

CHAPTER 1

INTRODUCTION

1.1 Background

Industry 5.0 was predicted to start 20 years after Industry 4.0, accelerating in 10 years, due to the pandemic situation (Ferdiana, 2021). Industry 5.0 has 3 elements: human-centricity, sustainability, and resilience, which will couple both humans and technology. Industry 5.0 will replace Industry 4.0 and focuses on digitalization, while Industry 5.0 will combine intelligent system and human brains. (Nahavandi, 2019).



Figure 1.1 United Nations Sustainable Development Goals

Source: Narvaez Rojas, Alomia Peñafiel, Loaiza Buitrago, & Tavera Romero, 2021

Society 5.0 became world highlighted after Japan start it in 2016 and announced it at CeBIT Hannover fair in 2017. Society 5.0 is often related to the United Nations development program, Sustainable Development Goals or SDGs with 3 sustainability cores: Environment, Economy, and Society (Narvaez Rojas, Alomia Peñafiel, Loaiza Buitrago, & Tavera Romero, 2021).

The main background of Japan’s initiation of Society 5.0, more familiarly called Society 5.0 was the decreased number of productive citizens in Japan. The goal is to maximize the usage of technology to help people or coexist within humans and technologies (Narvaez Rojas, Alomia Peñafiel, Loaiza Buitrago, & Tavera Romero, 2021).

Society 5.0

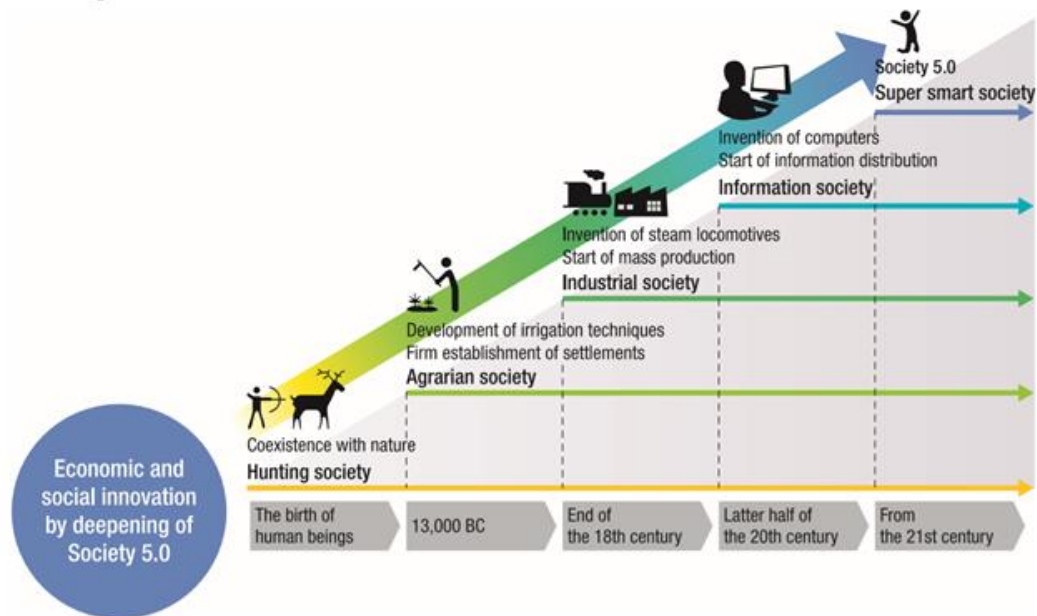


Figure 1.2 Society 5.0 History

Source: Harayama, 2017

All Industries in Indonesia should be aware of and prepared for it, including the retail industry, which not only has vision, scale, localization, and investment in technology but also should have a seamless shopping experience.

Indonesia's consumers are already familiar with technology, digital payment, e-commerce site, and many others, which have become daily needs. Now it's up to retailers to capture and use technology for innovation to attract customer acquisition (Bresciani, Ciampi, Meli, & Ferraris, 2021).

Below are levels of maturity in several industries. As seen Retail is 2nd in line for maturity ready.

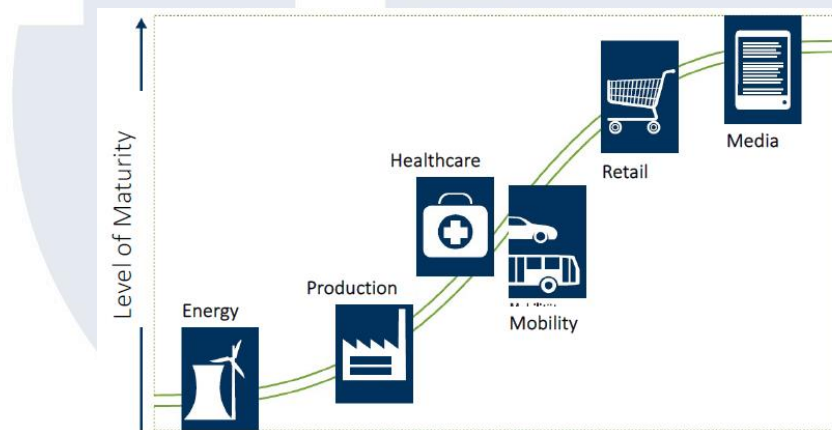


Figure 1.3 Industry Level of Maturity

Source: Accenture

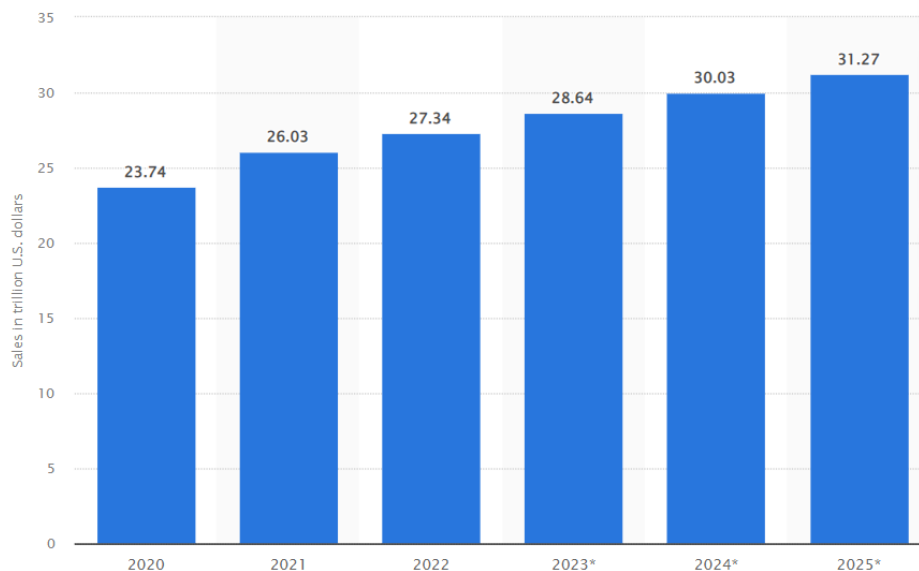


Figure 1.4 World Total Retail Sales

Source: (Sabanoglu, 2022)

Technology adoption often scored a success, especially in an environment where it can fill holes in lacking sectors (World Economic Forum, 2022). World total retail sales are predicted to reach US\$ 31.27 trillion in 2025. While total retail sales growth in Indonesia based on a report released by Bank Indonesia in July 2022 shows an optimistic number, which is accelerating to 6,2 % (yoy) and 4.1 % YoY per month.

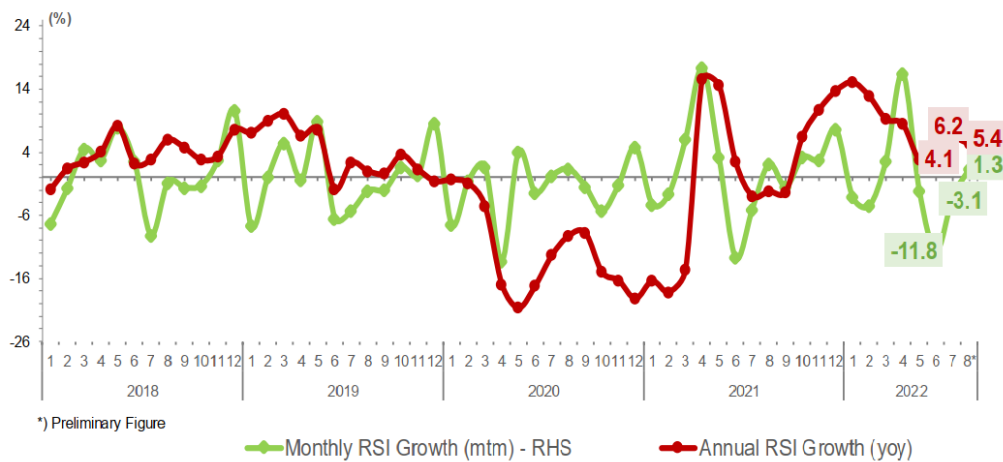


Figure 1.5 Retail Sales Index Growth in Indonesia

Source: BI report, graph 2. Monthly and annual real sales growth.

The pandemic outbreak in early 2000 affecting on consumer behavior and customer expectation. Consumers became very critical and friendly with technology. Consumers exacting for the best consumers experiences, price sensible, and are easily attracted to other competitors (Turban, Pollard, & Wood, 2018). Organization business strategy and operations continue to be disrupted by the pandemic (14%), yet around 86% of it has adapted to the new normal (Standish & Reddy, Retail Technology Vision 2022: Retailers, Meet me in the Metaverse, 2022).

The pandemic also greatly impacts consumers' earnings and changes their spending prioritization. Health becomes a priority and for consumers who experience budget pressure, some ways impacting on environmental sustainability,

such as using reusable and refillable products. (Standish, What's really driving retail purchasing today?, 2022).

Based on Accenture Consumer Pulse Survey conducted in February 2022, with 11,311 respondents from Latin America, Europe, Asia, and the Middle East (18 countries), Consumers are anticipating their income wisely in spending, as shown in figure 1.6 (Standish, What's really driving retail purchasing today?, 2022).

With those facts, retailers should revolutionize their concept and business model to keep innovating to attract consumers. Significant investment in technology is no longer an option, but it's a must unless retailers want to be categorized as laggards instead of leaders.

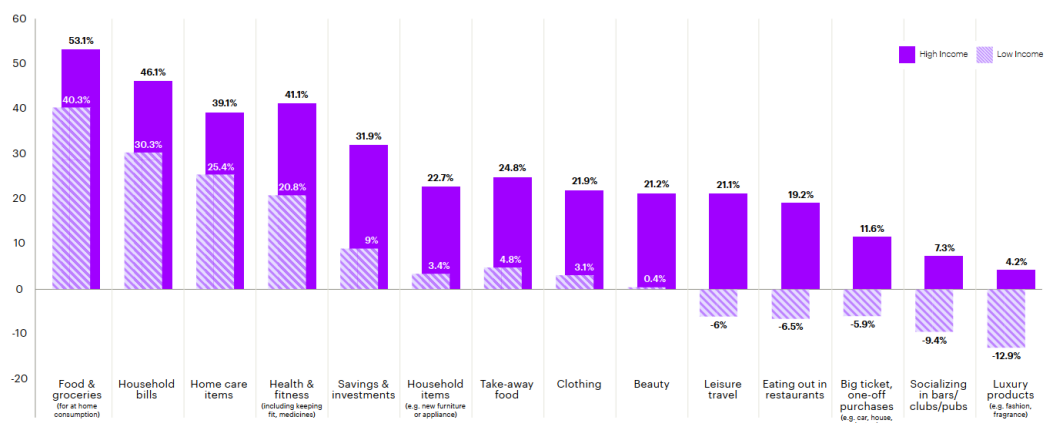


Figure 1.6 Consumers' Spending Anticipation

Source: Accenture Consumer Pulse Survey 2022

Investing in e-commerce, digital marketing, and omnichannel are not enough, innovation in all sectors is mandatory. In the upcoming 5 years ahead, voice commerce self-service cashiers, and digital goods such as metaverse and NFT (non-fungible tokens) will be widely used, along with the usage of cryptocurrencies as one payment method. Retailers no longer have the option to push back technology and disruptions (World Economic Forum, 2022), instead, need to embrace it in every aspect and use it to attract consumers.

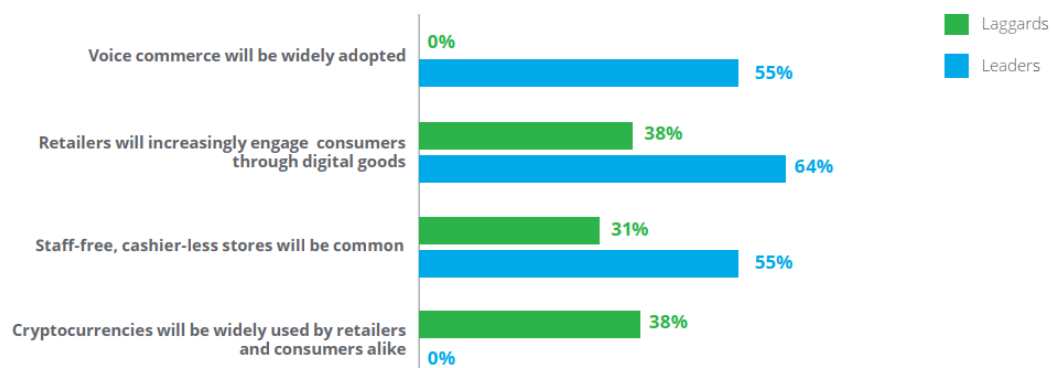


Figure 1.7 Upcoming Retail Technology Trends

Source: (World Economic Forum, 2022).

Investment in technology and global economy phenomena might force retailers to increase products price. While it could be a challenge in attracting new customers, but on contrary loyal customers are more liberal with surge prices (Kun-Huang & Hui-Kuang, 2020).

What factors affect customer loyalty? Is it just customer satisfaction, or are there any other factors? To give a seamless customer experience which may lead to customer satisfaction, other factors such as consumer culture, perceived service quality, marketing program, and corporate image also have a direct impact on customer loyalty (Fam, Boon, Cham, Tan, & Ting, 2021).

Customer loyalty has a direct relationship with customer retention, a satisfied customer doesn't guarantee that it will improve customer purchase intention, there are other factors such as brand image, brand awareness (Qing, Al Mamun, Makhbul, & Zainol, 2022), customer experience (Becker & Jaakkola, 2020), etc.

Another factor that increases Customer retention is how fast an organization reacts to customers' issues and complaints. Being responsive to customers will improve customer retention, along with organization reliability, and customer convenience. Appealing programs or strategies and communication are important, especially for consumers who might adapt to technology (Mahmoud, 2019).

The amount of data retailers received should be easily presented to top-level management as the peak of decision-makers. An information system helps businesses to better analyze the data such as sales trends, marketing campaigns, etc. Information System supports have four different types. It begins with Transaction Processing System, Management Information System, Decision Support System, and Executive Information System. All of the types differentiate by the users who use them, and also the function of the data used by the user (Turban, Pollard, & Wood, 2018).

An Executive information system with characteristics, user friendly, and adaptable or flexible to use as business changes, should be able to support top-level management in deciding the organization's future and improving the organization.

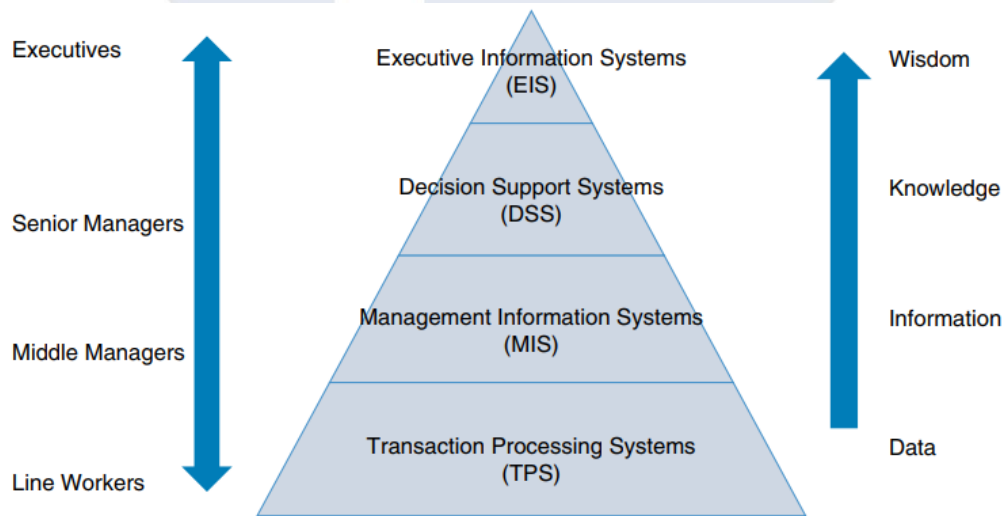


Figure 1.8 Information Support System Hierarchy

Source: (Turban, Pollard, & Wood, 2018)

Based on research conducted by Statista Research Development, the average customer retention is 83% with the retail industry at 63%.



Figure 1.9 Customer Retention by Industry

Source: (Statista Research Development, 2022)

1.2 Industry Characteristics

The retail industry is a consumer-centric industry, where all the progress is directly affected by consumer behavior. The PESTLE analysis will be used to evaluate market conditions based on external factors. Political, Economy, Social, Technology, Legal, and finally environmental factors will be described next (Whittington, Regnér, Angwin, Johnson, & Scholes, 2020).

a) Politic

The trade war between the United States of America and China affects the price (Wu, Wood, Oh, & Jang, 2020). Also on the other hand, the Russian Federation's attack on Ukraine is affecting Gas and Oil which directly affecting on transportation (Garacino, Dominic, & Weder, 2022).

Retailers who operate in FCMG (Fast Moving Consumer Good) and Health industries are fully tied with International and national health organizations.

Particularly in Muslim countries, the product must be “Halal”, to get accepted and approved for distribution (Mashudi, Mufid, Purwanto, & Mochammad, 2021).

Unlike external political factors, Indonesia itself has good news. Indonesia’s commitment to supporting and encouraging digital transformation seriously implement. Building new capital in East Kalimantan is one example.

b) Economy

As one of the top 5 countries with the largest population, Indonesia's digital economy is expected to be worth more than \$100 billion in 2025 (Limanseto, 2022). The pandemic situation is still one of the root causes of economic decline, but at the same time, technology also boosts the economy. Eastern Indonesia is also one of potential economic growth. Indonesia’s new capital might also draw attention to economic focus, which might make the economic growth rate not evenly distributed. The total number of citizens who got full doses of covid-19 vaccines plus extra vaccines (booster, 3rd dose) gaining consumer credence on economic recovery, which is good news for the retail industry (Sides & Skelly, 2021).

c) Social

Consumer behavior shifts from direct selling by visiting offline locations, to using online platform-based applications. Not just easy to use, but it also giving many other benefits such as fast transactions, giving flexibility for the customer to manage their profile, and many others (Akram, Fülöp, Tiron-Tudor, Tupor, & Căpușneanu, 2021).

Female consumers tend to choose luxury services from onsite stores, other than men, as well as earnings also have a demographic impact on purchase intentions. Despite consumers with high earnings, prefer to purchase onsite, there are possibilities they choose an online shopping experience, due to convenience (Ryu, 2020).

Niche markets such as luxury products have several circumstances that cause purchase intentions, such as cultural and social status reasons (Ting, Prentice, & Wei, 2021).

This social culture shifting must be adopted by retailers to seize new market segments and conform to brand and product awareness.

d) Technology

Society 5.0 adoption is still at an early stage, it requires more skill and professional resources to share knowledge and ideas. Instead of that giving customers the best shopping experience can be fulfilled with technology such as platform base systems (Gupta & Ramachandran, 2021). The omnichannel network also needs to enhance and build to increase customer purchase intention and customer retention (Lazaris, Vrechopoulos, Sarantopoulos, & Doukidis, 2021).

e) Environment

Eco-friendly and green materials are still the main concern. Less energy used to produce products will add to the earth's sustainability (Yu, Han, Ding, & He, 2020). Product packaging is also a concern, the plastic waste left after the product is empty have become a pollutant and creates another new chapter of new bacteria and or viruses.

f) Legal

Retailers must follow international and or local regulations which are usually under the Ministry of Health (Mashudi, Mufid, Purwanto, & Mochammad, 2021). In Indonesia, drugs and foods are regulated and supervised by Badan Pengawas Obat dan Makanan (POM), a non-departmental institution (Organisasi yang Solid, 2022). Intellectual property rights and employment laws, need to maintain close, and failure to comply will affect an organization's value and reputation.

1.3 Digital Transformation Context

Building a digital transformation does not just focus on technology alone, but also needs to consider other aspects such as social culture, organization, infrastructure, data management, analytics, also governance. Digital transformation requires organizational capabilities in leadership to improve organizational value and strategy (Gong & Ribiere, 2021).

The digital transformation started with technology involvement or in some cases technology improvement of an organization in modernizing their current business process, adding digital technologies for creating new customer value propositions, products, market entrance, also future strategies for organization sustainability (Armstrong & Lee, 2021).

Digital transformation in retail business has challenges in data security concerns, operation excellence, and reducing human error conducted by employees. Retail industries are usually already equipped with certain systems, thus in many cases, the systems are not integrated into others, which made reporting and data analysis not easy to get.

Digital transformation starts with leveraging data-driven processes, follow by leveraging ecosystems and leveraging platforms (Cennamo, Dagnino, Di Minin, & Lanzolla, 2020). Leveraging a data-driven process is the first step in improving the organization's response while improving the organization's capabilities against market competitiveness. The next step of digital transformation is leveraging the ecosystem, where organization opens their limitation and boundaries by collaborating with other companies. Finally, leveraging platforms will increase organization values, and entering marketplaces will open wide new markets and sectors (Cennamo, Dagnino, Di Minin, & Lanzolla, 2020).

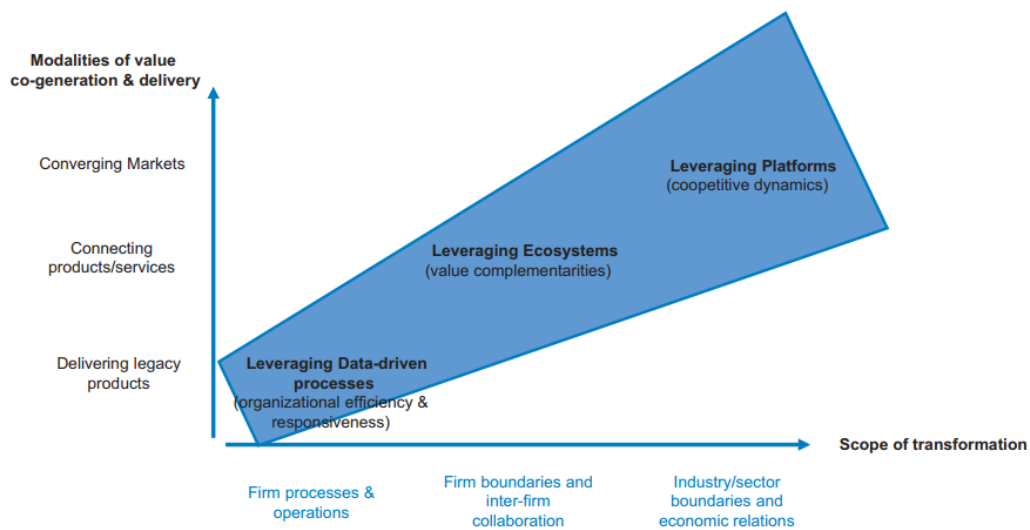


Figure 1.10 Digital Transformation

Source: Cennamo, Dagnino, Di Minin, & Lanzolla, 2020

Digital competency and literacy had proven to become industry saviors during the pandemic (Indonesia Usung Semangat Pulih Bersama dalam Presidensi G20 Tahun 2022, 2022). From a business perspective, technology is essential as a supporting tool and also as a partner and business enabler in creating new revenue streams. Data mining from IoT (Internet of Things) devices (router, firewall, etc.), application platforms such as Enterprise Resource Planning (ERP), e-commerce websites, mobile application platforms, and marketplace.

Integration within systems and connection to ERP will be the context of retail business digital transformation. The goals of the digital transformation are to improve employee skills, strengthen data security and minimize loopholes coming from fraud transactions, which can be achieved by leveraging data-driven processes with the executive information system and its dashboard reports.

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1.4 Opportunity and Benefit of Digital Transformation

The pandemic situation creates new kinds of era such as working from home and touchless transactions, which create new kinds of opportunities. Customer acquisition from the platform-based application.

Another opportunity on the company side is consumer experience journey will be encouraged whether it's online store platforms (website, mobile application, etc.) or in brick-mortar stores (Etminani-Ghasrodashti & Hamidi, 2020).

With digital transformation, companies no longer need to spend extra time to analyze and generate the report, but also help them in delivering the report to the board.

The common benefit and goal of digital transformation are simplifying the business processes so that business actors easy to analyze the data and later use it to evaluate and iterate the process. One behavior that often occurs in the company is multiple systems with less integration. This will cause enormous resources just to create a single report.

Other issues found are duplicate reports presented by different departments, which also consumes extra time just to gather the data. Not to mention to process the data for board directors on decision making.

Digital transformation in PT. XYZ employee perspective will result in flexible working hours as one of the benefits (Gaidhani et al.,2019). Also, employee skills improvement is encouraged with digital technology, they had to compete with the technology with available resources.

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1.5 Threats and Challenges of Digital Transformation

Despite there are a lot of benefits of implementing digital transformation, it also has several threats and challenges. Cloud base applications dominate on-premises applications, due to the flexibility and feasibility of data in a cloud environment. But still, some opinions remain, such as people questioning about data security in cloud environments.

Although it was answered by cloud providers by giving network solutions such as VPN services, and layers of security, customers need to pay extra money to feel safe. On the other hand, comparing on-premises with cloud base environments, automatically choose on-premises as a cost-friendly option despite customers' need to build and maintain it, which is time-consuming.

There is another rumor that government will create some regulations to attract business owners to host their data in Indonesia instead of in other countries. It's related to PP No. 82/2012 which encourage data center located in Indonesia, but before implementation, distribution to all data centers should not be located in major big cities only, also data and cyber security are two key factors to be highlighted (Yati, 2022). Data security become the center of discussion among business organizations, and skepticism on how government regulation ensures the data is safe and secure emerges.

Challenges from the internal sector such as rejection from employees in adapting new technology, and some concerns about employee reduction in terms of data entry level since the work will be handled automatically by the system. The technology itself is kept on evolving the technology we used today might be outdated in one or two years, which made the company need to find suitable digital transformation at an extra speed.