countries ICT revenue in in 2010 (billion EUR)

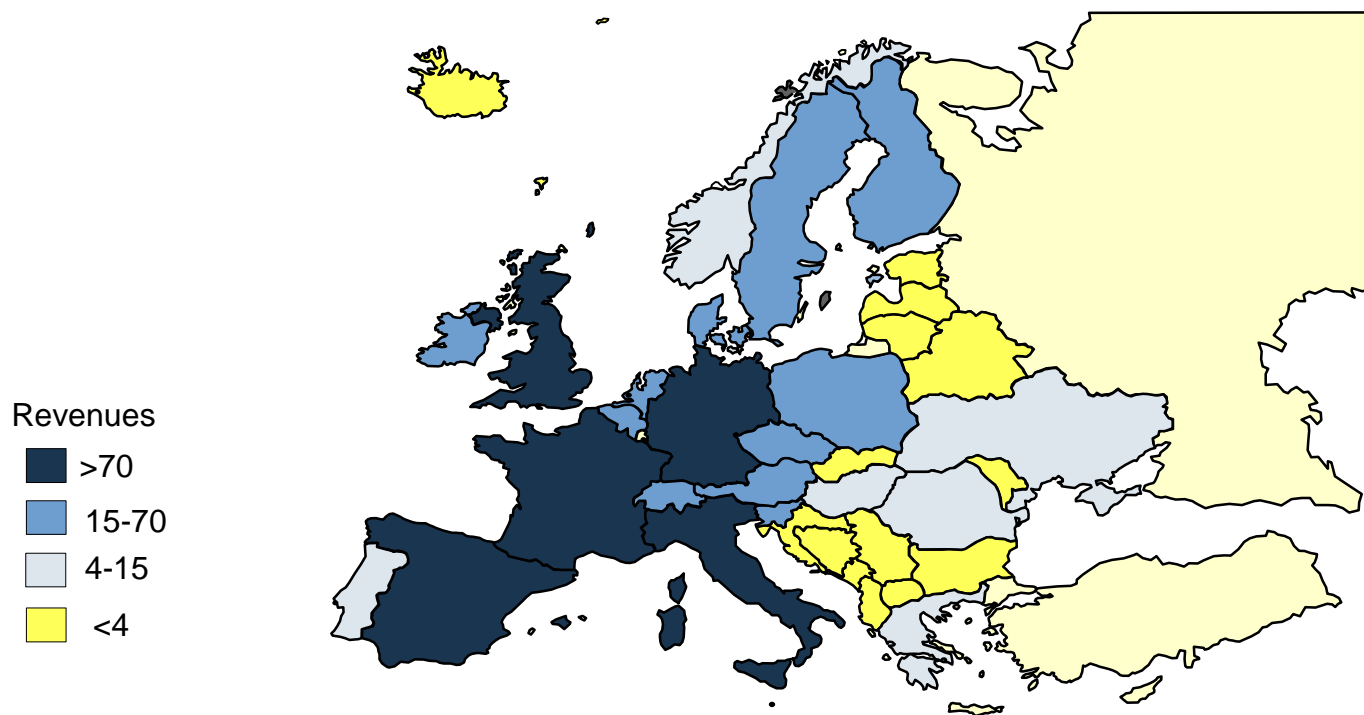


The revenues of the European ICT market reached **EUR 861 billion**. **Germany** had the highest revenue of **EUR 130 billion**. **Denmark's** revenue has grown over **EUR 15 billion**, **Romania's** revenue has grown over **EUR 4 billion**.

European ICT industry by revenues in 2011

The revenues in Europe have been constantly increasing. Germany had the highest revenue in Europe, and was followed by France, the UK, Spain and Italy.

The countries ICT revenue in 2011 (billion EUR)

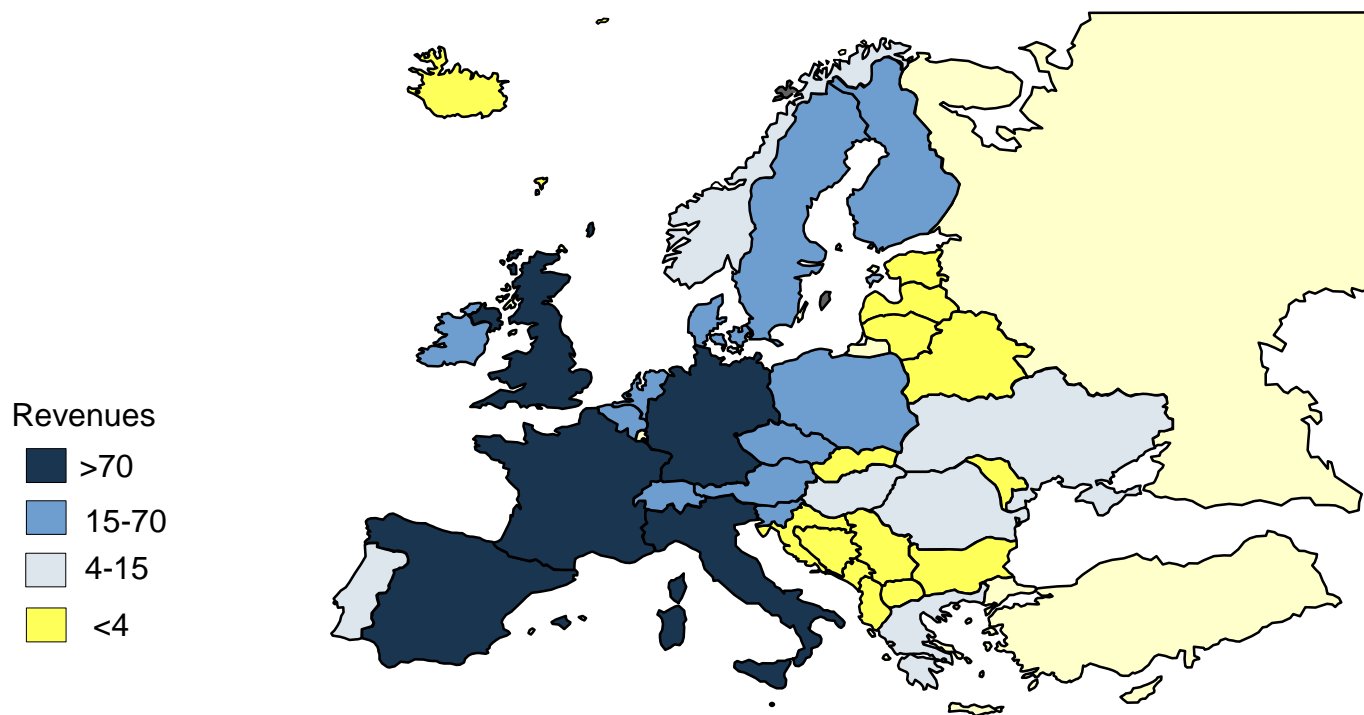


The revenue in the European ICT market has constantly been increasing, and it reached **EUR 872 billion** in 2011. **Germany** had the highest revenue of **EUR 135.3 billion**, followed by the UK, France, Spain and Italy.

European ICT industry by revenues in 2012

The revenues in Europe are constantly increasing. Germany had the highest revenue in Europe and was followed by France, UK, Spain and Italy.

The countries ICT revenue in 2012 (billion EUR)

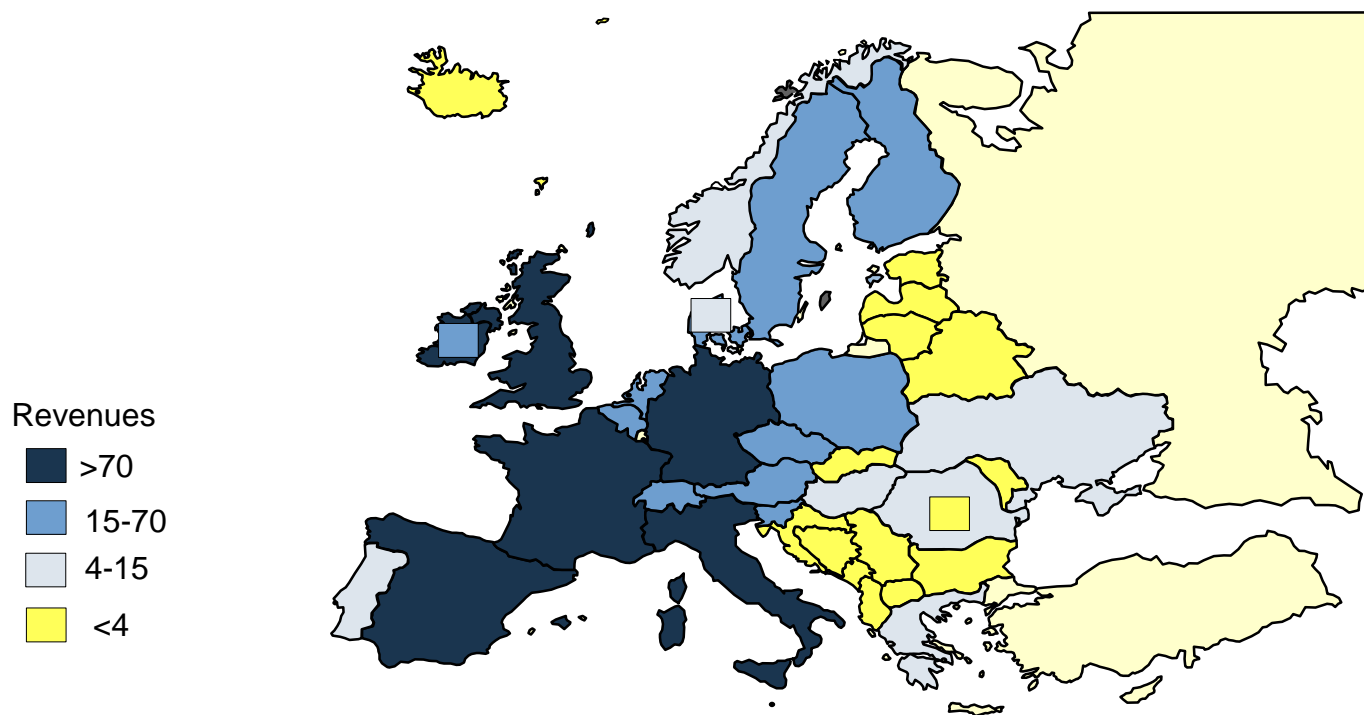


The revenues in the European ICT market are constantly increasing, and reached **EUR 883 billion** in 2012. **Germany** had the highest revenue of **EUR 139.1 billion**, followed by the UK, France, Spain and Italy.

European ICT industry by revenues in 2013

Germany had the highest revenue in Europe. In all the countries the revenues are increasing constantly. Ireland's revenue has grown over EUR 70 billion.

The countries ICT revenue in 2013 (billion EUR)

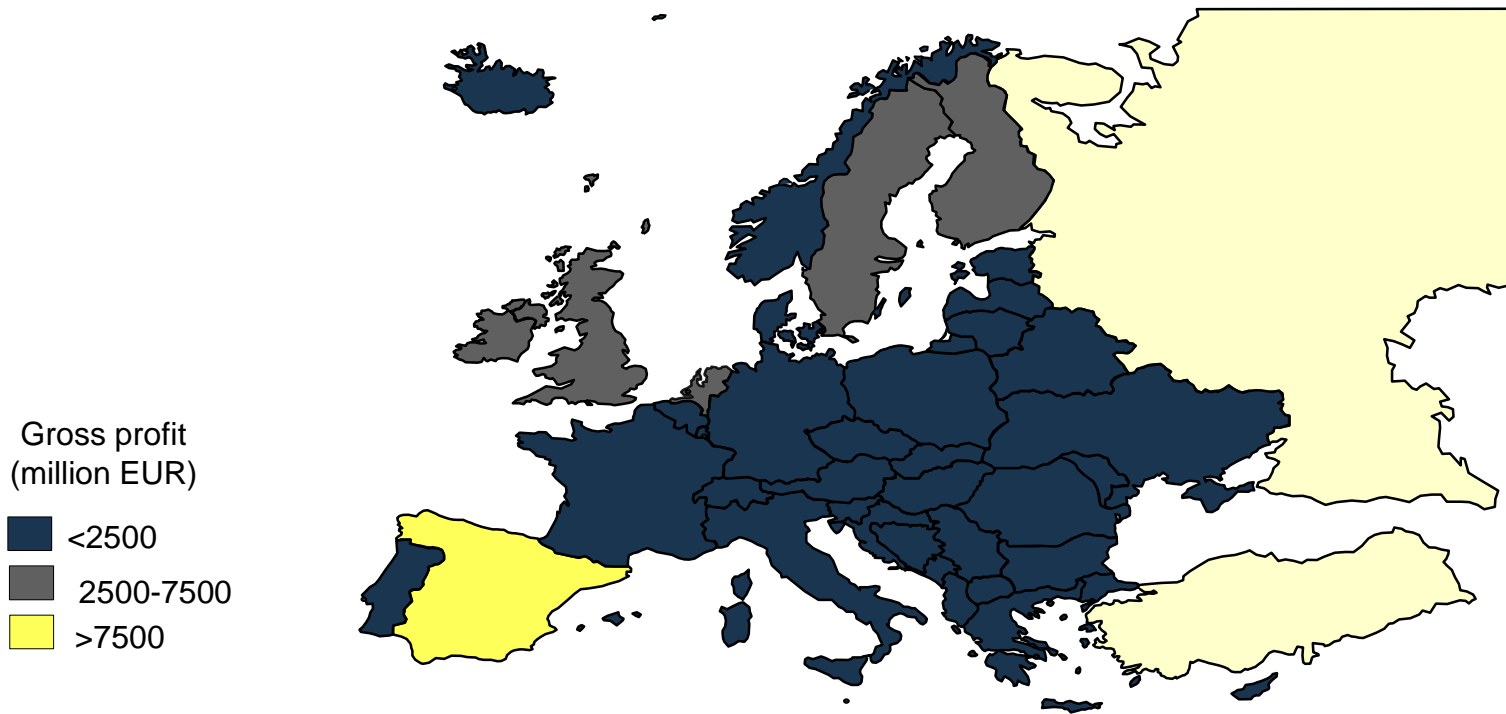


The revenues in the European ICT market are constantly increasing, and in 2013 reached EUR **889 billion**. **Germany** had the highest revenue of **EUR 152 billion**, and **Ireland's** revenue has grown over EUR 70 billion. **Romania's** revenue was over **EUR 4 billion**.

European ICT industry profits by country in 2009

Europe did not have many profitable ICT markets in 2009. Only Finland and Spain managed to rise above the average.

ICT profits in Europe by country in 2009 (million EUR)

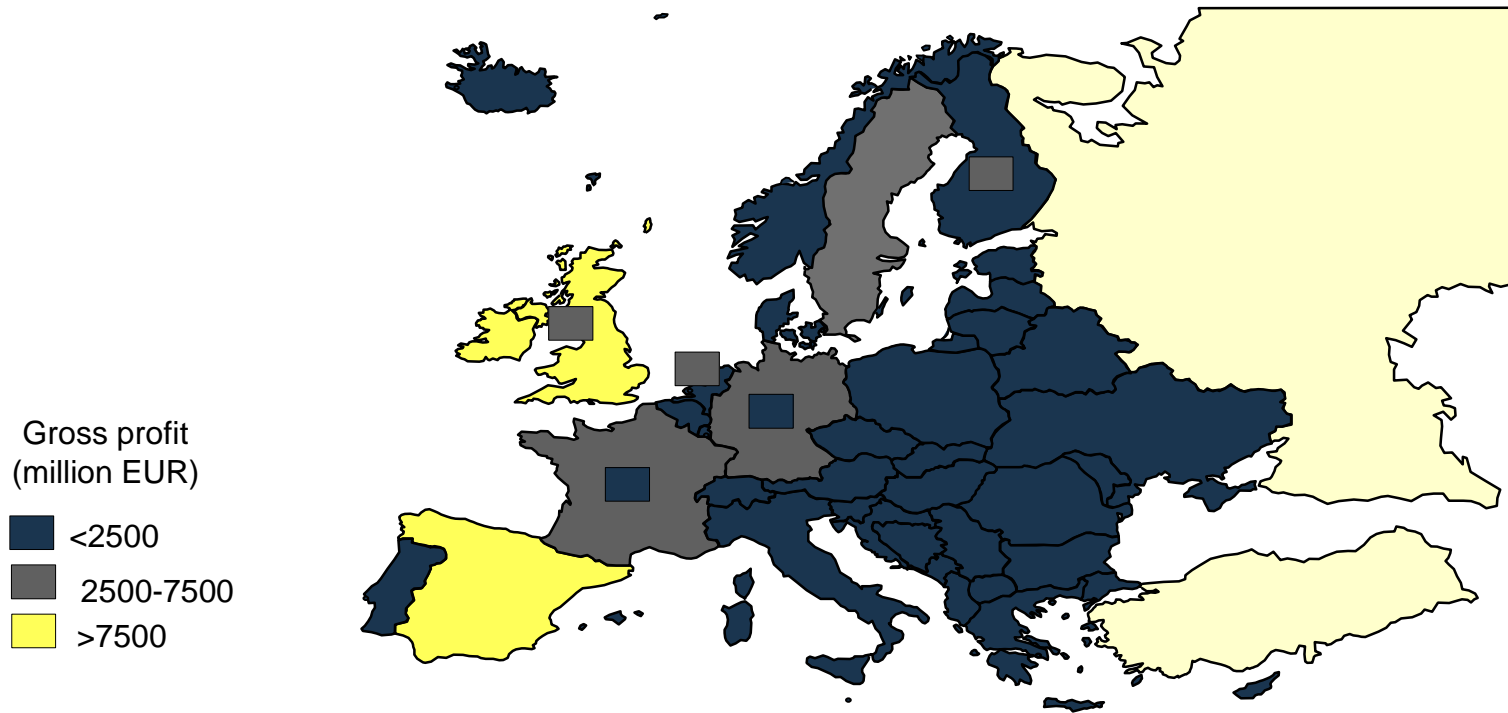


Finland and Spain is followed closely by Germany, France, the UK and Sweden.

European ICT industry profits by country in 2010

In 2010, the UK has become the most profitable ICT market in Europe, and the second best country was Spain.

ICT profits in Europe by country in 2010 (million EUR)

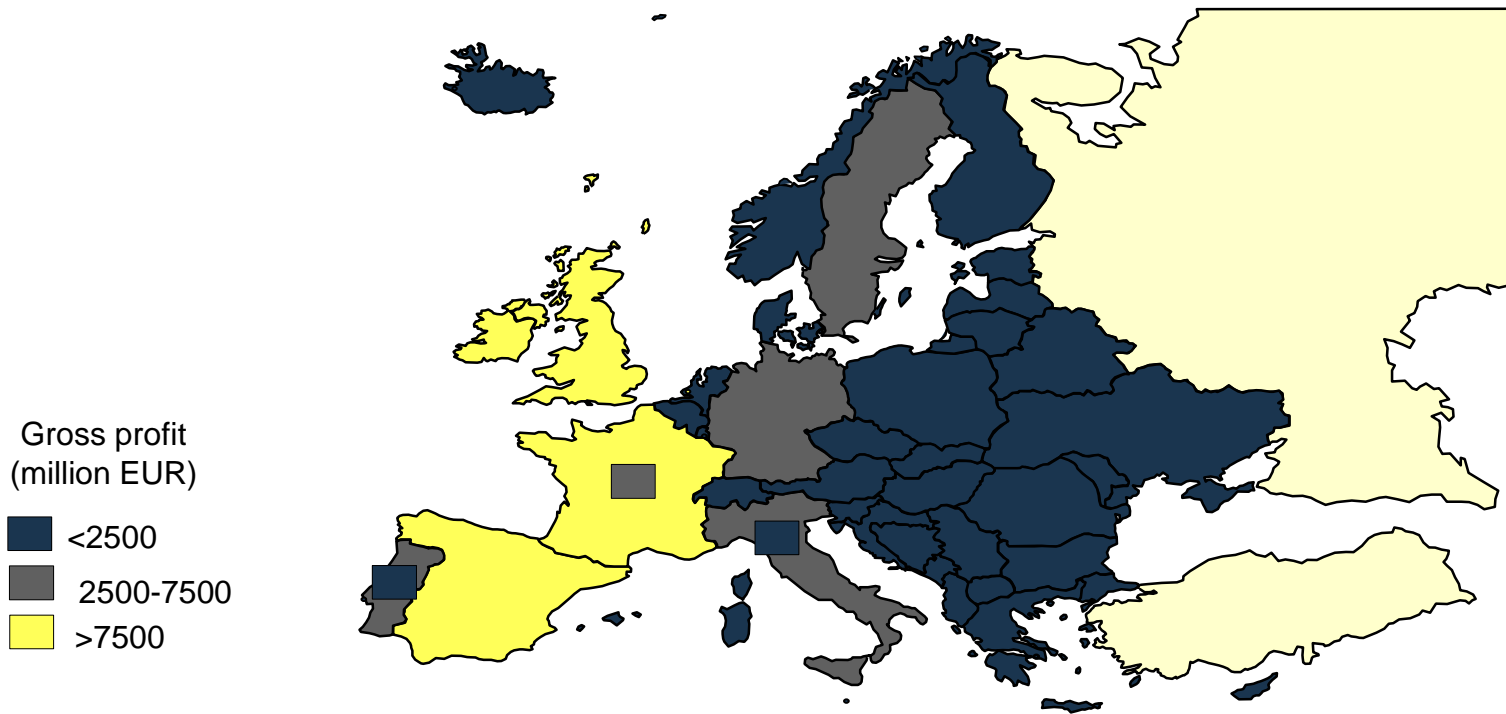


The UK has produced an amazing growth in this category from last year, managing to register profits over EUR 10 billion.

European ICT industry profits by country in 2011

In 2011, two other countries join the UK, by registering profits over EUR 10 billion in the ICT industry, France and Spain.

ICT profits in Europe by country in 2011 (million EUR)

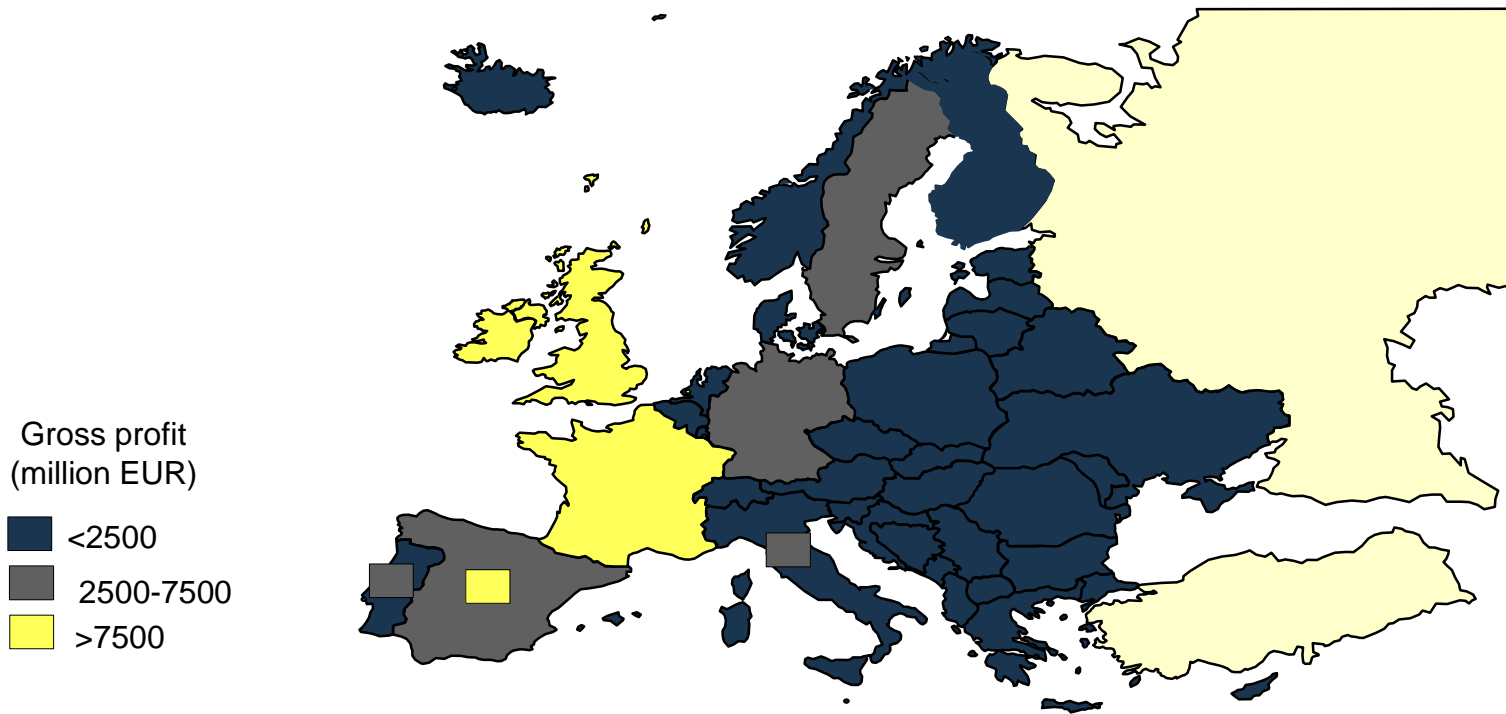


The constant growth in profits lead Spain to the top of the list, but as France had a sudden increase in profits, the number of the leading countries has grown to 3.

European ICT industry profits by country in 2012

The UK remained the most profitable market, and Germany reached a higher category, due to its constant growth over the years.

ICT profits in Europe by country in 2012 (million EUR)

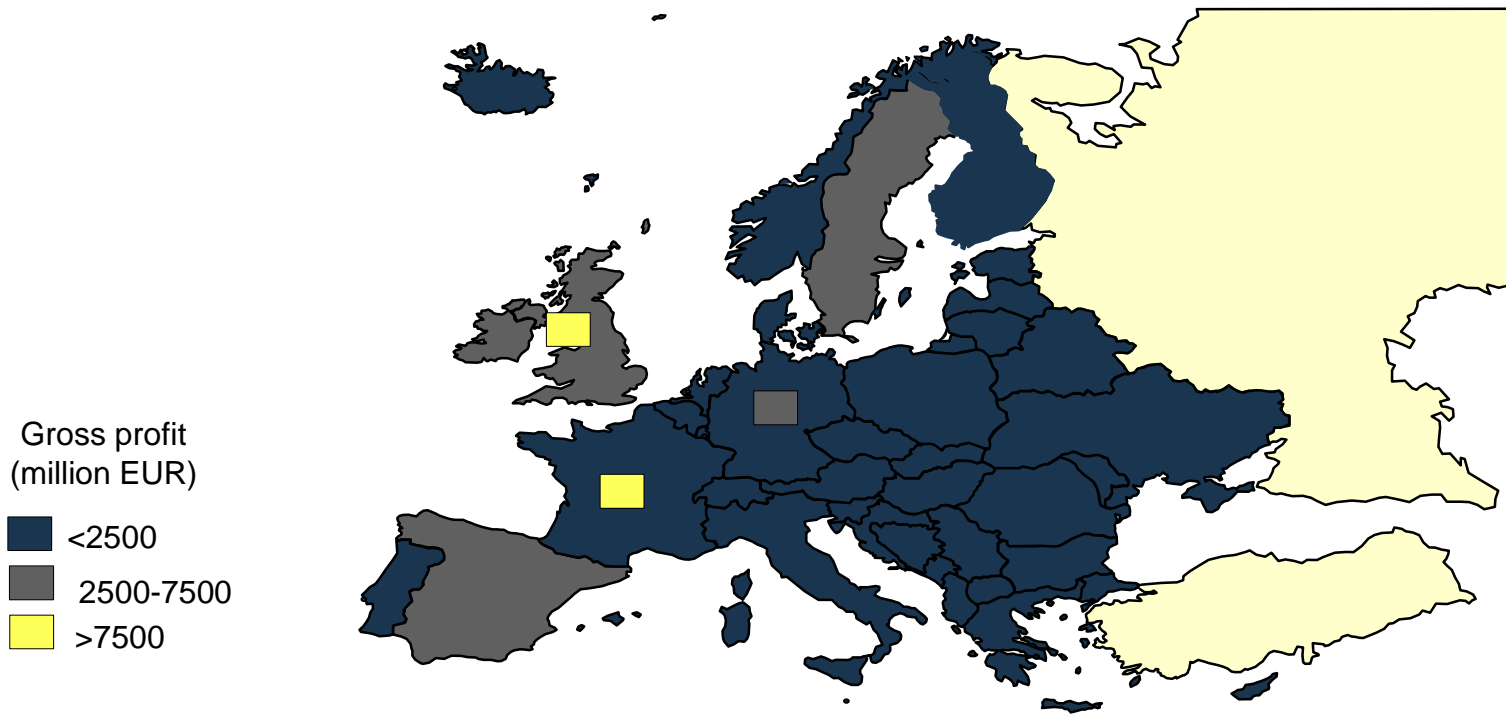


Profits are starting to go downhill compared to last year. Even the UK registered lower profits than in the previous year.

European ICT industry profits by country in 2013

2013 was a bad year for the ICT industry. Spain managed to stay on top, but many countries experienced decreased profits, and some of them registered losses.

ICT profits in Europe by country in 2013 (million EUR)

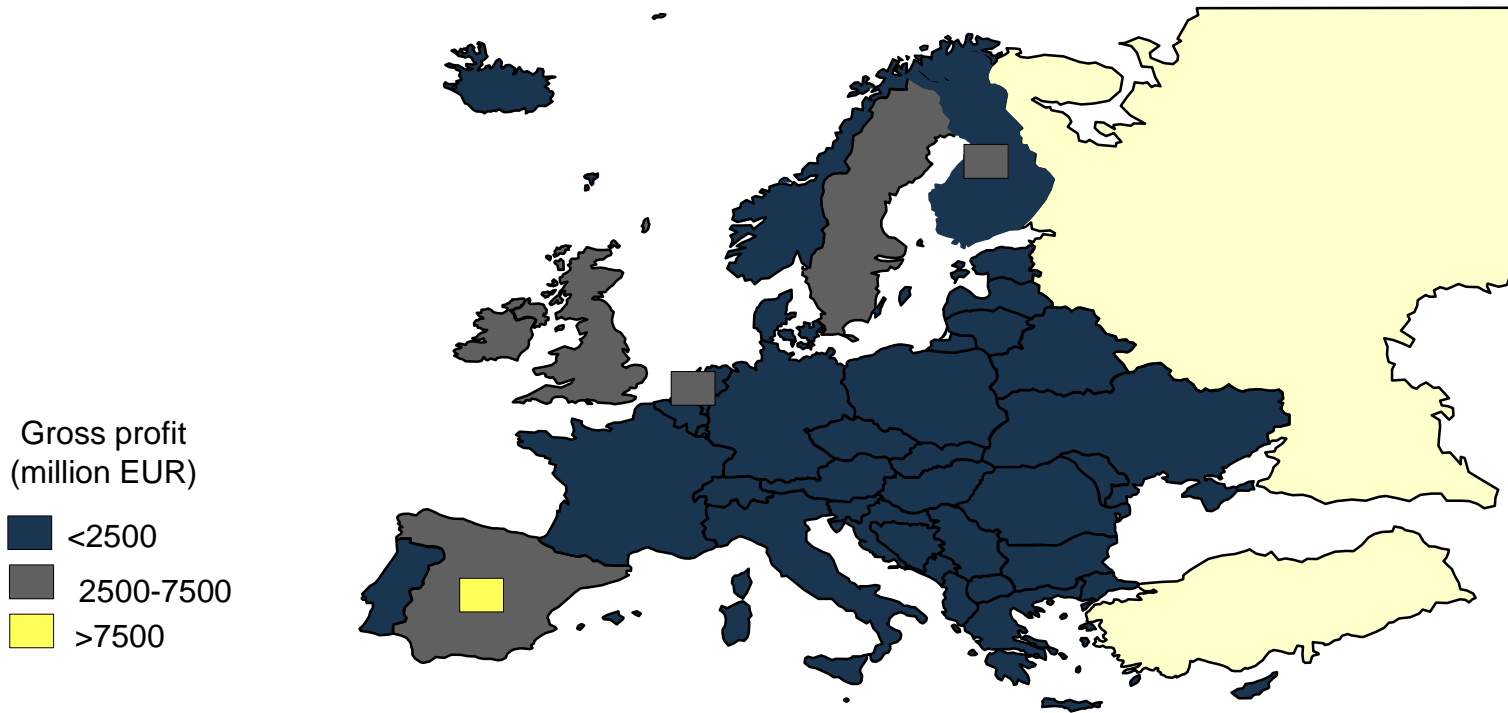


In the last 5 years clearly the UK was the most profitable market for the ICT industry, while many other countries registered constant but smaller profits e.g., Germany, Spain, Ireland, and Netherland.

European ICT industry profits by country, 2009-2013

2013 was a bad year for the ICT industry. Spain managed to stay on top, but many countries experienced decreased profits, and some of them registered losses.

European ICT industry profits by country, 2009-2013 (million EUR)

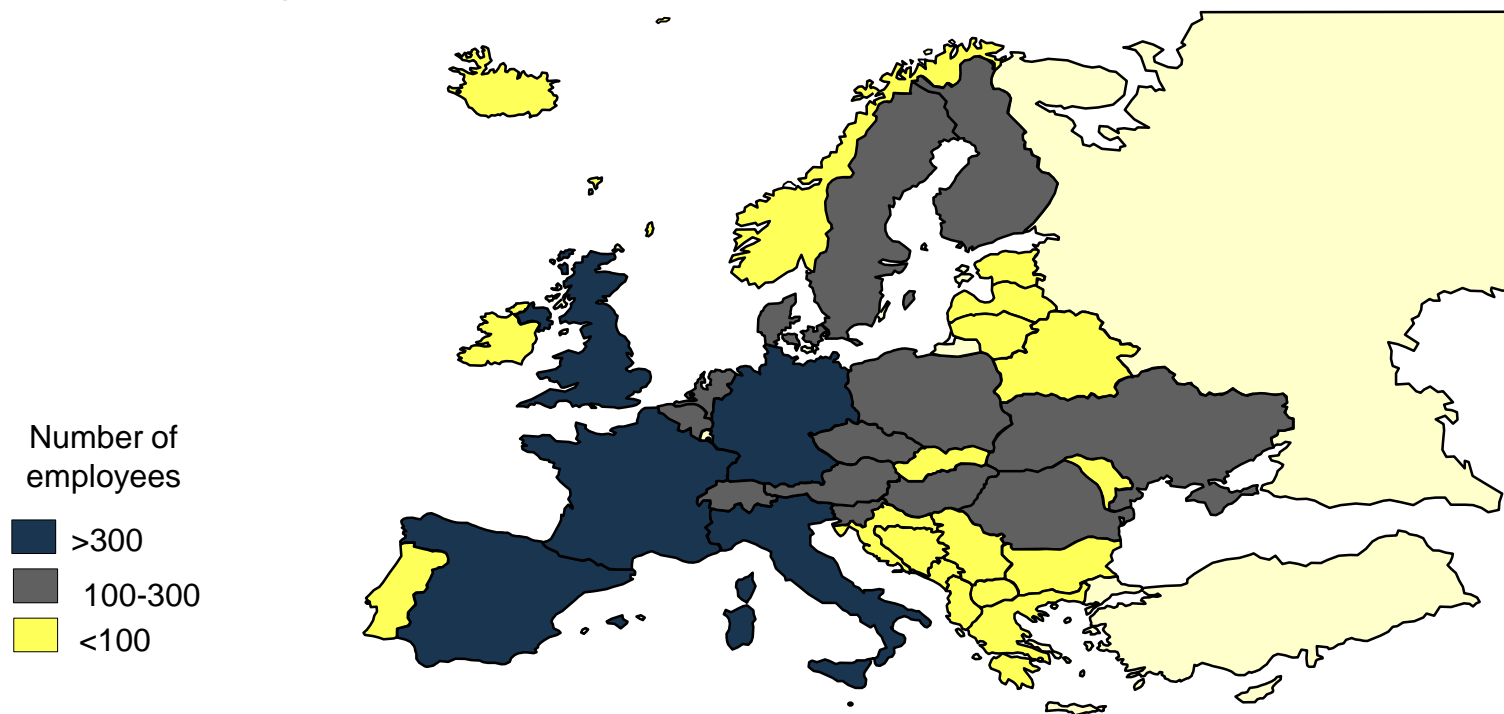


In the last 5 years, the UK had the most profitable ICT market, while many other countries registered constant but smaller profits e.g., Germany, Spain, Ireland, and Netherland.

European ICT industry by employees in 2009

Germany has the highest number of employees in the ICT industry followed by France, UK, Italy, and Spain in 2009. These countries have over 300 thousand employees.

The largest ICT markets in Europe based on employment numbers (thousands capita)

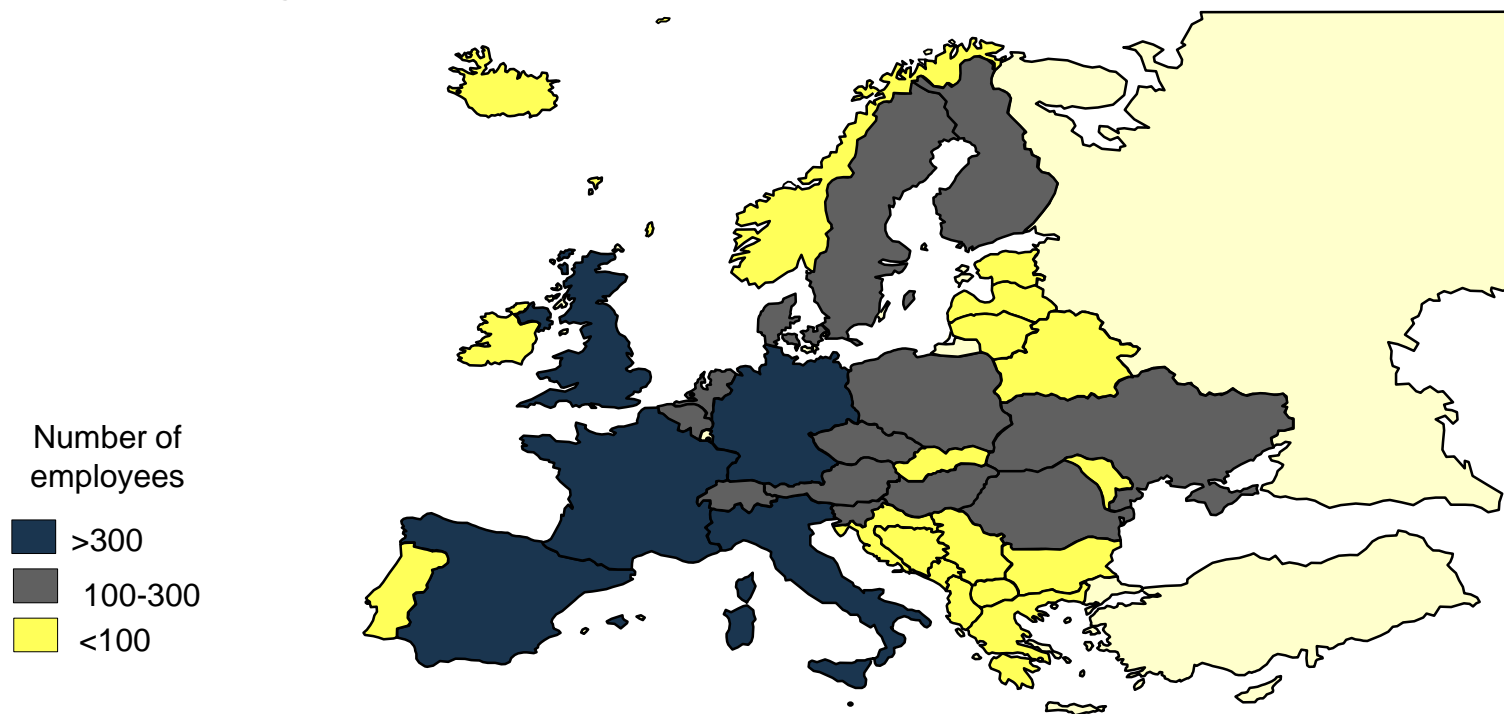


The highest number of employees in the European ICT market works in **Germany**, over **850 thousand** people. Germany is followed by the UK, France, Italy and Spain, as these **5** countries have over 300 thousand employees.

European ICT industry by employees in 2010

The UK is the biggest ICT industry employer followed by Germany. The ICT industry total employment is constantly increasing.

The largest ICT markets in Europe based on employment numbers (thousands capita)

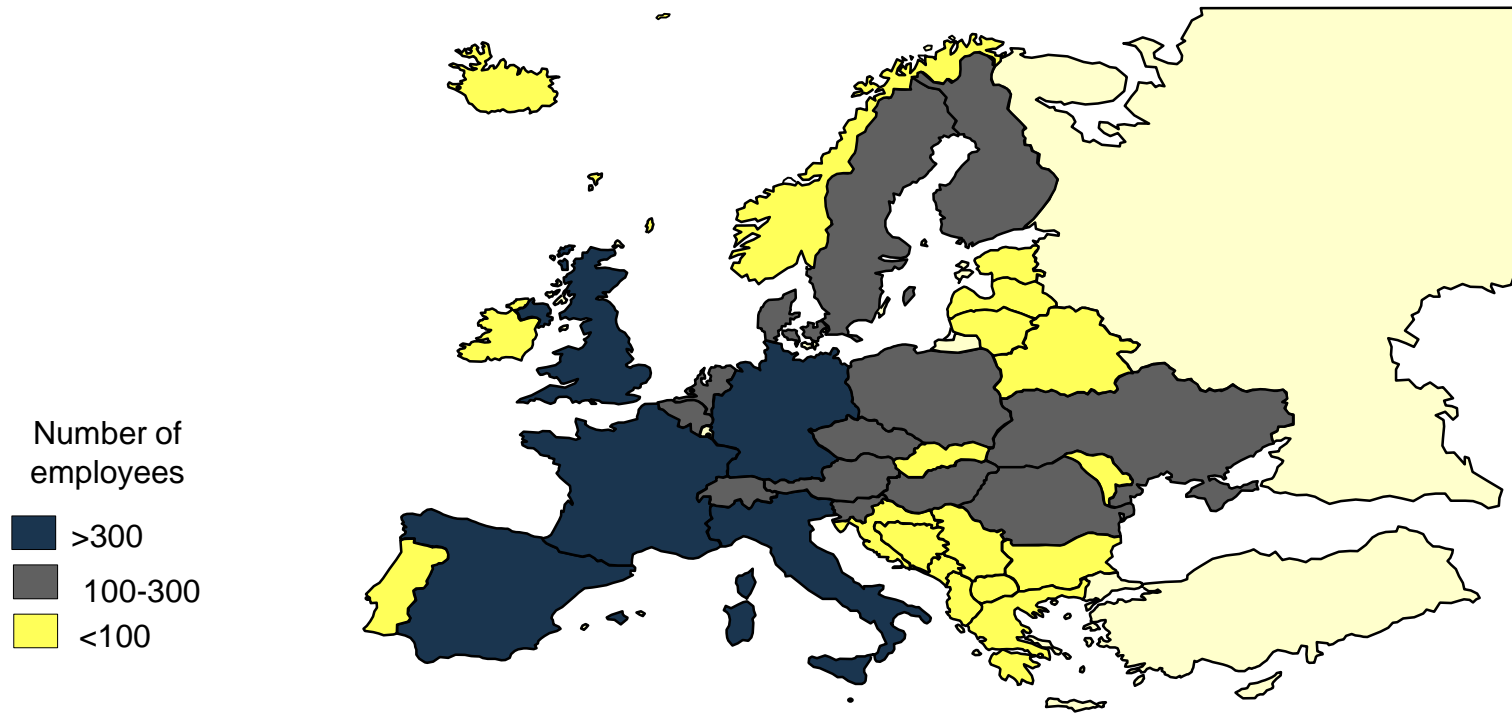


The number of European ICT employees reached **8.36 million** in 2010. The **UK** has the highest number of employees, with over **1 million** capita, and is followed by Germany, France, Italy and Spain.

European ICT industry by employees in 2011

The number of employees has been increasing constantly. UK maintains the first position. Romania's employment number is over 110 thousand.

The largest ICT markets in Europe based on employment numbers (thousands capita)

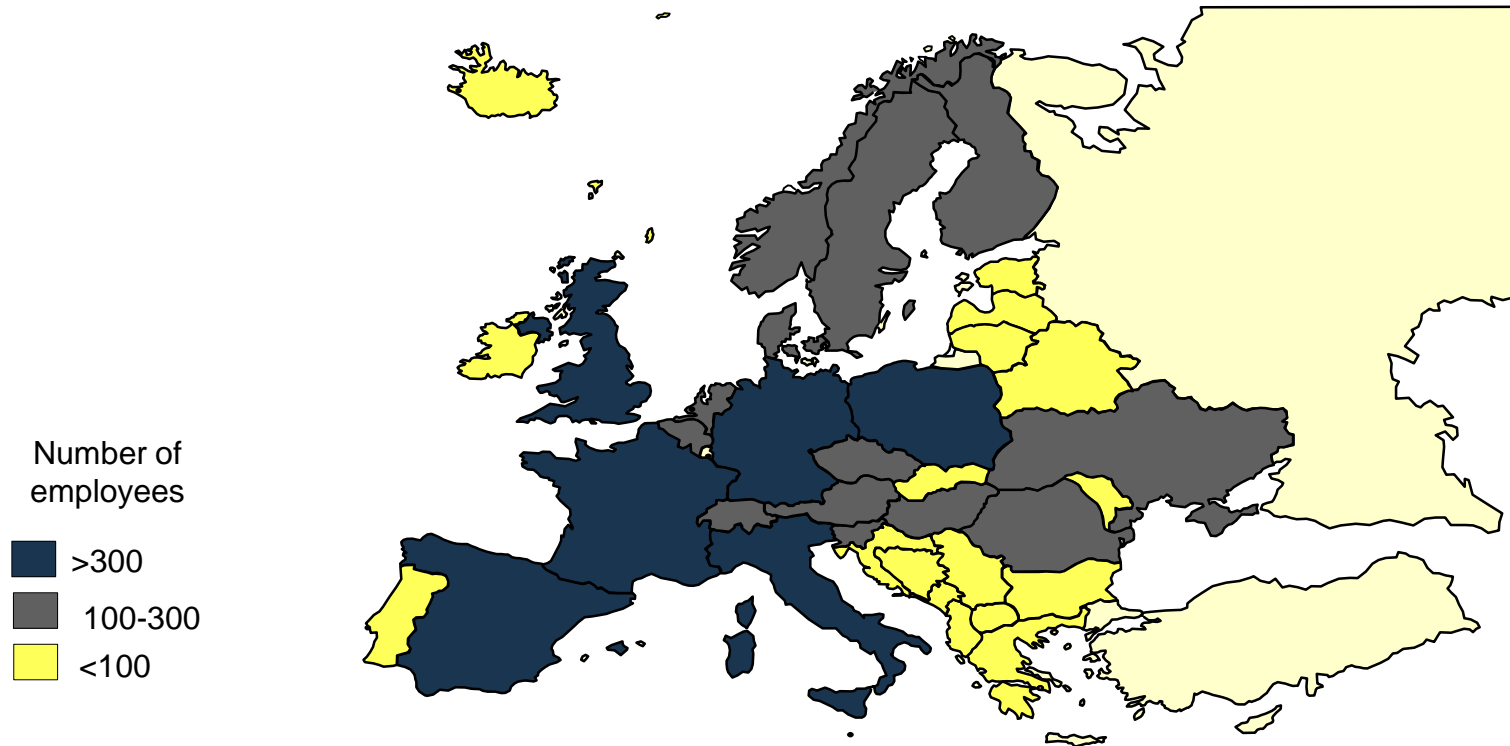


The market leader is the **UK**, and the total number of employees is **8.7** million. The UK is followed by Germany, France, Italy and Spain. **Romania's** employment number has increased over **110** thousand.

European ICT industry by employees in 2012

UK has the highest number of employees in the ICT sector with 900 thousand. Norway's number of employees has increased over 100 thousand and Poland's over 300 thousand.

The largest ICT markets in Europe based on employment numbers (thousands capita)

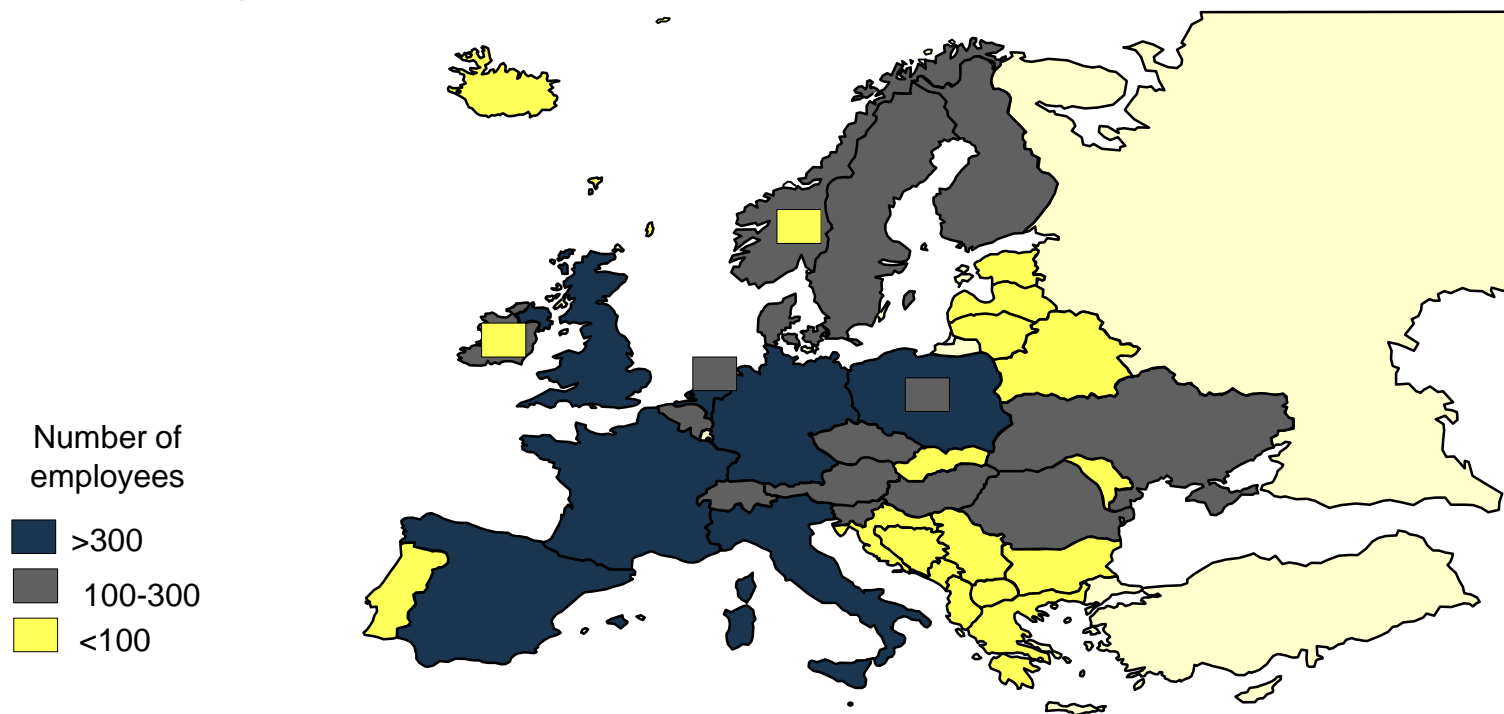


The market leader is the **UK**, and the total number of employees was **9.07** million in 2012. **Norway** employment number has increased over **100** thousand. **Poland** employee number has increased over **300** thousand.

European ICT industry by employees in 2013

UK has the highest number of employees in the European ICT market. Netherland's employee number has increased over 300 thousand and Ireland's over 100 thousand.

The largest ICT markets in Europe based on the number of employees (thousand capita)



The most ICT employees work in the **UK**, over 1.4 million followed by **Germany, France, Italy, Spain, and Poland**. The total European ICT employment number was **9.43** million in 2013. The number of employees in the **Netherlands** has grown **over 300 thousand**, and in **Ireland** has reached **100.5 thousand**. Romania has over **100 thousand** ICT employees.