Entering the European market for big data services

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On the European market, you need to comply with mandatory legal and other requirements, such as copyright law and the General Data Protection Regulation. Buyers may have additional requirements regarding issues such as quality management and corporate social responsibility, as well as industry-specific standards. European service providers and intermediaries are your most realistic market entry channels.

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1. What requirements should big data services comply with to be allowed on the European market?

On the European market for big data services, requirements vary per industry, per segment and even per country. As it would be impossible to list (or to know) all possible requirements, this chapter discusses the most common requirements. For more information, see our study about the requirements outsourcing services must comply with on the European market.

What are mandatory requirements?

Mandatory outsourcing requirements for the European big data services market can be divided into legal and non-legal mandatory requirements.

Legal requirements include legislation about copyright as well as personal data protection. Privacy is highly protected in Europe, via the General Data Protection Regulation (GDPR) and the ePrivacy Directive. If you do not respect these directives, you may be subject to enforcement actions and/or possible claims – even though you are located outside of the European Union. Non-legal requirements mainly deal with security. Although you are not obliged to comply by law, they are considered minimum requirements to enter the European market.

Copyright

The European Union has established specific legislation to protect computer programs by means of copyright. According to the Directive on the legal protection of computer programs, you have to make sure not to breach any copyright when placing your big data services on the market. At the same time, this directive also protects your work against unauthorised reproduction.

For work to be protected by copyright, it must be original. This means that the maker's own original creation and reflection has to be stamped on the work. Raw data, such as weather forecasts, stock quotations and consumer patterns, are in principle excluded from copyright protection. However, original data can gain originality once it is connected with other information and presented in an original way.

Tips:

- Read Copyright in relation to big data services to find out if it may apply to your product or service.
- Check the exact regulations in your European target market. All European Union Member States have implemented the European Directive into national legislation. Although they are generally the same, there could be minor differences. And pay attention to copyright and infringement (the act of breaking or disobeying the contract) clauses in the contracts you sign with European buyers.
- Check the ePing website for an overview of country-specific measures that affect trade and differ from
 international standards. This website also lists the contact persons per country that the World Trade
 Organisation (WTO) has appointed. Subscribe to receive alerts (ePing alerts) that can be relevant for
 your product or service.

General Data Protection Regulation

The new General Data Protection Regulation (GDPR) came into effect on 25 May 2018. It was designed to protect individuals in Europe from privacy and data breaches. It has since been incorporated into the European Economic Area (EEA) Agreement, which brings 3 of the European Free Trade Association (EFTA) states into the European single market. This means the new GDPR is also enforced in Iceland, Liechtenstein and Norway.

These new rules were introduced to give people more control over their personal data and let businesses benefit from a level playing field, where the laws and regulations are the same in every country. The GDPR applies to all companies processing the personal data of individuals in Europe, regardless of the company's location. This means it also applies to you directly.

Under the GDPR, any company or individual that processes data is responsible for the protection of these data. While not all big data projects concern personal data, like names, email addresses, bank details, social media content, photos and IP addresses, many of them do. As the personal data aspect in big data development is expected to grow, complying with the GDPR is becoming very relevant for this sector.

Tips:

- If you are dealing with personal data, study the GDPR's new European data protection rules and principles for a good understanding of what is allowed and what is not.
- Use IDC's GDPR Readiness Assessment to determine how compliant you are and what you may need to improve.
- Set up clear consent request forms and privacy policies that inform your or your client's customers of how you process their personal data and keep records of your obtained consent. For more information, see the GDPR consent guidance from the British Information Commissioner's Office (ICO) and Econsultancy's GDPR: How to create best practice privacy notices (with examples).

ePrivacy Directive

The ePrivacy Directive (2002/58/EC), commonly known as the 'cookie law', contains specific regulations for data protection in the electric communications sector. For example, the directive prohibits unsolicited commercial electronic messages ('spam'). It contains strict rules on the use of cookies, and contact details may only be published with the subject's consent.

A new ePrivacy Regulation is intended to safeguard the confidentiality of electronic communications through stronger privacy rules. Unlike the current directive, it includes Internet-based voice and messaging technologies such as Skype, WhatsApp and Facebook Messenger. The latest draft was released in March 2020, while

negotiations resumed in July 2020.

Tips:

- Read more about digital privacy on the website of the European Commission. This is also where you can keep up to date on the reforms of the European ePrivacy rules.
- Keep track of the latest legal requirements drawn up by the European Commission. They have dedicated a section of their website to their policy on the market for software development.

Security

Data security is one of the main challenges for IT outsourcing service providers. This includes both data protection and recovery systems. Many European buyers expect you to implement an information security and management system. Although there is no specific legislation on this, the ISO 27000-series contains common standards and guidelines for information security.

ISO 27001 is an internationally recognised standard that provides requirements for an information security management system. ISO 27002 is a supporting document to ISO 27001 that gives guidance and advice on the implementation of information security controls. Other supporting guideline documents in the ISO 27000 family are ISO 27003 and ISO 27004. ISO/IEC 27701:2019 is a certifiable privacy extension of ISO 27001, supporting the GDPR.

Tips:

- Make sure you have effective security processes and systems in place, from business continuity and disaster recovery to virus protection.
- Ask your buyer to what extent they require you to implement a security management system like the ISO 27001 standard.
- Consider obtaining the ISO/IEC 27701:2019 certification.

What additional requirements do buyers often have?

European buyers of big data services often have additional requirements that refer to quality, corporate social responsibility (CSR) and industry-specific standards.

Quality management

Some European buyers only do business with companies that have a quality management system in place. Such a system shows that you are well organised and able to deliver the required service quality. It includes, for example, backup and recovery schemes, network and infrastructure security, communication plans and relocation options.

Though implementing a quality management system does not automatically guarantee good-quality software, it proves that you have a repeatable process and that you are a serious company that values standardisation. Acknowledged and common systems are ISO 9001:2015 and the Capability Maturity Model Integration.

ISO 9001:2015

Achieving ISO 9001:2015 certification or complying with this standard means that an organisation (or part of it):

- Follows the guidelines of the ISO 9001 standard;
- Fulfils its own requirements;

- Consistently meets customer requirements, as well as statutory and regulatory requirements;
- Maintains documentation.

Certified Analytics Professional (CAP)

CAP certification is relatively new for the big data industry (spring 2013). As the premier global professional certification for analytics practitioners, it provides a structured way of defining quality for data scientists.

Capability Maturity Model Integration (CMMI)

Another option is the CMMI that has been adopted worldwide. A rating (ranging from 1-5) is based on your level of maturity. It indicates your improvement in multiple process areas. CMMI Services helps you to improve your capability to provide your customers with quality services.

Tips:

- Show you are a professional company by having good references, obtaining relevant industry certification, responding quickly, communicating regularly, offering constant quality, complying with contractual agreements and having a good and stable management team to lead the project.
- If you specialise or aim to specialise in particular sectors, find out which certifications are relevant and always ask yourself: is this certification good for my company? Is it good for my clients? Does it have marketing value?
- Check if you can apply for financial support to achieve quality certification. Contact your national IT association (such as TAG Georgia or BPESA from South Africa) or a business support organisation in your country responsible for (IT) export promotion.

Corporate Social Responsibility

Up-to-date knowledge and skills

European buyers expect you to be able to offer them the possibility to work with the latest technology. It is very important to stay informed about the latest big data technologies, platforms, frameworks and innovation and to keep your skills up to date.

Tip:

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

What are the requirements for niche markets?

European buyers often require you to comply with a sector-specific and/or industry-specific standard or code of practice (if available). There are also many technologies, technical standards, protocols and frameworks related to big data services. They are developed and maintained by a large number of organisations and can differ significantly between niche markets.

In healthcare, for instance, Health Level 7 (HL7) and the Health Insurance Portability and Accountability Act (HIPAA) are important. In the automotive industry, MISRA and AUTOSAR are the 2 main coding standards used, but ISO 26262 and ISO 15504 are also applicable. The requirements for niche markets vary greatly because the big data services market is very diverse.

Tip:

• Check which sector-specific standards or codes are available for your product (for example, by asking your sector association or your buyer) and to what extent your buyers want you to implement them.

2. Through what channels can you get big data services on the European market?

How is the end market segmented?

The market for big data services can be segmented by horizontal market (type of service) and by vertical market (type of industry).

Figure 1: Horizontal and vertical market segments with opportunities for service providers



It is important to realise that, without big data, there is no machine learning or artificial intelligence. Therefore, big data is used in a wide range of industries and market segments. The most promising segments currently are machine learning, artificial intelligence, blockchain and the Internet of Things. Of all these segments, only cloud computing and mobile app development are currently more or less regarded as commodities.

On the service provider side, there are generalists and specialists. Specialist big data service providers focus on (and have extensive experience in) a specific vertical or horizontal market. Generalists, on the other hand, do not specialise in any particular segment. Opportunities for big data specialists can be found in logistics, healthcare (for example, precision medicine), finance and banking (for example, fraud detection), and marketing and advertisement.

It is difficult to say which segment provides the best opportunities for big data service providers from developing countries. There is a huge demand for data specialists in almost all industries. Also, there is a lot of potential in big data that is currently not used. All in all, opportunities lie in all vertical and horizontal markets.

Tips:

Monitor developments within the European big data market that are relevant for your company by conducting Google searches that combine your service with a particular niche market.

Research the end-market segment you want to focus on, so you can effectively market your company.

If your big data service is a relative commodity, you should focus on a niche market. Especially if you can find a niche market that is underserved or has a need/room for digital innovation/transformation.

Through what channels do big data services end up on the end market?

Figure 2 provides an overview of the trade structure for outsourcing. This structure is more or less the same in every European country.

Figure 2: Trade structure for outsourcing big data services in the European market



What is the most interesting channel for you?

Your most promising market entry channels are working together with European service providers, consultants/matchmakers and sales/marketing representatives. Other channels are working with a local sales office or direct sales (possibly through online platforms). Selecting a channel depends on your type of company, the nature of your product or service, your target market and the available resources for market entry. Regardless of the channel you choose, your own marketing and promotion is a vital part of your market entry strategy, for which you are responsible.

European service provider

Subcontracting for European service providers is generally your most realistic market entry channel. A European service provider that is similar to your company would be your most suitable subcontractor. Ideally, this company should design, develop, market, sell and maintain its own big data solutions and offer IT services that are similar to yours. For big data software development, a European service provider is usually an Independent Software Vendor (ISV) in the target country.

You can find a European service provider directly or by working with a matchmaker or a sales representative. Because many European companies prefer to deal with a local contact person, an intermediary is a good option.

Tips:

- Look for European service providers that have software development skills in combination with big data-specific skills, plus domain knowledge of the specific market segment you are targeting.
- Attend leading online and offline European trade fairs to meet competitors and potential customers.
 Select events that fit your profile well. Create a list of relevant events using trade event directories such as 10Times, Expo Database and UK Exhibitions.
- Use IT industry associations to find potential customers in Europe, such as Bitkom in Germany, NLdigital in the Netherlands and techUK and BIMA in the United Kingdom. If you specialise in a particular industry, you can also use associations for specific niches, such as the Association of British HealthTech Industries.
- Use outsourcing associations to find potential customers, such as the Global Sourcing Association, the German Outsourcing Association and Sourcing Nederland.

Consultant/matchmaker

This is a person or a company with a large number of relevant contacts in a specific market segment or industry. As an intermediary, they are a 'door opener' and not an agent to make cold calls or send cold emails. Make sure you properly inform your consultant/matchmaker about your company. They speak with many potential customers and often create long lists of potential outsourcing providers. The more information they have on your company and the better they understand your capabilities, the more they can spread the word about you.

If you work with a consultant/matchmaker:

- The consultant/matchmaker makes appointments with prospects for you;
- The presentation and sales process remains in your own hands;
- You pay a retainer + success fee (which can be expensive);
- The consultant/matchmaker usually has multiple clients;
- You need to set clear expectations and objectives to measure their performance.

A retainer + success fee construction can be expensive. While the success fee depends on what the intermediary has delivered, you have to pay the retainer (usually a fixed monthly payment) regardless of their performance. Together, they should provide a strong motivation for the intermediary to deliver: the retainer should be high enough to cover some costs but low enough to encourage delivery.

You also need to determine an exit strategy in the contract, with a clearly defined period after which the contract can be terminated without any further consequences. This period is usually not longer than 3 or 4 months, after which the contract will be evaluated and can be terminated or prolonged. For this period, there should be clearly defined delivery expectations and targets for the consultant/matchmaker (such as the number of relevant contacts, meetings and leads). You could also negotiate a trial period.

Tips:

- When contracting an intermediary, involve a good lawyer who knows the applicable law of the country where the intermediary resides and has previous experience with this type of contracting. Pay special attention to exit clauses, success criteria, deliverables and payments.
- Try to avoid limitations to your marketing coverage and activities in your contracts.
- Some food for thought: although convenient, your uncle who lives in Germany might not be the best intermediary for your company.

Sales/marketing representative

Another type of intermediary is a sales/marketing representative. These representatives are more involved in the sales process than consultants/matchmakers. When working with a sales/marketing representative:

- The sales/marketing representative contacts prospects for you;
- The sales/marketing representative also makes the sales and sometimes manages projects;
- You pay a retainer + success fee (which can be expensive) or a fixed monthly fee;
- The sales/marketing representative can have multiple clients or work exclusively for you.

A good sales/marketing representative has a large, relevant network, so they do not make cold calls to provide services for you. Their success fee is often a percentage of the projects they bring in. Having to pay them will increase your expenses, but you will be free to focus on your core business and search for other markets yourself.

Tips:

- Like with consultants/matchmakers, involve a good lawyer when contracting a sales/marketing representative and include exit clauses, success criteria, deliverables and payments.
- Be cautious if intermediaries (both consultants/matchmakers and sales/marketing representatives) only ask a success fee for their work, because either they are excellent at their job or they are desperate and may not be able to deliver. You should also be cautious if intermediaries want to work for you part-time besides their regular job, because they are often so busy that they do not deliver.

Local sales office

Ideally, you should establish a local sales office in your European target market. A local presence makes it easier to build long-term relationships with customers through personal contact. It also increases your credibility, builds trust and allows you to retain control over your marketing and sales activities. However, this is very difficult, as it requires a lot of experience and large investments.

Tips:

- Consider establishing your own office if you have already established a client base in the target country/region or if you have a well-founded indication of the demand for your services/products. If you decide to establish an office, involve your sales/marketing representative.
- Look for alternatives to lower your costs, such as business incubators or government incentives to bring your business to a particular country or region.

Direct sales and online marketplaces

Try to sell your big data services directly to European end users. Many European companies are looking for cost reduction and delivery capacity, which developing countries can often provide. This is one of your unique selling points. However, you should be aware that these end users might not have qualified IT staff to work with.

Electronic marketplaces are a cheap marketing tool that may make direct sales easier. They are expected to lead to lower transaction costs. Although they mostly contain smaller projects for freelancers, they can lead to pilot projects. However, direct sales require experience in the European market. This is most suitable for larger providers that want to target large European end users. Your best bet is to focus on a small, underserved niche market. Sometimes, suppliers from developing countries work together to make a direct sales offer. Having existing customers in Europe will help. References are a must when you want to enter this market through direct sales.

Tips:

- Look for potential leads in the field of software development on online outsourcing marketplaces.

 UpWork and Freelancer are interesting for freelancers or really small companies.
- Combine offline and online promotion channels to get as many contacts as possible. This will maximise your chances of finding suitable partners/customers. Use social media platforms as a marketing tool to reach potential customers. LinkedIn can be particularly useful for market research and making contacts.
- Have a professional, high-quality company website, where you can present full, accurate and up-todate details of your offering at low cost. Make it compatible with mobile devices and invest in Search Engine Marketing and Search Engine Optimisation, so potential customers can easily find you online.

3. What competition do you face on the European big data services outsourcing market?

Which countries are you competing with?

European companies generally prefer to outsource services to providers within the same country (also known as homesourcing, or simply as outsourcing). When they do outsource to companies abroad, they generally prefer nearshore locations, because of proximity, language, cultural similarities and the minimal time difference. For more information on nearshoring versus offshoring, see our study on the European market potential for big data services.

The Global Services Location Index (GSLI) ranks the competitiveness of ITO/BPO destinations based on 4 categories: financial attractiveness, people skills and availability, business environment and digital resonance. For big data services, we have selected 6 countries that can be considered your strongest competition.

India

India continues to lead the GSLI, mainly due to the country's unique combination of low-cost services and excellent English language skills. India is one of the world's developer hotspots for IoT, machine learning and apps (together with, among others, the USA, China, Israel, the UK and Russia). This attractive profile makes India a strong contender on the big data services outsourcing market. To stay ahead, they need to prepare for the shift from lower-skilled jobs to more creative and highly skilled work. This also applies to other low-cost countries.

European buyers often associate extremely low software development rates in Asian countries with poorer project quality. They think that cheap service providers must compromise on the skills and experience of the developers or even on their working circumstances. Indian professionals ranking as the 35th best developers in the world, with a relatively modest score of 79%, reflects this.

This illustrates that, although offering competitive rates is important, you should not compete only on price. As relatively simple (and therefore cheap) tasks can be automated, your focus should be on excellent skills, knowledge and creativity, which have a higher value. Demonstrating your commitment to quality through references and quality management systems is key to building trust among potential European clients.

China

China is identified as one of the world's developer hotspots for IoT, machine learning and apps. China is the runner-up in the GSLI and is catching up with India thanks to its business environment and digital resonance, which includes the digital skills of the labour force. In 2019, Microsoft opened the world's largest IoT and artificial intelligence laboratory in Shanghai. However, if the trade conflict between the United States of America and China and its technology companies continues, this may deter global investors from doing business with China.

Like India, China offers some of the lowest hourly software development rates in the world. This applies to big data as well. Again, the ambivalence of buyers towards extremely low rates is reflected in the perceived quality of the developer population. With a score of 76%, Chinese software developers are ranked 43rd out of 44 assessed countries. Combined with the relatively moderate English proficiency in China, this offers you opportunities to compete.

Poland

Poland used to be the highest-ranking Central and Eastern European country. Now, it has slipped to 24th place, after ranking 12th in 2017. This is mainly due to its higher hourly rates. However, the country remains an important big data services outsourcing location for European companies, as the industry is maturing and can offer good-quality services.

As a Central and Eastern European (CEE) country, it benefits from European buyers' preference for nearshore providers due to proximity, language, cultural similarities and relatively small time differences (if any). Many big data scientists and developers are available, and they are known for their good-quality work. Polish people also score very high on English proficiency, making it relatively easy for European clients to communicate with them. This makes the country a particularly fierce competitor for you.

CEE big data scientist and developer rates are higher than in offshore destinations. However, these rates generally do not deter European buyers, as they are often prepared to pay for the benefits that nearshoring offers them. This also means you can consider offering your outsourcing services to Polish companies, as they can probably save quite some costs by outsourcing some big data tasks or projects to you.

Romania

Similar to Poland, Romania has dropped 10 places to the 28th position. Just like other Central and Eastern

European countries, Romania continues to be able to offer good language skills combined with relatively low wages. In future, jobs demanding a higher degree of creativity and skills offer opportunities for Romania.

Russia

Russia moved up 5 places in the index, reaching the 18th place. It has considerably increased its country environment and country infrastructure scores. It is regarded as a key outsourcing country for IT projects. Its average hourly rates vary between €34 and €47 per hour. Like Ukraine, Russia showed declining people skills and availability scores, but improvements in other areas more than made up for this. Russia is identified as one of the world's developer hotspots for IoT, machine learning and apps.

Ukraine

Ukraine is home to nearly 200,000 big data and other software developers. It is the second-largest CEE developer population after Poland. Ukraine software developers are ranked the number 5 best developers in the world. The country has climbed from number 24 to number 20 in the GSLI by improving its infrastructure and business environment. Like Russia, Ukraine shows declining people skills and availability scores. Improvements in other areas have more than made up for this.

Although Ukrainians generally have low English proficiency, most Ukrainian software developers actually have intermediate to upper-intermediate English language skills. Ukraine's hourly software development rates are relatively low for a CEE country, at €22-€36. For senior developers, this is comparable to rates in Asia. Combined with the high perceived quality of Ukrainian developers and the general benefits of a nearshoring destination, these relatively low costs make Ukraine an attractive destination for European buyers.

Tips:

- Compete on the quality of your services, rather than just on costs.
- Visit the websites of IT outsourcing associations and big data-related associations in particular, to get a better understanding of competing countries. Examples are the Big Data Alliance, the Big Data Value Association (BDV), the Central and Eastern European Outsourcing Association (CEEOA) and the Ghana Export Promotion Authority (GEPA).

Which companies are you competing with?

Examples of big data service providers are:

Prolifics

Prolifics is a global digital transformation company that has been around for over 40 years. Its big data-related services include data scanning, data integration and data governance. It combines big data services with artificial intelligence and machine learning in particular to improve its predictive analysis. It has been selected by IBM as one of its 2020 IBM Think Build Grow winners. Prolifics' winning submission was 'Quick FHIR'. This is a digital healthcare integration and data platform. More details about this product and the prize can be found on Prolifics' website.

Denologix

Denologix is a Canada-based company that has acquired an impressive portfolio. It offers a wide range of solutions like data management, data integration and business intelligence. Its expertise lies in marketing analytics, operations and process improvement, compliance, fraud and risk management and crime prevention. It has developed its own solutions for specific product-market combinations. Examples are dxANALYTICS for finances, dxINDEX for a data accuracy index and dxCRYSTAL for data cleansing.

Fayrix

Based in Israel, Fayrix employs over 50 data scientists, analysts and developers. Its big data solutions focus on increasing sales, risk management and business process optimisation. It combines AI and machine learning to advance processing of big volumes of data. It also successfully works in software and mobile development.

Tips:

- Use the services of your national export promotion agency and actively participate in the creation of export strategies.
- Search company databases to find more competing companies. These databases can be free, like company.info, or paid, via chambers of commerce (such as the Dutch Kamer van Koophandel) or commercial databases like Bold Data.

Which products are you competing with?

In the big data services industry, the product is the service. So the real question is: what makes one service provider different from another? The answer: technical knowledge, available capacity, analytical skills, understanding of various algorithms, references, flexibility, scalability, reliability, communication and language capabilities, quality management, security infrastructure, vertical and/or horizontal market focus and niche market orientation, among other things. The location (country) of the service provider is also an important factor.

Tips:

- Invest in country branding. For more information, see our tips on doing business with European buyers.
- Find out how you can get a competitive advantage, based on factors such as quality, cost, technology or product characteristics. For ideas, read blogs or articles that mention big data skills.

4. What are the prices for big data services outsourcing?

Although the price is often not the most important selection criterion for big data services, it has to be right and competitive. The price for big data services is influenced by technological requirements, skill levels, complexity of the project, length of the contract and other requirements written in the Service Level Agreement (SLA).

Your offer should include the price, with your hourly rates and an honest estimation of the number of hours you expect to work on the project. You also have to choose a price model for your product or service. There are 3 popular working models: Fixed-Price Contract, Time and Material Approach and Dedicated Team. The most common price model for software development services is a Fixed-Price Contract. This is an all-inclusive offer, where clients are billed based on pre-defined (in the SLA) milestones.

It is impossible to make an exact price breakdown. First of all, big data projects are so diverse that there is no single price breakdown that suits all (or even most) projects. Secondly, it requires so much estimating and unforeseen elements that even the process itself is an estimation. Big data projects change frequently, which raises other questions such as scope definition, change management and acceptance. What is clear, however, is that, if you focus on a niche or non-commodity market, European buyers are often less price sensitive.

Tips:

- Study average prices in reports like Cleveroad, DAXX, Qubit Labs, Yalantis and SourceSeek. You can also research the average salaries for various roles in the big data process via platforms like Payscale.
- Create the "ideal" client persona to help you tailor your offer. For example: "a big data services company with fewer than 200 staff members, in the Munich area, specialised in analytics using Apache Hadoop".
- Choose a type of price model for your outsourcing contract; look at pricing models in outsourcing. Go beyond setting the right price and work out your pricing strategy. This should include the preferred pricing model, payment terms and expectations, and how and when you offer discounts.

This study was carried out on behalf of CBI by Globally Cool B.V. in collaboration with Laszlo Klucs.

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