

## Industry Overview

Indonesia information technology (IT) industry was valued at USD 36.91 billion in 2022 and expected to grow at a compounded annual growth rate (CAGR) of 16.69% to reach a value of USD 79.87 billion by 2027. The IT industry in Indonesia is still in its early development stages but is growing quite rapidly.

## Sub-Sectors of IT

### Software and Service

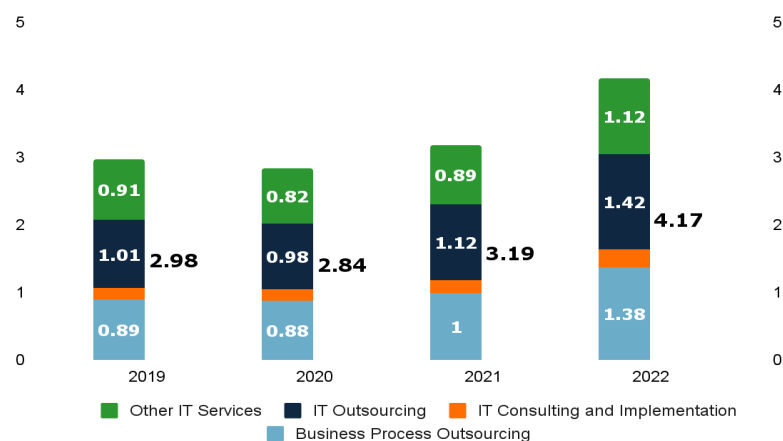
#### IT Service

IT service refers to the service that manages the infrastructure of an IT organization responsible for operating network and data communications. This service includes the management of the organization's network environment and is usually delivered by external IT service providers based on formal contracts. These services can include corporate network management, monitoring, security, capacity planning, performance monitoring, ongoing technical support, etc.

The IT service can be divided into several groups, which are Business Process Outsourcing, IT Consulting and Implementation, IT Outsourcing, Other IT Services.

*Companies: PT Integra Inovasi Indonesia, PT Solusi Daya Indonesia, PT Multipolar Technology, PT Sigma Cipta Caraka.*

Figure 1. Indonesia IT Service Revenue Mix 2019-2022

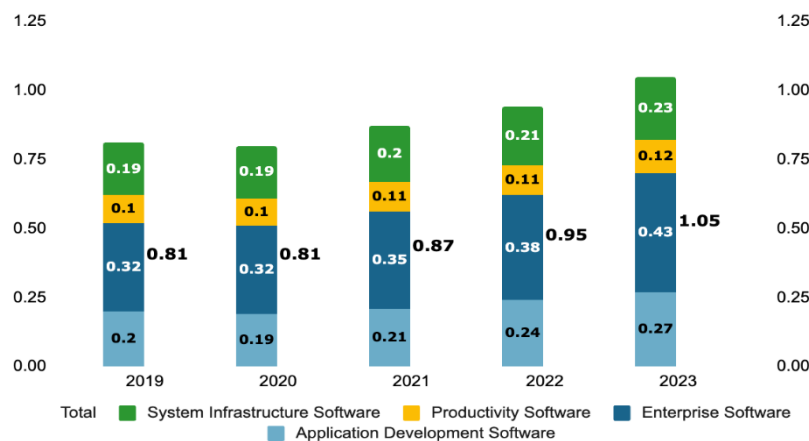


Source: Statista

## Software

The software industry is the sales of software that requires the buyer to install, configure, and maintain the software on their own computer or server. The software industry subsectors include enterprise software, productivity software, application development software, and system infrastructure software. In 2022, the revenue from the software industry was USD 0.94 billion and is expected to reach USD 1.62 billion in 2028.

Figure 2. Indonesia Software Revenue Mix 2019-2023



Source: Statista

The highest contributor is enterprise software, a software that is designed to support the core business processes of large organizations. Enterprise software help ensures businesses to increase its efficiency, cost reduction, and improved decision-making.

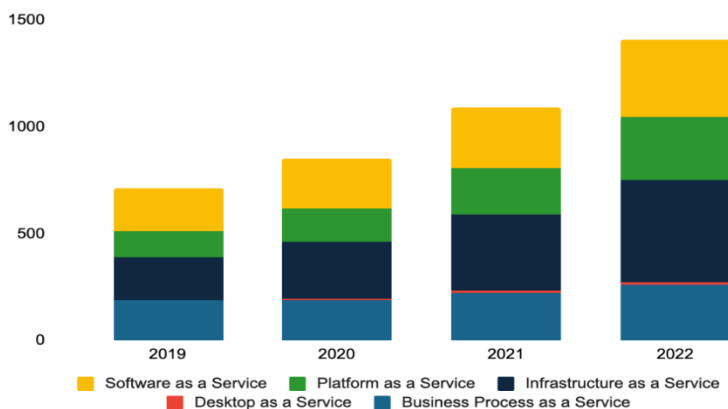
## Technology hardware and equipment

The subsector of technology hardware and equipment covers the sales and usage of hardware for technology such as cell phones, PCs, servers, electronic computer products and peripherals. This also includes motherboards, audio and video

cards, monitors, keyboards and printers.

The technology hardware and equipment revenue was USD 14.92 billion in 2019 and grew until 2021, but reduced a bit in 2022. The biggest contributor is the phone segment with ~66% share.

**Figure 3.** Indonesia Technology Hardware Revenue Mix 2019-2022

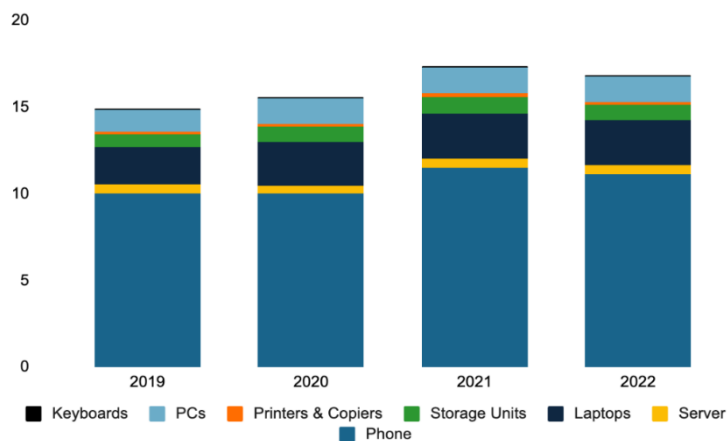


Source: Statista, Protemus Research

### Public Cloud

Public cloud is essentially a service that provide digital infrastructure and computing resources through the cloud (internet) that are managed by a service provider. The services include virtual machines, storage, and services with a pay as you go and subscription payment. It helps customers to access, scale, and utilize resources as needed. The public cloud revenue in Indonesia was USD 710 million in 2019 and grew to USD 1.4 billion in 2022.

**Figure 4.** Indonesia Public Cloud Revenue Mix 2019-2022



Source: Statista

The subsector itself is divided into 5 services which are software as a service, platform as a service, infrastructure as a service, desktop as a service, and business process as a service. The biggest contributor is infrastructure as a service and the second is software as a service. The reason for higher IaaS than SaaS is that most large companies in Indonesia that adopt cloud computing for

<b>Software as a Service (SaaS)</b>	SaaS is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted.
<b>Platform as a Service (PaaS)</b>	PaaS provides a platform allowing software developers to develop, run, and manage applications without maintaining technology infrastructure.
<b>Infrastructure as a Service (IaaS)</b>	IaaS provides customers with the capability to procure and use processing, storage, networks, and other fundamental computing resources easily

In 2019, cloud computing remains small and relatively unpopular in Asia Pacific. It only makes up **3%** of entire region's technology market, even though its growing rapidly (Forrester 2019).

## Growth Prospect

### Government Support

Indonesian government fully supportive on the development of IT industry in Indonesia to support industry 4.0. It is seen from several incentives on taxes that give lots of leniency to IT growth and research. Several regulations are:

1. Pasal 2 ayat (2) huruf d angka 4 UU No. 52/2011 tentang Fasilitas Pajak Penghasilan Untuk Penanaman Modal di Bidang-Bidang Usaha Tertentu dan/atau di Daerah-Daerah Tertentu.  
*Consists of:* Companies that invest in certain businesses or areas and incur research and development costs in the country may be given an additional year for loss compensation, which is longer than 5 years but not more than 10 years. However, this incentive can only be used after the taxpayer has realized at least 80% of the planned investment.
2. Pasal 1 dan 2 KMK No. 143/1997.  
*Consists of:* Exemption from import duties and taxes on goods for research and development purposes.
3. Pasal 3 ayat (1) huruf b angka 5 PMK No. 154/2010  
*Consists of:* In relation to the import of research and development goods, the government provides an exemption from withholding income tax under Article 22 on goods for the purpose of scientific research and development.
4. Foreign investments for IT industry can own up to 100% of a company that operates in the IT industry in Indonesia.

### Growth of Digital Economy

Currently, Indonesia is a thriving company digitally that has produced multi-billion-dollar tech platforms, a home-grown “super-app”, and numerous tech startups. The digital economy itself include e-commerce, ride-hailing and food transportation, online travel, and online media. Total GMV of digital economy has been growing really well, from only USD 41 billion in 2019 until USD 74.6 billion in 2022.

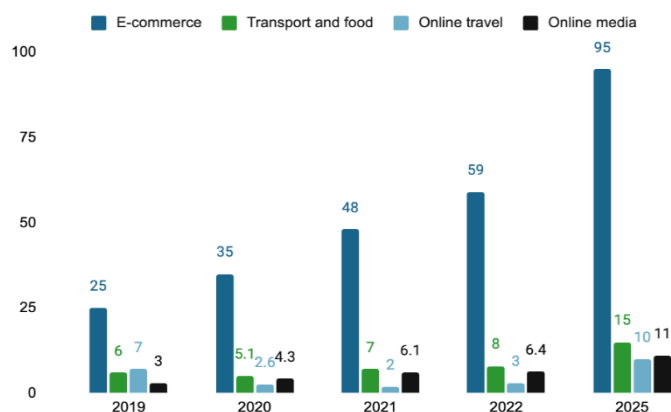
Figure 5. Indonesia Digital GMV Revenue Mix 2019-2025

Year	Number of startups
2019	2,000
2020	2,100
2021	2,300
2022	2,400
2023	2,486

Source: Statista

This indicates that the digital economy is growing healthily and also proves to provide a lot of opportunities for startups in Indonesia that has been growing as well.

Figure 6. Indonesia Startups 2019-2023



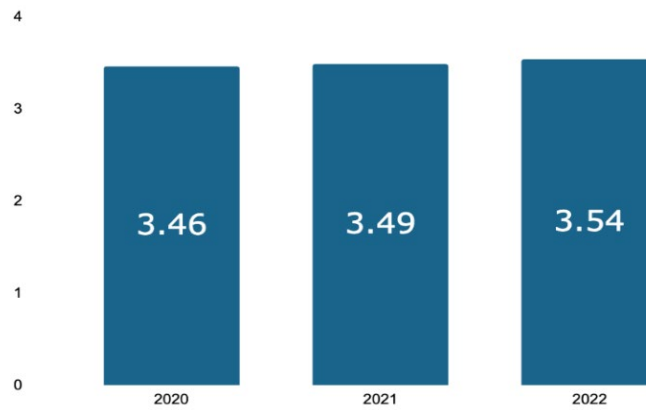
Source: Protemus Research

The growth of digital economy bring positive growth opportunities for IT industry in the future as startups will need the services provided by the industry.

### Indonesia Digital Literacy

The digital literacy in Indonesia has also been growing really well ranging from 3.46 to 3.54 in 2022. With a range index of 1-5, Indonesia's digital literacy is above average. The growth and also a great number of the index, indicate that Indonesians are getting more knowledgeable regarding digital usage that could provide more opportunities for IT industry to serve in the future.

Figure 7. Indonesia Digital Literacy Index



Source: Katadata

## Challenges of IT

### Lack of Skilled Workforce

IT industry surely requires skilled workforce in order to grow more and provide in-depth services for digital economy. But, it is well-known that Indonesia currently lacking skilled workforce needed for IT industry. This is one of the major challenges since IT companies need more skilled workforce in order to expand and develop, and if no supply for skilled workforce available it will affect the growth of IT industry in Indonesia.

Figure 8. Workforce Shortages Data 2021-2022



Source: World Economic Forum, Indonesian Ministry of Education and Culture, Indonesian Association of IT Companies (APIKOM).

### Lack Access to Capital

According to World Bank report "Indonesia: Technology and Innovation for Growth and Equity, 2022", Indonesia's spending on R&D in 2020 was only 0.24% of its GDP, much lower than that of other developed and developing countries. This would delay the growth of IT industry in Indonesia since R&D is one of the important aspects in order to grow the industry and develop. A 2021 survey by the Indonesian Association of IT Companies (APIKOM) found that 70% of IT startups in Indonesia have difficulty raising capital. The Indonesian government is aware of the challenge and is taking steps to address it. For example, the government has launched a number of programs to support R&D, such as the National Research and Innovation Agency (BRIN) and the Technology Innovation Fund (TIF).

## IT Insights

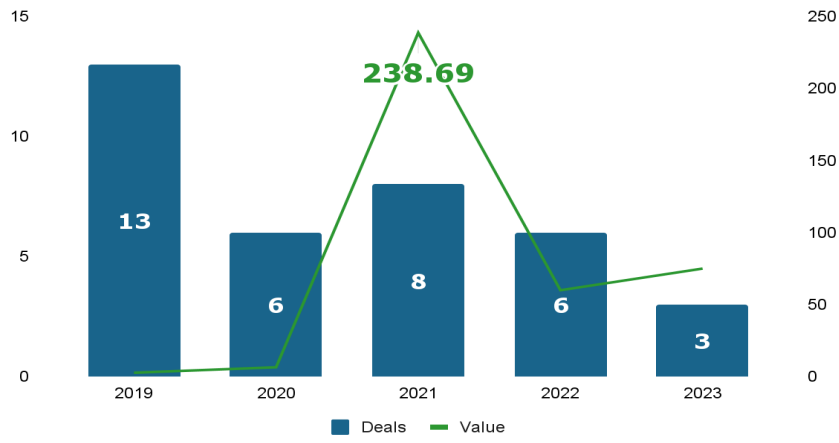
### Indonesia is The Fastest Growing Internet Economy

The GMV of Indonesia's digital economy has grown significantly over the years. The GMV itself has reached USD 76.4 billion in 2022 boosted by the pandemic. Boosted by the pandemic, the digital economy in Indonesia is led by the e-commerce GMV as a platform providing easy transactions seen from its huge growth of 40% in GMV from 2019 to 2020. Growing digital penetration and literacy also led to higher market in digital economy and it also means strong competition in the market, which forces major technology companies to constantly innovate and grow. In order to innovate and grow, they will need to utilize advanced technologies such as cloud applications and infrastructure services to analyze, store, and implicate data easily as digitalization grows. This opens up more opportunities of IT industry in Indonesia to serve more startups and companies and prove to be a great and wide market.

### IT M&A Trend

The IT industry in Indonesia is not that popular in the M&A activities throughout 2018 to 2023 both from deals and the value.

**Figure 9.** IT M&A in Indonesia 2019-2023



Source: Protemus M&A Insights 2023

The deals have been decreasing from 2019 to 2022, and in 2023 only 3 deals have been made. The reducing and low M&A deals in Indonesia could be affected by the unattractive and undeveloped market of IT in Indonesia based on the lack of skilled workforce and difficult access to capital.

**Figure 10.** Top 3 IT M&A in Indonesia 2019-2023.

Date	Buyer	Target	Value
06/14/2021	Digital Edge (Hongkong) Limited	PT Indointernet Tbk. (IDX:EDGE)	165
03/10/2023	-	PT Tarrasmart Teknologi Indonesia	75
12/15/2021	Humanica Public Company Limited (SET:HUMAN)	PT. IndoDev Niaga Internet	66.85

Source: Protemus M&A Insights 2023

The highest transaction value was in 2021 where Digital Edge acquires Indointernet for its expansion strategy in Indonesia.