Blockchain in Europe

The global blockchain market is growing exponentially. Western Europe is the second largest region worldwide in terms of blockchain related spending, indicating good opportunities for your blockchain services. Awareness of blockchain technology as a solution has expanded from the financial sector towards into numerous other areas, like supply chains, manufacturing and healthcare. The considerable European IT-skills shortage further stimulates the outsourcing of blockchain services.

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1. Product description

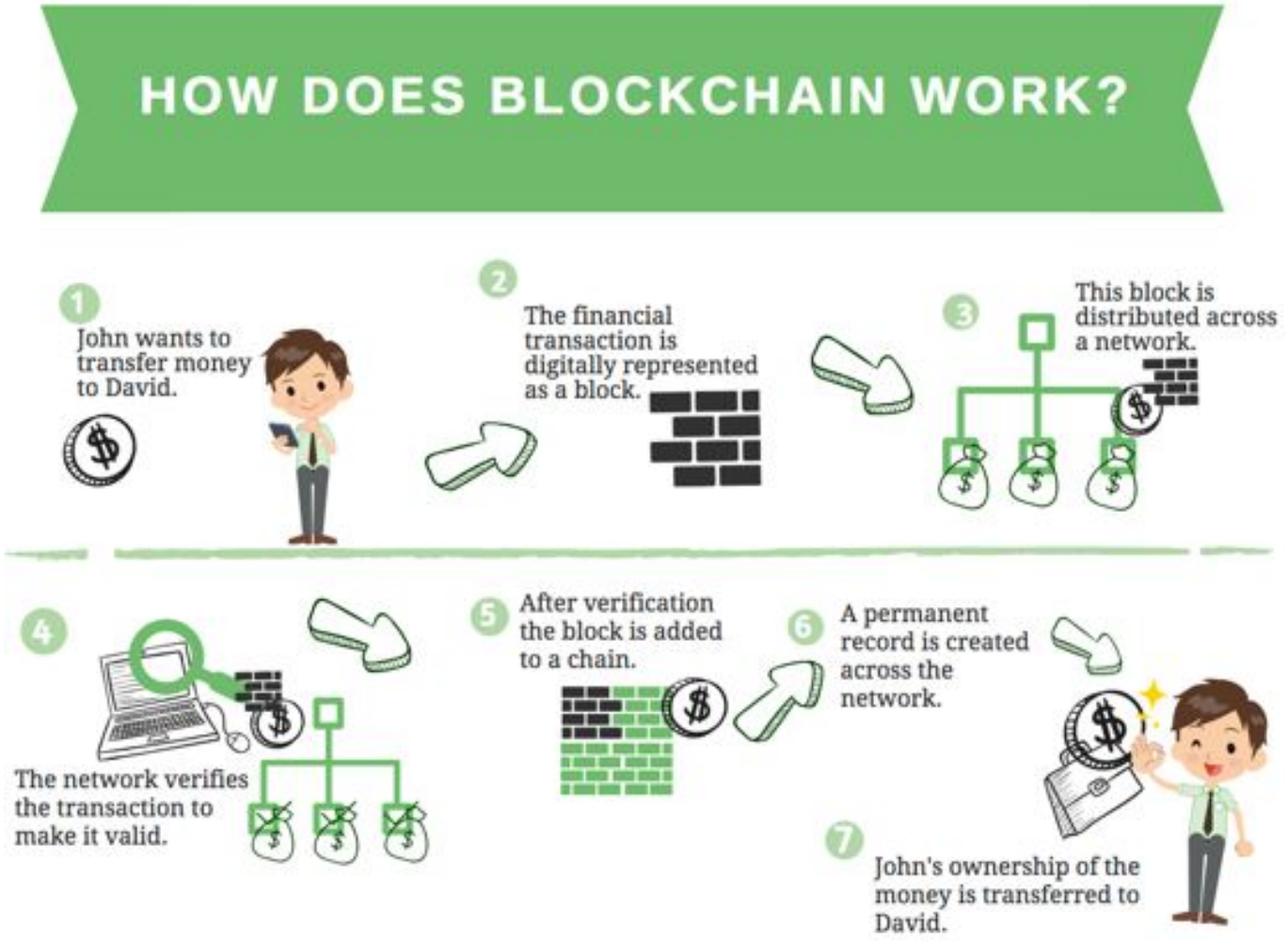
What is blockchain?

Blockchain (also known as Distributed Ledger Systems) is a modern mix of existing technologies used to record transactional information, originally created for cryptocurrency (bitcoin) transactions.

Traditionally, a record of all transactions is kept in a central location (such as a bank for financial transactions). Blockchain, however, records them in a distributed ledger. It links transactions (blocks) in an encrypted ledger (chain), stored on many computers in a peer-to-peer network. The larger the network, the more difficult to corrupt.

The easiest way to explain blockchain technology is through a fictional financial transaction. In the example below, John wants to send money to David using blockchain technology.

Figure 1: Simplified explanation of blockchain technology in a financial transaction



So far, blockchain is mainly associated with cryptocurrencies and digital financial transactions. The technology is, however, quickly evolving and moving into other areas.

Experts agree that the blockchain technology has many possible uses, such as:

- supply chain monitoring and improvement (traceability)
- data sharing and data backup
- protection of ownership
- contracting (smart contracts)
- digital IDs and voting
- corporate Social Responsibility solutions (labour rights)
- managing and simplifying the Internet of Things
- medical sector solutions including recordkeeping and drug tracking

Current blockchain technology also has disadvantages in terms of transaction volumes, required amount of computing resources and ease of access for reporting, which require evaluation when considering the application of the technology. However, the technology is evolving fast, which will lead to mitigation of these restrictions.

Why do European companies outsource blockchain services?

Cost reduction

For 60% of executives, cost reduction is their main reason for outsourcing information technology (IT). This confirms that cost reduction continues to be the main driver for European companies to outsource IT, like blockchain services.

Tips:

Offer competitive pricing, but don't compromise on the quality of your services.

Be transparent in your pricing: avoid hidden costs.

Maintain a fixed price model, except for support services.

Lack of in-house technical skills

Another key advantage of outsourcing blockchain services is that European companies don't need to hire in-house expertise. Blockchain services require excellent knowledge and technical skills, which most European companies don't have in-house.

Some key areas of expertise for blockchain developers include:

- interoperability
- platforms, such as Hyperledger Fabric and Ethereum
- security
- standards and ecosystems

Tips:

Keep your (and your staff's) skills and knowledge up-to-date.

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

What are the challenges when it comes to outsourcing blockchain services?

Putting blockchain into practice

Like all major technological developments and innovations, blockchain needs a firm base besides early adopters. Organisations often do not understand the technology, its limitations and/or its practical commercial use, making them reluctant to invest in blockchain development. So far, pilot projects with blockchain technology often aren't put into practice. Most of them either failed or were just experiments.

General Data Protection Regulation leads to questions

Europe's new General Data Protection Regulation (GDPR) has come into effect on May 25th 2018. This regulation is designed to protect European citizens from privacy and data breaches.

Although the fact that the data in a blockchain can't be altered is its main appeal, this also poses a challenge on the European market. The new GDPR gives European citizens the 'right to be forgotten', meaning they are entitled to have their personal data erased. However, of course, that requirement isn't compatible with blockchain technology. This is a key issue that has yet to be resolved.

Tips:

Stay informed about the latest news regarding GDPR and how it involves blockchain technology development at all times.

If you process data of European citizens, make sure you comply with the GDPR.

For more information on the GDPR (and other European legislation), see our study about buyer requirements on the European outsourcing market.

2. Which European markets offer opportunities for blockchain services?

The market for blockchain services is growing exponentially

The global market of blockchain services is booming. A record setting €1.8 billion in global spending on blockchain solutions is expected for 2018. This is more than double the spending in 2017 (€820 million). For the coming years, an average annual growth of 73% is forecast.

Western Europe is the second largest market worldwide

Western Europe is the second largest region in terms of blockchain spending worldwide, after the United States of America. Driven by the fast adoption in the banking industry, the financial sector is the leading sector for blockchain in Western Europe. However, the fastest growth is expected in professional services, discrete manufacturing and resource industries.

Tips:

Focus on Western European countries, where blockchain spending is highest.

Study your options in especially the financial sector, as well as opportunities in professional services, discrete manufacturing and resource industries.

3. What trends offer opportunities on the European market for blockchain services?

From exploration to practical business applications

Blockchain technology is approaching a turning point, as the momentum shifts from exploration of technology towards building practical business applications. The financial sector is a frontrunner in its attempts to apply blockchain into business processes. This is because cryptocurrency traders were among the early adopters of this new technology.

Other sectors remain slightly more reserved as they still work on developing appropriate use cases. 59% of the early adopters across business industries believe that blockchain has the potential to revolutionise their industry. The main difficulty is that there are currently very few active use cases. However, the number of blockchain initiatives challenging traditional business models is increasing across sectors.

Digital skills shortage

Global multinationals are increasingly exploring the blockchain technology and its wide range of business

opportunities. Also, hundreds of blockchain-based start-ups emerge in fast pace. The largest consulting firms have been focusing extensively on blockchain for some years already. In 2017, postings on job openings related to blockchain have more than tripled on LinkedIn.

However, there is a considerable lack of IT training, certification and experience in the European workforce. Due to rapid technological innovations, the skills of IT-graduates don't match the needs of the market. This means, there may be a shortage of 400,000 data professionals in Europe by 2020.

Tip:

Promote your company's professional expertise and experience in blockchain services. Use references to support your message.

Upcoming investments in blockchain technology development

As awareness increases, more than one-third of financial services organisations plan to significantly invest in the blockchain technology in the coming three years. Most of them have not yet developed the necessary blockchain skills. Even fewer currently have teams in place with a sufficient expertise level. This leads them to outsource blockchain development activities to specialised agencies and freelancers, offering you interesting opportunities.

Tips:

Innovate and build up blockchain related skills and expertise.

Clearly communicate and promote your expertise and skills in blockchain services to attract new buyers.

Implementations in new areas

Blockchain technology has mainly been focused on cryptocurrencies and financial transactions. However, industry experts around the world acknowledge the endless opportunities for the use of blockchain in other areas. Some main areas with potential include:

Transparent supply chains

There is a large need for traceability and accountability, for example in the food sector. Because of increasing global trade, the issue becomes more important every single day. Manufacturing takes place across the globe and there is a general lack (or nonexistence) of transparency between suppliers. Blockchain technology is perfectly suited to offer a solution for supply chain issues and facilitate traceability.

An interesting example is Walmart, who has recently put a blockchain solution into practice. The multinational retailer has partnered with IBM to develop a tracking system of food products from farmer to the shelves. This is one of the first concrete cases where blockchain technology is used to support supply chain issues, especially traceability. This could also be useful in, for example, the pharmaceutical industry, legally required to maintain the chain of custody over all products.

Using big data to improve predictions

Businesses are increasingly processing massive amounts of data (big data) to make accurate predictions. With blockchain, more accurate forecasts become more easily available for smaller enterprises (and even consumers).

Combining blockchain with the Internet of Things

Similarly, blockchain has interesting potential for Internet of Things (IoT) solutions. IoT is by definition a network of distributed devices, making it a good match with the distributed ledger technology of blockchain. The main advantage of using blockchain technology for IoT is the trust it adds.

Improving identity management

Because of the expansion of the internet and new technological developments, identity theft and fraud have become increasingly common issues. Identity verification is challenged by, for example, mass data breaches. Security improvements have not yet been sufficient to counter these threats. Using blockchain technology could prevent identity theft by giving people more control of their own data.

Tips:

Develop your skills in blockchain technology for (one of) these most promising areas.

Be creative in broadening your scope on blockchain development, as tapping into opportunities in new areas can be a great competitive advantage.

See out studies on big data and IoT for more information about these topics.

4. What requirements should blockchain services comply with to be allowed on the European market?

What legal and non-legal requirements must you comply with?

General Data Protection Regulation

Europe's new General Data Protection Regulation (GDPR) has come into effect on May 25th 2018. This regulation is designed to protect European citizens from privacy and data breaches. Under the GDPR, any company or individual that processes data is also responsible for its protection. It applies to all companies processing the personal data of European subjects, regardless of the company's location. This means it also applies to you directly!

The personal data this regulation protects can range from a name or email address, to bank details, social media content, a photo or an IP address. Some key consumer rights you must comply with include consent, right to access, data portability and the right to be forgotten. You also need to practice privacy by design, meaning data protection should be included from the onset of designing systems.

Tips:

If you process data of European citizens, make sure you comply with the GDPR.

Stay up-to-date about the latest developments regarding GDPR and how to cope with it in blockchain technology.

For more information on the GDPR (and other European legislation), see our study about buyer

requirements on the European outsourcing market.

What additional requirements do buyers often have?

With the rise of blockchain technology development and initiatives, there is an increasing interest in blockchain certifications. Obtaining one or more of these certifications shows potential European buyers that you are a reliable outsourcing partner.

Some of the most common programmes are:

The Blockchain Council

The Blockchain Council offers numerous courses and certification programmes, including their notable Certified Blockchain Expert training. It prepares professionals with a profound understanding of blockchain technology. In addition, it develops your skills and knowledge in blockchain-based applications for businesses.

Key advantages include:

- the course does not require prior technical background
- the course is open to anyone
- certification is obtained after training and successfully finishing an exam-based programme

Central Blockchain Council of America

The Central Blockchain Council of America covers three certification programmes for different roles in blockchain development. These include business blockchain professional, certified blockchain engineer and cryptocurrency investment professional.

This certification offers:

- certifications that are widely accepted across sectors
- different certification programmes for every category
- simple and convenient learning and examining processes
- the most advanced cross-platform credential for blockchain engineers

Blockchain Specialization

The Coursera: Blockchain Specialization course dives into four blockchain technology areas: basics, smart contracts, decentralised applications and platforms. It gives you a broad understanding of the entire blockchain technology system. The full programme requires 3-4 hours of time investment per week, for a period of 16 weeks.

The main advantages of this programme are:

- different aspects of blockchain technology in one place
- good practices of applying the skills you learn
- knowledge of high level programming language is enough to get started

Tips:

Find out which certification is most relevant for you.

Obtain the relevant certification to prove your professional knowledge and skills.

See our study about buyer requirements on the European outsourcing market for more information.

5. What competition do you face on the European blockchain market?

Competition on the European blockchain market does not differ significantly from the outsourcing market in general. Refer to our top 10 tips for doing business with European buyers.

Nearshoring more popular than offshoring

European companies prefer to outsource services to providers within the same country (onshoring). When outsourcing abroad they prefer nearshore locations because of proximity, language, cultural similarities and the little or no time difference. These are usually Eastern European countries, due to their relatively low wages. For example Poland, Bulgaria and Romania.

However, prices in nearshore countries are rising. This development makes service providers in these countries less competitive for offshore service providers. It makes European companies more open towards outsourcing to destinations further away. You can choose to form subcontracting partnerships with these nearshoring providers, or compete with them.

Offshoring destinations with the strongest potential are:

- India
- China
- Malaysia
- Indonesia
- Brazil
- Vietnam

Tips:

Limit the possible disadvantages of being offshore. Provide excellent communication, availability in the required time zone and good security and privacy measures.

Differentiate yourself from onshore and nearshore providers to remain competitive. Emphasise how you are different in your marketing message. Do not only compete on price, but also analyse what other advantages you can offer. For example access to skills, specialised industry expertise or around-the-clock operations (24/7).

Research what your competitors are doing right and wrong. This can help you differentiate yourself from them.

Partner with nearshore service providers, as Eastern European companies are looking for cheaper destinations. Many service providers in developing countries have not yet recognised this opportunity.

6. Through what channels can you get your blockchain services on the European market?

Subcontracting by European service providers

Subcontracting by European service providers is your most realistic market entry channel. It means that European service providers subcontract blockchain development assignments to you, which end user companies have contracted to them.

Tips:

Decide on a business model. Either develop your own blockchain services, or focus on providing services for a European partner.

Target service providers whose size is in line with your capacity.

Focus on companies that serve the same industries as your company.

Attend relevant industry events in your target country to meet potential partners. This also allows you to learn more about their business culture. For example the Blockchain Leadership Summit and Crypto Summit in Switzerland Blockchain Expo Europe in the Netherlands and Crypto Challenge Forum in the United Kingdom.

Use industry associations and networks to find potential customers in Europe, for example, the World Blockchain Organization in Switzerland, or the Dutch Blockchain Network in the Netherlands.

National outsourcing associations can also be interesting sources to find potential customers. For example Global Sourcing Association in the United Kingdom, Outsourcing Verband in Germany and Platform Outsourcing in the Netherlands.

Develop good promotional tools, such as a professional company website and a company leaflet. Also invest in Search Engine Marketing, so potential customers can easily find your company online.

Intermediary

You can approach European blockchain service providers directly, or through an intermediary. A local contact person is an advantage, especially if you are located in a lesser-known outsourcing destination. Intermediaries, such as a consultant/matchmaker or sales/marketing representative, can therefore be an important channel to establish contact with potential buyers.

Refer to our study on finding buyers in the European market.

7. What are the end market prices for blockchain services?

Price would be an important reason for companies in Europe to outsource blockchain technology services to developing countries. Staff salaries make up a large share of the costs of IT services. This means outsourcing to countries with lower wages can lead to considerable savings. For example, the average annual salary of a software developer in Western Europe is between €36,000 and €50,000. In offshore destinations, this is usually significantly lower.

More concretely with respect to blockchain services, the average current pay rate (2018) for blockchain professionals ranges between $50 and $200 per hour.

Tip:

Research the average salaries for software developers in your European target country. For example via Payscale, a global database for salary profiles.

Emphasise the potential salary savings in your marketing activities.

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