



CBI
Ministry of Foreign Affairs

Value Chain Analysis

Market Assessment of Services for IT and ITES Companies in Uganda

Commissioned by The Centre for the Promotion of Imports
from developing countries (CBI)

Maximilian Schulz and William Babigumira

March 2020





Market Assessment of Services for IT and ITES Companies in Uganda

Final Report

SUBMITTED TO

Margot Lobbezoo
CBI Project Manager NTF IV

SUBMITTED BY

Maximilian Schulz and William Babigumira

MARCH 2020

Table of Contents

ACKNOWLEDGEMENTS	3
EXECUTIVE SUMMARY	4
List of abbreviations	6
SECTION 1. Introduction	8
1.1 Objective	8
1.2 Methodology	8
1.3 Data Constraints	8
SECTION 2. The IT and ITES Market System in Uganda	9
2.1 The Core IT and ITES Market	9
2.1.1 Inputs	11
2.1.2 IT and ITES Production and Supply Side Structure	12
2.1.3 Distribution Channels and Consumer Segregation	15
2.1.4 Growing Foreign Competition	23
2.1.5 Summary of Constraints, Root Causes and Symptoms	25
2.2 Supporting Functions	26
2.2.1 Infrastructure	26
2.2.2 Access to Finance	28
2.2.3 Skills and Capacity	30
2.2.4 Summary of Constraints, Root Causes and Symptoms	32
2.3 Rules and Regulations	35
2.3.1 Laws and Regulations	35
2.3.2 Certifications and Standards	37
2.3.3 Some Further Legal Aspects in Uganda	37
SECTION 3. Business Development Services Market for IT and ITES Firms	40
3.1 BDS Needs Assessment	40
3.1.1 Needs for Legal and Non-Legal Business Development Services	40
3.1.2 Need for 360° Business Management BDS	44
3.2 Current BDS Services for IT and ITES Firms	46
3.2.1 BDS Service Offering and Providers Landscape	46
3.2.2 Capacity Assessment of Business Support Project Partners	49

3.3	Gaps in the BDS Markets	51
SECTION 4. Conclusion and Recommendations		53
4.1	Conclusion	53
4.2	Recommendations for the Sector	53
4.3	Recommendations for CBI	54
4.4	Next Steps	55
Annex A – Bibliography		56
Annex B – List of Interviewed Key Informants		57
Annex C – BDS Needs Assessment – Questionnaire		58

ACKNOWLEDGEMENTS

We would like to acknowledge and express our gratitude to all of the industry experts and key informants (full list found in Annex I) who took the time to talk to us. The experiences and insights they shared with us proved to be invaluable to this research.

We would also like to thank CBI Programme Manager, Margot Lobbezoo, and ITC NTF IV Programme Manager, Martin Labbe, for their valuable comments and guidance.

Last but not least, many thanks to the CBI NTF IV Parallel Project Coordinator, Richard Okuti, and his team for their coordination and constant support throughout the research process.

EXECUTIVE SUMMARY

NTF IV aims to enhance the export competitiveness of the Ugandan IT and ITES sector. This report identifies and assesses critical bottlenecks (root causes) that prevent Ugandan IT and ITES firms from entering the EU market. The assessment not only covers the core value chain, but also determines the enabling environment, in order to uncover what kind of Business Development Services (BDS) will be required to assist firms on their export journey. Applying the market systems development approach, the report provides a holistic analysis of the market, identifying the root causes of low export readiness and the related constraints in the supporting functions and the rules and regulations.

Uganda's IT and ITES core market is broadly defined by three kinds of services, IT outsourcing (ITO), business process outsourcing (BPO) and knowledge process outsourcing (KPO), which all have a subset of different activities. The key inputs for all three services are human resources, connectivity, electricity and hardware. The supply of ITO services is highly fragmented, with numerous MSMEs and freelancers clustered in Kampala, who all offer a range of services with varying level of value addition. BPO services, however, mainly comprise call and contact centres. On the demand side, both the domestic and international markets can be segregated into transactions between IT and ITES firms of the same industry (horizontal activities), and services provided to other sectors (industry verticals). The biggest consumers of IT and ITES stem from banking, financial services & insurance (BFSI), telecommunications and e-government. However, these are also the industries where Ugandan IT and ITES firms face stiff competition from foreign companies.

The supporting functions form the foundation for any market transaction taking place. Four essential supporting functions were identified: infrastructure; access to finance; skills; and capacity. *Infrastructure* comprises: access to internet and broadband, which is mostly available with good speed and at decreasing costs; availability and cost of software and hardware; reliable power, which is still a critical factor in Uganda; and mobile phone penetration. *Access to finance* is still constrained by banks not accepting intangible assets, highly volatile cash flows, lack of short-term and medium-term loans for capital expenditures, and poor investment readiness. *Skills & Capacity*: despite a large tech-savvy workforce, there is a lack of general management skills, as well as e-business and eTrade management skills, at company level.

The rules and regulations define the 'rules of the game' and the terms of the market transactions which are being undertaken. On the legal side, the EU uses copyright to legally protect computer programs (Directive 2009/24/EC), while it also protects the personal data of people using online (and other IT) services. Several European buyers will require companies to have quality management standards, such as 'ISO 9001:2015' and 'Capability Maturity Model Integration' (CMMI), in place. There are also other Ugandan legal aspects that affect the local IT and ITES firms, such as the ban on importation of second-hand ICT equipment, over-the-top tax on social media and access to government tenders, that led to more imported hardware.

Access to business development services (BDS) is not only another vital supporting function, the provision of BDS itself also forms a market system. On the demand side, there is a moderate level of awareness and a relatively low level of compliance among a sample of Ugandan IT and ITES firms with regard to testing

the awareness and compliance level of crucial legal and non-legal EU market entry requirements. Thus, unsurprisingly these firms indicate a high urgency for BDS assistance to be compliant with the EU market entry requirements. Equally, sampled firms show high demand for general BDS and give top priority to help that is directly linked to exports, thus strengthening eTrade management skills.

BDS are required at all three growth stages of a firm – BDS for Incubation, BDS for Survival and BDS for Growth – with the need for more tailored BDS assistance increasing at each stage. However, on the supply side, while there is a broad range of general BDS available, tailored support for IT and ITES companies that want to export to the EU is broadly lacking and mainly supplied by NTF IV itself. Nevertheless, there are stakeholders well suited to provide these services in Uganda. The Will-Skill Framework is a useful tool to assess their capacity and capability, as well as their commitment. Here, ministries, departments and agencies (MDAs) are located in the ‘Low Will, High Skills’ quadrant, while BMOs are more in the ‘High Will, Low Skills’ region. Commercial BDS providers will generally operate anywhere where there is a viable business case. Thus, they are placed in the ‘High Will, High Skills’ quadrant.

A well-functioning market for BDS is a vital element of the overall IT and ITES market system. Many of the identified root causes stem from the lack of tailored and affordable business support services. There are several local BDS providers – some more capable, some more committed – lined up to provide these services. Depending on where they are placed in the Will-Skill Framework, CBI should take the appropriate approach when engaging them. Going forward, this report aims to provide some guidance on how NTF IV Project Partners could improve their BDS portfolio and/or develop a new service tailored to the needs of the sector – while keeping in mind that ownership of the development and implementation of new concepts should remain with the partners. In addition, CBI should consider its own exit strategy and ensure it does not permanently fill any gaps.

List of abbreviations

ATM	Automated Teller Machine
B2B	Business to Business
BDS	Business Development Services
BFSI	Banking, Financial Services & Insurance
BMOs	Business Membership Organisations
BPO	Business Process Outsourcing
BSc	Bachelor of Science
CBI	Centre for the Promotion of Imports from developing countries, Ministry of Foreign Affairs of the Netherlands
CMMI	Capability Maturity Model Integration
CCM	Customer Communications Management
CRM	Customer Relationship Management
DFS	Digital Financial Services
EAC	East African Community
EU	European Union
FDI	Foreign Direct Investment
FITSPA	Fintech Association of Uganda
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GoU	Government of Uganda
ICT	Information and Communication Technology
ICTAU	ICT Association Uganda
IDA	International Development Association
IMS	Information Management Services
ISO	International Organization for Standardization
ISPs	Internet Service Providers
IT	Information Technology
ITC	International Trade Centre
ITES	Information Technology Enabled Services
ITO	Information Technology Outsourcing
KPO	Knowledge Process Outsourcing
kWh	kilowatt-hour
MDAs	Ministries, Departments and Agencies
MSD	Market Systems Development

MICT	Ministry of Information and Communication Technology
MNC	Multinational Corporation
MNO	Mobile Network Operator
MSc	Master of Science
MSDs	Ministries, Departments and Agencies
NITA-U	National Information Technology Authority Uganda
NTF	Netherlands Trust Fund
P2P	Peer-2-Peer
P2B	Platform to Business
PC	Personal Computer
PhD	Doctor of Philosophy
PPI	Personal Identifiable Information
PSFU	Private Sector Foundation Uganda
PSP	Public Service Provider
QMS	Quality Management System
R&D	Research and Development
SMEs	Small and Medium Enterprises
Telcos	Telecommunications Companies
TSI	Trade Support Institution
UBPOA	Uganda Business Process Outsourcing Association
UCC	Uganda Communication Commission
UNCTAD	United Nations Conference on Trade and Development
VAS	Value-Added Services
VMPs	Virtual Market Places
WTO	World Trade Organization

SECTION 1. Introduction

1.1 Objective

In 2005, CBI and the International Trade Centre (ITC) formed a partnership to implement the Netherland Trust Fund (NTF) Programme. Since then, three phases of the programme have been successfully implemented: NTF I, NTF II and NTF III. In Uganda, NTF III started to focus on the IT service and IT-enabled service (ITES) sectors, doing so by training Ugandan technology SMEs to build export capacity. The next phase, NTF IV, intends to enhance the export competitiveness of the Ugandan IT sector.

This report aims to identify and assess critical bottlenecks that prevent Ugandan IT and ITES firms from entering the EU market. The assessment not only covers the core value chain, but also assesses the enabling environment, subsequently uncovering what kind of business development services (BDS) will be required to assist firms on their export journey. Thus, the report then drills down to the BDS market to conduct a needs assessment for such services at the firm level, as well as a supplier capability assessment to assess the capability and commitment to provide such service. This should inform CBI's next stage of providing support to the BDS design phase for the NTF IV Project Partners.

1.2 Methodology

This market assessment applies the market systems development approach to map out the Ugandan IT and ITES sector value chain, to assess its broader export readiness, as well as to identify and prioritise the main constraints. A market system is defined by the core market transactions, in our case the IT services and ITES provided by Ugandan firms on the supply side and the need for such services by EU companies on the demand side. Together with 'supporting functions', such as infrastructure, skills and technology, and the 'rules and regulations', such as standards, the market system comprises a holistic framework.

Applying the market systems approach will allow us to gain a holistic understanding of the market and identify root causes of low export readiness and the related constraints in the supporting functions and the rules and regulations. The root cause analysis (an alternative to the SWOT analysis) will assess the underlying cause for observed obstacles in the market system and will inform the potential need for BDS that will be required to address the identified constraints.

1.3 Data Constraints

The consultants faced significant data constraints while compiling this report. Despite undertaking two missions to Uganda, it was found that basic data was often not collected, and where it was available it was incomplete and usually not very high quality. This is particularly the case for the most basic data, which is not collected by any agency or the statistical department, including (i) estimates of the number of IT and ITES professionals who are active in the sector, and (ii) the size of the domestic market in value terms or the value of exports generated for the sector. Estimates had to be developed using a number of industry sources and interviews with key informants, as well as comparisons with other countries in the region.

SECTION 2. The IT and ITES Market System in Uganda

To a significant extent, Uganda's information technology (IT) and information technology enabled services (ITES) sector has matured. The evolution of the sector can be traced back as far as the mid to late 1990s, when a wave of business computing services started to firmly establish a foothold in the burgeoning services sector and even began to transform the goods sector. Internet cafes mushroomed in Kampala and other satellite cities across Uganda, allowing individuals and small businesses to communicate in much cheaper and faster ways. They were also able to massively improve and digitise their business processes. Consequently, the IT industry has grown at a significant rate and has often outpaced the overall rate of economic growth. According to the International Trade Centre, in 2016, the ICT sector employed up to one million Ugandans, contributing 7% to Uganda's GDP with a compounded annual growth rate of 25%.¹



Applying the MSD approach, this section depicts the entire market system of the IT and ITES sectors as it currently stands in Uganda. A market system is defined by the core market transactions, thus the IT services and ITES provided by Ugandan firms on the supply side, and the (potential) purchase of such services by EU companies on the demand side. Embedded in the 'supporting functions' and 'rules and regulations', the market system provides a holistic view of these sectors and their enabling environment.

Figure 1: The IT and ITES Market System in Uganda

Figure 1 on the right illustrates the market system and the key subcomponents that will be further elaborated.

2.1 The Core IT and ITES Market

Uganda's IT and ITES core market – or the value chain – comprises of a number of discrete general market segments. For the purposes of the report, three kind of services (IT outsourcing, business process outsourcing and knowledge process outsourcing) will be broadly defined, based on a services typology adapted from Gereffi & Fernandez-Stark (2010) and commonly used in the literature.²

¹ Onyango, D. (2016:7) *Uganda: ICT Sector Investment Profile*. International Trade Centre (ITC). Retrieved from http://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Projects/SITA/Uganda%20ICT%20booklet_final_web_page.pdf

² Gereffi, G. & F. Fernandez-Stark, (2010).

- **IT outsourcing (ITO):** This covers a whole range of services, starting from low-value activities, such as the management of applications, networks and other IT infrastructure, to software development for enterprise resource planning (ERP) and new applications or applications integration, all the way up to high-value added activities, such as IT consulting and software R&D.
- **Business process outsourcing (BPO):** BPO activities are in the low and middle segments. There are three broad categories: i) enterprise resource management (ERM), such as finance & accounting, supply chain management and content/document management; ii) human resource management (HRM), namely training, payroll and recruitment; and iii) customer relationship management (CRM), covering marketing/sales and call centres.
- **Knowledge process outsourcing (KPO):** This includes business consulting, market intelligence and legal services, forming the highest value added activities.

The value added for each activity is correlated with human capital (education level). Thus, lower value-added services tend to be performed by people with fewer years of formal education. Call centres and some other BPO activities, for example, can usually be performed by employees with just a secondary school diploma. Market research or application management is typically carried out by employees with at least a Bachelor's degree, while the highest-level R&D and sophisticated programming is carried out by employees with specialised Master's degrees.³

Figure 2 represents the core market for all three services based on discussions with industry experts.

³ Gereffi, G. & Fernandez-Stark, K. (2010). *The Offshore Services Value Chain: Developing Countries and the Crisis*. The World Bank.

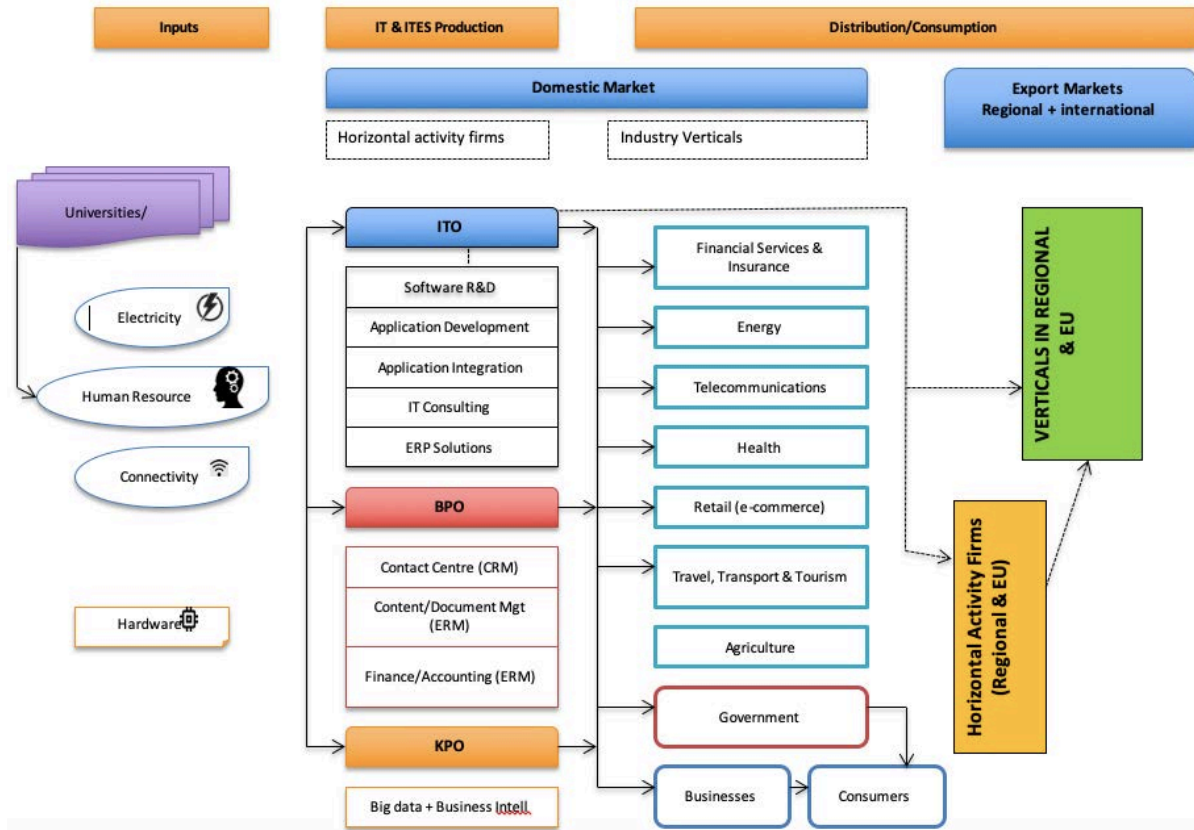


Figure 2: The IT and ITES Core Market

In Figure 2 above, a distinction is made between services that are provided to industry ‘verticals’ (i.e. industry specific clusters), characterised by their own distinct value chains. Horizontal activities firms produce ITO, BPO and KPO service products that can be sold across all industries.

The following section provides a detailed description of the core IT and ITES market, starting from the firm-level on the left side of the value chain, working through to the domestic markets and finally international markets on the right side of the value chain.

2.1.1 Inputs

The key input for all three services is human resources. As stated above, depending on the value of the activity, different levels of education will be required, ranging from customer representatives to software engineers and IT specialists. For IT and ITES companies, human resources costs are estimated to likely account for 60-75 % of a firm’s total costs base, given the typically high labour to revenue ratio of ITES firms. The other costs are for inputs around infrastructure, such as office rent, electricity, connectivity and the cost of hardware, including computers and servers.

Inputs largely depend on other factors from outside the core market and therefore are further detailed in Section 2.2.

2.1.2 IT and ITES Production and Supply Side Structure

A recent survey conducted by NTF IV estimates there are approximately 300 active IT companies in Uganda.⁴ This is a conservative estimate, given that many companies operate informally, with the lines blurred between companies and freelance service provision. According to the International Trade Centre, in 2016, the ICT sector employed up to one million Ugandans, contributing 7% to Uganda's GDP, with a compounded annual growth rate of 25%.⁵ Beyond that, it is difficult to establish the exact size of the domestic market in value terms.

Besides a few BPO companies, most IT and ITES firms in Uganda undertake a variety of activities and do not exclusively provide a single type of service. This makes it difficult to confine them to a specific company profile. The 2018 NTF IV Uganda IT & ITES Exporter Directory shows that – broadly speaking – firms cover ten categories: Web Applications; System Integration; Graphics Design/Image Processing; Mobile Services and Applications Development; Website Design; Big Data and Business Intelligence; Cloud Solutions; Embedded Software Development; Business Process Outsourcing (BPO); and Customised Software Development.

In terms of firm maturity, based on the NTF IV Uganda online survey, one third of the companies had been operating 2-5 years, 19.3% were under 2 years old, 21.1% were 5-10 years old and 26.3% had existed longer than 10 years.

The majority (75.4%) are small enterprises with 6-50 employees, 15.8% are micro-enterprises with less than 5 staff and 8.8% are medium-large enterprises with over 50 employees.

Supply Side Structure of Horizontal Activities: IT Outsourcing (ITO)

Ugandan firms are actively positioning an offer of systems integration, application development (website and mobile) and application integration services, mainly serving a narrow range of buyers in the finance, energy, media and telecommunications sectors, as well as other industry verticals. Discussions with industry sources⁶ reveal that the supply of ITO services is highly fragmented, with numerous MSMEs and freelance application developers clustered in Kampala, all offering a range of services. This ranges from high-value activities, such as website development and design, other user interface (UI) applications and user experience (UX) design services, to lower-value activities, such as digital marketing services. The fragmented and informal nature of the suppliers, therefore, is often not consistent with the formal requirements demanded by major (and most certainly international) buyers, both within industry verticals and by those engaged in horizontal activities. Given their specific requirements, the verticals require a service offer that is systematically tailored to their needs, with assurances on quality and after-sales customer services, as well as post-purchase maintenance support; the latter is a requirement that most ITES firms (predominantly horizontally active) are generally unable to meet.

⁴ CBI (2019:14). *Firms Characteristics and Obstacles to the ICT Services Trade: Indicative Evidence from a Company Survey in the Ugandan ICT sector*. CBI.

⁵ Onyango, D. (2016:7). *Uganda: ICT Sector Investment Profile*. International Trade Centre (ITC). Retrieved from http://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Projects/SITA/Uganda%20ICT%20booklet_final_web_page.pdf

⁶ Interview with Key Informant (ICT Association of Uganda)

Only a handful of domestic firms, with an average team size of 6-8 personnel (mainly IT technicians), have demonstrated the capability to serve a narrow set of semi-sophisticated buyers. Firms like Bulamu.NET,⁷ Javanet Systems,⁸ Buzen Technologies⁹ and Fecund Labs¹⁰ have successfully developed mobile applications for utilities, entertainment companies, virtual marketplaces (VMPs) for e-commerce, health services providers and some legal firms. A few mature, domestically owned and operated software development service providers have made their mark on the market with successful products for the financial services (core banking modules) and insurance, business process management (BPM), customer relations management (CRM), human resource management (HRM) and e-commerce VMPs; they include Digital Solutions,¹¹ Jentroy,¹² Omnitech,¹³ Crystal Clear Limited, and Laboremous.¹⁴ The main challenge limiting supply-side potential for ITO is the small size of firms mostly operating on the margins of formality. Small in this respect means very low capitalisation, limited or non-existent managerial capability (technician owned and operated) and limited as well as informal commercial relationships with a fragmented buyer field.

In line with global tendencies, women are still underrepresented in the ITO and wider tech industry in Uganda. For example, the proportion of female employees at MDAs is only 31.2% female vs. 68.8% male, which has remained largely unchanged since 2012/13.¹⁵ This is partly due to educational and occupational decisions in the past. In a recent study conducted in the United States, only 23% of high school students taking exams in Computer Science exam were female, while only 19% of graduates with a Bachelor's degree in Computer and Information Science were women, resulting in 26% of the computing workforce being female.¹⁶

Supply Side Structure of Horizontal Activities: Business Process Outsourcing (BPO)

The business process outsourcing (BPO) sector in Uganda has been a recipient of significant government and development partner support over the last decade. BPO was and is still thought to offer accessible opportunities, or 'low-hanging fruit', for lucrative contracts for the private sector, while the potential for job creation provides an attractive opportunity for the Government of Uganda to achieve its development objectives. The high level of interest is based on Uganda's comparative advantages, including the low cost of labour and a relatively highly educated workforce with a high command of accent-neutral English. Key government interventions included training of private BPO practitioners in 2011, benchmarking visits to other BPO producer markets, and the setup of a BPO incubation centre at Statistics House in Kampala City. The results of these interventions are mixed and beyond the scope of this report. However, the number of BPO seats in Uganda has not exceeded 1000 over the last decade. The top three BPO firms in

⁷ <http://bulamu.net>

⁸ <https://www.javanetsystems.com/services.html>

⁹ <https://www.buzentechnologies.com/portfolio>

¹⁰ <https://www.fecundlabs.com/welcome/Portfolio>

¹¹ <http://www.dsmagic.com/works/>

¹² <https://jentroy.com>

¹³ <http://omnitech.co.ug>

¹⁴ <https://www.laboremous.ug>

¹⁵ NITA-U (2018). Uganda: National Information Technology Survey 2017/18. Collaboration on International ICT Policy for East and Southern Africa (CIPESA). Available at NITA-U website.

¹⁶ Conway, M., Ellingrud, K., Nowski, T. & Wittermyer, R. (2018). *Closing the Tech Gender Gap Through Philanthropy and Corporate Social Responsibility*. McKinsey & Company. September 2018 | Report

Uganda account for close to 60% of the total number of BPO seats, most of which are concentrated in the contact centre services segment.

The high concentration and the small number of industry players may reflect root causes in other segments of the BPO market system. Traditionally, demand for BPO services is dictated by trends in outsourcing by industry verticals in the home market where the BPOs are established. This does not seem to be the case in Uganda since the industry verticals either own and operate their contact centres, or have centralised corporate customer care functionality. Banks, insurance companies, tourism players, health sector players and mobile telecommunications operators fall in this category. The BPO business operates a volume-driven model often dictated by purchasers that typically have a large, fast-growing and diverse customer base. Therefore, anticipation of growth in the vertical markets is a key driver as well as a constraint for outsourcing contact centre services. One of the leading industry operators felt the limited appetite to invest in growing the current seat capacity was due to sentiments remaining subdued in the purchaser's market for demand growth. However, incidences of lost export opportunities abound.¹⁷ The foreign buying segment for contact centre services is also rather small and concentrated in a few foreign markets,¹⁸ in addition to having to deal with high competition pressure¹⁹ and low margins. However, Asia (a major supplier of BPO contact centre services) is now losing its low-cost competitive edge, a process driven by accelerating wage growth.²⁰

Significant supply-side constraints exist that may continue to alter the capability of the nascent BPO industry to handle demand surges. These constraints include inadequate infrastructure, and lack of access to credit and technology. Consequently, diversification of the service offer is a crucial limitation. The service offer of the industry is concentrated in contact centre service support and less so in the back office operations (bookkeeping, data processing and entry, digitisation, financial record management, content development, and translation services). Content development (animation, engineering, design) as additional services offer are still in their nascency and remain concentrated in the entertainment arena, where very few content creation and integration market actors are supplying content to domestic media market players. The key generators of market growth and demand for translation services to support the volume-driven business models of BPO/ITES players include the publishing houses and academia. However, these two segments are constrained by limited growth potential as well as difficulties securing and retaining property rights to their created content, respectively. The BPO/ITES strategy sheds some light on the strategic orientation that Uganda desires, regarding each of these segments. However, market performance remains lacklustre.

The challenges cited by the BPO industry include poor last-mile infrastructure connectivity, inadequate skills, limited access to business development services (cost and access), and limited access to capital. The BPO Association of Uganda has advocated for better last-mile connectivity through NITA-U and the Ministry of ICT, but with limited success. For contact centre services, abundant and affordable skills

¹⁷ For example, according to one key informant, Bookings.com (a major global tourism virtual marketplace operator) offered a large contract to BPOAU to execute. The association could not respond due to capacity limitations.

¹⁸ Primarily Canada.

¹⁹ Mauritius, Egypt and South Africa are all major BPO suppliers.

²⁰ Despite a slowdown in 2017, Asia's wage growth rate remains above the global average (ILO Global Wage Report, 2018/19).

(quantity) are not in short supply, bolstered by a growing number of graduates in Uganda's secondary and tertiary education system. Industry players agree that accent neutrality is a competitive advantage over India and Egypt. Whether animation and language translation skills are available in the right quantity and quality is generally unknown. Tertiary institutions in Uganda still dominate formal translation services (Makerere University's School of Languages, Literature and Communication). There are only a few translation services providers, and they are not formal BPO providers in the traditional sense.²¹ The inadequacy of management skills in the BPO sector is generally more pronounced than at operational and agent levels.²² The organisational capabilities needed to compete in export markets are not fully present in the translation services segment. Development partners have also participated in the BPO support space, albeit with different approaches and varying scope. For example, the Strengthening India Trade with Africa (SITA) project, a joint initiative of the International Trade Centre (ITC Geneva) and the UK-DFID, was designed to address more of the supply-side gaps, focusing more on partnerships and attracting inward investment into the sector. Interestingly, from a gender perspective, according to a key informant (unlike in ITO), the female/male worker ratio (particularly for call centre agents) is entirely driven by the clients' demands and requirements, with some clients preferring predominantly female agents and others male ones.

2.1.3 Distribution Channels and Consumer Segregation

Consumers of ITES can be segregated into those receiving services from horizontal activities services providers (ITO, BPO and KPO) and those outsourcing key business processes within their industry clusters (verticals). In the next section, we provide a brief analysis of the industry verticals, their needs, purchasing behaviour and buying opportunities.

Demand-Side: Industry Verticals

Banking, Financial Services & Insurance (BFSI)

From a digital financial services standpoint, the banking sector in Uganda is becoming a more and more avid consumer of ITES. While banking services are still primarily delivered 'over-the-counter' or by automated teller machines (ATMs) in the more densely populated areas, banks have generally been quick to respond to and adapt to new technologies. These allowed them to serve customers from the still mostly unbanked population in (rural) Uganda as well as deploy a more efficient service delivery system.

There are 24 licenced banks in Uganda. Four of them provide Tier 2 Capital, five are engaged in Tier 3 microfinance and are deposit-taking institutions, while the rest are Tier 1 banks.²³ Virtually all of them offer one or more value-added digitised banking services enabled by software applications. However, these were all acquired from and installed by international vendors, and are maintained by them as well. While sourcing from foreign buyers still dominates, a shift is now becoming noticeable. Banks are beginning to engage with local and regional vendors and have even purchased software and digitisation solutions from them. A recent example is DFCU Bank's partnership with fintech provider Laboremus,

²¹ Individual freelance translators. Some foreign embassies also offer translation services.

²² CBI survey under NTFIV conducted in 2019.

²³ Bank of Uganda Reports.

intended to accelerate the digitisation of its banking system in order to boost the onboarding of new account users.²⁴

Building on the growing base of mobile phone users across the country, the mobile banking sector has emerged, which continues to grow at a consistent rate. Total mobile money subscriptions peaked in 2017 at 23.7 million subscriptions, constituting 97.4% of the total mobile subscriptions.²⁵ According to FinScope,²⁶ 32% of adult phone holders were active digital financial services (DFS) users by the end of 2017. Agency banking has been heralded by the most recent amendments to the Financial Institutions Act (2017), which allows banks to roll out services to licensed agents in remote rural areas and cities across Uganda. Agency banking is set to change the purchasing habits of brick-and-mortar financial institutions. It provides scope for increased demand for ITES-ITO by financial institutions who are expected to purchase new core banking software solutions tailored to address their unique interoperability needs and requirements. Over two years (2016-18), a pilot project by Financial Sector Deepening Uganda (FSDU), involving the nation's five top banks, has since rolled out agency banking services. Furthermore, the Uganda Bankers Association recently implemented the first-ever shared agency banking platform, which allows interoperability within the network of agents and across different banks.²⁷

The emergence, growth and participation of financial technology (often referred to as fintech) is blurring the lines between traditional banking services and digital financial services. As part of the IT and ITES market, fintech is now also becoming more pronounced in Uganda. According to industry sources, although fintech companies in Uganda are currently concentrated in the late startup stage of enterprise progression,²⁸ they now play a more active role in the financial services value chain. The Fintech Association of Uganda (FITSPA), launched in August of 2017 under the tutelage of FSDU, has registered over 70 fintech companies as members, which is estimated to be approximately three-quarters of the known fintech startups in Uganda.²⁹ The leading offers made by fintech companies to banks are scalability and deeper financial inclusion. Some fintech companies (foreign and domestic) have built business models to improve the core banking and insurance sectors' infrastructural backbone. They have positioned their treasure trove of customer data to provide risk management analytics services and, in some instances, core banking software solutions. For the insurance sector, micro-insurance products have been packaged and served in the 'm-insurance' B2C markets.³⁰

Since 2009, Uganda's financial sector has subscribed to the Basel III framework, which imposes stricter risk management requirements on financial institutions. Compliance requires banks and insurance companies to store and analyse several years of customer's transactional data, a function the fintechs

²⁴ Source: <https://www.dfcugroup.com/news/dfcu-bank-to-accelerate-digitisation-of-bank-system-in-partnership-with-laboremus/>

²⁵ In June 2018, the number of mobile money subscriptions exceeded the number of mobile subscriptions due to the fact that a mobile money subscription remains counted as registered for the service even when such a number has been deactivated from the network, provided there is balance on such account (UCC, 2018:18).

²⁶ (FinScope, 2018). *Financial Sector Deepening Uganda Topline Findings Report*.

²⁷ Uganda Bankers Association & Finscope (2018).

²⁸ 'Late startup stage' means that the fintech has demonstrated viability as a company, has a user base and is becoming more attractive for more funding, including Series A. Xente (<https://www.xente.co>) is a good example.

²⁹ According to Venture4Africa, there were between 70 to 100 Fintech startups in Uganda, as of January 2019.

³⁰ This segment of the financial services value chain is called InsurTech. BIMA mobile is one example (<http://www.bimamobile.com/news-and-media/news/bima-opens-operation-in-uganda>). Others include Mazima Retirement Plan (MRP), WeFarm Limited, Money Duka Services, AyO Uganda and Craft Silicon.

have nearly perfected over the years. Consequently, risk management analytics has become part of the fintech sector’s offer. Most fintechs have focused on digital payments, mainly mobile money peer-to-peer (P2P) payments, remittances and points of sale services. Other fintechs are servicing B2B payments. In the micro-lending segment, fintechs also provide P2P and P2B services, as well as credit risk assessment services.

Below is an illustration showing the services value chain from ITO, KPO and fintechs to selected key industry verticals (banks, insurance companies), and then to selected businesses.

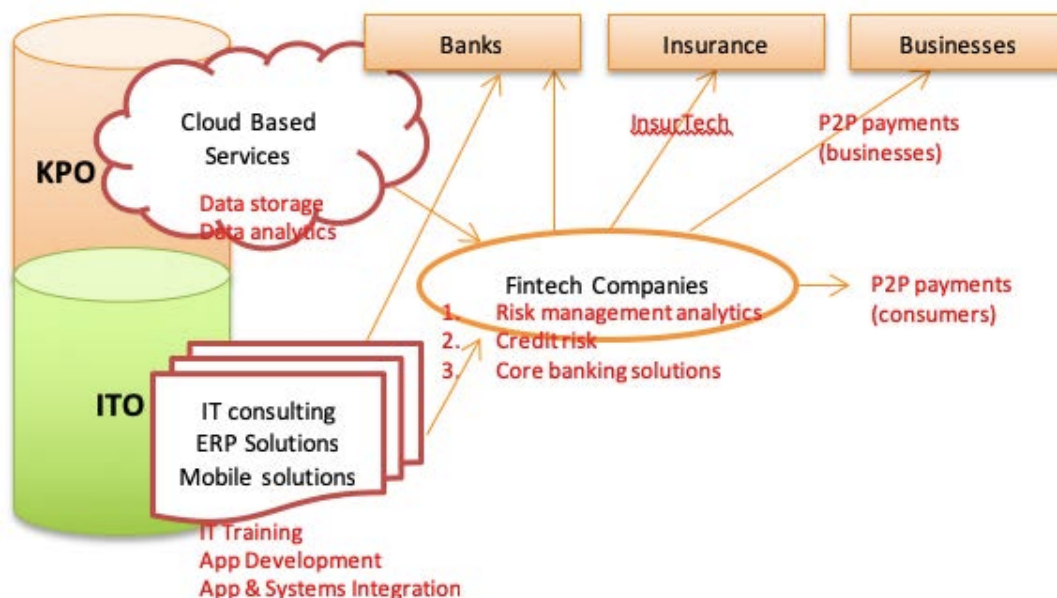


Figure 3: BFSI Sub Core Market

The cloud-based services segment of the ITES value chain is still dominated by foreign service providers. Cloud services are mainly served by global players, including Amazon Web Services (AWS), Microsoft’s Azure and Google Cloud. Nonetheless, Raxio Data³¹ is a recent entrant into the cloud services market whose strategy is to help customers (mainly banks, MDAs, telcos, ISPs and large corporations) to keep local and regional content local. Raxio’s strategy is premised on the recently enacted data protection law which imposes a residency restriction rule for personally identifiable information (PII). Other cloud service providers currently in the NTFIV program include Thin Void, NFT Consult, Pref-Tech Communications Ltd and Jentroy (U) Ltd.

Telecommunications

The transformation of ITES was visibly characterised and in many ways driven by the liberalisation of the telecommunications sector. In 1995, Uganda licensed the first mobile network operator (MNO) called

³¹ <https://www.raxio.co.ug>

Celtel, followed by MTN South Africa in 1998. The number of Public Service Provider (PSP) licence holders has reached 31 in Uganda, with the voice and data segment being served by 7 MNOs. According to the Uganda Communication Commission (UCC), as of March 2018, the estimated number of internet users reached 19,134,518, of which 9,855,034 were mobile internet subscriptions. Mobile phone subscription rates have soared over the last two decades at double-digit rates, peaking at close to 24.9 million³² in 2017 according to the UCC, a phone penetration rate of about 52% among adults. However, an estimated 700,000 smartphones users registered across Uganda’s MNO networks put this statistic into better perspective. The smartphone penetration rate remains substantially low.

The stellar growth of the telecommunications industry in Uganda has also trended towards higher industry concentration and less competition, with only two of the MNOs – Airtel and MTN – controlling more than 82% of the telecom market by mobile subscription,³³ while three MNOs exited the market in 2018.³⁴ Limited competition in the telecommunications industry can constrain demand in the IT and ITES domestic market, because the highly concentrated market power of the MNOs limits the selling opportunities for a highly competitive, more diverse (yet weak), horizontal activities ITES seller’s market. Such a situation may favour larger foreign ITES providers who possess unique capabilities and advantages that hand them supplier power.

Below is an illustration showing the services value chain from IT & ITES services firms to telecommunications industry verticals.

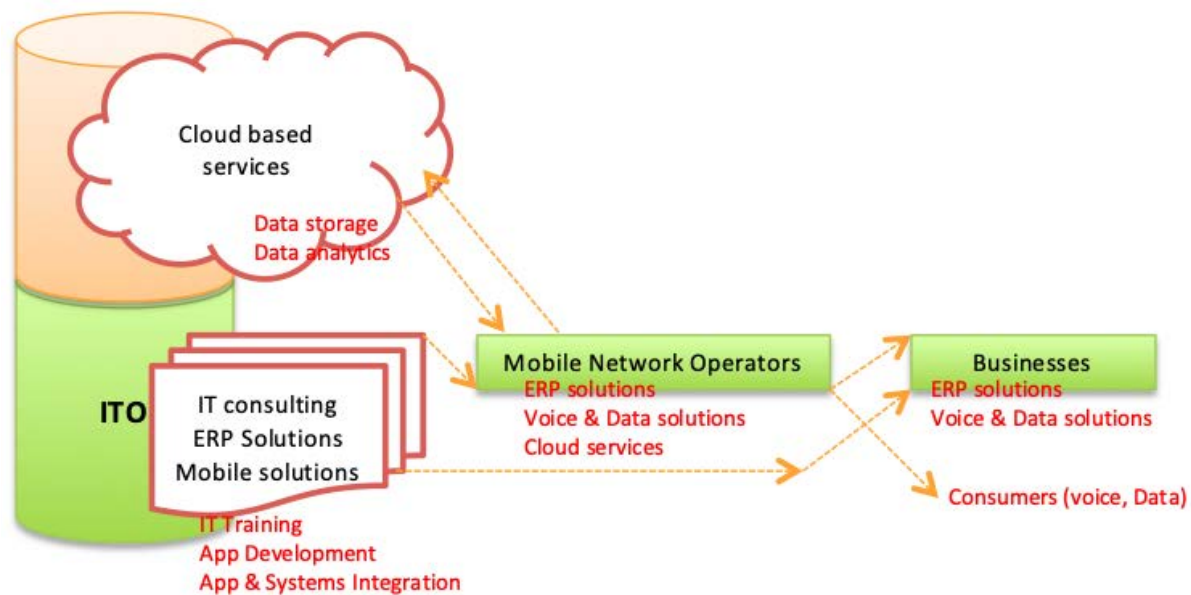


Figure 4: Telecommunications Sub Core Market

³² (UCC, 2018:4). Post, *Broadcasting and Telecommunications Market & Industry Q2 Report, 2018*. Retrieved from the UCC website

³³ Herfindahl index by UCC shows growing concentration (UCC, 2018:11). A recent article (Gillwald, Mothobi, Ndiwalana. & Tusubira, 2018) also tackles this issue, positing lack of willingness by the regulator to consider both ex-ante and ex post policy interventions to restore efficiency in the markets.

³⁴ Vodafone, SMART and K2 exited Uganda.

The eventual market saturation of voice, data and internet consumption will force MNOs to shift their business models into the value-added service segment of ITES in the future. This situation, which is already happening in the EU,³⁵ is likely to yield positive spillovers for firms already established and specialised in the ITES sector. For example, 'MTN Business' already offers a cloud-based ERP service called 'MTN ERP' which is a fully integrated management software solution for corporate clients in countries where the company operates.

However, there are also some significant downside risks from increased competition if MNOs offer additional, competing IT-enabled (value-added) services to the corporate and business segment in their domestic markets, Uganda included. The MNOs also purchase and resell broadband from the undersea cable companies, a position that hands them much more power over internet pricing. Currently, MNOs in Uganda do consume domestically produced IT consulting services; however, this is in relatively small quantities and firms could potentially be absorbed in the future. The most recent CBI survey identifies 27 companies offering telecommunications related services, mainly mobile services.³⁶ The few domestic firms that supply IT consulting services are focused on basic training and digital marketing, some application development services, and, to some extent, systems integration.³⁷ Telcos have identified a market segment comprising customers purchasing content streaming services. In 2018, MTN exploited this opportunity and signed up with Tidal to bring high-quality music streaming services to their mobile customers.³⁸

e-Government

Beyond regulating ITES market activity, governments across the world are increasingly playing an active role in utilising these services (particularly BPO) for their own benefits. The Government of Uganda (GoU) is a significant customer of the IT and IT-enabled services sector on the demand side. The key driver behind this is the government's aspiration to digitise government and to establish crucial IT backbone infrastructure to support digitisation across the board. Such technologies would allow them to operate in much more effective and transparent ways. Uganda's ambition to implement comprehensive e-government initiatives is stated across various key government strategies. The Ministry of ICT's Sector Strategy and Investment Plan (ICT SSIP 2015-2020) envisions the use of ICT as a tool for governance and growth in non-ICT areas. The strategy sets a target of ensuring that at least five priority sectors of the Government of Uganda are completely online by 2020, and at least 50% of e-government services are online by 2020.³⁹ As of 31 December 2018, some 397 ministries, departments and agencies (MDAs)⁴⁰ were connected to the national backbone infrastructure (NBI), with a total of 81 e-government services now

³⁵ The telecom giant Swisscom AG is a case in point. Worth US\$ 25 billion, the giant has at least 16 spinoff subsidiaries offering a broad range of IT, ITES and VAS services across Europe.

³⁶ CBI (2019 April:16). *Firms' Characteristics and Obstacles to ICT Services Trade: Indicative Evidence from a Company Survey In the Ugandan ICT Sector*.

³⁷ Firms that offer more advanced services to telcos (including ERP, cloud, mobility, analytics, social, and smart sensors services) have a foreign ownership component. A case in point is WIPRO, a South African company with a wholly owned subsidiary based in Uganda (<https://careers.wipro.com/global-africa.aspx>). Oracle ERP is another.

³⁸ <https://tidal.com/partners/mtn>

³⁹ MICT (2014). *ICT Sector Strategy & Investment Plan (2015-2020)*. Deloitte & Touche. Available on the NITA-U website.

⁴⁰ MOF (2019). Of these, 282 were receiving services including internet bandwidth, IFMS, leased lines, dark fibre and data centre. To put these figures into perspective, NITA-U had planned to connect up to 730 MDAs during the same period.

available online.⁴¹ NITA-U remains the biggest supplier⁴² of internet bandwidth to MDAs, priced at US\$ 70 per Mbps in November 2017 – a 171% drop from US\$ 190 per Mbps, one which ultimately even made commercial ISPs lower their prices (see Section 2.2.1).

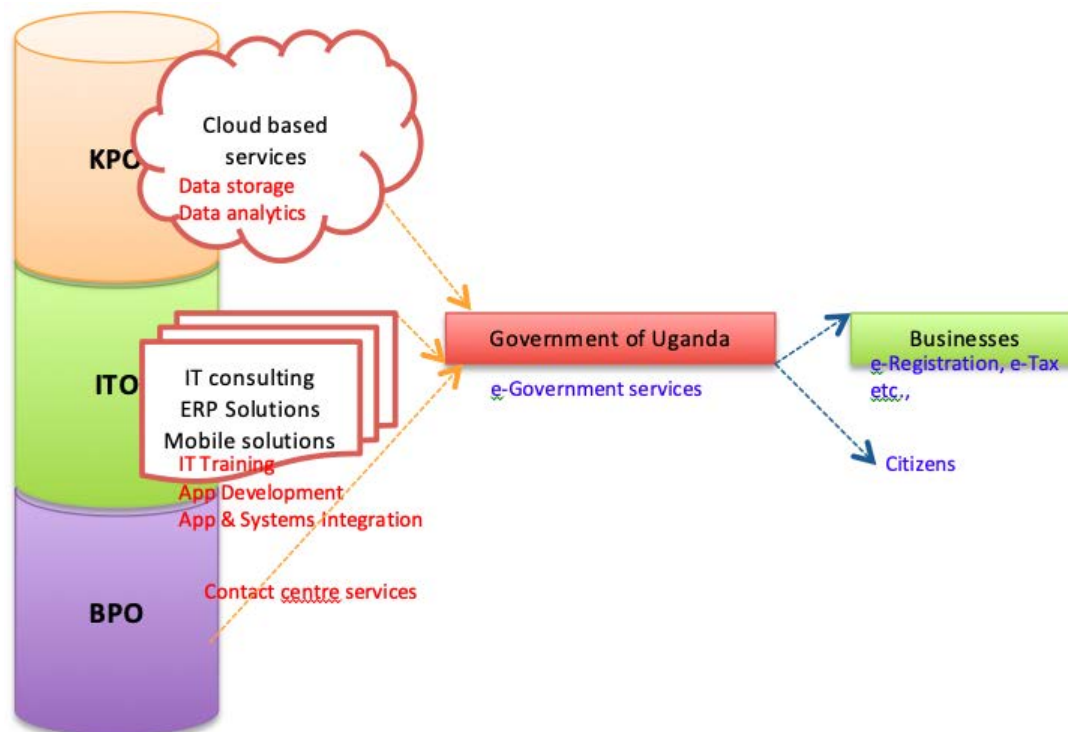


Figure 5: e-Government Sub Core Market

Strategic interventions proposed in the ICT SSIP included promotion, production and use of low-cost locally assembled devices in collaboration with the private sector, and collaboration with the private sector to establish centres of ICT excellence. The GoU has also implemented demand-side initiatives to boost consumption of e-government services. For instance, the government has installed free public Wi-Fi services (dubbed MYUG), which, according to the Ministry of ICT, were expanded to cover over 284 locations, with 76,519 users signed up for the service. Ugandan citizens in these locations can now access fast and reliable internet connectivity for free (MOT, 2019). The GoU regularly conducts e-government usage surveys.⁴³ According to the latest survey conducted 2017/18, the most deployed online service was mobile payment for utility bills, water or electricity (62.2%), followed by registration for tax identification numbers (49%) and online tax payments (35.4%). Unsurprisingly, more usage was registered in urban areas than in rural areas. However, rural based users do use certain services more actively than their

⁴¹ <https://www.ecitizen.go.ug>

⁴² Other suppliers include Uganda Telecom, MTN, Airtel, Africell, Smile and Vodafone (ordered by size). Together these companies supply up to 475 Mbps, compared to NITA-U's 544 Mbps (source: National Information Technology Survey).

⁴³ NITA-U (2018). Uganda: National Information Technology Survey 2017/18. Collaboration on International ICT Policy for East and Southern Africa (CIPESA). Available on the NITA-U website.

urban counterparts. These include the request for examination results (50%), application for trading licences (41.7%), student loans (12.7%) and land title verifications (11.3%).

A proxy for the GoU's demand for IT and ITES can be estimated by the government's combined allocation of funding for ICT to all sector ministries, departments and agencies.⁴⁴ According to the Ministry of Finance,⁴⁵ NITA-U alone had an allocated budget of UGX 139.2 billion (US\$ 38.1 million).⁴⁶ The demand for ITES increases substantially if the total budgeted amounts include development partner contributions. The Regional Communications Infrastructure Program (RISP) alone received a contribution from the World Bank amounting to US\$ 75 million, with the GoU contributing an additional US\$ 10 million. RISP is designed to broadly improve e-government services, improving efficiency through government cloud infrastructure, integration of government IT systems, and building capacity in the management of IT programmes and projects. RISP, alongside other government ICT projects, can substantially stimulate demand for IT and ITES services, providing that domestic sourcing rules of the government's procurement policies are being followed.⁴⁷

Further, NITA-U has issued guidelines and recommended minimum specifications for hardware and software services. For quality and compliance purposes, NITA-U also certifies all suppliers of IT and ITES to MDAs. According to NITA-U, audits of potential suppliers have registered a success rate of contract award for over 75%.⁴⁸ Such a high rate of success, even for a small cohort of applicants, suggests that the certification requirements by NITA-U may not impose a barrier to entry for domestic suppliers beyond the capacities of the applicant firms.

However, from observation of the specifications and guidelines, it cannot be assumed that obtaining a NITA-U certificate will ensure that the minimum requirements of buyers in international markets, like the European Union (EU), are met. As seen later in the report, substantial supply-side constraints limit the potential of domestic firms to become preferred suppliers of ITES to the Government of Uganda. Some of these constraints (at firm level) may be mitigated by sufficient supply and consumption of business development services.

Other Vertical Sectors

The analysis of the three previous vertical sectors – telecommunications, financial services and e-government – indicates that a significant percentage (probably over 75% according to some industry insiders) of the IT and ITES product is being consumed in these sectors in Uganda.

The instances of ITES serving manufacturing, agriculture, health and retail (e-commerce) are still very rare, though existent. eHealth, which remains a priority enabler of digitisation of the health sector for the

⁴⁴ The NITA-U Act 2009; empowers NITA-U 'To regulate and enforce standards for Information Technology Hardware & software planning, equipment procurement in all Government Ministries, departments, agencies and Parastatals'.

⁴⁵ MOF (2019). *ICT Sector Semi-Annual Budget Monitoring Report. Financial Year 2018/19*. Ministry of Finance. Retrieved from <https://www.finance.go.ug/sites/default/files/Publications/ICT%20Sector%20Semi-Annual%20Monitoring%20Report%20FY2018-19.pdf>

⁴⁶ MOF (2019:15). Realistically, the release was only 59.3% while expenditure performance was only 48.9%.

⁴⁷ Section 50 (1) of the PPDA Act 2003 proffers preferential treatment to domestically manufactured goods, Ugandan contractors and Ugandan consultants, including the requirement that all bidding documents by PDEs provide for application of a margin of preference in accordance with Section 59A of the PPDA Act, 2003.

⁴⁸ Key Informant Interview, September 2019.

Government of Uganda, is expected to forge common infrastructure platforms to seamlessly link public and private healthcare systems.⁴⁹ eHealth in Uganda has significantly benefited from public investment via a government project – Health Management Information System (HMIS) – initiated in 2012.⁵⁰ However, although innovations driven by the private sector are still in the early stages, there is large potential of disrupting healthcare service delivery. Local startups have developed mobile applications for health communication and marketing, maternal health (GetIN App), ophthalmology (E-liiso), laboratory diagnostic services (applying artificial intelligence)⁵¹ and health data collection (DigiHealth). Legacy laboratory diagnostic services providers like Lancet⁵² have also rolled out mobile applications to reach more patients through mobile applications.

The relatively few companies offering digitisation solutions to the agri-business sector are, to some extent, driven by supply-side interventions financed by various development partners. The supported solutions are mostly IT-enabled services whose goal is to address market information asymmetries. Most of these supported services are packaged as farmer information services providing commodity prices to farmers through mobile and web-based platforms. Others are designed to address practical bottlenecks to improve agricultural practices as well as market linkages. The market-led user-owned ICT4Ag-enabled information service in Uganda (MUIIS), supported by the Dutch government,⁵³ is one such infrastructure which provides context-specific weather alerts, agronomic tips and index-based insurance throughout the season.⁵⁴ More recently, MUIIS has moved into payments, market linkages and agri-insurance services. A startup called EzyAgric⁵⁵ provides off-take market linkage services.

The e-commerce retail markets in Uganda are growing rapidly, driven by a few virtual marketplaces which are all striving to create online markets for goods and services. However, the most significant constraint on the supply side remains inadequate e-commerce skills, specifically digital marketing and content management. Lack of these skills, together with the relative scarcity of entrepreneurs with IT skills further constrains the sustained take-off of e-commerce. One e-commerce virtual marketplace, Jumia, operates the Jumia ecommerce academy⁵⁶ to help build sufficient good-quality skills for the sector. A high uptake of e-commerce services (demand side) is highly dependent on the right business models, as well as on a sustained change in (end) consumer behaviour and customer expectations in the market. Interviews with two e-commerce virtual marketplaces (VMs) reveal that the inadequacies are mostly related to poor e-business strategy (design and execution).

⁴⁹ MoH (2016). The Uganda National eHealth Policy of 2016 recognises the need for ‘a secure network infrastructure to be shared across public and private healthcare systems’ (p. 16).

⁵⁰ The GoU’s e-Health project, a partnership between the Ministry of Health and the Uganda Communication Commission (UCC), which has established the Health Management Information System (HMIS) and tele-medicine components, seeks to cover 53 districts and 103 health facilities (53 hospitals and 69 health centre IVs).

⁵¹ <https://edition.cnn.com/2018/12/14/health/ugandas-first-ai-lab-develops-malaria-detection-app-intl/index.html>

⁵² <http://www.lancet.co.ug>

⁵³ The Technical Centre for Agricultural and Rural Cooperation (CTA) of the Netherlands: www.cta.int

⁵⁴ <http://muiis.cta.int/2017/03/20/muiis-service-bundle-officially-launched-in-kampala/index.html>

⁵⁵ <https://ezyagric.com>

⁵⁶ <https://www.jumia.ug/about-us/>

2.1.4 Growing Foreign Competition

The ITO market in Uganda is still relatively small when compared to other countries. A proxy for market size in this case is imports of services. Uganda's imports of telecommunications computer and information services are shown in the table below.

List of services imported by Uganda

Service, code no. 9: Telecommunications, computer, and information services by value (US\$ 000)

Code	Service label	Imported Value in 2014 (US\$ 000)	Imported Value in 2015 (US\$ 000)	Imported Value in 2016 (US\$ 000)	Imported Value in 2017 (US\$ 000)
9.1	Telecommunications services	11,734	21,733	10,950	7,319
9.2	Computer services	64,061	59,180	42,840	29,206
9.3	Information services	170	133	119	180

Source: ITC Trademap, WTO, UNCTAD

Uganda remains a net importer of telecommunications, computer and information services. Companies like NCR⁵⁷ (now operating as NCI East Africa),⁵⁸ Craft Silicon,⁵⁹ Simba Technology,⁶⁰ Comtel Integrators Africa and others are the main importers and distributors of IT & ITES, mainly serving industry verticals, many of whom are also foreign owned. Imports of ITES in Uganda are driven by local purchasers who prefer reliable and quality products offered by foreign-owned subsidiaries of multinational corporations (MNCs) or domestic firms with a foreign investment component. These entities import sophisticated, off-the-shelf software solutions that have demonstrated proof-of-concept and scalability within a global community of users. The imported ITES are mostly resold to local entities in the industry verticals. Ultimately, imported foreign produced software products and IT-enabled services enjoy a significant domestic market share. The decline in imports of computer services over the period 2014 to 2017 may be attributed to a shift away from the importation of software originals (EBOPS⁶¹ 9.2.1) towards more cloud-based and SaaS imports. In the same category (EBOP⁶² 9.2.2), some domestic firms have begun to gain

⁵⁷ <https://www.ncr.com>

⁵⁸ SCI has major market tie-ups in place, with and as a Microsoft Solution Provider, Cisco Premier Certified Partner, Eaton Powerware, UPS Systems Distributor, Systimax & D-Link Networking solutions, Philips & Corel Voice solutions (PABX), Cybernet & DigiPoS debit/credit card payment terminals and Retail Outlet Point of Sale terminals. In 2008, SCI added partnerships with Avanza Solutions, for ATM switching software, and with Sage Pastel, for accounting software (Babigumira, 2010). <https://sciug.com/about-us/why-sci/>

⁵⁹ Craft Silicon sells core banking software to Ugandan microfinance institutions. <https://www.craftsilicon.com>

⁶⁰ Simba Technology Ltd, established in 1996, has a presence in Kenya, Tanzania & Nigeria. They provide enterprise solutions, consultancy and training to the government and private sector. Simba's expertise and resource base is enhanced by their value networks/alliances with renowned companies like Oracle Corporation, Infosys Technologies Ltd, mChek, 3i Infotech Ltd and ACI Worldwide, to name a few. SIMBA specialises and has extensive experience in project management, system integration, core banking & insurance applications implementation, software development, relational database management systems, ORACLE Designer and ORACLE Developer tools, UNIX, Windows NT, client-server technology, network computing and BPO Call Centres (Babigumira, 2010). <https://www.simbatechnology.co.tz/AboutUs.html>

⁶¹ Extended Balance of Payments Services Classification as defined by the IMF's Balance of Payments Manual (BPM6).

⁶² Ibid.

market share, especially in IT consulting and support services, application development, design and development for networks and systems, infrastructure and network management services, and education and training services.

However, buyers in Uganda continue to pay significant charges for the use of intellectual property, as is shown in the following table.

List of services imported by Uganda

Service, code no. 8: Charges for the use of intellectual property n.i.e. by value (US\$ 000)

Code	Service label	Imported Value in 2014 (US\$ 000)	Imported Value in 2015 (US\$ 000)	Imported Value in 2016 (US\$ 000)	Imported Value in 2017 (US\$ 000)	Imported Value in 2018 (US\$ 000)
8	Charges for the use of intellectual property n.i.e.	12,184	13,771	19,742	17,640	11,047

Source: ITC Trademap, WTO, UNCTAD (value shown in green is estimated by UNCTAD, WTO and ITC).

2.1.5 Summary of Constraints, Root Causes and Symptoms

1. PRIMARY IT & ITES VALUE CHAIN			
CONSTRAINTS	SYMPTOM(S)	ROOT CAUSE(S)	MARKET ACCESS SUCCESS FACTORS AFFECTED
Small/Limited market size (ITO/BPO)	<ul style="list-style-type: none"> - Most IT & ITES firms stuck in Start-up phase and some in Survival stage (rather than Growth phase) 	<ul style="list-style-type: none"> - Highly fragmented supply structure - Limited buying segment (mostly industry verticals) - Increased competition from ITES producers, particularly MNCs who serve more sophisticated customers 	Bargaining power of Ugandan ITES suppliers
Limited growth potential	<ul style="list-style-type: none"> - Increased competition from imported products (off-the-shelf tried and tested solutions) - Limited visibility in major international markets (EU included) 	<ul style="list-style-type: none"> - Domestic focus (narrow) 	<ul style="list-style-type: none"> - Product differentiation - Global (export) strategy

2.2 Supporting Functions

The supporting functions comprise a vital element of the enabling environment – they set the foundation on which any transaction takes place. The elements of supporting functions affect (and can often explain) matters including the quality of inputs, the production process, the characteristics and performance of stakeholders, the type of delivery models, the supply and demand structure, and access within the market system. As seen in Figure 1, five key supporting functions were identified, which are further detailed below.

2.2.1 Infrastructure

Countries with a strong technology infrastructure – as reflected by high internet and broadband penetration, access to licensed software and affordable hardware, steady power connections and good last-mile connectivity – are in the best position to build a thriving IT and ITES sector. Without reliable infrastructure, companies will struggle to conduct their business and provide services that meet international standards and requirements in an already competitive market.

There are four key components that comprise a good level of supporting infrastructure in IT and ITES: strong and fast internet and broadband connectivity at affordable costs; availability and affordability of software and hardware; reliable and affordable power; and high mobile phone and mobile money penetration.

Strong and Fast Internet and Broadband Connectivity at Affordable Costs

At the end of June 2018, internet penetration stood at 47.4%, with an estimated total of 18,502,166 internet users.⁶³ The average download speed for fixed broadband was 16.93 Mbps in September 2019, (a significant improvement compared to January 2019, when it was 11.58 Mbps). Uganda outperformed some neighbours, such as Kenya (15.66 Mbps) and Tanzania (13.75 Mbps), although its download speed is still significantly lower than, for example, Senegal's (20.62 Mbps in the same month).⁶⁴ Due to limited price competition among the six commercial internet service providers (ISPs), the cost of internet access remains high (at an average market cost of US\$ 237 for 1 Mbps per month) compared to Uganda's neighbouring countries. Interestingly, NITA-U – the biggest supplier of internet bandwidth to MDAs – seems to have had an impact on the internet prices offered by commercial ISPs: when NITA-U dropped prices from US\$ 190 to US\$ 70 per Mbps in November 2017, the ISPs followed with price reductions of their own. Thus, the Mbps per month market prices have been decreasing from an average of US\$ 619 in 2013 down to US\$ 237 in 2018.⁶⁵ Still, the average cost of broadband in Tanzania is US\$ 181 per month, while in Kenya this is only US\$ 75 per month.⁶⁶

Availability and Affordability of Software and Hardware

Despite limited documented evidence, access to affordable software programs and hardware equipment is a serious constraint for the IT and ITES market in Uganda. As a landlocked country, there are additional costs to importing hardware that is already expensive. The NITA-U IT survey finds that only 5.9% of all

⁶³ UCC (2018). *Post, Broadcasting and Telecommunications Market & Industry Q2 Report, 2018*.

⁶⁴ <https://www.speedtest.net/global-index>

⁶⁵ NITA-U (2018). *National Information Technology Survey 2017/18 Report, March 2018*.

⁶⁶ <https://www.cable.co.uk/broadband/pricing/worldwide-comparison/>

households have access to a computer at home, while 8.3% of these households do not have internet at home, because of the too high costs of the internet equipment. Another effect of expensive software licences is a thriving grey market. Trading in counterfeit software and digital piracy is not only an offence under the Copyright and Neighbouring Rights Act of 2006, but also – as detailed in Section 2.3 – negatively affects willingness to pay for licensed software. Digital piracy undermines incentives for local companies to develop software solutions. Even at the governmental level, 24.3% of all MDAs and 16.7% of local governments still use pirated software licences.⁶⁷

Reliable and Affordable Power

Reliable power is still a critical and significant factor for productivity at company level in Uganda. Although over 80% of Ugandan firms experience electrical outages, these outages seem to occur less often on a monthly basis than in the rest of Sub-Saharan Africa. However, when they do occur, they seem to last much longer (10 hours on average) than in neighbouring countries. However, access to generators in Uganda is high, and a quick poll among the NTF IV firms seems to suggest that most of them either own or share a generator. At US\$ 0.16 per kilowatt-hour (kWh) for businesses (US\$ 0.21 per kWh for households), the price of electricity does not seem to differ significantly from prices in other East African countries (Kenya: US\$ 0.19 per kWh, Tanzania: US\$ 0.10 per kWh). It does not create a critical barrier for Ugandan IT SMEs and startups.

Indicator	Uganda	Sub-Saharan Africa	All countries
Percent of firms experiencing electrical outages	81.5	76.2	60.6
Number of electrical outages in a typical month	6.3	8.3	6.3
If there were outages, average duration of a typical electrical outage (hours)	10.1	6.4	4.7
If there were outages, average losses due to electrical outages (% of annual sales)	11.2	7.8	4.6
Percent of firms owning or sharing a generator	52.2	51	34.9
If a generator is used, average proportion of electricity from a generator (%)	17.6	26.9	19.3

Source: World Bank Enterprise Survey Data

High Mobile Phone and Mobile Money Penetration

In June 2018, Uganda had 21,648,672 mobile phone subscribers, with a phone penetration rate of about 56%. Despite a recent drop, mobile phone penetration continues to grow at a fast rate. In 2018, there were 22,733,823 mobile money subscribers, with 358,272,314 mobile money transactions undertaken in the second quarter of the year (according to June 2018 figures), valued at approximately US\$ 5.2 billion.

⁶⁷ NITA-U (2018). *National Information Technology Survey 2017/18 Report, 2018*.

2.2.2 Access to Finance

Access to finance is a critical factor for any type of business to grow. Micro, small, and medium-sized companies all face broadly similar challenges accessing finance, although the ticket size of investments and other capital injections inevitably vary at each stage of the growth process. However, there are some specific characteristics of IT and ITES companies that are quite unique and entail their own challenges.

The market assessment uncovered four types of financing gaps and that need to be addressed.

Acceptance of Intangible Assets

IT and ITES companies usually hold a significant number of intangible assets (ones that are not physical). These include intellectual property, such as patents, trademarks, and copyrights,⁶⁸ computer software and licences and, most recently, also cloud services.⁶⁹

Currently, there are international accounting standards that set out how intangible assets should be treated in the accounts.⁷⁰ However, most Ugandan banks are unwilling – or unable – to accept intangible assets as collateral. The explanation is that bank analysts have difficulties determining the value of, for example, software services that are developed in-house for internal use and those that are being sold, leased or marketed, while also finding it difficult to distinguish between these.

It is also challenging for analysts to determine precisely when technological feasibility⁷¹ has been achieved during the product development lifecycle. This challenge, which has been confirmed through industry interviews,⁷² has serious implications for access to finance for small IT and ITES firms in Uganda. It hints towards the need for capacity building for lenders and financial institutions to improve their underwriting and risk assessment capabilities to encourage higher lending to ITES firms. It also may suggest the need for specialised accounting services for ITES firms and better in-firm financial management capacity (at Chief Financial Officer level). Moreover, competent staff who are qualified to design and implement firm-level accounting policies that are consistent with GAAP standards are needed to ensure an accurate and fair assessment of the actual assets of IT companies.

Short-term Cash Flow Management

IT and ITES companies, like any other service providers, typically experience highly volatile cash flows, which causes their risk profile to escalate beyond normal acceptable commercial risk. Further, many of the contracts are outcome-based, meaning that firms will only be reimbursed once agreements on deliverables are met, while the deliverables often come in the form of an intangible asset (see above). This requirement places additional commercial risks on them that banks are unable to measure and mitigate. Particularly if customers delay fulfilling – or even default on – their payment obligations, the

⁶⁸ <https://www.investopedia.com/terms/i/intangibleasset.asp>

⁶⁹ Also, in August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (a consensus of the FASB Emerging Issues Task Force) (ASU 2018-15). PricewaterhouseCoopers (PwC) has also provided guidance on cloud computing capitalisation <https://www.pwc.com.au/assurance/ifrs/assets/spotlight-accounting-for-cloud-based-software.pdf>

⁷⁰ IAS 38 Intangible assets (Deloitte, n,d) Retrieved from <https://www.iasplus.com/en/standards/ias/ias38>

⁷¹ Generally Accepted Accounting Principles (GAAP) define ‘technological feasibility’ as that point during a software service development project where the research and development phase has been completed to a substantial extent.

⁷² Key informant in the banking sector, interviewed October 2019.

developed service products could become worthless, in contrast to the production of goods whose surpluses can be sold to other consumers. Such a situation severely limits the access to affordable working capital for IT and ITES companies.

However, there are financial instruments to overcome these constraints that are also available in Uganda. For example, contract financing and invoice discounting, which essentially ensure a smooth cash flow from customers. Instead of waiting for customers to pay, companies receive payments almost as soon as they issue their invoices. A quick Google search shows that all major Ugandan banks offer these services with a maximum amount of the invoice finance covered of 70-80% for a maximum tenor of 30-180 days, depending on the length and value of the contract.

Banks	Maximum amount of the invoice finance	Maximum tenor
Centenary Bank	80%	120 days
Equity Bank	80%	90 days
Standard Chartered Bank	70%	30 to 180 days
Orient Bank Limited	70%	60 days

Source: Online research

Lenders and borrowers from the real goods sector often have access to credit guarantee schemes, which provide third-party credit risk mitigation to lenders through the absorption of a portion of the lender's losses on the loans made to SMEs in case of default, typically in return for a fee. In Uganda, there are the African Agricultural Capital Fund (AACF) and the Agricultural Credit Facility (ACF), which (as their names suggest) are tailored for the agriculture sector. The ACF provides 33-50% cover, mainly for investment credit for the farmer. Both of these guarantee schemes do not provide export cover for the agriculture sector. Government export guarantee schemes can mitigate the exposure to the risks of payment default by the contracting party, allowing firms to spread their cash inflows over the export transaction cycle. Such support is contingent on the capability of lenders to assess commercial risks associated with IT and ITES exports and the capability of an export credit guarantee scheme to tailor partial export credit risk cover for the IT and ITES export sector.

Lack of Access to Short- to Mid-Term Loans to Build Capacity

For SMEs in IT and ITES, access to short- to mid-term loans for capital expenditure to build capacity and buy fixed assets is very limited. One key respondent reported that his BPO firm received an offer for a contract that surpassed their current number of seats available. When he went to the bank to ask for a short-term loan to invest in additional seats, they requested a copy of the contract. However, the potential customer was only willing to sign the contract once the required seats were available. The deal eventually fell through as a result.

As explained above, this situation is worsened by the fact that Ugandan banks and other financial institutions do not accept intangible assets as a form of collateral and, therefore, fixed assets and other efficiency ratios appear very weak to them.

Poor Investment Readiness

Access to capital, particularly for investment, might not always be a matter of availability of cash in the market. Most of export-ready firms under NTF IV stated that they already have wealthy shareholders that are willing to provide loans or increase investment by increasing their shareholding. Current financing trends – particularly the private equity business model – tend to favour higher than required ticket sizing towards investment levels greater than US\$ 500,000. These are far higher than the typical SME requirement that usually is within the US\$ 25,000-100,000 range.⁷³

However, ‘investment readiness’ is still an issue due to limited awareness.

2.2.3 Skills and Capacity

Technical IT Skills and Tech-Savvy Labour Force

Tertiary education institutions form the foundation of the IT and ITES sector, given that they determine both the quality and size of the future labour force. Tertiary education comprises three consecutive qualifications in Uganda. In the first place, there are certificates for particular IT programs and applications (ranging from graphics and web design, Java programming, Android app development and Python programming, to 3D animation and cloud computing) and diploma courses in IT and/or Computer Science. In the second place, there are Bachelor’s degree programmes in IT and in Information Systems, and BSc programmes in Computer Science and in Software Engineering. Thirdly, there are MSc and PhD programmes in Computer Science, IT, Information Systems, and Data Communications & Software Engineering.

However, it is difficult to obtain data on the number of higher education institutions that had IT-related specialisations with students enrolled, as well as on the number of IT graduates who studied in Uganda. The only reliable data source is the 2017/18 IT household survey conducted by NITA-U. They find that amongst the students enrolled at the time, 13.4% were pursuing some form of IT training at the tertiary level. The majority of these students (64.5%) were pursuing a certificate in an IT degree programme, while 17.2% were pursuing a Bachelor’s degree in IT, 14.5% a BSc in Computer Science, while 3.8% were on a Diploma course in IT and/or Computer Science.

Amongst graduates with a tertiary qualification within the sample, only 3.8% had their qualifications in IT. Of these, the majority (55.9%) had a Bachelor’s degree in IT, followed by graduates with a BSc in Computer Science (28.2%), while 16.0% had a certificate for a particular IT program or application.

Despite these numbers appearing quite low on a national level, according to the key informants and interviewed firms, there is a large pool of workforce with solid IT technical skills available. In the CBI firm audit, representatives from both ITO and BPO companies stated that employees as well as freelancers

⁷³ Ewing, J., Okolloh, O., & Rawlings, L. (2011). Transforming East African ICT Sector by Creating a Business Engine for SMEs: SMEs and the East Africa ICT Sector. InfoDev. Worldbank.

could be easily hired, with this entailing no specific problems. Potential candidates for permanent positions are often already approached when they are still at university.

However, although there was no gender disaggregated data on tertiary IT graduates available, female representation among the computing workforce is an issue. The bias can partly be explained by educational and occupational choices of young women and girls who often lack digital literacy. Addressing digital illiteracy could therefore be a first step in allaying the common misconception that IT and ICT is a male domain. The Uganda Women Entrepreneurs Association's (UWEAL) is currently developing training courses on digital literacy for women, to be held at a newly established IT hub.⁷⁴ There are also other programmes that provide ICT skills training⁷⁵ for girls. Further, UWEAL's chairperson has introduced a Girls in Coding programme at her former secondary school, where girls learn common coding practices every Saturday.

Lack of Business, e-Business and eTrade Management Skills

Business management skills are essential for effective and efficient management of any company. Business management comprises all 360° aspects of business, starting with strategy, governance, human resources (HR) and financial management, among others. All efforts are aimed at achieving the company's goals and strategy. Effective business management not only requires several business processes and tools to be in place, but also a set of general business skills at the management level.

Further, for the ITES market, almost all transactions involve the exchange of services, either shared online across the internet or via telecommunications. This kind of commerce that is enabled through ICT is often referred to as 'e-business'. Operating an e-business, therefore, requires several specific skills in addition to the general business skills, such as the ability to formalise digital business, manage online orders, conduct digital marketing, and achieve compliance with e-commerce platforms and payment providers.

Under NTF IV, e-businesses are encouraged to trade and export their IT services and ITES on the international market. Export trading thus becomes an essential part of their business strategy. The term 'eTrade' was first introduced by UNCTAD's 'eTrade for all initiative',⁷⁶ which for the purpose of this report is defined as e-business that is conducted across international borders. These transactions need to overcome quite a number of challenges (as outlined in this section) and therefore require an even more sophisticated set of eTrade management skills, such as distance-selling, managing international orders, digital marketing in foreign markets, and achieving compliance with legal and non-legal international buyers' requirements. According to UNCTAD's *Rapid eTrade Readiness Assessment for Uganda*, Uganda's IT labour force is still not adequately equipped with e-business and eTrade knowledge and skills, which are distinct from IT skills. Most IT experts learn about the business aspects through their first jobs and not through any formal education or professional training. The lack of broader business and specific e-business and eTrade skills often lead to the quick end of startups and young SMEs.⁷⁷

⁷⁴ See <https://www.sautitech.com/tech/hub-coworking-space/>

⁷⁵ See <http://digitalinclusionnewslog.itu.int/2018/11/23/digital-literacy-training-to-empower-3400-girls-every-year-in-kampala-uganda/>

⁷⁶ <https://etradeforall.org/>

⁷⁷ UNCTAD (2018). *Rapid eTrade Readiness Assessment for Uganda*. United Nations.

These findings partly resonate with the results from CBI’s Firm Audit of the firms with the highest export potential. For the more mature businesses, at least general business skills and management systems seem to be in place. As such, one of the eight firms is already compliant with ISO 9001, while two more are currently in the process towards this. However, in terms of export skills and international sales capacity, there is only limited experience, with three of the eight firms having exported regionally and one to the US, while there were two which have not exported yet, and none have yet exported to the EU. The management style (i.e. executive decision-making) is mostly structured. Four firms have a top-down structure where the managing director makes the final call, while one firm operates on a CEO to CFO and CTO structure. Two of them operate using an open, more informal structure, while one makes cooperative decisions.

Low Firm-Level Capacity for Fulfilling International Orders for BPO

The number of BPO seats in Uganda has not exceeded 1,000 over the last decade. The top three BPO firms in Uganda account for close to 60% of the total number of BPO seats, most of which are concentrated in contact centre services segment.

Company Name	Total Call Centre Seats
IPSON	250 seats
Techno Brain	100 seats
Exquisite Solutions Ltd	200 seats
Platinum	35 seats

Source: Uganda BPO Association (2019)

Similarly, although the four BPO companies identified as having the highest EU export potential only have an aggregated number of 159 at the moment; however, all of them stated that they could quickly up-scale to between 50 and 100 seats.

For call centre contracts, international buyers will first focus on the number of seats that a company can offer and will look elsewhere if a supplier cannot offer the required capacity. For example, according to one key informant, Bookings.com, a major global tourism virtual marketplace operator, offered a large contract to their firm to execute. However, since the company was unable to provide the required capacity, the deal fell through.

2.2.4 Summary of Constraints, Root Causes and Symptoms

2. SUPPORTING FUNCTIONS

CONSTRAINTS	SYMPTOM(S)	ROOT CAUSE(S)	MARKET ACCESS SUCCESS FACTORS AFFECTED
Infrastructure	<ul style="list-style-type: none"> - Unreliable service - Low quality of service (QoS) 	<ul style="list-style-type: none"> - Poor quality electricity supply (outages) - Unreliable internet 	
Access to Finance	<ul style="list-style-type: none"> - Insufficient collateral and savings at informal financial institutions - Low capacity to develop viable business plans - Complex loan application procedures at commercial banks 	<ul style="list-style-type: none"> - Small ITES businesses do not have large orders to service - ITES firms (small) accumulate just enough cash to keep operations going, do not have a developed business growth focus (limited need for capital growth) - high Informality 	
Skills (a) Lack of e-business management skills (b) Inadequate skills in advanced IT & ITES product/service design, development and marketing. (c) Lack of sufficient supply of Business Development Services	<ul style="list-style-type: none"> - Significant operational delays (low reliability of export supply of ITES) - Lack of awareness of management challenges & needs for sophisticated markets - There is broad access to basic IT technical training, but only covers basic skills already available in the market. Advanced IT programming and systems integration/analysis trainings are not fully available in Uganda - Insufficient demand for specialised BDS 	<ul style="list-style-type: none"> - Lack of awareness of management-related challenges - Lack of awareness of the market access potential of high-quality, well priced ITES - High cost of BDS (particularly specialised services) 	<ul style="list-style-type: none"> - Marketing capability - Brand penetration
Access to Markets	<ul style="list-style-type: none"> - Too many lost opportunities 	<ul style="list-style-type: none"> - Uganda brand (BPO & ITO) still largely unknown in target 	<ul style="list-style-type: none"> - Market share

<p>(a) Mid to high-end customers are buying too little in markets/product segments where Uganda ITES have succeeded</p> <p>(b) Limited knowledge of customer needs, purchasing habits and expectations</p>		<p>international markets (EU) for IT & ITES</p> <ul style="list-style-type: none"> - Limited value offer - Inadequate in-house capacity for production capabilities (software design) - Lack of standards which comply for EU market entry 	
--	--	---	--

2.3 Rules and Regulations

To recap, the IT and ITES market system presented in Figure 1 is composed of the core value chain as well as several 'supporting functions' and the 'rules and regulations'. The rules and regulations define the 'rules of the game' and terms under which core market transactions are being undertaken.

There are four major components shaping the rules and impacting the behaviour of key actors in the IT and ITES market system. However, for the purpose of this report, aspects of both law and regulations as well as certifications and standards will be grouped together, since these are closely intertwined. Given the export orientation of the analysis in this report, the focus will be on how these are affecting small businesses (with export potential) and not domestic consumers. CBI has already published a comprehensive list of legal and non-legal requirements⁷⁸ that service providers wanting to enter the European outsourcing market have to comply with. In the following section, we do not repeat the CBI's list, but rather contextualise it within the Ugandan market.

2.3.1 Laws and Regulations

Copyright and Legal Protection of Computer Programs

Under Directive 2009/24/EC, the EU provides for legal protection of computer programs by copyright. This protection means that, on the one hand, firms exporting to the EU cannot breach any copyright when offering their services in the EU market, and on the other that their products are protected by copyright.

In Uganda, there is a serious constraint for the IT and ITES market system, comprising a thriving grey market, alongside the trade in counterfeit software and digital piracy. This negatively impacts the incentives for local IT companies to invest significant amounts of resources (human and financial) in developing world-class software solutions. Copyright piracy is an offence under the Copyright and Neighbouring Rights Act of 2006. The Uganda Registration Services Bureau (URSB), in collaboration with the Uganda Police Force (UPF), has established a specialised IP enforcement Unit (IPEU) which has been active for the last two years. The law makes provisions for copyright and trademark inspectors who work with the UPF to enforce the law. However, IPEU operations are fraught with institutional coordination arrangement challenges and also have to deal with inadequate capacity.⁷⁹ Counterfeiting software takes place in Uganda on a major scale, with a thriving informal market whose magnitude is difficult to estimate.

NITA-U understands the gravity of the impact of proliferating substandard IT solutions and attributes this to the lack of standards. The agency has established guidelines for certification to counter this issue.⁸⁰ Despite the depth and scope being largely unknown, counterfeiting in Uganda is believed to be concentrated in the desktop operating system segment. However, consumers of highly sophisticated vertical activities, like banks, health facility operators and telecommunications, are largely shielded from counterfeiting. The impact is felt more on the supply side because of the distortionary effect of the 'rock bottom' prices of counterfeit goods.

⁷⁸ See <https://www.cbi.eu/market-information/outsourcing/buyer-requirements/>

⁷⁹ WIPO (2018, September) *Coordinating Intellectual Property Enforcement*. WIPO. Retrieved from https://www.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_13/wipo_ace_13_6.pdf

Institutions involved in IP enforcement include the Uganda National Bureau of Standards, Uganda Revenue Authority, Uganda Communications Commission, Uganda Police Force, Uganda Registration Services Bureau and Collective Management Organisations (WIPO, 2018:57, 58 & 59).

⁸⁰ <https://www.nita.go.ug/publication/guidelines-and-standards-acquisition-it-hardware-software-mdas>

These issues prevent Ugandan IT and ITES firms from entering and/or effectively participating in the market. Digital piracy also seriously alters the buyer's value perception since pirated software services are a cheaper substitute for genuine authorised software. The displacement of legal software sales is believed to largely impact importers of ITES, given their relatively larger market share. Another concern is the formidable entry barrier formed by digital piracy against domestic startups in the ITES market. Such a market distortion may leave only a narrow range of opportunities for Ugandan market entrants to become players in the more sophisticated ITES producer segments, thereby further degrading the scope for fair competition and export potential. Inevitably, there must be a number of unreported and/or undetected cases where illegal software is used to provide ITO and BPO services; as of yet, it is unclear how to counter this.

Data Protection and Privacy Restrictions

In May 2018, the General Data Protection Regulation (GDPR) came into effect in the EU, new legislation which gives people more control over their personal data and lets businesses benefit from a level playing field. The GDPR applies to all companies processing personal data of individuals in Europe, regardless of the company's location.

In response to the GDPR, Uganda launched the new Data Protection and Privacy Act (2019)⁸¹ last year. The law is aligned with the EU's GDPR as far as strict compliance with privacy concerns goes. This development will benefit IT and ITES exporters who intend to access the EU market. However, the new law limits the scope of data processing of personal data outside Uganda. Clause 19 states [as requirement] *'that the country in which data is processed or stored has adequate measures in place for the protection of personal data at least equivalent to the protection provided for by the act, or the data subject has consented.'*

This clause alone raises questions regarding the scope for enforcement of the law, with regard to the provision and transfer of personal data in virtual marketplaces, on websites, and by social media platform operators and other ITES entities serving industry verticals like the health sector, who may, during the routine conduct of business, transfer or store personal data in the cloud in locations outside of Uganda. This clause may also limit access to countries whose laws on personal data privacy are not aligned with Uganda's data protection law. A framework may be needed in the foreseeable future for mutual recognition agreements or regulations by competent data protection authorities for the appropriate safeguards for data transfers and storage in and outside of Uganda into the EAC or other RECs.⁸²

IT and ITES businesses who wish to export their services to the EU will benefit from legal alignment with EU privacy legislation. However, although they will have to demonstrate compliance with the law, there is no certification body that can signal to EU buyers that firms are compliant with the GDPR.

⁸¹ Uganda Data Protection & Privacy Act (2019). Retrieved from

<https://ulii.org/system/files/legislation/act/2019/1/THE%20DATA%20PROTECTION%20AND%20PRIVACY%20BILL%20-%20ASSENTED.pdf>

⁸² For example, Rwanda outright imposes strict restrictions on the storage of personally identifiable information (PII) in foreign locations.

2.3.2 Certifications and Standards

Quality Management Standards

Several European buyers will only by services from companies that have a quality management system in place. The most commonly known are 'ISO 9001:2015' and 'Capability Maturity Model Integration' (CMMI).

In Section 3.1, the level of awareness and compliance with these standards will be set out in detail. Broadly speaking, it can be said that, within this study's sample, the awareness of ISO 9001 was high, while this was medium for CMMI. This can most likely be attributed to CBI's effort under NTF III and IV to raise awareness and provide support. Compliance with ISO 9001 scores the highest, with a majority already in the process of applying.

However, it is not awareness nor the capacity to comply that prevents most firms from obtaining such quality management standards. The high cost of preparation, training, consultation and accreditation are what prevent most firms from obtaining the required certification. This anomaly is in part due to the small size of the certification market in Uganda, as well as the fact that most of the certification bodies are based outside Uganda. Further, firms perceive a low return of such investments, since obtaining such certification does not guarantee new business from international buyers.

2.3.3 Some Further Legal Aspects in Uganda

There are some further legal and non-legal aspects that have direct and indirect implications on how the Ugandan IT and ITES market system operates. The three most relevant aspects are detailed below.

Ban on Importation of Second-Hand ICT Equipment

In the early 2000s, used ICT equipment flooded into Uganda, the plethora of imports spurred by the burgeoning demand from the quickly growing ICT sector. The second-hand ICT equipment became a serious threat to local suppliers of brand-new ICT equipment, even though all of these suppliers were also importers, given that Uganda lacked a domestic ICT manufacturing sector. The country still has yet to establish a vibrant electronics manufacturing industry; only a few companies have set up assembly operations for electronic communication equipment, with only one computer assembly plant constructed, supported by Chinese investment.⁸³ In 2010, the Government of Uganda, concerned about the threat of e-waste, banned the import of used computers.⁸⁴ The ban overtly signalled to electronical product retailers that there was an opportunity to sell brand-new imported equipment. Although this further drove up prices, it did not incentivise the establishment of ICT manufacturing entities in Uganda.

Since the ban in 2010, by now any second-hand ICT equipment has likely been fully replaced by brand-new imported equipment. However, a booming second-hand dealers' market for ICT equipment exists (estimated in the billions), although this is mainly concentrated in the telecommunications handset market segment. In 2018, some investment in electronics assembly was registered in the economy. This ban is likely to have a limited impact on local production (manufacture) by electronics producers and the

⁸³ https://www.newvision.co.ug/new_vision/news/1502973/chinese-company-sets-manufacturing-plant

⁸⁴ https://www.nita.go.ug/sites/default/files/publications/FINAL%20Draft%20Report_NITA_U%20-%20Impact%20Assessment%20on%20the%20Ban%20on%20Importation%20of%20Used%20Computers-9th%20July%202014_0.pdf

output of ITES for several reasons. First, and most importantly, Ugandan ITES businesses have full access to relatively inexpensive imported (new) hardware. Second, ITES businesses are forecast to migrate towards cloud-based delivery models, a trend that will significantly lower their need for physical equipment to start or sustain their operations. This trend could perhaps free up scarce financial resources that would otherwise be needed to purchase expensive hardware to produce and supply ITES.

Tax Benefits and Threats

Industry verticals who buy ITES from local ITES suppliers benefit indirectly from tax-exempt ICT equipment. This is due to the fact that importers and distributors only pay VAT on ICT equipment but not import duty (25%). ITES suppliers also enjoy depreciation allowances of up to 40% for computers and data-handling equipment. However, MNOs pay a 20% excise duty on value-added services (VAS) produced and sold on the domestic market.⁸⁵ An additional threat with significant industry-wide ramifications is captured in the Uganda tax amendment bill of 2018. The bill broadens the definition of excisable 'electronic services' to 'include websites, web-hosting or remote maintenance of programs and equipment, software, images, texts and information, access to databases, self-education packages, music, films, games of chances, political, cultural, artistic, sporting, scientific and other broadcasts'.⁸⁶ The same tax amendment establishes the over-the-top (OTT) tax,⁸⁷ which by most accounts is negatively impacting the use of social media platforms and mobile money services,⁸⁸ a trend that may indirectly lower demand for ITES (particularly those sold through SaaS models to platform operators or other types of VAS, such as mobile applications). It remains unclear how this tax treatment will impact ITES exports, beyond introducing extra production costs and increasing prices for domestic consumers.

Formal ITES businesses benefit indirectly from the tax exemption for ICT equipment. They also may benefit more from the high depreciation allowances, which improve the attractiveness of ITES investments. Independent programmers use new imported ICT equipment whose cost has dropped substantially over the years. Industry players report that this has helped drive down investment costs. However, broadening the scope of excisable electronic services could be a threat to continued investment in ITES, particularly by small businesses who also suffer from high competition with independent informal freelance developers and programmers. The fragmented freelance programmers and developers' market (not export-oriented) is proliferating because of the relatively more straightforward access to cheaper equipment (laptops, servers, desktops). It is also likely that over the medium-to-long term, the benefits of lower taxes on equipment may not be enough to form an advantage for formal ITES businesses, programmers and developers, given the trend towards cloud-based ITES delivery models.

⁸⁵ Uganda Revenue Authority (URA) *Taxation Handbook*. Retrieved from <https://www.ura.go.ug/Resources/webuploads/INLB/TAXATION%20HANDBOOK%20.pdf>

⁸⁶ EY (2018:4). *Global Tax Alert*. Ernst & Young. Retrieved from [https://www.ey.com/Publication/vwLUAssets/Uganda_issues_Tax_Amendment_Bills_for_2018/\\$FILE/2018G_02127-181Gbl_Uganda%20issues%20Tax%20Amendment%20Bills%20for%202018.pdf](https://www.ey.com/Publication/vwLUAssets/Uganda_issues_Tax_Amendment_Bills_for_2018/$FILE/2018G_02127-181Gbl_Uganda%20issues%20Tax%20Amendment%20Bills%20for%202018.pdf)

⁸⁷ [The phrase] 'over the top services' means the transmission or receipt of voice or messages over the internet protocol network and includes access to virtual private networks but does not include educational or research sites prescribed by the Minister by notice in the Gazette. (EY, 2018: 5)

⁸⁸ See Nanfuka (2018) <https://cipesa.org/2018/04/ugandas-social-media-tax-threatens-internet-access-affordability/> and <https://cipesa.org/2019/01/%EF%BB%BFsocial-media-tax-cuts-ugandan-internet-users-by-five-million-penetration-down-from-47-to-35/> as well as Pestanes & Marcais (2018) available here https://www.wavestone.com/app/uploads/2016/09/OTT_UK.pdf

*Access to Local Public Tenders*⁸⁹

Uganda spends significant amounts on IT and ITES services (see Section 2.1.3, sub-heading ‘e-Government’). Government expenditure can substantially stimulate demand for IT and ITES services if local content rules in the procurement policies are implemented to the letter,⁹⁰ despite the risk of erecting entry barriers for foreign firms and restricting value for money. However, the preferential treatment prescribed in the law has not resulted in increased supply by local ITES firms. Stringent specifications for public tenders have been cited as an obstacle, alongside huge capital requirements. There are legitimate concerns raised by government ministries, departments and agencies, related to local bidders’ lack of capacity and failure to comply with minimum requirements and specifications.

Potential ITES providers, such as the golden group under the NTFIV, could benefit from winning and fulfilling public tenders as they have the financial and human capital needed to sustain the supply of high-quality reliable services. For example, Crystal Clear Software Ltd is capable of supplying services with the capacity to support millions of end users. It is almost impossible for small businesses to win these tenders, which casts doubt on their capability to export their services. In addition, small entrepreneurs often find the tender procedures tedious and lengthy.⁹¹ If tender conditions were different, they could potentially increase the production and supply of high-quality export grade ITES, ultimately preparing them to sustain market presence in larger, more complicated markets like the EU.

‘Few small businesses have the capacity to compete for public ICT tenders’

- ICT Association of Uganda

⁸⁹ Interviews with ICTAU members were instrumental in compiling this section of the market system analysis on procurement rules.

⁹⁰ Section 50 (1) of the PPDA Act 2003 proffers preferential treatment to domestically manufactured goods, Ugandan contractors and Ugandan consultants, including the requirement that all bidding documents by PDEs provide for application of a margin of preference in accordance with Section 59A of the PPDA Act, 2003.

⁹¹ Requirements can be found in most tender documents listed on the NITA-U website. High bid securities, and sophisticated service requirements often means that small domestic ITES companies do not fit the profile for supply. For example, see ‘Supply, configuration, customization, operation and maintenance of digital authentication and electronic signatures solution for the government of Uganda’. https://www.nita.go.ug/sites/default/files/procurement/Invitation%20for%20Bids%20%20website%20version%20%20010819_0.pdf

SECTION 3. Business Development Services Market for IT and ITES Firms

Access to business development services (BDS) is another key component of the supporting functions of the IT and ITES market system. Since many of the identified root causes relate to access to (a well-functioning market for) BDS to support businesses with various aspects of their exporting journey. Since the provision of BDS is a market in itself, this section analysis the demand and supply side of such market.

3.1 BDS Needs Assessment

To estimate the need for BDS, four critical indicators are defined and tested. First is a test of the level of awareness of the key legal and non-legal requirements for EU market entry. This is followed by an estimation of the level of compliance for these requirements and an assessment of the perceived needs for business support to fulfil the EU market entry requirements. An estimation of the level of compliance for these requirements and an assessment of the perceived needs for business support for general BDS is also required. Last is a test of the perceived benefits or level of satisfaction experienced by companies that have already utilised various business development services. These four indicators combined will provide solid estimate for demand for BDS among IT and ITES companies.

3.1.1 Needs for Legal and Non-Legal Business Development Services

Awareness Level

The first test aims to estimate the level of awareness of the key legal and non-legal requirements for EU market entry (see Figure 6).



Figure 6: EU Legal and Certification Requirements - Awareness Level

On the legal requirements, virtually all of the SMEs have heard of the GDPR, with 29.1% claiming that they are 'very familiar' with this regulation. This high level of awareness perhaps can be attributed to CBI's awareness-raising efforts under NTF III and NTF IV.

The two other relevant laws, however, are less known. Directive 2019/790 (i.e. the 'Copyright Law' or Directive on Copyright in the Digital Single Market) is only 'somewhat familiar' to most of the SMEs, while over 40% of the surveyed SMEs have never heard of E-privacy Directive 2009/136/EC (i.e. the 'Cookie Law'), which is indeed the least known requirement of all.

On the non-legal buyers' requirements, the most familiar standard overall is ISO 9001, with almost 50% of SMEs claiming to be very familiar with it and literally none saying that they had never heard of it. Again, this might very well be attributed to the efforts under NTF III and NTF IV. The least know quality standard is CMMI, which was only 'very familiar' to one SME, with 41.2% of the respondents stating that they had never heard of it.

Awareness of EU market entry requirements among IT and ITES companies is the first important element with regard to ensuring that firms know what will be required, thus allowing them to integrate such information in their export strategy and ultimately look out for BDS to support them to comply.

Compliance Level

The overall compliance level with EU legal and certification requirements is relatively low within the sample. Only three firms are currently fully compliant with ISO 9001 and only one company with the GDPR. However, there is a lot of compliance effort currently being undertaken. Over 50% are currently in the process of achieving compliance with ISO 9001, while 47.1% are aiming to be compliant with both the GDPR and ISO 27001. Nevertheless, five companies still claim that they are unable to comply with the GDPR, five with the Cookie Law, and six with the Copyright Law.

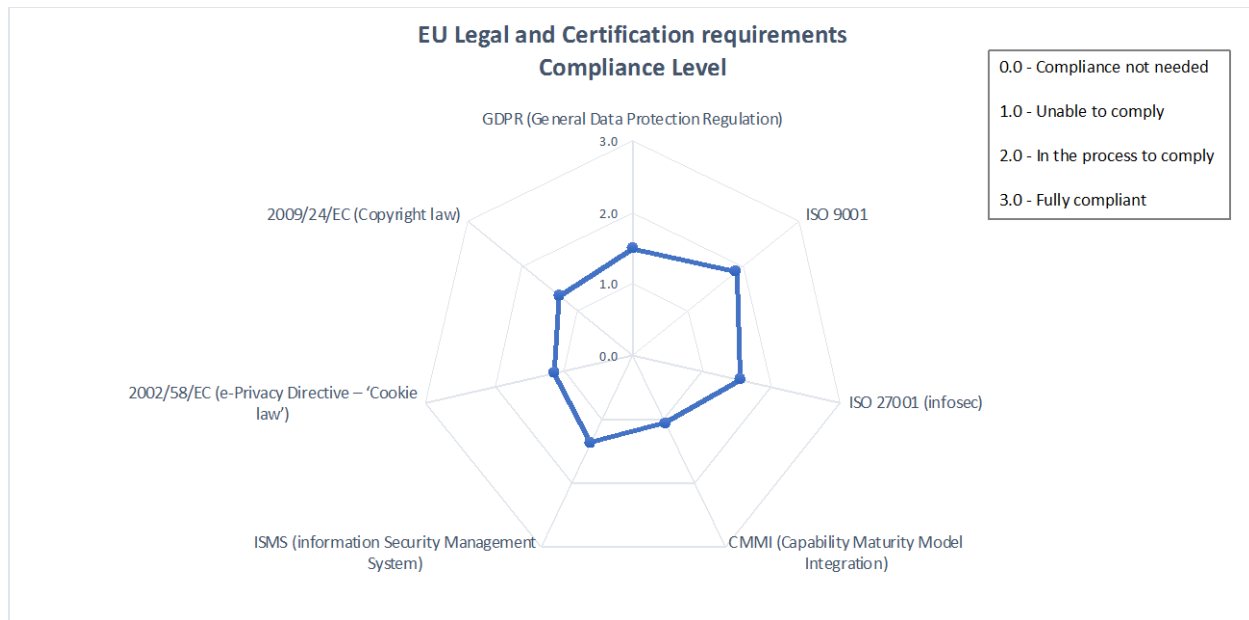


Figure 7: EU Legal and Certification Requirements – Compliance Level

The current efforts to comply with some of the legal requirements and to obtain certification seem to indicate that companies foresee a positive return of investments from these initiatives – this should strengthen their level of commitment and received value.

BDS Needs Assessment

The need for business development services is estimated by questioning the respondents about how urgently (on a scale of 1 to 4) they need assistance to achieve compliance with the set of EU market access legal and certification requirements.

With an average score of 3.0, SMEs require assistance most 'urgently' to achieve compliance with ISO 27001, closely followed by the GDPR, which scored 2.94 on average. Interestingly, even if we ignore the firms that are already compliant with ISO 9001 (and as one would expect therefore no longer need any BDS), business development services required to comply with ISO 9001 still rank only third, after the GDPR and ISO 27001.

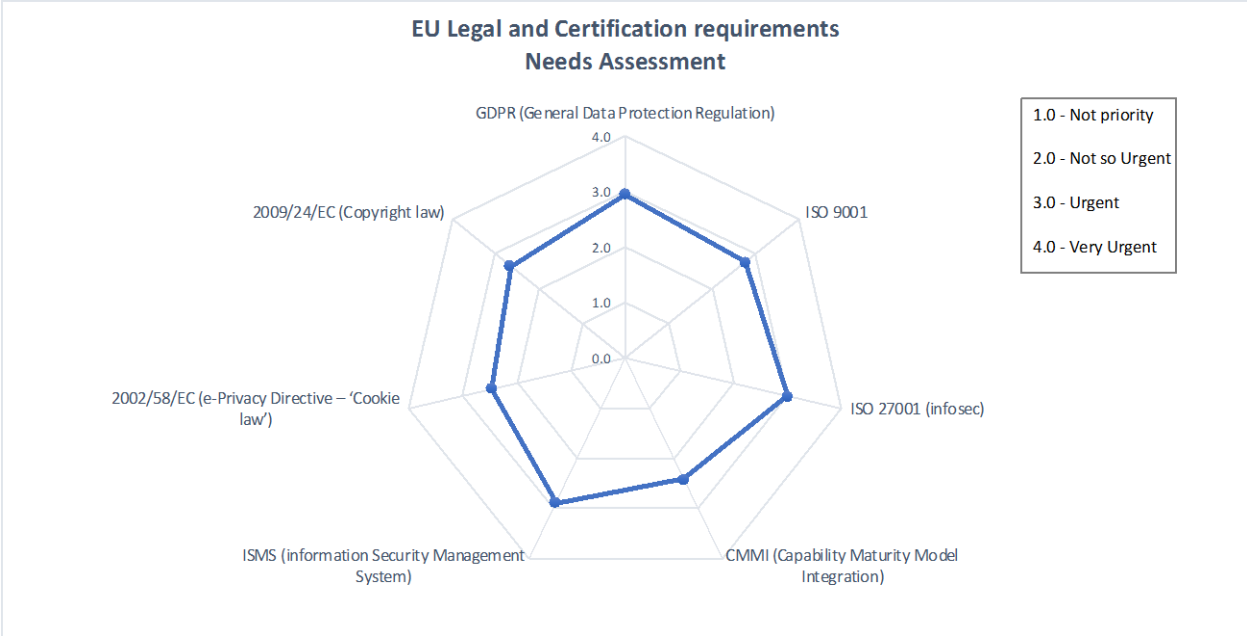


Figure 8: EU Legal and Certification requirements - Needs Assessment

The least prioritised need for BDS is to obtain CMMI certification, although – as seen above – this is also the least known requirement of all. This is followed by assistance with the Cookie Law, which 35.4% of the SMEs consider ‘not so urgent’, and subsequently by Copyright Law, which only two respondents currently very urgently need help with. Again, the lack of awareness and understanding of these laws might also explain why they been given lower priority.

The high need for BDS to comply with ISO 27001 and the GDPR – two types of BDS that are currently not being provided in Uganda – clearly shows that there is a business case for providing such services. Further, there is also a strong need for BDS to obtain ISO 9001 certification; even firms that are already compliant with these standards (one instance in this sample) still state that they need continuous BDS support.

3.1.2 Need for 360° Business Management BDS

BDS Needs Assessment

The following is a test of the perceived need for business development services to assist with each of 360° aspects of business, e-business and eTrade management skills, as defined in Section 2.2.3.

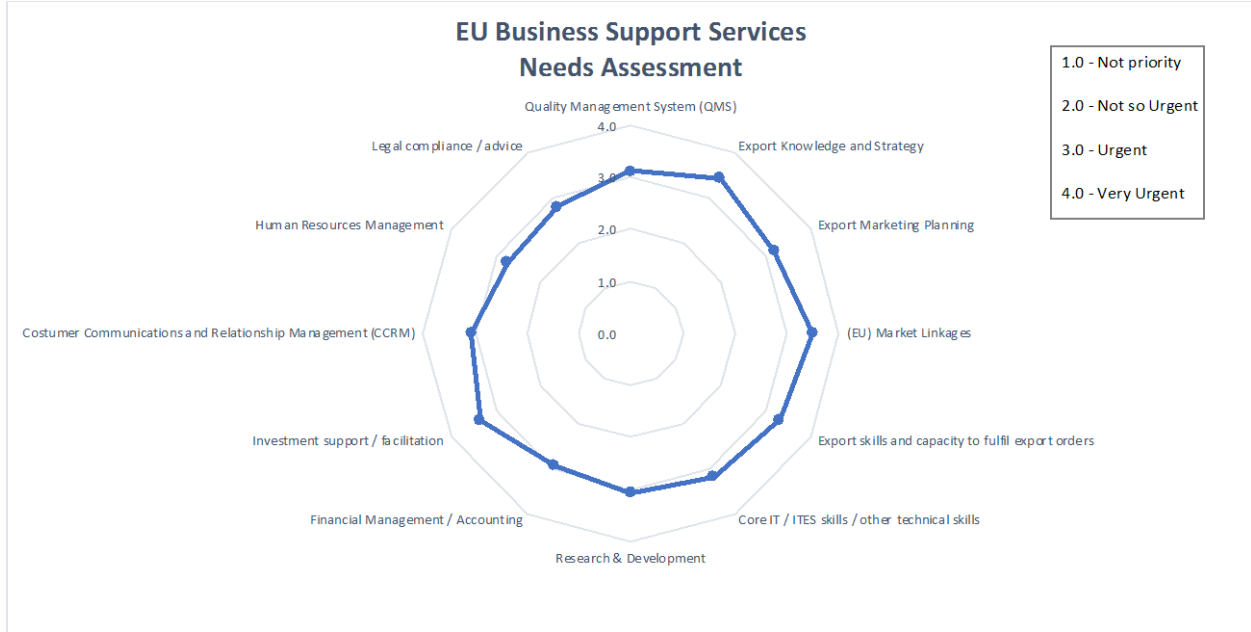


Figure 9: EU Business Support Services – Needs Assessment

The most urgently needed support is for market linkages, particularly to the EU, with an average score of 3.50 (on a scale of 1 to 4) and over half of the respondents stating that they need help ‘very urgently’. Virtually none of them stated that this is not a priority for them. This is closely followed by ‘Export Knowledge and Strategy’, with an average score of 3.44, with 88.2% either stating that they need business support ‘very urgently’ or ‘urgently’. This is followed by ‘Investment Support / Facilitation’, then ‘Export Skills & Capacity to Fulfil Export Orders’, with ‘Export Marketing Planning’ and ‘Core IT / ITES Skills / Other Technical Skills’ sharing fifth place.

The least prioritised need for BDS support is ‘Human Resource Management’ with an average score of 2.75 and 35.3% of the respondents claiming that this is either not a priority or not an urgent priority for them. This is closely followed by ‘Legal Compliance / Advice’ and ‘Financial Management / Accounting’ which ranks 10th.

Interestingly, besides investment support, the top 5 prioritised areas for BDS services thus are all directly export related (i.e. an eTrade management skill). This, on the one hand, shows that NTF IV is on the right track and filling a real gap in the BDS market, while on the other hand there might also be a bias in the sample, since all of them have already received support from NTF IV in one way or another. This is despite the fact that the bottom three BDS services (perhaps with the slight exception of legal advice) are all pure business management skills that are traditionally either kept in-house or where business relationships and outsourcing contracts have already been formed. This is true, particularly for more mature firms like the silver and gold category firms under NTF IV.

BDS Perceived Benefits

It is important to note that asking the SMEs about their needs for business development services and the related matter of urgency assumes that the respondents are *aware of* and *know* what kind of BDS support they need and how they should best prioritise. However, this is often not the case, particularly for BDS that firms have never utilised before and, in some cases, have not even existed on the market before. Thus, in many cases, BDS costumers are *not aware* that they require BDS support, nor do they know what kind they need. This phenomenon is often defined as ‘latent needs’.⁹² In that sense, the BDS Needs Assessment for both legal and non-legal as well as 360° business management BDS are actually conservative estimates and could potentially be higher.

This section, therefore, controls for ‘latent needs’ by asking respondents about the perceived benefits from currently or previously used business support services.

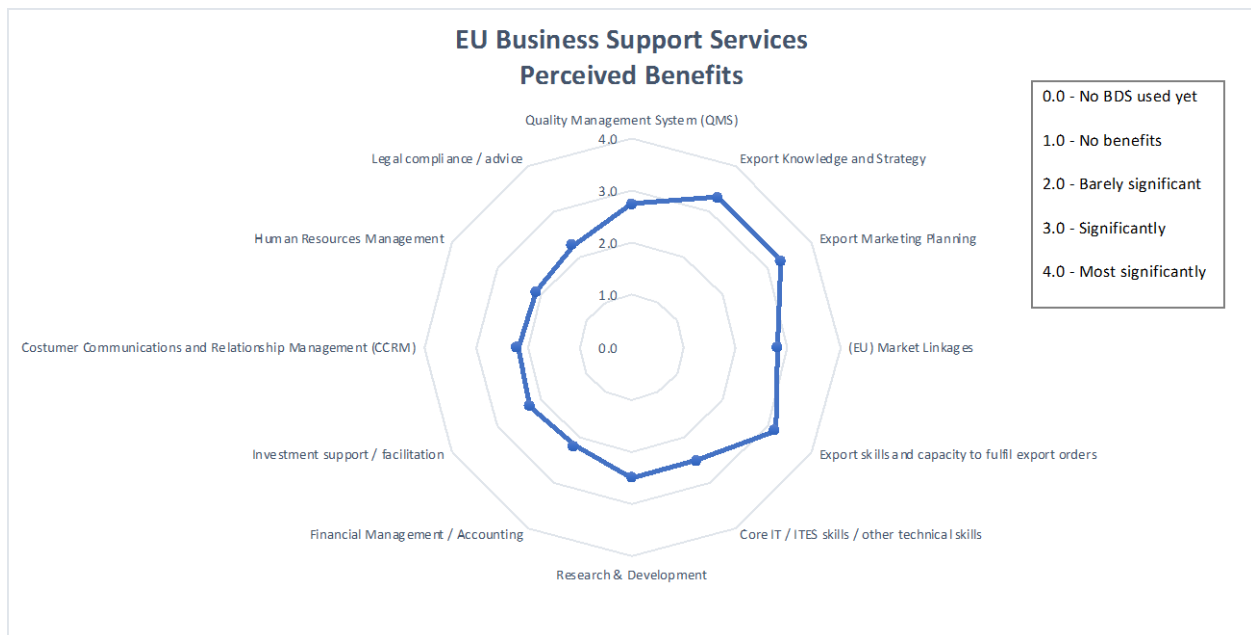


Figure 10: EU Business Support Services – Perceived Benefits

Interestingly, with an average score of 3.31, both ‘Export Knowledge and Strategy’ as well as ‘Export Marketing Planning’ rank 1st with regard to the BDS that brought the most benefits to SMEs, according to the companies themselves. For both services, around half of the respondents state that these have ‘most significantly’ benefited their company, while virtually none of them stated that these led to ‘no benefits’. This was closely followed by ‘Export Skills & Capacity to Fulfil Export Orders’, which scored 3.19 on average. Remarkably, these three categories were the only ones that had an average score above 3.0 (i.e. ‘significantly’ benefited) and again all relate to eTrade management skills.

However, this is mainly because respondents had not used BDS yet. If we only look at those respondents who actually had previously utilised BDS, a different picture emerges. While we still have both ‘Export

⁹² Ahola, T. (2006). How to deliver value to customers with latent needs in a business-to-business project delivery context: empirical illustration from the construction industry. In *Proceedings of the 22nd IMP conference*.

Knowledge and Strategy’ and ‘Export Marketing’ on the top, now all other kinds of BDS also have a score higher than 3.0 (i.e. ‘significantly’ benefited).

The only three categories remaining below now are ‘Financial Management / Accounting’, ‘CCM and CRM’ and ‘Legal Compliance / Advice’. While this result is perhaps surprising, it should not diminish the importance of these categories, particularly of legal and financial advice. The benefits of the two services are the precautionary and preventive measures that they provide, and, of course, these benefits will only be perceived if a company is in either financial or legal trouble.

Last but not least, it should be noted that the questionnaire also tested if firms had used other BDS support that the researcher had not thought of. However, none of the respondents stated any additional kind of BDS that they have used.

3.2 Current BDS Services for IT and ITES Firms

This section outlines the relevant BDS service provider landscape and details the current service portfolio. We then undertake a more in-depth ‘Will-Skills’ analysis of NTF IV project partners, assessing their capacity and commitment to provide BDS services that are tailored to the IT and ITES industry needs.

3.2.1 BDS Service Offering and Providers Landscape

The BDS market both for general business support and for IT and ITES companies is quite nascent in Uganda. However, there some services are being offered that are relevant for IT and ITES.

We distinguish between strategic and operational BDS. The table below provides an overview of the current BDS on offer in Uganda.⁹³

Strategic BDS	Operational BDS
Market Intelligence*	Market Information
Trade Fairs	Financial Management / Accounting
(QMS) Certification* (→ awareness)	Preparation / Capacity Building
B2B / Matchmaking	IT and ITES Technical Training
Commercial Missions	Firm Directory
Advocacy	Collective Bidding*
Political Advisory	Export Marketing Planning
National Branding*	(EU) Market Linkages
Quality Management System	Export Skills & Capacity to Fulfil Export Orders
Export Knowledge and Strategy	Customer Communications and Relationship Management (CCRM)
Research & Development	Human Resources Management
Investment Support / Facilitation	

*currently in planning or in discussion

⁹³ It should be noted that it is impossible for a researcher to compile a comprehensive list of business development services found in the market as these are constantly evolving as well as taking place within the informal sector.

Ministries, Departments and Agencies (MDAs)

Founded in 2011, the **National Information Technology Authority Uganda (NITA-U)** is an autonomous statutory agency that coordinates and regulates IT services in Uganda. The organisation was founded in response to a mandate provided for in the NITA-U Act 2009. Its mission is to coordinate, promote and monitor the IT and ITES sector in Uganda. NITA-U aims to provide up-to-date information on the availability, access and usage, affordability and satisfaction with IT infrastructure, equipment and services. Apart from providing IT infrastructure services to government (NITA-U is the primary ISP for MDAs in Uganda), NITA-U aims to standardise processes and procedures across the whole sourcing and development phase of IT equipment and services, as well as provide guidance and other support to users and providers of IT and ITES. NITA-U is under the general supervision of the Ministry of ICT and National Guidance.

NITA-U has a number of BDS service offerings (see <https://www.nita.go.ug/services>). However, most of their services are benefiting MDAs and local governments, as opposed to private IT and ITES firms. Under Capacity Development and Skilling, NITA-U has signed a memorandum of understanding with the National Council of Higher Education and the Ministry of Education and Sports to ensure ICT is embedded in the national curriculum (primary and secondary school), which will only have indirect, long-term effects on the current workforce. Further, they have put their own IT certification in place to ensure improved quality and good practice in IT products and services. These certificates are mandatory to obtain public contracts from the GoU; however, its recognition by international buyers is questionable and so is the level of enforcement and control once certificates are obtained.

The **Uganda Export Promotion Board (UEPB)** is a public trade support institution (TSI) established to coordinate the development and promotion of Uganda's exports. It is the national focal point for export promotion and development. It is supervised by the Ministry of Trade, Industry and Cooperatives, falling directly under the External Trade Department. It was established by a Statute of Parliament, UEPB Statute No. 2 of 1996, which repealed the Uganda Export Promotion Council (UEPC) Act No. 7 of 1983. The 1983 Act had previously repealed Parliamentary Act 17 of 1969 which established the first Uganda Export Promotion Council.

UEPB provides traditional TSI services, including trade information and market intelligence services, market research, business-to-business linkages, training for export readiness, and trade fair participation assistance to exporters of goods and services. The agency is expected to play a vital role in implementing the national export development strategy (2015/16/-2019/20). The strategy provides the impetus for dedicated export promotion initiatives. It lends credence to the need for more resources for UEPB to improve its organisational effectiveness and to better execute its mandate. However, the NDP III (Third National Development Plan) and the national policy on trade in services is not yet complete. These two important policy documents are pivotal in reshaping the services export strategic orientation at macro-level and meso-level. However, it is essential to realise that the delivery of business support services as a public good is almost always budget-constrained. A narrow fiscal space for improving the scope, extent, and quality of business support services, therefore, limits the effectiveness of service delivery purely as a public good. This situation explains why international partnerships remain at the centre of UEPB's expansion and roll-out of a limited range of support services.

Business Membership Organisations (BMOs)

The **ICT Association of Uganda (ICTAU)** was founded in 2013 as Uganda's first business membership organisation (BMO) for the IT and ITES sector, with the mission to create an effective network between all industry players, researchers, developers and policy-makers to develop world class ICT institutions through professionalism and promote a competitive ICT industry in Uganda.

As indicated in the ITC's Performance Improvement Roadmap (PIRM), there is a need to improve ICTAU's service portfolio, which currently only includes advocacy, accreditation, and branding & brand recognition.

The **Alliance for Trade in Information-Technology and Services (ATIS)** is an export and investment trade alliance formed by a group of companies looking to export their services to the world. ATIS was set up to enable export-ready companies take advantage of joint increased capacity, while providing leadership to its members. ATIS is committed to its members to organise and give them access to global markets, while providing a platform for members to increase access to business and partnership opportunities. ATIS currently has 23 members.

As indicated in the ITC's Performance Improvement Roadmap, ATIS has realised the need to update its service portfolio, which currently does not go beyond advocacy, joint branding of the alliance and B2B meetings, as well as the organisation of trade promotion events, both of which are still in the planning phase.

Commercial BDS Providers

The certification market is very niche in Uganda. There is only one accredited certification body (Bureau Veritas) providing ISO 9001 quality management certification. Most of the ISO-certified IT companies received their certification either from Kenya or India.

The legal sector in Uganda is large. In 2017, there were 772 law firms that were registered and approved by the Ministry of Justice and Constitutional Affairs.⁹⁴ However, a significantly smaller proportion of these are specialised in ICT related aspects. The law firm Kampala Associated Advocates are probably the market leader when it comes to experience in technology, media and telecommunications (TMT) legal practice.

According to the Institute of Certified Public Accountants of Uganda (ICPAU),⁹⁵ in May 2019 there were some 250 licensed accounting firms and practising accountants (auditors) in Uganda. Thus, similarly to the legal sector, it is not a matter of availability, but of specialisation that allows the specific needs of IT and ITES firms to be met (see Section 2.2.2).

⁹⁴ See <https://www.justice.go.ug/sites/default/files/APPROVED%20AND%20NOT%20APPROVED%20LAW%20FIRMS%202017.pdf>

⁹⁵ See https://icpauportal.com/index.php/external_portal/firms

3.2.2 Capacity Assessment of Business Support Project Partners

This section presents an assessment of the capacity and capabilities ('Skills') as well as the commitment ('Will') of BDS providers to deliver the right quantity and quality of business development services needed to improve market access of Uganda's IT and ITES service providers to the EU market, and ensure their subsequent market entry. These are set out in the 'Will-Skills Framework' in Figure 11 below.

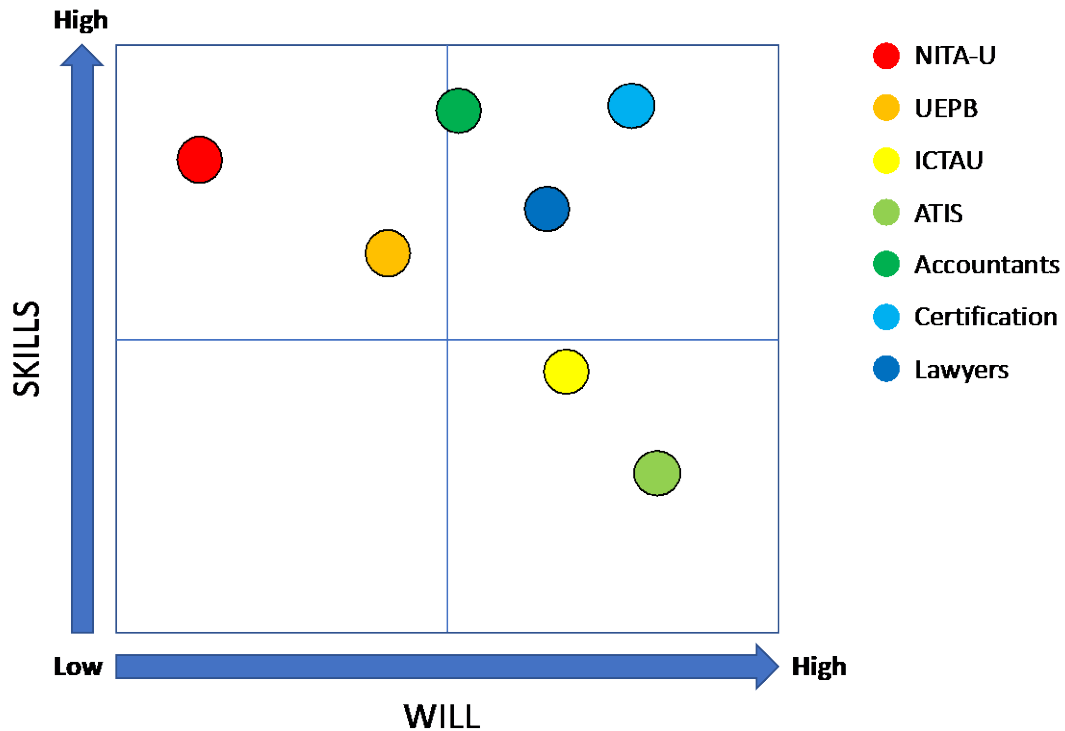


Figure 11: Will-Skill Framework of BDS Service Providers

Located in the 'Low Will, High Skills' quadrant are NITA-U and the UEPB. Through its governmental mandate, NITA-U has the capacity, the financial means and the regulative power to provide meaningful business support services to IT and ITES companies. However, they do not view developing additional BDS services as a high priority. A lot of their attention is currently focused on their partnership with IDA/World Bank, from whom they have received US\$ 75 million in funding to finance the Regional Communications Infrastructure Program (RCIP) Phase 5 – Uganda Project, which aims to lower prices for international capacity and extend the geographic reach of broadband networks, while improving the GoU's efficiency and transparency through e-government applications. As a governmental body, the UEPB is currently waiting for the completion of NDP III (Third National Development Plan) before they will start developing their own Services Export Strategy. Thus, a revision and improvement of their current service offerings will only follow later. Further, UEPB is not a regulator, therefore they lack government funding to further delve into the BDS design.

In the 'Low Will, High Skills' quadrant, players will need partnerships with (external) players who can leverage the high skills to offer subsidised services. Such partnerships could be with international agencies who possess the comparative advantage in delivering BDS services to a diverse global audience of SMEs.

Organisations such as mainly the ITC and CBI remain pivotal for MDAs' success in supporting the IT and ITES sector.

The UEPB, therefore, will continue to play a vital role in identifying and prioritising services sector export strategies and building bridges between Uganda and target markets. The TSI should, however, consider implementing public-private partnership models for ITES BDS delivery, leveraging market-driven approaches, with the private sector taking the lead in delivering specialised and subsidised support services to firms that can partially afford these services. Early-stage ITES firms in the incubator and innovation spaces are good candidates for this model. Late-stage ITES companies transitioning from survival to growth will likely possess the minimum financial means needed to fully pay for BDS. Developing such a model outright, as a pilot project, is to be recommended. The UEPB can then test the effectiveness of delivery and provide valuable lessons in BDS delivery for the ITES sector for policy-makers and implementers.

ATIS and ICTAU are placed in the 'High Will, Low Skills' quadrant. With its 152 members (in October 2017), ICTAU is the largest BMO within the ICT sector. Over the past years, they noticed a low willingness to pay membership fees among their members and an increasing number questioning the actual benefits of their membership. Therefore, they are committed to developing a better service offering to their members. However, they have yet to undertake a members' satisfaction survey for some years now, nor have they categorised their membership. Further, there are a number of challenges within their governance structure which are currently being addressed by an external lawyer provided under NTF IV. ATIS is very committed towards fulfilling its mandate of providing better export opportunities to its members. They view CBI/NTF IV as a critical partner in achieving this. They also recognise the need to develop business development services that have actual business benefits for their members. However, neither the board nor the recently hired secretariat has any experience in developing and designing BDS. As such, they have never undertaken a member's survey to understand the members' need for BDS.

The 'High Will, Low Skills' BDS providers need organisational development support to effectively deliver BDS.

All of the commercial BDS providers are in the 'High Will, High Skills' quadrant. Since providing BDS is their core business, their business will only be sustainable if their service offering is adequate, given market standards. For certification services, the certification body also must comply with the level of standards that they offer; thus, inevitably, they need to have sufficient capacity. The accounting practices and support that IT and ITES firms require do not significantly vary from any other industry, thus certified chartered accountants do have the necessary skills to provide these. However, in Section 2.2.2, we have seen an example – intangible assets – that is relatively new to the financial management practices in Uganda. Lawyers might perhaps need to adapt or specialise to gain the qualifications required to practise addressing the most recent developments in the legal and legislative landscape that have recently emerged in the IT and ITES sector in Uganda and preferred markets like the EU. Thus, their technical capacity is ranked slightly lower. In terms of commitment, wherever there is a commercially viable business case (commercial), BDS providers will be willing to offer their services. There might be a need, however, to raise awareness that IT and ITES companies can become reliable and substantial customers

for business development services, as this new sector is still viewed as predominantly being run by small and non-solvent startups.

‘High Will, High Skills’ BDS providers will need awareness programmes to help ITES players find them and learn more about their service offer.

The fact that the ‘Low Will, Low Skills’ quadrant is empty does not imply that there are no players present in this area. For example, there are small accounting firms, tax audit firms and training firms that remain informal. However, these are not eligible for the support that CBI gives to providing BDS to the IT and ITES sector.

3.3 Gaps in the BDS Markets

As seen in Section 2, many of the root causes identified in the IT and ITES market system can largely be addressed by a well-functioning BDS support system tailored to the specific needs of the industry. Key informants confirmed the high scarcity of business development support services. This scarcity has been perceived as an opportunity, attracting some foreign BDS players. For example, the BPO Certification Institute (BCI) of India has established itself in Uganda⁹⁶ with the strategy to improve service through standardisation (ISO 9001). However, the costs remain prohibitively high.⁹⁷

A partnership model for BDS has also been considered. For example, the BPOAU has contacted the UK National Outsourcing Association, seeking their support in designing a curriculum and a BPO centre of excellence in Uganda. The chairman of the association also tried to source expertise in call centre setup and support.⁹⁸ The BPO sector mentioned (in order of priority) the need for marketing support, skills, market intelligence, business process management certification and market entry assistance.

⁹⁶ African BPO Academy located at Plot 2722, Ring Road Muyenga, KAMPALA. Source: <http://bci.us.org/about-bci/global-locations.aspx>

⁹⁷ ~US\$ 15,000 by some reports.

⁹⁸ Rod Jones is a reputed expert (<https://rodjones.co.za>). His services were needed for expansion support, following the possibility of securing a large contract from a foreign buyer, which required more seat for successful fulfilment.

As seen in Section 3.1, there is an extensive need for BDS across all aspects of business, e-business, and eTrade, as well as for legal and non-legal compliance with the European market. Figure 12 below states the most important kinds of BDS at each growth stage of an IT and ITES firm.

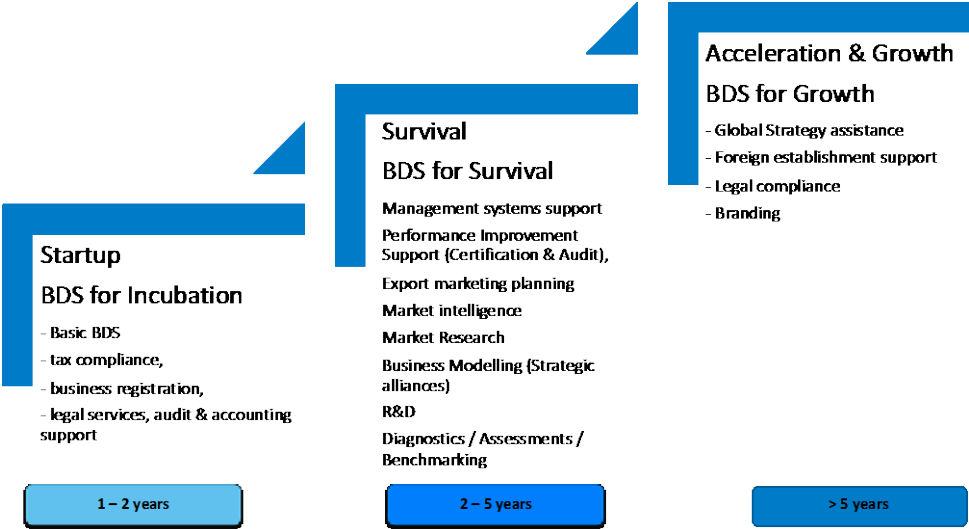


Figure 12: Type of BDS required at each growth stage

SECTION 4. Conclusion and Recommendations

4.1 Conclusion

A well-functioning market for business development services (BDS) is a vital element of the overall IT and ITES market system. Many of the identified root causes stem from the lack of tailored and affordable business support services. For the core market, a national export strategy and branding is required, while the supporting functions firms need to improve their business, e-business and eTrade management skills. With regard to legislation, rules and regulations, IT and ITES export firms need support to comply with the EU legal and non-legal buyers' requirements .

There is a large demand for BDS, particularly for support with legal and non-legal requirements of the EU market and eTrade related aspects. This means that CBI – with NTF IV – is a pivotal player in the market. However, it is important not to become part of the market system and consider exit strategies. There are a number of local BDS providers – some more capable, some more committed – lined up to support the IT and ITES sector.

4.2 Recommendations for the Sector

For the primary IT and ITES value chain, the following recommendations apply to the sector:

- Most Uganda IT and ITES firms remain stuck in the 'Startup phase' and some in the 'Survival stage', instead of reaching the 'Growth phase', due to a highly fragmented supply structure with a limited buying segment, and stiff competition from foreign-owned subsidiaries of multinational corporations (MNCs). Business membership organisations, such as ICTAU and ATIS, are therefore vital for increasing the bargaining power of Ugandan IT and ITES suppliers. Further, it may also be advisable for some firms to grow organically and serve the domestic and regional markets before targeting the EU. Here, the Government of Uganda – Uganda's most significant buyer of ICT services – could provide preferential offers to local innovators and suppliers to support this.
- There is limited visibility of Ugandan IT firms in major international markets, including the EU. Firms therefore need to broaden their domestic focus and develop global (export) strategies and invest in product differentiation. CBI is currently supporting firms, but new (local) players need to enter the market to ensure support sustains beyond CBI's intervention. Further, there is a need for more awareness-raising on the EU side about potential Ugandan suppliers. This should be done through the development of B2B platforms and trade fairs that encourage European buyers to come to Uganda.

There are a number of recommendations and possible interventions within the supporting functions:

- IT and ITES companies usually hold a significant amount of intangible assets (i.e. ones that are not physical). There are international accounting standards that set out how intangible assets should be treated in the accounts. However, most Ugandan banks are unwilling – or unable – to accept intangible assets as collateral. Thus, there is a need for capacity building among lenders and other financial institutions, and for training in specialised accounting services and better in-house financial management capacity at ITES firm level.

- Uganda’s IT labour force is still not adequately equipped with e-business and eTrade knowledge and skills, which are distinct from IT technical skills. There is a need to strengthen formal education or provide professional training to increase both general business skills and more specific e-business and eTrade capabilities among IT and ITES firms’ C-level management.
- The Business Development Service market is generally weak in Uganda, particularly for specialised services to support (EU) export readiness of IT and ITES firms. Thus, there is a need to provide capacity-building support to business membership organisations (BMOs) with the development of a portfolio of both specialised and non-specialised services. Awareness-raising is also required among private BDS providers, to show that there are serious business opportunities on the IT and ITES market.

There are two key recommendations regarding legislation, rules and regulations:

- Under current legislation, IT and ITES firms who wish to export their services to the EU will need to comply with the prevailing laws and regulations. However, there is an inadequate level of awareness and a low level of compliance among Ugandan IT and ITES firms. Public and private BDS providers (e.g. lawyers) should therefore provide tailored training and (legal) assistance to increase capacity – and knowledge of ‘how’ – to comply. There is the need to equip, capacitate and accredit the NITA-U IT Certification Office (ITCO) to assure EU buyers that Ugandan firms are compliant with EU digital laws and regulations. In addition, where possible, NITA-U is encouraged to collaborate with EU trusted certification service providers.⁹⁹
- Similarly, European buyers may require companies to hold specific quality management certificates, such as ISO 9001 or CMMI, or security standards, such as the ISO 27000 series. However, firms lack knowledge of ‘how’ and ‘why’ to certify, while the cost of certification is quite high. Thus, to raise awareness and bring down prices, the certification and accreditation ecosystem needs to grow in Uganda in the long run, while a call for innovative public-private partnerships (also BMO-private sector collaborations) is required in the short run.

4.3 Recommendations for CBI

Based on the analysis above, the following recommendations can be made to CBI:

- For all of CBI’s support with the concept of new business support services, the ownership of the development and implementation of such concepts should be with the project partners. This approach will strengthen the sustainability of the developed services that go beyond the project lifecycle of NFT IV.
- For Project Partners in the ‘Low Will, High Skills’ quadrant, CBI should aim to facilitate and foster partnerships between these Project Partners and other external stakeholders who can leverage the high skills required to offer subsidised services. Such partnerships could be with CBI and ITC directly, or with other (willing) commercial providers.

⁹⁹ EU trusted lists of Certification Service Providers <https://ec.europa.eu/digital-single-market/en/news/eu-trusted-lists-certification-service-providers>

- For 'High Will, Low Skills' Project Partners, CBI should continue to provide organisational development support to these institutions to ensure effective delivery of BDS.
- With regard to Project Partners with 'High Will, High Skills', CBI should continue with programmes to raise awareness, and help IT and ITES companies to find them and learn more about CBI's service offering, on the one hand. On the other, CBI should engage directly with Project Partners to allay the perception that the IT and ITES sector is a business sector comprising young entrepreneurs who do not have the purchasing power to afford their services.
- When intervening in the IT and ITES market systems, CBI should begin considering its own exit strategy and ensure gaps are not permanently filled.

4.4 Next Steps

The next steps comprise NTF IV's project partners, together with one additional BMO (FITSPA) and four commercial BDS providers, having been invited to submit their concepts to improve their BDS portfolio and/or develop a new service tailored to the needs of the sector. CBI's BDS Expert for NTF IV in Uganda will then review these concepts and assist in improving them. CBI will then select six concepts with the highest business potential and benefits. The BDS Expert will subsequently counsel the selected partners throughout the entire design process and support them with technical workshops and individual consultations.

Annex A – Bibliography

- CBI (2019:14). *Firms' Characteristics and Obstacles to the ICT Services Trade: Indicative Evidence from a Company Survey in the Ugandan ICT sector*. CBI.
- Conway, M., Ellingrud, K., Nowski, T., & Wittemyer, R. (2018). *Closing the Tech Gender Gap Through Philanthropy and Corporate Social Responsibility*. McKinsey & Company.
- Ewing, J., Okolloh, O., & Rawlings, L. (2011). *Transforming the East African ICT Sector by Creating a Business Engine for SMEs: SMEs and the East Africa ICT Sector*. InfoDev. Worldbank.
- EY (2018:4). *Global Tax Alert*. Ernst & Young.
- FinScope (2018). *Financial Sector Deepening Uganda Topline Findings Report*. Finmark Trust.
- Gereffi, G., & Fernandez-Stark, K. (2010). *The Offshore Services Value Chain: Developing Countries and the Crisis*. The World Bank.
- MICT (2014). *ICT Sector Strategy & Investment Plan (2015-2020)*. Deloitte & Touche. Available on NITA-U website
- MOF (2019:15). Realistically, the release was only 59.3% while expenditure performance was only 48.9%.
- MOF (2019). *ICT Sector Semi-Annual Budget Monitoring Report. Financial Year 2018/19*. Ugandan Ministry of Finance.
- MoH (2016). *The Uganda National eHealth Policy: November 2016*. Ugandan Ministry of Health.
- NITA-U (2018). *Uganda: National Information Technology Survey 2017/18. Collaboration on International ICT Policy for East and Southern Africa (CIPESA)*.
- Onyango, D. (2016:7) *Uganda: ICT Sector Investment Profile*. International Trade Centre.
- UCC (2018:4). *Post, Broadcasting and Telecommunications Market & Industry Q2 Report, 2018*.
- Uganda Bankers Association & Finscope (2018).
- Uganda Revenue Authority (2011). *Taxation Handbook: A Guide to Taxation in Uganda*.
- UNCTAD (2018). *Rapid eTrade Readiness Assessment for Uganda*.

Annex B – List of Interviewed Key Informants

	Key Informant	Institution	Position
1	Albert Mucunguzi	ICT Association of Uganda (ICTAU)	Board Chairperson
2	Alex Gichuru	Samasource Uganda	Country Director
3	Alison Kwikiriza	Compliance Consultant	Senior Legal Advisor
4	Angela Bageine	Uganda Women Entrepreneur's' Association Ltd	Chairperson
5	Brenda Opus Katarikawe	Uganda Export Promotion Board (Alternate)	Senior Export Marketing Executive
6	Georgina Mugerwa	Ministry of Trade & Industry (MTIC)	Services Exports
7	Grace Achire Labong	Alliance for Trade in Information-Technology and Services (ATIS)	Chairperson
8	Joshua Okello	Andela Uganda	Senior Manager, Partner Engineering
9	Michael Newman Byamugisha	National Information Technology Authority-Uganda (NITA-U)	ITES and BPO Coordinator
10	Portia Dobinson	Accountant	Freelancer
11	Rogers Karebi	Uganda Business Process Outsourcing Association (UBPOA)	Chairperson
12	Silas Ngabirano	Ministry of Information & Communication Technology (MICT)	Asst. Commissioner Info Management Systems
13	Stella Ayikoru	Ugandan Export Promotion Board	Export Marketing Executive - Services
14	Tim Timbiti	NetHope	Program Manager
15	Zianah Muddu	Financial Technology Service Providers Association (FITSPA)	Engagement Partner

Annex C – BDS Needs Assessment – Questionnaire

BDS SERVICE - QUESTIONNAIRE:

Company Name:

Position:

Sector/Product/Service:

PLEASE NOTE THAT ALL YOUR ANSWERS WILL BE KEPT STRICTLY CONFIDENTIAL AND WILL NOT BE COPIED OR DISSEMINATED TO ANYONE OUTSIDE OF THE NTF IV. ALL ANALYSIS SHALL BE ANONYMISED.

For the following section, kindly tick where applicable and fill in the relevant sections. Many thanks!

1) How familiar is the company with the following EU market access legal and certification requirements for IT & ITES?

EU Legal and Certification Requirements	Never heard of it / N.A.	Somewhat familiar	Familiar	Very familiar
GDPR (General Data Protection Regulation)				
ISO 9001				
ISO 27001 (infosec)				
CMMI (Capability Maturity Model Integration)				
ISMS (information Security Management System)				
2002/58/EC (e-Privacy Directive – ‘Cookie Law’)				
2009/24/EC (Copyright Law)				

2) How familiar is the company with the following EU sector-specific market access requirements for IT & ITES?

EU sector-specific Requirements	Never heard of it / N.A.	Somewhat familiar	Familiar	Very familiar
HL7 (for e-Health)				
PCI-DSS				

COPC or ISO 18295-1:2017				
Code of Practice for Cloud Service Providers				

3) Is the company COMPLIANT with the following EU market access legal and certification requirements for IT & ITES?

EU Legal and Certification Requirements	Compliance not needed	Unable to comply	In the process to comply	Fully compliant
GDPR (General Data Protection Regulation)				
ISO 9001				
ISO 27001 (infosec)				
CMMI (Capability Maturity Model Integration)				
ISMS (information Security Management System)				
2002/58/EC (e-Privacy Directive – ‘Cookie Law’)				
2009/24/EC (Copyright Law)				

4) Is the company COMPLIANT with the following sector-specific EU market access requirements for IT & ITES?

EU Legal and Certification Requirements	Compliance not needed	Unable to comply	In the process to comply	Fully compliant
HL7 (for e-Health)				
PCI-DSS				
COPC or ISO 18295-1:2017				
Code of Practice for Cloud Service Providers				

5) How urgently does the company need ASSISTANCE to be compliant with the following EU market access legal and certification requirements for IT & ITES?

EU Legal and Certification Requirements	Not priority	Not so Urgent	Urgent	Very Urgent
GDPR (General Data Protection Regulation)				
ISO 9001				

ISO 27001 (infosec)				
CMMI (Capability Maturity Model Integration)				
ISMS (information Security Management System)				
2002/58/EC (e-Privacy Directive – ‘Cookie law’)				
2009/24/EC (Copyright law)				

6) How urgently does the company need assistance to be compliant with the following sector-specific EU market access requirements for IT & ITES?

EU Legal and Certification Requirements	Not priority	Not so Urgent	Urgent	Very Urgent
HL7 (for e-Health)				
PCI-DSS				
COPC or ISO 18295-1:2017				
Code of Practice for Cloud Service Providers				

7) For the following areas, how urgently does the company need BUSINESS SUPPORT SERVICES to enter the EU market and/or expand to serve more clients from the EU?

Support Areas	Not priority / not required	Not so Urgent	Urgent	Very Urgent
Quality Management System (QMS)				
Export Knowledge and Strategy				
Export Marketing Planning				
(EU) Market Linkages				
Export Skills & Capacity to Fulfil Export Orders				
Core IT / ITES Skills / Other Technical Skills				
Research & Development				
Financial Management / Accounting				
Investment Support / Facilitation				
Customer Communications and Relationship Management (CCRM)				

Human Resources Management				
Legal Compliance / Advice				

8) Looking in the past and present, how much did (or does) the company benefit from BUSINESS SUPPORT SERVICES in the following areas?

Support Areas	No BDS used yet	No benefits	Barely significant	Significantly	Most significantly
Quality Management System (QMS)					
Export Knowledge and Strategy					
Export Marketing Planning					
(EU) Market Linkages					
Export Skills & Capacity to Fulfil Export Orders					
Core IT / ITES Skills / Other Technical Skills					
Research & Development					
Financial Management / Accounting					
Investment Support / Facilitation					
Customer Communications and Relationship Management (CCRM)					
Human Resources Management					
Legal Compliance / Advice					

9) Has the company used any other Business Support Services that are NOT mentioned above?

NO

YES

If yes, please state: (more space on the reverse side)