The European market potential for integrated internet of things and big data services

The European market for internet of things (IoT) solutions integrated with big data is growing. Germany, the United Kingdom, France, Italy, Spain and the Netherlands are leading European IoT adoption, but Eastern European countries and the Nordics are following closely. Both consumer and business IoT offer opportunities, though specialisation may provide a competitive advantage. The home, health and finance sectors are the front runners in IoT adoption, and the shortage of skilled specialists continues to drive outsourcing.

Contents of this page

1. Product description

In order to understand the context of internet of things and big data integration, it is necessary to understand and distinguish between what the industrial internet of things is, what big data is and what different types of activities fall under internet of things services.

What is the internet of things?

The internet of things (IoT) refers to everyday physical devices that are connected to and interconnected with the internet. These 'things' are embedded with electronics, sensors, software, actuators and network connectivity allowing them to collect, send and receive data and to connect and interact with other devices. This collection and exchange of data enables the optimisation of processes, monitoring of environments and performing of computations or mathematical calculations.

Typically, IoT can be divided into two main categories, namely, consumer IoT and industrial IoT. Consumer IoT, often referred to simply as IoT, refers to devices for personal use. The latter, industrial IoT, which is often called IIoT, refers to non-consumer devices used by organisations, such as companies, governments and utilities, to enhance operations. Unless otherwise noted in this report, the term IoT shall be used to comprise both consumer and industrial IoT.

The purpose of consumer IoT devices is, generally, to improve consumers' daily lives by, for instance, making them safer, healthier of simply more enjoyable. Examples of such devices include wearable health and fitness monitoring devices, home automation appliances and connected vehicles. The purpose of IIoT devices is to allow for increased productivity, efficiency and safety while decreasing waste throughout operations. Examples of IIoT devices include manufacturing equipment, robots and 3D printers.

When IoT devices are interconnected with other devices and able to operate interactively and autonomously without human intervention, they are considered 'smart'. In other words, they are able to perceive and deduce information and retain it as knowledge that is further applied towards adaptive behaviours within an environment or context. Smart environments and devices are able to learn, operate autonomously and offer expert advice. They are typical examples of how big data, artificial intelligence and IoT are integrated.

Examples of smart consumer devices are smartphones, smartwatches and smart televisions. When these smart devices are linked to and integrated in everyday settings and tasks, then we speak of smart environments. Examples of smart environments in Europe are smart homes, smart cities, smart manufacturing and smart industries.

IoT is closely associated with big data, machine learning, 5G (the next generation of mobile data infrastructure) and artificial intelligence. Higher bandwidths associated with 5G will allow more devices to connect to the internet. This in turn means that there will be greater data generation and processing capacity allowing companies to benefit even more from big data. As the availability of data will continue to increase, this will further increase the demand for machine learning and artificial intelligence.

What is big data

Big data refers to data sets so large that they can be difficult to manage with traditional data processing applications. Commonly used software tools cannot process big data within a reasonable timeframe.

What are IoT services?

The key revenue activities associated with IoT deal with platforms, applications and services, IoT professional services, connectivity, big data solutions, software services and product development. An IoT market analysis showed that approximately 35% of IoT market value is generated from hardware, 27% from IoT services, 22% from connectivity, and 16% from software.

The platforms, applications and services segment comprises multiple IoT layers, including cloud, data analytics and security. IoT professional services include systems integration, managed services and consulting. Big data solutions include skills and solutions that are needed to analyse, interpret and base predictions on IoT retrieved data. Software services include traditional software development, product development — like co-creation with specialised hardware manufacturers — and improvement of existing products with IoT features.

Developing IoT products also offers further opportunities for global market expansion, for example, via innovation and development of disruptive technologies, attracting investments possibly via crowdfunding and establishing start-up companies as spin-offs of your company, often in collaboration with the producer of the physical machinery or sensors in question.

Crowdfunding is defined by Fundable as a method of raising capital through the collective effort of friends, family, customers and individual investors via online channels, such as via social media and crowd funding platforms. By making use of different European crowdfunding platforms, SMEs from developing countries can find potential investment partners already based in Europe and raise capital to help further develop business ideas.

Tips:

See our studies on big data and software developing services for more information about the developments of these promising export services.

Clearly communicate what services or solutions you provide and what are the benefits of outsourcing these services to you.

Read more about crowdfunding and take a look at sites such as Crowdsourcing Week and Silicon Canals to learn about the best European crowdfunding platforms. Different platforms are used in different countries.

2. What makes Europe an interesting market for IoT services outsourcing?

Europe is the third largest adopter of IoT after North America and the Asia-Pacific region. However, the European IoT market is growing annually by double digits. What makes Europe particularly interesting next to

its growing market size is that both consumer and industrial IoT offer opportunities and that these opportunities can be found in many vertical industries. The growing IoT market combined with skills shortages means there is extra room for outsourcing.

The European IoT market size is growing rapidly

As IoT becomes more mainstream, the related technology becomes cheaper. However, the IoT market continues to grow due to the considerable increase in the number of IoT devices. According to the IDC's Worldwide Internet of Things Spending Guide, Europe is responsible for 23% of global IoT spending, which is predicted to reach €664 billion in 2019 and grow to €891 billion in 2022.

Europe is the third largest market for IoT after the Asia-Pacific and North American regions, which respectively account for 35.7% and 27.3% of worldwide IoT spending. However, Europe is forecasted to see the fastest growth in market size and revenue from these three leading regions at an annual growth rate of 15.7% through to 2025. By 2023, Europe is expected to account for 25% of worldwide IoT spending. North America and Asia-Pacific will have lower annual growth rates of 11% and 13.2% respectively.

There were 14.2 billion connected things in 2019, a figure that is estimated to go up to 25 billion by 2025, of which 4.9 billion will be in Europe.

Tips:

- You must move fast and build your capabilities and experience in IoT services to establish a position in the IoT market.
- Provide examples of how your industrial IoT services have optimised operations for your clients. Include concrete financial benefits it generated for them.
- Take a look at which calls to action are being taken towards 2025 to develop a stronger digital Europe.
- Visit IoT and IIoT events in Europe, such as the IoT World Europe Summit, IoT Week, IoT Tech Expo, IoT Solutions World Congress and Industry of Things World.
- Many start-up companies focus on IoT and IIoT solutions. Look for such companies to partner with.

Both consumer and industrial IoT offer opportunities

Consumer devices account for 63% of all IoT devices, with industrial devices accounting for the rest. This ratio is expected to remain the same in the coming years. This makes consumer IoT an interesting market for you but IIoT also offers good opportunities, as the spending is much higher. Although consumer devices comprise almost two-thirds of all connected devices, they only make up 19% of Europe's IoT expenditure. In 2019, revenues from the consumer segment were estimated at €28.5 billion.

In the coming years, consumers are expected to purchase increasingly more expensive connected things, making the gap between consumer IoT and industrial IoT likely to decrease. Nevertheless, industries will remain the greater spenders.

An expected 60% of the connected devices will be cross-industry devices and 40% will be vertical-specific devices. Cross-industry devices are those devices that are used in multiple industries mainly to save costs, such as building management systems. Vertical-specific devices are used in specific industries, such as healthcare and manufacturing, to improve efficiency and accuracy.

Tips:

Beware that many IoT technologies are rapidly becoming commodities, like mobile applications and cloud computing did before, for example. This means your window of opportunity in new technologies, business models and market segments is limited.

Provide references, testimonials and examples of recent work, preferably on your website, as European companies often require proof of your technical skills.

Many promising vertical industries

IoT is expected to affect all vertical European markets but markets that have traditionally invested more in IT are the front runners. The vertical industries with the greatest spending in Europe in 2019 were the consumer segment (€28.5 billion), manufacturing (€17.8 billion), utilities (€16.9 billion), retail (€14.3 billion) and transportation (€13.4 billion) sectors.

IoT spending among manufacturers was largely focused on solutions supporting manufacturing operations and production asset management. In the utilities sector, IoT spending was dominated by smart grids for electricity, gas and water. Within the retail sector omnichannel operations, the increased interaction between physical and digital sales channels, were the single largest use case, and in transportation, the majority of IoT spending went into freight monitoring and logistics solutions.

The European industries that are expected to see the fastest annual growth rates throughout 2019 and 2022 are retail (18.5%), healthcare (17.9%) and local government (17.1%). This growth is reflected in the European Commission's identification of which smart environments offer the most promising business opportunities, which includes smart homes, smart health, smart finance and smart customer experience.

Smart Homes include private and public buildings that are equipped with lighting, heating, and electronic devices that can be controlled remotely by smartphones, mobile devices or computers. Examples of smart home solutions include home security (cameras and sensors), energy management (climate control, ventilation, lighting) and appliances (kettles, fridges and washing machines).

Smart health refers to the use of mobile and other smart devices and sensors to improve the way that well-being oriented users can access and deliver health and wellness services. Both consumers and the healthcare industry increasingly use IoT solutions. Examples of applications include health-specific personal wellness, such as wearable heart rate, glucose level and blood pressure monitors, and telehealth systems that exchange medical information between sites, medical professionals and patients.

Healthcare is the largest market in Europe among IoT applications for active ageing. However, only few companies already offer specific solutions. Hence, specific IoT solutions and applications focusing on active ageing offer good opportunities. Healthcare is increasingly linked to big databases and medical advice is provided by doctors supported by artificial intelligence. Smart health is an explicit example of how IoT is linked with big data, artificial intelligence, machine learning and robotics.

Smart finance is the intelligent integration of decentralised applications applied to several finance markets, including insurance, financial intermediation and broking, real estate activities, renting and leasing. The use of IoT in the financial sector started out with a focus on security but is moving into the development of new services, such as security, with remote asset security and smart ATMs, and financial services offering car, house and health insurance policies and rates, based on customer behaviour.

Smart customer experience includes the provision of personalised content to customers at all customer touch

points in several domains, from retail to entertainment, which improves the way individuals interact with technology in their personal lives.

Despite the identification of these key markets by the European Commission, there are tangible business opportunities for IoT, cloud, artificial intelligence, machine learning and big data technologies across all smart environments, including smart utilities, smart transport and smart governments.

Tips:

Specialise in a vertical sector, or even better, on a specific niche market segment within a vertical market, which will give you a competitive advantage. Examples of such niche market segments within vertical sectors are smart farming, smart villages and smart warehousing.

Follow the latest technological developments to keep your knowledge and skills up to date.

Offer potential buyers a pilot project or a demonstration of transparency and capability, which can also help to establish trust.

Skills shortages and lack of expertise

As IoT continues to expand, there is an increasing need for specialised developers and specialists. Key skills include data visualisation, security solutions, machine learning, hardware expertise and the integration of all IoT elements. However, there is a considerable lack of IT training, certification and experience in the European workforce. Due to the rapid technological innovations in IT, the skills of IT graduates do not match the needs of the market. A study by Capgemini revealed that 54% of the organisations feel that their digital transformations are being hampered by a digital talent gap.

Initially skills shortages were common for Western and Northern Europe, but the shortages have now also become apparent in other areas in Europe such as Eastern Europe. Countries such as Poland, Bulgaria and Romania have grown to become common nearshore destinations for Northern and Western Europe but they too are now facing skills shortages.

According to the Building a Better Working Europe survey released by EY, the scarcest skills are in cybersecurity, AI and robotics. Seeing as these are all big areas of maturity, the situation is only likely to get worse. All these shortages have a relationship with and an impact on IoT.

Tips:

Closely follow IT developments in your target countries. Good ways to do this are by looking at the European IT Observatory and industry association journals such as the German Outsourcing Association's Outsourcing Journal. It is also recommended to set up a Google alert and to follow large consulting companies, such as AT Kearney, Gartner, Deloitte, ATOS, Accenture and Capgemini. Signing up for newsletters from different firms is another way of retrieving relevant information.

Develop consulting skills to advise potential buyers on how they can benefit from IoT and how you can help them with it. The earlier you are involved in the project, the better.

Build up IoT expertise and an IoT team in your company. Offer solutions first locally and regionally to get references and confidence in your capabilities.

Specialisation in IoT offers opportunities

Outsourcing IoT software development is still software development, which is why we recommend that you look into our study about outsourcing software development services. However, IoT software development requires additional specialisation for software developers, including knowledge of hardware, sensors, data analytics and vertical market expertise, such as healthcare and manufacturing. Since IoT software development requires additional expertise, it could provide opportunities for service providers like you.

IoT also offers a lot of opportunities for companies from developing countries to innovate and develop their own products. Apart from solely focusing on software development services you could develop your own IoT devices and hardware.

Tip:

See our study about demand for IT outsourcing services in the European market for more information about what makes Europe an interesting market for IT outsourcing in general.

3. Which European countries offer most opportunities for IoT services outsourcing?

Europe's total IoT spending in 2019 equalled €150 billion, accounting for 23% of global IoT spending. Germany, the United Kingdom, France and Italy have the largest IoT markets in Europe with an accumulated €92.6 billion spent in 2019, which is equivalent to 62% of Europe's total spending. Sweden, Norway, Finland and Denmark are interesting markets because of their growth in IoT adoption, but also due to their openness to outsourcing. Central and Eastern European countries show significant growth in IoT adoption, making them interesting markets too.

Germany: Europe's IoT champion

Germany's 2019 IoT spending exceeded €31 billion, the largest in Europe. Growing from €23.6 billion in 2017, German IoT spending is expected to grow by 15.5% annually reaching €42 billion in 2021. The majority of Germany's IoT spending is in enterprise and industrial IoT, with the automotive and manufacturing sectors leading the country's IoT adoption rate. The IoT solution market in Germany is strongly driven by mid-market companies.

Germany has a strong interest and history in industrial IoT, having made constant industrial investments and innovations in the past decades. It is, therefore, expected that Germany will be a pioneer in utilising 5G to ramp up industrial IoT further. Initially, German companies saw IoT as a mechanism to develop new services and business opportunities, but the perception is changing more recently to increasing the use of IoT to generate higher efficiency in existing processes leading to cost reductions.

Despite Germany's large IoT market size, German companies are still generally reluctant to use IoT for connected product applications, as people are very sensitive to data protection and privacy issues. Cybersecurity is gaining importance too. When offering IoT solutions, it is recommended to focus on minimising vulnerabilities by, for instance, combining IoT solutions with blockchain and edge processing technologies.

Germany is a very interesting market due to its large market size, but Germany remains risk sensitive and less open to offshore outsourcing compared to other European countries, such as the United Kingdom and the Netherlands. This is changing as German companies face skill shortages and become more experienced in offshore outsourcing.

German companies naturally prefer to work and collaborate in German, which is why they prefer nearshoring when they do outsource. You can increase your chances of success in Germany by collaborating with a local German-speaking partner rather than approaching end users directly.

Tips:

Increase your chances of success in Germany by focusing on mid-market companies in the industrial sectors, which drive IoT adoption.

Read more about 5G in our study on trends and opportunities to understand what 5G is and how it influences IoT and other technological developments.

Read this summary about IoT adoption in Germany on the ISG group website.

Note that many websites in Germany are available only in German, because Germans prefer to do business in their own language. If you would like to research potential German customers, make sure to install a translation extension on your browser or to use a translation tool.

The United Kingdom remains attractive despite Brexit

In our study about the demand for IT outsourcing in Europe we show that the United Kingdom's withdrawal from the European Union (Brexit) made companies more cautious in their outsourcing decisions, partially contributing to a decline in outsourcing after 2016. This behaviour is not reflected in the United Kingdom's IoT spending, which increased from €17.4 billion in 2017 to approximately €22.3 billion in 2019 and is expected to continue growing.

Of all European countries, the United Kingdom is the most open to offshore outsourcing and the least cautious about doing business with companies in developing countries. Their openness is influenced by their cost-savings business culture and their long standing business relations with many countries.

Research from ISG shows that companies in the United Kingdom also face a shortage of skilled IoT talent and hence seek expertise from service providers to help them make sense of new technologies. This talent shortage combined with the openness to outsourcing means that the United Kingdom offers good opportunities. At the same time, however, beware this will also mean strong competition in the market.

Tips:

Take a look at the United Kingdom's IoTUK national programme to see how the British government is aiming to advance the United Kingdom's global leadership in IoT.

Check out the UK-Singapore IoT cybersecurity relationship to see how the United Kingdom and Singapore are working together on the security of internet connected devices.

Read more about IoT services and trends on the ISG-one website for the United Kingdom.

France: speak the language

The French IoT market is approximately the same size as the United Kingdom's. IoT spending in France grew from €17,5 billion in 2017 to approximately €22.3 billion in 2019. Although France has a large IoT market size, the French prefer to collaborate and work in their own language. Speaking French or finding a partner able to do

so will increase your chances of success when entering the French market.

The sector expected to see the most IoT investments in France is the distribution and services sector (30%), followed by consumer markets (25%), the public sector (16%), industry (15%) and infrastructure (13%). A study by Zebra Technologies shows that 78% of French companies will continue to increase their IoT investments over the next two years.

Tips:

Look up the IoTone website to learn about IoT suppliers in various countries, including France. Look also into case studies to see what IoT solutions these companies have introduced.

Consider IoT solutions for the distribution and services sector, consumer markets, public sector or industry when targeting the French market. These are the industries that are expected to see the most IoT investments.

Italy: IoT helping the Italian economy bounce back

Italy's economy has been suffering with structural and non-structural problems since the great recession of the late 2000s resulting in a below-average annual economic growth among European countries. Despite the economic problems, the IoT market has been helping the Italian economy to leap forward and register equal growth compared to other Western European countries. Italy's IoT spending reached €17 billion in 2019, the fourth-largest European market after Germany, the United Kingdom and France.

Business benefits in efficiency and effectiveness are the main drivers for companies to invest in IoT solutions but the adoption of IoT among companies in Italy is also driven by the National Industry 4.0 plan. The segments that see most IoT growth in Italy are smart metering and smart asset management solutions for utilities, smart cars, smart building sand smart homes.

Italy's IoT adoption is expected to continue growing in double digits between 25% and 40% annually. The European Commission together with the Italian network organisation Confartigianato predicts that the market for internet of things in Italy will be worth 5.4% of Italy's GDP in 2020. Combined with the government's strategy to boost investment in new technologies, research and development, this makes Italy an interesting market to focus on.

Although Italy remains interesting due to its growth in IoT adoption and its market size, it may be the least interesting market for offshore outsourcing, as Italian businesses are known to be not too open to it.

Tips:

Consider focusing on smart metering, smart asset management, smart cars and smart building when you decide to focus on the Italian market for industrial IoT. These are the markets where most IoT investments are taking place.

Keep in mind that the three main drivers for the adoption of IoT solutions among Italian companies are: reaching new customers, cost rationalisation and organisational improvement.

Other markets – the Nordics and Central and Eastern Europe

The Nordic markets (Sweden, Finland, Denmark, Norway and Iceland) are smaller than the markets of Germany, the United Kingdom, France and Italy; yet, their combined spending likely exceeded €12 billion in 2019 and is expected to grow to €20 billion in 2023. Due to their openness to outsourcing, these growing markets could be interesting for you to look into.

Competition in the United Kingdom IoT outsourcing market is very strong due to existing business ties and a shared language with countries such as India. Experts believe that the competition in Nordic markets will be less strong than in the United Kingdom, making them easier targets to consider.

Central and Eastern Europe accounted for 7% of Europe's IoT revenue in 2019 with €10.6 billion. These expenditures are expected to grow beyond €18.6 billion in 2022. If we do not consider Russia, which accounts for approximately €3.4 billion, then the largest IoT markets in Eastern Europe are Poland and Czech Republic: €1.9 billion and €0.8 billion respectively in 2018.

Poland and Czech Republic are common nearshoring destinations for Western and Northern European countries, though they are increasingly facing the same skills shortages experienced in the rest of Europe. These countries could, therefore, be interesting to look at for subcontracting. You may see them as your competitors but certainly also as your partners.

Read more about IoT services and trends on the ISG website about IoT in the Nordics.

Tips:

Look up the large scale IoT pilots across Europe.

Determine which country is best to target by looking at what cultural similarities you have with it, what diaspora there is, what historical ties you may have with it and what languages are spoken there. These factors will influence which countries are more appropriate than others.

Identify which countries have the greatest demand for your particular expertise by seeing which specific IoT events are taking place in different countries.

Ensure you have access to skilled professionals, for example, by working with universities, setting up training courses or centres, systematically collecting and analysing CVs and having a partner network of companies and individuals. Emphasise your professional skills in your marketing, as well as the lower costs you offer.

Closely follow upcoming IoT developments and build capacity in these technologies. Use websites, social media and blogs of trade associations, magazines, IoT and IIoT events for insights into market trends and developments.

4. What trends offer opportunities for IoT services outsourcing?

The technology behind IoT is advancing rapidly, becoming faster, cheaper and more efficient. For example, smartwatches have evolved considerably since their debut. Their processors now have more than double the capacity, while using a fraction of the power. Technological developments are expected to drive demand for IoT devices in the coming years.

The major trends that offer opportunities for IoT service providers are technology related trends: the digital transformation, 5G cellular network technology, machine learning and artificial intelligence and robotics. Other

trends in the IoT market are national industrial IoT initiatives, data and cyber security and competing standards and platforms.

Examples of SMEs from developing countries that have successfully tapped into one or more of the below trends are Vadion from Pakistan, which developed an IoT app for the start-up Quiske from Finland that evaluates a rower's performance and helps improve it; Jyaasa from Nepal, which creates all sorts of web and mobile software for international customers, and Inoxoft from Ukraine, which built an image annotation tool for a German company. All of these cases are examples of applications where IoT is combined with machine learning and artificial intelligence.

Digital transformation

Businesses are increasingly using digital technologies to create new and modify existing business processes, as the business and market requirements are changing. This change of businesses in the digital age is called digital transformation. IoT is considered to be one of the key technologies enabling and driving the digital transformation, as the ability of devices to sense and transmit data through networks and connectivity is creating extensive amounts of data that help companies achieve considerable benefits but would be impossible for humans to handle.

5G cellular network technology

With higher bandwidth, 5G, the next generation of mobile data infrastructure, will enable the rise in the number of devices connected to the internet along with the amount of data they generate. The new 5G technology that will be rolled out in the coming years will allow more than 350,000 devices to be connected per square kilometre, which is 500 times more than comparable existing technologies. Although 5G may not provide any direct opportunities by itself, it is necessary for the expansion of IoT

The European Union intends to have 5G cover at least 40% of the European workforce by 2025, including 70% of European industrial sites and 80% of main logistics routes. Because it will enable more devices to connect to the internet, 5G is considered one of the most important infrastructures to further develop IoT. Service providers are recommended to start looking into the opportunities and possibilities associated with 5G, or risk decreasing demand for their existing products and services.

Machine learning and AI

Artificial intelligence is the concept of machines being able to carry out tasks in a way that we would consider smart, intelligent or autonomous. Machine learning is an application of artificial intelligence whereby machines are given access to data and learn to use it themselves, for example, improving through experience. Machine learning is just one example of artificial intelligence.

The increasing data generation and data processing capacity associated with the internet of things allows companies to benefit more from big data. As the availability of data continues to increase, this further impacts the demand for machine learning and artificial intelligence, which means more opportunities for companies that offer IoT solutions. At the same time, as more machine learning and artificial intelligence concepts are developed more companies can benefit from the data generated by connected devices, hence increasing the value of IoT.

Tip:

Read more about the developments and demand for these services in our study about machine learning and artificial intelligence.

Developing niches: robotics

Robotics in artificial intelligence involves designing, developing and producing devices, machines and robots that can replace humans and replicate human actions. The global market for robotics is expected to grow at an average rate of 25% annually between 2018 and 2024.

Robotics and IoT are considered two separate fields, but their technologies are growing simultaneously. It is expected that the internet of robotic things (IoRT) will be a growing value-added niche combining the two. IoRT involves the combination of sensor data from a range of sources, processes and using it to control and manipulate objects in the physical world. IoT sensors and data analytics technologies give robots an even wider situational awareness leading to better task execution.

As IoT, machine learning and artificial intelligence develop, so do the opportunities to find niches that combine these different technologies.

Tip:

more about IoRT and additional niches that could offer opportunities for specialisation.

National industrial IoT initiatives

Several European countries have launched or are launching national initiatives to stimulate industrial IoT implementation. These include PlattformIndustrie 4.0 in Germany and Smart Industry in the Netherlands, which can have a positive effect on these markets. They often invite companies to participate, for example, via working groups with stakeholders.

Tips:

Check the European Commission's list of national industrial IoT initiatives for programmes in your target countries.

Keep track of new initiatives that can boost national markets for industrial IoT services.

Data and cybersecurity in IoT

As the number of connected devices and the volumes of available data increase, so do the issues of data security and privacy. In Europe, IoT cybersecurity is becoming a growing concern. The European Telecommunications Standard Institute (ETSI) recently introduced a new specification (TS 103645) to establish a security baseline IoT devices.

This specification aims to protect consumer privacy and, among other requirements, obliges manufacturers to keep software updated, ensure software integrity and ensure personal data is protected. Not only is TS 103645 expected to ensure compliance with the General Data Protection Regulation, but it is also expected to provide the basis for future IoT certification schemes.

Offering IoT services in line with the latest requirements regarding data and cyber security offer you a great

competitive advantage.

Tips:

Provide clear information about your company's data security and privacy measures.

Make sure you comply with European data protection rules. Look at the requirements section for more information.

Pay attention to data security within the software you develop. All software has bugs, which you need to handle appropriately.

Competing standards and platforms

An important challenge in IoT product development is the lack of universal standards and platforms, in contrast with the various competing standards and platforms in use in the IoT sector.

Products using different standards and platforms are generally incompatible. In fact, cross-platform compatibility and cross-platform deployment are serious challenges in IoT development. This includes all kinds of devices with different architecture, protocols and operating systems, which are major concern for companies. The IoT products companies use in their business processes and those they sell to their customers need to be able to connect and communicate. To help achieve compatibility, the European Commission is now working on developing European standards.

Offering IoT services in line with the latest developments in European standards, when they are ready, will offer you a great competitive advantage.

Tips:

Clearly assess and agree with your buyer which standards and platforms their IoT product should be compatible with.

Keep up to date with the development of European standards.

Clearly communicate and promote your compliance with European standards to your potential European buyers.

Take a look at our study about trends in the European IT outsourcing market to see which trends are impacting IT outsourcing in Europe.

This study has been carried out on behalf of CBI by Globally Cool.

(opens in a new tab)  Facebook

(opens in a new tab)  LinkedIn

RSS