

White Paper

THE IT SECTOR IN POLAND

F R O S T & S U L L I V A N

In cooperation with



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FOREIGN INVESTMENT AGENCY

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About This Document

The following whitepaper outlines the findings of a study conducted by Frost & Sullivan for The Polish Information and Foreign Investment Agency (PAIiZ) on the IT sector in Poland. In addition to exploring the benefits of Poland as a location for IT offshoring, this whitepaper will position the country as a new growth market that companies are turning to for incremental revenues. A country comparison framework will be presented, putting Poland in context against traditional comparators and, building on a snapshot of the Polish IT market, the whitepaper will pinpoint market opportunities and suggest ways to realise them.

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Executive Summary

The aim of this whitepaper is to analyse the attractiveness of Poland's IT market to foreign investors. This will be done from two perspectives: a) an IT offshore outsourcer looking for a new offshoring location; and b) an IT company looking to sell its products and services in a new market.

Prior to EU accession, Poland was already in need of significant investment and job creation drivers. As one key element for how to address this need, a strategy was put together to position Poland as a strong offshoring/ nearshoring destination. Frost & Sullivan believes that Poland's main attraction as an offshoring/ nearshoring location stems from: the pool of high-skilled labour that is available at relatively favourable cost points; extensive support from the government; EU membership; good infrastructure; a stable and growing economy; and geographical proximity to other European countries.

Many major IT providers have already recognised Poland's strong potential, especially as a location for BPO operations. An emerging investment trend is that foreign companies are starting to establish more advanced activities in Poland, such as R&D centres.

Poland's accession to the EU significantly improved levels of investment in the country, particularly through structural funds for different types of large-scale projects, such as e-government and e-health. These investments spurred significant IT spending.

Poland's revenue potential is growing rapidly across all horizontal IT segments. Hardware is the largest horizontal segment, as a large part of the Polish market continues to demand laptops and servers. The Polish IT market is, however, becoming increasingly sophisticated, driven by the demand for operational efficiency in key industries such as retail, where companies are digitalising purchasing, supply chain and sales. This demand for applications, infrastructure and IT services - such as system integration, IT training and IT consulting - will exhibit strong growth rates.

Outsourcing is expected to experience the highest growth rates. The high growth in IT services is mainly driven by the lack of in-house resources to cope with the increasing obligations that Polish companies face. Another important driver for IT services and, specifically outsourcing, is inherent in companies seeking pursuing cost reduction strategies and thus focusing on core business elements internally. In important industries such as the financial sector, there are opportunities with regard to addressing ever-increasing compliance requirements. In the government sector, opportunities are mainly related to supporting Poland meet obligations in relation to e-government milestones set by the EU; there are also major infrastructure upgrades and application deployments needed for e-health initiatives. Furthermore, domestically-driven government projects are starting to emerge. Other key industries such, as manufacturing and utilities, also need IT to overcome critical challenges such as achieving cost efficiency, managing digitalisation requirements and enabling growth strategies.

Frost & Sullivan believes that important new revenue opportunities will continue to emerge in the Polish IT market over the next five years within all horizontal and vertical sectors.

1. Key Factors Affecting the IT Market – From Box to Service

The Polish market has undergone immense changes over the last four years. As recently as 2004, smaller Polish software application companies dominated the local market and no company had more than a 10% market share. At present, multinational IT participants dominate the Polish market, which is similar to the situation in other European countries. EU accession in 2004 was the main catalyst for the Polish IT market, as Poland received large cash injections through structural funds for a variety

of industries, including IT. For example, Poland was awarded approximately €3.9 billion¹ for the country's e-society programme, covering the period from 2007 to 2013.

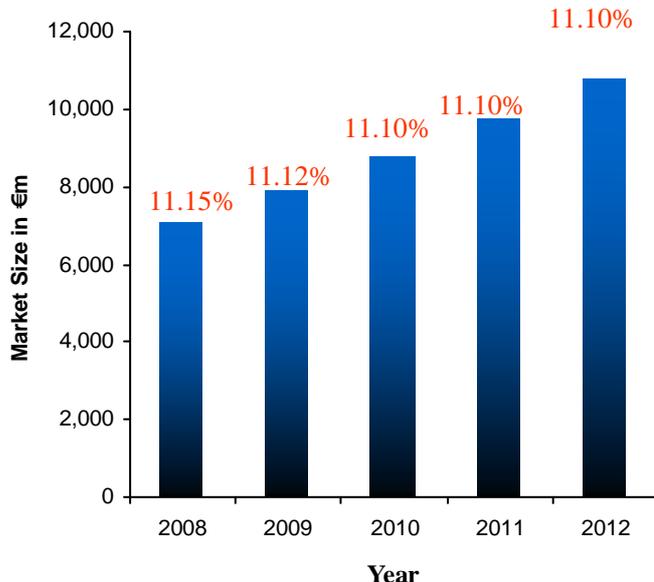


Figure 1: IT Market: Size and Forecast Poland, 2008-2012

Source: Frost & Sullivan, 2008

recognised Poland mainly as a cost-effective offshoring location with a highly skilled workforce. These companies have typically set up finance and accounting BPO facilities in Poland. Multinationals have started to increasingly invest in Poland because of its revenue potential, particularly for hardware and basic software applications; this was HP's main reason when selecting Poland to establish a sales office as early as 1991.

The funds were allocated to Poland to support infrastructure upgrades in key sectors such as utilities and to support the country's obligation to implement core EU legislation, such as the i2010 Strategy.

Poland is also undergoing liberalisation in industries such as utilities and this process is driving growth for digitalising operations to remain competitive.

Many multinationals such as IBM and HP have historically

More recently, the Polish IT outsourcing market is expanding beyond boxes with hardware. This is being driven by the increasing demand for more advanced

¹ PAiIZ, 2008

infrastructure and enterprise applications. An example is The Ministry of Health which is expected to announce the largest IT outsourcing contract tender in Poland by the end of 2008, potentially worth €146 million². The contract is expected to include new infrastructure and software applications. As a result of such a service expansion, multinationals now tend to use their presence in Poland as both a delivery and a sales platform.

Even though many companies have entered the Polish market over the last few years, there is still significant market potential for new entrants, as demand is strong and diverse.

Examples of EU Programmes for the Development of the IT Market which are defined in the i2010 Strategy¹: *The strategy includes major IT-focussed projects such as the e-government Action Plan and the EU Health Action Plan.*

To implement the i2010 Strategy, Poland has received more than €3.9 billion¹ in structural funds for the period 2007-2013. The e-government Action Plan requires public services for both businesses and citizens to be available online such as e-procurement, the enhancement of electronic engagement channels and many other ICT-related measures aiming to make the public sector more efficient and citizen-centric. At this stage, Poland has mainly been focussing on rolling out hardware and office software, as well as developing home pages where citizens can find contact information.

The e-health Action Plan stipulates that countries must digitalise patient records, ensure infrastructure to enable the electronic transfer of data and, in the final stages, introduce a variety of telemedicine and online services. Poland is in the initial stages of trying to roll out hardware to all hospitals, GPs and other health organisations; the next step will be to digitalise patient records.

2. Poland – A Favourable Offshoring or Nearshoring Location

Stiff competition and ever-increasing customer expectations have forced companies across the world to accelerate innovation and achieve operational efficiency through streamlined processes. IT has become a primary enabler for achieving such corporate objectives.

The offshore outsourcing of IT has become one of the approaches to achieve operational efficiency because it can decrease operating costs, while enhancing process productivity. However, there are also a number of pitfalls when choosing implementing an offshoring strategy. Careful evaluation and selection of the offshoring destination can help to minimise the risks and pitfalls.

² Business Monitor, 2008: The Poland Information Technology Report

With many emerging economies such as the Czech Republic, Ukraine and Poland fighting for their share of FDI, it can be difficult for potential investors to recognise unique benefits of one location compared to another. When choosing an offshoring location, potential investors should take a holistic view, instead of simply looking at the cost of labour. By taking a holistic view, investors are better able to understand the implications of their decision.

Since new market entry tends to be a strategic decision, it is important to have both shorter and longer term opportunities in sight. Potential investors should be able to reap the benefits of lower costs in a new offshoring location in a relatively short time frame. Over a longer term horizon, investors should also be able to see potential new revenue opportunities in the new offshoring location.

Summarised in the table, we have defined a range of factors we believe each IT company must consider when searching for the optimal offshore location. Each location will vary in attractiveness, depending on the country of origin of the offshorer – just another reason why careful consideration is needed. Each country specific factor shown in the table consists of different sub criteria, some of which are further explained below, constituting the rating given.

Country Specific Factor	Poland	Czech Republic	Ukraine
Language skills			
Cultural proximity			
High domestic growth rates			
Cost base			
FDI support			
High skilled workforce			
Well functioning infrastructure			
Security			

Key: Black: Strong/high and White: Weak/low

Figure 2: Offshoring Market: Attractiveness Comparison Indicator for European Offshorers

Source: Frost & Sullivan, 2008

Language Skills

Choosing a location that has the necessary and appropriate language skills is among the most important factors in selecting a new offshoring location. Poland obtains an

average rating on language skills because about half of the country's graduates speak another European language, mainly English; furthermore, German and French are also popular³. However, a PAiIZ survey conducted among students indicated that nearer to 60% of students surveyed said they had secondary language skills. The Czech Republic scores equally high compared to Poland because approximately half of the workforce speaks a second European language; the most popular languages are English, German and Russian⁴. The ability to speak another European language at a business-level proficiency is more limited in Ukraine, where about one third of the workforce speaks an additional language⁵.

Cultural Proximity

Although it is often overlooked, cultural proximity is a highly important factor when selecting offshore locations. Cultural awareness is a key enabler for effective communication between people from different countries. Since all three countries are located in Europe it could be easier for Polish, Czech and Ukrainian employees to emphasise and communicate efficiently with their colleagues in other Western European countries.

High Domestic Growth Rates

While Poland's annual GDP growth was projected to be 6.6% per cent⁶ in 2007 and Czech Republic's annual GDP growth was projected to be 6.5%⁷ in 2007. Ukraine's GDP, however, grew at rate of 7.2% in January 2007⁸.

Cost Base

A lower cost base is a prerequisite for establishing an offshore facility; wages are typically the main consideration in this respect. In the Czech Republic, the average wage for a computer engineer was approximately €19,500⁹ per annum in 2007, while in Poland the same salary benchmark is approximately €20,500¹⁰. However, in 2006, the average minimum wage was €2,952¹¹ in Poland, which compares favourably with €3,456¹² in the Czech Republic. In Ukraine both engineering wages and minimum wages are lower; a salary average is approximately €3,430¹³ per year in 2007 for a professional. It should be noted that wages in all countries have been spiralling, but with the current economic climate this could slow down. Furthermore, attrition rates in the Czech Republic and Poland are very high, ranging from 15% to 30% per year. Attrition in Ukraine is also rising rapidly. Attrition is an additional cost that offshorers must be prepared to deal with.

FDI Support

Poland and the Czech Republic in particular offer foreign investors support from agencies, tax benefit schemes and special investment zones with enhanced infrastructure. Ukraine is less mature in this respect.

³ Central Statistical Office Poland, 2007: Statistical Yearbook Poland 2008

⁴ Czech Invest, 2008: Skills & R&D in Czech Republic

⁵ Ukraine State Statistical Committee, 2008: Population Statistics

⁶ OECD, 2008: OECD Outlook Database, 2008

⁷ OECD, 2008: OECD Outlook Database, 2008

⁸ IER, 2008: Monthly Economic Monitor Ukraine 2008

⁹ Czech Invest, 2008: Labour Costs

¹⁰ Czech Invest, 2008: Labour Costs

¹¹ Eurostat, 2007: EU Minimum Wages in January 2008

¹² Eurostat, 2007: EU Minimum Wages in January 2008

¹³ Ukraine Statistics Committee, 2008: Household Income

High-skilled Workforce

Every year, Poland educates 151,600¹⁴ graduates in IT, engineering, languages and business & management out a population of around 40 million¹⁵. Polish students have shown the ability to innovate; for example, Polish student have won international innovation prizes such as the IOI competition in computer science. In comparison, Ukraine educated 127,383¹⁶ graduates in 2007 in IT, engineering, languages and business & management out of a population of 49 million¹⁷. Czech Republic is a significantly smaller country with a population of app. 10m¹⁸ people. However, the country educated app. 81,078¹⁹ graduates in IT, engineering, languages and business & management companies in 2007.

Robust Infrastructure

Infrastructure in Poland and the Czech Republic is in a relatively better state than in Ukraine, particularly with reference to utilities, ICT (including broadband coverage²⁰) and transportation²¹.

Security

With regards to physical security both Poland and the Czech Republic are considered secure. Ukraine has experienced some political turmoil during the last two years.

With regards to other factors relating to security such as corruption and economic transparency Ukraine generally scores lower than Poland and the Czech Republic (for example: Transparency's Corruption Index²²).

Summary

Poland and the Czech Republic are shown to be attractive locations due to the: ability to serve the entire Europe within office hours; robust infrastructure; stable and secure environment; strong FDI support; EU membership; highly skilled labour force; appropriate languages skills and lower cultural proximity to other European countries.

As a result, many IT service providers have established BPO centres in Poland. For example, Capgemini has a ten-year old finance and accounting BPO centre south of Krakow. The centre supports the delivery of Capgemini's contract with Matalan (major U.K. clothing retailer).

Ukraine is still an embryonic IT offshoring/nearshoring but it could be expected that further investment will be directed towards the country because, despite spiralling costs, the country's cost base is still significantly lower than Poland and the Czech Republic.

¹⁴ Central Statistical Office Poland, 2007: Statistical Yearbook Poland 2007

¹⁵ Central Statistical Office Poland, 2007: Statistical Yearbook Poland 2007

¹⁶ Ukraine State Statistics Committee, 2008: Education

¹⁷ CIA, 2008: World Fact Book 2008: Ukraine

¹⁸ CIA, 2008: World Fact Book 2008: Czech Republic

¹⁹ Czech Statistical Office, 2008: Education

²⁰ EC, 2008: Implementation of the European Neighbouring Policy 2007 –Progress Report on Ukraine

²¹ EC, 2008: Implementation of the European Neighbouring Policy 2007 –Progress Report on Ukraine

²² Transparency.org, 2008

2.1. Case Study: HP Recognises Poland as an Offshoring Location

HP established its first sales office in Poland in 1991. The office was mainly focussed on hardware sales. However, after Poland's accession to the EU, in 2004, its IT business really started to take off. As a result, HP's infrastructure and data storage businesses are also emerging.

After considering its choice of location carefully and after almost a decade of familiarisation with Poland, HP announced that it would invest €36.5 million to establish its new finance and accounting BPO centre in Wroclaw, Poland in 2005.

According to Marc Schwarz, Worldwide Vice President and General Manager, BPO, Managed Services, HP, there were two main reasons for choosing Wroclaw. The first was the well-developed ICT infrastructure. The second was the availability of strong skills in the area. HP also acknowledged the proactive support of the national and local governments, which helped convince HP that establishing an office in Poland would be a win-win situation for the company and the local community.

According to the initial plan, HP would employ 1,000 staff over five years. However, due to high demand and a positive experience, the number of employees has reached 1,000 employees after only three years. HP now plans to double the headcount to 2,000 by 2009 to help serve Polish and global clients.

3. Drivers and Restraints in the Polish IT Market

The Polish market has strong potential, as there is a need for new IT solutions: hardware; software applications; and infrastructure. The total IT market is forecast to grow at a five-year compound annual growth rate of 11.1% (2008 to 2012).

The most important drivers and restraints in the market are illustrated in Figure 3.

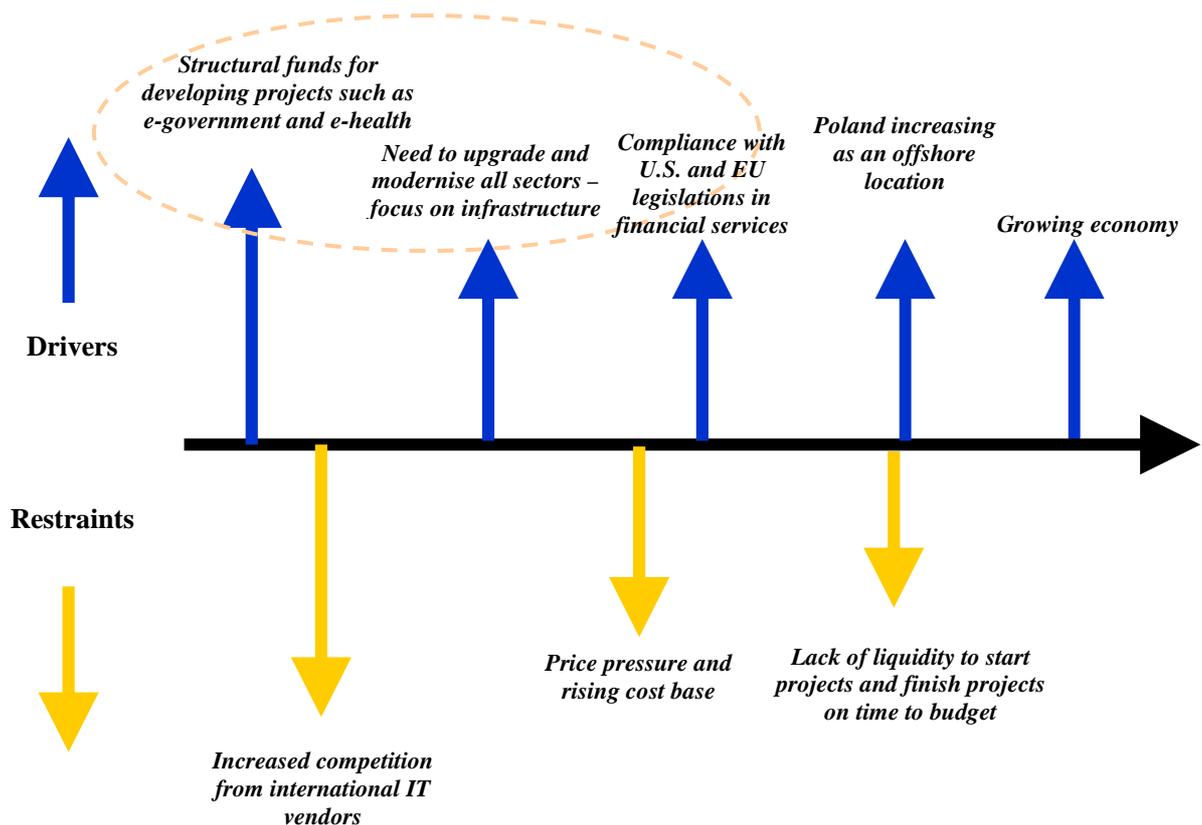


Figure 3: Drivers and restraints in the Polish IT market

Source: Frost & Sullivan, 2008

Drivers

The inflow of at least €3.9 billion over several years in structural funds is a strong driver as there is a huge need to implement a wide range of initiatives in the public sector, such as e-government and other infrastructure projects.

A larger share of the growth is expected to be driven by the financial services sector (see figure 5) which has to ensure legislative compliance with the legislations such as the European Payment Directive²³ and Solvency II.²⁴ To implement these legislative frameworks sophisticated data storage, security, communication tools and application software solutions is required. It is often necessary for Polish companies to comply with US legislations such as SOX²⁵ to be able to conduct business with American business partners.

Furthermore, all vertical sectors in Poland need to invest in IT to remain competitive. There is a critical need to drive efficiency in operations and enhance processes to

²³ EC, 2007: Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market

²⁴ EC, 2008: Directive of the European Parliament and the Council on the taking-up and pursuit of the business of Insurance and Reinsurance Solvency II

²⁵ SEC, 2002: Sarbanes-Oxley Act 2002

compete effectively. In sectors being liberalised such as utilities digitalisation is for example required to ensure efficiency.

In sectors such as manufacturing the need for Polish companies to up-to-date IT systems to enable better collaboration with business partners is driving growth.

Although the Polish economy has shown strong growth rates (6.6% GDP²⁶ growth in 2006), the current economic climate presents a risk may cause lower investment levels in IT, as well as other areas.

Restraints

The increased number of tenders for larger projects across all sectors is attracting more multinational IT companies. The increased number of multinational IT companies has increased competition in the Polish IT market. This is putting extra pressure on existing local companies and new entrants. Scale in operations is becoming more important, and efficiency in operations is pivotal, providing a challenge for many Polish IT companies.

There is currently only one Polish firm left among the top ten IT players in Poland. The remaining nine are multinational players. This stands in stark contrast to four years ago where there were five local companies among the ten largest players.

The growing economy is also causing operating costs to increase in Poland. The growing cost base needs to be managed to ensure continuous competitiveness against other offshoring locations, especially other new EU member states such as Hungary and Romania. TCS, for example, chose Hungary to establish its BPO centre. Romania is also increasing its attractiveness as a BPO location. As a result of rising wages and enhanced opportunities, employee attrition rates of 15-30% in a year are becoming a challenge to manage and a significant added but hidden cost. Foreign investors must develop a strategy to cope with the rising cost base.

Besides the government and the financial service sector, most other sectors have relatively limited financial resources. As a result, IT companies should develop appropriate financial plans to ensure that projects can be finished on time and to budget. This is especially true in Poland, as projects, on occasion, have been started, delayed and, in worst cases, never been finished, as cash flow dried up. This is an opportunity for foreign investors to compete in offering financing options as part of their solution offerings.

²⁶ OECD, 2008: OECD Outlook Database, 2008

4. Opportunities in the Polish IT Market

The Polish market is showing great appetite for new IT. Over the past few years, the market was focussed on merely getting PCs in place. The main driver for IT investments is starting to shift towards a need for more efficient processes where IT is a key enabler. To enhance efficiency, a transformation of processes is needed in many Polish companies. To enable such transformation, demand is starting to shift towards IT services and advanced software applications and infrastructure.

4.1. Opportunities in the Horizontal Sub-Segments

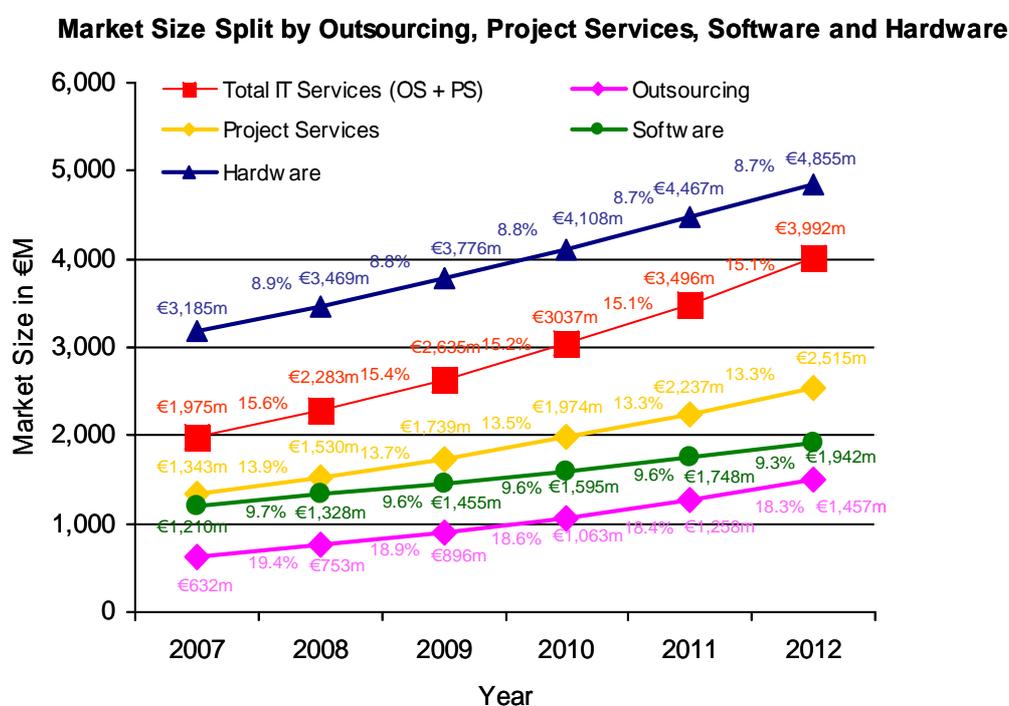


Figure 4: Market Size & Forecast of the Polish IT Market Split by Horizontal Segments

Source: Frost & Sullivan, 2008

4.1.1. Hardware

The hardware segment definition includes: laptops; desktops; printers; scanners; terminals; and servers.

Opportunities in this segment mainly consist of laptops and servers. Many Polish organisations are still investing heavily in hardware (laptops in particular), both in the private and public sector. This segment of the market is forecast to grow at a compound rate of 8.8% between 2007 and 2012. As Polish companies and public sector organisations start to engage in more data-intensive projects such as

compliance with financial regulation and e-government growth in these vertical sectors is likely to remain the largest in the Polish IT market.

The hardware segment is dominated by HP (commanding approximately 50% of the market). HP, which competes in the PC, scanner, printer and server space has had a sales office in Poland since 1991. IBM, now Lenevo, has increased its market share approximately to 30%. As competition in the segment has increased, so has price pressure. Dell also has an office in Poland and has been able to capture market share mainly due to the lower prices it offers. Other brands like Acer have a smaller market share. However, low-cost brands like Acer and ASUSTek are likely to increase their market share through price competition.

4.1.2. Infrastructure and Software Applications

Infrastructure & tools

The infrastructure segment definition includes: operating systems; middleware; storage; and security management software.

The tools segment definition includes: communication tools; access tools; business intelligence tools; database engines; development tools; infrastructure; and integration platforms.

The total software applications and infrastructure segment was worth €1,210 million in 2007. There are great opportunities in the Polish market for infrastructure software and application software as it is expected to grow at a compound rate of around 9.6% between 2007 and 2012.

In the infrastructure sub-segment, growth has to-date been driven by applications such as Microsoft operating systems. Microsoft is dominant in the operating system space; Poland is among the European markets where Windows Vista is most widespread. However, open source alternatives like Linux are also gaining acceptance.

The demand for infrastructure is being driven by several factors. One important factor is the demand being placed on Polish companies by foreign partners to have an IT environment that can: support efficient collaboration; cope with the need for legislation compliance; address security and privacy concerns; and utilise customer information more efficiently. To ensure that infrastructure can handle these sophisticated demands the main opportunities in the sub-segment lie in new platforms, security and access tools.

The tools sub-segment is mainly driven by the demand for simple development tools and database engines. Business intelligence and access tools are still in early stages of development. Many Polish companies have not yet seen the real need and do not yet have the infrastructure to be able to fully utilise tools such as advanced business intelligence tools. However, it is expected that the demand for these tools will increase over the coming 3-5 years.

IBM and SAP are dominant in the platforms segment. SAP is the largest enterprise application software provider in Poland; the NetWeaver platform has, therefore, been a natural choice for many, particularly in verticals like manufacturing. On the other

hand, with many companies using IBM/ Lenovo hardware, IBM's infrastructure is also being widely adopted especially in verticals such as financial services. Furthermore, IBM is also leveraging its position in the software space to deepen its infrastructure footprint.

HP uses its position in the hardware segment to win infrastructure business. Microsoft has captured some enterprise business, but its focus is on the SMB market, which it mainly targets through resellers. Microsoft is, however, increasingly focussing on providing software as a service (SaaS) solutions. Asseco caters for both enterprises and SMBs. Major infrastructure companies like Oracle and BEA are starting to establish a more significant presence in the market. In the database space, Oracle is the market leader, but Microsoft is also making inroads, especially within the SMB segment.

Software Applications

The software application segment definition includes: industry-specific software applications; and non-industry-specific software applications.

With companies realising that they must have modern IT systems to remain competitive, the demand for more advanced enterprise software applications is starting to emerge. The main opportunities lie in the enterprise application segment; these are: supply chain management; computer-aided design (CAD); computer-aided manufacturing (CAM); work force management; fleet management; customer relationship management (CRM); and enterprise resource planning (ERP). ERP is being deployed especially to support the large manufacturing base in Poland, but also, increasingly in retail. Furthermore, there are strong opportunities in administrative type solutions such as HR and finance and accounting solutions across all sectors. In many cases, these applications are also meant to support the transformation of processes, which is much needed across most vertical sectors in Poland in order for companies to achieve the necessary efficiency gains (see figure 4).

The emergence of SaaS as an alternative to traditional off-the-shelf software will help overcome the relative shortage of financial and in-house IT resources in the SMB segment. For example, many SMBs may not be able to afford a one-year license, nor are they likely to have the skill set to manage larger and more complex applications. SaaS can provide the flexibility and facilitate access to affordable application software for SMBs.

To-date, SAP has dominated the enterprise software application space. This can be traced back to two primary reasons: (a) the German company established a first-mover advantage in Poland, as it invested earlier than its competitor, Oracle; and (b) many large (especially German) companies already use SAP at home and may prefer their partner or subsidiary to also use SAP. Carlsberg is an example of a company that uses SAP in its Danish headquarters; consequently, its Polish subsidiary is also deploying SAP.

Oracle's presence is growing, especially in the enterprise CRM space. Microsoft is aggressively pushing its enterprise application suite, Dynamics, mainly for SMBs. Asseco's acquisitions of many of the larger Polish software houses have left the company in a good position, as its solutions are generally well-liked. As a result, the

company holds a number of large Polish contracts such as the IT System for Zakład Ubezpieczeń Społecznych Zakład (Social Insurance Institution)²⁷.

4.1.3. IT Services

Project Services

The project services segment definition includes: IT consulting; proprietary application/ system development; system integration; managed services; and IT training.

The project services segment is among the fastest growing horizontal segments in Poland, with a forecast compound growth rate of 13.5% between 2007 and 2012. This segment, which was worth approximately €1,343 million in 2007, accounts for 21% of the total IT market in Poland (see figure 4).

Implementation and system integration are the main growth drivers and constitute the largest opportunities. The growth in implementations and system integration is sparked by, the emerging interest in enterprise applications and infrastructure – especially platforms.

There is a strong need for other project services, especially IT training and IT consulting. To reap the full benefit of new IT, consulting is also needed to enable process transformations and enhancements across all sectors. Furthermore, Frost & Sullivan believes that IT consulting is a key differentiator when highlighting business cases and presenting capabilities to potential clients. For example, IBM was able to enhance its business in the financial sector through a mixture of good service and technical capabilities, enabling it to win, for example, legislative compliance work.

Outsourcing

The IT outsourcing segment definition includes: complete outsourcing; infrastructure-related outsourcing; application-related outsourcing, including application management; business processing outsourcing; and BPO (although not all is IT) and hardware maintenance.

The Polish outsourcing market was worth €634 million in 2007 and is forecast to be the fastest growing horizontal segment at 15.3% CAGR until 2012 (see figure 4). The majority of outsourcing is hardware maintenance while the second biggest sub-segment is infrastructure-related. The application-related sub-segment is increasing rapidly; an example is IBM's deal with BCP to upgrade and manage infrastructure.

Outsourcing is a relatively new phenomenon in Poland. It was kick started by the influx of structural funds for IT projects, given the focus on e-government projects and other EU related projects, where outsourcing is a common model.

The main reasons for the rapid growth in outsourcing are the lack of in-house resources to cope with major projects, such as: ensuring legislative compliance in financial services; upgrading of infrastructure and applications across most sectors; and the implementation of large-scale public sector programmes. Many of these new

²⁷ Asseco, 2008

opportunities require more advanced data management solutions. An example is HP's data storage contract to support Schengen Information System II (SIS II), worth €15 million.

Furthermore, outsourcing has been driven by the demand for efficiency. Outsourcing deals have allowed Polish companies to tap into the outsourcers' expertise to drive operational efficiency.

The rapid growth of outsourcing, beyond what is expected from other sub-segments, does not imply that demand in other sub-segments is maturing. On a contrary, other sub-segments are being subsumed into larger outsourcing deals.

Despite the rapid growth of outsourcing, contract sizes have still not reached comparable levels against other European markets. There are several reasons for this, namely: (a) a lack of cash to tender major contracts, including both hardware and service; (b) the realisation of the need for IT services, which has only come about recently; (c) the tradition of multi sourcing; (d) the lack of experience with managing major IT service contracts; and (e) complex labour laws.

Competition in the IT Services Space

Competition in the IT services segment is increasing, but there is still strong potential for new entrants in areas such as system integration, more advanced types of infrastructure outsourcing and application management. The major multinational IT service providers operating elsewhere in Europe are also dominant in Poland although it should be noted that the Polish market is more fragmented. As a result, it is estimated that no IT service provider holds more than 15% of the market. Asseco is the only large local IT service provider left in the Polish IT market. The company has grown through acquisitions and organically. Asseco has over the last four years acquired a range of local companies such as Prokom. We believe that the prospects for Asseco are positive as local suppliers are well liked especially in SMBs and public sector organisations. Furthermore, many Polish companies use its software already. As a result, the company holds contracts such as the Integrated IT System for PZU and the Central Register of Vehicles and Drivers System for the Ministry of Internal Affairs and Administration.

IBM and HP are the leading IT service providers. IBM holds relatively large contracts with a number of Polish banks. IBM has a market share of approximately 15%. Companies like HP, with a strong background in hardware, often win service contracts as part of hardware deals; HP is estimated to hold a market share of about 14%.

Other multinational IT service providers such as Accenture and Capgemini have also increased their market share, although their respective strategies in Poland differ. Accenture has mainly entered Poland for new revenue opportunities. Like elsewhere in Europe, the company has been expanding its business in retail –Poland being no exception. In conjunction with Retek, Accenture has won a contract with the Polish fashion retailer, LPP, to deploy merchandising, forecasting and planning systems, which support LPP in expanding across the CEE region. Accenture has a market share of less than 10%.

Capgemini entered Poland mainly to enhance its offshoring facilities in line with its “Rightshore” strategy. As a result, the company has used its nearshoring facility in Poland to deliver contracts abroad. An example is the UK clothing retailer Matalan’s service desk and desktop support services which are provided from Capgemini’s customer service centre in Cracow. The Polish centre supports around 500 Matalan staff at the retailer’s UK headquarters, its distribution depots and at its 200 UK stores. However, as the Polish market is showing strong growth rates, Capgemini is increasingly looking at also winning business in Poland.

4.2. Opportunities in Vertical Sectors

The Polish market is witnessing great demand for IT investments. All the vertical sectors are exhibiting strong growth. As a result, there are opportunities across all sectors.

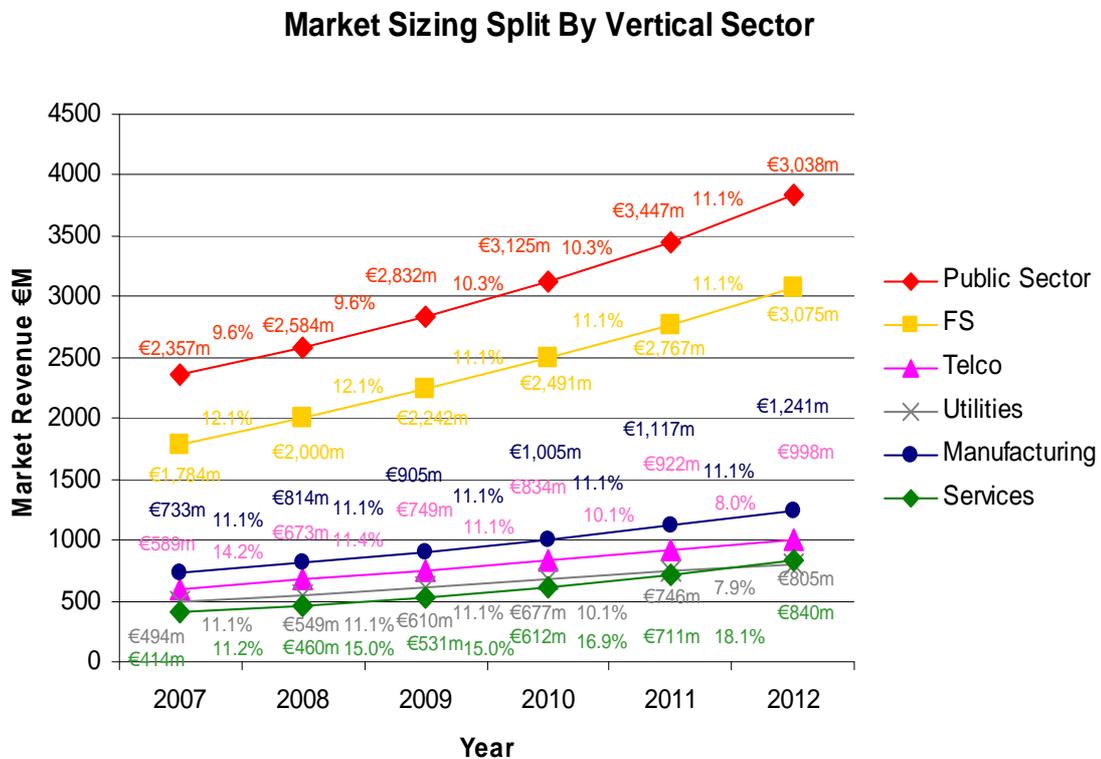


Figure 5: Market Sizing and Forecast for the Polish IT Market Split by Vertical Sector

Source: Frost & Sullivan, 2008

4.2.1. Public Sector

The public sector accounted for 37% of the total IT market, making it the largest sub-sector with a five-year CAGR of 10.2% between 2007 and 12. Opportunities mainly lie in supporting the implementation of major EU-driven projects such as e-government projects, which will, for example, ensure that citizens more easily get access to public services. Currently, in healthcare, the country is in the very early stages of spreading the use of IT to GPs and within hospitals and in creating an electronic patient record system. The aim is to move on to further steps in the EU e-health Action Plan.

To implement the EU's Counter Terrorism Strategy border, security systems such as the SIS II are being deployed. To do so Poland has received €313 million in structural funds. It has generally been in the public sector that larger outsourcing contracts have emerged such as the data storage contract for Frontex the European border security agency headquartered in Warsaw. The contract data storage contract alone was worth €12.6 million, alone.

More recently, larger projects are being considered, such as the Polish Ministry of Health's new IT system. This contract is to be tendered by the end of 2008. Domestic opportunities will increasingly consist of major outsourcing deals; therefore, growth in the public sector is expected to remain strong.

4.2.2. Financial Services

The financial services sector is the second largest sector in Poland. It accounted for 28.5% of the total IT market in 2007. It is estimated to grow at a five-year CAGR of 11.5% between 2007 and 2012. Growth will be driven by the following opportunities:

- Ensuring legislative compliance with (for example) Solvency II and MiFID. With the current credit crunch, further regulations are expected.
- Aligning and integrating systems after merger and acquisition activities. Recent examples include GE Money acquiring BHP in 2008 and Aegon acquiring Bre Bank's pension business.
- General structural changes to meet higher demands for services such as private pensions.
- Need for efficiency processes to cope with the increased competition in terms of more efficient systems, better CRM and business intelligence (BI).

The major opportunities in the financial services sector are likely to be infrastructure and application-related outsourcing and project service deals related to infrastructure and software application implementations. One example is IBM's ten-year engagement with BCP, started in 2005, regarding IT infrastructure.

4.2.3. Telecommunications

The telecommunications sector accounted for 9.2% of the total IT market in 2007. It is forecast to show impressive growth of 11.0% between 2007 and 2012. The main opportunities lie in the renewal of infrastructure and business service systems (BSS)

to enhance efficiency; the growing revenue pressure to deploy new data services; the ubiquity of convergence and the increasing demand for high-speed data access.

To help focus on core business activities, many telecom companies have started to look at outsourcing. One such example is the Polish carrier, Telekomunikacja Polska (TP), which signed a five-year infrastructure deal with EDS (now HP) in 2007, worth \$52²⁸ million. EDS will manage desktop systems for TP and TP Group's mobile operator, PTK Centertel. Furthermore, EDS will handle onsite and offsite service support, printing and help desk for TP Group's 33,000 employees. The arrangement involves 250 TP employees and some of its close partners' employees transferring to EDS in 2008.

4.2.4. Utilities

Utilities accounted for 7.8% of the total IT market in 2007. The sector is forecast to grow at a 10.3% five-year CAGR between 2007 and 2012. The industry is being liberalised. The main opportunities lie in enabling Polish utility companies to remain competitive in terms of using IT services to digitalise operations, enhance the use of CRM and BI and integrate and consolidate systems.

To prepare for liberalisation, Poludniowy Koncern Energetyczny (PKE), the largest and state-owned utility company, has chosen IFS to upgrade its IT systems²⁹. The company is hoping to reduce operating costs and enhance processes. Furthermore, EDF Elektrownia Rybnik a subsidiary of EDF has for example chosen Asseco to support the company upgrading infrastructure and applications³⁰.

4.2.5. Manufacturing

The manufacturing sector accounted for 11.5% of the total IT market in 2007, with an estimated five-year CAGR of 11.1% between 2007 and 2012. The main opportunities lie with companies seeking to modernise their IT systems and looking to achieve organisational objectives such as enhancing efficiency, facilitating collaboration and meeting international production standards. The main types of applications in demand are supply chain management, fleet management, work force deployment, CAD/CAM and administration. Carlsberg Polska, for example, uses SAP to integrate, support and change processes to make them more transparent³¹.

4.2.6. Services

The services sector accounted for 6% of the total IT market in 2007, with an estimated five-year CAGR of 15.2% between 2007 and 2012. Traditionally large retailers and major service firms wanting to digitalise operations were the main drivers in this space. Many service firms in Poland are SMBs. Most of their IT needs have so far been relatively basic, but there is a growing need for more advanced solutions mainly in terms of more advanced enterprise applications such as ERP applications in retail and CRM systems and administrative applications such as HR

²⁸ EDS, 2007

²⁹ IFS, 2000

³⁰ Asseco, 2007

³¹ SAP, 2007

and finance and accounting. An example is Emperia Holding, which deployed a business intelligence solution in conjunction with Asseco.

Frost & Sullivan believes that SaaS or managed service deals will capture a significant part of the growth in this segment. This is mainly due to the SaaS business model's ability to make any application available at affordable costs in a convenient manner to any size of company.

4.3 Summary of Opportunities in Poland

There is enormous potential in the growing Polish market across all horizontals and verticals. Despite the presence of major IT providers in Poland there is still viable potential for new entrants. The diversity of market demand is also ensuring opportunities for niche participants, such as in advanced infrastructure and types of IT services. As the Polish market modernises, there will continue to be new and more advanced opportunities in all vertical sectors in terms of:

- More advanced infrastructure mainly in terms of platforms, access tools security, collaboration tools and business intelligence tools;
- More advanced enterprise applications such as CRM, ERP, finance & accounting HR, SCM and CAD/CAM;
- Project services more specifically implementations of enterprise applications, system integration and IT consulting and
- Larger outsourcing application related infrastructure related and hardware maintenance deals.

5. FDI in Poland

Poland is a firm contender in the race to attract FDI. To encourage investors, the government provides a range of different types of support:

- Tax exemptions in special economic zones (e.g. in Cracow, where major IT service provider Capgemini established its “Rightshore” centre).
- Financial grants for new job creation and training, which most major IT companies, such as Dell and IBM, have benefited from when establishing sites that will contribute to the local economy.
- Availability of modern infrastructure: local authorities encourage investors by providing high quality infrastructure facilities. HP, for example, stated that the availability of good infrastructure was a key reason for its decision to establish its finance & accounting BPO centre in Wroclaw. In addition to physical infrastructure, the company also acknowledged the extensive support and involvement from local authorities in accommodating its requirements.
- Exemption from real estate tax for several years.
- Conferment of equal status to foreign investors; for example, foreign investors have:
 - The possibility of conducting business in all the legal forms available in Poland; and
 - The right to purchase real estate and have access to public procurement as opposed to some emerging countries where local companies are the preferred suppliers.

As a result of the proactive engagement of the Polish Government, the country has been successful in attracting foreign investors, especially in the BPO space, where notably large US-based IT companies have played a leading role.

A trend of non US-based IT companies that are using Poland as a cost-effective base from which to serve the European market primarily is emerging. An example is the Indian software house Zensar Technologies³². Also, major hardware company Lenovo announced in 2007 that it would establish manufacturing facilities in Legnica SEZ and was forecasting production of 5 million PCs per year³³. Poland was selected due to its geographical presence in Europe and the young and strong skill base present in the country. Furthermore, Poland is starting to emerge as an R&D location due to the high skill levels in the country, as well as the attractive cost parameters.

³² Zensar Technologies, 2007

³³ Lenovo, 2007

Table 1: BPO Centres Opened in Poland During 2007 and H1 2008

Company	Location	Year	Capital Invested (€ Million)	Employment
KPIT	Wrocław	2007	3.5	500
CSS	Wrocław	2007	3	250
HSL	Kraków	2007	2.6	250
ZenSar Technology	Gdansk	2008	1.8	350
Vantyx Systems	Warszawa	2008	2.3	100
Emtex Pitney Bowes	Bielsko Biała	2008	0.3	25
Wipro Technologies	Wrocław	2008	0.5	200
First Data Corporation	Gdansk	2008	3	400
Atos Origin	Łódź	2008	2	200
Google	Wrocław, Kraków	2008	1.5	270

Source: PAIiZ, 2008

5.1. Case Study: IBM Investing in Cracow

After careful consideration, in 2005, IBM announced that it would set up its first new software laboratory in Cracow, Poland. According to the CEO of IBM, Poland, Dariusz Fabiszewski, the high level of skills of Polish engineers played a major role in identifying Poland as an appropriate location for software development in CEE. Furthermore, a stable Polish economy and the availability of financial incentives to support high-tech investments were key factors favouring the decision.

In the agreement between the Polish Government and IBM, the company was to establish a software laboratory in Cracow, and later, an R&D centre. In return, IBM received government subsidies for job training, tax benefits and other support of €212,000 over two years.

6. Future Perspectives of the Polish IT Market

Poland's accession to the EU improved the country's investment potential. The improvement was mainly due to the availability of structural funds for different types of large projects, such as e-government and e-health, as well as the rollout of broadband and introduction of e-literacy programmes. These initiatives had a knock-on effect and spurred significant IT spending.

The major inflow of capital into the Polish IT market provided a wake up call to most multinational companies like IBM and Microsoft. Initially, to capture the immense demand for hardware and office applications, many other companies established sales

offices in Poland. The strong presence of multinationals changed the competitive dynamics of the Polish market. To compete with foreign multinationals, there were many mergers and acquisitions. By August 2008, Asseco was the only local IT company among the top ten IT companies in Poland.

The revenue potential in Poland is present in all horizontal IT segments, and is rapidly growing. Currently, hardware is the largest horizontal segment, as a large part of the Polish market continues to demand laptops and servers. As a result, there are a number of opportunities in these two sub-segments. Concurrently, a larger part of the Polish IT market is becoming more sophisticated, driven by the demand for efficiency. As a result, opportunities are arising from software applications, infrastructure and IT services such as system integration, IT training and IT consulting with IT services expected to show the strongest growth rates.

Outsourcing is expected to deliver high growth rates. The high growth in IT services is mainly driven by Polish companies lacking in-house resources to cope with increasing obligations from the EU and other business partners. In key industries such as financial services, there are opportunities to meet ever-increasing compliance requirements. In the public sector major opportunities consist of obligations to meet targets for e-government milestones and major infrastructure upgrades and application deployments. However, domestically driven opportunities in the government sector are also growing. Other key industries such as manufacturing and utilities also need IT solutions to overcome key challenges such as achieving cost efficiency and managing digitalisation requirements. In telecoms, convergence is one of the many challenges driving growth. As a result, Frost & Sullivan believes that there will be strong revenue opportunities in the Polish IT market materialising and developing over the next five years across all horizontal and verticals sectors.

As Poland needs the investment and the jobs, the country is looking to become a top offshoring/ nearshoring location. The country's main attractions as an offshoring/ nearshoring location are the availability of high-skilled labour at attractive cost points, extensive support from the government, EU membership, a robust infrastructure, a stable and growing economy and better cultural understanding between European countries. Many companies are increasingly recognising Poland's potential as a strong offshoring/ nearshoring location.

Frost & Sullivan believes that there is strong future investment potential in the Polish IT market, for offshoring/ nearshoring, and especially as a nearshoring destination serving the European market. The investment potential is especially positive for BPO.

About Frost & Sullivan

Frost & Sullivan, a global growth consulting company, has been partnering with clients to support the development of innovative strategies for more than 40 years. The company's industry expertise integrates growth consulting, growth partnership services and corporate management training to identify and develop opportunities. Frost & Sullivan serves an extensive clientele that includes Global 1000 companies, emerging companies and the investment community by providing comprehensive industry coverage that reflects a unique global perspective and combines ongoing analysis of markets, technologies, econometrics and demographics. For more information, visit <http://www.frost.com>.

About PAIiZ

The Polish information and Foreign Investment Agency (PAIiZ) has been serving investors for 15 years. Its mission is to increase Foreign Direct Investment (FDI) by encouraging international companies to invest in Poland. It guides investors through all the necessary administrative and legal procedures along the way to setting up their business in Poland.

PAIiZ offers investors: quick access to comprehensive information about the economic and legal environment, assistance in finding appropriate partners and investment locations and support at every phase of the investment process.

Another one of PAIiZ's roles is the creation of positive image of Poland and the promotion of Polish products and services abroad by organizing conferences, visits for foreign journalists and trade missions. PAIiZ also promotes Poland's regions. It has established a network of Regional Investor Assistance Centres throughout Poland. Their goal is to improve the quality of regional services for investors and to provide access to the most up-to-date information, such as the latest investment offers and regional microeconomic data. These specialized offices are staffed by PAIiZ trained employees and financed from local funds.

In order to help support and encourage FDI, the Polish government has passed many new resolutions this year. 90 billion Euro of EU funds has been allocated to Poland for the years 2007-2013. There has never been a better time to invest in Poland. Come and see for yourselves. We are here to help you!

Contact us to learn more about how your company can profit from the unique business potential of Poland.

Contact details:

The Polish Information and Foreign Investment Agency (PAIiZ)

ul. Bagatela 12

00-585 Warsaw, Poland

tel. (+48 22) 334 98 00

fax (+48 22) 334 99 99

e-mail: post@paiz.gov.pl

www.paiz.gov.pl.