

The European IT outsourcing market for IT services in Senegal & Uganda

The objective of the study is an explorative analysis of the IT outsourcing market in Europe with the aim of supporting IT service companies from Uganda and Senegal with future European market entry decisions and strategies. Therefore, M-Brain conducted extensive desk research and 18 interviews nine of which with industry experts and nine with potential IT service buyers from different regions and different industries. As a result, the market study does not only provide the basic facts about the market itself but also conveys high-level industry perspectives as perceived by industry insiders.

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Key intelligence topics included market size estimations, qualitative insights on the overall functionality of the market and the potential opportunities for companies from Uganda and Senegal. They included the following questions:

- Which industries, services/products, countries/regions are the most important in Europe and which show the best potential for companies from Uganda and Senegal?
- What are the current (outsourcing) market trends and drivers in Europe?
- Which are the selection criteria of the buyers? How do they choose a partner?
- Which marketing channels are used to promote the services in Europe?
- What could be competitive advantages and disadvantages of companies from Uganda and Senegal?
- How are IT services from Uganda and Senegal perceived by buyers in the European market?
- What is generally needed by Ugandan and Senegalese companies to have chances in the market?

In the end, the study aims to give an overall picture of the current and future market situation and serve as a guideline for IT services companies from Uganda and Senegal planning to offer their services to companies in Europe.

Please note that the research for this study took place in the fall of 2019, before the outbreak of the COVID-19 virus in Europe. This means that the impact of the corona-crisis on the European market and global supply chains has not been taken into account in this market report and forecast.

1. Summary

The market study has found detailed information and possible points for interaction for companies from Uganda and Senegal. The following points have been identified as the most important facts for IT service companies from Uganda and Senegal.

Key findings on the market:

- The European IT Outsourcing market reached a value of approx. USD 94bn in 2018 and is expected to grow to approximately USD 104bn by 2021, representing a compound annual growth rate (CAGR) of 3.4%.
- The biggest markets are localized in Western Europe, led by the United Kingdom, Germany and France.
- The fastest growing markets are located in Northern Europe, with Norway showing the fastest growth and Sweden being the biggest market in this region.
- The fastest growing country is Ukraine (estimated CAGR of 8.4%) due to the developing market for the provision of services.

- Overall, the European market is very mature, and an entry of new competitors is time-intensive and uncertain in terms of success but also potentially very profitable.
- Western, Northern and parts of Southern Europe are facing a shortage of skilled IT experts.
- While traditional IT services are declining (approx. by 4% per year), disruptive technologies are leading to overall market growth.
- Due to new technologies, the market is very dynamic, and innovation driven.
- The portfolio can be divided into (standardized) internal process-related services and industry-specialized services.
- The actual demand for services is depending on the company size and related industries.

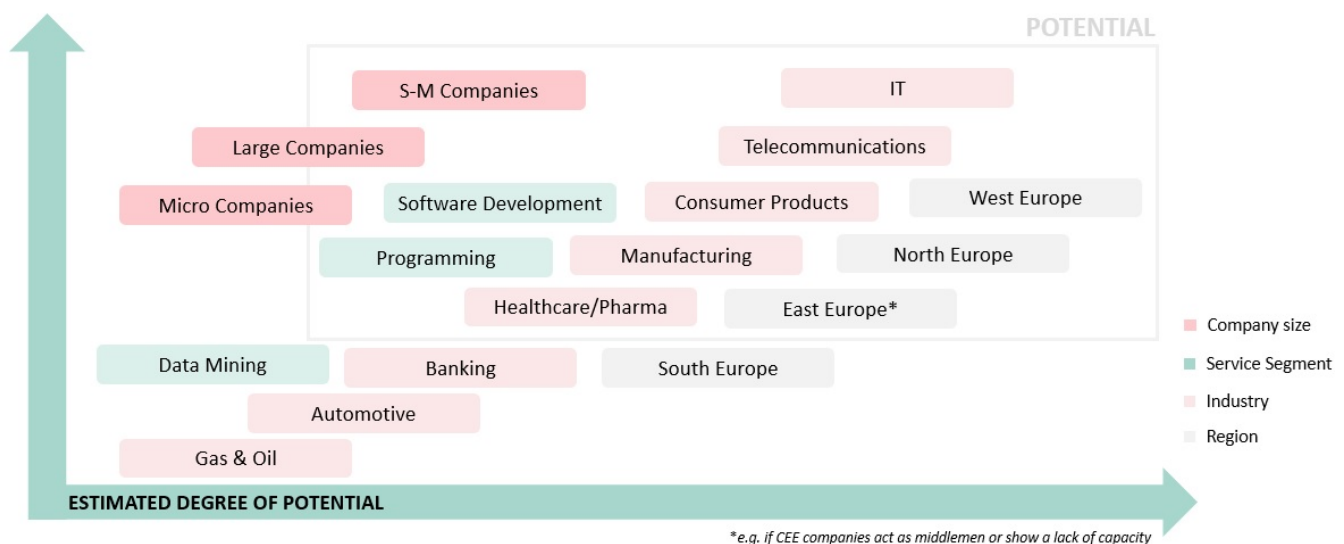
Best opportunities for companies from Uganda and Senegal:

- Most systems work through cloud computing, allowing the involvement into many different IT processes which could be outsourced.
- Blockchain technology is a trend but it is not well understood by European IT employees.
- Western and Northern Europe are increasingly demanding outsourced services. Companies in the UK, France and the Netherlands already show a high amount of IT collaboration experience with servicing companies.
- Software development and programming segments are demanded throughout Europe.
- Niche technologies and segments are highly demanded.
- A collaboration with small- and medium-sized companies offers the best potential for market entry.
- European companies prefer to work with smaller, specialised companies.
- Smaller projects, pilots, free trials offer high potential for networking and building up references.
- The collaboration with a local middlemen or intermediating teams bridge geographic distances and create a feeling of needed proximity.
- Teaming up with other companies that share the same target in form of associations can increase awareness of the reliability of companies from Uganda and Senegal.

Most important tips for companies from Uganda and Senegal:

- Actively network with all kinds of European market participants to increase the chances to be seen and considered for outsourcing tasks.
- Be honest and transparent when communicating with European buyers.
- Be aware that cost-reduction is not the buyers' major target anymore, thus show your qualities, even if these services are not the cheapest solutions.
- Offer (free) trials and participate in smaller tasks to prove your company's and experts' skills and quality.
- Get as "local" as possible to be seen as a "proximate" partner.
- Comply with the [GDPR standards](#); this is a mandatory requirement to participate in the European market.
- Hire employees who speak different European languages (based on the markets you are interested in entering) and who have experience with European business culture to increase the intercultural understanding and improve client communication.
- Be highly available for exchange, many companies in Europe are urgently looking for 24/7 services.
- Make sure your internal systems are stable in order to ensure seamless services.

Figure 1: Overview on the analysis on high-potential market segments, incl. industries, company sizes, geographies and services/products



2. PART I: IT services offering opportunities on the European market

IT stands for “information technology”, referring to anything related to computing technology. Today, IT services are part of all segments of modern companies and modern IT technologies get implemented into all internal processes to document, monitor and automate procedures. Due to a lack of internal capacities, as well as efficiency and cost reasons, companies started to outsource IT services to other companies starting from the 1980’s. Over the years, especially companies in Europe discovered the benefits of outsourcing IT services and the region has become an attractive market for IT companies offering the corresponding services. Today, the outsourcing of IT applications is integral part of [ITES and BPO strategies](#).

The European IT outsourcing market had a value of approximately USD 94bn in 2018 and is expected to grow at a compound annual growth rate (CAGR: Compound Annual Growth Rate, thus the progression ratio of a growth as constant rate over a specific time period) of 3.4% up to USD 104.3bn by 2021. Some industry experts even expect a bigger growth rate of 8% to 12% per year during the next years. Companies in the UK close the highest number of IT outsourcing deals as well as the highest valued ones, shortly followed by companies in Germany. Northern Europe is showing the highest growth in comparison with the other regions (CAGR of 4.14% until 2021) but the fastest-growing country is expected to be the Ukraine (CAGR of 8.2%). The whole region of Eastern Europe is expected to play an increasingly important role within the next 2-5 years.

Current IT outsourcing market trends in Europe and globally:

- Companies in Northern Europe increasingly open to outsourcing of IT services beyond their national borders.
- Many European companies aim to re-insource their IT processes to Europe, therefore they increasingly outsource to other European countries of which many are in Eastern Europe.
- Partnerships are to add value to the IT processes and systems of both parties and contract periods have become shorter to be more flexible, although most buying companies prefer long-term relationships with providers to be able to work quality oriented.
- The overall “as-a-Service” market is expanding. The two segments “Infrastructure-as-a-Service” and “Software-as-a-Service” account for more than 40% of the global IT outsourcing market.
- Instead of pure cost-reduction, companies are increasingly willing to pay for quality. The companies have understood the relevance of quality as deciding factor in competitive markets.
- Buyers are increasingly looking for specialized companies that are able to offer niche services. The companies often work with several IT service providers at a time, with each of the providers being responsible for a part of the overall project.

On average, European companies outsource 20% of their internal IT processes today. A large share of companies plans to increase their outsourcing activities, especially in Western Europe. Key IT outsourcing

drivers are the increased need to focus on the core business in order to stay competitive, cost-optimization in times of growing IT costs, the lack of IT experts especially in Northern and Western Europe, the legal facilitation of the service trade (for example, through the General Agreement in Trade in Services and the European Service Directive from 2006) as well as the boom in new technologies that companies would like to implement into their internal processes.

On the other hand, several factors also impede the further development of IT outsourcing in general. Companies are fearing data-related issues which affect their reputation, they anticipate potential losses due to quality issues in outsourced work and they are afraid of a loss of control on intellectual property. Further obstacles concerning outsourcing include geographical distances, especially in the case of offshore outsourcing and concerns towards geopolitical dynamics.

The drivers of the market are clearly outperforming the obstacles. The IT outsourcing market will grow further even though the current situation and the outlook depends on the development in the individual industry segments. A closer look at geographies, service offerings and industries will help to understand the current IT outsourcing market and seize the market entry opportunities for companies from Senegal and Uganda.

1.1. Vertical niches: Industries showing the best opportunities

New technologies have long become the desired standard in most industries and are treated as a must to stay competitive in the long term. Thanks to these technologies, internal processes can be enhanced and made faster, in many cases even automatized. On the other hand, the handling of these technologies has become more complicated and is requiring a specific level of IT skills which are not sufficiently available in the Northern, Western and parts of Southern Europe. Nevertheless, companies of all industries see the urgency to invest more into their IT departments and to increase their budget for the implementation of IT-related procedures. This rising investment also includes an increasing level of IT outsourcing to overcome the inhouse shortages.

Important industries in Europe which are showing increasing activity in IT outsourcing include automotive, telecommunication and broadcasting, consumer products, manufacturing, banking, healthcare, oil & gas (energy) and IT.

Automotive companies in Europe generally have a long history of outsourcing processes. Today, they outsource on average 42% of their IT processes, driven especially by the development of smart and autonomous cars as well as other new technologies which currently revolutionize the industry. Typical outsourced services in the European industry include the management of IT infrastructure (for example, the maintenance of servers, routers, switches and licences and the support of all networks), efficiency improvements in product manufacturing and maintenance (for example software development in M2M and M2C and modelling systems) as well as the implementation of new technologies (like monitoring systems, infotainment and communication or navigation systems) into their products. Especially for the latter, IT experts need to have specialist knowledge. In Germany, for example, the programming languages C++ and C# are currently demanded to fulfil important niche applications.

Telecommunication companies make use of a broad range of IT applications which could be outsourced, of which fewer need the same level of specialization as in the automotive industry but surely need high-level experience in the field of telecommunication systems. Approximately 35% of telecom companies' IT processes are getting outsourced, with most of them aimed at increasing the efficiency of telecom networks and carrier systems, enabling end-to-end processes (for example, Telecom Expense Management, BSS/OSS, Wireless Expense Management, remote network activities and voice services). Other needed IT services include the enhancement of invoicing systems and payment auditing in order to be automated. Another important sphere in the telecom industry is the communication and exchange with end-consumers. Telecom companies currently invest into the development and maintenance of various applications which are to help facilitate problem-solving.

Consumer product companies often outsource a major share of their IT processes, but the average of IT related

outsourcing is at approximately 31% due to the often-limited size of the companies and the available budgets for IT. The companies' key reason to outsource is the needed focus on core business areas such as marketing, logistics and sales. Data mining applications are seldomly outsourced, since larger companies often own their own market research departments handling the use of the data, and smaller companies often cannot afford it. Therefore, companies in the industry show more interest in system-enhancing software services such as the implementation of ERP systems (especially through MS Accepta/Microsoft Dynamics AX) and vendor management systems (SAP Field) as well as cloud-enabling programs (such as Google Cloud). Additionally, the companies frequently hire programmers who work with Java, Html and Angular to adjust existing software.

Manufacturing companies collaborate with IT service partners to enhance and automate manufacturing (especially through Internet of Things applications) but invest more into outsourcing to improve internal planning and monitoring systems. Prominent fields for outsourcing in the manufacturing segment include MES (manufacturing executive systems), PLM (product lifecycle management) and S&OP (sales and operation planning). Therefore, the industry is specifically looking for programming and developing experts who can develop customized software or, more often, adjust existing software to the individual company's needs.

Banking and financing companies increasingly automate their interactions with end-consumers, to overcome the increasing costs for in-person consultation. They increase their portfolio of mobile and other applications to cut cost and facilitate any interaction between clients and finance experts. Although the field of app development and maintenance offers strong potential for possible outsourcing to IT service companies, banks are highly restricted in the choice of outsourcing partners due to the strict GDPR regulations. In return, banks need to be content in outsourcing the pure app development, ERP services, remote infrastructure monitoring, business intelligence and the conduction of independent pilot phases for their applications.

Healthcare companies are strongly driven by the need for innovation to raise their cost-effectiveness. The reasons are increasing prices and reduced budgets in all healthcare-related fields. The companies also invest into automation if IT budget is available. Healthcare companies and institutes in Europe profit from the growing use of (mobile) apps and other systems working in-between healthcare professionals, insurers and end-consumers. Like banking sector, the healthcare sector was not an employment destination for IT experts in the past. Thus, the need for experts is even higher than in other industries but skilled IT workers are difficult to find and to pay. This offers a niche for potential outsourcing partners, at least for tasks which do not require the involvement of patient data. Healthcare companies also hire IT service companies to develop billing process software, enabling e-prescriptions and hospital inventory management programs. In some fields, medical coding and transcription is needed, requiring a certain degree of specialized background knowledge.

Oil & gas companies are quite inexperienced in the use of IT technologies, but the industry increases its commitment especially in North Europe. Companies in Norway offer growing potential when it comes to the outsourcing of IT services due to the lack of internal skilled workers. The increasing interest in process optimisation through modern technologies is driven by the currently increasing oil price in Europe. For now, the companies outsource approximately 13% of their IT. Outsourced functions mostly relate to the development of an efficient IT infrastructure, which is still lacking in many oil & gas companies. IT service partners can help the companies to establish a cloud network system and implement the ERP, for example using SAP as software. In many cases, oil & gas companies hire IT service experts to educate employees about the basic functionalities of the existing and new IT systems.

IT companies outsource up to 10% of their processes. In 2018, 76% of the Western European IT companies outsourced parts of their processes due to the lack of skilled workers and the capacity bottlenecks. In the future, more IT companies are planning to outsource processes due to the lack of stabilization in the market. IT companies outsource mainly programming tasks since they can become quite time-intense and might need special skills (depending on the needed programming language) but are not as expensive as other services. Additionally, companies in the industry increasingly use data mining services from external service providers. Other important fields of application are the development and maintenance of CRM systems, cloud management processes (especially through Azure and AWS) as well as simple Microsoft 365 applications.

1.1.2. Industry opportunities for companies from Uganda and Senegal

From the industries mentioned above, companies in the IT, telecommunication, consumer products, manufacturing and healthcare/pharma industries show the greatest potential for companies from Uganda and Senegal, but all have different demands and challenges, depending on the level of already implemented systems. Key factors for the success of Senegalese and Ugandan companies in all industries include the availability of different contracts, the level of expertise, the grade of specialization, the available budget, European regulations (for example on data) and the competition in the market. The companies also have to clearly demonstrate their know-how to meet the specific needs and demands by various industries.

Although IT companies do not outsource the greatest part of their processes, companies in this sector offer the greatest potential for companies from Uganda and Senegal. Key reasons are the rise in outsourcing less-specialised tasks and the many different opportunities for partnership. Other IT companies also can act as “introducer” to the European market, allowing the establishment of new business contacts in the region and enabling the development of a case study portfolio for successful references. Nonetheless, due to the broadness of the offered collaborations, the competition on these kinds of partnerships is high.

Followed by the IT sector, telecommunication companies offer a broad range of collaboration opportunities and are urgently looking for experts able to realize innovative ideas and enhance the existing network and carrier systems. An important competitive advantage would be existing experience in the field of telecommunication, concerning internal system enhancement as well as the handling of (administrative) tasks with the end-consumers.

Consumer products is another interesting field for IT service offers from Senegal and Uganda since companies in this market outsource a major part of their internal IT processes and might offer a broad range of deals in all forms, with short-termed project-related collaborations being the more frequently available ones. Long-term projects have been often given to other IT service providers earlier. Working for consumer product companies does not demand the same high-level specialisation as required for other industries but the budget for available projects is often lower than in other industries, too.

Companies in the manufacturing industry are specifically looking for companies that can support them in enhancing internal processes through the implementation of process optimizing software. Here, Senegalese and Ugandan developers and programmers could help but work on the IT infrastructure mostly demands long-term relationships. Additionally, systems to enhance manufacturing processes themselves demand a high-level of specialisation, focused completely on the buyer companies’ products and needs. A partnership with manufacturing companies promises companies from Uganda and Senegal high revenues but getting a direct partner is expected to be difficult.

Healthcare providers need outsourcing service companies to adjust existing systems to their individual needs. A partnership with Ugandan and Senegalese companies is expected to be possible if no patient data is involved. Even if IT service companies do implement standards according to GDPR, health companies would be reluctant in this field, fearing to become the major player in a data scandal.

Concerns on data security are also influencing the potential of a partnership with banking and finance companies. All in all, automotive, banking and gas and oil applications are high-level and demand an increased level of specialization. The more budget is available, the more hesitant are companies to collaborate with a big number of service providers, especially ones located offshore.

Potential for support provided by Senegalese and Ugandan companies is currently only seen for smaller projects or in supporting roles (for example programming). Experts additionally see the urgent need of industry contacts as obstacle for African companies. Responsible company representatives would need to successfully participate in high-end networks. Whereas the banking and automotive sectors are already deeply involved in digitalisation and use elaborated technologies, the gas and oil sector are still in the discovery phase. It is a still small market that is growing especially in Norway and that is characterised by companies hesitating to outsource offshore in

general. Nevertheless, it would be worth a try to pick gas and oil companies at this stage of process to see if they can be convinced to attempt outsourcing IT processes out of Europe. In the end, the award of a project depends largely on the provider's power of persuasion.

Tips:

Define a clear target group, based on company size, country, industry and projects, in order to facilitate the targeting of new customers. In most cases, it makes sense to start with smaller projects to gain references and industry contacts first.

Be aware of the very personalized/customized demands by the clients. In many fields the companies demand a certain degree of industry-specialization which is needed to provide helpful services.

Develop a real relationship with (potential) customers, showing interest for long-term relationships. Likewise, you can enlarge your network and keep in touch for potential collaborations in the future.

Present yourself transparent, honest and ask questions to gain customer trust.

Inform yourself about the specific needs of the industries to be able to show expertise and high-end industry knowledge.

1.2. Horizontal markets: Services/products showing best opportunities

In Western Europe, companies consider traditional IT services as the major part of the industry. Out of these companies, 70.5% confirm the importance of IT monitoring services, 57.1% of IT infrastructure management, 42.21% of data center services and 41.4% of remote end-user services ([CoMarch 2018](#)). In Germany, companies spent 60% of their IT budget on IT infrastructure projects and 24% on IT applications in 2018.

Being the most appreciated outsourced sector now, IT service monitoring describes all services which ensure the seamless operation of all processes and technologies of a company. This includes services which guarantee data and network security, technical support (often in form of a helpline), disaster recovery and data backup as well as the auditing of soft- and hardware. These services are often outsourced due to the high level of standardisation of the services.

IT infrastructure services relate to all components of the companies' own IT environment and networks and which make sure that internal processes are swift and efficient. Typical outsourced processes within this segment include, for example, the development, adjustment and maintenance of software (SaaS), the development and maintenance of (mobile) applications, the maintenance of websites and web-related processes and the management/hosting of servers. Observing the current demand, especially the development of (mobile) apps is increasingly important and companies of all industries outsource this task. An enhanced knowledge of this subject is a current competitive advantage for service providers.

Another important segment for outsourcing is data center services, which also include the gathering and analysis of data (data mining). Other services which get typically outsourced are the hosting of data and the development and maintenance of databases and related support services. Today, companies aim to gather not only as much data as possible, but they also want to make sense out of it, hoping for better insights into customer segments, product lifecycles etc. Therefore, several tools have been developed, supporting the analysis of the data. Many of these tools get implemented by companies themselves, others are specialised working materials for related intelligence agencies.

Cloud computing plays an extraordinary role in this segment and all other service segments. Therefore, the implementation and management of cloud services belongs to the prospected top-priorities of companies of all

industries. Outsourced services include the migration and transformation of internal processes as well as the assessment of systems regarding their readiness to be migrated. In many cases, a 100% migration of all systems is not possible but external service providers can make sure that systems out of and in the cloud are interacting with each other.

The role of cloud computing technologies reflects the importance of modern technology trends, significantly influencing the shape of the current IT outsourcing market. Gartner (a leading US-located IT service management company) predicts the shift towards cloud technology to account for USD 1 trillion of IT spending by 2020 globally. Companies are expected to increase investment into that area on a huge scale and outsourcing partners should be ready to play an active role in it. An estimated 93% of the companies in Europe have already implemented cloud technologies to a certain extent. By now, the technology can be used by (nearly) all business processes and permits the involvement of outsourcing externals into many of these processes. This means that cloud computing actively broadens the possible portfolio of IT service providers, too.

Another important trend influencing the IT outsourcing industry is automatized processes and robotics, enabled through artificial intelligence. 72% of Western European companies consider adopting Robotic Process Automatization (RPA) solutions to fasten and facilitate internal (routine) processes and communication with end-users (for example, by virtual agents and chatbots). While simple data processing has been outsourced to Asia, European companies prefer to outsource the implementation of IT processes to nearshore destinations for now. This might change once know-how in this field has been also proven by companies in offshore destinations. India, for example, is actively educating its IT experts in these fields and aggressively targets the developing AI markets in Europe and North America.

Artificial intelligence is directly connected to the Internet of Things (IoT). The IoT creates a vast API community and is the backbone of all connected and autonomous devices (for example RFID monitoring, Smart Spaces). Industries like automotive, manufacturing and healthcare/pharma are highly interested in technologies permitting to further connect and monitor everything. Once 5G has been properly launched in Europe (which is planned for 2020), the connection of further devices and larger amounts of processes will be possible and the market for IoT solutions and applications will further increase.

Blockchain technology is promising enhanced seamlessness and data security but its real functionality still is a mystery to most companies in Europe. They are actively seeking to understand the technology and integrate it into their internal systems. The key reason for the lack of knowledge is the overall lack of IT experts in general. IT service companies that can easily present the advantages of blockchain technology have real chances to reach a high number of interested companies.

Another technological trend influencing the potential portfolio of IT service companies is augmented and virtual reality. Although it is not seen much outside marketing yet, experts see the greatest potential currently in the automotive industry as well as in R&D simulation and manufacturing departments of companies of various industries.

The greatest potential for IT service companies in terms of trends has been identified to be in (mobile) applications. Enterprises of all industries currently involve into the SaaS market in order to launch apps that enhance internal processes as well as communication with end-consumers. Companies hire IT service providers in this field mostly for short-term projects to develop and/or adjust apps according to their needs. Sometimes they also hire IT service providers to make sense of the additionally gathered data. However, app development is much standardised and needed by all different players; specifically, companies from the health and banking/finance industries do actively demand the development of front-end applications.

Apart from the pure offer of IT services in the discussed fields, companies are hiring IT experts from agencies to provide and train internal staff in new technologies. Large parts of the European workforce have already reached a higher age and did not learn the IT skills needed today since they simply were not needed for their field of activity until now. Today, IT-related skills (and be it only the handling of specific software like Microsoft

365, SAP or such) are required for a much larger part of jobs throughout all industries.

1.2.1. Service opportunities for companies from Uganda and Senegal

IT service companies must choose from a constantly growing portfolio of potential services. The final choice is highly depending on local capacities and should be seen in a realistic way to be successful. Based on the interviews, an IT outsourcing expert from Europe suggests Senegalese and Ugandan companies choose one or two fields of specialisation and offer services relating to these service segments as all-round concepts to European clients (for example, by the concentration on Artificial Intelligence and the Internet of Things and/or mobile applications). The importance here, says the expert, is to appear as a real expert in the field, showing deep professionalism and experience.

One difficulty for non-European service providers might be to understand what Europeans mean by “professionalism”. Companies should be prepared here and address the client directly to clarify introductory questions on:

1. the deadline(s) of the project and milestones which need to be met,
2. the client's (internal) standards and expectations in terms of quality,
3. the frequency and intensity of communication/updating during the project,
4. any upcoming topics and uncertainties concerning the product content and the client's needs and
5. the needed form of product delivery.

Hereby, the companies should be always transparent and never promise services out of the possible scope for execution.

Generally, IT service companies should decide if they prefer full software development and any other involvements into the IT infrastructure (mainly based on mid- and longer-termed contracts), or if they prefer to serve companies with short-termed services. There is potential for Senegalese and Ugandan companies in both fields whereas the field of shorter contracts allows them to be involved into many projects at a time, resulting in an elevated quantity of possible references and case studies. Regarding this, short-termed collaborations are surely an intelligent way to enter the European market “softly”.

While IT infrastructure services and managed cloud services show potential being offered from Senegalese and Ugandan companies, typical offshore services rather include all kinds of IT service monitoring, especially IT support and service auditing. In terms of data center services, European companies are reluctant to outsource those services offshore due to the risk to violate the GDPR ([General Data Protection Regulation](#)) and the fear to lose intellectual property. Nevertheless, the possible cost reduction by offshore outsourcing does sometimes convince companies to do it despite their concerns. During the interviews, potential buyers criticized the current availability of IT service providers. According to one of the executives, it is difficult to find companies which are available 24/7, convinced this is what the market needs these days.

In the end, IT service companies in Senegal and Uganda should be aware of the growing role of disruptive technologies and act forward-looking. Traditional IT services are expected to decline by an CAGR of approx. 4% within the next years while new technologies are expected to reach a higher CAGR than the prospected 3.4% for all IT outsourcing services throughout Europe. Therefore, the companies should be aware of the new possibilities and hire appropriate experts. The high dependency on cloud technologies additionally demands enhanced stability of the own internal network and digital infrastructure.

Tips:

Show elaborated knowledge on disruptive technologies, especially on Artificial Intelligence, Blockchain and Cloud Computing., they will be required in all IT-related processes soon. If you do not have equal capacities in your team yet, make sure to fill these gaps.

Most European companies currently need support in the implementation of digitalization; be aware of

data transfer, archiving, internal communication, monitoring and so on to be able to offer corresponding services to European companies.

Get to know about upcoming technologies which could be managed by your team to gain competitive advantage towards other IT service companies and make it part of the communication with your customers.

Present yourself as provider of solutions for current and upcoming challenges, not only as provider of a product. Likewise, the customer might perceive your company as counsellor in expert questions.

Focus on a set of 2-3 fields of expertise instead of offering a huge variety of services. Narrowing down the own the portfolio will help you to become a much-appreciated expert in the chosen fields.

1.3. Geographies: Countries and regions showing the best opportunities

Western Europe is by far the greatest market for IT outsourcing, accounting for a market value of approximately USD 64,615m in 2018 with an expected CAGR of 3.4% until 2021, reaching USD 70,527m. Hotspot countries of the region are the United Kingdom (accounting for 35% of the total European market), Germany (27%) and France (20%), whereas Germany is, at the same time, expecting the slowest CAGR of 2.4% of Western Europe. The IT service market in Belgium is expected to grow the fastest, at 4.9%.

Companies in the region show a high tendency of expanding their outsourcing partnerships further; 70% of the companies in UK and Germany plan to increase their outsourcing of IT processes or keep the same status as currently. However, the German market is expected to be saturated within the next three years once the shortage in skilled workers is closed. In the Netherlands, even 81% of companies plan to keep outsourcing stable or increase it within the next few years, resulting in an CAGR of the overall market of 3.1% until 2021. Only a minority of 10% of the interviewed companies plan to outsource less IT processes soon.

The West European IT outsourcing market is characterized by the growing number of market involvement by small- and medium-sized enterprises (SMEs), also including marketing agencies, accounting firms, e-commerce stores, sports agencies, professional services agencies and others. The SMEs are mainly driven by the current role of innovation, the needed implementation of new technologies into services and internal processes and the high costs of inhouse IT development.

Generally, the missing expertise in modern technologies (like robotics, the Internet of Things and artificial intelligence), a very high lack of skilled IT workers and the rates of these IT experts (for example the hourly rate of a software developer in the US is between USD 132-240, in Eastern Europe USD 35-56 and in Asia USD 30-52) are the main drivers of the IT outsourcing market in Western Europe.

Still, countries like Germany and France show quite conservative attitudes towards outsourcing to other countries, especially offshore countries. According to industry experts, English still constitutes a problem for many German people, including the employees of IT departments. This complicates outsourcing to non-German-speaking experts. In general, 77% of the buying companies in Germany outsource to countries within Europe, 18% to Asia, 4% to Africa and 1% to South America. The same issues influence the market in France: French enterprises hesitate to outsource to English-speaking experts, but they are very active in collaborating with companies in countries with a high level of French-speaking proficiency like Morocco and Tunisia.

The Dutch market is more open to collaborating with companies on- and offshore. Companies in the country did also start to collaborate with African companies and a further growth is likely, according to industry players. In 2017, Dutch companies spent an average of 11.9% of their total IT budget on outsourcing, 13% more than in 2016. Belgium and Switzerland are more famous as IT outsourcing destinations than as buyers of the services. In these countries, the lack of experts is smaller and the level of expertise higher. Due to the high costs of the

local experts in these countries in comparison to other regions, they do still not belong to Europe's key outsourcing destinations.

Southern Europe is a less attractive destination to offer IT outsourcing services. Italy and Spain are buyers of IT services but often hire experts from Portugal and Greece, which currently are destinations for IT outsourcing. The overall value of the market in South Europe is USD 12,484m, with an expected CAGR of 3.3% until 2021.

The biggest market is currently Italy (USD 6,257m), shortly followed by Spain (USD 5,181m). Portugal grows at a CAGR of 3.6%. The Spanish and Italian markets are experiencing a high lack of IT experts (in Spain: expected 2 million by 2020) while Portugal has young skilled workers available. A large part of software development is therefore getting outsourced to companies in Portugal.

Greece is not only the weakest market in value (USD 343m) but also in growth (CAGR of 2.6%). Nevertheless, Greece is currently developing into a hub connecting the Western and Southern parts of Europe with the South-Eastern IT market. Greek IT service companies are specifically popular for disaster recovery. Currently, the country experiences kind of a "brain drain" due to the migration of skilled young workers to countries with more economic security.

Still, experts expect Southern Europe to play an important role in the European IT market of the future, which will mainly grow due to the increased interest of buying companies in Spain (82% of companies are planning to increase their outsourcing partnerships within the next few years) and Italy (40% of all Italian companies already outsource IT processes). However, industry experts call the Southern European market "complicated", due to local insecure economic circumstances, growing migration and the current market dynamics. These factors make the markets unpredictable even though the overall IT outsourcing value is still higher than in Northern Europe.

Figure 2: IT Outsourcing Market sizes including the segments professional payment services, IT Infrastructure outsourcing, IT application and IT administration outsourcing

Country	Market Value 2018 (USDm)	ECAGR 2018-2021	Estimated Market Value 2021 (USDm)
Europe	94,000	3.4%	104,340
Western Europe	64,616	3.3%	70,527
UK	22,510	3.1%	24,700
Germany	17,725	2.4%	19,032
France	12,660	3.0%	13,850
Netherlands	5,306	3.1%	5,822
Switzerland	4,220	3.2%	4,636
Belgium	2,192	4.9%	2,532
Austria	n/a	n/a	n/a

Southern Europe	12,484	3.3%	13,802
Italy	6,257	3.3%	6,900
Spain	5,181	3.5%	5,750
Portugal	702	3.6%	781
Greece	343	2.6%	371
Northern Europe	7,183	4.1%	8,105
Sweden	2,164	3.5%	2,402
Finland	1,917	3.1%	2,100
Norway	1,675	6.5%	2,025
Denmark	1,427	3.4%	1,578
Eastern Europe	10,122	3.7%	11,906
Ukraine	4,500	8.2%	5,700
Poland	2,088	3.5%	2,312
Czechia	1,016	2.4%	1,090
Russia	661	3.7%	546
Hungary	584	4.1%	658
Romania	489	3.7%	546
Slovakia	404	2.9%	440
Croatia	220	4.1%	248
Belarus	228	3.7%*	241
Bulgaria	172	2.3%	184
Latvia	90	3.6%	100
Estonia	85	2.7%	92

Lithuania	80	3.6%	89
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Source: M-Brain analysis based on Statista, EY, Skolkovo

*according to CEE, average, no data available

Northern European companies opened for outsourcing outside the own region within the last five to ten years and the market is thus still smaller than it potentially could be. In 2018, the IT outsourcing markets in Norway, Finland, Sweden and Denmark generated a consolidated USD 7,183m. With a CAGR of 4.1% until 2021, the region shows the fastest expected growth rate among all regions in Europe. The currently leading market is Sweden with a market value of USD 2,164m, which is very close to the value in Finland USD 1,917m, Norway USD 1,675m and Denmark USD 1,427m. During the last five years, the market values in the Nordic region also increased due to the shift from pure project-related outsourcing to more all-round IT service outsourcing.

The market in Sweden is driven by the growing demand for outsourcing services in the financing sector. Especially innovative SMEs are looking for cheaper opportunities to develop, program and pilot new technological possibilities and develop a cloud-based IT infrastructure. In total, 45% of all local companies plan to increase the outsourcing level of their IT. Although Swedish companies tend to prefer to outsource within their own country or region, the small population and very limited number of IT employees forces the companies to outsource further. By 2016, already 26% of businesses with more than 250 employees experienced difficulties to hire IT experts. The same goes for the Danish market, which is expected to experience a lack of approximately 19,000 skilled IT workers by 2030. In Denmark, 47% of the local companies plan to increase their outsourcing partnerships while 15% would like to reduce it.

With an expected CAGR of 6.5% until 2021, Norway shows the greatest potential in the region and ranks second throughout Europe. According to experts, this high growth rate is driven by the increased interest of the local gas and oil industry and a hunger for a broader range of technologies. Companies in the country have just started multi-source contracting of IT services and 54% of them are planning to outsource more processes soon. The demand in Finland also boomed within the last three years: In 2016, 27% of companies planned to increase outsourcing processes, by 2018 the number rose to 45%. According to the Finish Information Association, Finland will also be lacking 15,000 IT experts by 2020.

Due to the small population, the lack of experienced IT workers and skyrocketing hourly rates of developers and other IT experts, the Nordic region was forced to outsource IT processes for the first time during the past years. Generally, Nordic IT experts are globally very popular as highly skilled people, they get actively lured away to other countries. Additionally, global tech moguls like Google, IBM and Microsoft expanded in the region, employing a great number of the best local experts. The Nordic markets are still very choosy in where and how to outsource and mainly drove demand for IT service in Eastern Europe (especially in Ukraine, Poland, the Czech Republic, Estonia, Latvia and Lithuania). The Swedish company Ericsson (a global leader in telecommunications) established a local office in Romania in 1994, which is now used as one of four global service centres. It employs 2,400 experts, serving over 40 networks worldwide.

Eastern Europe is currently more in the focus as a provider of IT services than as a buyer of those. Still, the total market reached approximately USD 10,122m in 2018 (excluding North Macedonia, Kosovo, Montenegro, Bosnia, Herzegovina, Albania and Serbia). The total market is expected to grow by 3.7% until 2021, reaching approximately USD 11,906m. The biggest markets are, with great distance to the other countries, Ukraine (USD 4,500m), Poland (USD 2,088m) and the Czech Republic (USD 1,016m). When it comes to the expected growth rate, Ukraine ranks first throughout Europe, with an estimated CAGR of 8.2%. The leading markets are the most popular IT nearshoring destinations for the rest of Europe. Growth is also expected for the rest of the Eastern European countries, such as Romania (CAGR 3.7%), Croatia (CAGR 4.1%), Hungary (CAGR 4.1%), Russia (CAGR

3.7%) and all other countries showing a CAGR between 2.2% and 3.6%. The countries which could not be considered for the study are also expected to play an increasing role in the future but for now reliable statistics on the local IT outsourcing markets are missing.

Key reasons for the outstanding positioning of the Ukrainian market are close economic ties (for example, through the Ukraine-European Union Association Agreement) and, most importantly, the giant market of skilled IT experts and IT service companies on small rates. Experts accept that cost reductions of 40% to 60% can be achieved by collaboration with Ukrainian service providers. These factors are characterizing many countries in the region. Other important driving factors are the proximity to the rest of Europe, economic ties through membership in the European Union (for example for Poland and the Czech Republic), a decent level of English skills and other European languages, the cultural compatibility and less concerns about data security.

The increasing demand for East European IT services does not only support the IT development of the region but is also increasing the demand for actual support for the IT service companies in the region. Industry experts and buyers of IT services name East European countries often as “middlemen”, re-outsourcing parts of their tasks due to capacity shortages or as consulting intermediate between offshore companies and the buying companies. In this case, Eastern European companies (especially those being located within the EU), take on big parts of the responsibility and make sure that easier tasks (for example pure programming tasks) are getting outsourced, while project management remains in East Europe. This approach is considered to be still a niche but offshore companies like Tata Consulting have already understood the potential of this strategy. The company opened several locations in Eastern Europe during the last few years in order to enhance and facilitate the service provision to Western and Northern European countries.

In an interview, a respondent described how the company outsourced IT processes to Poland, whereas the Polish company outsourced again to India. For now, there is no reliable data available representing the outsourcing activities of Eastern European countries to other (offshore) IT service providers, but experts are sure about the existence and highlight their importance as bridges solving the issue of locality and proximity.

1.3.1. Geographic opportunities for Senegalese and Ugandan companies

Being by far the biggest market in the region, West Europe is the most interesting region to offer IT services to. UK, Germany and France are the biggest markets of the whole continent and experts highlight the attractiveness of entering those markets as fast as possible. On the other hand, Germany and France have been described as quite conservative and hesitant in the use of English. Therefore, a (accent-less) fluency of the local languages, French and German, can develop into an important factor of competitive advantage. In case of French, Senegalese people already show an elaborated degree of skills and might benefit from it while establishing a business in France. In case of German for Germany, it might be more difficult to find local IT experts being able to support the company in this matter.

There is a higher potential to collaborate with more open markets than Germany and France, like the Netherlands, Belgium and the UK. Companies from Senegal and Uganda will be able to build up first networks in the region and establish successful case studies based in Europe. In case of the Netherlands, the companies (or their partners) might even already have business relationships to local players. All in all, Western European countries are mature in IT outsourcing and many ties with IT service providers already exist. The key challenge is to establish local networks and prove professionalism and expertise to potential buyers in the region. Once this has been worked out, the involvement in Western Europe promises to be very profitable.

In the course of the markets' opening to further outsourcing, Northern Europe also shows high potential for companies from Uganda and Senegal. Here, the challenge is in the much smaller size of the market(s) and the local companies' strong preference to nearshore outsourced services. Nevertheless, Ugandan and Senegalese IT service providers can try to target especially small- and medium-sized companies (for example in the banking sector) right now with the perspective on a further growing market.

Due to the great hunger for innovative technologies, Ugandan and Senegalese companies that use or can

implement these technologies might be successful. A possible threat here is the growing number of local players of which many are (or have become) global players. Thus, a collaboration with smaller local companies is more likely than partnerships with big locals. However, it would be strategically intelligent to invest into the establishment of partnerships and networks with Northern European countries now since the markets will surely play a significant role in the future.

Establishing business relationships with companies in Eastern Europe might become a key move by companies from Uganda and Senegal. The companies might speculate on the further growth of the region, coupled with the loss of capacity to serve the growing demand coming from other parts of Europe as well as other regions. In this case, the customers would not be companies from the financing, insurance or manufacturing industries but players from the IT industry, offering IT services as part of outsourcing by themselves.

Another approach would be the collaboration with local consultancies in order to have an intermediate to arbitrate between the buying and the executing party, ensuring the upkeep of European standards and facilitating communication and the fluent exchange of information during projects. Already engaged salesmen could be trained to be project managers, expanding their scope also on the knowledge of local ongoing projects, or sales teams could be expanded by hiring project managers. A last promising approach would be the establishment of a local facility in Eastern Europe. Ugandan and Senegalese companies might save money (establishing locations in the rest of Europe is more costly) but could still act as a local player.

The local office must not necessarily execute the service offers but represent a local partner for European companies. The hiring of a few local employees for this office is an important success factor for this kind of strategy. On one hand, East European countries are strong competitors to IT service companies from Uganda and Senegal. On the other hand, their proximity to and strong presence in the rest of Europe can be used as advantage.

The Southern part of Europe represents, at first sight, the region with the least potential on the continent. The reasons are the region's local skilled IT workers as well as the ongoing economic and political uncertainty. Spain and Italy have strong IT outsourcing markets which are expected to grow but the potential for Ugandan and Senegalese companies is difficult to seize. Experts expect the region to act more as an isolated island, providing the major part of outsourced services to each other. Still, a lack of IT experts is also prospected for these countries and the potential in the region might increase. Greece is again an interesting hub, connecting the Western and Eastern parts of Europe. IT service providers might be interested in taking advantage of this situation and the currently weak economic situation to establish a local presence in the region.

In the end, which countries might be more interesting for Ugandan and Senegalese companies than others is also dependent on their character and capacities. A partnership with a local partner offers the biggest potential to enter the market. In this case, the companies should not conceal their true identity. In contrast, it would be very important that the companies to remain transparent and proof their expertise and truthfulness instead of playing with wrong promises. The more difficult it is to network with companies in the region, the more it is worth being part of the network. European companies show tendencies to stick and come back to companies they successfully work or have worked with. Word-of-mouth recommendations make a major part of marketing in the region and this should be used by companies from Uganda and Senegal.

Tips:

Get to know the European (company) cultures, customs and languages. If possible, hire employees having experience in working with European companies. It is important you and your team know well about the European perspective, for example, in terms of the European definition of "quality" and "professionalism", to be successful.

Be brave in the proactive targeting of European companies, even if those do belong to the less-potential markets. You never know how a suddenly upcoming need might turn out to be a great opportunity for your company.

Be aware you are entering a mature market, not waiting for your involvement. Correspondingly, high involvement and much time will be needed to establish your company in the region.

Observe the Asian, East European and African markets as potential places of origin of competitors; be aware of the development in the regions/countries and react fast to upcoming opportunities (for example trade disputes, protectionism, new trade acts and so on).

Be open to partner with other (IT service) companies to facilitate the market entry for yourself. Many companies in Africa, Asia and (East) Europe have the same targets and in collaboration you might reach more than alone.

Establish a local office and/or hire local representatives to bridge the geographical distance between your company and the customer. European companies prefer to work proximate partners these days, hoping for enhanced communication and closer collaborations in real-time.

3. PART II: European opportunities and obstacles for specific IT services and products in Senegal and Uganda

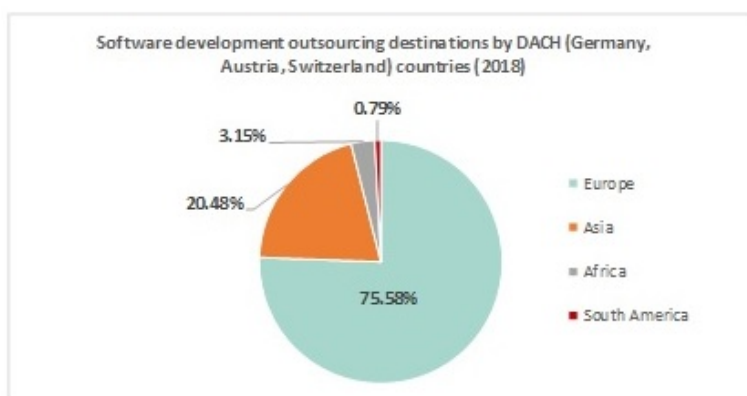
As the portfolio of IT service providing companies is growing, known industry segments are expanded by new sub-segments and developing niches. This is also the case in software development, programming and data mining, which could offer new opportunities by the implementation of new service strategies and technologies. Although all segments of IT outsourcing are part of the ongoing change dynamics, these three segments have been chosen as being especially interesting for companies from Uganda and Senegal.

2.1. Software development

In software development, outsourcing companies take over the construction of a new IT infrastructure, including project planning, coding and the integration of the software applications. Software development requires larger teams, comprising programmers, analysts, testers, project managers and consultants. Thus, mostly larger companies are offering these services.

The main driver for the outsourcing of software development is the current and prospected gap of locally available developers. In 2014, the European Commission warned Europe would lack up to 900,000 developers by 2021. Empirica, a German statistics institute, adjusted the figure down to 500,000. The development in countries like Senegal and Uganda is the opposite; the young population is increasingly interested in the study of STEM (Science, Technology, Engineering and Mathematics) courses and the number of IT developers is further increasing. At the same time, the rates for developers in Africa are low in comparison to other countries and competitive with other low-cost (offshore) destinations.

Figure 3: The most prominent outsourcing destinations for software development



To date, only small percentages of software development get outsourced to Africa. Companies in the DACH region (Germany, Austria, Switzerland) outsourced 75.58% of their software development projects within Europe, 20.48% to Asia, 3.15% to Africa and 0.79% to South America. The leading Asian country is India, even though companies in other Asian countries like the Philippines currently try to promote themselves. In Eastern Europe, Ukraine, Poland and Romania are dominating the software development market next to other Eastern European countries. The relatively low number of projects shared with African companies (of which most are from South Africa and Egypt) projects the low interest in outsourcing to these companies but could also indicate an interesting beginning for companies from Africa.

Software development projects mostly demand a long-term relationship between the buyer and the service provider. Since European companies do not like to develop such a relationship out of nowhere, they tend to choose companies they already worked with or received positive references about. This underlines the importance of networking within Europe. It also shows the general difficulty to enter the market right through a typical all-round software development project. Therefore, it is easier to target long-term projects after having proven the own capabilities by smaller projects, such as the adjustment of existing software or the re-programming.

Software development tasks which get typically outsourced are ERP tasks (mostly with Navision or Microsoft Dynamics NAV), cloud applications (with Microsoft Azure), website and other web-related functions, the implementation of virtual assistants and chatbots, B2B portals as well as intranet platforms, ITES solutions, payment processing systems, mobile applications, e-commerce applications, the development of API, PHP, JS, HTML and CSS, VR/AR as well as other artificial intelligence and machine learning functions of all kinds. The interview respondents referred several times to the importance of support especially in ERP and cloud systems.

Tips:

Start with smaller projects, focusing, for example, on programming, applications, software/hardware auditing, technical support etc., to gain reputation.

Later, make sure to be able to provide all services required in software development, including project management. Prove your expertise in the handling of larger projects, too.

Be aware that companies from Senegal and Uganda are not much known in the industry yet; raise awareness on the capabilities of your team.

Let European companies choose between a full package of services or selected elements; the further can be used as trials to prove your work.

Prove the compatibility of quality in software development and low-price. European companies tend to be suspicious about quality for lower prices.

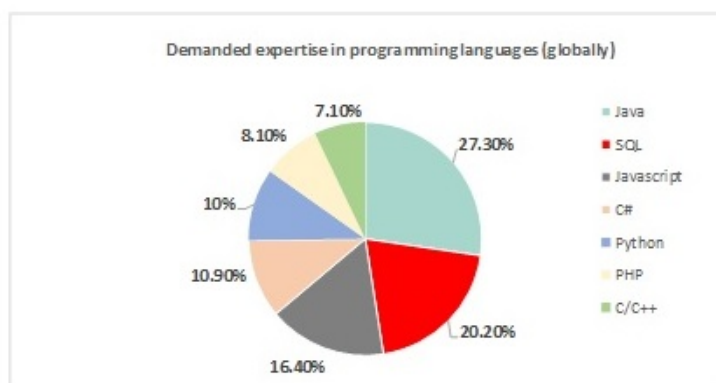
2.2. Programming

Coding, scripting and the knowledge on programming languages are essential for the creation of enterprise IT systems in front-end and back-end applications. Companies of many industries use existing programs, which means they need adjustments/customizations in systems and are therefore looking for high-skilled programmers. As significant high demand for programming services originates in the UK, France, Germany, Austria and Switzerland. Industries outsourcing programming mainly include automotive and telecommunication companies, which face very technology-driven markets and need to react to developing applications in real-time. The programming of applications is currently very popular. There is a need for specialists who can use, for example, Amazon to develop non-iOS-specific apps as well as other specialised applications.

A high number of hiring companies are SMEs, due to the very limited budget available for IT-related activities. Many of these companies also belong to the IT industry and hire supporters in times of a shortage of work capacity.

The type of needed programmers depends solely on the needed application and the related programming language. Generally, programmers cannot be experts for all computer languages but specialize in certain ones. Most are using the universal languages such as Java, SQL, Ruby, Python, C++ and, C# and J2E, others specialise in non-universal languages such as LISP, Matlab and AWK. Globally, Java remains the most demanded programming language (27.3%), followed by SQL (20.2%), Javascript (16.4%), C# (10.9%), Python (10%), PHP (8.1%) and C/C++ (7.1%). Although the interest in Python appears currently quite minor, industry players expect the language to dramatically increase in importance within the next few years, pointing to the current increasing search for experts in this field. Interview respondents additionally mentioned the need for programmers who can work on JavaScript using AngularJS.

Figure 4: The globally most prominent programming languages



In Germany, there was a shortage of 11,000 Java programmers, 8,000 SQL programmers and 6,500 JavaScript developers in 2018. According to an industry expert, the automotive sector in Germany is currently urgently looking for C# and C++ developers for some niche applications. These niches and the overall lack of skilled programmers could be filled by the expertise of African developers, too.

Currently, Ukraine, India and Egypt represent the most important outsourcing destinations for programming services. While Ukraine is specialised more in universal languages (Python, C++, JavaScript, PHP, 3D Unity), India is more interesting for niche languages such as Magento, Nod.js and Asp.net.

Apart from the mentioned programming languages, operations in the field of ERP systems, VPN systems, SAP/Comet (both monitoring software) and artificial intelligence are typically outsourced by companies in Europe.

Tips:

Stay informed about trends and developments to develop a future-directed strategy.

Grow the customers' awareness on upcoming problems (for example, the growing shortage of skilled workers) to highlight the benefits of a collaboration with your company.

Promote your company and your team by a combination of digital marketing and personal interaction; try to be as individual to each customer as possible and follow a personalized approach on the customer's real needs.

Broach as many programming languages as possible, universal as well as niche languages to be prepared for the industry's needs. Nevertheless, Java and Python are the currently most important languages which should be known by all companies in the field.

Inform yourself about specialized needs of specific industries. Depending on what industry/region you are focusing on for the market entry, the demand on programming (languages) can be significantly different from others.

2.3. Data Mining

Data mining is a process of finding patterns within large data sets. These data sets can be found through social media, government resources, various registers and databases. Nowadays, all industries require the gathering and analysis of related data. Data mining has become one of the major change makers in the world of economics today.

It is critical for data analysts to have a strong knowledge of data science, statistical models, analysis methods and analytical technologies, along with an understanding of the relevance of data with respect to an organization's business objective. Therefore, they often work with statistical tools like SAS and SPSS. Typical outsourced tasks include web data mining, text mining, screen scraping, image data mining, data warehousing, social media data mining, SQL data mining, the work with Data Stage, the work with SAP in the field, the collection of e-commerce, contact and competitor data as well as business intelligence. Especially companies dealing with e-commerce, direct marketing, health care, telecommunications, financial services etc. are generally looking for data mining services.

This appears to be a broad variety of services which can be outsourced but research has shown that especially larger companies hesitate to outsource data-related tasks. Therefore, corporates and other larger companies mostly own inhouse market research or market intelligence units. Smaller companies do indeed outsource these tasks to external agencies but prefer to keep the data within the European Union to comply with the General Data Protection Regulation. This is a big obstacle for companies from Senegal and Uganda.

If companies are outsourcing data mining services, they are mainly asking for all-round solutions, including not only the gathering of data but also the analysis and processing of insights. Modern intelligence agencies are also asked for forward-looking company consultancy services as part of the full package.

The increasing amount of data through the endless collection by mobile applications and other digital process make the need for middlemen between executive persons and clients more urgent. Nevertheless, the potential for companies from Senegal and Uganda is seen low by industry experts as well as by potential buyers. The main reasons are their lack of experience in working with such companies and a prevailing mistrust concerning their treatment of (company) data.

Driven by the increasing demand in Europe, especially in the field of artificial intelligence, IoT and cloud computing, and the increased need of specialised software adjustment and application, the potential for companies from Senegal and Uganda is expected to be higher in software development than in programming or data mining. Though the segment is prospected to be generally the most attractive, the companies should not expect to directly take over full software development projects. They should initially focus on a role as a supportive player.

Programming services also show potential due to the increasing lack of programmers in general and the growing demand for Java and Python experts. Different industries often use different sets of programming languages and likewise create niches which need to be tackled with the help of specialized programmers. Pure database management is not demanded anymore and shows no big potential for the African companies in the future. Niches are always very small markets which require only a very limited number of workers. Companies from Senegal and Uganda offering programming services thus need to increase their visibility in terms of niches in order to be chosen. This can be achieved through a professional representation of the own skills, for example, through digital marketing channels and an established network in the industry in question.

Tips:

Be an expert on the General Data Protection Regulations (GDPR), as well as national laws. This knowledge is the base to be able to work with European data at all. If possible, get certificates proving your data-related expertise.

Use “buzz words” like Big Data, Digitalization and Agile Development to a) show what you know about the industry, and b) make potential customers curious about your solutions.

Promote your company and your team by a combination of digital marketing and personal interaction; try to follow a personalized approach for each (potential) customer.

If possible, use European servers for the work with European data, ensuring your compliance with data regulations and enhancing the trust by the customers.

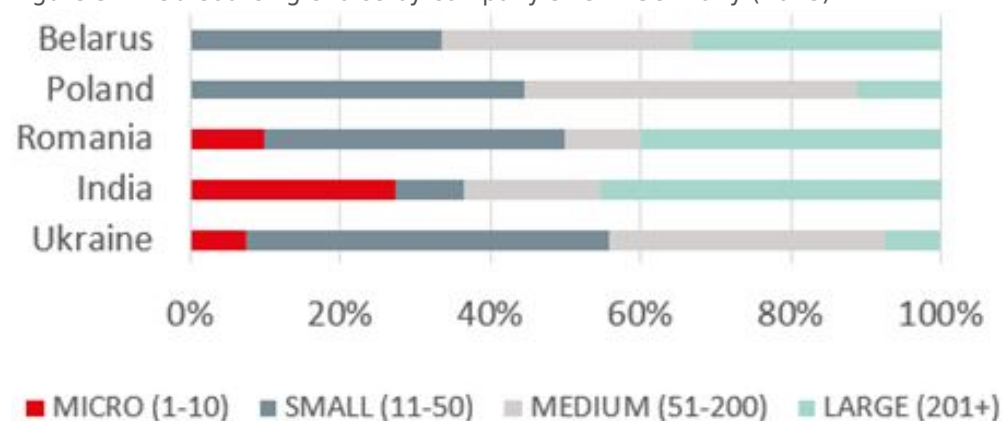
Use modern approaches on data gathering, data analysis and data visualization to impress (potential) customers. Define your unique selling points in terms of data handling and communicate these openly.

4. PART III: Seizing opportunities and tackling obstacles for the IT sectors in Senegal and Uganda

Key reasons for the outsourcing of IT services by European companies can be divided into economic, technological and strategic reasons. Economic reasons are cost reduction, time saving, access to cheap labour and missing capacity inhouse. Technological reasons are the closure of tech gaps, access to “fresh” IT experts that might offer new and faster solutions than the inhouse staff, the more efficient fixing of possible bugs and the need for independent pilot phases. Finally, strategic reasons include the increasing scope of provider services, possible access to new markets, speed-up of internal processes, enhanced flexibility as demanded by the market, scalability of services, possible improvement of user experience, capacity to enhance the core business, growing access to innovation and decreasing dependence on the establishment of internal teams.

According to a survey conducted among Western European companies employing more than 500 people, the input for new ideas and technologies as well as cost reduction and the enhanced efficiency of internal resources and product development are the most important reasons to outsource IT tasks today. Respondents in this market study attributed importance to all the reasons mentioned above and highlighted the importance of cost reduction despite the overall trend to choose partners also for their innovative drive and the quality of services.

Figure 5: IT Outsourcing choice by company size in Germany (2018)



Source: KPMG Survey

Research has shown that the buying companies' purchase attitude depends on several factors, including the company size and connected business characteristics. SMEs outsource significant parts of their tasks to Eastern Europe while micro companies still outsource mainly to India to save costs. In Germany, mainly micro and larger companies outsource to India while SMEs mainly outsource to countries like Belarus, Poland and Ukraine. This corresponds to the fact that SMEs currently increase their spending on IT outsourcing services. The budget of mid-size companies increased from 4.7% of the whole IT budget in 2016 to 6.5% in 2017, while the budget of small companies rose from 6.7% to 7.8% during the same time period.

As much as 66% of larger companies (>500 employees) in Western Europe outsource some of their IT services, 23% outsource all of their IT services and 11% do not outsource at all. Among companies employing 500-999 people, ~30% of the companies in Europe outsource every IT operation to a third country. Among companies employing >2,500 people, ~19% outsource every IT operation to another country. Large companies have withdrawn from the strategy to outsource to many IT service providers at a time. They generally try to limit their collaboration in terms of IT to few partnerships at a time, showing increasing demand for all-round services. All in all, "the larger the company, the less enthusiastic the company is about outsourcing," as one industry expert states.

Apart from the sole size of a company, the type of outsourcing partnership also depends on the buyers' strategic approach in terms of IT and IT outsourcing. In most cases, IT service providers enter running projects in which guidelines, the scope and the needed approach have been already decided on. Once the provider has been chosen, the latter's responsibility is mainly to react to the given strategy and show the promised expertise within the given time frame. After the first delivery, providers should make sure to clear upcoming questions and stay in touch with the buying company to prove service quality and to make the buying company a part of their local network.

The continuous communication between buyer and provider is an important part of any modern IT outsourcing collaboration. 60% of outsourcing companies are following the agile methodology, pursuing continuous project updating and continuous exchange in order to make the best result happen. This requires also enhanced flexibility and availability by the service provider. A collaboration with middlemen can support this exchange. A third party, coordinating the processes between the buying and providing company, can make the exchange more efficient and create a sense of "proximity" between the parties. This makes especially sense if projects have been outsourced offshore. The middleman company can be either an independent consultancy company, a trained local salesman or a local office of the providing company, bridging all geographic distances.

The choice of the right IT service partner depends on many different factors. The most important criteria are the service quality, the grade of possible adaptability, the set of available skills and expertise, the range of portfolio, the provider's agility/dynamics, service costs, geographical proximity and the level of guaranteed data security. These selection criteria create the picture of a small-or mid-size company as close as possible in geography, flexible in approach, offering specialized all-around solutions at an acceptable price, showing enough references and ensuring the safety of data according to the GDPR. Further selection criteria mentioned by individual potential buyers of IT services include the cultural match, the level of capacity, transparency, innovative drive, political and economic stability of the provider's country of origin, healthiness of the local transport infrastructure, digital infrastructure and the range of possible contract models.

Depending on the project and the company's needs and regulations, buying companies in the end decide between "mass providers" and "boutique providers" (also called "pure players"). Mass providers are all the big IT outsourcing companies well known in the industry (for example Capgemini, IBM, Deloitte etc.) and companies offering mostly "traditional" and standardised solutions. Companies looking for alternatives and, possibly, more innovative partners choose smaller companies, of which many offer niche and specialised services. Comparing the listed selection criteria with the available types of potential collaboration partners, it explains the current trend of buying companies increasingly collaborating with smaller "pure player" companies. Nevertheless, larger service companies have understood this shift and try to tackle the market of the small companies for specialised projects, too.

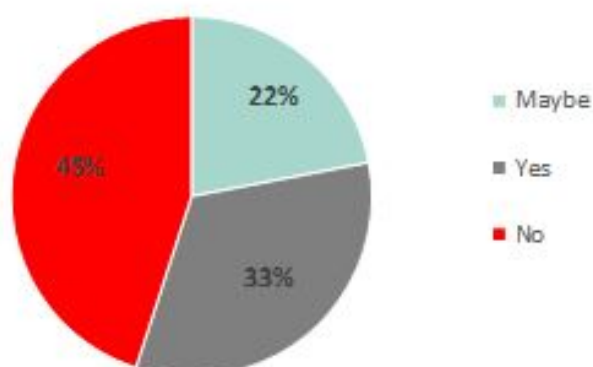
Can companies from Senegal and Uganda use this development and become an interesting partner for European buyers? The situation is uncertain. For now, none of the interviewed industry experts or buyers could identify any Senegalese or Ugandan player in the market. Still, experts are estimating a future CAGR of >7% for the African IT outsourcing market between 2016 and 2021. Major players are companies from North Africa (especially Egypt) as well as South Africa, Nigeria, Ghana and Kenya.

The “Silicon Savannah” in Nairobi and the tech-hub in Lagos are known by chosen people but the services of the most parts of the African country yet remain unknown. This might soon change, since tech giants like IBM and Microsoft have already discovered the potential and invested more than USD 100m into African tech hubs.

When asking buyers about potential collaborations with companies from Senegal and Uganda, only 3 (out of 9) respondents could imagine them at the moment. Reasons are not connected to potential unique selling factors of the companies but more to an overall open-mindedness. 2 (out of 9) respondents could imagine collaborating “maybe” with Ugandan or Senegalese service providers but were unsure about their coherence with the GDPR. 4 (out of 9) respondents said they were not interested in working with the companies right now. Important reasons given included data safety, a bad reputation of African services spread on the internet, a fear of a lack in communication, language issues, hesitation in terms of responsibility, cultural difference and, interestingly, time difference. These concerns represent all the same issue: A lack of awareness of African companies in general.

Figure 6: European buyers' willingness to outsource to Senegal and Uganda

Would you outsource to companies in Senegal/Uganda? (n=9)



Companies from Senegal and Uganda, must deal with a lack of knowledge and experience by the target group in Europe. This will complicate the entry to the European market and increase the need in proving your capabilities. To do so, you should know about the perceived disadvantages and the advantages of your businesses and learn about the possible opportunities and threats in the European markets.

Tips:

Be confident to present solutions which are more expensive but could still add value to the customer.

Show your “innovative drive” using fresh solutions available on the market and promoting modern approaches.

Be as adjustable to previous settled strategies as possible. In many cases your company gets involved once everything had been decided. Still, make the customer aware of potentially upcoming problems in the chosen approach.

Ensure fluent and on-going communication, before, during and after the execution of a task/project.

Highlight the benefits of collaboration with you as a small company and disclose the disadvantages of

the big solution providers (for example costs and inflexibility).

3.1. Possible opportunities and how to use them

Strategies implemented by the governments of Senegal and Uganda and the ITC industry in both countries are currently driving the business of IT service companies. Research has shown that governments release new funds and aim to strengthen the business segment by setting up supportive regulations. Investments into the ICT infrastructure shall enhance the attractiveness of the local market by creating more IT jobs and bringing together the different tech hubs. The young population of the countries is encouraged to achieve STEM degrees and the national IT education is further sponsored. The aim is, to increase the quality and the reputation of local universities, creating more trust into local capabilities. Additionally, global players are investing into the local IT market and encourage further students to become IT experts in order to get attractive jobs.

In the future, many young people can become the IT experts, being trained by well-known universities and global players in the region. The emerging tech hubs consolidate innovative ideas and expert skills through the investment into ITC. The further development of language skills, also of less-known languages such as German, Spanish, Polish, etc. due to training in universities, an ongoing urbanization enhancing the local (digital) infrastructure, a decent time difference (less than Asia), affordable workforces in programming and software development, as well as the economic proximity through the growing exchange between Europe and Africa constitute competitive advantages which can result in opportunities for the future development of the industry in both countries. The effective promotion of these advantages and the skills of the individual company is a question of successful marketing.

The marketing of IT outsourcing services is mainly focused on the digital and personal interaction between provider companies and buyers. Companies offering mentioned services mainly own a professional looking company website (not directly linking to the country of origin) as well as banner advertising on relevant websites (like Computerworld). The main target is to convince potential buyers through experience and expertise rather than country-related information. The interaction of both parties through relevant platforms (for example Clutch, Stack Overflow, Open Cloud Front etc.) can create the opportunity to schedule initial meetings between both parties.

Additionally, IT service companies can participate in open tenders, at first only to make themselves visible since tenders are difficult to win initially. On a personal scale, service providers should participate in local networking events and trade fairs to develop a local network. These companies do not necessarily need to be solely potential buyers, but also people who could relate somehow to them. In the end, a lot in the industry is happening through mouth-to-mouth propaganda. In order to be successful, companies need to proof themselves and make themselves recommendable.

Recommendations by other companies or departments within one company are one of the major marketing channels. Industry experts suggest, companies interested in entering the market, should create an inbound marketing strategy apart from outbound marketing. Providers should adapt to the marketing rules of the target markets, show off the know-how for serving niches, create a dynamic client database and build-up public reference and case studies that are easily available to potential prospects. Following these tips and insights, companies from Senegal and Uganda can show presence and reduce the lack of knowledge among European market participants and make them curious about possible partnership opportunities. Rising awareness does not only benefit individual companies but all local industry participants. Finally, it makes sense to think and work together in promoting and raising awareness within European countries.

3.2. Possible obstacles and how to tackle them

A few of the obstacles for companies in Senegal and Uganda have been mentioned before, explaining the hesitance of potential European partners to collaborate with them. European companies feel a “cultural

difference” could complicate the communication between the different participants and different perspectives on what quality is or how important deadlines could decelerate the overall project. This leads to another obstacle, the lack of awareness and existing prejudices about companies from Africa, regarding the overall service quality, infrastructure, as well as economic and political situation in the region. Further factors which could be an obstacle for the provider companies are the lack of routine in collaborating with European companies the geographic distance that makes short-termed visits difficult and the growing global competition.

Currently, IT service providers from India, Eastern Europe and other European countries are the biggest competitors for companies from Senegal and Uganda. European companies tend to prefer to outsource services within the own country or at least within EU borders. They expect to be on the safe side in terms of quality, communication and data security. Germany, the UK, the Netherlands, Greece, Portugal, Belgium and Switzerland are attractive providers of IT outsourcing solutions for companies that have the necessary budget.

Countries in Eastern Europe (for example Ukraine, Poland, Czech Republic) promise equal benefits in terms of quality and security for less money. Ukraine is not part of the EU but is considered European and benefits from special trade agreements and standards. In many terms, Eastern Europe appears to be also very much developed in modern technologies and IT education. In 2017, the “Wired Magazine” named Estonia “the most advanced digital society in the world”. Belarus acquired the title “The Silicon Valley of Eastern Europe”.

India has been the market leader in IT outsourcing since the early 2000’s, due to a high number of skilled workers, low-cost models and solid delivery. The success resulted in huge economic growth and high-quality companies increasing their salaries as well as service prices. Still, experts believe that companies can save up to 75% of their software development costs by outsourcing to India. Being an offshore location for the companies in Europe, companies in India are a direct competitor for companies from Senegal and Uganda. IT service companies in Senegal and Uganda do not only have to think about how to advertise their advantages but also how to overcome the already established competition and turn existing disadvantages into success factors.

The European industry currently sees the transportation infrastructure, the still minor focus on STEM studies (only 20% of students in Uganda are focused on such a degree), possible political instability, an in-transparent taxation system, an ineffective procurement system, issues in data security and a painful Internet connectivity as the major disadvantages of African companies. Many of these disadvantages cannot be tackled by the individual companies themselves but must be handled by government bodies, industry associations and cross-industry collaborations. Changes in regulations and improved infrastructures are required to show off the attractiveness of the market. A future entry to the European market can be a strong driver for the local economy and should therefore be in the interest of all market participants, even non-IT players. Comparing the identified competitive advantages and disadvantages, drivers and barriers, it is clearly visible that Senegal and Uganda could become very interesting partners for companies in Europe even though they will have to face a long and hard way to enter an already very mature market. The companies therefore need a long breath and a lot of passion to define an individual market entry strategy to tackle this challenge.

3.3. Guidelines to enter the European market

In collaboration with potential buyers and industry experts as well as through analysis, a list of helpful guidelines has been established, in order to support Senegalese and Ugandan IT service companies to re-evaluate themselves. The various tips and considerations are related to three different phases for the market entry:

Phase 1: Show your clients what you can do!

AWARENESS, TESTING, PROCUREMENT, PROXIMITY, HIGHLIGHT USP, MARKETING, NETWORKING:

The greatest obstacle during the first phase is the question of client awareness. To achieve awareness among companies in Europe, first network connections should be closed with companies in Europe. The trick here is to

create a certain level of proximity between yourself and the prospected client. You can use digital platforms and social media as well as present yourself at trade fairs and other networking events in European countries. Keep in touch and inform interested and less-interested prospects about your skills and expertise. You can also achieve this by sharing the link to your professionally established website, the creation of interesting content and the frequent exchange with industry experts. If you do not know what exactly is meant by “professional” in Europe, do some research and check out the websites of European IT service companies. Start to advertise your company as much as possible without being intrusive and respect the client’s boundaries. To be more efficient, try to find out what the client needs and how the customer’s IT infrastructure looks like in order to approach the customer with potential solutions. In some cases, it makes sense to present your skills to customers in form of free trials or piloting. This increases also chances to build up the first case studies and win references. Once active networking had been successful, try to get on IT managers’ and consultants’ procurement lists to be considered as potential outsourcing partner.

Phase 2: Prove yourself and your expertise!

QUALITY, AGILITY, SPECIALISATION, COMPATIBILITY, DATA SECURITY, FULL-SERVICE PACKAGES, COMPETENCE:

Is a client showing interest in your company and your offer, it is very important to show the broadness of your offer without opening your portfolio too much. Instead, focus on the presentation of service quality (if possible, proven by quality assessments like ISO/CEI, both European quality certification systems) and your specialised expertise in a limited number of fields. Make sure you know about the competitive advantages of your company and your internal skills and communicate them; they are your unique selling points (USPs). Offering too many services at a time often raises suspicion on the real quality of your work. Instead, talk about the potential added value through the filling of niches, evaluate the compatibility of your systems and the clients’ systems and offer the client an all-round service, carrying the responsible person from the beginning through the end of the project. Make sure to clarify deadlines, the frequency and form of updating and the overall project process, including milestones. To be successful, be aware of the agile development method and try to grant the client a certain degree of flexibility. In order to be successful, you should not make the project uncomfortable for the client or yourself. Limit potential risks as much as possible and let the client know about upcoming insecurities and problems. A very important part of the negotiations is to be trusted make the client believe in your trustworthiness. Therefore, the client’s data should be secured according to GDPR and intellectual property needs to be kept safe. Therefore, you should create a safety system which enables you to explain your safety measures to the client and allows you to easily maintain its validity.

Phase 3: Stay ready for more!

TRANSPARENCY, FLEXIBILITY, REFERENCES, COMPETITION, LANGUAGES

European buyers will show enhanced scrutiny towards you and your company and you will need to confirm your capabilities more than other companies. In the last phase, let the client know about the work in your company behind the scenes, be transparent and communicate that you are not looking for the fast money but are interested in creating a long-term relationship. This relationship can be easier maintained if you and your employees show a specific level in European languages apart from English (like German, French, Spanish, depending your customers’ location). This creates trust and motivates buyers to keep on interacting. Generously talk about the projects you have been already working on, mention references if you already have some. If not, make sure the client gives you the permission to mention it as a reference in case you win the project. Before, during and even after a project, make sure you are flexible. It might be that clients are confirming projects suddenly or contact you out of nowhere. Make sure to get yourself informed in detail before you confirm anything.

Industry experts who have been already involved into market entry projects highlight the importance to calculate enough time when trying to enter the European market. According to them, the entry into European markets is very difficult and might take several months or even years of intensive efforts to reach the beginning of success. However, the increasing competition will also be an ongoing challenge; even already established

companies are often struggling with the dynamics of the market and face difficulties in being chosen as a partner. To remain successful as service partner in Europe, companies should keep themselves always informed about the competitive landscape and react quickly to upcoming changes.

When targeting the European market, it makes sense to collaborate with other service partners from Senegal and Uganda to form associations. Additionally, it is important to actively interact with many contacts in Europe, might they be potential clients or not. Once the fundamentals of the companies in the Senegalese and Ugandan landscape is settled to comply to the needs of the European buyers, IT service companies are confident enough to actively enter the European market as part of an intense strategic offensive towards the North.

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