

**Understanding the impact of outsourcing in the ICT sector to strengthen the capacity of workers' organisations to address labour market changes and to improve social dialogue (IMPOS)**

***Final Report***

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## 1. INTRODUCTION

The ICT sector, as both developer and user of key technologies for coordination and communication, is central to the European economy. Hence, developments in the ICT sector tend to be interpreted as forecasts of wider developments in the world of work. As ICT companies are on the technological forefront, their strategies and modes of work organisation are likely to pioneer new and exemplary modes of working and of organising work – for better or for worse. The outsourcing and offshoring of work has been a part of these strategies for decades and has presented various challenges for trade unions (Bruyn and Ramioul, 2006; Drahokoupil, 2015). In spite of this importance of the sector, company strategies are not just influenced by technological possibilities. Other influences also play a part and shape the very use of technology: market pressures, the restructuring strategies of the sector's clients, the demands for skill and talent, access to markets, and liberalisation policies in telecommunications in particular. For years outsourcing and offshoring affected mainly customer services and other labour-intensive functions. In recent years, we are seeing outsourcing changing its quality: it has become more '**systemic**', has begun to affect '**core**' functions such as R&D or network operations, and companies find an increasingly **wider range of locations and providers** to outsource and offshore to. Even more recently, we are seeing technology driven market- or community-based forms of accessing potential workforces developing (crowdsourcing).

This mapping of outsourcing and offshoring in the ICT sector has three dimensions that are interrelated but should not be confused:

- the **functional**, with regard to sector-specific business activities such as maintenance, customer service, R&D, network operations, software development etc.;
- the **spatial** and **country/region**-related
- and the **company-specific**.

Put more simply, we are asking **what** telecom and ICT functions are outsourced or offshored, i.e. shared services, field services, network operation and maintenance, IT services and so on, **where** the function is moved to, and **by whom to whom**.

This report is based on a broad desk research relying on scientific sources, company reports, the European Restructuring Monitor and various press releases, online news and business studies from consultancies. In addition, we draw on interviews conducted with companies' worker representatives and managers. For trade unions' experience we conducted a small e-mail survey among representatives of UNI's member unions with the help of UNI and the project's Advisory Committee. Chapter 3 introduces the general mechanisms and the terminology of outsourcing and offshoring. Chapter 4 investigates the functions and activities in the ICT sector that have been outsourced or offshored and thus outlines the "history" of ICT outsourcing as it is mirrored in the research literature. The closer we come to the present, the more it is based on publications from business studies and consultancies. Chapter 5 outlines the spatial and national dimension, based on the studies of OECD, some research and consultancy literature. Chapter 6 presents the company-specific evidence for the Telecom and IT companies that were selected in consultation with UNI Europa for their strategic interest both within the sector and in a union context. This is based on desk and online research, a

search of the European Restructuring Monitor (ERM), and on interviews with union and management representatives. Chapter 7 investigates union strategies and experiences in addressing outsourcing and offshoring in the ICT sector and chapter 8 draws some conclusions.

The methodology applied had to make some concessions to timelines and limited resources in the project, but in a combination of desk and online research, taking consultancy and company documents and “grey” literature into account and validating findings through expert interviews and ongoing discussion with unions and the Steering Group, this report adds some new knowledge to the discussion of ICT outsourcing and offshoring. However, it is worth keeping in mind some methodological constraints: the ERM is based on national press releases reported by Eurofound’s network of national correspondents and has its limitations. National news pay varying attention to outsourcing and offshoring and to the ICT sector (cf. Holtgrewe et al., 2009), and press coverage also depends on other news of the respective day. News on national incumbent telecoms and on multinationals in their home countries are better represented than news on generic and less well-known service providers or of foreign subsidiaries. Incremental developments and gradual relocations in particular are unlikely to be reported. We thus conducted both reference database and Google searches on the subjects of outsourcing and offshoring in the telecommunications, IT and IT services subsectors, and for the company-specific analyses, are relying on the business press, trade journals and technology newsletters as well as the annual reports of key companies. The resulting company case studies were enriched through explorative expert interviews with both union and works council representatives of the companies in question and, where possible, managers of key companies. Interviews were based on a guideline and covered the companies’ outsourcing strategies and experiences. Six interviews were conducted. Trade union experiences and strategies addressing outsourcing and offshoring were covered through discussions with the project’s Steering Committee and a small e-mail survey administered through UNI Europa’s contacts.

## **2. EXECUTIVE SUMMARY**

### **2.1. Outsourcing and offshoring in general – challenges to trade unions**

Depending on the spatial, social and technological organisation of the respective value chain, outsourcing and offshoring may occur locally, regionally or globally, by moving work into owned or partly owned subsidiaries (also called **captives**) or by subcontracting it to an independent company. Two dimensions are distinguished: firstly, where work is relocated (**offshoring**, or nearshoring), and secondly, where the boundaries of the company are (**outsourcing**). Both may be combined in **offshore outsourcing**: the relocation of work to another company in another region or country.

Traditionally, outsourcing and offshoring aim chiefly to access lower-cost or more flexible workforces or organisations. Access to higher specialisation and expertise or proximity to customers also plays a part. Lower cost may be achieved through various interrelated mechanisms: Firstly, simply through lower wages and labour standards in other countries or sectors. Secondly, through specialisation and economies of scale, increasing efficiency and exploiting synergies. This breeds further economies of scale when activities are consolidated, tools harmonised and processes standardised. Either way may entail reductions of staff in the higher-wage countries or labour market segments. For unions, this

creates multiple challenges: job losses in the core companies and in those countries where they have been (more or less well) established; increased options for employers to access non-unionised workforces and bargain for concessions under threats of relocation; increased difficulties for unions to contact and represent their actual and potential constituencies and to co-ordinate interest representation across companies, sectors and countries; also losses in influence over vocational training and the definition of skills in those countries where unions are represented in Skills Councils and vocational training systems.

In recent years there is evidence of a new quality in outsourcing and offshoring. Authors such as Linares-Navarro et al. (2014) write about the “Fine-slicing of the value chain” by multinationals in manufacturing. **Fine-slicing** means “efforts to split the value chain into ever finer modules (sets of activities) that are internally coherent, and to standardize interfaces with other modules to limit the need for extensive communication and coordination. (ibid. p. 114).

Fine-slicing can be interpreted as an instance of the mechanisms of **globalised capitalist competition** at play. It is not a linear process but opens up a range of contradictions for economic actors. Companies drive the competitive process themselves through outsourcing and accessing lower-cost suppliers. To do this, they standardise their products and processes and render them more modular. However, their suppliers develop their business from the knowledge gathered through outsourcing and aim to “move up” their respective value chains (cf. Dossani and Kenney, 2003; Holtgrewe and Meil, 2008b). A standardised and modular product and service can be copied more easily by new market entrants. The original outsourcing companies then find themselves confronted with new competitors: in this case, their former suppliers. Californian value chain experts Zysman and Kenney (2015) call this mechanism the **commodity trap**: globalisation and standardisation of products and processes create markets in which competition is increasingly price-based, putting pressure on both product and service quality and on working conditions.

## 2.2. *Offshoring and outsourcing in IT and telecommunications*

In the ICT sector, for years outsourcing and offshoring affected mainly customer services and other labour-intensive functions. In recent years, we are seeing outsourcing changing its quality: it has become more **‘systemic’** (Boes and Kämpf, 2011), has begun to affect **‘core’ functions** such as R&D or network operations, and companies find an increasingly **wider range of locations and providers** to outsource and offshore to. Even more recently, technology-driven market- or community-based forms of accessing potential workforces are developing (crowdsourcing). The sector has indeed shown interrelated processes of standardisation and industrialisation on the one hand (Barrett, 2005), and also an upgrading of outsourced tasks with subcontractors “moving up the value chain” (Dossani and Kenney, 2003) on the other.

Initially, from the 1990s onwards, in IT simple processes or pieces of the product were outsourced or offshored such as data maintenance, coding or software testing tasks. India, with its relatively cheap, qualified labour force, first emerged as a prime location, followed soon by other emerging economies such as Russia, Vietnam and Central and Eastern European countries (Huws and Flecker, 2004; Holtgrewe and Meil, 2008b; Dossani and Kenney, 2003, 2006) and also Latin America for both Spanish-

speaking and global services (Manning et al., 2010). Meanwhile, former offshoring and outsourcing destinations originate their own offshoring and outsourcing. The newer IT and service outsourcing destinations are distinct from either the high-tech Silicon-Valley-type or the low-cost manufacturing clusters known since the 1980s (Manning, 2013): Chinese, Eastern European or Latin American cities and city-regions provide lower-cost but still skilled and knowledge-intensive services such as software, CAD design, or R&D to a global clientele. They develop around technical universities but different from the high-tech clusters these universities are used less as collaborators in R&D than as “low-cost talent providers” (p. 13).

Offshoring in ICT has become increasingly strategic and systemic, with management strategies pursuing cost savings, proximity to customers, skill availability and innovative capacities in a global context. Indeed, the top-of-the-value-chain and specialised functions of R&D, innovation and systems integration were traditionally assumed to be core competencies that would remain in the originating countries of multinationals. Now, they are no longer immune to offshoring. Even their processes are standardised and teams increasingly collaborate virtually. Especially for new recruitment in these functions, companies appear to turn to newer and cheaper locations.

For IT and back-office **service outsourcing**, there is a fairly generic process (Miozzo and Grimshaw, 2005): Service providers transfer staff from their clients or buy entire service units off them. In this way, they access local and client-specific knowledge. On the other hand, they have developed standardised processes and routines of learning and project management that are used across countries and outsourcing contracts. Outsourcing specialists are then able to flexibly deploy staff, increase productivity and benchmark performance. This is the way in which outsourcing service providers realise the synergies and economies of scale that clients expect from outsourcing. However, clients may find that this very strategy of lowering cost and **achieving synergies** through service centralisation and outsourcing can generate losses of expertise and **declines in quality** (Eikermann et al., 2013).

In **telecommunications**, market liberalisation and privatisation have played a key part. Through liberalisation, the former state-owned monopolists and incumbents were joined by new players in the markets, and the markets diversified into cable, mobile, broadband etc. From the 1990s onwards, competition was shaped by transnationalisation and globalisation, the digitalisation of telecom technology which is gradually converging with the Internet, and a rapid trade in telecom companies through a sequence of mergers and acquisitions. Outsourcing and offshoring became key parts of telco strategies to cut costs, improve competitiveness and transfer some of the risks of investment into new technologies. This first addressed the labour-intensive services of **customer support** (Blutner et al., 2002; Doellgast and Greer, 2007). There, cost savings could be achieved already through domestic outsourcing, moving workers outside the collective agreements of the incumbent telcos into the less organised sectors of, for example, **business services**. **IT services** might also be outsourced. Network operations, sales and billing were retained and considered core functions at the time. However, in the 2000s, **network operations** were increasingly unbundled or fine-sliced. First, less critical sub-functions of inventory or spare part management or field services were outsourced, then entire network operations. Telcos may expect some 20-35% of operational cost savings in this way (Claussen et al., 2012).

Telecommunication **equipment vendors** now take over these operations from telcos. They are European multinationals such as Ericsson, Alcatel-Lucent or Nokia (merged with Alcatel-Lucent in spring 2016). These companies are under considerable competitive pressure from Chinese state-backed equipment manufacturers like Huawei or ZTE, and are cutting costs and downsizing personnel while making that transition. Increasingly, established US providers of generic hardware such as Cisco, IBM or HP provide the hardware that telco networks are running on. New Silicon-Valley-based network software developers enter the competition unburdened by the legacies of telecommunications (Holtgrewe 2014).

Hence, former core functions across the sector are no longer immune to offshoring and outsourcing. Functions are re-divided across value chains and subsectors, under multiplied competitive pressures, by downsizing companies that run complex technological operations increasingly through virtual collaborations, and also under ongoing uncertainty over business models and industrial policies.

### **2.3. Clouds: Moving slowly but dynamically**

Emerging cloud services add further dynamics to offshoring. Data and computing capacities can be stored at and accessed from different places. Work processes are standardised accordingly. Hence, further and accelerated relocations of work are possible. Clouds are both offered as an outsourced service by varying alliances of telcos and IT providers, and are used to run the space-independent parts of companies' own operations. Cloud services currently play an important role in the provision of IT services and for hosting network management systems. Indeed, they tie into the trend of centralising network management functions in network operations centres and will enable further remote network management.

However, it may be early days to take "the cloud" as a given driver of outsourcing that brings another leap in the quality of restructuring. The transition to cloud operations is not trivial technologically, and the IT and telecommunications companies making that transition are already virtualised, spatially distributed and massively downsizing and restructuring. Cloud computing also requires complementary investment on the ground, in space-bound, physical network infrastructures that provide reliable broadband connectivity to "the cloud" – and there appears to be some uncertainty over the sources of that investment. In between competitive pressures and the need for innovative capabilities, companies are likely to find that building clouds requires more tightly co-ordinated collaboration among reliable and innovative teams than current restructuring modes allow for. Hence, technological transitions may take longer than visionaries expect, especially when complex systems need to be integrated across companies and sectors.

### **2.4. The company cases: common patterns and variations**

All the companies covered in the report have histories of active outsourcing and offshoring that are in line with the sector-wide observations discussed above. However, there is some variation in geographical range and the degree of centralisation. Among telecommunication companies Orange, Telefónica, Deutsche Telekom and Vodafone, not all of them shed all of their network management.

Especially Deutsche Telekom aims to realise the synergies and cost-savings of consolidating offshored services by itself, keeping them in owned subsidiaries abroad. Either way, staff is likely to be reduced in higher-cost countries, although there are not always immediate relocations of work or entire units. Slower, more gradual shifts of jobs are not always easy to observe. In recent years, the functions affected by outsourcing and offshoring have shifted, again.

The first restructuring moves aimed at cost-cutting affected the non-core business functions, such as **customer services**. With increasing internationalisation of both telcos and their service providers, customer service was offshored. The English-speaking world pioneered this development, but large service providers from France and Germany soon transnationalised their operations as well and continue to do so. With the internationalisation of telcos and the emergence of multilingual call and service centres, transnationalisation of customer services no longer follows traditional (post)-colonial language lines: Orange operates locations in French-speaking countries outside Europe but also in Central and Eastern Europe. Telefónica outsources to big and internationally operating call centre providers, such as its own former spin-off Atento. Deutsche Telekom somewhat reduced its call centre outsourcing after very active years between 2007 and 2011 and is currently bringing some work back inhouse. The reasons usually given for insourcing are expectations of better service quality, but we suppose that some technological change is involved as well: on the one hand, routine customer service can be replaced by online-based self-service, on the other hand, telcos offer more complex services and packages (such as mobile broadband, multimedia) that generate new support needs and sales opportunities. Still, offshoring of customer services is by no means obsolete. Vodafone relocated customer services to subsidiaries in Central and Eastern Europe (Hungary, Romania), Portugal, India and Egypt. Call and service centre provider Teleperformance has large workforces in the Philippines, Mexico or Brazil, and within Europe, expands multi-lingual operations in Portugal and Greece.

**IT services** were also among the early functions to be outsourced. Main providers of outsourced IT services to telcos and indeed, across nearly all sectors of the economy are IBM, HP, Atos or IT-consultancies such as Cognizant or Accenture. What originated as outsourced IT services has frequently developed into broader business process outsourcing that also affects **administrative and back-office tasks**, accounting, finance, procurement or HR. Nevertheless, strategies of offshoring or offshore-outsourcing vary, and especially Deutsche Telekom pursues a strategy of relocating work to its own subsidiaries in Central and Eastern European countries to consolidate business functions and benefit from efficiencies and lower wages. IBM is a key player in IT and business process outsourcing. Over the past years the company not only transformed its business from manufacturing to IT services, but has also been continuously moving work to offshore locations, India on its forefront, and to nearshore locations in Central and Eastern Europe. It has been solidly downsizing in Western Europe, apparently to compensate for declining sales. IBM appears to make what the company calls “workforce rebalancing” a regular practice, shifting workforces to expanding markets and business areas. Its explorations of crowdsourcing from 2012 onwards with an aim to replace a large proportion of employees (and indeed its HRM) by a pool of freelancers met with considerable internal resistance by works councils and project managers themselves (Kawalec and Menz, 2013) and reportedly the explicit crowdsourcing programme has been stopped. Visible expansions of IBM in Europe mostly have occurred in the well-known shared service locations in Poland, Romania and Slovakia. Atos is another integral part of the internationalisation of the European telecommunications sector, as it provides

outsourcing for Nokia, KPN, Orange, Telefonica/O2 or Telecom Italia and hosts offshore locations all over the globe. In Europe, it appears to be expanding mostly in Poland and Romania.

Over the years, ICT companies and their service providers thus have gained experience in outsourcing IT, customer and back-office services and consequently, have transnationalised and consolidated these functions. With ongoing competitive pressures and tightening markets in telecommunications and also IT in Europe, new ways of reducing costs are being pursued. Functions formerly regarded as 'core' became outsourcing and offshoring targets: first, **field services**, then entire **network operations** are now provided mainly by equipment vendors, such as Ericsson, Nokia, Alcatel-Lucent, Huawei or ZTE. This marks a large step in outsourcing in the telecommunication sector that affects all telcos to varying degrees. Ericsson shows an exemplary development of network services: It has received former telco workers to provide field services in the countries concerned but has consolidated the virtual parts of network operations in its European Network Operations Centre in Romania and at offshore locations in India, China, and Mexico.

As a result of these various outsourcing, offshoring and restructuring moves, in recent years, both ICT multinationals and telcos have had widely-published rounds of job cuts across the board. Locations have been closed in the remaining manufacturing operations and in services. Such downsizing has centrally affected multinationals' home countries that of course tend to be high-wage countries.

## 2.5. *Regional priorities for trade unions*

Regionally, Poland, Romania, and Portugal are obvious first priorities for UNI Europa's efforts. They have been identified from the company case studies in conjunction with the general sectoral and geographical patterns observed in chapters 4 and 5. New sites of customer and shared services or IT are not necessarily opening or expanding in the metropolitan regions. Poland has had customer service centres, shared services, IT R&D and data centres relocated from most companies in the study, in particular Orange, IBM, Atos and Teleperformance. They are distributed in the various regions of Kraków, Katowice, Wrocław or Gdańsk. Romania has attracted customer service, shared services and Ericsson's and Vodafone's network operations. They are mostly located in and around Bucharest, but Deutsche Telekom has operations in Timisoara and IBM has a site in Brasov. Portugal emerges more recently as the site of customer service centres from Teleperformance, Telefónica and Altice, and shared services of Vodafone. After the 2008ff. crisis, the country apparently has joined the New EU Member States as a nearshoring site for telecommunications and customer service.

In CEE otherwise Hungary remains an important site for IT and also telecommunications equipment, with the longer offshoring tradition of former Siemens software development from Austria (Holtgrewe and Meil, 2008a, 2008b; Huws, 2003) and others. In Slovakia, Bratislava is a well-known service centre location and IBM has shared services in Brno and Košice. T-Systems also has a location in Košice. In the Czech Republic, Ostrava has a service centre of former Telefónica service provider Atento. Bulgaria also aims to develop its ICT and business process outsourcing industry (Vladikov 2016) but so far has very limited union presence in the sector. In cost-driven customer service in particular, there have also been attempts to relocate work to Turkey, but for multilingual services recruitment appears to be difficult. Future nearshoring destinations may also include the West Balkan countries.

Outside of Europe, the “global” offshoring locations of India and, for customer and back office services, the Philippines continue to play a part, especially for the providers of generic customer or IT services such as IBM and Teleperformance. French-based companies, but also Vodafone relocate functions to North Africa. Morocco appears as an offshoring destination for customer services of Orange and Teleperformance, and global and managed services and systems integration of Atos. Tunisia also has customer service centres, and Egypt hosts Vodafone shared service and data centres and customer service locations by Teleperformance.

## **2.6. Unions’ responses and strategies**

Unions’ responses to telecommunications and IT companies’ outsourcing and offshoring strategies vary with the respective country’s industrial relations system and also with the history and operation modes of interest representation in the country and company in question. Generally, unions have had it easier to pursue a ‘domestic’ and somewhat defensive strategy than an inclusive and universalist one. However, increasingly, this is seen as less of an alternative and more of a two-pronged strategy. The general conclusion is somewhat obvious: in the well-regulated sectors and companies, such as incumbent telcos in countries with comprehensive industrial relations outsourcing can be influenced to some extent. Examples show that successful initiatives still tend to be domestic, and mostly located in countries and companies where outsourcing and offshoring originate. Unions are also addressing double standards for home country and foreign locations as in the ‘ONE Telecom Union Alliance’ addressing T-Mobile and Deutsche Telekom’s strategies, or in the activities of the SAP European Works Council.

However, unions are learning that a purely defensive stance is increasingly unsuccessful as offshoring proves impossible to prevent. Transfer of undertakings protects standards for a limited time only. Providers of outsourced services tend to rely on new groups of workers and more flexible employment contracts, sometimes incrementally. Different standards for “old” and “new” workforces are sometimes inevitable but need to be limited and complemented by organising efforts among new employees – who will be sceptical of unions seen as protecting insiders only. Organising the providers of outsourced services simultaneously appears to be the most promising strategy. Ideally, this should happen faster than companies can lower standards for work.

Within Europe, and with regard to Central and Eastern Europe in particular, initiatives are taken by few Eastern European unions and some European Works Councils. They can develop in offshoring destination countries where local unions exist and have the capacities to utilise European legislation and international support. Romanian SITT has gone beyond the telco sector and organised outsourcing companies Wipro (an Indian IT and business process outsourcing multinational that has been backshoring work to Europe for a while) and Accenture (Iancu 2016). However, Western or Northern unions sometimes have difficulty finding or making contact with counterparts in Eastern offshoring destinations. Finding a local collaborator is apparently a problem in the Baltic states that have become nearshoring destinations for Nordic companies in particular, and in Bulgaria.

In the less organised countries or regions, it seems that some institution building needs to take place first. This may need some engagement with a wider variety of local and regional actors, political

contacts in the regions, civil society, universities and vocational training institutions and so on. For unions and their associations this is a tall order and probably not a task to take on one's own but in collaboration with other political and regional development or innovation actors.

However, the current trend of consolidation of network operations, customer service and increasingly, back-office services may even work in favour of unions as a small number of larger locations are more amenable to organising and collective action – and more risky to completely relocate. The most favourable configuration for unions appears to be outsourcing and transfers of operations to a large and somewhat organised specialist like Ericsson or SAP, or to Tech Mahindra in Denmark or possibly, Accenture in Romania. Indeed, Ericsson worker representatives report increasing unionisation with field services and network operations transferred to Ericsson. In these contexts, unions can draw on existing transnational collaborations and can demonstrate successes to further expand collaborations. Yet, digitalised operations and processes are still footloose, and we have seen that through increases in experience of companies and further development of technologies and management tools, outsourcing and offshoring breed further outsourcing and offshoring. As unions increase their experience as well, it is essential to remain attentive to future and emerging developments and build up analytic and forecasting capabilities.

### **3.      **OUTSOURCING AT LARGE – GENERAL OBSERVATIONS AND TERMINOLOGY****

Traditionally, outsourcing and offshoring aims chiefly to access lower-cost or more flexible workforces or organisations. Access to higher specialisation and expertise or proximity to customers may also play a part in companies' restructuring. Lower cost may be achieved through various interrelated mechanisms: Firstly, simply through lower wages in other countries or sectors, less favourable collective agreements or working outside of collective agreements. This may also entail reductions of staff in the higher-wage countries or labour market segments. Secondly, through specialisation and economies of scale, increasing efficiency and exploiting synergies. This may breed further economies of scale when activities are consolidated, tools harmonised and processes standardised. However, there may be a reverse logic as well: outsourcing to cheaper and still skilled and flexible workforces may lessen some of the pressures for efficiency and streamlined processes when these professionals compensate for inefficiencies and frictions at lower cost (Flecker, 2012; Huws, 2003). Beyond cost considerations, value chains have been described as "risk-and-flexibility transfer chains" (Frade and Darmon, 2005): companies also externalise volatilities and risks onto others in the value chain. For instance, if a company outsources its customer service, it is the service provider who has to manage business fluctuations and to hire or dismiss staff appropriately (Arzbächer et al., 2002). It is for this reason that studies on outsourcing and job quality have shown in many cases that outsourcing and offshoring leads to a fragmentation of employment (Marchington et al., 2005; Flecker, 2010): workers on one site or project may be working for the same or a different organisation. They may have completely different contracts with their respective employers. Frequently, employment conditions vary between cohorts who were transferred or were hired at different points in time. For many groups of workers, quality of work has been shown to decrease rather than improve with outsourcing –

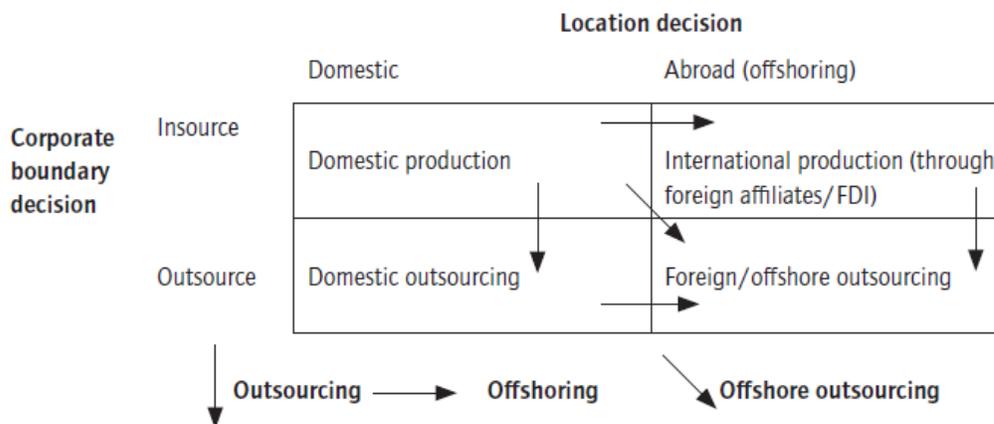
although high-tech multinationals in offshoring destination countries still offer comparatively favourable working conditions.

For unions, this creates multiple challenges: job losses in the core companies and in those countries where they have been (more or less well) established; increased options for employers to access non-unionised workforces and bargain for concessions under threats of relocation; increased difficulties for unions to contact and represent their actual and potential constituencies and to co-ordinate interest representation across companies, sectors and countries; also losses in influence over vocational training and the definition of skills in those countries where unions are represented in Skills Councils and vocational training systems.

### 3.1. Outsourcing and Offshoring – the terminology

Depending on the spatial, social and technological organisation of the respective value chain, outsourcing and offshoring may occur locally, regionally or globally, by moving work into owned or partly owned subsidiaries (also called **captives**) or subcontracting it to an independent company. Drahekoupil (2015a) provides a handy overview in Figure 3.1. This matrix distinguishes two decisions: firstly, where work is relocated to, and secondly, where the boundaries of the company are. When work remains in a company at a local site, we talk about **domestic work** (quadrant domestic production). When work is done locally (perhaps even at the same site as before), but is moved to another company, this is called **domestic outsourcing**. The third option is **offshoring** work to another location (region or country) but retaining it within the company structure (quadrant international production), also known as **captive offshoring**. This can imply moving work to foreign affiliates or company-owned subsidiaries and often involves foreign direct investments (FDI). The final choice of relocating work is **offshore outsourcing** and this includes both, the relocation of work to another company in another region or country (quadrant foreign/offshore outsourcing). The arrows in the figure mark possible, but not deterministic shifts and transitions between modes of offshoring or outsourcing. Moving work back to its original company or country is called back sourcing.

**Figure 3.1: Generic outsourcing and offshoring. Source: Drahekoupil, 2015a, p. 11**



Offshoring and outsourcing have both a company-specific and a national or regional dimension. Obviously, it is **companies** that take the decisions of how to “make or buy” products and services and where to locate production and service delivery. Yet, offshoring is frequently described as a pattern between countries, and indeed, **countries** are known to have distinct patterns of shifting work (Kirchner, 2015). These patterns can be partly explained by their labour markets and employment regimes and regulation, and also by language, colonial and historical ties (Holtgrewe et al., 2009). For this reason, we provide a look at developments on the national level in chapter 5. For the relocation of work to neighbouring countries or within a continent, within Europe in particular, we use the term **nearshoring** (opposed to offshoring, which most often means the relocation of work to another continent). Exploring the back-and-forth of outsourcing and offshoring in European companies, we use the terminology of outsourcing/offshoring **origins** and **destinations** both for countries and companies. Among companies, outsourcing relationships are also described as those of **clients** and **service providers** or **(sub-)contractors**.

Outsourcing and restructuring are self-enhancing. When functions are outsourced and both clients and contractors gain experience with outsourcing, further and more outsourcing is likely to follow (Huws et al., 2009). In other words, restructuring “can become a drug where the more you do, the more you have to do to get the result” (Froud et al., 2006, p. 120) when the obvious areas of cost-cutting and relocation have been exploited. Furthermore, the outsourcing of work frequently involves a loss of knowledge and management capability, making it difficult and expensive to bring work back in-house. Nevertheless, results of restructuring have been found to be rarely evaluated ex-post (Lynn and Salzman, 2006), and some failures involving abandoned projects or back-sourcing of subcontracted work have been reported (Holtgrewe and Meil, 2008b; Schönauer et al., 2013).

### 3.2. *The fine-slicing of functions and the consequences*

In recent years we are seeing evidence of a new quality in outsourcing and offshoring. Authors such as Linares-Navarro et al. (2014) write about the “Fine-slicing of the value chain” by multinationals in manufacturing. **Fine-slicing** means

“efforts to split the value chain into ever finer modules (sets of activities) that are internally coherent, and to standardize interfaces with other modules to limit the need for extensive communication and coordination.” (ibid. p. 114)

“some essential activities previously viewed as core activities are being detached from the core and made more offshorable. [...] while companies typically keep their distinctive core activities in house and close to headquarters, they are beginning to offshore essential activities that are close to core activities, i.e. activities that are critical to the company’s competitive advantage.” (ibid. p. 112)

In manufacturing such near-core activities and functions are more likely to be offshored to owned subsidiaries, whereas non-core activities tend to be offshore-outsourced. Captive offshoring is also more likely in the more knowledge-intensive firms. We found evidence for such an approach at the telecommunication companies we studied, as many redefined (and at the same time diversified) their core competences fundamentally over the past decade. Fine-slicing requires standardised interfaces

and modular processes – and the process of creating such modules is usually outsourced to external ICT providers.

Fine-slicing can be interpreted as an instance of the mechanisms of **globalised capitalist competition** at play. It is not a linear process but opens up a range of contradictions for economic actors. The never-ending pursuit to cut costs leads companies to drive the competitive process themselves through outsourcing and accessing lower-cost suppliers. To do this, they standardise their products and processes and render them more modular. However, suppliers develop their own business from the knowledge gathered through outsourcing and aim to “move up” their respective value chains (cf. Dossani and Kenney, 2003; Holtgrewe and Meil, 2008b). A standardised and modular product and service can also be copied more easily by new market entrants. The original outsourcing companies then find themselves confronted with new competitors. Californian value chain experts Zysman and Kenney (2015) call this mechanism the **commodity trap**: globalisation and standardisation of products and processes create markets in which competition is increasingly price-based, putting pressure on both product and service quality and on working conditions. Ursula Huws writes in a similar vein,

“the simplification of labor processes and procedures, leading to the production of highly standardized products in locations with low regulation, dubious attitudes to intellectual property, and cheap labor, opens up access to the market to new companies, unencumbered with any legacy costs or commitments to the development of new products. This produces a competitive environment in which profits are dramatically squeezed.” (Huws, 2014)

The telecommunications sector provides ample examples for this mechanism: This may be in the interest of clients first: in telecommunications for example, large mobile providers exerted their influence to develop standards for mobile networks that took apart network hardware and software. This was intended to reduce their dependency on particular vendors and their specific systems (Holtgrewe, 2014), and allowed the integration of multi-vendor hardware systems that run software provided by network specialists. As the former equipment vendors become systems integrators, increasingly telcos outsource their entire network management to them (see below). At the other end of the value chain, telecommunication companies encounter new competitors, the so-called over-the-top (OTT) service providers, such as Google, Microsoft or Apple, that use the internet (and the services provided by telcos) to disrupt and substitute conventional telecommunications services, for example through communications tools such as Skype, WhatsApp or other platforms and services. Such services cut into profit margins of telcos and thus exert further cost-cutting pressure in tightening markets.

#### **4. OUTSOURCING IN THE ICT SECTOR: THE ROLE OF BUSINESS FUNCTIONS**

The **ICT, software development and IT services sector** is a well-established segment of interest for outsourcing and restructuring research. **Telecommunications**, with its complex and country-specific histories of liberalisation, de- and re-regulation is more of a specialist subject that is of special interest to unions due to its traditionally high union density. ICT has shown interrelated processes of standardisation and industrialisation on the one hand (Barrett, 2005), and also an upgrading of outsourced tasks with subcontractors “moving up the value chain” (Dossani and Kenney, 2003) on the other. Initially, from the 1990s onwards, in IT simple processes or pieces of the product were

outsourced or offshored such as data maintenance, coding or software testing tasks. India, with its relatively cheap, qualified labour force, first emerged as a prime location, followed soon by other emerging economies such as Russia, Vietnam and Central and Eastern European countries (Huws and Flecker, 2004; Holtgrewe and Meil, 2008b; Dossani and Kenney, 2003, 2006) and also Latin America for both Spanish-speaking and global services (Manning et al., 2010). Meanwhile, former offshoring and outsourcing destinations and service providers originate their own offshoring and outsourcing. Both Western multinationals and their subcontractors further subcontract and relocate work. Western IT companies themselves have moved from manufacturing towards services and system integration, often including consultancy as well, offering “solutions” with higher value-added to their clients rather than “products”. The Indian IT service and business-process outsourcing providers establish both subsidiaries in Europe, closer to their customers, and further offshoring destinations. Outsourcing and offshoring has affected different functions and types of services over time in different ways, moving from the “periphery” of generic services and functions to the “core” of sector-specific functions that a few years ago would still have counted as strategic. For this reason, we describe the outsourcing and offshoring histories of the respective “functions”, covering IT services, back-office and customer service, and field services and network operations in telecommunications.

#### 4.1. *Outsourcing and offshoring of IT services*

Increasingly larger parts of the software-development process began to be outsourced or offshored as companies learned to manage distributed work processes and developed new functions and work roles for liaison and coordination between organisations (Holtgrewe, 2012; Marchington et al., 2005). Specialised **IT and business service companies** developed (Berrebi-Hoffmann et al., 2011; Miozzo and Grimshaw, 2011). Companies such as EDS, IBM, Accenture, German T-Systems or British Telecom take over both IT services and the respective staff from their clients (cf. Dahlmann, 2008). In also offering consulting and management services, they are capable of influencing the outsourcing and offshoring decisions and strategies of their clients. They gather and aggregate knowledge from customers and reshape processes across sectors and value chains. Vice versa, the providers of outsourced/offshored services, in particular Indian ones, expanded rapidly and developed into large IT and business process outsourcing multinationals such as Tata Consultancy Services, Wipro, Infosys, Tech Mahindra and others who do the same thing. Increasingly, these companies do their own offshoring and in recent years have even been backshoring work to Europe or the US, establishing subsidiaries there to be closer to their clients (Holtgrewe, 2014; Boes and Kämpf, 2011).

Manning (2013) describes the **emerging IT and service outsourcing destinations** in late-industrialising countries as a “new species” that is distinct from either the high-tech Silicon-Valley-type or the low-cost manufacturing clusters known since the 1980s: emerging “Knowledge Services Clusters” of lower-cost but still skilled provision of knowledge-intensive services such as software, CAD design, or R&D to a global clientele. Here, after the cases of Indian Bangalore, Chennai or Pune, Chinese, Eastern European or Latin American cities and city-regions with varied specialisations and histories emerge. They develop around technical universities but different from the high-tech clusters these universities are used less as collaborators in R&D than as “low-cost talent providers” (ibid. p. 13) in the developing countries. Manning explains this with

“the increasing commoditization of knowledge work which allows foreign firms to utilize (lower-cost) local S&E [science and engineering, authors] graduates at various skill levels, and which justifies growth of local R&D operations without sophisticated R&D collaborations with local universities.” (p. 13)

In this sense, functions such as R&D, software design or architectural work are standardised and deskilled (not completely, but to a limited extent) while regions improve their knowledge bases and specialisations – often in partnerships with lead companies. This allows companies a wider range of outsourcing options, enabled by both the ICT-supported standardisation of processes and tools and the increasing education and skill levels of young professional workers in many countries.

#### **4.2. Outsourcing and offshoring of back-office services – and the repercussions**

In IT and services, 1<sup>st</sup> generation outsourcing/offshoring addressed software testing and coding and helpdesk and support functions. Both captives’ and subcontractors’ strategies frequently aimed for taking over higher-valued functions. In the cases investigated by the WORKS project in the 2000s (Holtgrewe and Meil, 2008a, 2008b) we found subsidiaries of an Austrian multinational competing for projects and subprojects among older and newer Central European locations, in that case, Hungary and Romania. Start-ups, for example in Bulgaria, offered more comprehensive software development services and conducted their own offshoring of testing and coding tasks to Vietnam.

Miozzo and Grimshaw (2011) describe the generic and typical process of IT and back-office **service outsourcing**: Service providers first access local and client-specific knowledge through transferring staff from their clients or buying entire service units off them. On the other hand, they have developed standardised processes and routines of learning and project management that are used across countries and outsourcing contracts. Work thus gets restructured, partly centralised and key personnel may get shifted. This is the way in which companies realise the synergies and economies of scale that clients expect from outsourcing. Outsourcing specialists are then able to flexibly deploy staff, increase productivity and benchmark performance.

Interestingly, a few years later the consultancy “strategy&” (Eikermann et al., 2013) describes this very strategy of lowering cost and **achieving synergies** through service centralisation and outsourcing as a problem for clients in mobile telecommunications who have outsourced their services:

“Several years ago, a Central European mobile operator with more than 10 million subscribers agreed to an outsourcing deal with two global vendors to build and run both its network operations and its IT operations. The initial result was a savings of 20 to 25 percent in operating expenses, with the expectation of further annual savings. Once the transition phase was complete and the necessary staff transferred, however, the problems began. Both vendors, facing increasing cost and pricing pressures, began reducing their own cost structure and changing the way they provided outsourced services to the operator. They boosted scale by merging the internal processes and systems they had developed for the operator with those of other clients, scaled back process execution, moved key people into new positions where they could share their knowledge across all clients, and transferred many operations to low-cost countries – thus effectively draining the brain pool dedicated to serving the operator client.” (Eikermann et al., 2013, p. 5)

This aptly describes the downside from a client’s point of view: losses of service quality and access to familiar experts, leakage of knowledge and longer chains of communication.

Offshoring in ICT has become increasingly strategic and systemic (Boes and Kämpf, 2011), with management strategies pursuing cost savings, proximity to customers, skill availability and innovative capacities in a global context. Processes are standardised and teams increasingly collaborate virtually. Indeed, the **top-of-the-value-chain functions** of R&D, innovation and systems integration were traditionally assumed to be core competencies that would remain in the originating countries of multinationals. Now, they are no longer immune to offshoring. Especially for new recruitment in these functions, companies appear to turn to the increasing variety of newer and cheaper locations. A **wider range of functions or activities** is relocated to or sourced from a **wider variety of places** – while regional differences still exist and regions continue to specialise. Arguably, such activities are also sourced from a **wider variety of organisational types** such as SMEs or individual self-employed workers through crowdsourcing platforms and similar arrangements – and it remains to be seen how far these types of work extend into core or near-core functions.

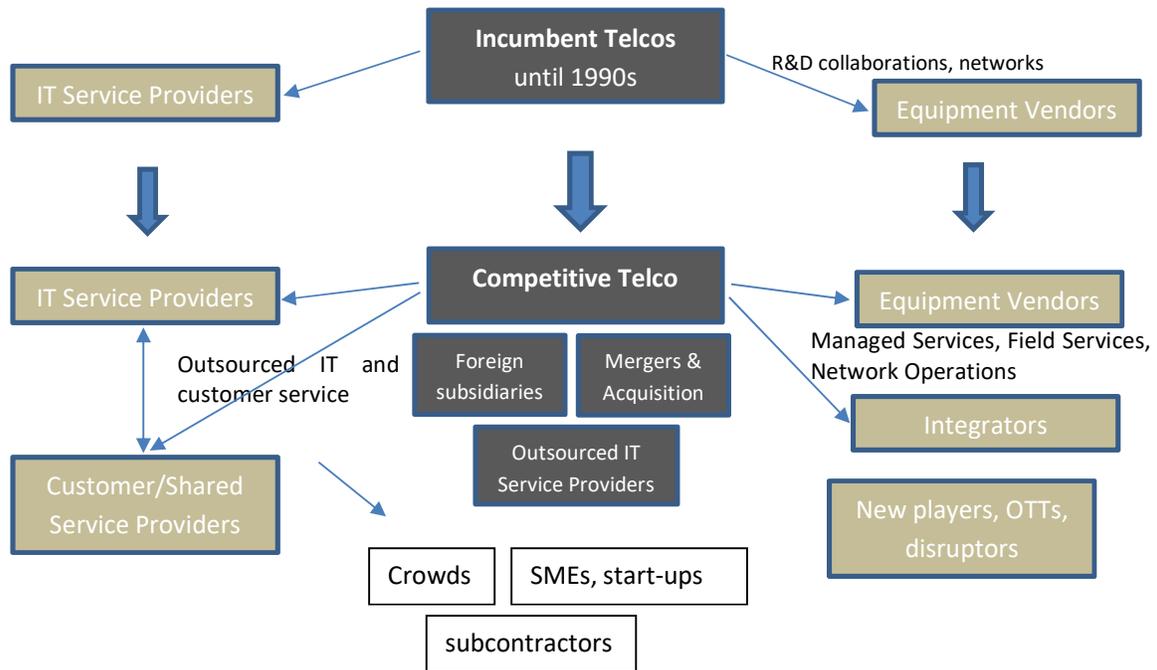
#### **4.3. Outsourcing and offshoring in telecommunications: the liberalised landscape**

In **telecommunications**, market liberalisation and privatisation have played a key part. Figure 4.1 shows the changing landscape and the multiplication of actors and functions in a rough, hypothetical overview. In the public-sector world of incumbent telcos, external contracts were used for varying R&D collaborations with mostly national equipment vendors, and for some outsourcing of software development and IT services. Through liberalisation, the incumbents were joined by new players in the telecommunications markets which also diversified into cable, mobile, broadband etc. New players were partly spin-offs from other infrastructure or technology companies that moved into telecommunications, partly new companies, and partly international subsidiaries of foreign incumbents that were now competing.

From the 1990s onwards, competition was shaped by transnationalisation and globalisation, the digitalisation of telecom technology which is gradually converging with the Internet, and a rapid trade in telecom companies through a sequence of mergers and acquisitions. Outsourcing and offshoring became key parts of telco strategies to cut costs, improve competitiveness and transfer some of the risks of investment into new technologies. The foreign acquisitions frequently became offshoring destinations when business functions were consolidated. After outsourcing customer services and own IT services, now equipment vendors are changing their roles to become comprehensive service providers that integrate standardised and highly specific technologies. In addition, new functions and divisions of labour emerge: virtual providers and OTTs (“over-the-top”) provide telco services over the Internet across multiple devices.<sup>1</sup> Start-ups develop new technologies, apps and services for providers to integrate into complex service bundles. Finally, crowdsourcing platforms may be used to outsource work packages or, possibly, a source of input for innovation.

<sup>1</sup> <https://en.wikipedia.org/wiki/Telco-OTT>

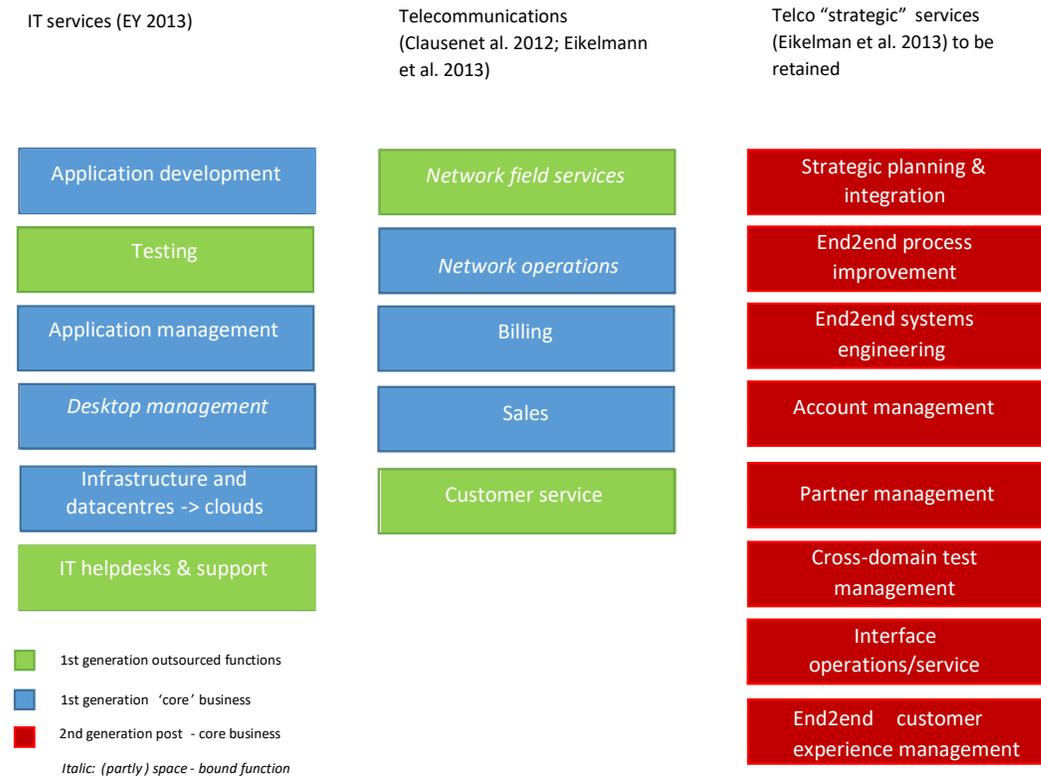
Figure 4.1: Telecommunications outsourcing origins and destinations. Source: authors



#### 4.4. The outsourcing of network field services and network operations

From recent sources (Claussen et al., 2012; Eikermann et al., 2013; EY, 2013) in both the business and consultancy literature, we can outline the shifts in functions that are outsourced and offshored in the subsectors of IT services and telecommunications (Figure 4.2). In telecommunications, first the liberalisation of the markets and the privatisation of incumbent companies in Europe, then the entry of new providers of mobile and cable services triggered outsourcing and some offshoring. This first addressed the labour-intensive services of technical services and customer support (Blutner et al., 2002; Doellgast and Greer, 2007). Cost savings could be achieved already through domestic outsourcing, moving workers outside the collective agreements of the incumbent telcos into the less organised sectors of for example, business services. IT services might also be outsourced. Network operations, sales and billing were retained and considered core functions at the time. However, in the 2000s, network operations were increasingly unbundled or fine-sliced. First, the less critical and generic logistics sub-functions of field services, inventory or spare part management were outsourced, then entire network operations. Newer mobile providers, in setting up 2G and later networks, cooperated with equipment vendors from the start and had entire services managed by them (Claussen et al., 2012).

Figure 4.2: IT and telco functions, Source: authors



Today, the telecommunication companies covered in this report all outsource their field services and network operations at least to some extent. In the pattern familiar from other IT services, network operators then centralise the space-independent functions into Global Network Operation Centres to realise economies of scale and concentrate expertise – and clients may not necessarily like the consequences of such synergies as Eikelmann et al. report (see above).

Claussen et al. report mobile companies could realise some 20-35% of operational cost savings in this way. Others are pooling their base stations in a common network and may hire an equipment vendor to run it to save investment in the networks. Well-known examples are, 3 and T-Mobile in the UK with Nokia Siemens Networks as an operator in 2007,<sup>2</sup> or Vodafone and O2/Telefónica in 2012 who formed a captive joint venture to maintain the pool.<sup>3</sup> Coleago Consulting (2015) provide an overview of network sharing deals. The CTO of Telefónica O2 in the UK considers managed services and the sharing of networks as supplementing one another:

“Network sharing and managed services are often presented as two distinct options for operators to pursue but that’s not actually the case. Network sharing creates momentum for managed services

<sup>2</sup> <http://www.theguardian.com/business/2007/dec/19/telecoms.telecoms> visited March 30, 2016.

<sup>3</sup> <http://blog.vodafone.co.uk/2012/11/20/better-coverage-fewer-masts-your-complete-guide-to-our-network-joint-venture/> visited March 30, 2016.

because once operators make the leap to infrastructure sharing they become increasingly amenable to exploring further options.” (Derek McManus CTO of Telefonica/O2 UK)<sup>4</sup>

Claussen et al. (2012) note the advantages of network outsourcing that go well beyond cost saving in a highly dynamic and somewhat volatile technological environment:

“in addition to the traditional cost-cutting effect of outsourcing, the flexibility and scale advantage of service providers to upgrade to the newest technologies and the resulting increased service quality offer further incentives to outsource knowledge-intensive activities.” (Claussen et al., 2012, p. 19)

Again, it is not just cost and expertise but also risk that is outsourced.

#### **4.5. Standardisation and technology – the equipment vendors**

This relatively easy way to outsource (new) functions was made possible by changes in the underlying technology (Holtgrewe, 2014): traditional telecommunications equipment consisted of dedicated, vendor-specific combinations of hardware and software that were developed in close collaborations of national incumbent telcos and ‘their’ national equipment manufacturers. The ATCA (Advanced Telecom Computing Architecture) standard took some steps in taking apart network hardware and software, allowing the integration of multi-vendor hardware systems that run software provided by network specialists. This was adopted partly upon pressure by large mobile network providers. Clients had an interest in a technology framework that reduced their dependency on particular vendors. Vendors thus needed to build the competencies to run multi-vendor networks – an actual instance of commoditisation of hardware as “off-the shelf” technology is used and the integration of these systems outsourced. ATCA did not yet present a truly open standard and was adapted by equipment manufacturers in different ways. However, the LTE-based separation of hardware and software layers turns network technology manufacturers increasingly into software companies and/or service providers. It also offers new (software) companies opportunities to enter telecommunications markets and compete with incumbent infrastructure vendors.

Telecommunication equipment vendors are European multinationals such as Ericsson, Alcatel-Lucent or Nokia (merged with Alcatel-Lucent in spring 2016) that are under considerable competitive pressure, cutting costs and downsizing personnel while making that transition. Increasingly, established US providers of generic hardware such as Cisco, IBM or HP provide the hardware that telco networks are running on. New Silicon-Valley-based network software developers enter the competition unburdened by the legacies of telecommunications. Finally, China does not just bring its state-backed equipment manufacturers like Huawei or ZTE into the mix but also has the largest and fast-growing network operators in the world with according purchase-power.

Within the ICT sector, we are thus seeing increasing evidence of standardisation and the resulting “commodity traps” that shift both markets and power relations between subsectors. Pon et al. (2015), Kushida (2015) and Kushida et al. (2015) argue that the current global dominance of the US-based

<sup>4</sup> <http://telecoms.com/opinion/flurry-of-european-network-outsourcing-announcements-suggests-turning-point/>, visited March 30, 2016

disruptive and networked companies such as Apple, Google, or Cisco in the entire ICT sector has been a result of the respective paths of telecommunications liberalisation in Europe, Japan and the US. The interaction of these path dependencies has led to the current, somewhat asymmetrical division of labour between US-based IT companies – that also acquire the lucrative over-the-top services – and European-based telco equipment and technology vendors. Historically, US antitrust policy against AT&T in combination with massive public investment into the Internet favoured start-up IT companies with somewhat disruptive platform business models (cf. Mazzucato, 2013). Meanwhile, formerly dominant European and Japanese telecommunications equipment manufacturers and telcos themselves are falling into various commodity traps as their abilities to retain customers and offer them value-added services erode. This process is accelerated by the new Chinese and US competitors.

In this context, the former core business of telecommunications providers is changing. “Strategy&” consultants Eikermann et al. (2013) suggest a distinct set of strategic and “meta” functions to be retained by mobile and telco providers. Strategic planning, “end to end” systems engineering, process improvement, test management and the management of partners, accounts and customer experience are the remaining functions – and in this generally turbulent environment there are no evidently stabilising “cores” identifiable.

#### **4.6. *The future: everything as a service from the cloud?***

It is still an open question how the development of cloud computing and the “internet of things” is going to shape this configuration and be shaped by it. In chapter 6 we shall see that alliances to develop cloud technologies stretch across the telecommunications, IT and equipment parts of the sector. We cannot be sure which companies will gain dominance in the field, especially when such alliances also include large and influential “users” such as the automotive or health sectors. Available cloud solutions in telecommunications or IT are quite certain to further expand possibilities for outsourcing and offshoring as data and computing power can be provided somewhat independently of particular locations. Virtual work and immaterial services could thus be shifted faster, given a parallel standardisation of processes and possibly skills. In mobile telecommunications, the virtualisation of network management also appears to be accompanied by further standardisation of radio hardware, down to entire “networks in a box” or a container that can be deployed flexibly, giving network providers more flexibility in their investments or allowing specialists for flexible networks to enter the market. This would let us conclude that cloud computing will further accelerate the dynamics of outsourcing and offshoring and intensify competition between IT and telco companies, newcomers and incumbents over lowest-cost services. However, this assumes that cloud computing and pervasive connectivity of things and people “work” and fulfil the promises of frictionless flexibility and virtuality.

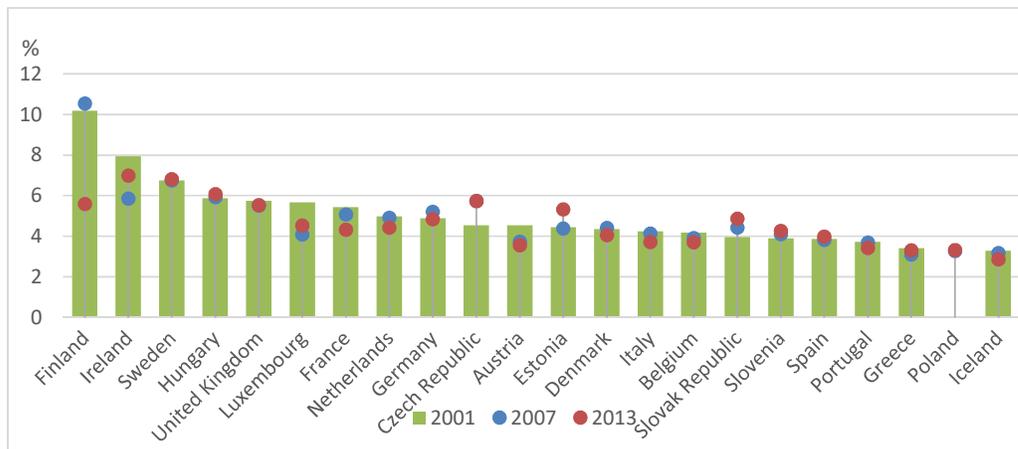
At present, the prerequisites for such dynamics need to be built and require considerable investment – not just in capital but also in skills and capabilities of both workers and companies. The standardising and alignment of interfaces, hardware and software layers, of the processes to run on them, and the interfaces between people and “things” is an ongoing effort and – as other efforts of standardisation – may not be brought about as comprehensively and swiftly as visionaries would have it.

## 5. MAPPING OF OUTSOURCING OF ICT SERVICES: THE NATIONAL DIMENSION

### 5.1. The ICT sector in the OECD countries

To map the regional patterns of outsourcing and offshoring in the ICT sector, we draw on the OECD Digital Economy Outlook (2015), supported by the European Restructuring Monitor and some evidence by consultancies. The European ICT sector (ISIC Rev.4 areas: manufacture of computer, electronic and optical products; telecommunications; computer programming, consultancy and related activities; information service activities and software publishing) appears to be stagnating in terms of value-added. To a significant extent this can be attributed to the 2007-09 crisis, although its effects have been somewhat smaller in telecommunication and IT services than in other parts of the economy (OECD, 2015). The sector's share of value added remained comparatively stable for the OECD countries between 2001 and 2013.

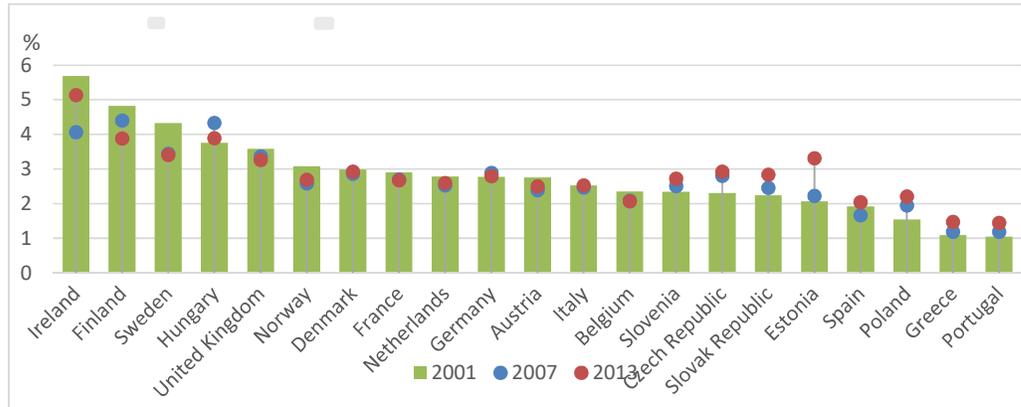
**Figure 5.1: Development of ICT sector value-added, 2001, 2007 and 2013; Shares of total value-added;**  
Source OECD 2015



Nevertheless, developments varied between countries. Notably, the countries with the relatively largest ICT sectors, Finland and Ireland, had a rather severe decline and others had smaller declines (Figure 5.1). In some countries, this began before the crisis, as a result of the breaking of the dot-com bubble: Ireland (-2.1 percentage points), Austria (-0.8) and France (-0.4). Over the period between 2001 and 2013, the share of ICT increased in the Czech Republic (1.2), Estonia and Slovenia (0.9) (ibid. 2015, p. 84).

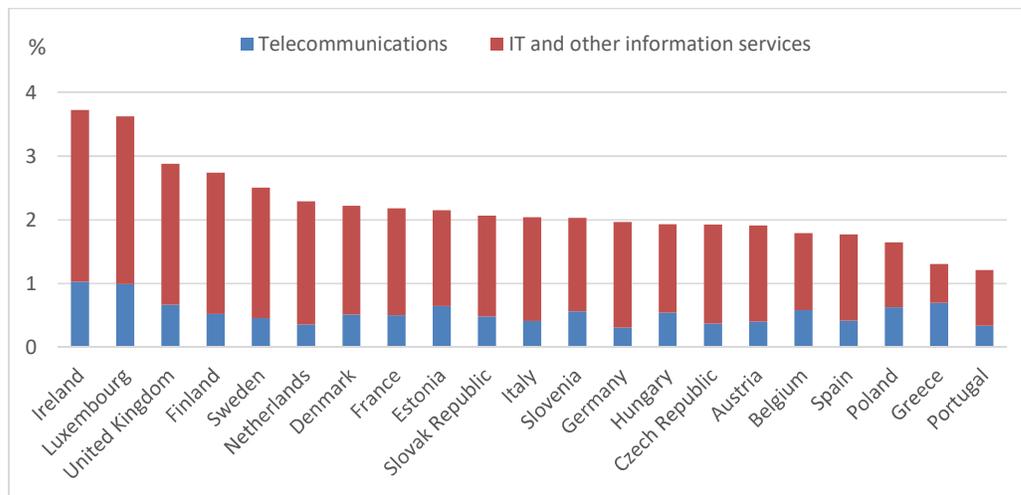
IT and other information services and telecommunication account for 80% of employment in the ICT sector (ibid. 2015). The remainder consist of ICT manufacturing and software publishing. While the share of employment in this sector in total employment also remained stable, we are seeing similar shifts that are a bit more marked, especially with regard to Western/Northern Europe compared to Eastern European countries.

**Figure 5.2: Development of the ICT sector employment, 2001, 2007 and 2013 as a percentage of total employment; Source OECD 2015**



ICT sector employment between 2001 and 2013 developed very differently across European OECD countries (see Figure 5.2): In Western European countries, the sector employment shares (as a percentage of total employment) decreased or stagnated from 2001 onwards. This decline is most visible in Ireland, Finland and Sweden. Central and Eastern European countries, as well as South European countries report increasing employment in the ICT sector since 2001, most notably Estonia and the Czech Republic.

**Figure 5.3: Employment in the ICT sector and sub-sectors, 2013; as a percentage of total employment; Source OECD 2015**



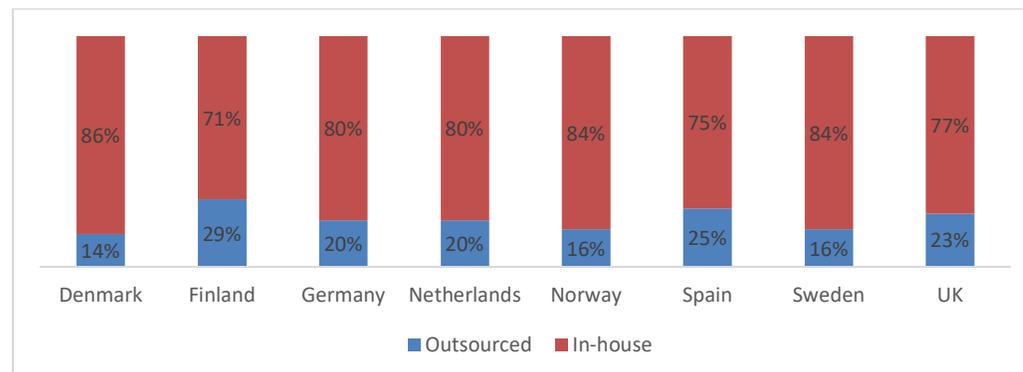
Observed more closely, in telecommunications and IT (without manufacturing and software publishing) in 2013 Ireland, the United Kingdom and Finland still had comparatively large shares of employment (Figure 5.3). Employment shares of the sector are on average in Central and Eastern European countries. In Southern European countries (especially Greece and Portugal) they are below average. Ireland and Luxemburg are also notable for a high share of employment in telecommunications specifically. Since the sector has employment shares between 1.5% and 4%, this suggests we are unlikely to see a massive impact of the outsourcing and offshoring by particular firms

onto national labour markets. As the large manufacturing relocations have happened in the previous years and ICT specialists who are outsourced or offshored may well continue working within the sector, such impacts may exist on the regional and company level but are less visible nationally. However, the increasing employment shares in Eastern Europe are in line with the company-specific findings of chapter 6.

## 5.2. Outsourcing of IT services, business processes and core functions

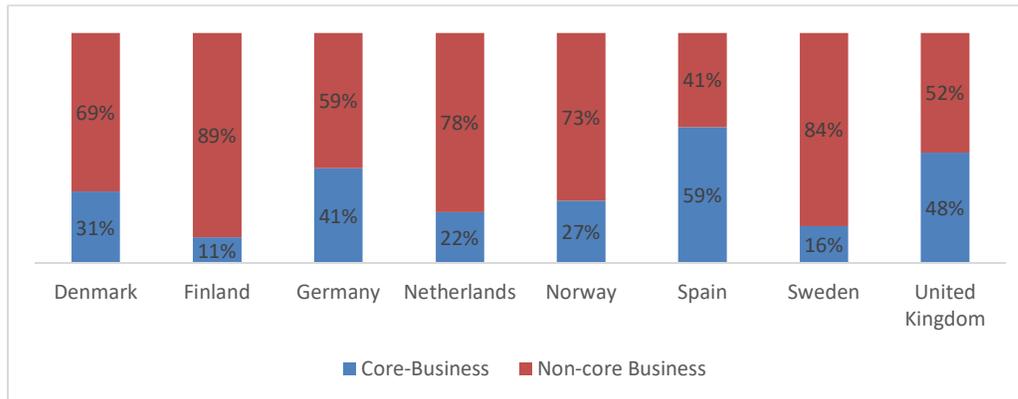
Apart from the questions of value-added and employment on the national level, EY consultancy (EY, 2013) has investigated outsourced IT functions and business processes in eight European countries. The data was collected from respondents active in different industries, not limited to telecommunication and ICT companies, but also covering manufacturing, the public sector, or trade and distribution. The share of outsourced IT and business process services compared to services remaining in-house varies considerably by country: the average share of outsourced IT services in the countries investigated is around 20%. Figure 5.4 shows the proportion of all IT services that are outsourced or kept in-house. The outsourced share is highest in Finland with 29% of IT services outsourced. However, this is not a Nordic pattern: Denmark, Norway and Sweden have shares of outsourcing below the average.

**Figure 5.4: Share of outsourced and in-house IT services; Source: EY Outsourcing in Europe (2013)**



The report also supports the finding that former core functions are increasingly outsourced and suggests some variation by country: Figure 5.5 shows that of all outsourced functions, on average around 1/3 are core, and this share is above average in Spain, the UK or Germany. However, in Finland and Sweden, countries known for their large ICT sectors, the proportion of outsourced core functions is considerably lower. The report argues that a high percentage of outsourced core functions is a sign of a mature industry, as those countries with higher general outsourcing also tend to outsource core functions. If that is so, Finland with its high share of outsourced IT and low proportion of outsourced core functions appears as a clear counter-example.

Figure 5.5: Outsourcing of core functions; Source: EY Outsourcing in Europe (2013)



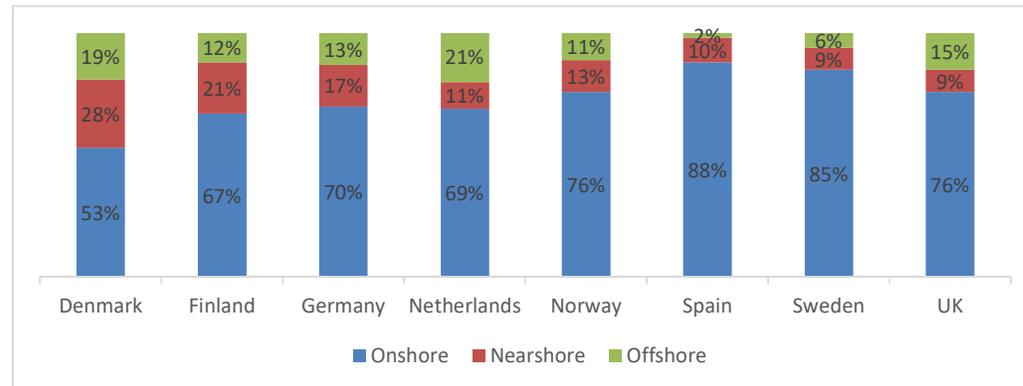
### 5.3. Domestic, nearshore, offshore?

More variation is found with regard to relocation. Figure 5.6 shows the different locations of outsourced services, distinguishing between onshore (= domestic), nearshore and offshore. Of outsourced IT services in the sectors covered by the EY report, the majority (an average of over 70%) is outsourced domestically. Services are still provided from the same location, or from within the same country. The second most used outsourcing strategy is nearshoring, where work is relocated to another country, but remains in the vicinity. Denmark has nearshored most services (28%). On the international average 14% of outsourced IT services were nearshored. Offshoring has the smallest share of outsourced IT services, being around 12% on average among the surveyed countries. Interestingly, it is the Netherlands and Denmark that have the largest share of offshored services, with the UK only in position three. This is surprising since much of the research literature on offshoring takes the UK as an exemplary frontrunner for reasons of language and business models. Considering the role of Latin America as both an IT (Manning, 2013) and customer service outsourcing destination, Spain's strikingly low 2% of offshored services appear plainly implausible.

In the telecommunication sector services are also mainly outsourced domestically, but to a lower extent than IT (55%). Offshoring is more common, as 22% of outsourcing is nearshored and 23% of outsourced services are moved to more distant offshore locations. Quite possibly, the effects of the cost and revenue pressures in the telecommunications sector are playing a part here.

While the data obviously needs to be taken with a grain of salt, arguably, the share of remote or "global" offshoring in Europe is still moderate. Possibly, even space-independent services are more nationally embedded than outsourcing advocates assume. Reasons may lie in the skill or coordination requirements of work, or in customer expectations of quality service that counterbalance the apparent cost savings. In the case of call centre relocations this has been argued by Holtgrewe et al. (2009) and Longen (2015) but similar arguments may well apply to more knowledge-intensive work.

**Figure 5.6: IT services relocated to onshore, nearshore or offshore locations; Source: EY Outsourcing in Europe (2013)**



#### 5.4. Telecom and IT markets

The global (mobile) telecommunication market has billions of customers, generating somewhere between one and three trillion US dollars each year.<sup>5</sup> Of this revenue, 60% are still generated with traditional phone calls. That said, mobile and data services grew significantly faster over the last few years. The global fixed-line market revenues are around half of the global mobile market revenues and while fixed-line calls remain stable, fixed broadband is growing substantially.<sup>6</sup> In Europe the telecommunications market has been stagnating overall for several years. This means a decline in fixed-line services, but an increase in the broadband market and a slightly positive mobile market. Reasons for this stagnation are market saturation, regulatory measures (such as roaming caps in Europe), falling prices for telecommunication services and some substitutional effects (migration of telecommunications to 'All-IP' solutions), or the substitution of traditional audio and video services with streamed content provided by specialised OTT (over-the-top) providers. Telco providers' attempts to integrate such services into specific bundles for consumers currently appear not very successful. At the same time, competition is described as tense and investments for improving the network structure, or investments in new technologies and network generations are high. While revenues for telecommunication services in Europe are stagnating, the IT market turned out more profitable: growing interest in cyber-security, cloud computing or unified communication lead to an overall growth.<sup>7</sup> However, growth rates for both, telecom and ICT services are higher outside of Europe (particularly in Africa and Middle East, Asia Pacific, South America, the US, China and India).<sup>8</sup>

Experts asked about the current situation of the European telecommunication market use terms such as "saturated", "mature", "low-margin" or "competitive" and highlighted the need for finding alternatives for generating income besides traditional core businesses. These alternatives for many providers in both telecommunications and IT lie in ICT products, such as cloud or IT security services,

<sup>5</sup> Orange, Annual Report 2014; p. 10; Deutsche Telekom, Annual Report, 2015; p.68

<sup>6</sup> Vodafone, Annual Report, 2015; p. 12

<sup>7</sup> Deutsche Telekom, Annual Report 2015, p.68-70

<sup>8</sup> Orange, Annual Financial Report 2014 and Deutsche Telekom, Geschäftsber 2015, p. 70

strategies further reflecting the convergence of telecommunications and IT. For companies in this field the implications are broad, as ‘Everything-as-a-service’ becomes an influential business strategy. IT infrastructure, software, platforms or business processes can be delivered over the internet and cloud systems, promising reduced costs and new business models, i.e. when collected (user) data can be used to develop further services through big data and analytics.<sup>9</sup> Telecom operators increasingly start offering bundled and modular services, while internet companies are entering ‘traditional’ telecom markets, through for instance, offering voice or messaging services.<sup>10</sup> Therefore, clear distinctions between the domains of telecom operators and internet companies are no longer possible.

This configuration may be somewhat paradoxical: As we argued in chapter 4.6 and shall see further in chapter 6, companies are building alliances across the segments of the sector to develop cloud solutions and technologies, for example between telco providers, equipment vendors, IT companies and chip manufacturers. From the current evidence, it is an open question who gets to dominate this market, but it appears companies across the board direct their investments into the promising new fields, increasing the risk of speculative bubbles. However, at the other end, the “internet of things” and cloud applications require an expansion of stable, reliable broadband connectivity well beyond current capabilities, and also including remote regions that even in the wealthy European countries are seeing some underprovision. Just where this (former) core business of telecommunications is concerned, we are seeing increasing outsourcing and also a shifting of investments, not just to financiers but also, possibly, back to the state. Distributing the costs and possible gains of a considerable technological transition is a challenge that is unlikely to be resolved by pure reliance on market forces. The development of markets and innovations in telecommunications and IT have been contingent upon political decisions, public investment and common goods in the past (Mazzucato 2013) – and will continue to require political and societal intervention to mitigate the risks of market failure and also to equitably realise the potential benefits.

## 6. COMPANY-SPECIFIC EVIDENCE

The particular outsourcing practices of European telecommunication and IT companies are manifold and complex. In the following section we explore company-specific developments. They are in line with the general developments described in chapters 3 and 4 but there is some variation in strategy and geographic orientation. Companies from different subsectors were selected in agreement with UNI Europa for strategic interest and coverage of different segments of the sector. They represent both different value chains and parts of a value chain. Like any multinational they provide outsourced services and have outsourced services provided to them. Telecommunication providers are at the core of this selection. Incumbent telcos, that is, the former national monopolists with their histories of transnationalisation and their still strong union representation are represented by Orange, Telefónica and Deutsche Telekom. Vodafone is an original mobile company. Ericsson as an equipment manufacturer is not a part of the ICT sector in a strict classification of sectors, but is included as a key provider of network management services well beyond manufacturing equipment. It thus represents the more recent second wave of outsourcing in telecommunications. IBM and Atos represent the IT

<sup>9</sup> Atos, Registration Document; p. 21, 22

<sup>10</sup> Orange Annual Financial Report 2014, p. 78

sector proper. IBM is an emblematic instance of the shift from hardware to services – and in this sense similar to Ericsson. Both IBM and Atos provide outsourced IT and business process services to telcos as well as to nearly all other parts of the economy. Teleperformance is a specialist provider of customer service and technical support that is moving from call centres to multi-lingual and multi-channel services. In this function, it grew through the first wave of outsourcing from telecommunications companies and has increasingly centralised service provision. Finally, Altice, for which the evidence is limited, is a conglomerate of broadband providers, cable and pay-tv providers with an active policy of generic and ruthless cost-cutting. It represents an example of a financialised business model similar to corporate raiding (Appelbaum et al., 2013).

Telecommunications companies covered in the report frequently started outsourcing their customer services to external service providers. Examples for this practice are Orange UK, when it outsourced customer support services to India, or Telefónica, focusing on offering customer support services from the Czech Republic. Deutsche Telekom outsourced its customer service domestically to external providers Arvato and Walter Teledien in Germany, selling them their call centre locations (Doellgast et al., 2013; Doellgast, 2012; Holtgrewe and Doellgast, 2012). After outsourcing, support services were often centralised in service centres in various locations in Europe (usually in Central- or Eastern Europe) and India (for the UK). The second major focus of outsourcing strategies aimed at IT services and then, in a second wave, telecommunication companies' core functions in network operations. IT services generally went to IT service specialists, mostly the "usual suspects". This includes the outsourcing of application development, the provision of IT infrastructure and related IT helpdesk and support services. Vodafone for example outsourced its application development and maintenance to EDS and IBM in 2006. EDS took over Vodafone's IT in Germany, the UK, Hungary and the Netherlands; services in Spain, the Czech Republic, Australia, New Zealand, Portugal, Ireland, Greece, and Italy were subcontracted to IBM. The German telecommunication company E-Plus (now belonging to Telefónica) outsources its IT operations to Atos since 2004. Orange also outsourced IT services to Deutsche Telekom's outsourced IT service provider, T-Systems. Indeed, telco incumbent companies have established specific brands or subsidiaries to provide IT or telecommunications services and consulting to other businesses (and each other), such as T-Systems or Telefónica Global Solutions. These companies provide IT infrastructure and maintenance, SAP-services and recently cloud services and also provide other business process outsourcing in shared service centres. Orange and T-Systems, for instance, provide IT services themselves, and Telefónica operates call centres for other companies and has spun off and later sold the multinational customer service provider Atento.

As described in chapter 4, more recently telcos outsourced network management and operations of both mobile and cable networks to the original equipment vendors in the market: Ericsson, Nokia (formerly Nokia Siemens Networks), Alcatel-Lucent (merged with Nokia in 2016) and Huawei. There are multiple examples for this kind of outsourcing practice, such as Orange UK outsourcing its network operations to Nokia-Siemens Networks, Telefónica/O2 outsourcing its mobile network maintenance in Germany to Huawei, or Vodafone, which outsourced its network operations in the Netherlands and the operation and maintenance of its radio access networks in the UK to Ericsson.

## 6.1. Orange

Orange is a leading telecommunication operator with annual revenues of 39 billion euros and 156,000 employees worldwide (of which 99,400 are located in France). The company is active in 29 countries and serves 244 million customers. Orange emerged out of France Telecom, the French incumbent telecommunications operator. Due to increasing deregulation and competition in the European telecommunication market between 1999 and 2002 the service portfolio was diversified and strategic investments pursued, for instance by acquiring stakes of Telekomunikacja Polska or Spanish mobile operator Amena. Since 2007 Orange has increasingly invested in African and Middle Eastern markets.<sup>11</sup> Orange can be classified in four sections: its presence in France with a focus on connectivity services (fixed and mobile services); its presence in other European countries (Poland, Belgium, Luxemburg, Slovakia, Romania, Moldova, Spain), which also concentrates on connectivity services; its business unit in Africa and Middle East, which provides B2B and consumer services; and finally Orange's business brand Orange Business Services, which provides (outsourcing) services to other enterprises.<sup>12</sup>

### 6.1.1. General outsourcing strategies

Orange's outsourcing activities rose significantly over the past years: In 2003 Orange France (France Telecom) had 6,500 employees working in 42 call centres, of which 9 were directly owned and 33 run externally.<sup>13</sup> In 2007<sup>14</sup> the company reported 8,856 external/outsourced employees (full-time equivalent, calculated on the basis of outsourcing costs) who were working under service agreements in the fields of network research, technical analysis, engineering, architecture, information systems, design, development and integration activities, and "to a lesser extent, outsourcing is also used in customer relations for customer telephone support" (Orange, Annual Financial Report, p. 180). For the following years the outsourcing costs and the full-time equivalents rose drastically but cannot be compared, because the methodology for calculating outsourcing costs changed in 2008. In 2014, this external workforce was calculated at 23,763 employees (full-time equivalent, calculated on the basis of outsourcing costs),<sup>15</sup> after being over 23,880 in the previous year and 25,880 in 2012. This represented 20,4% of the Orange SA workforce in 2014. While the external workforce increased in the area of technical work for customers and networks and for services for business customers, fewer external workers were working in customer services in call centres.

A company expert argues that the rising competition and the high technology investments were significant for outsourcing decisions:

"In the past five years, telecom operators in Europe have been faced with stiff competition, which was stirred up by regulations on national and European levels, for the sake of driving prices down. At the same time, the need for investments in new technologies – both in frequencies and

<sup>11</sup> Orange, Annual Financial Report 2014

<sup>12</sup> Manager, Orange

<sup>13</sup> <http://www.sec.gov/Archives/edgar/data/1038143/000095016803000869/d20f.htm>, p.54; visited 03.06.2016

<sup>14</sup> Orange, Annual Financial Report 2007

<sup>15</sup> Orange, Annual Financial Report 2014, p. 301

equipment – rose significantly. This combination of decreasing revenues and increasing capital expenditure forced us to be more careful about our operational expenditure.”<sup>16</sup>

Besides the argument for a better cost structure through efficiency, there are other reasons to outsource business functions for the telecom operator, such as availability or the bundling of small activities. While outsourcing benefits from lower wages in destination countries, the major benefits from outsourcing in this manager’s view stem from increases in efficiency through consolidating activities, harmonising tools and standardising processes. Besides, high skill levels at the outsourcing destination are very important for deciding on the location. On the other hand, an Orange worker representative points out that outsourcing can be a strategy to reduce staff in high-cost countries. This expert distinguishes two general forms of outsourcing that amount to a “modular”, standardised and a “tailored”, service- or solution-based type. Mode 1 is buying services “off-the-shelf”, in this case the company buys a complete service package from a provider. Mode 2 is “tailored” outsourcing of activities that are identified as non-core to the company’s business and that can be provided by someone else more efficiently. Especially for “tailored” outsourcing it is important to manage the outsourced business function well prior to outsourcing:

“you cannot efficiently outsource something that you don’t manage well. ... unless you manage your business very well, outsourcing may fail.”

Opinions at Orange thus vary with regard to the relevance of price versus process improvement, and interestingly, it is the union expert who considers the risk of outsourcing problematic functions and leaving the problem-solving to an external service provider.

When deciding which functions are to be outsourced, it is important for Orange to keep control of core competences. That means those competences that are necessary to differentiate the company from competitors. Three major sectors for Orange’s outsourcing are call centres, field services and network operations (building, repairing, maintaining and upgrading network structures) and IT services.

### **6.1.2. Outsourced customer service**

Call centre services have been offshore-outsourced to French-speaking countries, and the main locations are Morocco and Mauritius, but Eastern Europe plays a part as well. Important locations are in Romania, Poland and Slovakia. According to an Orange manager, call centre outsourcing declined in recent years and – similar to Deutsche Telekom (see below) – work was brought back in-house. Major reasons for this strategy were control over the process and improving quality. For core competences, where it is necessary for Orange to keep control, it rather offshores work to own subsidiaries in other countries, than transferring work to external providers. Orange UK (merged with T-Mobile UK in 2010 to form EE but retaining the brand until 2015) has had a long history of outsourcing activities connected to call centre jobs. In 2004 Orange UK was already planning to outsource customer support services to

<sup>16</sup> Manager, Orange

India affecting some 1,500 jobs but actual relocation took a while.<sup>17,18</sup> In 2006 Orange closed two call centres in the UK. Unions accused Orange of outsourcing the work to its Indian facilities, Orange, however, denied the accusations.<sup>19</sup> Orange also opened its own service centres in Middle and Eastern Europe, such as in Slovakia<sup>20</sup> and Romania in 2009<sup>21</sup> and Poland in 2010.<sup>22</sup>

### 6.1.3. Outsourced IT services

Services outsourced in IT were software development or quality assurance, project management and analysis. According to an Orange worker representative the primary IT-outsourcing wave occurred around 2005 and was directed to low-cost countries, e.g. to India and Egypt. In 2011, Orange made a 7-year deal with T-Systems,<sup>23</sup> Orange Switzerland outsourced IT-services to Igate.<sup>24</sup> Otherwise, in recent years Orange frequently backsourced IT services again, having built up its own network of subsidiaries:

“We first outsourced everything in low-cost countries and now we are insourcing ... actually, it’s no traditional insourcing, but we are transferring part of our outsourced activity to Orange subsidiaries.”<sup>25</sup>

Despite cost advantages an Orange representative questions the effectiveness of IT outsourcing, because the business gets much more complex with external providers. For instance, with IT services outsourced it gets more difficult to approach developers or to assure quality and an outsourced IT is often much more time consuming. Additionally, when software is bought “off-the-shelf” a company gains a complete software-package but loses ways to distinguish itself from competitors, who may buy the same services. Quality assurance of outsourced services usually happens on two different levels. First, a quality assurance process is imposed on the provider and second, Orange assesses the deliveries internally by defining KPI’s (key performance indicators) and measuring them against the outsourced services.

### 6.1.4. Outsourced field services and network operations

Outsourcing field services often is subcontracted locally (not necessarily to local companies, but rather to local subsidiaries of multinational companies that may outsource services further). Therefore, Orange relocates work in field services within the same country. Nowadays, Orange has outsourced

<sup>17</sup> <http://www.cellular-news.com/story/11155.php>; May, 2004

<sup>18</sup> <http://www.telegraph.co.uk/finance/2903159/Orange-joins-jobs-caravan-to-India.html>; January, 2005

<sup>19</sup> [http://articles.economicstimes.indiatimes.com/2006-07-31/news/27427073\\_1\\_customer-service-staff-strength-orange](http://articles.economicstimes.indiatimes.com/2006-07-31/news/27427073_1_customer-service-staff-strength-orange); July, 2006

<sup>20</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/orange-slovensko>

<sup>21</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/orange-romania>

<sup>22</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/orange-customer-service>

<sup>23</sup> <http://www.computerweekly.com/news/1280095526/Orange-and-T-Mobile-UK-operation-outsources-IT-to-T-Systems>; March, 2011

<sup>24</sup> <http://navisco.com/orange-schweiz-lagert-an-igate-aus/>; December, 2013

<sup>25</sup> Worker representative, Orange

most of its field services to external providers, however, when it started outsourcing field services it included transfers of workers and large redundancy plans.

Orange also outsourced network operations, which are more space-independent than field services and thus can be moved abroad and beyond European boundaries. In 2014 it outsourced operations of its mobile services to Ericsson in Spain, Belgium, Romania, Slovakia and Moldova, where the French operator serves more than 30 million customers in total.<sup>26</sup> Observers connected this with both pressures on cost and revenues in Europe and with Orange's plans in Africa: there, it runs networks in Botswana, Cameroon, the Congo, Egypt, Guinea, Cote d'Ivoire, Kenya and Mali, and may aim for continent-wide economies of scale itself. Meanwhile, mother company France Télécom sold its mobile towers in Cameroon and Cote d'Ivoire to HIS, an African infrastructure group acquiring and expanding mobile infrastructure to be shared by mobile operators.<sup>27</sup> Orange made a 5-year deal with Nokia Siemens Networks in 2009 over the operation and maintenance of its mobile networks in the UK.<sup>28</sup> This deal included network planning and optimisation, spare parts management and providing turnkey network rollout services. For carrying out these services, 470 employees were transferred from Orange to Nokia-Siemens Networks. It was also planned to outsource first-line maintenance services which would have included the transfer of an additional 230 employees.<sup>29</sup> Simultaneously, Orange signed a 5-year deal in Spain over the management of its mobile and fixed-line networks with Nokia Siemens Networks.<sup>30</sup> Orange also outsourced the operation and maintenance of its mobile network in Switzerland to Ericsson in a 5-year deal starting in 2013. This deal included the transfer of 100 employees to Ericsson.<sup>31</sup> In addition, Orange outsourced the construction and operation of both mobile and fixed-line networks in Austria and Belgium.<sup>32</sup> While Orange is largely outsourcing its network building and maintenance in Europe, it provided the network management for the Ethiopian Ethio Telecom in a two-year deal worth 30 million euros in 2010.<sup>33</sup>

### 6.1.5. Orange providing outsourcing

However, Orange's operations are pointing in many directions, as it also provides outsourced services, IT infrastructure and service solutions. Its business branch, which runs under the name Orange Business Services (OBS), offers integrated IT and connectivity services for other businesses. In recent years, the focus is increasingly on IT and cloud services. Fixed-line (voice and data) services are becoming less important. OBS offers the outsourcing of complete packages of managed services through network centres. It runs service centres in low-cost countries, such as Mauritius, Egypt (Cairo),

<sup>26</sup> <http://www.lightreading.com/services/managed-services/orange-weighs-outsourcing-of-africa-ops/d/d-id/714161>; March, 2015

<sup>27</sup> <http://www.ft.com/cms/s/0/e10a4908-97ba-11e2-97e0-00144feabdc0.html>, April, 2013 and <http://www.ft.com/intl/cms/s/0/e93cc39c-e692-11e5-a09b-1f8b0d268c39.html>; March, 2016

<sup>28</sup> <http://www.zdnet.com/article/orange-and-vodafone-to-outsource-operations/>, March 18, 2009

<sup>29</sup> <http://www.cellular-news.com/story/Operators/36573.php>; March, 2009

<sup>30</sup> <http://telecoms.com/opinion/flurry-of-european-network-outsourcing-announcements-suggests-turning-point/>, March 2009

<sup>31</sup> [https://www.salt.ch/media/press/files/2012/12/21/cd7bd7a7-aa75-4749-948a-e100a5042213/36/MM\\_DE\\_DNO\\_2012.pdf](https://www.salt.ch/media/press/files/2012/12/21/cd7bd7a7-aa75-4749-948a-e100a5042213/36/MM_DE_DNO_2012.pdf), December, 2012

<sup>32</sup> Orange, Registration Document France Telecom 2011, p. 190

<sup>33</sup> <http://www.infinitcontact.com/blog/telecommunications-outsourcing-rise/>; December, 2010

India (Gurgaon) and Brazil (Petrópolis).<sup>34</sup> The “Flexible Contact Center”-solution stands for a cloud-based contact centre solution, run by OBS via two data centres in France and two in Singapore. The focus lies on business clients and offers virtual customer support solutions.<sup>35</sup>

Customers of OBS are mainly outside the telecommunication sector: OBS signed a deal with Numonyx to manage the latter’s IT infrastructure for 7 years, starting in 2008.<sup>36</sup> Orange Business Services also has an outsourcing deal with Zürich Insurances.<sup>37</sup> A big customer is GDF Suez, for which OBS manages the information system.<sup>38</sup> Other customers of Orange’s outsourcing are Kühne + Nagel,<sup>39</sup> Japanese Tobacco Inc.,<sup>40</sup> Tata<sup>41</sup> or Kone.<sup>42</sup> In 2014 Orange Business Services and the IT consulting company Accenture formed an alliance to provide end-to-end cloud services first to French, then to European companies.<sup>43</sup>

Trends in this segment are described in Orange’s Annual Financial Report 2014 as follows:

“the boundaries between telecom operators and integrators are blurring due to the commoditization of networks and the convergence towards IP: operators are offering advanced communication services that are increasingly integrated into businesses’ information systems, and are entering into direct competition with IP integrators and Internet companies.” (p. 78)

#### 6.1.6. *Effects on the workforce*

Depending on the country the effects of outsourcing on the workforce differs significantly. An Orange worker representative told us that in France, in line with legal requirements of employment protection, workers who are affected by outsourcing measures are reassigned to other tasks and jobs within the Orange Group. However, this reassignment is not always without friction:

“Sometimes this [reassignment] can cause very big problems, if a person who used to install fibre-networks is reassigned to a shop selling mobile phones, for instance. Anyway, in France, we keep them, until they die. Because dismissing them is very expensive.”

Employment protection in other European countries is often lower, and outsourcing frequently involves redundancy plans and the transfer of workers to the outsourcing companies. How

<sup>34</sup> [https://en.wikipedia.org/wiki/Orange\\_Business\\_Services](https://en.wikipedia.org/wiki/Orange_Business_Services), 10.05.2016 (10:42)

<sup>35</sup> [http://www.duquesneadvisory.com/Flexible-Contact-Center-Orange-goes-for-growth-in-international-markets\\_a255.html](http://www.duquesneadvisory.com/Flexible-Contact-Center-Orange-goes-for-growth-in-international-markets_a255.html); November 26, 2012

<sup>36</sup> <http://navisco.com/numonyx-lagert-an-orange-business-services-aus/>; June, 2008

<sup>37</sup> <http://navisco.com/zurich-verlaengert-outsourcing-mit-orange/>; July, 2009

<sup>38</sup> [http://www.duquesneadvisory.com/Tech-Biz-outsourcing-advances-in-the-utilities-sector-GDF-SUEZ-signs-with-Orange-Business-Services\\_a194.html](http://www.duquesneadvisory.com/Tech-Biz-outsourcing-advances-in-the-utilities-sector-GDF-SUEZ-signs-with-Orange-Business-Services_a194.html), March 30, 2011

<sup>39</sup> <http://navisco.com/kuehne-nagel-und-orange-verlaengern-vertrag/>; March, 2010

<sup>40</sup> <http://www.orange-business.com/en/press/orange-business-services-signs-five-year-over-100-million-telecoms-outsourcing-contract>; March, 2012

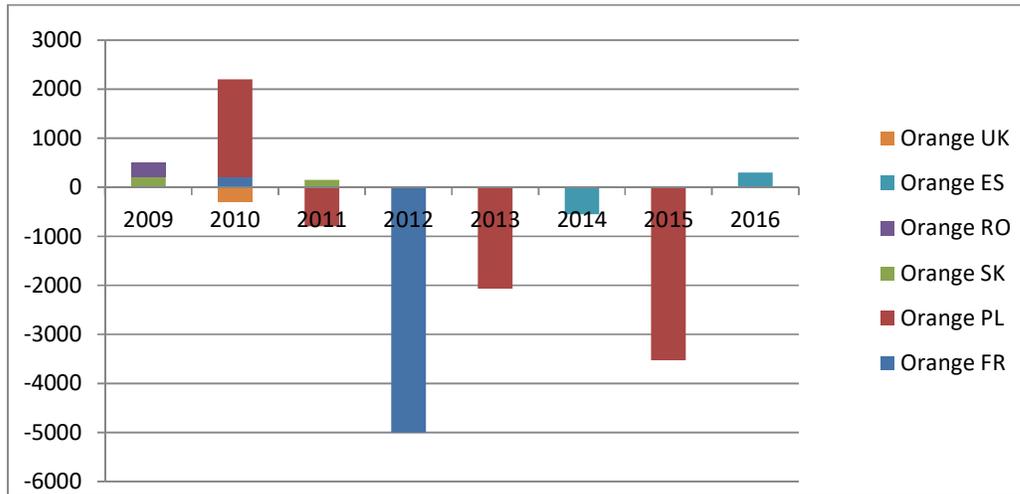
<sup>41</sup> <http://www.orange-business.com/en/press/orange-business-services-partners-with-tata-communications-to-expand-its-network-presence-in>; July, 2015

<sup>42</sup> <http://www.orange-business.com/en/press/kone-to-enrich-customer-experience-with-orange-business-services-contact-center-solutions>; May, 2015

<sup>43</sup> <https://newsroom.accenture.com/industries/communications/accenture-and-orange-business-services-collaborate-to-drive-cloud-computing-transformation-for-large-enterprises.htm>; April, 2014

redundancies or transfers of Orange workers are handled in European countries also depends on the negotiations of the respective works councils. When workers are transferred to the outsourcing company, this usually happens at the same wage levels and Orange guarantees employment for two years, but not beyond this point, when service providers may realise synergies.

**Figure 6.1: Orange employment changes** Source: own calculation based on *European Restructuring Monitor Factsheets*



According to the worker representative the communication between unions is easily possible in France, but has not been so easy with other European countries as regulations and conditions are different in each country and negotiations treat every country individually. Hence, co-ordinating negotiations can prove difficult in some European countries and is especially delicate in some countries outside Europe, such as in India or Egypt. While there have been instances of the management discouraging workers to join unions (in Slovakia for example), our interview partner does not assume that outsourcing locations are chosen deliberately because of weak worker representation.

The European restructuring monitor (Figure 6.1) shows a moderate expansion in Slovakia and Romania in 2009 and mostly job losses after this. In Poland, in 2010 with the outsourcing of Orange Customer Service from Telekomunikacja Polska (Polish Telecom) and PTK Centertel (in which Orange held shares) 2000 new customer service jobs were announced but the following years saw considerable downsizing in both the service company and Polish Orange at large, culminating with a loss of 3,530 jobs in 2015 – of which 1,000 were not cut but outsourced as a call centre was sold to an external provider. In France, some 5,000 jobs were to be cut from 2012. In Spain, the merger with Jazztel led to expected cuts of 550 jobs and 300 call centre jobs were newly created in 2016.

#### 6.1.7. Outsourcing in Orange Poland

One of Orange's main affiliates is Orange Polska. Polish incumbent telco Telekomunikacja Polska S.A. (TP S.A.) was privatised from 1998 onwards and France Telecom acquired shares and became the main owner of the company. Beginning in the 2000s, France Telecom strategies aimed at reducing costs through restructuring, cutting costs and reducing employees. It introduced the programme "Praca za

pracownikami” (jobs for employees), which involved the outsourcing of network operations to external companies along with the transfer of employees who performed these tasks at TP S.A.<sup>44</sup> Trade unions early on tried to negotiate agreements to retain standards and improve social protection and wage levels with both TP S.A. and the providers of outsourced services. But even though some progress could be achieved, outsourcing and the transfer of workers to TP S.A. subsidiaries continued and as a result trade unions rather put an emphasis on enforcing social protection for those transferred employees. Over the course of the last decade employment regulations in Poland were liberalised and temporary work agencies established, which triggered a process of further outsourcing work from TP S.A. (called Orange Polska since 2012). In addition to the transfer of jobs and undertakings, employment was flexibilised through the introduction of agency work. This mostly affected low-paid workers for whom the losses in benefits and income matter most. While at Orange Polska workers retain many of the features of regular employment at a former incumbent telco, such as open-ended contracts, trade union coverage, regular pay rises, additional pension and social funds administered by the union, etc., transfer to a temporary work agency often means a sequence of unstable and short-term employment contracts, low(er) salaries, no collective agreements or regular pay rises, difficulty in joining trade unions, etc. For Polish trade unions it became apparent that approaching workers at temporary work agencies and gaining a foothold in these companies is a major challenge.

## 6.2. Telefónica

Telefónica evolved from the former Spanish public-owned incumbent telecommunications company. The company’s main businesses are fixed and mobile communication. Telefónica operates in 16 countries and the main markets in Europe have been Spain and Germany since Telefónica discontinued its operations in the UK. In Latin America the main markets are Brazil, Argentina and Peru. In the different countries and regions Telefónica uses different brand names, such as Movistar in Spain and Latin America, Vivo in Brazil and O2 (and E-Plus) in Germany. At the end of 2015 the company had nearly 130,000 employees, which is a 5% increase compared to 2014.<sup>45</sup> This was mainly attributable to mergers, acquisitions and divestments (acquisition of GVT and DTS, deconsolidation of Telefónica UK), and without these acquisitions the workforce would have decreased by 4%. The company’s largest workforces are in Spain (38,100 employees), in Brazil (35,500), Argentina (17,200) and Germany (8,700). It also has its own providers of outsourced services, Telefónica Global Solutions and Telefónica Business Solutions. They offer a multitude of services, among them are the provision of IT infrastructure, security services, cloud services and customer service through their service management centres.<sup>46</sup> Telefónica’s outsourcing and offshoring activities concentrate on customer services on the one hand and field operations and managed services on the other hand.

<sup>44</sup> <http://gsmonline.pl/artykuly/program-outplacementowy-praca-za-pracownikiem-w-tp-s-dot-a>; August, 2002

<sup>45</sup> Telefónica, Integrated Report, 2015; p. 7, 12, 78

<sup>46</sup> <https://www.business-solutions.telefonica.com/en/enterprise/solutions/customer-support/outsourcing/>; 01.07.2016, 14:44

### 6.2.1. Outsourced customer and IT services

Telefónica has been outsourcing customer services in various markets. The Spanish and Latin American markets are serviced by Atento, which was a Telefónica subsidiary for customer relationship management established in 1999. Today, Atento is one of the world's leading customer service providers. Telefónica sold Atento in 2012 and it was agreed that Atento would continue to provide services to the Telefónica Group for at least nine years after the deal (which is until 2021).<sup>47</sup> In addition, the company operates its own call centres in the Czech Republic with between 3,000 and 5,000 employees.<sup>48</sup>

In 2013 O2 UK made a big deal with Capita over the outsourcing of its telephone support. This 10-year deal over £1.2bn included the transfer of 2,700 workers from Telefónica to Capita at four O2 contact centres in Glasgow, Leeds, Bury and Preston Brook. The bargaining union (CWU) achieved some job security and long-term protection of pay and conditions for the transferred staff and also a promise to redeploy staff locally. Nevertheless, 1,000 workers agreed to voluntary redundancies.<sup>49</sup> The UK was not the only region where Telefónica outsourced its customer service. Germany was a major focus of reducing staff and outsourcing in customer service. In 2014 Telefónica had around 3,700 call centre employees in Germany, 1,000 of those were temporary workers. In 2010 O2 announced plans to outsource three call centres with around 650 employees to Arvato.<sup>50</sup> However, some employees refused to work for the new employer in one of the call centres and went on strike.<sup>51</sup> After acquiring mobile provider E-Plus Telefónica may be about to consolidate its call centre operations in Germany, spinning off its three owned German call centres with some 2,100 employees as independent companies in line with the four already outsourced ones.<sup>52</sup> It also considered outsourcing its IT operations<sup>53</sup> and generally announced plans to cut some 1,900 jobs from both O2 and E-Plus until 2018.

Before E-Plus was part of the Telefónica Group it had outsourced IT services (monitoring, maintenance, infrastructure) to Atos since 2004 and the two companies continually renewed their contract, the last time in 2013.<sup>54</sup> After acquiring E-Plus in Germany, Telefónica outsourced its IT operations.<sup>55</sup> In 2016 IBM was selected to modernise and manage Telefónica's human resources and finance processes for

<sup>47</sup> Atento Annual Report, 2014; p. 33, 34

<http://www.ft.com/cms/s/0/d1d65de4-144a-11e2-8cf2-00144feabdc0.html#axzz4DA4V1kGQ>; October, 2012

<sup>48</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-czech-republic-0>; November, 2013

<sup>49</sup> [http://www.channelregister.co.uk/2013/07/03/o2\\_inks\\_outsourcing\\_deal\\_with\\_capita/](http://www.channelregister.co.uk/2013/07/03/o2_inks_outsourcing_deal_with_capita/); July, 2013

<http://www.channelweb.co.uk/crn-uk/news/2279106/huge-o2-outsourcing-deal-rolls-out-after-capita-ends-union-beef>; July, 2013

<sup>50</sup> <http://www.spiegel.de/wirtschaft/unternehmen/sparkurs-o2-schliesst-sechs-standorte-in-deutschland-a-722129.html>; October, 2010

<http://www.golem.de/1102/81209.html>; February, 2011

<http://onetoone.de/de/artikel/o2-outsourcing-von-drei-call-centern-arvato-services>; November, 2010

<sup>51</sup> <https://www.computerbase.de/2011-02/o2-mitarbeiter-verweigern-outsourcing/>; February, 2011

<sup>52</sup> <http://www.heise.de/newsticker/meldung/Telefonica-ueberprueft-Zukunft-seiner-Call-Center-2789293.html>, August 24, 2015

<http://www.rp-online.de/wirtschaft/Telefonica-stellt-call-center-auf-den-pruefstand-aid-1.5334781>,

<http://www.zdnet.de/88244840/telefonica-gliedert-deutsche-call-center-aus/>; August, 2015

<https://hamburg.verdi.de/publikationen/hamburg-news/++co++944a2720-9da5-11e5-9d57-525400248a66>

<sup>53</sup> <https://tk-it.verdi.de/themen/nachrichten/++co++8186b572-2a1e-11e5-bb25-525400248a66>

<sup>54</sup> <http://de.atos.net/content/dam/de/documents/atos-casestudy-eplus-outsourcing.pdf>

[http://de.atos.net/de-de/home/uber-uns/newsroom/press-release/2013/pr-2013\\_09\\_16\\_01.html](http://de.atos.net/de-de/home/uber-uns/newsroom/press-release/2013/pr-2013_09_16_01.html); September, 2013

<sup>55</sup> <https://tk-it.verdi.de/themen/nachrichten/++co++8186b572-2a1e-11e5-bb25-525400248a66>

the next 10 years. Part of the deal is the acquisition of Tgestonia by IBM – a Telefónica subsidiary operating in Spain, Argentina and Peru.<sup>56</sup>

### 6.2.2. Outsourced field services and network operations

With regard to field operations, Telefónica procures services from all network vendors. The Telefónica UK subsidiary O2 outsourced services to Ericsson since 2011.<sup>57</sup> In 2012 British Telefónica/O2 signed a 5-year managed services deal with Huawei. The deal encompasses core network planning and implementation and the outsourcing also includes the transfer of 56 permanent employees and 62 contractors.<sup>58</sup> After acquiring E-Plus in Germany in 2014, Telefónica Germany outsourced its field operations and network management to Chinese ZTE in a managed service deal. Before, E-Plus had had an outsourcing contract (since 2007) over field operations with Alcatel-Lucent Network Services. Part of the new contract with ZTE was the transfer of 750 Alcatel-Lucent employees to ZTE (those 750 employees had been transferred in 2007 from E-Plus to Alcatel-Lucent). The services are managed from a network operations centre in Romania and from locations in Germany. This second-generation outsourcing bore no dismissals or wage reduction and employees remained under the same collective agreement.<sup>59</sup> In 2010 Telefónica/O2 outsourced its mobile network maintenance in Germany to Chinese provider Huawei. Accordingly, 220 employees were transferred from O2 to Huawei.<sup>60</sup> In 2016 Telefónica selected Ericsson as a partner in their cloud project. Ericsson provides the infrastructure and software, and the cloud is aimed at virtualizing and automating network functions across all of Telefónica's operations in Germany.<sup>61, 62</sup> Ericsson has also been a partner in deploying voice over LTE for Telefónica in Germany.<sup>63</sup> On the main European markets Telefónica also procured network upgrading from Nokia Siemens Networks (NSN). In recent years NSN was selected by Telefónica as partner for LTE upgrading and network expansion and maintenance in Germany in 2011<sup>64</sup> and a year later, in the UK.<sup>65</sup> Since 2014 Nokia upgrades and modernises Telefónica's Spanish radio network, implements the 4G standard, and additionally provides customer experience management and support services, such as Support network implementation, planning and optimization.<sup>66</sup>

<sup>56</sup> <http://www-03.ibm.com/press/us/en/pressrelease/49273.wss>; March, 2016

<sup>57</sup> <https://www.ericsson.com/news/1482512>; January, 2011

<https://www.ericsson.com/news/1680657>; February, 2013

<sup>58</sup> <http://www.information-age.com/technology/mobile-and-networking/2103318/o2-outsources-core-network-management-to-huawei>; May, 2012

<sup>59</sup> <http://www.ip-insider.de/uebernahme-des-netzbetriebs-keiner-hat-es-bemerkt-a-447051/>; May, 2014

<sup>60</sup> <http://www.heise.de/newsticker/meldung/Huawei-uebernimmt-Netzpflege-von-O2-Mobilfunk-956380.html>; March, 2010

<sup>61</sup> <http://www.cellular-news.com/story/Operators/68577.php>, February 29, 2016

<sup>62</sup> <https://www.ericsson.com/news/1988285>; February, 2016

<sup>63</sup> <http://www.cellular-news.com/story/Operators/67029.php>; October, 2014

<sup>64</sup> <http://networks.nokia.com/news-events/press-room/press-releases/telefonica-o2-germany-selects-nokia-siemens-networks-as-a-network-technology-partner-for->; accessed on 08.10.2016

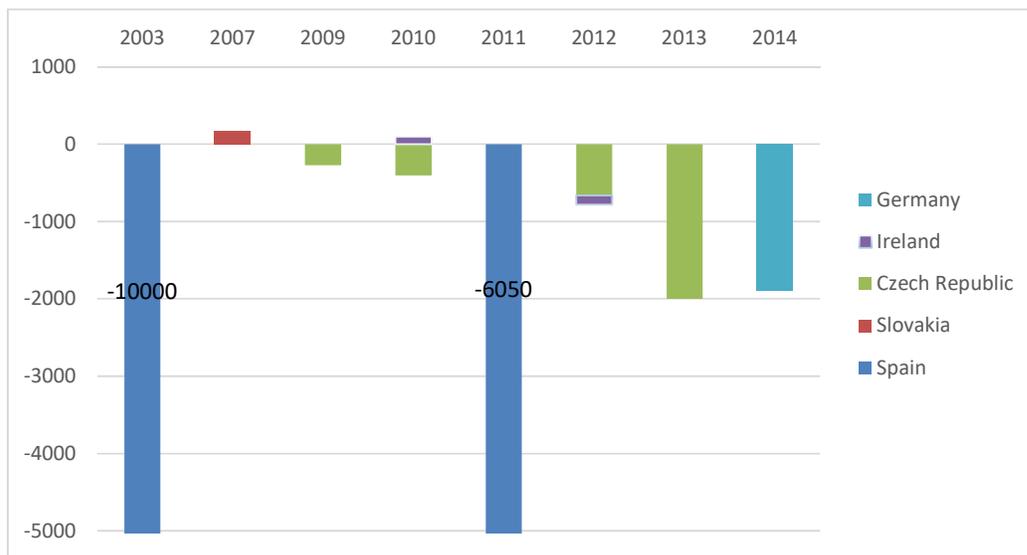
<sup>65</sup> <http://networks.nokia.com/news-events/press-room/press-releases/nokia-siemens-networks-prepares-o2-s-network-for-lte-in-the-uk>; December, 2012

<sup>66</sup> <http://networks.nokia.com/news-events/press-room/press-releases/telefonica-modernizes-expands-its-radio-network-in-spain-with-nokia-networks>; July, 2014

### 6.2.3. Effects on the workforce

On the European Restructuring Monitor several changes in employment at Telefónica were logged. Some employment shifts can be attributed to restructuring, such as a huge wave of dismissals between 2003 and 2008 in Spain, when staff was reduced by 10,000 to 15,000.<sup>67</sup> Other employment movements are a direct result of outsourcing, as the company opened a new call centre in Slovakia in 2007.<sup>68</sup> In 2009 Telefónica created a service centre in the Czech Republic to provide telecommunication services for DHL<sup>69</sup> and increased its Czech workforce again in 2012.<sup>70</sup>

**Figure 6.2: Telefónica employment changes** Source: own calculation based on European Restructuring Monitor



However, these increases around 100 call centre jobs were accompanied by ongoing downsizing. In Ireland 100 new jobs in HR at the European People Services Centre at the O2 headquarters in Dublin were created. Only two years later the cut of 120 jobs was announced due to challenging market conditions.<sup>71</sup> Spain was the focus of business consolidation and broad dismissals again in 2011, when Telefónica decided to cut 6,500 jobs. Bargaining with unions led to hiring 450 new employees.<sup>72</sup> Between 2012 and 2013 the Czech Republic was again central to Telefónica's job creation: it hired 120 new employees at one of its call centres in Ostrava. A couple of months later, the reduction of 280 managerial positions was announced and at the end of the year 500 people were dismissed, again,

<sup>67</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-5>; April, 2003

<sup>68</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/Telefonica-o2>

<sup>69</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/Telefonica-o2-czech-republic-1>

<sup>70</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/Telefonica-cr>

<sup>71</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica>; May, 2010

<sup>72</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-0>; April, 2012

<sup>72</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-4>; July, 2011

mostly affecting white collar workers,<sup>73</sup> and, due to a takeover around 2,000 employees were dismissed in 2013.<sup>74</sup> The consolidation of O2 and E-Plus in Germany led to job reduction between 1,600 and 1,900.<sup>75</sup> Otherwise, the ERM only covers a small part of Telefónica's activities, possibly because there are time lags between restructuring and actual announcements of job losses or gains.

### 6.3. Deutsche Telekom

Deutsche Telekom (DT), another former public incumbent, is a major player on the European telecommunication market. In 2015 it had 226,000 employees worldwide (nearly 120,000 in Europe, excluding T-Systems), served 156 million mobile customers, 29 million fixed-line customers and nearly 18 million broadband customers. DT runs the business and IT service provider T-Systems, which has another 46,000 employees who manage over 63,000 servers and 1.7 million workplaces.<sup>76</sup> DT's most important businesses are fixed-line communications (telephony and broadband), mobile communication and IT services and consulting. DT's main operating areas are Germany, the United States, Greece, Romania, Hungary, the Netherlands, Poland, Czech Republic, Croatia, Austria and Slovakia.<sup>77</sup> In Germany, DT is market leader in fixed-line and mobile communications. On its second biggest market, in the US (T-Mobile US), DT is a rapidly growing (15% more customers in 2015) provider of mobile communication. In Europe (excluding Germany), mobile customers and fixed-line (telephony) were declining, while customer-numbers rose in broadband. DT still served over 52 million mobile, nearly 9 million fixed-line and over 5 million broadband customers in Europe.<sup>78</sup> In recent years DT focused specifically on offering cloud services through T-Systems, which offers SAP-Enterprise Resource Planning systems embedded in cloud solutions. As such, T-Systems has business customers in various sectors. Additionally, DT is currently working on a Cloud platform ('Open Telekom Cloud') in cooperation with Huawei.<sup>79</sup>

Employees' Representation in the DT group differs significantly from country to country: in countries with strong unions, such as Germany or Austria, unions have a strong voice and industrial relations are collaborative. However, in other countries employees' representation is insignificant or not non-existent (in Poland 5,000 workers and in the Czech Republic 3,000 workers are without union representation). T-Mobile US became somewhat notorious for anti-union policies that are at odds with industrial relations in its home country. However, this has also triggered a union partnership between German ver.di and the US CWU.<sup>80</sup> For unions and worker representatives the possibilities to intervene in outsourcing or offshoring decisions are nevertheless limited. Although unions are usually informed about upcoming relocation activities, most often they alleviate the negative effects and have no option

<sup>73</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-cr>; January, 2012

<https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-cr-0>; March, 2012

<https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-czech-republic>; November, 2012

<sup>74</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-czech-republic-0>; November, 2013

<sup>75</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/telefonica-2>; October, 2014

<sup>76</sup> Deutsche Telekom, Annual Report 2015, p. 4-6, 11

<sup>77</sup> Deutsche Telekom, Annual Report 2015, p. 8, 89

<sup>78</sup> Deutsche Telekom, Annual Report 2015, p. 83-90

<sup>79</sup> Deutsche Telekom, Annual Report 2015, p. 55, 56

<sup>80</sup> <http://tmobileworkersunited.org/about-us/> visited Jul 17, 2016

to influence or prevent the relocation at all. In countries with strong unions bargaining with the DT management is substantially more successful, and a DT worker representative points out that improving workers' voice in other countries can only be influenced when unions start to cooperate internationally.<sup>81</sup>

### 6.3.1. Call centre and customer support outsourcing

In Germany DT operates call centres at 33 locations and employs over 10,000 workers (which marks a substantial drop from over 80 call centres and 18,000 call centre employees prior to 2007).<sup>82</sup> Customer services were outsourced substantially in 2007 and 2008 and divided up among large call centre providers such as Walter Services or Bertelsmann-owned Arvato (Doellgast and Greer, 2007; Holtgrewe and Doellgast, 2012).<sup>83</sup> DT sold seven call centres to Walter Services and transferred over 1,000 employees to different locations.<sup>84</sup> Arvato took over five call centres and 1,100 employees from DT in 2007 and yet another five call centres with 640 employees the following year.<sup>85</sup> The restructuring of DT's customer service segment in Germany thus involved the transfer of up to 8,000 employees between 2008 and 2011.<sup>86</sup> However, trade unions were able to negotiate a reduction in the number of call centres to be closed or disposed, down to 30 from 39 locations, and the parties agreed on guarantees to secure call-centre jobs until 2012 at the new locations.<sup>87</sup> Later, Walter Services got into financial problems (and had to file for bankruptcy in 2013), and reportedly one reason was DT's and other telco companies' high market pressure.<sup>88</sup> According to a DT worker representative the majority of customer service today is backsource to DT again, as outsourcing turned out to be rather unsuccessful and the language barrier posed a hindrance to providing customer service of high quality across borders, especially when outsourcing to low-wage countries in Eastern and Central Europe.

<sup>81</sup> Worker representative, Deutsche Telekom

<sup>82</sup> [http://asctechnologies.com/brochures/de/CS\\_DTKS\\_deutsch.pdf](http://asctechnologies.com/brochures/de/CS_DTKS_deutsch.pdf); September, 2012;  
<http://www.heise.de/newsticker/meldung/Telekom-buendelt-Callcenter-an-24-Standorten-198287.html>; August, 2008;  
<http://www.kn-online.de/News/Nachrichten-aus-Rendsburg/Call-Center-der-Deutschen-Telekom-zieht-an-die-Hoern>; February, 2010  
<http://www.welt.de/wirtschaft/article2326711/Deutsche-Telekom-will-50-Callcenter-dichtmachen.html>; August, 2008  
<http://www.verdi.de/presse/pressemitteilungen/landespressemitteilung/++co++c5b1c904-d9a2-11e0-4e7e-0019b9e321e1>; September, 2008

<sup>83</sup> <http://www.handelsblatt.com/unternehmen/it-medien/outsourcing-geht-weiter-telekom-befluegelt-call-center-branche/2763180.html>;  
 January, 2007

<sup>84</sup> <http://www.manager-magazin.de/unternehmen/it/a-473838.html>; March 2007

<sup>85</sup> *ibid.*  
<http://www.manager-magazin.de/unternehmen/it/a-529268.html>; January 2008

<sup>86</sup> <http://www.heise.de/newsticker/meldung/Telekom-Chef-verteidigt-vor-Callcenter-Mitarbeitern-Streichungen-204705.html>; September 2008  
<http://www.heise.de/newsticker/meldung/Einigung-im-Streit-um-Telekom-Callcenter-33-Standorte-bleiben-218536.html>; November, 2008

<sup>87</sup> <http://www.heise.de/newsticker/meldung/Einigung-im-Streit-um-Telekom-Callcenter-33-Standorte-bleiben-218536.html>; November, 2008

<sup>88</sup> <http://www.handelsblatt.com/unternehmen/handel-konsumgueter/call-center-deutsche-telekom-in-der-kritik/3823726.html>; February, 2011  
<http://www.spiegel.de/wirtschaft/unternehmen/walter-services-call-center-betreiber-steht-vor-dem-aus-a-913122.html>; July, 2013

T-Mobile UK signed a deal in 2008 with WNS Holding to outsource customer support to the Philippines. It is not clear if this also implied redundancies.<sup>89</sup> A year later it outsourced customer finance, commercial finance and accounting and procurement operations to Indian Infosys.<sup>90</sup> DT signed a cloud partnership with call centre technology vendor Avaya in 2014 over the provision of a cloud-based call centre solution. In this agreement DT's own T-Systems provides the cloud infrastructure, while Avaya provides a fully virtualised software.<sup>91</sup>

### 6.3.2. *Current outsourcing strategy and network outsourcing*

Recently, DT's relocation strategies aim to offshore or nearshore service work to other countries. A central aim is to concentrate and centralise functions in low-cost countries, while keeping the work within the Group. The major benefits of this centralisation are economies of scale, easier standardisation and the automation of work – effects that other telcos expect from external service providers. The near- and offshoring locations are countries in Eastern and Central Europe, and DT operates shared service centres in Bratislava (Slovakia), Timisoara and Bucharest (both Romania).<sup>92</sup> In the beginning, DT primarily relocated simple administrative tasks from European countries, later also parts of purchase, logistics and controlling were relocated and the relocation of HR activities is planned for the years ahead. For a DT worker representative this kind of relocating work turns out to be worse than outsourcing within the same country,

“... because usually, when work is outsourced within the same country no one is losing their jobs, but are transferred to the new employer, [...] with nearshoring or offshoring these jobs are gone, they remain in the company, but in my country, they are gone.”

Like other telecommunication companies in Europe DT is also outsourcing network operations, repairs and upgrades to external companies. However, DT's network management and monitoring is still done in-house. The Deutsche Telekom subsidiary T-Mobile Netherlands signed an agreement over managed services for their networks with Nokia in 2007. The deal includes field operations and spare part management.<sup>93</sup> The offshoring of data-related services to other countries is another important aspect of DT's relocation activities. Such services, like telephone and E-mail systems, data storage or the provision of software, can be managed via cloud systems. Despite rapid developments and the wide distribution of cloud systems, concerns about data security remain high. Doubts on the effectiveness and benefits of centralising and offshoring work and data management relate to the loss of knowledge and to the loss of control and sovereignty over the key communication infrastructure of a country – in line with the centralising offshoring logic of DT's strategy.<sup>94</sup>

<sup>89</sup> <http://www.cellular-news.com/story/Operators/33430.php>; September, 2008

<sup>90</sup> <http://telecoms.com/13274/t-mobile-uk-outsources-finances-to-cut-costs/>; August, 2009

<sup>91</sup> <http://www.mobileeurope.co.uk/press-wire/deutsche-telekom-looks-to-cloud-for-new-call-centre-solution-with-avaya>, May, 2014

<sup>92</sup> <http://www.telekom.com/media/company/69368>; June, 2011 and worker representative, Deutsche Telekom

<sup>93</sup> <http://company.nokia.com/en/news/press-releases/2007/02/07/nokia-wins-a-managed-services-contract-with-t-mobile-in-the-netherlands>; February, 2007

<sup>94</sup> Worker representative, Deutsche Telekom

### 6.3.3. Providing outsourcing services – T-Systems

Like other telecommunication companies covered in this overview, Deutsche Telekom is also a recipient of outsourcing (insources work). With its brand T-Systems for business customers it has its own outsourcing specialist and offers IT solutions (especially SAP-services, cloud computing, consulting, connectivity and IT-security) and desktop services (provision of server infrastructure, workstation management, application management and call centre services).<sup>95</sup> T-Systems is active in nearly all European countries but until recently most of the services were offered locally.<sup>96</sup> In recent years tendencies of centralisation are apparent and centres for shared services are growing, especially in Eastern and Central Europe, such as a centre in Košice, Slovakia with more than 3,200 employees.<sup>97</sup> Major clients are EADS Group, VW Group, BMW, Daimler, EON,<sup>98</sup> BP, Deutsche Post DHL, Philips and Shell.<sup>99</sup> T-Systems also manages IT infrastructure and services for DLR (German Centre for Aerospace) in a 5-year deal, renewed in 2010.<sup>100</sup> Together with HP, T-Systems agreed to manage IT infrastructure and IT services for the German energy company EON, starting in 2010. The agreement included the transfer of 1,100 EON employees to HP for maintaining 80,000 of EON's workstations and it included a further 220 of EON's employees to be transferred to T-Systems.<sup>101</sup> T-Systems acquired the IT maintenance for the German region Niedersachsen for 12 years, starting in 2012.<sup>102</sup>

<sup>95</sup> Deutsche Telekom, Annual Report 2015; p.251

<sup>96</sup> Worker representative, Deutsche Telekom

<sup>97</sup> <https://www.telekom.com/konzern/weltweit/profile/10628>; accessed: 13.07.2016

<sup>98</sup> <http://www.computerwoche.de/a/eon-macht-milliardenschweres-outsourcing-perfekt.2360293>; December, 2010

<sup>99</sup> <http://www.datacenterdynamics.com/power-cooling/shell-renews-data-center-outsourcing-contract-with-deutsche-telekom/66570.fullarticle>; July, 2012

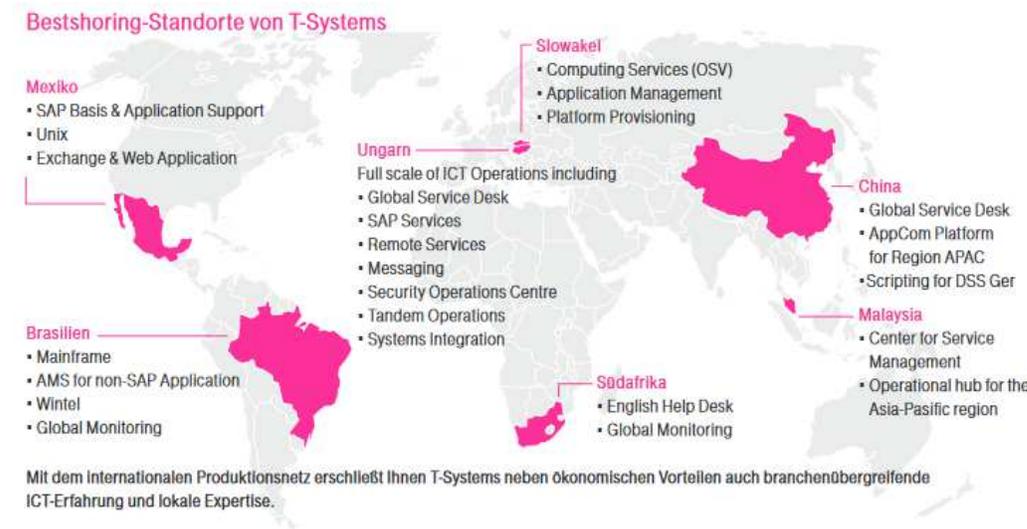
<https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/it-services-hungary>

<sup>100</sup> <http://www.heise.de/newsticker/meldung/Luft-und-Raumfahrtzentrum-bleibt-T-Systems-treu-909354.html>; January, 2010

<sup>101</sup> <http://www.heise.de/newsticker/meldung/HP-und-T-Systems-uebernehmen-IT-Abteilung-von-Eon-1153187.html>; December, 2010

<sup>102</sup> <http://www.heise.de/newsticker/meldung/Niedersachsen-modernisiert-PCs-T-Systems-bekommt-den-Zuschlag-1761304.html>; December, 2012

Figure 6.3: T-Systems Offshore Locations; Source: [https://www.t-systems.com/umn/uti/774224\\_1/blobBinary/Flyer-Nearshoring-ps.pdf?ts\\_layoutId=774590](https://www.t-systems.com/umn/uti/774224_1/blobBinary/Flyer-Nearshoring-ps.pdf?ts_layoutId=774590)



Overall, T-Systems' business is growing due to digitalisation, especially in such areas as cloud services, cyber security, Internet of Things and consulting services. T-Systems' more traditional outsourcing services have remained relatively stable, with a decline in long-term outsourcing contracts.<sup>103</sup> Since in these services, the company is a comparatively small player, the shift is intentional, and T-Systems withdraws from offering desktop services and focuses its efforts on cloud services and IT security. Its partners in offering cloud services are Huawei, Microsoft and Cisco.<sup>104</sup>

T-Systems has its own subsidiaries in several countries, such as IT services in Hungary, Slovakia or Spain, where it operates data centres. According to the European Restructuring Monitor it downsized its workforce in Germany considerably with announced cuts of 3-4,000 from 2008-2010, and another round of 2,200 and 2,700 job losses in 2014 and 2015 respectively. The 2008ff cuts were directly related to a co-operation with Cognizant: The jobs cut in Germany were to move to its new partner in India – and do no longer appear in the European Restructuring Monitor.<sup>105</sup> Other reductions took place in France and Spain,<sup>106</sup> whereas in 2009 the company created some 100 jobs in Portugal. Meanwhile, business expanded in Eastern Europe with a gradual build-up of service centres in Košice, Slovakia.

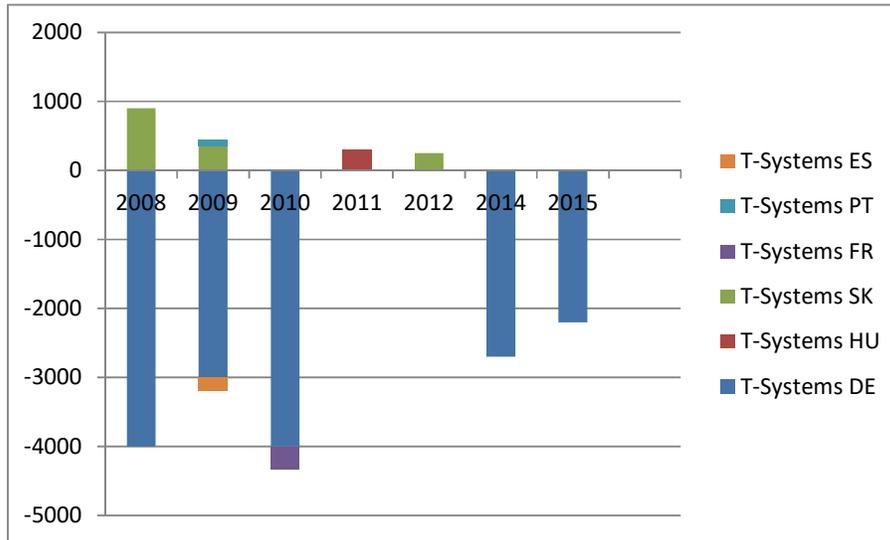
<sup>103</sup> Deutsche Telekom, Annual Report 2015; p. 70

<sup>104</sup> <https://www.t-systems.com/ch/de/newsroom/pressemitteilungen/pressemitteilung/outsourcing-muster-212808>, January, 2016

<sup>105</sup> <http://www.sueddeutsche.de/wirtschaft/t-systems-tausende-stellen-werden-nach-indien-verlagert-1.276826>; May, 2010

<sup>106</sup> [https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets?ef\\_search=t-systems&shs\\_term\\_node\\_tid\\_depth=All&field\\_of\\_announcement\\_date\\_value\[min\]\[date\]=&field\\_of\\_announcement\\_date\\_value\[max\]\[date\]=&field\\_of\\_type\\_of\\_restructuring\\_tid=All](https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets?ef_search=t-systems&shs_term_node_tid_depth=All&field_of_announcement_date_value[min][date]=&field_of_announcement_date_value[max][date]=&field_of_type_of_restructuring_tid=All)

**Figure 6.4: Reported Job reduction and creation in T-Systems in Europe 2008 – 2015;**  
 Source: <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets>



#### 6.4. Vodafone

The British mobile telecommunications company Vodafone is present in most European markets, either through ownership of local companies, subsidiaries, or partnership agreements. The company offers mobile and fixed-line communication. IT services are also part of the portfolio and Vodafone runs data centres, offers customer relationship capability, customer billing services and online resources. Furthermore, cloud and hosting services as well as machine-to-machine solutions are part of Vodafone's business, which is also where Vodafone's investment endeavours are currently concentrated. While these booming services receive much attention, mobile and fixed-line communication still mark the core businesses of Vodafone. It is active in 13 European countries and the main operating markets are the UK, Germany, Italy and Spain. In addition, it offers services outside of Europe, most notably in India, Egypt, South Africa and Turkey.<sup>107</sup>

Vodafone in 2016 had 106,000 employees (101,500 full-time equivalents) worldwide and another 25,000 contractors. Over the past years the Vodafone workforce grew from 83,800 (full-time equivalents) in 2011. In 2015 the countries with the most employees were India (18% of total Vodafone workforce), the UK (16%) and Germany (14%).<sup>108</sup> Between 2013 and 2015 employment in the UK rose by approximately 8,000 workers and employment in India by approximately 6,000 additional workers, which mark the two largest increases of workforce. Over 52,000 employees are in customer care and administration (of which 17,000 employees offer customer services in and for all European markets), over 35,000 are in selling and distribution and over 17,000 are in operations.<sup>109</sup> Vodafone Global Enterprise (VGE) is a division for large multinational companies and offers fixed and mobile

<sup>107</sup> Vodafone, Annual Report, 2015; p. 9ff

<sup>108</sup> Vodafone, Annual Report, 2015; p. 28

<sup>109</sup> Vodafone, Annual Report, 2015; p. 157

communication, cloud-based hosting platforms, machine-to-machine capability and other business services. Parts of the enterprise business are organised country-wise (fixed and mobile communication, IP-VPN network), other functions are run centralised (Vodafone Global Enterprise, machine-to-machine and cloud and hosting services). For cloud and hosting services, Vodafone runs 18 data centres in the UK, Ireland, Germany and Africa. In addition, Vodafone offers carrier services for other communication providers.<sup>110</sup> Generally, Vodafone aims to reduce “non-customer-facing costs” through standardisation and centralisation of business functions. Centralisation is mainly achieved through offshoring administrative tasks to shared service centres in low-cost countries.<sup>111</sup>

#### 6.4.1. Offshoring to large service centres

The trend of offshoring services to large centres took hold in Vodafone as well. Since 2007 it started operating its own shared service centres in Eastern and Central Europe and offshored work from other European countries to the new locations. Today it has centres in Hungary (Budapest, over 1,500 employees), Romania (Bucharest, over 3,000 employees), Portugal, India and Egypt. In 2014 the shared service centre workforce exceeded 13,300 employees, which marks a sharp increase from 6,000 employees in 2012. The company planned to further increase staff in shared service centres to 16,000 by 2016.<sup>112</sup> For Vodafone subsidiaries, customers and business clients the centres offer a wide range of services, such as finance, accounting, payroll, procurement, helpdesk, technical IT support and HR.<sup>113</sup> A SAP Business Transformation Study (2014)<sup>114</sup> evaluated the offshoring and relocation process in the Vodafone Group as (financially) successful, because efficiency gains could be realised through centralising and optimising procedures. The study expects further shifts of offshoring at longer distances with even more multilingual services:

“[...] over the last few months the India centre has started to serve countries where English may not be the primary language but is widely understood, such as the Netherlands, which was previously in the hands of the Hungary centre.” (p. 6)

Finally, Vodafone outsources parts of its IT services to external providers: Vodafone signed a global deal with EDS and IBM in 2006 over the outsourcing of Vodafone’s IT application development and maintenance services. The agreement with EDS covered Vodafone companies in Germany, the UK, Hungary and the Netherlands, while the outsourcing agreement with IBM concerned Spain, the Czech Republic, Australia, New Zealand, Portugal, Ireland, Greece, and Italy. The contract ran for a 7-year

<sup>110</sup> Vodafone, Annual Report, 2015; p. 27

<sup>111</sup> Vodafone Annual Report, 2014; p. 32 and Vodafone Annual Report, 2013; p. 17

<sup>112</sup> <http://www.romania-insider.com/vodafone-opens-new-shared-services-center-in-romania/>; July, 2014  
[https://www.vodafone.com/content/annualreport/annual\\_report13/downloads/operations\\_2015.pdf](https://www.vodafone.com/content/annualreport/annual_report13/downloads/operations_2015.pdf) (Vodafone, Annual Report 2013)  
 Vodafone, Annual Report, 2014; p. 32

<sup>113</sup> <http://sscheroes.com/company/vodafone-shared-services-budapest/>; accessed: 13.07.2016

<http://www.vodafone.hu/vodafonerol/vodafone-shared-services-budapest/>; accessed: 13.07.2016

<sup>114</sup> <http://go.sap.com/docs/download/2014/08/8ec9cbdd-4a7c-0010-82c7-eda71af511fa.pdf>; accessed: 13.07.2016

period.<sup>115</sup> Accordingly, 6,300 employees were affected by the outsourcing activities, the majority was transferred to the outsourcing partners.

#### 6.4.2. Outsourcing of field services and network operations

Vodafone has outsourced network services chiefly to Ericsson. In Europe, Ericsson is already managing and building networks for Vodafone in Germany, the UK, the Netherlands and Italy.<sup>116</sup> Vodafone and Ericsson signed an outsourcing contract in 2006 over network services in the Netherlands.<sup>117</sup> Vodafone UK decided to outsource the operation and maintenance of its Radio Access Networks to Ericsson in 2009. As part of this 7-year deal 350 employees were transferred from Vodafone UK to Ericsson.<sup>118</sup> In 2010 Vodafone Germany outsourced field operations to Ericsson in a 5-year deal. This deal included the management of fixed-line and mobile networks access and transmission networks, as well as fixed core network nodes. The contract led to the transfer of 650 Vodafone employees to Ericsson.<sup>119</sup> In this outsourcing case the German union IG Metall bargained over the transfer conditions and achieved a 2-year employment protection, a 5-year outsourcing moratorium, no redeployments for five years and the adoption of all company agreements.<sup>120</sup> In Italy the two companies agreed on outsourcing field operations for a 5-year period and on transferring 300 employees.<sup>121</sup> In the UK Vodafone outsourced network maintenance and operations for Vodafone and transferred 350 employees to Ericsson in 2009.<sup>122</sup> Outside Europe, Vodafone and Ericsson have a contract in Egypt over network upgrading and maintenance.<sup>123</sup> Nevertheless, with regard to field services Ericsson is not the only provider, Chinese Huawei or Nokia also have contracts with Vodafone. In Germany Huawei is upgrading Vodafone's base stations to LTE,<sup>124</sup> in Spain Huawei is providing field maintenance<sup>125</sup> and there have been deals in Australia<sup>126</sup> (Huawei) and in India<sup>127</sup> (NSN). For the next generation of mobile networks, 5G, Vodafone in 2016 announced a development partnership with all three network equipment manufacturers,

<sup>115</sup> <http://www.lightreading.com/spit-%28service-provider-it%29/bss-%28inc-billing-revenue-assurance%29/ibm-eds-share-vodafone-spoils/d/d-id/634142>; February, 2006

<sup>116</sup> <https://www.telegeography.com/products/commsupdate/articles/2011/07/08/ericsson-lands-big-deal-with-vodafone-for-network-management/>; July, 2011

<sup>117</sup> <http://phys.org/news/2006-03-ericsson-dutch-vodafone-network.html>; March, 2006

<sup>118</sup> <http://www.cellular-news.com/story/Operators/36573.php>; March, 2009

<sup>119</sup> [https://www.ericsson.com/news/100915\\_vodafone\\_244218600\\_c](https://www.ericsson.com/news/100915_vodafone_244218600_c); September, 2010

<sup>120</sup> [https://www.google.at/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&ved=0ahUKEwig3--WkM3NAhVLRQKHeHLAXIQFghTMAg&url=http%3A%2F%2Fwww.vodafone.igm.de%2Fdownloads%2Fartikel%2Ffiles%2F%2FARTID\\_40243\\_IGe6Ey%3Fname%3Dvodafone\\_news\\_extra\\_field\\_service2.pdf&usq=AFQjCNFhteTpY6M6RDmmNBsndHCm6J824w&bv m=bv.125801520.d.d24&cad=rja](https://www.google.at/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&ved=0ahUKEwig3--WkM3NAhVLRQKHeHLAXIQFghTMAg&url=http%3A%2F%2Fwww.vodafone.igm.de%2Fdownloads%2Fartikel%2Ffiles%2F%2FARTID_40243_IGe6Ey%3Fname%3Dvodafone_news_extra_field_service2.pdf&usq=AFQjCNFhteTpY6M6RDmmNBsndHCm6J824w&bv m=bv.125801520.d.d24&cad=rja); September, 2010

<sup>121</sup> [https://www.google.at/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&ved=0ahUKEwig3--WkM3NAhVLRQKHeHLAXIQFghTMAg&url=http%3A%2F%2Fwww.vodafone.igm.de%2Fdownloads%2Fartikel%2Ffiles%2F%2FARTID\\_40243\\_IGe6Ey%3Fname%3Dvodafone\\_news\\_extra\\_field\\_service2.pdf&usq=AFQjCNFhteTpY6M6RDmmNBsndHCm6J824w&bv m=bv.125801520.d.d24&cad=rja](https://www.google.at/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&ved=0ahUKEwig3--WkM3NAhVLRQKHeHLAXIQFghTMAg&url=http%3A%2F%2Fwww.vodafone.igm.de%2Fdownloads%2Fartikel%2Ffiles%2F%2FARTID_40243_IGe6Ey%3Fname%3Dvodafone_news_extra_field_service2.pdf&usq=AFQjCNFhteTpY6M6RDmmNBsndHCm6J824w&bv m=bv.125801520.d.d24&cad=rja); September, 2010

<sup>122</sup> <http://www.fiercewireless.com/europe/story/ericsson-scoops-vodafone-italy-managed-services-deal/2011-07-08>; July, 2011

<sup>123</sup> <http://www.cellular-news.com/story/Operators/36573.php>; March, 2009

<sup>124</sup> <http://www.itnewsafrika.com/2014/08/vodafone-ericsson-to-enhance-network-quality-in-greater-cairo/>; August, 2014

<sup>125</sup> Huawei Europe Fact sheet, Huawei Press Center; p. 3

<sup>126</sup> [http://pr.huawei.com/en/news/hw-266333-vodafone.htm#\\_V3PBUCkwPcs](http://pr.huawei.com/en/news/hw-266333-vodafone.htm#_V3PBUCkwPcs); June, 2013

<sup>127</sup> <http://www.zdnet.com/article/vodafone-to-overhaul-entire-network/>; February, 2011

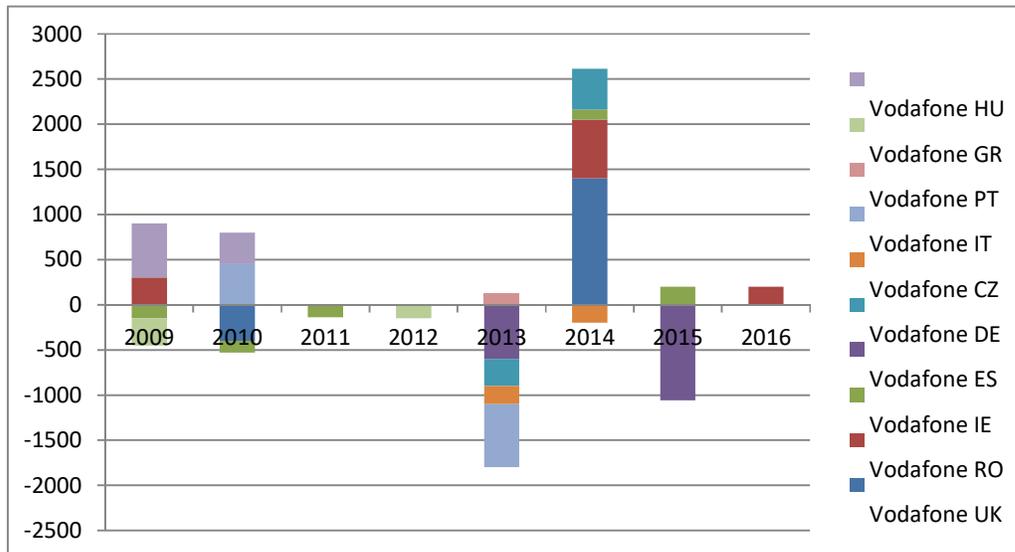
<sup>128</sup> <http://networks.nokia.com/news-events/press-room/press-releases/vodafone-essar-selects-nokia-siemens-networks-to-provide-3g>; October, 2010

Ericsson, Nokia and Huawei plus chip manufacturers Intel and Qualcomm, and some universities. Vodafone is to test hardware and software in its innovation labs and in selected markets.<sup>128</sup>

Network monitoring and management is centralised by Vodafone itself. The network operations centre (NOC) in Romania manages not only the Romanian network, but also the Vodafone networks of Italy, Greece, Germany, Netherlands, Czech Republic and Albania.<sup>129</sup> Another network operations centre in Portugal oversees the networks of Portugal, Spain, the UK and Ireland.<sup>130</sup>

#### 6.4.3. Effects on the workforce

**Figure 6.5: Job losses and gains reported in the European Restructuring Monitor 2009 – mid-2016;**  
Source: European Restructuring Monitor



The European Restructuring Monitor does not mirror the ongoing expansion of Vodafone but provides somewhat isolated evidence of announced larger expansions and cuts. It appears that many instances of downsizing were tightly associated with decreasing profits in the respective markets. Such cuts frequently affected ca. 10% of the workforce across the board. 2013 thus had job losses in Germany, Italy, Spain and the Czech Republic. In the German case, jobs and functions were reported to be moved with network technology shifting to Romania and customer service to India. The 2015 job losses in Spain were due to a merger with cable company Ono. In these recent cases in Spain and Germany, unions managed to negotiate lower redundancies than the company had originally announced. Interestingly, in 2014 and 2015, the company expanded sales functions again, in particular in the UK and Ireland but also in Germany. Just a few years earlier, in 2010 and 2011, the UK and Ireland had seen some consolidations and relocations of Vodafone's customer service centres. Possibly, the

<sup>128</sup> <http://www.golem.de/news/netz-vodafone-arbeitet-mit-allen-drei-netzausruestern-an-10-gbit-s-1602-119278.html>; February, 2016

<sup>129</sup> <http://www.business-review.eu/featured/vodafone-opens-in-romania-regional-network-operations-center-40758>; March, 2013

<sup>130</sup> <http://press.vodafone.pt/en/2012/11/19/vodafone-portugal-monitors-networks-in-uk-and-ireland/>; November, 2012

company is moving somewhat ambiguously between cost-cutting in customer service and investing in proximity to customers.

## 6.5. Ericsson

Swedish Ericsson has shown up several times in this report as an equipment vendor that has increasingly become an operator of managed services on behalf of mobile telecommunications companies. This change from manufacturer to service provider is reflected by the fact that nowadays two thirds of its business are related to services and software. Ericsson has over 116,000 (118,000 in 2014) employees worldwide and has customers in more than 180 countries. In 2015 India was the region with most employees (22,000) and also the only region where employment numbers grew.<sup>131</sup> It is active in many sectors: it still produces equipment, provides network infrastructure and network maintenance and offers software and services. The activities are clustered in three business segments: Networks, Global Services and Support Solutions. In Networks Ericsson offers services for mobile and fixed communication, radio networks, IP and transmission networks, core networks and cloud. In this segment selling hardware still remains important. The second largest business segment Global Services is responsible for network rollout services and professional services, including managed services, consulting and systems integration, customer support as well as network design and optimization services. These activities are processed through Global Services Centres. Support Solutions are characterised by software-supported business process improvements.<sup>132</sup>

Ericsson defines its two core businesses as first, radio, core and transmission, which represents the network equipment market and its software and second, telecom services, which include support services for the network infrastructure business (network rollout), but also the more independent professional services.<sup>133</sup> Following the standardisation of network hardware, Ericsson buys most of its hardware from other suppliers, often located in low-cost countries. Some manufacturing is still retained in-house at manufacturing sites in Brazil, China, Estonia, India, Mexico and Sweden.<sup>134</sup> Managed services that do not require Ericsson employees to be on-site are mostly provided through one of Ericsson's Global Network Operation centres. Ericsson operates such a network centre at four locations in India and additionally runs centres in China, Mexico and Romania.<sup>135</sup> The centre in Mexico has over 2,000 employees and opened in 2013,<sup>136</sup> the Chinese centre has about 800 employees and

<sup>131</sup> Ericsson, Annual Report, 2015, p. 100

<sup>132</sup> Ericsson, Annual Report, 2015, p. 6, 7

<sup>133</sup> Ericsson, Annual Report, 2015, p. 22, 23

<sup>134</sup> Ericsson, Annual Report, 2015, p. 50

<sup>135</sup> [https://www.ericsson.com/news/140708-ericsson-opens-fourth-global-network-operations-center-site-in-india\\_244099436\\_c](https://www.ericsson.com/news/140708-ericsson-opens-fourth-global-network-operations-center-site-in-india_244099436_c); July, 2014

<sup>136</sup> [https://www.ericsson.com/news/130227-ericsson-opens-new-global-service-center-office-in-queretaro-mexico\\_244129229\\_c](https://www.ericsson.com/news/130227-ericsson-opens-new-global-service-center-office-in-queretaro-mexico_244129229_c); February, 2013

started in 2011<sup>137</sup> and the centre in Romania, which started in 2007 with 200 workers,<sup>138</sup> exceeded 2,000 employees in 2015.<sup>139</sup> An Ericsson worker representative describes Ericsson's business:

"Ericsson is the biggest telecom operator in the world. We are insourcing telecom operations, we are running a service business, doing things for the telecom operators that they could do themselves and that they are outsourcing to us. And this business is mainly run from India."

### 6.5.1. *Business*

Ericsson's portfolio is reflected in its wide-spread insourcing activities that mirror the telcos' outsourcing of network operations. The first important segment where Ericsson is insourcing work is in field operations, that is, the building, maintaining and upgrading of networks. The second big segment of insourcing work addresses support services, managed services, consulting and systems integration, network design, optimisation services and customer support. In total Ericsson has more than 300 managed service contracts. Major competitors are Alcatel-Lucent (merged with Nokia in 2016), Nokia, Huawei and Juniper for the network sector and on the other hand IT and consulting companies like Accenture or IBM when it comes to software and consulting services.<sup>140</sup>

Ericsson thus represents the economies of scale in outsourcing and offshoring: it offers managed services to many operators in many countries and is able to draw on knowledge, experts, innovation and tools. Furthermore, it runs big service centres at low-wage locations and benefits from highly standardised and optimised procedures. Still, due to fierce competition (especially from Huawei), a mediocre overall economic development (especially in Europe and some emerging markets<sup>141</sup>) and stagnating prices in telecommunication, Ericsson's current market situation is assessed critically by an Ericsson representative. However, since large-scale contracts are common in the telecommunication sector, the situation might change quickly. Because of this difficult market situation and the lacking growth, Ericsson has recently become more hesitant to insource staff from telecommunication operators.<sup>142</sup>

### 6.5.2. *Major clients in the telecommunication sector*

Many insourcing contracts are in field services, network rollout and managed services. With Orange Ericsson made an agreement over the operation, rollout and field maintenance of its mobile network in the Netherlands in 2007. The contract had a duration of five years and resulted in the transfer of

<sup>137</sup> <https://www.ericsson.com/news/1542622>; August, 2011  
<https://www.ericsson.com/news/1651367>; September, 2012

<sup>138</sup> <https://www.ericsson.com/news/1129286>; May, 2007

<sup>139</sup> <http://www.romania-insider.com/swedish-group-ericsson-to-add-300-more-employees-to-its-global-services-center-in-romania-next-year/>; September, 2014

<sup>140</sup> Ericsson, Annual Report, 2015, p. 31-35

<sup>141</sup> <https://www.ericsson.com/res/investors/docs/q-reports/2016/03month16-en.pdf>; April, 2016

<sup>142</sup> Ericsson, worker representative

190 employees from Orange Netherlands to Ericsson.<sup>143</sup> Ericsson also upgraded the mobile network for Orange Austria in 2010.<sup>144</sup> Outside Europe Ericsson also provided services for Orange, for instance, in Africa (Conakry in Guinea) Ericsson deployed solar-powered base stations or in the Dominican Republic it upgraded Orange's network.<sup>145</sup> In 2015 Ericsson acquired a contract to manage and operate Orange's networks in Belgium, Moldova, Romania, Slovakia and Spain.<sup>146</sup>

Ericsson also worked with other operators. In 2009 Vodafone granted a 7-year contract to Ericsson, outsourcing its network maintenance in the UK. The deal included the transfer of 350 employees from Vodafone to Ericsson.<sup>147</sup> In Australia Vodafone contracted Ericsson to upgrade its core network and in Egypt it assigned Ericsson to deliver network field maintenance for three years.<sup>148</sup> Ericsson made a deal with Vodafone Germany in 2010 to take over network maintenance, as well as 600 employees.<sup>149</sup> Another contract covers network transformation, including products and services.<sup>150</sup> In Portugal, Vodafone selected Ericsson and Cisco to modernise its network.<sup>151</sup> Recently, Vodafone selected Ericsson for its customer experience management in 22 countries.<sup>152</sup> In India, Vodafone agreed with Ericsson to manage its optical fiber network.<sup>153</sup>

In 2014 Ericsson made a deal with Croatian telecom operator Hrvatski Telekom (member of Deutsche Telekom Group) to take over HT's network construction and maintenance services and 640 employees were transferred from HT to Ericsson.<sup>154</sup> The telecommunications union, Hrvatski Sindikat Telekomunikacija, managed to transfer its structure, retain its density, protect jobs and employment conditions and make the transition from a company-specific to an ICTS union (Palada 2016).

Telefónica has been outsourcing its network transformation (network virtualisation, software defined networking) to Ericsson since 2013.<sup>155</sup> Telefónica Germany selected Ericsson to upgrade their mobile network to support voice over LTE.<sup>156</sup> Telefónica also partners with Ericsson in a cloud-based

<sup>143</sup> <http://www.marketwired.com/press-release/ericsson-selected-by-orange-for-managed-services-in-the-netherlands-nasdaq-eric-717847.htm>; February, 2007

<sup>144</sup> <https://www.telegeography.com/products/commsupdate/articles/2010/07/15/orange-selects-ericsson-for-wireless-upgrade/>; July, 2010

<sup>145</sup> <http://telecomafrika.blogspot.co.at/2009/02/orange-deploys-ericsson-solar-powered.html>; February, 2009  
<http://www.lightreading.com/orange-picks-ericsson-for-gsm/d/d-id/614040>; May, 2005

<sup>146</sup> Ericsson, Annual Report, 2015, p. 28, 29

<sup>147</sup> <http://www.cellular-news.com/story/Operators/36573.php>; March, 2009

<sup>148</sup> <http://www.itnews.com.au/news/vodafone-picks-ericsson-to-rebuild-core-network-391218>; August, 2014

<http://www.lightreading.com/services/managed-services/vodafone-egypt-uses-ericssons-managed-services/d/d-id/710249>; August, 2014

<sup>149</sup> <http://www.handelsblatt.com/unternehmen/industrie/uebernahme-ericsson-wartet-telefonnetz-fuer-vodafone/3540718.html>; September, 2010

<sup>150</sup> <http://www.finanzen.net/nachricht/aktien/Vodafone-s-Project-Spring-awards-Ericsson-with-5-year-deal-3327526>; February, 2014

<sup>151</sup> <http://www.finanzen.net/nachricht/aktien/Ericsson-and-Cisco-partner-to-transform-Vodafone-Portugal-IP-Mobile-Backhaul-4749561>; February, 2016

<sup>152</sup> <http://www.finanzen.net/nachricht/aktien/Vodafone-Group-selects-Ericsson-as-global-Customer-Experience-Management-partner-4744237>; February, 2016

<sup>153</sup> <http://www.finanzen.net/nachricht/aktien/Vodafone-India-selects-Ericsson-to-manage-optical-fiber-network-4740631>; February, 2016

<sup>154</sup> <http://www.telecompaper.com/news/hrvatski-telekom-ericsson-sign-outsourcing-agreement--1023708>

<sup>155</sup> <http://www.finanzen.net/nachricht/aktien/Ericsson-and-Telefonica-extend-successful-co-operation-for-Network-Virtualization-4218374>; March, 2015

<sup>156</sup> <http://www.finanzen.net/nachricht/aktien/Telefonica-Germany-selects-Ericsson-for-Voice-over-LTE-3957688>; October, 2010

virtualisation project (UNICA) in Germany.<sup>157</sup> Outside Europe, Ericsson made a very big deal with US company Sprint Nextel transferred its wireless and fixed-line operation to Ericsson with 6,000 employees from Sprint Nextel.<sup>158</sup>

Staff that is transferred from other companies to Ericsson is usually hired by Ericsson on the same terms as other Ericsson employees. A worker representative told us that it is important to treat transferred workers the same as any other Ericsson employees. This practice is a matter under discussion, as transferred workers (and their unions) frequently expect employment guarantees for one or two years following the transfer. The majority of the 15,000 employees who joined Ericsson in 2015 were workers transferred from other companies or from acquisitions of companies.<sup>159</sup> There are usually works councils and union representation at most Ericsson locations, but in some countries (India, for instance) unionisation is quite low. Contrary to popular belief, unionisation at Ericsson usually rises due to the transfer of workers to the company. Also, unions are involved in the bargaining over the transfer of workers in the countries where the transfer is taking place. However, because of possibly affecting share prices, communication between different works councils prior to the transfer of workers is often very limited.<sup>160</sup>

In addition, Ericsson is very active in outsourcing its own IT services and IT infrastructure. It signed, for instance, a five-year outsourcing deal with HP in 2003. Accordingly, HP manages Ericsson's IT-infrastructure, offers helpdesk support and provides additional functions in 100 countries. As a result, 1,000 employees from Ericsson were to be transferred to HP.<sup>161</sup> This contract was extended in 2008 granting HP the operation of IT infrastructure services, application services, helpdesk support and other services for a 5-year period.<sup>162</sup> 2009 was a very active year for Ericsson when it comes to outsourcing: Ericsson signed a 5-year agreement in 2008 with IBM to outsourcing application maintenance and development. This agreement covers the delivery of services to 70,000 clients and extends an already existing contract with IBM.<sup>163</sup>

### 6.5.3. Competition taking a toll

Ericsson has been restructuring itself for years, which especially affected European locations. Since 2009, Sweden took the brunt of reported job losses through several rounds of restructuring. Manufacturing sites in particular were closed in Sweden, Germany and Finland, but R&D was also downsized in Sweden, Germany, the Netherlands and Italy. In Finland, Ericsson established a new radio technology R&D centre in Oulu in 2011 – also a site of competitor NSN/Nokia – with 50 new jobs

<sup>157</sup> <http://www.finanzen.net/nachricht/aktien/Telefonica-selects-Ericsson-for-global-UNICA-program-4747069>; February, 2016

<sup>158</sup> <http://abcnews.go.com/Business/story?id=8046767>; accessed: 13.07.2016  
<http://www.heise.de/newsticker/meldung/Ericsson-uebernimmt-Netzbetrieb-fuer-Sprint-Nextel-6125.html>; July, 2009

<sup>159</sup> Ericsson, worker representative and Ericsson, Annual report 2015, p. 6

<sup>160</sup> Ericsson, worker representative

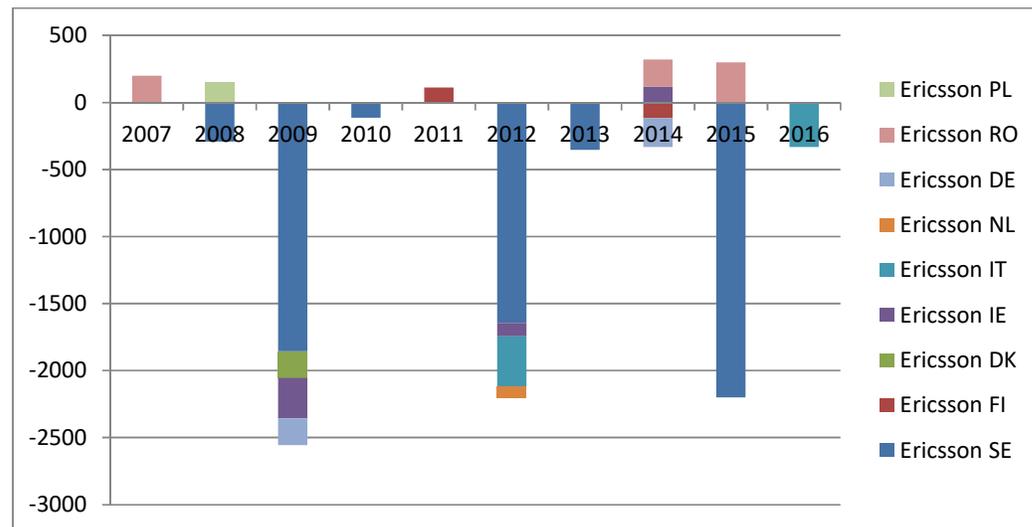
<sup>161</sup> <http://www.computerworld.com/article/2570430/it-outsourcing/ericsson-signs-five-year-it-outsourcing-deal-with-hp.html>; June, 2003

<sup>162</sup> <http://www.cellular-news.com/story/Business/32054.php>; June, 2008

<sup>163</sup> <http://www.cellular-news.com/story/Business/31910.php>; June, 2008  
<http://www.cellular-news.com/story/Business/35753.php>; January, 2009

expected at Ericsson itself and 150 with the company's cooperation partners in the region.<sup>164</sup> Ireland lost 100 R&D jobs in 2012 that were located in "legacy products", but in 2014 Ericsson announced the creation of 120 jobs in the areas of software development, programme management and consultancy in a collaboration with universities in Dublin and Athlone, supported by the Industrial Development Agency.<sup>165</sup> According to the European Restructuring Monitor it closed manufacturing sites in Sweden in 2005 and parts of the production were moved to China. When Ericsson took over the British telecommunication company Marconi, it announced the cut of service-related jobs in Germany. Ericsson cut jobs in the Netherlands due to the relocation of research and development activities to China. However, it also created 200 jobs in research and services in Hungary. Ericsson operates Global Services Delivery Centres in many different locations, for instance it located such centres in Romania and Lebanon in 2007<sup>166</sup> (and again in both countries in 2014 and 2013<sup>167</sup>), in Pakistan in 2008<sup>168</sup>, or in Poland in 2009<sup>169</sup> with continuous job growth. On the other hand Ericsson reduced jobs in Ireland as functions of product development and product line maintenance were to be moved to China, Poland and Sweden. Since 2014 Ericsson has reduced jobs in Finland, Germany and Sweden in manufacturing, research and development and services.<sup>170</sup> Hence, the company is somewhat emblematic of the shift of 'new' jobs in telecommunications towards Eastern Europe.

**Figure 6.6: Job losses and gains reported in the European Restructuring Monitor 2007 – mid-2016;**  
**Source: European Restructuring Monitor Source: own calculation from European Restructuring Monitor Factsheets**



<sup>164</sup> <http://www.investinfinland.fi/-/ericsson-to-establish-r-d-centre-in-oulu-finland>; October, 2011

<sup>165</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/ericsson-35>

<sup>166</sup> <https://www.ericsson.com/news/1129286>; May, 2007 and <https://www.ericsson.com/news/1149056>; August, 2007

<sup>167</sup> <http://www.romania-insider.com/swedish-group-ericsson-to-add-300-more-employees-to-its-global-services-center-in-romania-next-year/>; September, 2014 and <http://www.cnmeonline.com/news/ericsson-to-open-global-service-delivery-centre-in-beirut/>; April, 2013

<sup>168</sup> <https://www.ericsson.com/news/1252203>; September, 2008

<sup>169</sup> <http://www.warsawvoice.pl/WV/page/pages/article.php/20078/article>; April, 2009

<sup>170</sup> [https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets?ef\\_search=ericsson&shs\\_term\\_node\\_tid\\_depth=All&field\\_ef\\_announcement\\_date\\_value\[min\]\[date\]=&field\\_ef\\_announcement\\_date\\_value\[max\]\[date\]=&field\\_ef\\_type\\_of\\_restructuring\\_tid=All](https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets?ef_search=ericsson&shs_term_node_tid_depth=All&field_ef_announcement_date_value[min][date]=&field_ef_announcement_date_value[max][date]=&field_ef_type_of_restructuring_tid=All)

## 6.6. IBM

IBM is an important actor in the global ICT segment and has been emblematic of an original hardware manufacturer's shift to services and "servitisation" of its products for decades. It has operations in more than 175 countries and is an integral part of European Telco's ICT-related outsourcing practices. The company employed 377,000 people in 2015. However, the global workforce declined quite drastically over the past years. Between 2010 and 2012 for instance, IBM and its subsidiaries continuously had a workforce of more than 430,000. The most significant decline of the staff happened between 2013 and 2014 due to divestitures (35,000 employees left the company).<sup>171</sup> The geographical allocation of the workforce remains unclear, but unofficial reports suggest India as IBM's largest staff location.<sup>172</sup>

### 6.6.1. A giant changing its business

IBM, originally "International Business Machines", offers hardware, software and the entire range of IT services, and provides hosting and consulting services (this includes IT datacentre and business process outsourcing, application management services, systems integration, technology infrastructure and system maintenance and the design and development of complex IT systems) and is also (somewhat ostentatiously) exploring crowdsourcing and virtualisation as an HR strategy (IG Metall-Vorstand, 2013; Kawalec and Menz, 2013; Holtgrewe, 2014).<sup>173</sup> Its current business strategy rests on three digital pillars: big data/analytics, cloud and engagement. Important tenets run under the names 'Cognitive Solutions', 'Cloud Platform' and 'Industry Focus'. Cognitive Solutions subsumes programmes and systems for analysing (big) data; with the cloud platform IBM provides the infrastructure for companies to transform their business processes and IT into a digital service; the industry focus refers to providing business specific and custom made solutions, rather than general purpose solutions.<sup>174</sup> Especially IT services can be delivered through cloud systems. The activities are segmented in five business units (Global Technology Services - GTS, Global Business Services - GBS, Software, Hardware and Financing). For this report the Global Services units are especially relevant, as they comprise the outsourcing and service maintenance business IBM provides for other companies. GTS offers the provision of IT infrastructure, managed services, cloud computing, analytics, cognitive computing and virtualization. GBS offers consulting, business integration, application management services, and process services.<sup>175</sup> Global Services today are central for IBM's business and around 60% of total revenues derive from this segment. Around 25% of total revenues are directly attributable to outsourcing. However, on a year-to-year basis, 2014 saw a decline in revenues from both, Global

<sup>171</sup> IBM Annual Report 2015; p. 69 and IBM Annual Report, 2013; p. 72

<sup>172</sup> <http://www.computerworld.com/article/2493565/it-careers/in-a-symbolic-shift-ibm-s-india-workforce-likely-exceeds-u-s-.html>; November, 2012  
<http://nypost.com/2013/10/05/ibm-now-employs-more-workers-in-india-than-us/>; October, 2013

<sup>173</sup> IBM, Annual Report, 2015; p. 83

<sup>174</sup> IBM, Annual Report, 2015; p. 22-24

<sup>175</sup> IBM Annual Report, 2015; p. 25-27

Services and outsourcing.<sup>176</sup> For carrying out these services IBM operated 49 cloud data centres all across the world (in 2014).<sup>177</sup>

### 6.6.2. IBM downsizes and relocates the workforce

After 2000 IBM shows globally co-ordinated waves of downsizing driven by expectations of future growth and partly by proximity to customers, a consistent relocation of the remaining manufacturing units to Asia, and a concentration of expansion in Eastern Europe and in shared service centres. Its strategy has been described as “two-pronged”:<sup>178</sup> cutting cost through iterations of downsizing on the one hand, expansion of higher-growth or higher-value segments on the other. Here, the company focused on higher-growth markets in the 2000s, the expansion of shared service centres in the 2010s and still ongoing, and currently acquisitions of cloud and analytics companies.

According to the European Restructuring Monitor, global downsizing initiatives were reported in 2005, 2013 and in the EU for 2014, and in recent years “workforce rebalancing” on a large scale appears to be an annual practice.<sup>179</sup> 2005 saw plans for a minus of 13,000 of 320,000 jobs across the world, with some 6,000 – 8,000 jobs to be cut in Europe and an intended focus on high-growth markets.<sup>180</sup> In 2013, overall employment was at 434,000 jobs and cuts were supposed to affect some 6,000 – 8,000 jobs worldwide, mostly in management positions.<sup>181</sup> An uncertain number of contract workers were also laid off. Forbes magazine commented that “IBM’s formula for profit growth has been to cut costs enough to offset declining sales. In the last year, its revenue fell 2.3% while its net income grew 4.7%. If IBM cut enough people, it could meet its profit numbers.”<sup>182</sup> This affected the US rather than Europe, but 700 jobs in Germany, 250 in Italy and 128 in Denmark were to be concerned in this round.

In 2014, some 1,900 jobs were to be shed in Europe. France was to lose 345 of its 9,000 IBM jobs in 2015 after having cuts of 600-800 jobs in 2013, and in 2015 IBM announced dismissals of 10% of its 1,370 Spanish staff and pay cuts of 12% for the remaining workers – clearly making use of some liberalisation in the regulation of restructuring in Spain:

“The company attributes the measures to economic, productive and technical reasons, taking advantage of the more flexible regulations in relation to restructuring in Spain introduced in 2012. However, trade unions argue that the reason for the reduction is to prevent the application of an earlier Labour Court decision obliging the company to restore unpaid pension entitlements.”<sup>183</sup>

<sup>176</sup> IBM Annual Report, 2015; p. 30

<sup>177</sup> <http://www.informationweek.com/cloud/infrastructure-as-a-service/ibm-brags-of-49-cloud-data-centers/d/d-id/1318243>; December, 2014

<sup>178</sup> [http://seekingalpha.com/article/3962353-ibm-reportedly-plans-layoffs-cloud-m-spree-continues?auth\\_param=ccdt3:1bfqs9t:39ee9a5fdcc1b613f6a1d54a96964324&uprof=46](http://seekingalpha.com/article/3962353-ibm-reportedly-plans-layoffs-cloud-m-spree-continues?auth_param=ccdt3:1bfqs9t:39ee9a5fdcc1b613f6a1d54a96964324&uprof=46) (March 2016).

<sup>179</sup> <http://www.informationweek.com/cloud/infrastructure-as-a-service/ibm-confirms-layoffs-amid-hiring/d/d-id/1114037>; February, 2014

<sup>180</sup> <http://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/ibm-6>

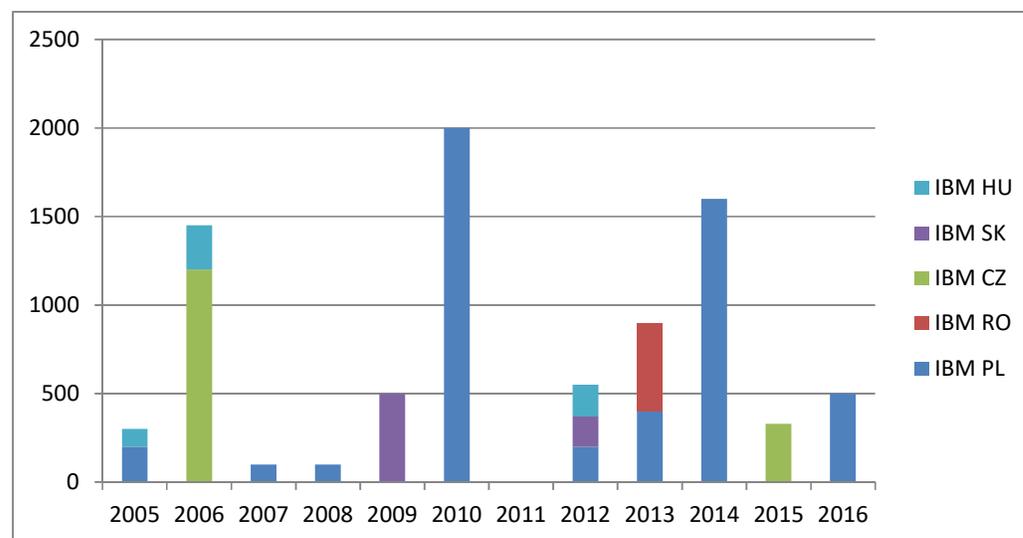
<sup>181</sup> <http://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/ibm-32>

<sup>182</sup> <http://www.forbes.com/sites/petercohan/2013/06/14/as-it-shrinks-in-a-growing-market-does-ibm-have-a-strategy/#451e7d07834e>; June, 2013

<sup>183</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/ibm-spain>

2016, IBM Italy reported a loss of 190 jobs, and in March of that year,<sup>184</sup> cuts of nearly 1,000 jobs in Germany until 2017 were announced. While in 2009, IBM Germany employed some 21,100 workers, in March 2016 it had 16,500 staff in Germany. Apparently, Germany, France, Italy, Spain and Denmark have consistently seen IBM downsizing since 2010. Nevertheless, some expansion is still found in Western Europe even in the 2010's. IBM Ireland and the Netherlands have had a mixed picture. 2009 and 2010 saw the relocation of server manufacturing from Ireland to Asia, with high-end servers manufactured in Singapore and the lower-end ones in China, leading to losses of 620 jobs in both years together. On the other hand, Irish software labs and services expanded, adding 100 jobs in 2009, 200 in 2012 in a global services integration hub in Dublin, and 110 jobs in 2015, retaining a workforce of slightly above 3,000 people. The Netherlands saw 240 jobs and an unreported number of flexible workers lost in 2012, due partly to offshoring to India, but an expansion of 350 jobs in the Groningen area in 2013 with the involvement of a regional development partnership to counter the perceived lack of ICT skills in the region. Sweden also reported 300 new jobs in in 2015 in a new development centre in Malmö. Earlier in 2016, there were rumours about another wave of dismissals and estimates were around 14,000 cut jobs worldwide.<sup>185</sup>

**Figure 6.7: Newly announced job expansion of IBM in Central and Eastern Europe 2005ff.;**  
**Source: own calculation from European Restructuring Monitor Factsheets**



Otherwise, IBM has expanded its operations chiefly in Eastern Europe since 2005 or earlier, with IBM Poland expanding the most. 2005 – 2008 saw expansions in Kraków and Gdańsk and the opening of a shared service centre in Brno, Slovakia, 2009 – 2012 a global service delivery centre in Wrocław and a location in Košice, Slovakia, announced new jobs – and Košice expected to hire some of the 122 local engineers previously dismissed by Finnish-owned software company Ixonos who had developed software for Nokia phones.<sup>186</sup> From 2013 onwards, Polish Katowice with a global services delivery centre, Romanian Bucharest and Brasov, and Brno and Wrocław grew. The European Restructuring

<sup>184</sup> <http://www.morgenpost.de/wirtschaft/article207330975/IBM-will-in-Deutschland-Hunderte-Arbeitsplaetze-streichen.html>; March, 2016

<sup>185</sup> [http://www.channelregister.co.uk/2016/03/22/ibm\\_job\\_losses/](http://www.channelregister.co.uk/2016/03/22/ibm_job_losses/); March, 2016

<sup>186</sup> <http://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/ibm-slovakia-0>

Monitor reports that for most of these East European expansions (and also some of the West European ones) IBM applied for and received public and regional development funding.

### 6.6.3. The clients

IBM is a major provider of outsourced services in the global IT infrastructure outsourcing segment.<sup>187</sup> In regard to the telecommunication industry it partners with a couple of companies: for Telefónica it modernises HR and financial processes in Spain, Argentina and Peru for 10 years, starting in 2016.<sup>188</sup> In 2011 Vodafone India and IBM extended their IT outsourcing contract until 2017.<sup>189</sup> Ericsson extended an existing contract with IBM in 2008 under which IT services for approximately 70,000 end users are managed.<sup>190</sup> But its offers are by no means limited to the telecommunication industry and it also manages the IT infrastructure for e.g. Lufthansa, Deutsche Bank,<sup>191</sup> Media-Saturn,<sup>192</sup> Hertz,<sup>193</sup> Volvo,<sup>194</sup> ProSiebenSat.1<sup>195</sup> or the Allianz Group.<sup>196</sup> Providing some details: In 2007 Nokia Siemens Networks outsourced some research and development functions, various services and support activities to IBM. 235 employees of NSN in Germany were transferred to IBM.<sup>197</sup> Ericsson also relies on IBM for IT outsourcing. In 2008 it renewed a contract with IBM for application management and development for a 5-year period.<sup>198</sup> In 2009 Deutsche Bank reduced staff in its IT division Group Technology & Operations (GTO) by 195 employees and announced the transfer of 50 employees to IBM. In 2014 IBM and Lufthansa signed an outsourcing deal according to which IBM will manage all of Lufthansa's IT infrastructure for 7 years and around 1,400 employees were transferred to IBM.<sup>199</sup> However, IBM's outsourcing strategies are not restricted to IT infrastructure: it also subcontracted finance and procurement from Unilever.<sup>200</sup>

In recent years IBM also explores extended cloud services, which again attracts further outsourcing of infrastructure services.<sup>201</sup> Especially notable is IBM's own crowdwork programme, the 'liquid program'. In this version of crowdsourcing, calls are open for all IBM employees and they are meant

<sup>187</sup> <http://www.prnewswire.com/news-releases/report-ibm-leads-the-pack-in-global-infrastructure-outsourcing-support-for-hybrid-cloud-computing-tops-ic-agenda-300041305.html>, February 25, 2015.

<sup>188</sup> <http://www-03.ibm.com/press/us/en/pressrelease/49273.wss>; March, 2016

<sup>189</sup> [http://www.information-age.com/it-management/outsourcing-and-supplier-management/1653558/vodafone-india-signs-\\$1bn-deal-extension-with-ibm](http://www.information-age.com/it-management/outsourcing-and-supplier-management/1653558/vodafone-india-signs-$1bn-deal-extension-with-ibm); September, 2011

<sup>190</sup> <http://www.cellular-news.com/story/Business/31910.php>; June, 2008

<sup>191</sup> <http://www.zdnet.de/88219916/deutsche-bank-und-hp-schliessen-milliardenschweren-outsourcing-vertrag/>; February, 2015

<sup>192</sup> <http://www.zdnet.de/39200112/media-saturn-lagert-zentrale-rechenzentren-an-ibm-aus/>; December, 2008

<sup>193</sup> <http://www.computerworld.com/article/2577114/it-outsourcing/hertz-extends-it-outsourcing-contract-with-ibm.html>; July, 2002

<sup>194</sup> [http://articles.economictimes.indiatimes.com/2015-06-17/news/63540621\\_1\\_ab-volvo-olof-persson-it-outsourcing-contract](http://articles.economictimes.indiatimes.com/2015-06-17/news/63540621_1_ab-volvo-olof-persson-it-outsourcing-contract); June, 2015

<sup>195</sup> <http://www.heise.de/newsticker/meldung/ProSiebenSat-1-und-IBM-schliessen-Outsourcing-Abkommen-197603.html>; April, 2008

<sup>196</sup> [https://www.allianz.com/de/presse/news/geschaeftsfelder/it/news\\_2013-12-20.html?search.query=ibm&search.filter=-contentType:editorial](https://www.allianz.com/de/presse/news/geschaeftsfelder/it/news_2013-12-20.html?search.query=ibm&search.filter=-contentType:editorial); December, 2013

<sup>197</sup> <http://www.cellular-news.com/story/Business/26375.php>; September, 2007

<sup>198</sup> <http://www.cellular-news.com/story/Business/31910.php>; June, 2008

<sup>199</sup> <http://www.computerwoche.de/a/lufthansa-gibt-it-infrastruktur-an-ibm-ab,3069983>; October, 2014

<sup>200</sup> <http://www.cips.org/en/Supply-Management/News/2012/December/Unilever-in-108-million-outsourcing-deal-with-IBM/>; December, 2012

<sup>201</sup> <http://www.prnewswire.com/news-releases/report-ibm-leads-the-pack-in-global-infrastructure-outsourcing-support-for-hybrid-cloud-computing-tops-ic-agenda-300041305.html>; February, 2015

to compete against each other, however, this program was later opened for external workers as well (Leimeister and Zogaj, 2013).<sup>202</sup>

## 6.7. Atos

The French company Atos is another large player in digital services. The company has 93,000 employees in 72 countries. Regions with most employees are France and, put together, India, Middle East and Africa (both regions have 16% of the total workforce each), Central and Eastern Europe (13%), Germany (10%) and the UK and Ireland (10%). Due to the acquisition of Xerox ITO the overall workforce grew in 2015. Besides, Atos hired people especially in offshore locations, mainly in India and also in North America. The company's portfolio comprises of consulting and systems integration services, managed services, BPO (Business Process Outsourcing), cloud, big data, cybersecurity solutions and transactional services (through the Worldline subsidiary). Atos delivers IT outsourcing, which includes data centre outsourcing, infrastructure outsourcing, cloud and application services and help desk and desktop outsourcing and BPO. With the UK and Ireland, France and Germany being the main markets, Europe is Atos' primary location.<sup>203</sup> Managed IT services is Atos' most important source of income, representing over 50% of total revenues and consulting and systems integration is the second strongest segment (30% of revenues). Customers can be characterised in Manufacturing, Retail and Transportation, Public and Health, Telcos, Media and Utilities and Financial Services. Telcos, Media and Utilities represent 20% of the company's revenue and main clients in the telecommunication and ICT sector are Nokia, KPN, Orange, Telefónica/O2 and formerly E plus,<sup>204</sup> Telecom Italia and Microsoft.<sup>205</sup>

<sup>202</sup> <http://www.computerwoche.de/a/ibm-macht-ernst-mit-crowdworking,3068119>; September, 2014

<sup>203</sup> Atos, Registration Document, 2015; p. 4-6, 70-72, 139

<sup>204</sup> <http://www.heise.de/newsticker/meldung/Atos-Origin-uebernimmt-IT-Bereich-von-E-Plus-118543.html>; November, 2004  
<http://navisco.com/e-plus-und-atos-origin-erweitern-partnerschaft/>; December, 2008

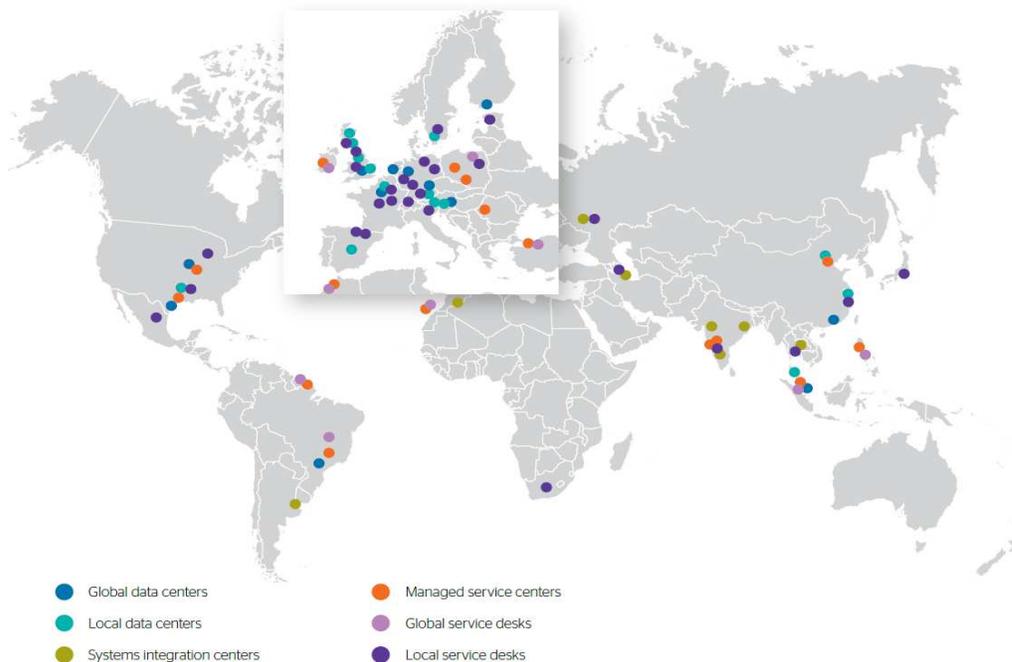
[http://atos.net/en-us/home/we-are/news/press-release/2013/pr-2013\\_09\\_16\\_02.html](http://atos.net/en-us/home/we-are/news/press-release/2013/pr-2013_09_16_02.html); September, 2013

<sup>205</sup> Atos, Registration Document, 2015; p. 126, 137

[http://atos.net/en-us/home/we-are/news/press-release/2010/pr-2010\\_06\\_01\\_01.html](http://atos.net/en-us/home/we-are/news/press-release/2010/pr-2010_06_01_01.html); June, 2010

### 6.7.1. Offshoring of service centres

**Figure 6.8: Atos service and data centre locations; Source: Atos Global Delivery, <https://atos.net/content/dam/global/documents/we-are/atos-global-delivery.pdf>**



To provide data services Atos operates over 85 data centres and data rooms. For managing over 3.2 million end user devices and business users, it relies on global and local production centres. Atos also operates global and local service delivery centres for providing the full range of outsourced and offshored services (i.e. business process outsourcing, consulting, managed services, business integration). For its outsourcing services Atos in total ran 150 global and local service delivery centres in 2011 with about 6,000 service desk agents.<sup>206</sup>

### 6.7.2. The relocation of the workforce

The European Restructuring Monitor<sup>207</sup> reports striking shifts in Atos's European geography with some job losses in Germany and the Netherlands and expansion concentrated and accelerating in Poland and more recently Romania. For France, some expansion was announced in 2010 and 2011<sup>208</sup> In Poland, Atos has been active since 2000. In 2005 a direct relocation of jobs was obvious when 245 jobs were cut in the Netherlands' Managed Operations Division of Atos (in which Philips had a share of 31%) and a few days later, an expansion of 100 jobs in Poland was announced due to the relocation of the remote management of Philips's computer services from there. 2010 – 2012, Poland reported increases of some 200-250 Atos jobs annually, in 2013 another 500 jobs were added, 850 in 2014 and

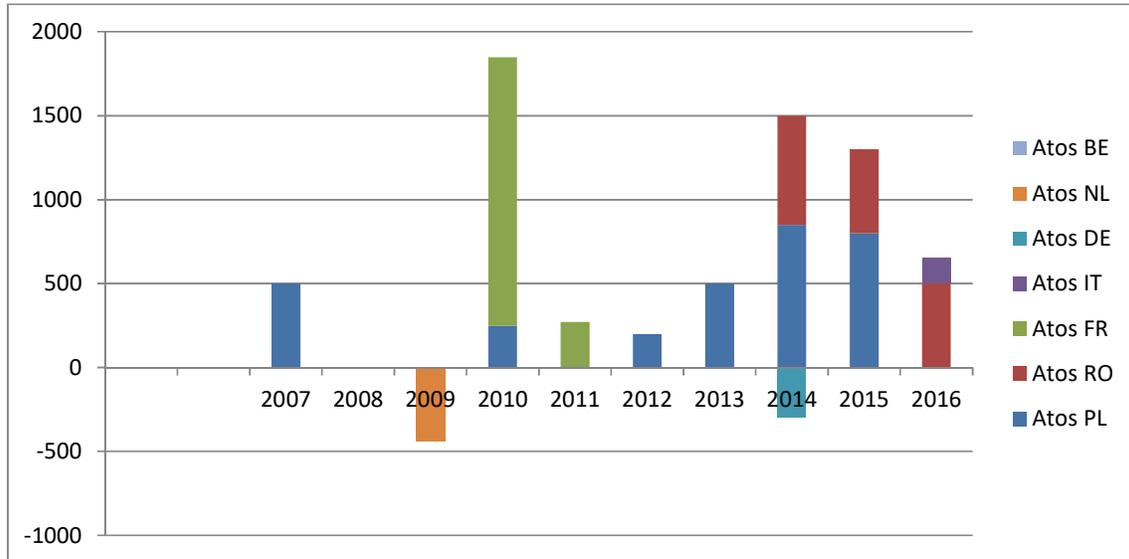
<sup>206</sup> Atos, Global Delivery. Delivering agility, quality and cost-efficiency through coordinated world resources; p. 4, 5 <https://atos.net/content/dam/global/documents/we-are/atos-global-delivery.pdf>; September, 2011

<sup>207</sup> A search of the ERM Factsheets conducted July 3rd, 2016, with some manual plausibility checks

<sup>208</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/atos-origin-7>

another 800 in 2015. Romania reported a similar expansion with 650 new jobs in 2014 and 500 in 2015 and 2016. Other expanding sites were in France, with 2,500 new jobs announced in 2006, 1,600 in 2010 (of which we do not know if they materialised when the company intended to hire 7,000-8,000 new people worldwide), and 270 in 2011 (of which we cannot be sure if they were added to the 2010 announcement or not.)

**Figure 6.9: Newly announced job expansion of Atos in Europe; Source: own calculation from European Restructuring Monitor Factsheets**



Few job losses were reported for Atos in the ERM. A round of downsizing in the Netherlands occurred in 2009 with 443 jobs (of still 9,000 Atos jobs in the country). In 2014, the Frankfurt/Main branch in Germany was closed with minus 300 jobs. Worldwide, the company has been growing from some 49,000 workers in 2011 to 86,000 at present. The major expansion occurred through the merger with Siemens IT Solutions and Services announced in 2010 which brought Atos to the size of 78,500 employees. Union representatives point out recent expansions were due to acquisitions only of BULL in 2014 (+7,148), Xerox ITO in 2015 (+1,000), and UNIFY (+1,200) and Equens (+1,223) in 2016. In France, from 2014 to 2016, the workforce declined from 18,337 to 16,236. Unions report that management aim for a global workforce composition of 55% onshore, 15% subcontracted and 30% offshored.

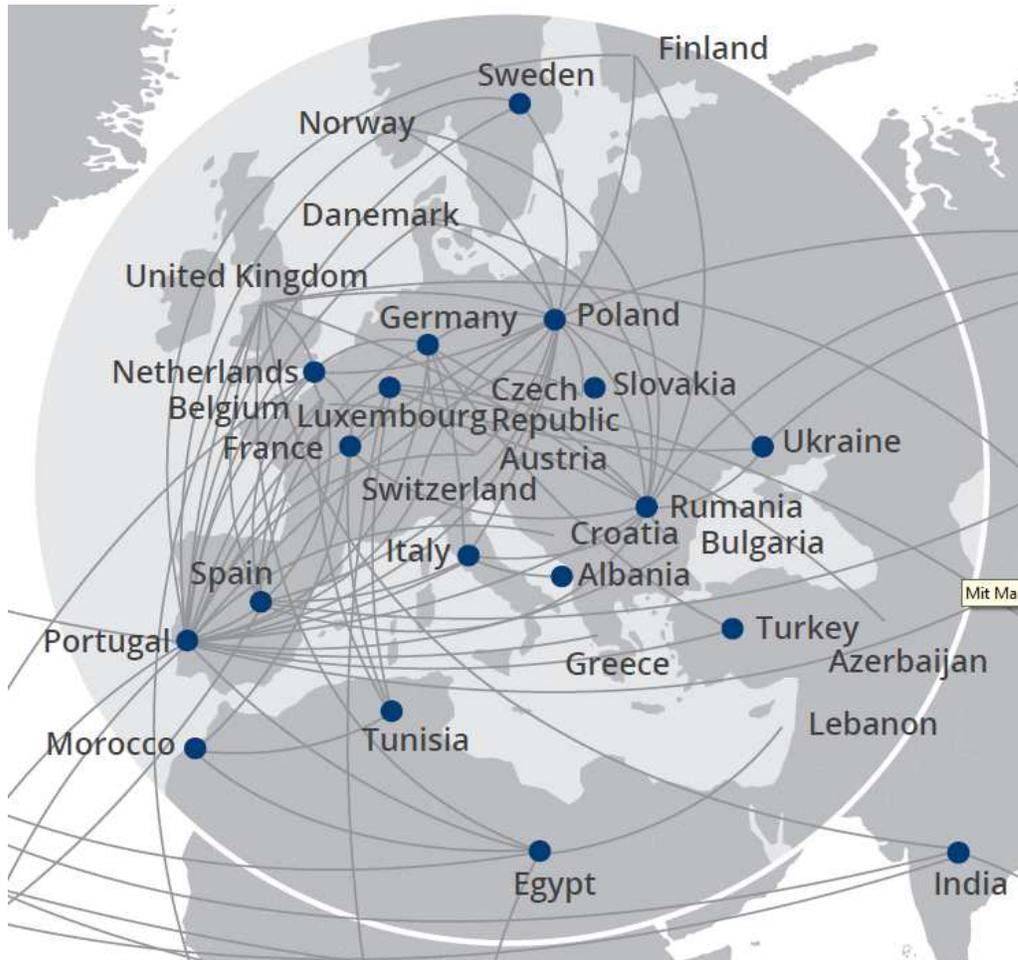
## 6.8. Teleperformance

The globally operating French company Teleperformance is the world leader in contact centre outsourcing (notable competitors are Convergys, Arvato and Atento, which was formerly owned by Telefónica).<sup>209</sup> It mainly provides services in the fields of customer service and technical support, but also offers services relating to the acquisition of customers and debt collection. Its service is multichannel using telephone, mail, chat and face-to-face interaction. However, most traffic is still

<sup>209</sup> Teleperformance, Registration Document 2014, p.17

processed over telephone. In 2015 it operated in 65 countries and ran 311 contact centres with 190,000 employees (Sielemann 2016).

**Figure 6.10: Teleperformance Offshore-Locations, Source: Teleperformance Registration Document 2014, p. 13**



The company employs most workers in the Philippines (40,000), the USA (26,000), Mexico (nearly 16,000) and Brazil (more than 15,000). Major customers are private sector companies and public entities. In total, the company has more than 750 clients in various business sectors. As competition in telecommunications is increasingly cost driven and margins are tight, the company aims to expand its services into such sectors that traditionally provided customer service inhouse or in owned subsidiaries. While most revenues are still made in the telecommunications and internet sector, the provision of support services for non-telecommunication sectors is rising significantly (such as energy, banking and insurance sectors). Contracts with customers are set up for a period of one year and are usually extended annually. Teleperformance itself outsources parts of its IT infrastructure and data management.

### 6.8.1. *The business strategy in customer service outsourcing*

A major focus lies on the worldwide provision of customer services for generally transnational or global clients through offshored service centre locations. Teleperformance for instance operates service centres in Surinam for servicing the Benelux countries in Dutch,<sup>210</sup> the North-American market is served by service centres operated in Mexico, the Philippines<sup>211</sup> and Guayana,<sup>212</sup> the French market is served by Morocco and Tunisia<sup>213</sup> and service centres are operated in Poland, Greece, Turkey and Portugal for German customers (among others, see Figure 6.10). The largest multilingual service centre in Portugal has around 7,500 employees and provides services in Portuguese, Spanish, French, German, Italian, Dutch and Greek. Another multilingual centre is in Athens, Greece with some 6,000 workers. In 2014 Teleperformance opened new contact centres in Poland, Russia, UK, US, China, Philippines and Costa Rica.<sup>214</sup>

According to a Teleperformance expert, the largest benefit of outsourcing to a service centre provider is lower cost. In support by skilled technicians in Germany, wage levels may be between 3,000 and 3,500 euros. A company expert says,

“We can provide the same service, with the same service quality – but not with the same [employees’] qualification levels – for 1,500 to 1,600 euros. The goal of outsourcing from the company perspective is always to cut costs, while maintaining the service quality or even improving it. We make this possible through experience, innovation, internationality and economies of scale.”

The wage level can be reduced further, if work is offshored to other countries. In Portugal, monthly wages are some 600 – 800 EUR, in Greece salaries start at 400 EUR. The selection of countries and locations is negotiated with the client and depends on wage levels, available languages and local skills and recruiting possibilities. This often limits the extent of offshoring, as expanding multilingual services sometimes requires moving native speakers to other countries. If necessary, the company sets incentives for native speakers to move abroad. For instance, German speakers moving to Portugal and have their flight paid, receive bonuses and housing is paid for the initial year.

While wage cost is certainly the **first benefit** clients expect from outsourcing customer service, others reasons play a part. **Secondly**, by transferring responsibilities for the workers to a service centre outsourcer, risks connected to personnel and flexibility needs are transferred as well. **Thirdly**, outsourcing work to companies like Teleperformance can help with standardising tasks. Indeed, the optimisation of business processes, mainly achieved through standardisation, is an integral part of the outsourcing business. Breaking down work packages into small tasks is important for Teleperformance to carry out its services fast and efficiently and constitutes one of the company’s core competences. In some cases, it is easier for an independent service provider to implement standardisation measures across countries that may be unpopular with the original company’s staff and union. **Fourth**, Teleperformance explores distributed modes of work, using Cloud and Internet services for distributing

<sup>210</sup> <http://www.teleperformance.com/media/2423333/150324-pr-teleperformance-surinam-opening-uk-final.pdf>; March, 2015

<sup>211</sup> Teleperformance, Registration Document 2014, p.12

<sup>212</sup> <http://www.teleperformance.com/media/2353859/150127-teleperformance-pr-footprint-expansion-in-guyana-uk-final.pdf>; January, 2015

<sup>213</sup> Teleperformance, Registration Document 2014, p.12

<sup>214</sup> Teleperformance, Registration Document 2014, p.19

calls to service agents; for example, it has a subsidiary with agents working from home on-call or with zero-hours contracts who are only “switched on” when demand is high. This allows the company to react to fluctuations in support requests with very high levels of flexibility. However, this form of distributed work is not excessively used yet due to labour law constraints in some countries and unresolved concerns over data security.

In the case of Teleperformance, according to a manager, the transfer of workers from the original company to the outsourcing provider is uncommon. It occurs in complex or specialised services (e.g. user helpdesk services), where workers’ qualifications and skill levels need to be higher. Such a transfer usually means lower wages for the transferred workers at the outsourcing company (Teleperformance in this case). When no workers are transferred, Teleperformance employees are trained in the specific areas of customer service, often by the client. Delicate situations may occur

“when our employees are at our client’s company for training purposes and the trainers there tell us: ‘we will be gone in three weeks, because you take over my job.’” (expert, Teleperformance)

In Germany Teleperformance has works councils in five of its six call centre locations and a general works council and a group works council for all sites who cooperate with the services trade union ver.di. However, there is no collective bargaining agreement for outsourced call centre employees in Germany and only few company-specific agreements are found in the sector.<sup>215</sup> Since 2015 Teleperformance also has a European Company Works Council.<sup>216</sup> Nevertheless, in countries and companies where there are no union representatives the management often has its leeway, as a representative states:

“In countries without works councils or unions companies’ managers tend to act like bulls in a china shop. Employees are then often reduced to an interchangeable number. This is not company policy but it still is a fact. Unions can really help preventing such situations.”

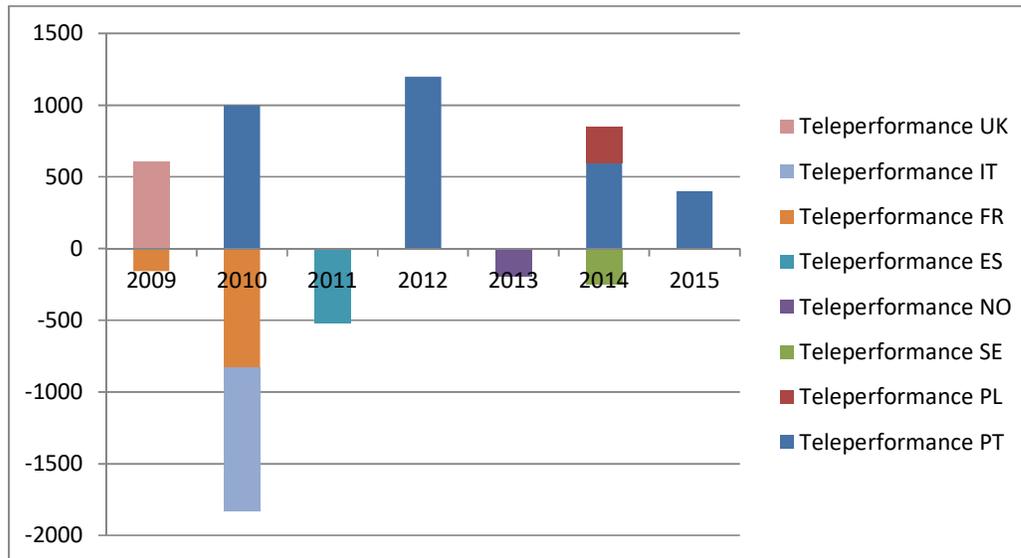
### **6.8.2. Gains and losses of jobs in Teleperformance**

From the European Restructuring Monitor, increases and decreases in employment are often associated with transfers of entire call centres and then, the gains and losses of customer service contracts. If workers are not transferred, risks of business volatility are immediately transferred onto jobs. However, with expanding multi-lingual services we are seeing some consolidation.

<sup>215</sup> In Germany only Walter Services has a collective agreement, which is slightly above the minimum wage.

<sup>216</sup> <http://www.uniglobalunion.org/news/new-european-company-works-council-teleperformance>; June, 2015

**Figure 6.11: Newly announced job gains and losses of Teleperformance in Europe;**  
**Source: own calculation from European Restructuring Monitor Factsheets**



In 2009 and 2010 we saw considerable employment losses in France and Italy, and a new call centre opened in Northern Ireland. From then on, expansion concentrated in Portugal. Poland had some growth in 2014 in Katowice, and Spain, Sweden and Norway had call centre closures or losses of contracts.

## 6.9. Altice

Altice is a somewhat “different” example of an ICT company: basically a holding of shares in broadband providers, cable and pay-tv companies in France, the US, Italy, Belgium, Portugal and the Caribbean with acquisitions financed by credit, and pursuing a business strategy similar to the corporate raiding of hedgefonds and other financialised vehicles (Appelbaum et al., 2013).

It has recently expanded into the telecommunication business by acquiring SFR in France, Portugal Telecom and other mobile operators in Israel, the Dominican Republic and the US. These acquisitions are also reflected in the workforce, which grew from over 9,000 to 37,500 between 2014 and 2015. Patrick Drahi, the founder of Altice who started his career as a door-to-door salesman of cable contracts,<sup>217</sup> stated in an interview that perhaps the same number of people was employed at subcontractors.<sup>218</sup> A prime market for Altice is the US, where Altice is acquiring Cablevision in June 2016.<sup>219</sup> The French business went public in 2013 under the name of Numericable. 2014 Numericable and the international holdings were joined under the name of Altice and became a Dutch company in 2015. The group provides cable and fibre based fixed services and mobile telephony services to

<sup>217</sup> <http://www.wsj.de/nachrichten/SB10001424052702304349604579607502494572972#>; June, 2014

<sup>218</sup> <http://genius.com/Patrick-drahi-hearing-of-mr-patrick-drahi-ceo-of-altice-main-shareholder-in-numericable-annotated>; May, 2015

<sup>219</sup> <http://www.bloomberg.com/news/articles/2016-06-20/altice-names-former-alcatel-leader-michel-combes-ceo-in-shuffle>; June, 2016

consumers and business clients. Additionally, Altice offers pay TV and telecom services to B2B customers.<sup>220</sup> A main business strategy seems to be growth through the acquisition of cable and telecommunication competitors, often on credit, with the clearly stated goal of reducing costs. This approach also entailed criticism from analysts, customers and employees alike. There is an infamous “Drahi method”, which says either the employees at the acquired company take 30% lower wages or they are dismissed (“30% or less or the door”).<sup>221</sup>

The majority of Altice’s customer service is outsourced to third-party providers.<sup>222</sup> Altice is nearshoring French-speaking customer service in Portugal. In 2016 a contact centre with 180 new jobs is to be opened in Lamego and another at Castelo Branco expanded from 120 to 230 jobs.<sup>223</sup> A majority of workers at the second centre was reportedly unemployed before, and some of the new workers are expected to be French living in Portugal. Temp agency company Randstad is managing both HR services and recruitment in Castelo Branco and Lamego. According to a Portuguese trade union representative, Altice in early 2017 operated 12 own call centres in Portugal with a total workforce surpassing 1,500. These call centres provide services exclusively for the French communications market. Altice relies on external providers for maintenance, installation and other activities.<sup>224</sup>

## 7. TRADE UNIONS: THE TRANSNATIONAL AND THE REGIONAL

Unions’ responses to telecommunications and IT companies’ outsourcing and offshoring strategies vary with the respective country’s industrial relations system and the instruments it provides for works councils and unions, and also with the history and operation modes of interest representation in the country and company in question. Generally, unions have it easier to pursue a “local” and somewhat defensive strategy, understandably emphasising the interests of actual over potential membership bases, and the protection of employees in the home country (also during transfers of undertakings) over the organising of employees at outsourcing or offshoring destinations. However, increasingly, this is seen as less of an alternative and more of a two-pronged strategy. A small e-mail survey of UNI Europa’s affiliates and the members of the Steering Group of the project has given us new insight and examples and experiences of unions addressing outsourcing and offshoring.

The general conclusion is somewhat obvious: in the well-regulated sectors and companies, such as incumbent telcos in countries with comprehensive industrial relations, outsourcing can be influenced to some extent, and even double standards for home country and foreign locations can be challenged as in the ‘ONE Telecom Union Alliance’ addressing T-Mobile and Deutsche Telekom’s strategies, or in the activities of the SAP European Works Council. Unions are learning that a purely defensive stance is increasingly unsuccessful as offshoring becomes more common and proves impossible to prevent.

<sup>220</sup> Altice, Annual Report, 2015; p. 5

<sup>221</sup> <http://www.cablefax.com/distribution/altice-mysteries-will-really-work>; September, 2015  
<http://stopthecap.com/2015/05/20/patrick-drahis-altice-buys-suddenlink-in-surprise-9-1-billion-deal-that-is-likely-bad-news-for-customers-employees/>; May, 2015  
<http://genius.com/Patrick-drahi-hearing-of-mr-patrick-drahi-ceo-of-altice-main-shareholder-in-numericable-annotated>; May, 2015

<sup>222</sup> Altice, Annual Report, 2015; p. 10

<sup>223</sup> <https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/altice>  
<https://www.eurofound.europa.eu/observatories/emcc/erm/factsheets/altice-0>

<sup>224</sup> Altice, Annual Report, 2015; p. 40

Transfer of undertakings protects standards for a limited time only. Providers of outsourced services tend to rely on new groups of workers and more flexible employment contracts. Organising the providers of outsourced services simultaneously appears to be the most promising strategy. Ideally this happens faster than standards for work can be lowered. The current trend of consolidation of network operations, customer service and increasingly, back-office services may even work in favour of unions as a small number of larger locations are more amenable to organising and collective action – and more risky to completely relocate. However, digitalised operations and processes are still footloose, and we have seen that through increases in experience of companies and further development of technologies and management tools, outsourcing and offshoring breed further outsourcing and offshoring. Outsourcing and transfers of operations to a large and somewhat organised specialist like Ericsson, SAP, Tech Mahindra in Denmark or possibly, Accenture in Romania, is then one of the more favourable configurations for unions who can draw on existing transnational collaborations. Indeed, for example Ericsson worker representatives even report increasing unionisation when field services and network operations are transferred from telecommunications companies to Ericsson.

### **7.1. Current union strategies addressing outsourcing and offshoring**

Influencing outsourcing and offshoring decisions through co-determination in the originating companies is favoured in incumbent telcos in those countries with elaborated co-determination such as Germany or Austria. There, labour law stipulates co-determination or consultation rights over changes in business operations, works councils are influential, and union representation in supervisory boards can be used. Political influence and lobbying also plays a part, especially in incumbent telcos where the state still shares ownership. In this context, trade unionists also question the role of public subsidies in relocating work to lower-cost regions that may exacerbate competition between regions and favour risky, short-term and unsustainable strategies of regional development.

A current Greek example represents the most “protective” successful agreement on outsourcing in the sample. The Greek Telecom Employees’ Federation OME-OTE signed a collective agreement running for three years with the OTE Group, Greece’s dominant telecom provider, of which 40% are owned by Deutsche Telekom. This includes the employees of OTEplus, an OTE subsidiary for telecom consultancy and ICT services. OTEplus also still employs facility management and security staff in-house. The agreement secures tenured jobs for cleaners, building maintenance and security staff until their retirement and gives higher qualified employees in cleaning the opportunity to transfer to other, higher-skilled tasks.

For collective bargaining, sector-wide collective agreements covering both incumbents and new companies in telecommunications (Kornelakis, 2015) and also co-ordination across sectors can ensure that incentives for national outsourcing are limited. An expert from Swedish Unionen puts it this way:

“Obviously one purpose for this structure of the collective agreements is to set a floor in each sector, in doing so the incentives for outsourcing within the country with the sole purpose of lowering salaries and other conditions is decreased.”

This may require co-operation between different unions in the sector and of works councils and shop stewards of originating and outsourcing companies. Issues for negotiation are not just wages but also working hours and contracts where outsourcing aims for increased or cheaper flexibility, for example in customer service. Such strategies may also require attention to the temporary agency sector. An expert from Finnish white-collar union Proliitto wrote to us:

“Our shop stewards in outsourcing are included in all the union activities and the problems of outsourced personnel (zero-hour contracts, bad work environment, temp agency work) are amongst our top priorities.”

All of this is easier in countries where general coverage by collective agreements is high, such as the Nordic countries or Austria – and vice versa, the fragmented landscape of collective agreements in Germany has increased the potential for domestic outsourcing in the 2000’s (Holtgrewe and Doellgast, 2012). National co-ordination and organising are also rendered more difficult by increased variety of employment relations and employee groups hired by outsourced service providers:

“Also, it is quite difficult and straining to organize outsourced workers because in many companies the workers are young students who only work in the sector for a short or medium period (1-5 years). This means that the recruitment and organizing needs to be an on-going activity as well as training the shop stewards” (ibd.).

For one particular group of “new” workers this is addressed by Danish trade unions HK/Privat and PROSA. They have concluded a collective agreement with Tech Mahindra, an Indian-based provider of outsourced services that ensures nearly equal treatment of Danish Tech Mahindra employees and posted workers from India (or elsewhere) who are working in Denmark temporarily:

“This guarantees the Indians coming to work in Denmark for a short time the same wage level as the rest of the people working here. What they miss are the pension and the education program. Those who are staying for a longer period will be fully subjected to the collective agreement. Beside the collective agreement, the shop stewards and management are taking initiative to secure integration between the two cultural groups” (e-mail information by PROSA representative).

Similar initiatives are reported by Swedish Unionen. These examples show that successful initiatives still tend to be domestic, and mostly located in countries and companies where outsourcing and offshoring originate – but there, standards can be extended to outsourcing service providers. Unionen also outlines its view of ongoing globalisation and restructuring:

“And the transition still goes on, with no clear sign of slowing down. One reason for this is the principled approach of the Swedish unions that Sweden as a whole will benefit from free trade and market economy – with offshoring being one side of this coin. The condition for this approach, however, is that the costs of the negative consequences must be shared and not only carried by the members whose jobs are offshored.” (e-mail information by Unionen representative)

Restructuring measures are discussed jointly and local unions may involve external experts and consultants to provide employers and unions with a second opinion. When actual jobs are lost, social partners jointly support those concerned:

“When offshoring occurs and members as a consequence lose their job, there is an organisation financed jointly by the unions and the employers’ organisations with the sole purpose of helping unions members to manage the transition to a new job, if necessary by getting new/updated skills through courses/vocational training/validation of competence etc.”. (ibid.).)

There are also examples of transnational collaborations. A well-known example that addresses a foreign subsidiary rather than actual offshoring is the case of T-Mobile USA: the campaign “We Expect Better” of the International Trade Union Federation, UNI Global Union, German ver.di and DGB, and US-American CWA and AFL-CIO aims to get T-Mobile USA to recognise union representation and end its notorious anti-union policy. In this context, ver.di in 2015 petitioned the German Bundestag to have the government (as partial owner of DT) ensure that Deutsche Telekom respects union rights in its foreign subsidiaries.<sup>225</sup> Recently, this has widened into a more transnational than bilateral collaboration: T-Mobile union representatives and works councils try to foster cooperation of unions within the T-Mobile group and across country boundaries, using networks of the European works council and a newly founded union alliance called ‘ONE Telecom Union Alliance’. The latter’s goals are to influence decisions of DT Group’s strategies towards becoming a pan-European telecom company, coordination of action among the different countries, exchange of information, cooperation with UNI and the European works council, and to influence European regulation of the telecom market.

Within Europe, and with regard to Central and Eastern Europe in particular, initiatives are taken by few Eastern European unions and some European Works Councils – but communications between nationally-oriented unions, works councillors in multinationals and UNI as a federation aiming to overcome these limitations do not always run smoothly. A member of the SAP European Works Council comments:

“I never had any contact with my Union on this topic. Unfortunately, Unions are very “local” and only defend their own affiliates. On a SE WoC Europe point of view, we have a strong focus on near-shore. The employees in the near-shore centers (Romania and Portugal) are considered as “under-employees” and not respected (...). We [the EWC] want to investigate how we can export the well-being that is experienced in most “old Europe” countries to the near-shore centers and the “low salary” countries in the SAP context.”

Romanian SITT has organised outsourcing companies Wipro (an Indian IT and business process outsourcing multinational that has been backshoring work to Europe for a while) and Accenture. They report that in cases of outsourcing they use EU regulation of transfer of undertakings to ensure continuity of collective agreements and aim to organise outsourcing destination companies as well – but when collective agreements expire, have needed to make some concessions:

“Still once we negotiated new collective agreements (when the transferred ones expired) in the destination companies it was difficult to maintain the same conditions hence some social dumping happened.” (e-mail information by SITT representative).

In both Western and Eastern European locations this is a limitation of European and national regulation of transfers of undertakings: they only protect standards for a limited time and then open them to renegotiation which often turns into concession bargaining. Different standards for “old” and “new”

<sup>225</sup> <http://www.weexpectbetter.org/about?lang=de>

workforces are sometimes inevitable but need to be limited and complemented by organising efforts among new employees – who will be sceptical of unions seen as protecting insiders only.

However, Western or Northern European unions sometimes have difficulty finding or making contact with counterparts in Eastern European offshoring destinations. For example, recently, the Austrian white-collar union GPA-djp, also lacking a counterpart in Slovakia, established a new trade union in the country. Finding a local collaborator is apparently also a problem in the Baltic countries that have become a nearshoring destination for Nordic companies in particular:

“Offshoring is a bigger problem because there is only a little that Pro[liitto] can do when it comes to offshoring to other countries. Countries that the teleoperators are offshoring to are e.g. Estonia, Latvia, Lithuania, Poland and Spain. Our main targets in these countries are helping the local unions in recruiting and electing local shop stewards. In all of these countries we need international cooperation with other unions abroad (both Nordic and the offshoring countries) as well as UNI. So far the work in this sense has not been adequate or successful. (...) In the cases where Pro[liitto] is the only agent: in the target country it has been difficult to identify a union to cooperate with. In the multilateral activities: activities have lacked a “host union” or a separate main driver although the projects under the BOA umbrella seem to have good prospects.” (e-mail information from Proliitto, Finland).

Hence, in offshoring destination countries where local unions exist and have the capacities to utilise European legislation and international support, initiatives can develop. In the less organised countries or regions, it seems that some institution building needs to take place first. This may need some engagement with a wider variety of local and regional actors, political contacts in the regions, civil society, universities and vocational training institutions and so on. For unions and their associations this is a tall order and probably not a task to take on one’s own, but in collaboration with other actors.

## **7.2. The national and regional view revisited – priorities for trade unions**

Arguably, the logic of exporting good practices suggested by some unionists is not trivial to implement. Companies are generally welcome to import investments, processes and practices to new and poorer locations. However, even company processes and practices are reshaped locally. Unions and workers need even more engagement and input of actual people, and thus need to be more self-reflexive and aware of the contexts, values and interests at play in the respective regions. Focusing on promising regions and areas with some critical mass and reliable collaborators first is thus an obvious path to take, especially as unions need some demonstrable successes both locally and internationally. However, some more tentative and experimental involvement in the more difficult regions such as less organised countries and secondary locations of offshoring should not be neglected – possibly in collaboration of national affiliates from neighbouring countries (say, Finland/Baltic countries, Austria/Slovakia) with UNI providing a forum for gathering and exchanging experiences. For this, unions might use collaborations with other collective actors, social movements and also academia and social sciences. Students and scientists have an increasingly transnational outlook and an interest in social impacts of digitalisation and globalisation both as researchers and citizens.

The regional priorities suggested in this report are thus temporary. They result from the company case studies in combination with the evidence of the changing geography of outsourcing and offshoring that is presented in chapters 3 and 4. The selection of company case studies, in turn, was agreed with UNI and the project's Steering Committee, and thus already focuses on companies that either have European Works Councils and significant union presence or are considered particularly critical for unions. Keeping this in mind, regionally, Poland, Romania, and Portugal are obvious first priorities for UNI Europa's efforts. New sites of customer and shared services or IT are not necessarily opening or expanding in the metropolitan regions. Poland has had customer service centres, shared services, IT R&D and data centres relocated from most companies in the study, in particular Orange, IBM, Atos and Teleperformance. They are distributed in the various regions of Kraków, Katowice, Wrocław or Gdańsk. For Romania, customer service, shared services and Ericsson's and Vodafone's network operations are found. They are mostly located in and around Bucharest but Deutsche Telekom has operations in Timisoara and IBM has a site in Brasov. Portugal emerges more recently as the site of customer service centres from Teleperformance, Telefónica and Altice and shared services of Vodafone. After the 2008ff. crisis, the country apparently has joined the New EU Member States as a nearshoring site for telecommunications and customer service. In CEE otherwise Hungary remains an important site for IT and also telecommunications equipment, with the longer offshoring tradition of former Siemens software development from Austria (Holtgrewe and Meil, 2008a, 2008b; Huws, 2003). In Slovakia, Bratislava is a well-known service centre location and IBM has shared service centres in Brno and Košice. T-Systems also has a location in Košice. In the Czech Republic, Ostrava has a service centre of former Telefónica service provider Atento. Bulgaria also aims to develop its ICT and business process outsourcing industry (Vladikov 2016) but so far has very limited union presence in the sector. In cost-driven customer service in particular, there have also been attempts to relocate work to Turkey, but for multilingual services recruitment appears to be difficult. Future nearshoring destinations may also include the West Balkan countries.

Outside of Europe, the "global" offshoring locations of India and, for customer and back office services, the Philippines also play a part, especially for the providers of generic customer, IT, and business process outsourcing services such as IBM and Teleperformance. French-based companies, but also Vodafone also relocate functions to North Africa. Morocco appears as an offshoring destination for customer services of Orange and Teleperformance, and global and managed services and systems integration of Atos. Tunisia also has customer service centres and some R&D and training activities by Ericsson, and Egypt hosts Vodafone shared service and data centres, customer service by Teleperformance.

## **8. CONCLUSIONS**

### **8.1. Common patterns and variations in companies' strategies**

All the companies covered in this report have histories of active outsourcing and offshoring that are in line with the sector-wide observations of chapter 3. However, there is some variation in geographical range and the degree of centralisation. Looking at the telecommunication companies Orange, Telefónica, Deutsche Telekom and Vodafone, some similarities and some differences can be discerned.

Not all telecommunication companies shed all of their network management, and some, especially Deutsche Telekom, aim to realise the synergies and cost-savings of consolidating offshored services themselves, keeping them in owned subsidiaries abroad. Outsourcing and offshoring for telco companies began a couple of years after the liberalisation of the telecom market in Europe. The main reasons for outsourcing and offshoring are about reducing costs, either directly, through hiring cheaper workforces in low-wage countries, or indirectly, through economies of scale, standardisation of work processes and operations, and subsequent consolidation of services. Either way, staff is likely to be reduced in higher-cost countries, although we are not always observing immediate relocations of work or entire units. Slower, more gradual shifts of jobs are not always easy to observe. In recent years, the functions affected by outsourcing and offshoring have shifted, again, in line with the review in chapter 3.

The first restructuring moves aimed at cost-cutting affected the non-core business functions, such as customer services or IT services. Here, telcos could make initial gains through domestic outsourcing since external call centres could be located in different sectors under different, less favourable collective agreements (for example generic business services) than those commonly negotiated in well-organised incumbent telco companies – or outside collective agreements, even where unions negotiated protections of jobs and wages for a limited time. With increasing internationalisation of both telcos and their service providers, customer service was offshored. The English-speaking world pioneered this development, but large service providers from France and Germany soon transnationalised their operations as well. In 2009, one of the authors of this report argued that transnationalisation of customer services followed traditional (post-)colonial language lines (Holtgrewe et al., 2009). Meanwhile, these historical patterns have become somewhat blurred: Orange operates locations in French-speaking countries outside Europe but also in Central and Eastern Europe, Telefónica outsources to big and internationally operating call centre providers, such as its own former spin-off Atento. Deutsche Telekom somewhat reduced its call centre outsourcing after very active years between 2007 and 2011 and is currently backshoring some work, and Orange is doing something similar. The reasons usually given for insourcing are expectations of better service quality, but some technological change is involved as well: on the one hand, routine customer service can be replaced by online-based self-service, also involving some speech recognition or the functionality of avatars and chatbots to automate communications, on the other hand, telcos offer more complex services and packages (such as mobile broadband, multimedia) that generate new support needs and sales opportunities. Still, offshoring is by no means obsolete and the evidence for backshoring of services so far is limited to telecommunications providers. Vodafone relocated customer services to subsidiaries in Central and Eastern Europe (Hungary, Romania), Portugal, India and Egypt. Call and service centre provider Teleperformance has large workforces in the Philippines, Mexico or Brazil, and within Europe, expands multi-lingual operations in Portugal. There, it explores possibilities to also transfer workers from other countries (with some modest incentives over local wages) who speak languages that are not available on the Portuguese labour market. With regard to customer service, the last decade has certainly seen some downgrading of wages and also job quality in the higher-income countries through national and increasingly transnational outsourcing. In the future, further consolidation and relocation of customer services may be limited by the availability of adequately

skilled, multilingual service representatives in the destination countries and regions, and by both quality requirements and possibilities for automation in countries of origin.

IT services were also among the early functions to be outsourced. Main providers of outsourced IT services to telcos and indeed, across nearly all sectors of the economy are IBM, HP, Atos or IT-consultancies such as Cognizant or Accenture. What originated as outsourced IT services frequently developed into broader business process outsourcing that also affects administrative and back-office tasks, accounting, finance, procurement or HR. The merged IT and consultancy companies are in an obvious strategic position. They help companies to streamline and standardise their processes and functions, outsource them and then run or manage outsourced operations themselves. Obviously, this comprehensive outsourcing carries risks of losing strategic knowledge and control over processes and objectives for the companies where outsourcing originates. Nevertheless, strategies of offshoring or offshore-outsourcing vary, and especially Deutsche Telekom pursues a strategy of relocating work to its own subsidiaries in Central and Eastern European countries to consolidate business functions and benefit from efficiencies and lower wages. IBM is a key player in IT and business process outsourcing. Over the past years the company not only transformed its business from manufacturing to IT services, but has been continuously moving work to offshore locations, India on its forefront, and to nearshore locations in Central and Eastern Europe. It has been solidly downsizing in Western Europe, apparently to compensate for declining sales, and appears to make what the company calls “workforce rebalancing” a regular practice, shifting workforces to expanding markets and business areas. Its explorations of crowdsourcing from 2012 onwards with an aim to replace a large proportion of employees (and indeed its HRM) by a pool of freelancers have been somewhat notorious and certainly raised the public and some political awareness of the challenges of crowdworking to employment systems. Nevertheless, the projects met with considerable internal resistance by works councils and project managers themselves (Kawalec and Menz, 2013) and reportedly the explicit crowdsourcing programme has been stopped. Some minor expansions of IBM in Western Europe involved regional development partnerships, but in Europe, visible expansions have mostly occurred in the well-known shared service locations in Slovakia, Poland and Romania. Atos is another integral part of the European telecommunication sector, as it provides outsourcing for Nokia, KPN, Orange, Telefónica/O2 or Telecom Italia and hosts offshore locations all over the globe. In Europe, it appears to be expanding mostly in Poland and Romania.

Over the years, ICT companies and their service providers thus have gained experience in outsourcing IT, customer and back-office services and consequently, have transnationalised and consolidated these functions. With ongoing competitive pressures and tightening markets in telecommunications and also in IT in Europe, new ways of reducing costs are being pursued. Functions formerly regarded as ‘core’, such as network operations, became outsourcing and offshoring targets. First, field services, then entire network operations are now provided mainly by equipment vendors, such as Ericsson, Nokia (merged with Alcatel-Lucent in 2016), Chinese Huawei or ZTE. This marked a large step in outsourcing in the telecommunication sector that affects all telcos to varying degrees. Ericsson shows an exemplary development of network services: It has received former telco workers to provide field services in the countries concerned but has consolidated the virtual parts of network operations in its Network Operations Centres in Romania in Europe and at offshore locations in India, China, and Mexico.

As a result of these various outsourcing, offshoring and restructuring moves, in recent years, both ICT multinationals and telcos have had widely-published rounds of job cuts across the board. Locations have been closed in the remaining manufacturing operations and also in services. Such downsizing has centrally affected multinationals' home countries that of course tend to be high-wage countries. This conclusion may be exacerbated by the public attention to national incumbents' activities in those home countries, and the under-reporting of foreign subsidiaries' activities but it is still notable as the countries of origin have tended to be union strongholds as well.

## 8.2. *Clouds: where do they come from?*

Emerging cloud services do not just attract investment throughout the sector but will also add further dynamics to offshoring. If data and computing capacities can be stored at and accessed from different places and work processes are standardised accordingly, further relocations of work are possible. Clouds are both offered as an outsourced service by varying alliances of telcos and IT providers, and are used to run the space-independent parts of companies' own operations. Cloud services are therefore an enabling technology for the outsourcing of other services, such as back-office services or the distributed operation of networks, rather than an outsourcing trend in itself. Cloud services currently play an important role in the provision of IT services and for hosting network management systems. Indeed, they tie into the trend of centralising network management functions in network operations centres and will enable further remote network management.

However, it may be early days to take "the cloud" as a given driver of outsourcing that brings another leap in the quality of restructuring. The transition to cloud operations is not trivial technologically, and the IT and telecommunications companies making that transition are the virtualised, spatially distributed and massively downsizing and restructuring multinationals and networks that we have investigated. Cloud computing also requires complementary investment on the ground, in space-bound, physical network infrastructures that provide reliable broadband connectivity to "the cloud" – and there appears to be some uncertainty over the sources of that investment. In between competitive pressures and the need for innovative capabilities, companies are likely to find that building clouds requires more tightly co-ordinated collaboration among reliable and innovative teams than current restructuring modes allow for. Hence, technological transitions may take longer than visionaries expect, especially when complex systems need to be integrated across companies and sectors. In addition, working conditions in the cloud business appear less than sustainable:

"What's special about the cloud business is that you have to deliver constantly, extremely short release cycles, continuous changes, permanent innovation, immediate response times."<sup>226</sup> (SAP manager, cited in Kronig, 2014, p. 304, translation authors)

However, if cloud-based services are implemented successfully, they will exacerbate the dilemma of commodity traps. Modularised and standardised services delivered independently from space, without owned hardware or even employed workers could be provided by any kind of new market entrant or former sub-subcontractor that undercuts established providers – or, alternatively, powerful cloud

<sup>226</sup> "Das Besondere am Cloud-Geschäft ist, dass man laufend liefern muss, extrem kurze Release-Zyklen, ständige Änderungen, permanente Innovationen, unmittelbare Reaktionszeiten".

service providers develop their business models in such ways that clients are locked into virtual monopolies. Either scenario may put innovative capabilities of companies at risk across value chains and thus could be disadvantageous to the sector at large.

### **8.3. Unions: building on successes and venturing beyond**

For trade unions specifically, the key conclusion is that offshoring and outsourcing is dynamic and likely to remain so. Companies' growing experience, the wider options and longer value chains suggest that ad-hoc responses to downsizing and relocation of work are not sufficient. Generally, unions have had it easier to pursue a "domestic" and somewhat defensive strategy than an inclusive and universalist one. However, increasingly, they develop two-pronged strategies rather than considering this as an alternative. In the well-regulated sectors and companies, such as incumbent telcos in countries with comprehensive industrial relations outsourcing can be influenced to some extent. The examples presented in chapter 7 show that most successful initiatives are domestic, and are mostly found in countries and companies where outsourcing and offshoring originate. However, unions are learning that a purely defensive stance is increasingly unsuccessful as offshoring proves impossible to prevent. Transfer of undertakings protects standards for a limited time only. Providers of outsourced services are not just located in different, less organised sectors but tend to rely on new groups of workers and more flexible employment contracts, sometimes incrementally. Unions cannot always avoid different standards for "old" and "new" workforces but need to limit them and complement them by organising efforts among new employees. New workforces otherwise will be sceptical of unions seen as protecting insiders only. Organising the providers of outsourced services simultaneously appears to be the most promising strategy. Ideally, this happens faster than companies can lower standards for work. We have found some transnational initiatives by Eastern European unions and some European Works Councils. They can develop in offshoring destination countries where local unions exist and have the capacities to utilise European legislation and international support. Consolidation of network operations, customer service and increasingly, back-office services may even work in favour of unions. A small number of larger locations may be more amenable to organising and collective action – and more risky for companies to completely relocate. However, digitalised operations and processes are highly mobile, and outsourcing and offshoring breed further outsourcing and offshoring. There is no reason to assume that these restructuring moves are losing momentum any time soon – although the technological complexity and also the criticality of IT and telecommunications for ever-wider business and social activities may render overly lean and fine-sliced value chains risky in themselves. At present, the most favourable configuration for unions appears to be the outsourcing and transfers of operations to a large and somewhat organised specialist like Ericsson or SAP. The Danish collective agreement with Tech Mahindra, or SITT's organising of Accenture in Romania are cases in point. In such configurations, unions can draw on existing transnational collaborations and can demonstrate successes to further expand collaborations and support organising efforts.

Regionally, Poland, Romania, and Portugal are obvious first priorities for UNI Europa's organising efforts. However, in spite of some consolidation of shared services and network management in these countries, unions are well advised to also pay attention to the more difficult regions such as less

organised countries and secondary locations of offshoring, such as the Baltic countries, Bulgaria, or the Mediterranean Rim: emerging regions of interest could be Morocco, Egypt and Tunisia.

Nevertheless, a latent nationalism in addressing relocations remains a central risk for European trade unions. It is easy from a West European perspective to perceive some unfair competition and an undercutting of wages and working conditions – while East European colleagues are feeling stuck in comparatively low wages, long work hours and high demands on their flexibility. Their companies may “move up” value chains, but workers themselves are not necessarily seeing progress. Work that has been relocated may well be relocated further. It is a moral effort for workers and unions to extend solidarity in situations of intense international competition between locations with widely differing wages, working conditions and aspirations. However, workers in multinationals’ distributed teams *are* able and *are* learning to collaborate and socialise transnationally unless they are immediately threatened – and in this case, there really is no alternative. This requires acknowledging and working through the different perspectives and standpoints, expectations and aspirations first.

The complementary side of a transnational outlook may well be a regional one that goes beyond industrial relations. In Eastern and South-Western Europe, clusters of service centres, IT companies, operations and delivery centres emerge, and some are supported through regional development funds and initiatives. Gaining ground in these regions and voice in innovation partnerships may be another promising strategy. This may also provide information and possible inroads into the smaller businesses and subcontracting networks that surround the clusters of big players and consolidated services. We suggest paying attention to regional universities and schools of technology and their students and graduates. Providing labour market information and information about opportunities and rights to workers across their careers and at the same time, listening to their experiences, both on the ground and virtually, could be promising for the future development of trade unions.

**Figure 8.1: Outsourcing at a glance - European telecommunications companies**

Company	Outsourcing strategy	Functions outsourced	Relocation type	Outsourcing destinations	provides outsourcing	...which is offshored to
<b>Deutsche Telekom</b>	outsourced customer service, some insourcing mainly offshoring to subsidiaries	customer service, back-office functions, field services – NOT network operations	nearshoring of back-office functions, domestic outsourcing of field services	Central and Eastern Europe	yes (T-Systems)	Slovakia, Hungary, China, South-Africa, Malaysia, Mexico, Brazil
<b>Orange</b>	Offshoring, outsourcing to varied (European) providers and global regions, shared networks in Africa	customer services, IT services, field services, network operations	offshore outsourcing of customer services, outsourcing of field services	French speaking countries (global), Central and Eastern Europe	yes (OGS, OBS)	Mauritius, Egypt, India, Brazil
<b>Vodafone</b>	outsources field services, mostly Ericsson, centralising network management	customer services, IT services, field services, network operations	outsourcing; centralised offshore-outsourced network management	Romania and Portugal for outsourced network management, captive shared service centres in Hungary, Romania, Portugal, India and Egypt	yes (VBE)	UK, Ireland, Germany, Africa
<b>Telefónica</b>	Outsourcing to various big service providers, to nearly all equipment vendors	customer services, field services, network operations, IT services	outsourcing of field services; offshoring, nearshoring and offshore outsourcing of customer services	Czech Republic, Latin America through Atento	yes, (TGS and TBS), ex-spin-off Atento	n/a
<b>Altice</b>	depends on network sharing, outsourcing of customer services	customer services, field services, network management, HR	n/a	Customer service to Portugal, and others (HR managed by Randstad)	no	-

**Figure 8.2: Outsourcing at a glance – IT and service providers to telcos**

Company	Outsourcing strategy	Functions outsourced	Relocation type	Outsourcing destination
<b>Ericsson</b>	In-sourcing network management and operations from telcos, centralising and consolidating at offshore locations, economies of scale	equipment, infrastructure, field services, network operations, network management	Offshoring, nearshored network management	India, China, Mexico, Central and Eastern Europe
<b>Atos</b>	global offshoring of data services, and shared services	consulting and systems integration services, managed services, business process outsourcing	offshoring	India, South America, South-East Asia, Europe
<b>IBM</b>	moving work to low-cost countries, “workforce rebalancing”, ostentatious attempts at crowdsourcing	IT services, business process outsourcing, managed services, consulting	offshoring and domestic services	India, Central and Eastern Europe, manufacturing China
<b>Teleperformance</b>	specialised (language) locations increasingly consolidated multi-lingual services from low-cost countries	Multi-channel customer service, tech support, back-office services	Offshoring, nearshoring	Surinam, Mexico, Philippines, Guyana, Morocco, Tunisia, Poland, Greece, Turkey, Portugal, Poland, Russia, UK, US, China, Costa Rica

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