

MARKET OPPORTUNITY

Singapore



INFORMATION &
COMMUNICATION
TECHNOLOGIES

OVERVIEW

- Singapore's ICT industry grew by a CAGR of 13.2% per annum from 2011 to 2016 and reached a market value of €111.65 billion (2016). Positive year-on-year growth between 2011-2015, albeit a decline in industry revenue in 2016 due to global economic uncertainty.¹
- Singapore is positioned as an ICT hub; it is a regional base for known multinationals such as Microsoft, Oracle, Amazon Web, Google, and Twitter, as well as various other international technology startup companies.
- The Info Communications Media Development Authority of Singapore (IMDA) and the Government Technology Agency (GovTech) are the lead agencies in the government's push to transform Singapore into a Smart Nation.
- Singapore consistently performs well in ICT rankings; ranked first in the World Economic Forum's Networked Readiness Index (2015 and 2016) and more recently ranking second in the Global Competitiveness Index (2017-2018).²

Key business opportunities for EU companies

1. **Companies that develop digital content, build apps for mobile services and location-based services, design and implement security infrastructure and offer cloud computing and business analytics** can leverage on Singapore's Smart Nation policy infrastructure.
2. **Companies with cybersecurity technologies and services** can benefit from the increased focus on cybersecurity as the Singapore business ecosystem continues its progress on digitisation while managing risks.³
3. Companies offering technologies or solutions that **increase productivity and transform business processes** in the following priority sectors where ICT initiatives have taken root: **education, healthcare, manufacturing, tourism, hospitality and finance**. Notable is the **financial technology (FinTech) sector**, as the Monetary Authority of Singapore (MAS) is promoting Singapore as a FinTech hub as part of Smart Financial Centre initiatives.⁴
4. Companies with products, technologies and solutions in the following areas underscore Singapore's ICT development over the next three to five years: **big data, cloud computing, cyber security, internet of things, ICT and sustainability, communications of the future, social media, new digital economy and user interfaces**.

Sector Characteristics

- IMDA has focused several efforts on developing a strong infocomms infrastructure in Singapore, which include:
 - a nationwide fibre broadband network connecting homes and buildings
 - an island-wide free hotspot service, Wireless@SG
- Innovative infocomms technology is used and connected to various sectors across Singapore such as education, financial services, healthcare and wellness, logistics and retail. Examples are:
 - in education, innovative use of emerging technologies is used to enrich the learning experience
 - in healthcare, integrating healthcare data allows for better management of services
- Total Information and Communications industry revenue comes mainly from the hardware sector (74%). The remaining revenue sources are spread across software (9%), services (9%), telecommunication services (6%) and others (based on 2016 figures).



- **Country:** Singapore
- **Capital City:** Singapore
- **Population:** 5.8 million (2018 est.)
- **GDP per capita:** 58,351 Euro (2018 est.)
- **Currency:** Singapore Dollar (SGD)
- **Official Languages:** English, Malay, Tamil, Standard Mandarin



Funded by
the European Union

Sources:

1. Infocomm Development Authority of Singapore, Annual Survey 2016 (2017)
2. Government Technology Agency, Singapore's Ranking in Infocomm (2016)
3. PwC Singapore, Global State of Information Security Survey 2018 Singapore Highlights (2018)
4. Monetary Authority of Singapore, MAS' Role in Smart Financial Centre (2016)
5. Infocomm Development Authority of Singapore, Statistical Charts (2017)

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- Singapore launched a Infocomm Media 2025 initiative, which sets out to create a globally competitive infocomm media ecosystem that enables and complements Singapore's Smart Nation vision. The initiative aims to tap on infocomm media to effect economic and social transformation by 2025.
- The IMDA provides various funding schemes to support enterprises, individuals, small and medium enterprises and startups to get a head start in the infocomm media field.

Key players



Singtel has played a pivotal role in Singapore's development as a communications hub with more than 130 years of operating experience.



CrimsonLogic is a key partner of the Singapore Government in implementing world-class eGovernment solutions.



ST Electronics specialises in the design, development and integration of advanced electronics and communications systems, marketing its solutions to more than 100 countries worldwide.



Quantum Automation is one of the leading System Integrators in Singapore, having been the pioneers to innovate a cashless Car Parking System to the implementation of Internet related Building Controls and Automation.



DXC provides complex services and solutions in the areas of analytics, cloud and digital platforms, security and digital integration, serving industries such as financial, logistics and health care.



Surbana Technologies has been providing urban technology solutions in Singapore for 30 years. It offers end-to-end technology and monitoring solutions which has largely contributed to the success of public housing development in Singapore.

Key sub-sectors and technologies

1.	Smart and digital devices <ul style="list-style-type: none"> ▪ Digital and smart learning devices for enriched learning experience ▪ Smart mobile health devices such as wearables and sensors
2.	Internet of Things To support data exchange and sharing in schools and enterprises
3.	Data Analytics <ul style="list-style-type: none"> ▪ Data Analytics to support consumer insights in retail sectors ▪ Social analytics for business enterprises, and support in education ▪ Software as-a-service, data as-a-service solutions
4.	Automation and robotics Advanced automation technologies e.g. for urban and international logistics
5.	Digital platform solutions, utilisation of Artificial Intelligence <ul style="list-style-type: none"> ▪ E-commerce technologies ▪ One-stop-shop platform providers ▪ Electronic and cryptocurrency payment solutions and technologies

MARKET OPPORTUNITY

Thailand



OVERVIEW

- Thailand is the second largest buyer of ICT products and services in the ASEAN region. It is geared for future growth through increased consumption and urbanisation, as well as a growing middle class.
- Thailand is a Fast Growing Market in South-East Asia with 84.8M mobile connections.
- Thailand is a gateway to Cambodia, Laos and Vietnam's emerging markets. Rapid export growth and healthy global growth resulted in a 3.9 percent increase in Thailand's GDP in 2017, its fastest GDP growth since 2012.
- Thailand market is highly dominated by hardware spending, followed by services and software. IT services dominates spending in the public sector, while hardware dominates spending in private sector.

Key business opportunities for EU companies

1. **Offering IT hardware.** IT hardware spending in Thailand is growing at 1.1% CAGR (2018-2022) to reach €2.1 billion by 2022. Electronics is a successful export industry and Thailand is a major production centre for hard drives and other storage products, integrating into global supply chains.
2. **Offering mobile-related products & services.** Telecoms-driven spending in Thailand is growing at 6.9% CAGR (2014-2019) to reach €10.4 billion by 2019. Productivity-enhancing investments by the corporate sector will continue to boost demand for industry-specific solutions in verticals such as telecoms.
3. **Offering IT services and solutions for enterprises.** Growth in IT services will continue, supported by the increasing trends in outsourcing non-core operations. There is high demand for companies specialised in hardware/software implementation as well as operations management companies. Government is promoting digitisation and cloud service adoption by public agencies and enterprises.
4. **Offering solutions, services and technologies within the value chain created by the government's National Digital Economy Master Plan.** The Thai government is making a strong push for ICT development in the following areas: hard infrastructure, digital economy acceleration, digital society, service infrastructure, digital workforce and soft infrastructure.

Sector characteristics

- Thailand's government has acknowledged the need to undergo digital transformation in the public sector. Under the concept of a "holistic smart government", efforts are being made to identify digital solutions to increase access to public services, as well as digital literacy. This will increase demands on integration and delivery platforms; e.g. public services being delivered through mobile applications.
- Top 3 local IT services players and their respective market shares: CDG (40%), MFEC (12%), and Loxley (11%).
- Majority of local systems integrators (SI) are very traditional in nature. Most have started off as "box-sellers" and have just begun to position themselves into services. The majority of SIs are part of a business group, either as a parent company or subsidiaries, however the services offered are not limited to only within the group.
- The Thai government has committed to making Thailand an internet connectivity hub in SEA by 2020. USD 143 million has been earmarked for investment in an internet gateway, as well as for submarine cable lines connecting Thailand to Hong Kong and India.



- **Country:** Thailand
- **Capital City:** Bangkok
- **Population:** 68.86 million (2016 est.)
- **GDP per capita:** 5,907 USD (2016 est.)
- **Currency:** Thai Baht (THB)
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- Investment and/or large corporate spending on IT solutions may be affected by slowing economic growth. However, there is a shift towards higher IT utilisation to optimise workflows and add value to business operations and products and services across the Thai market.

Key players: IT

	CDG Group is a professional service provider of IT solutions in Thailand with wide range of services
	MFEC Public Company Limited (PCL) is an IT service provider specializing in network computing and e-business
	Loxley Public Co. Ltd. Provides IT services, operating through the following segments: Technology, Trading and Services
	Metro Systems Corporation Public Company Limited provides enterprise servers, personal computing products, and storage systems
	SVOA Public Company Limited provides integrated information technology (IT) products and services in Thailand

Key players: Communications

	TOT Public Company Limited is a Thai state-owned telecommunications company offering connectivity services as well as various online services
	CAT Telecom Public Company Limited is the state-owned company that runs Thailand's international telecommunications infrastructure
	Total Access Communication Public Company Limited (DTAC) is the 2nd largest GSM mobile phone provider in Thailand (after AIS)
	Advanced Info Service Public Company Limited (AIS) is Thailand's largest GSM mobile phone operator
	True Corporation Public Company Limited (TRUE) is a communication conglomerate in Thailand

Key sectors: IT

1.	Systems integration
2.	Hardware deployment and support
3.	Network consulting and integration
4.	Big Data and Cloud services
5.	Government e-Services

Key sectors: Communications

1.	Mobile telecommunications
2.	Mobile devices
3.	Broadband
4.	Telecoms Infrastructure
5.	Pay TV