Connecting Indonesian Start-Ups and Dutch Companies

A scoping study on possibilities for mutually beneficial connections between the two ecosystems.

Kingdom of the Netherlands

ANGIN
ANGEL INVESTMENT NETWORK INDONESIA

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Table of Content

Table of Figures

List of Tables

Executive Summary

Start-ups all over the world have proven to be the pioneers in finding smart ways to solve social problems and global challenges. They are characterized by integrating the innovative use of technology and combining it with fostered entrepreneurship. Indonesia's start-up sector has managed to capture a growing number of players, shaping different sector dynamics in investment trajectories and verticals in the last five years. Considering the economic growth of the country and the rising number of tech-literate young people, investors generally have an optimistic view on Indonesian start-up investment opportunities.

On the other side of the world, the Netherlands is home to a vibrant start-up ecosystem with leading innovation hubs, where the private sector benefits from world-class incubators and R&D facilities. The ecosystem emphasizes the power of collaboration, meaning the interconnectedness between the entities in the ecosystem play a key role in supporting the growth of start-ups.

Indonesia and the Netherlands have established a strong trade and investment relation, and have longstanding cultural and historical ties. Both countries are keen to strengthen their future-looking cooperation by finding smart solutions for a sustainable future. This report contributes to achieve this goal; by assessing possibilities to connect Dutch private sector expertise with Indonesia's booming start-ups ecosystem in six focused-sectors: agriculture, healthcare, logistics, financial technology (fintech), waste management, and water management. Connecting start-ups and companies in these fields helps create new cooperation, sharing ideas, and other critical resources required to accelerate each other's sustainability and innovation.

This report contains insights and collaboration model proposals for those who are looking for partnership and collaboration when entering the Indonesian market, and those who are already present in the market and ready to develop their engagement even further in the focus sectors.

Considering the interests of the two ecosystems, past and on-going collaborations, and challenges and opportunities for each sector, the report is focused on tech-enabled aspects for each sector in several ways:

- Knowledge transfer between the two countries' expertise
- Accelerating tech development in the start-up ecosystem
- To connect available opportunities to appropriate funding for focus sectors
- Establishing access to a new market for start-ups with scaling up initiatives
- Obtaining best practices on capacity building from Dutch SAO programs

We are aiming to unlock potential ways in which the Dutch and Indonesian ecosystem can learn from each other's strengths and how to leverage them to form a strategic and mutually beneficial partnership. Based on the insights from our data collection, and connecting them with the strength points from the two ecosystems, we recommend three models of collaboration:

1. **Corporate Innovations**, the process of incorporating new innovative solutions into existing business models. This model allows corporates and start-ups to exchange resources, industrial expertise, market trends, with possibility for acquisition (for corporates) and exit (for startups). Suitable especially for the fintech and logistics sectors.
2. **Venture Builders**, which allows SAOs or corporates (the venture builders) with initial business ideas in a specific industry to build their own A-team through an intensive period of building the business (venture building). This model might result in new technology development tailored to local context, and access to a global network of resources. Suitable for Waste Management and Water Management sector.
3. **Joint R&D**, the classic collaboration in the always-changing world, hence can be applied throughout all focus sectors and is particularly relevant for Agriculture and Healthcare where intensive R&D process involving industry experts is highly needed. Start-ups or any ecosystem players might benefit from this model to know the needs and opportunities of the market, of which start-ups can leverage based on the R&D outcome.

Glossary

Accelerator Any structured programs that typically provide mentorship, connections, educational components, and sometimes capital in return for equity to help a start-up grow during a specific period, usually over the course of three to four months

Agriculture The process of producing food, feed, and many other desired products by the cultivation of certain plants.

Agricultural inputs The products permitted for use in organic farming. These include feedstuffs, fertilizers, and authorized plant protection products as well as cleaning agents and additives used in food production.

Angel Investors Individuals who invest their personal money in start-up companies and support them in their early stages of growth.

B2B Business to Business is a company that provides services to other companies.

B2C Business to Customers is a company that provides services for individuals.

Business Model Conceptual structure that supports the viability of a product or company and explains how the company operates, makes money, and how it intends to achieve its goals.

Collaboration The practice of working together between institutions to achieve a common purpose to achieve business benefits. The corporate-start-up collaboration covers a wide range of behaviors; it can be transactional (investment through CVC, or corporate accelerator program) or relationships that are more than strictly transactional, where it merely involves the sharing of knowledge, activities, and resources.

Corporate incubator or accelerator specialized corporate units that hatch new businesses by providing physical resources and support.

Corporate innovation: the process of incorporating new innovative solutions into existing business models

Corporate Venture Capital (CVC) The practice of directly investing corporate funds into external start-up companies through joint venture agreements and acquisition of equity stakes.

Decacorn refer to companies valued > USD 10 Billion

Downstream in agriculture The food processing industry.

Early Stage Companies Companies who are mainly focused on developing their business ideas and defining their business models and products. These include companies from the ideation stage to those who have generated revenue, either non-recurring or recurring revenue.

E-aggregator Fintech provides data collection and processing services for better user decision making.

ECommerce The activity of buying and selling goods and services on the internet.

E-money Pioneer of chip-based electronic money embedded in the face of the card.

E-wallet Server-based electronic money in smartphones.

Equity The ownership interest of the company which is owned by various parties.

FDI Foreign Direct Investment.

Financial Services The professional service involving investment, lending, and management (omitting Point of Services / POS).

Fintech: The technology and innovation that aims to compete with traditional financial methods in the delivery of financial services. It is an emerging industry that uses technology to improve activities in finance

Funding The available capital to build and grow the business together with the interest, capabilities, and track record of likely investors.

Gini ratio A measure of statistical dispersion intended to represent the income or wealth distribution of a nation's residents and is the most commonly used measurement of inequality.

Growth stage (scaling up) The phase when a company has shown stable growth and reached its' break-even point. During this stage, there might be some founders exit for the start-up that is very high in value and seen to be very attractive for capital providers.

High-Net-Worth Individuals (HNWIs): Individuals with investable assets of USD 1 million or more, including primary residence, collectibles, consumables, and consumer durables.

Ideation stage The preparation stage for a start-up with the business model keeps on changing when the company is still focused on developing its business model, not yet developing any product and capital, mostly from the founder's inner circle.

Incubator Provide long-term structured programs that typically include training, management advice, and working space as a way to assist start-ups in building the right foundation for their businesses.

Incubator initiated VB the Incubator-initiated VB consists of incubators moving upstream into the venture creation and VB space. They often have streamlined programs in place that are offered to both partnering ventures as well as their own initiated ventures.

Investment The process of committing capital to a business with the expectation of generating a long term profit.

Investment mode The vehicles/institutions used to make an investment, for example through VCs, as foreign direct investment companies, or grants deployment through partnership with SAOs.

Healthcare A sector of the economy made up of companies that specialize in products and services related to health and medical care.

Logistics The management flow of goods, information, and other resources between the point of origin and the point of consumption to meet the requirements of consumers.

Midstream in agriculture The food production process, including meat, fish, animal feed, and dairy products.

Minimum Viable Product (MVP) A version of a new product that offers a team to collect a maximum amount of validated learning about customers.

Organic Growth Growing the business slowly based on sales, without the need to raise external funds.

Peer-to-peer (P2P) Lending Lending alternatives that enable individuals to obtain loans directly from other individuals, cutting out the financial institution as the middleman.

Pre-revenue stage The stage where companies focus is still on creating and validating their MVP.

Pre-seed The stage when a start-up receives non-institutional money (grant, loan, or angels).

Product/Market Fit An extent to which a product satisfies the market demand.

Pure-play VB companies that are solely focusing on venture building, creating ventures from scratch and investing in them until exiting (often only 5-10 years later).

Research and Development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge on products or services.

Revenue generating (product launched) The stage when a start-up is snowballing, able to monetize and start to gain traction from the market.

RVO: Rijksdienst voor Ondernemend Nederland or the Netherlands Enterprise Agency, the Dutch official facilitator to support entrepreneurs, NGOs, knowledge institutions and organisations.

SaaS Software as a service is a software product that is hosted remotely, usually over the internet (a.k.a. "in the cloud").

SAO (Start-ups Assistance Organizations) Start-up assistance organizations enable entrepreneurs and ventures at diverse growth stages to develop successful businesses, by providing a variety of assistance and support services.

Seed The seed round is the first official round of financing for a startup. At this point a company is usually raising funds for proof of concept and/or to build out a prototype and is referred to as a "seed stage" company.

Stage The stage of development a startup company is in

Sector The market that a startup companies product or service fits into. Examples include: consumer technology, cleantech, biotech, and enterprise technology. Venture Capitalists tend to have experience investing in specific related sectors and thus tend not to invest outside of their area of expertise.

Series Refers to the specific round of financing a company is raising.

Start-up Any companies that are in the early stages of development, in which the entrepreneurs are reshaping and refining their business models, with a vision to set-up viable, stable and scalable businesses. These companies usually implement innovative technologies and/or business models to strive for trajectory growth. In this report, a start-up is not limited to the tech sector but any companies fit the aforementioned definition.

Startup ecosystem (ecosystem players) The surrounding environment where different stakeholders interact as a system for the pursuit of entrepreneurship. It comprises start-ups in their various stages and organizations including, but not limited to entrepreneurs, capital providers, private corporates and private individuals.

Supply chain management Collaboration between firms to connect suppliers, customers, and other partners as a means of boosting efficiency and producing value for the end consumer, the operational framework within which logistics is performed.

Ticket size Amount invested in a company

Unicorns refer to companies valued > USD 1 Billion

Upstream (agriculture) Includes inputs to agriculture, such as seeds, fertilizer, machinery and technology for new areas such as precision agriculture.

Venture builder Structured programs for start-ups which involves initiated ideas by the VB's team and provide funding so they often takes majority stake in their venture.

Venture capital (VC) The money provided by venture capital firms to small, high-risk start-up companies with significant growth potential.

VC initiated VB a model where VCs go 'upstream' in the value chain towards starting their own venture builder vehicle.

Water Management Management of water resources that include the detection and collection of groundwater, processing, and the distribution of drinking or freshwater.

Waste management The collection, transportation, and disposal of garbage, sewage, and other waste products.

Research Limitation

1. **Sample Size.** The sample size is developed by aggregating the desk study provided in available sectoral research, government policies, available private sector data and analytics, ANGIN partners numbers, data in ANGIN pipeline as the biggest investor network in Indonesia, and the participants calling in December 2019 through various channels and community partnership throughout Indonesia. The nature of the emerging sector lets the researchers unfold the population size of the sample.

2. **Method and Data Collection Process.** Our primary data collection method is limited due to shareable and consent insight shared by respondents. Thus, the answers might be high in subjectivity, according to their personal & institutional value propositions and interests. Data collection in Indonesia is delivered in Indonesian and English. Data collection in the Netherlands is delivered in English, which might have distorted the terms of language barrier and understanding. There is also a possibility of Group-Think during data collection with more than one respondent, as a more assertive voice tends to dominate the space.

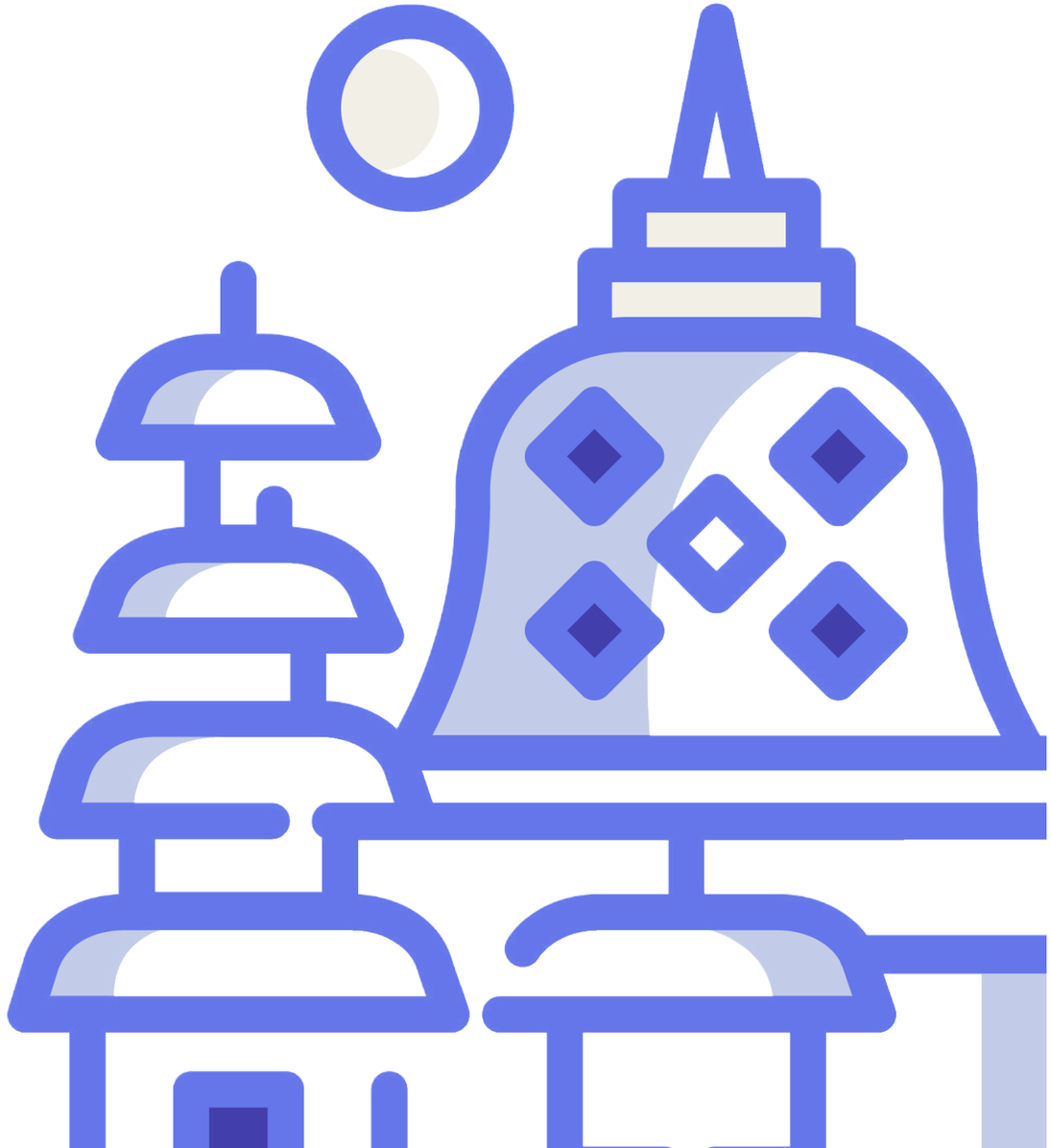
3. **Time and Timing of Study.** The study is limited to data obtained during the study time frame (December 2019 - March 2020). There is a possibility of undiscovered data due to unsuitability data collecting timing for respondents.

4. **Age of Secondary Data.** Secondary data utilised in this report are any publications made max. five years before 2020 to ensure currentness.

5. **Locations.** In Indonesia, the data is concentrated in cities where the respondents reply back to our respondents calling and literature review, namely Jakarta, Bali, Yogyakarta, and Bandung.

CHAPTER 1

Indonesian start-up Landscape



I.1. Overview

This chapter elaborates on the Indonesian start-up ecosystem and gives a clear overview of the opportunities and challenges in the Indonesian start-up scene. This part analyses the appealing factors of Indonesian ecosystem and why it is interesting to explore collaboration areas. The datas collected are based on the study of reports and interviews with Indonesian stakeholders.

Figure 1 - Map of Indonesia Position in the Asia Pacific

I.1.1. Development Agenda and Innovative Solution

Indonesia is a middle-income country that has maintained a consistent economic growth of over 5% on average during the period from 2014 to 2018 (World Bank, 2020). In Indonesia, efforts to achieve the SDGs are institutionalized from the highest national level to subnational entities and integrated into national and subnational development planning. This is a massive collaborative endeavor between the government and non-state actors designed to serve 264 million people – a third of whom are children – consisting of 1.300 ethnic groups across 17.000 islands. Through various efforts, Indonesia has been successful in reducing inequality with the Gini ratio hitting the third percentile already in 2018 (0.39) [3] . Poverty has been reduced to a single digit for the first time in history, job opportunities and access to education increased at all levels [4] .

Indonesia's development priorities include strengthening human development through poverty reduction and improvement of basic services, reducing regional disparities through connectivity and maritime development, increasing economic value-added and job creation, unlocking the potential of creative industries, and overcoming the digital divide between big cities and the rest of the country, like Jakarta, Yogyakarta, Bandung, Surabaya, and Bali.

Following the success stories of Indonesian "Unicorns" in bringing innovative solutions resulting in significant social impact, many new start-up initiatives have grown. These initiatives are aimed to nurture innovative young entrepreneurs. Incubators, accelerators, and various SAOs, including university incubators, are mushrooming across the country. With an increasing vibrant entrepreneurial scene in the country, a lot of the programs recently established are more sector focused (e.g. food, energy), which allows for tailored and specific knowledge transfer.

[3] GINI index (World Bank estimate) - Indonesia. from https://data.worldbank.org/indicator/SI.POV.GINI?end=2018&locations=ID&start=1984&view=chart
[4] Deeper indicator for Indonesia can be accessed at https://sustainabledevelopment.un.org/memberstates/indonesia

I.1.2. Government Commitment & Policy Endorsement: Making Indonesia 4.0

One of the Indonesian government's strategic agenda's in accelerating economic growth and achieving SDGs is enhancing industrial digitalization, also known as *Indonesia 4.0*. This means seizing the momentum of the Fourth Industrial Revolution or 4IR, commonly seen across the Asia Pacific region. Indonesia is in line with this trend, together with Southeast Asian countries such as Malaysia, Singapore, and Thailand, believing that digital technologies, innovation, and entrepreneurship are keys to securing high quality economic growth.

Indonesia has recently released its digitalization roadmap, "Making Indonesia 4.0"[5], as part of its strategy to create more jobs and fulfill its aspiration to become one of the top ten economies in the world by size. This digital emphasis is particularly important in the context of harnessing the 4IR phenomenon, while the country ranks last (25th out of 25 nations) on the Automation Readiness Index[6]. Nonetheless, as a member of both the ASEAN and the APEC, Indonesia is well-positioned to benefit from the socio-technological transformation through its growing start-up scene. The fact that "Making Indonesia 4.0" was launched in 2018 indicates not only a national awareness of the potential of 4IR, but also a desire to harness it for the purpose of increasing productivity, efficiency, service quality, and reducing inequalities from a macro perspective. Among the national priorities set out in the roadmap, those related to start-ups are "Empower SMEs" and "Establishing Innovation Ecosystem".

As the result from the roadmap, the Ministry of Industry launched Startup 4 Industry[7]. Startup 4 Industry is a set of programs to support start-ups to solve problems of their industries through technology-based and innovative entrepreneurship. The programs comprise national seminars and competitions (Comptech and Hackindustry), and provide a networking platform for start-ups through TechLink. Along with the Ministry of Industry, the Ministry of Finance, and the Ministry of Communication and Information Technology are working together to boost the digital economy through start-up activities, supported by other sector focused ministries. Another initiative resulting from the roadmap is called *The Smart Cities*, assisting cities beyond Jakarta to accelerate their internet literacy, which aims to decentralize internet "know how".

Aside from these initiatives, the government is committed to nationwide 4G infrastructure through the *Palapa Ring* project. *Palapa Ring* is a megaproject consisting of 3 parts of Indonesia (West, Central, and East), consisting of optical fiber network development as a backbone for the national telecommunications system. The project will connect the whole country, improve access to the internet, as well as Universal implementation Service Obligation (USO) facilitation, utilization of e-government, e-education, and e-healthcare.

[5] Designed by Indonesia's Ministry of Industry in 2018. Official publication can be obtained at: https://www.kemenperin.go.id/download/19347
[6] ABB, 2018, *Automation Readiness Index: Who Is Ready for The Coming Wave Of Automation?*
[7] Official Website: https://startup4industry.id/

Figure 2 - Indonesia Palapa Ring Map (Source: Ministry of Communication)

The *Palapa Ring*[8] project clearly shows the Government's commitment in enhancing Indonesia's connectivity in order to boost digitalization, which leads to opportunities for mobile and tech-based sectors, including start-ups. While the *Smart Cities* are supporting the start-up ecosystem through more accessible information and service platforms to deal with the public sector. According to the latest report by Google, Bain, and Temasek (2019), the size of Indonesia's *internet economy* is valued at USD 40 Billion, four times bigger than it was in 2015, and expected to grow towards USD 130 Billion in 2025.

Government commitment to foster start-ups can be highlighted through the launching of various government programs. The government aims for Indonesia being The Digital Energy of Asia. The prominent effort is the 1,000 Startup Digital[9], initiated in 2016 and operating under the Ministry of Communications and Information Technology, is a comprehensive incubation program for start-ups focusing on agriculture, healthcare, education, tourism, logistic, and maritime sectors. The government is also building numbers of decentralized accelerator and incubator programs in various cities like Bandung Technopark, Makassar Technopark, Bali Creative Industry Center, and many others. This shows how the government is looking at a role not merely as regulator, but as well as accelerator.

The above illustrates support from the government in enhancing 4IR. With a population of more than 270 million, Indonesia has a big market with a growing digital economy. The Netherlands has a dense network of digital talent and is an innovative hub for many multinationals. These are complementary strengths, and if both countries work together, they can be more than the sum of their parts.

[8] Read more at https://kominfo.go.id/content/detail/3298/sekilas-palapa-ring/0/palapa_ring or https://palaparing.id (both in Bahasa)
[9] Read more at https://1000startupdigital.id

I.1.3. Home of The Unicorns

Development of innovative start-ups has become a driver in combating social challenges in Indonesia, developing the Indonesian economy, solving environmental challenges, and reaching SDGs. Started and centralized in Jakarta, an internet gold rush is afoot in the city, with start-ups disrupting businesses and improving Indonesian lives by taking chances on the demographic bonus. Based on DailySocial's Start-up report in 2019, Indonesia has one decacorn, Go-Jek (originally a ride-hailing app, now developed into an app-based multi service provider from ticket box to digital payment) and five unicorns, which are, Traveloka (online travel agency), Bukalapak (marketplace), Tokopedia (marketplace), OVO (mobile payment), and JD.ID (marketplace). Indonesia's start-up ecosystem is forecasted to further grow by 20-30% in the coming years[10].

Reflecting the existence of unicorns, venture capital funding in Indonesia escalated significantly from USD 2.3 million in 2014 to USD 136 million in 2017[11] and further increased to USD 582 million in 2019[12]. Meanwhile, more early stage investment options are also established with institutional investors going into early-stage investment: new VCs entering the early-stage market (from Japan, Korea), existing VCs create new seed funds to build their pipeline (e.g. Kejora), also some CVC have partnerships with venture builders or accelerators (now more state-owned enterprises are establishing CVC's as well). We have also seen increased angel investing as more High Net-Worth Individuals (HNWIs) are inclined to enter the scene. The vibrant market gives leeway for new players as there are plenty of options to provide capital to promising start-ups.

Figure 3 - Jakarta as one of the go-to investment hub (Source: Startup Genome)

[10] The Jakarta Post, 16 April 2019, "*Number of start-ups projected to grow 20-30 percent this year*", https://www.thejakartapost.com/news/2019/04/16/number-of-start-ups-projected-to-grow-20-30-percent-this-year-bekraf-says.html
[11] Conrad Egusa, 20 June 2019, "*An entrepreneurs guide to Indonesia's startup scene*", June 20, 2019. https://thenextweb.com/podium/2019/06/20/an-entrepreneurs-guide-to-indonesia-startup-ecosystem/
[12] The Jakarta Post, 27 March 2020, "*Indonesia Retains Its Position as SE Asia's Second Largest Venture Capital Market*", https://www.thejakartapost.com/news/2020/03/27/indonesia-retains-its-position-as-se-asias-second-largest-venture-capital-market.html

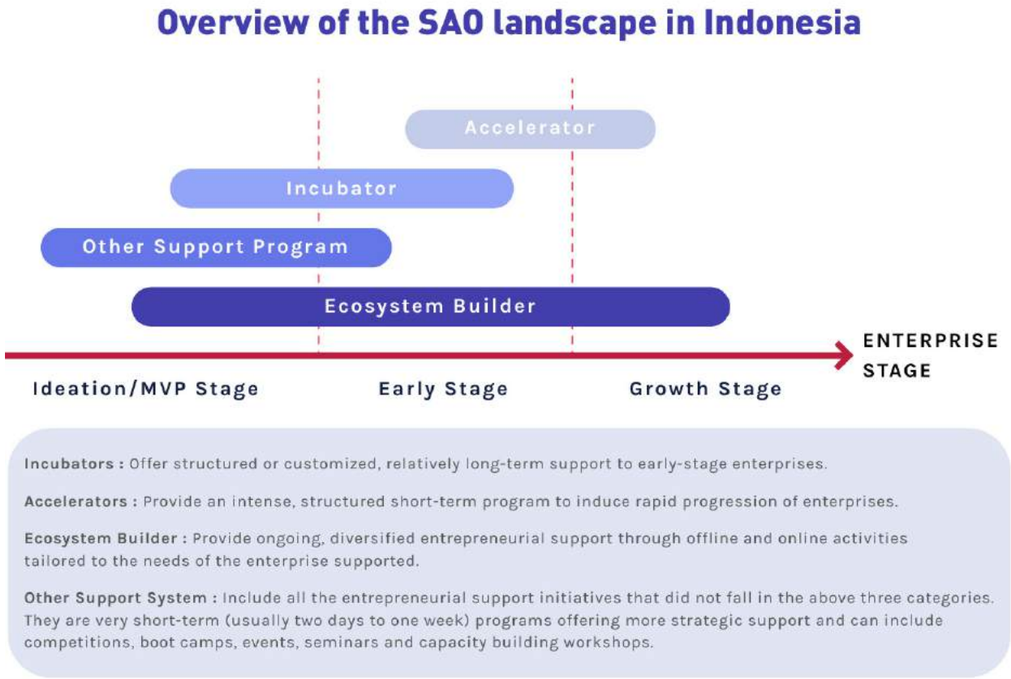
1.1.4. Ecosystem Builders: Presence of Start-up Assistance Organizations' (SAOs)

Start-up Assistance Organizations (SAOs) have largely sprung up over the past five years in Indonesia. SAOs are entities that offer a spectrum of support services to entrepreneurs and ventures at different growth stages, from idea-stage to growth-stage, to develop successful and viable businesses. SAOs in Indonesia are established and supported by a diverse range of stakeholders, starting from the Central Government, State-Owned Enterprises, Private Companies, and also Knowledge Institutions. Many programs use self-designated terms and definitions to identify themselves. Furthermore, SAOs, consisting of mentorship providers like accelerators and incubators, and other supporting programs from governments and foreign Official Development Assistance (ODAs) for instance, host events or establish formal partnerships to fuel start-up activity.

Ecosystem builders like the networking platforms of ecosystem players or co-working spaces host start-up related community events. They have become the "go to" players to start new activity in the ecosystem. Start-ups mainly depend on SAOs for assistance or to unlock opportunities to grow, rather than their limited personal networks. That makes the existence of SAOs significant to the start-ups.

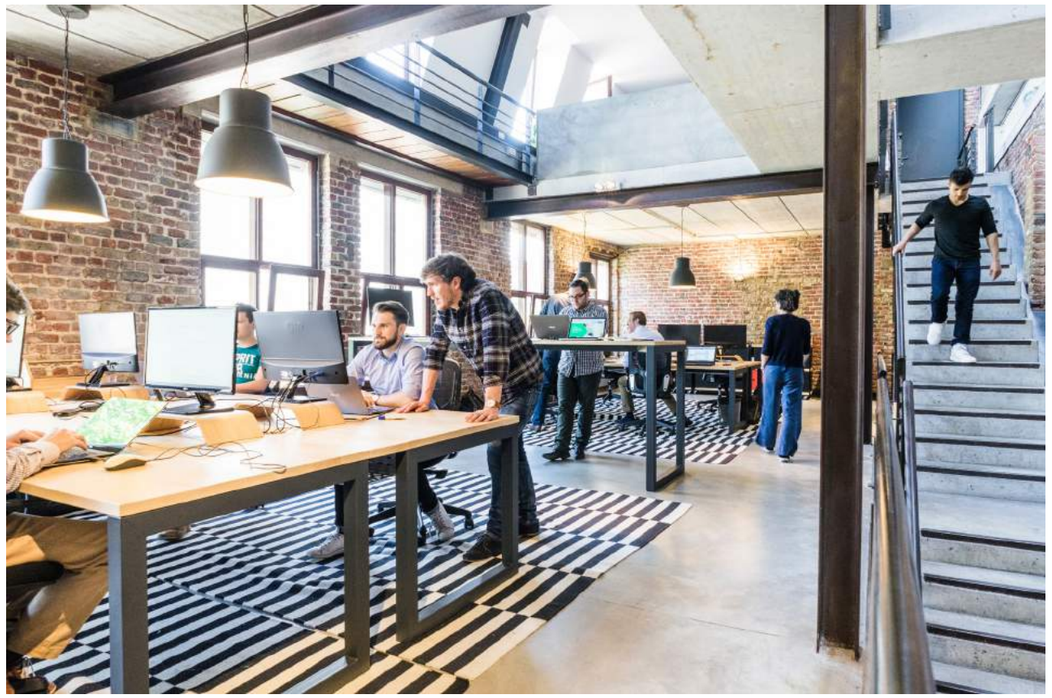
SAOs have a variety of organizational structures and business models. When engaging with them, it is useful to know the structure and mission of programs in advance. We streamline the categorization of SAOs by identifying commonalities into four classifications, as follows:

Figure 4 - Overview of SAO Landscape in Indonesia 2019 (source: ANGIN Report)



Although the SAOs can be categorized into certain classifications, there is, in practice, a wide range within the categories. Within the broad categories, we found that SAOs may differ according to their business model, curriculum, and method of delivery. There are also some categorical overlaps across the categories; for instance, some ecosystem builders may run a program with a similar curriculum structure as incubators. In addition, there is still an element of evolution in Indonesia's SAO ecosystem. Most SAOs have gone through several transformations since inception – most notably in the program structure – and they are expected to continue to improve their program.

A clear list of prominent organizations that shape the Indonesian start-up sector and investment space is in **SAOs Taxonomy & Landscape of Indonesia Report**. The report lists organizations which have strong reputations, do concrete work, are sustainable in terms of programs and commitments, and are highly valuable to accompany non-Indonesian start-up players in their journey in Indonesia.



I.2. Opportunities in Indonesia

Indonesia offers at least four attractive factors to incoming players seeking engagement with its start-up scene. These opportunities should be seized to unlock the full potential of cooperation with Indonesian start-ups. Those factors are:

1. **Big and vibrant market.**
   Huge, young, and tech savvy population, growing numbers of mobile penetration, and increasing middle class, trigger innovation driven enterprises to keep looking for untapped industries and markets. This without having to go overseas for customers in the initial growth stages.

2. **Increasing number of Tech-Enablers in various sectors.**
   The appetite for tech startups enabling sector development is not limited to fintech, despite currently being the most popular. Other sectors gaining popularity are agriculture, logistic, healthcare, waste management, and water management. These industries are in line to grow in terms of active tech enablers, and are focus sectors in this report.

3. **The growth of eCommerce.**
   eCommerce is booming and three start-ups from this sector became unicorns already. SMEs outside big cities or offline businesses are now connected by these internet-based marketplaces for greater market access. eCommerce also fuels the growth of other related industries such as logistics, fintech, transport, artificial intelligence etc.

4. **Positive investment outlook.**
   Various reports have confirmed this trend; the latest report of Daily Social stated that there were 113 disclosed funding announcements, compared to 67 in 2017 in Indonesia. This trend shows that investors' confidence in the start-up industry has improved significantly, reflected by the growth of VC investment in the last five years. While VC investments only take up to 0.15% of GDP compared to 0.28% on average in SEA, this gap does offer more room for new investors to boost the market.

This section will further deep-dive into the opportunities above.

1.2.1 Emerging Indonesian Market

With the largest population in the region, access to more than 500 million people in SEA, and steady GDP growth (5% yearly), Indonesia remains an attractive market for investment. In start-ups only, Indonesia unlocked USD 2.9 Billion in 2019[13], expected to rise in the following years. The capital city, Jakarta, has a population of nine million people, indicating a considerably big urban market; and 260 million others are scattered throughout the archipelago. The big market size is advantageous to the start-ups as they will worry less about expanding to neighboring countries in their initial business stages, considering the ample potential of consumers in the homeland. For instance, ride-hailing giant GOJEK, grew by only depending on the local market before their expansion to overseas markets in ASEAN.

It is not only about the number of people, but also their potential to be an attractive target market. With the increase of population, the increase in consumption is inevitable. Frost & Sullivan report in 2018 projected that the Indonesian middle class rises from 89 million in 2016 to 92.4 million in 2020[14]. Nielsen's Changing Consumer Prosperity study finds that most consumers in Indonesia spend more on Information, Communication, and Technology (ICT) industries, reflecting the tech-savviness of consumers. The usage of mobile phones is the major source of internet users. About 97 million out of 152 million mobile phone users are in big cities in Java and Sumatra[15]. As the average age in Indonesia is 24 years old, the younger generation who uses smartphones the most is leading the technology revolution. Even with the uneven distribution of internet users, Indonesia is able to close 113 investment deals in start-ups in 2019 based on the latest Daily Social report. Most of them are taking their business online and are Jakarta-based.

Jakarta is still the capital of start-ups; but the crowded market is expected to grow in emerging creative hub cities like Bali, Makassar, Bandung, Medan, and beyond. This holds the potential of untapped markets for potential investors and ecosystem builders, considering the different culture each area holds, opening the opportunity of diversified or creation of new products tailored to local culture and market. The Indonesian government's priority to enhance SMEs in rural areas can also stimulate the creation of scalable SMEs and turn them into innovation driven enterprises or start-ups.

Figure 5 - Mobile Market Statistics: Indonesia

Mobile Market Statistics: Indonesia

(source: UN SDSN, Oxford Business Group, The Indonesian Internet Providers Association (APJII), Google Temasek

- Population of 273 million (2020)
- Productive age (15 years old - 65 years old) predicted to be 70% of the population by 2030
- Mobile Internet user (2019) 152 million users
- Total internet user (2019) 171 million users
- The middle class population of 56 million (2020)

[13] Daily Social, 2020, Scaling Through Technology Democratization: Startup Report 2019
[14] Frost & Sullivan, 2018, *Digital Market Overview: Indonesia.*
[15] *Ibid.*

1.2.2. Increasing Tech-Enablers in Various Sectors

Tech enabling market opportunities in Indonesia are two-fold: shift in the market's buying behavior (from offline to online) and the government infrastructure endorsement. Middle-class income country (World Bank, 2018) leads to middle-class consumption behavior, which then leads to the government's urgency to improve its infrastructure to face the industry 4.0 era. The country's commitment to 4G infrastructure development 2018 - 2025 is noted in the State Budget Allocation (*Anggaran Pendapatan dan Belanja Negara/APBN*) 2020 and the National Action Plan (*Rencana Pembangunan Nasional/RPJMN*) through The Palapa Ring program, which will lead to a better ecosystem for a lot more start-ups to grow and evolve towards tech-based and digitization in the near future.

The tech-enabled start-up sector in Indonesia grows and flourishes, aligned with Indonesia's digital infrastructure development growth in recent years. Evidence is recorded by ANGIN[16]. Among 535 start-ups applying for fundraising to ANGIN in 2018, it is noted that 73% are technology-based ventures, while 27% are brick-and-mortar businesses. In 2019, the total number of start-up applicants doubled to 1,114 start-ups. On average, for every four start-ups applying for investment to ANGIN, three of them are tech-enabled businesses, while only one of them is an offline business.

In the data collection process between December 2019 and January 2020 as we announced the call for participants to be our respondents for this report, we found that fintech was making up as much as 21.67% of the overall applications, showing the big interest in the sector to build a strategic partnership with the Netherlands. We also noted a new trend in the agriculture sector to be more visible and spread out geographically. About 40% of the respondents in the agriculture sector in our data operate in the four big cities in Indonesia (Bandung, Yogyakarta, Jakarta, and Bali). The level of engagement is then followed by the logistics and health tech sectors, while the waste and water management sectors have the lowest portion of respondents. Each of the sectors will be discussed deeper in chapter 1.4.

Table 1 - Percentage of Start-up Fundraising Applicants by sector in Indonesia (source: ANGIN pipeline)

Sector	2018	2019
Fintech	11%	10%
Agriculture	4%	5%
Logistic	3%	4%
Healthcare	3%	4%
Waste Management	2%	1%
Water Management	1%	1%
Other Sectors	76%	75%

[16] Angel Investment Indonesia Network (https://angin.id)

1.2.3 The Growth of eCommerce Sector

Indonesians have embraced digital technology with enthusiasm and are among the world's most avid users of social media such as Facebook, Instagram, Line, Twitter, and YouTube as the penetration rate of the internet has increased up to 64% by 2019 based on the We are Social and Hootsuite yearly report. eCommerce, as one of the emerging sectors in Indonesian market, keeps growing rapidly as the mobile internet user penetration rate is now 66.3% compared to 52.5% in 2017, based on the leading statistical search engine, Statista. This helps MSMEs all over the country to grow.

The increasing focus on the tech-sector is by no means undermining the non-tech sectors. Indonesian start-ups are also innovating and creating new business models. For instance, ride-hailing firms are expanding to medicine delivery, events tickets booking, and mobile payment. The SMEs who were dependent on offline business now benefit from internet-based marketplaces for greater market access. The emerging social enterprises contribute to the ecosystem by expanding their social and economic impact to the marginalized through agritech, edutech, and healthtech sectors.

The emergence of eCommerce also increases the value proposition of digital finance and logistics services. The increasing growth in eCommerce transactions means an equally rising need for innovative responses from the logistics and digital financial services sectors to complement the eCommerce activities. Digital financial services offer efficiency to eCommerce transactions, allowing instant payment and speedier booking confirmations. Traditional banks are also competing to have the most efficient digital payment platform, (some are as well actively investing in the newest fintech solutions), making the fintech start-ups need to raise the bar and propose greater innovations. Logistics services are as well essential where digital marketplaces are assessed by the market based on delivery duration and area coverage. Tokopedia, an Indonesia unicorn ecommerce platform, is utilizing at least five logistics companies and offers more than ten digital payment methods (including traditional banks' products and available digital financial service providers). Hence, the positive trajectory of the eCommerce market has paved the way for the emergence of the logistics and digital financial services sectors as the "hot sectors" attracting both investors and customers attention.

In addition to the impact the tech-sector brings, Indonesia's middle class is growing rapidly. Coupled with affordable access to the internet through mobile devices, these factors are now shaping Indonesia into a tech-based ecosystem, allowing many Indonesian start-ups to venture primarily into the tech-enabled start-up sector. This way, as explained before, the tech-sector's impact will also trickle down to the non-tech sectors, unlocking opportunities for any sector possible.

There is palpable excitement as the potential for change, and scale is immense. Indonesia's middle class is growing fast and consuming more than ever. In 2017, sales of cigarettes and instant noodles fell for the first time, while sales of high-value items such as cosmetics and smartphones rose. This trend shows that the buying power of the middle class is high and they desire a more sophisticated life.

1.2.4 Indonesia Investment Landscape Insights: Positive Outlook

Over the past five years, Indonesia has managed to capture a growing number of players entering the Indonesian investment sector, shaping different sector dynamics in investment trajectories and verticals, collected in the investment insights in Figure 6. Considering the economic growth of the country and the rising number of young people who are tech-literate, investors generally have an optimistic view towards Indonesian start-up investment opportunities. The positive outlook is driven by the following factors:

- **Strong macroeconomic outlook**: Investors are confident in the strong macroeconomic fundamentals. Indonesian GDP will continue to grow by 5% steadily for the next five years. The government's efforts to prioritize infrastructure and development is gaining the confidence of global and local investors.
- **Favorable demographic:** Favorable demographic characteristics (bonus population) are expected to grow over the years continuously which leads to the increase of consumption. Market availability is not limited to the capital city, but more untapped and currently not-prioritized markets are ready to be nurtured by interventions of knowledge and capital sharing.
- **Newly digitized market:** Despite the nascency, digitization is visible in various sectors. The most prominent industry to take advantage of the digital era is financial services and retail businesses who took transactions online. With a strong macroeconomic outlook and favorable demographics, further development of the digital market is expected to grow strongly in the following years.

Figure 6 Investment Insights

Investment Trajectory

- Joint research conducted by Google Inc. and Temasek Holdings Pte claims that Indonesia's internet economy market is forecasted to account for USD 133 billion (40%) of Southeast Asia's total digital economy that is estimated to surge to USD 300 billion by 2025.
- Attractive fundamentals and a young population make Indonesia particularly attractive for digital investments, and in return, supports further growth of nationwide digital transactions. Due to all the right factors, Indonesia is now home to one decacorn (Gojek) and five unicorns (Tokopedia, Traveloka, Bukalapak, OVO, and JD.ID)
- In 2019, there were 113 disclosed funding announcements, compared to 67 in 2017 in Indonesia. This trend shows that investors' confidence in the start-up industry has improved significantly, reflected by the growth of VC investment in the last five years.

Verticals

- Taking advantage of the bonus demography and heavy traffic in big cities like Jakarta and Surabaya, GoJek had the biggest round of investment in 2019 by raising USD 2 Billion.
- However, the tech-based financial services or fintech industry closed 2019 with 23 deals, the most of all invested industries. High spikes of deal numbers in a year are found in logistics (2018: 3 deals, 2019: 7 deals). The total disclosed investment for the two industries amounted up to USD 256 Million from total of USD 959 Million (excluding USD 2 Billion to Gojek). The increasing amount and deals reflect rising popularity among investors.

Most investors are looking to diversify from eCommerce because of potential market consolidation, major new entrants, high investments, and the long lead time for profitability. As a result, **education technology, agriculture technology, health technology, and insurance technology** are also emerging as rising star sectors in Indonesian start-ups. (Source: Google, Bain & Temasek 2019, Daily Social Research 2020)

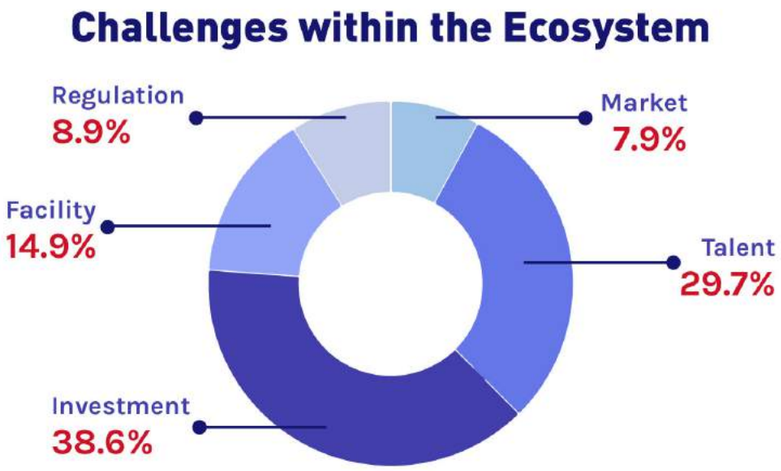
1.3. Challenges in Indonesia

Existing studies[17] have identified five key challenges that hinder the growth of Indonesian start-ups:

1. **Regulation:** Overlapping regulatory requirements (for instance, double taxation for certain business models) and lack of accommodating regulation in some industries, burdening start-ups and investors alike as issuance of new regulations is yet to complete with the rise of new business models.
2. **Investment:** Lack of source of funds and supportive regulations encouraging the flow of investments, along with lack of structured mechanisms matching suitable investors and deserving start-ups.
3. **Infrastructure:** Relatively uneven development of critical basic infrastructure (network and connectivity) and entrepreneurial activities enablers (SAOs) throughout the country, outside the hubs. SAOs, capital providers, and technical resources are still centralized in Jakarta.
4. **Talent:** Inadequate high quality of tech and entrepreneurial talents is seen as a constraint to the growth of the start-up ecosystem.
5. **Market:** Fragmented and yet to be educated market creates additional hurdles when it comes to selling and marketing start-ups' products or services.

The challenges found have been adopted to build the interview and survey questions to explore the reality of current Indonesian start-up scene players, and how they expect their challenges to be tackled, specifically those in our six focus sectors. MIKTI & Teknopreneur in 2018 has mapped the challenges faced by Indonesian start-ups as displayed in Figure 7. Our data collection echoed their findings, that almost all of our respondents face challenges in the five sectors, regardless of the weight of each of the challenges.

Figure 7 - Challenges within the Ecosystem by Rank, According to Start-ups (Source: MIKTI&Teknopreneur)



[17] [3]GIIN 2019; [4]ANGIN internal data 2019; [5]BCG 2015; [6]British Council 2018, MIKTI&Teknopreneur 2018

1.4. Potential Areas for Collaboration: Indonesia and the Netherlands

The Dutch government has committed to boost its relationship with Indonesia, noting that economic, political, and interpersonal contacts can be strengthened further. Beyond historical ties, socio-cultural ties and trade ties, Indonesia and the Netherlands can connect through the emerging Indonesian start-up landscape towards sustainable and innovative economic cooperation. Both countries can complement each other in providing added value in solving challenges and seizing opportunities.

According to the Indonesia Investment Coordinating Board (*Badan Koordinasi Penanaman Modal/BKPM*), the Netherlands is the biggest investor in Indonesia amongst the EU Countries. Ranked No. 3 in the EU on the 2019 Global Innovation Index, the Netherlands is home to more than ten leading innovation hubs, whereas the private sector benefits from world-class incubators and R&D facilities; In the following sections we deep dive more into possible collaboration in areas where both countries show mutual interest to engage in the start-up context. The focus sectors of this report were chosen based on several criteria, such as:

1. **Possibility of innovation and knowledge transfer between the two countries,** meaning areas where the two countries can share their strong points and relevant expertise with each other, creating a mutually beneficial relationship,
2. The **existing bilateral economic relationship** between the two countries,
3. **Sector trends** between the two countries, and
4. **Common challenges,** and the interest to solve them, as the starting point of partnerships to find innovative solutions.

Indonesia and the Netherlands already have existing cooperation in several sectors, namely within the healthcare sector, agriculture sector, maritime (including logistics and water management) sector, and waste management sector. Besides partnerships between companies from the two countries, there are various cooperation agreements between the governments for instance through bilateral MoUs. The Netherlands Embassy in Indonesia provides many platforms to connect Indonesia and the Netherlands, both at government level and between businesses. This for instance through joint conventions, and bilateral economic missions. In fact, the sectors above were the focus sectors of the 2020 Economic Mission of the Netherlands to Indonesia[18], parallel to the State Visit of King Willem-Alexander and Queen Maxima. On top of those sectors, Indonesia itself is a country where start-up unicorns were born in a.o. financial services (fintech), as reflected in ANGIN's 2019 End of Year Report[19], which is also currently a growing start-up sector in the Netherlands.

[18] More at Bit.ly/NLMissionBooklet
[19] ANGIN 2019 End of Year Report can be accessed https://www.angin.id/wp-content/uploads/2019/12/EOY-Final-ANGIN_compressed-1.pdf

Based on the criteria and current sector trends explained in 1.2.2, we are streamlining the focus of this report to be within the six sectors mentioned above, with emphasis on tech-enabled aspects in each sector, such as fintech, health tech, and agritech. Figure 8 shows the bilateral focus sector map; potential areas where Indonesia and the Netherlands can strategically partner up, while Figure 9 shows the Indonesian start-ups who are active within the sector and are interested to partner with the Netherlands, reflected by their willingness to participate in this study.

Of course there are also emerging opportunities in other sectors such as tech-enabled education, F&B, eCommerce, gaming, and creative sectors, that are not included in this analysis, as a result of the criteria for choosing the focus sectors above. The new retail sector for example, is indeed within the interest of current investors. The sector has succeeded to get rounds of investment from VCs and is a part of Indonesia's unicorn list. This shows that integrating technology for Indonesian SMEs and activating micro-entrepreneurs across Indonesia holds promising growth. Another flourishing sector is online education platforms, who have received grant funding, including two Natural Language Processing/Understanding (NLP/U) platforms that have received VCs seed investments. These investments proved the attractiveness of the edutech sector and led this sector to join the centaurs group (start-ups with above USD 100 million in valuation), with a positive trajectory, it is likely to scale up into the unicorns category (start-ups with USD 1 billion valuation).

This brings us to start-up focus sectors in this report:

1. Agriculture
2. Healthcare
3. Logistic
4. Fintech
5. Waste management
6. Water management

In detail, we break down sectors according to each of their value chains to classify possible and available business models, including each sector's perceived opportunities and challenges for start-ups under five sectoral classifications: Regulation, Investment, Infrastructure, Talent, and Market to get a clear insight in each sector scape.

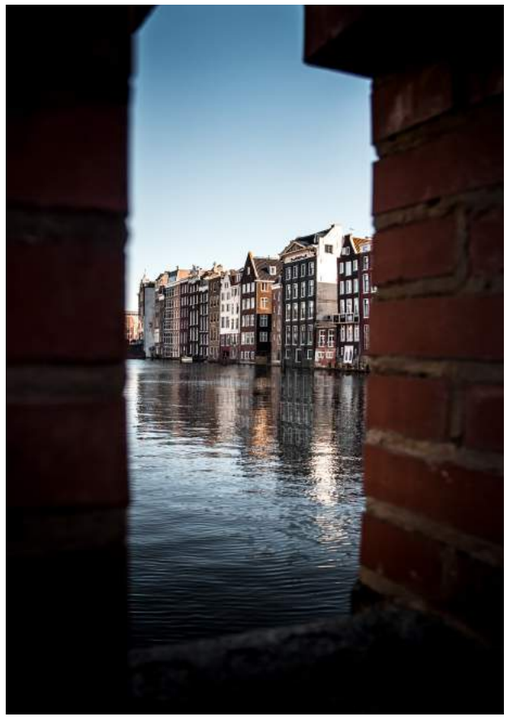
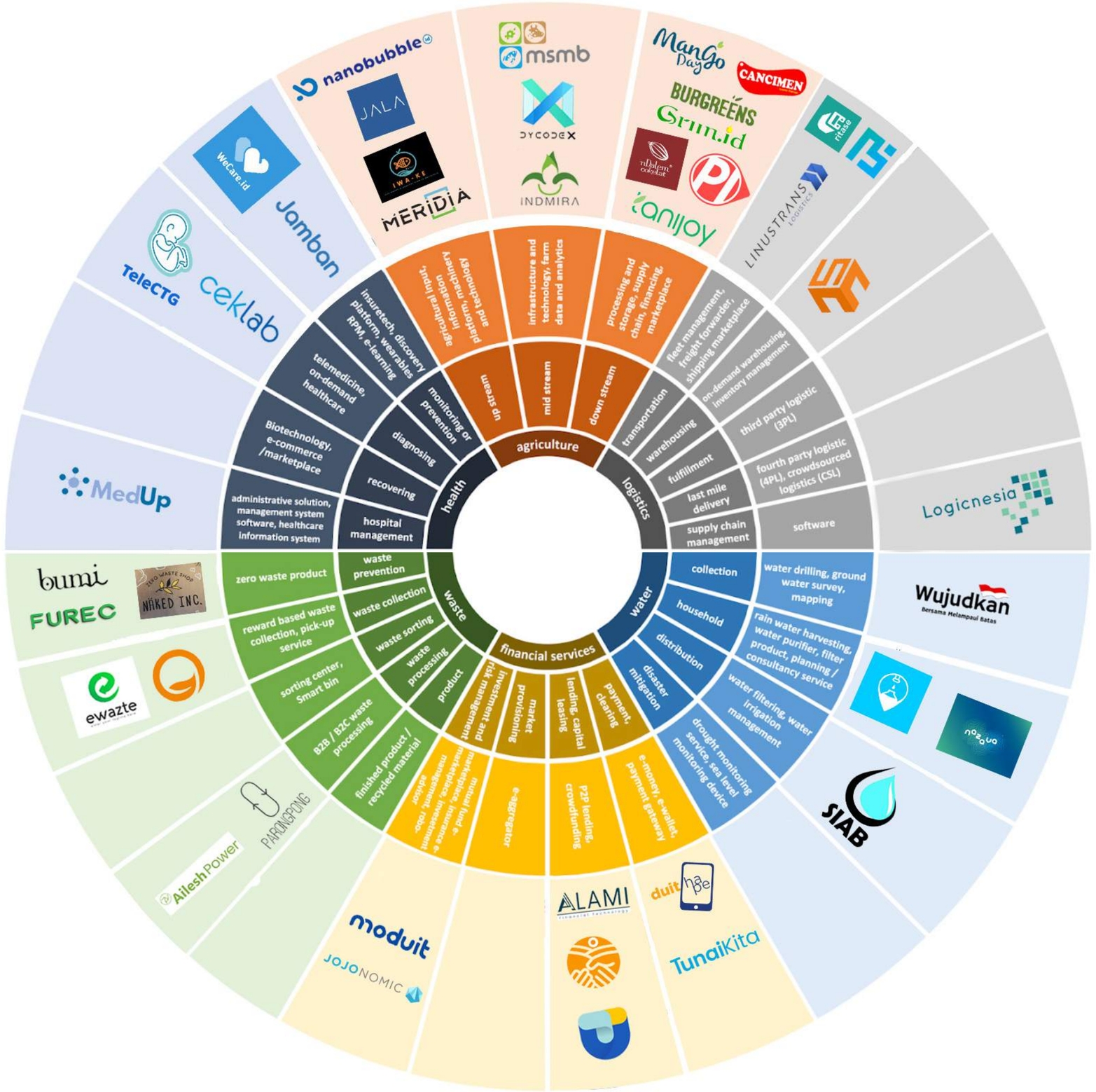


Figure 8 The Netherlands - Indonesia (NL-ID) Bilateral Focus Sector Map

Figure 9 The Indonesia Start-ups in Focus Sectors



1.4.1. Agriculture

Based on the value-chain, agriculture start-ups in Indonesia could be categorized into three categories: pre-production (up-stream), production (mid-stream), and post-production (down-stream). The trend of a healthy lifestyle and online shopping behavior is helping Indonesian start-ups that are focusing on the post-production stage to grow, and they offer more variety of products and ways to send it to the customers. Only 14,8% of Indonesian farmers use the internet (BPS, 2018), where the readiness to adapt to technology that start-ups offer in the pre-production and production stage is still challenging. The age group of 55 to 64 is the active majority of farmers in Indonesia (BPS, 2018)[20], although the government is now actively boosting the young farmers to be active and help the technology adaptation for Indonesian farmers in general.

The Netherlands and Indonesia enjoy strong collaboration, trade and investment in the Agriculture and Food sectors. There are many existing partnerships, agreements, and cooperations between Government agencies, private companies, and knowledge institutions from both countries. Indonesia's aim to strengthen innovation and technology, increase productivity, and agricultural education fits best with the value added of Dutch expertise as the World's second largest agriculture products exporter, and with Agriculture and Food as one of its top sectors.[21]

Fields covered in cooperation, trade and investment between both countries include Aquaculture, Poultry, Dairy, and Horticulture. Together with the Indonesian Government and other stakeholders, several notable ongoing projects are *FoodTechIndonesia*[22] (public-private partnership aims to strengthen poultry sector in Indonesia), *VegIMPACT* (program on improving vegetable production in Indonesia)[23], and *Dairy Village*[24] (modern and sustainable dairy farm to improve productivity and quality of milk), and *MAIA - Millennial Agripreneurs in Action* (providing students with knowledge on development of agriculture work, development, and agripreneurship)[25]. In addition to this, many Dutch companies and organizations from the sector are active in Indonesia ranging from seed and feed production to dairy. A cluster of companies from the poultry sector is active in the market as well. The latest visit from The King and Queen of the Netherlands in March 2020 also resulted in an agreement between the Dutch and Indonesian government through the Ministry of Cooperative and SMEs to enhance and develop the Indonesian cooperatives focusing on agriculture products. The agreement has also been based on agricultural market leverage and shows the interest of Dutch government to support the sector[26].

[20] Statistics Central Agency, 2018, *HASIL SURVEI PERTANIAN ANTAR SENSUS (SUTAS) 2018*, https://www.bps.go.id/publication/2019/01/02/c7cb1c0a1db444e2cc726708/hasil-survei-pertanian-antar-sensus--sutas--2018.html

[21] Netherlands Agriculture Counsellor Louis Beijer, "Focus Indonesie op versterking ketens (Indonesia Focus on Strengthening Chains" https://www.agroberichtenbuitenland.nl/landeninformatie/indonesie/achtergrond/100jaarlan_sp

[22] Read more about FoodTechIndonesia: https://www.agroberichtenbuitenland.nl/actueel/nieuws/2018/05/30/foodtechindonesia-offers-training-to-poultry-farm-managers-in-south-sulawesi

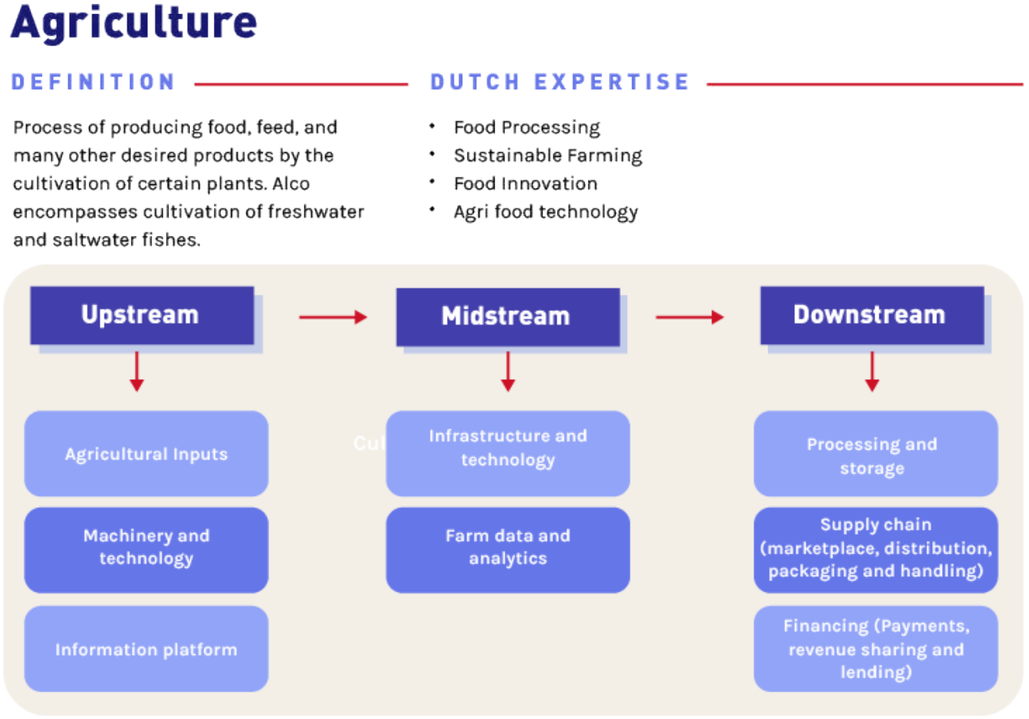
[23] Read more about VegIMPACT: https://vegimpact.com

[24] Read more about the Dairy Village: https://www.agroberichtenbuitenland.nl/actueel/nieuws/2018/12/15/frisian-flag-indonesia-launches-the-first-independent-dairy-village-in-lembang-west-java-indonesia

[25] Read more about MAIA: https://www.agroberichtenbuitenland.nl/actueel/nieuws/2018/12/12/maia

[26] Sindo News, 12 March 2020, *Indonesia dan Belanda Sepakat Perkuat Koperasi Pertanian*, https://ekbis.sindonews.com/read/1554682/34/indonesia-dan-belanda-sepakat-perkuat-koperasi-pertanian-1584032180

Figure 10 - Agriculture Focus core activities and its start-ups value proposition



Source: 1. Agritech Startups : The Ray of Hope in Indian Agriculture
2. https://www.raconteur.net/sustainability/growing-yields-in-agri-investments

Table 2 - Indonesia Agriculture Sector Challenges & Opportunities

Challenges	
Infrastructure to supply chain issues	The majority of farming activities are located in remote areas; thus, distribution and network connectivity are still challenging as infrastructure development projects are spread out unevenly. This leads to a long supply chain that might disadvantage the farmers as it includes middlemen before the farmer's products reach the end customers. Farmers should be equipped with the right mindset and infrastructure to add value to their products, supported by adequate public facilities like transportation, fresh markets, and mobile reception to better connect with other stakeholders; and the improvement of the cold supply chain, to lengthen products' durability.
Senior age group are less open to adopting new technology	The agriculture sector is facing an aging problem where fewer young people are looking to work in the sector. In a market where its beneficiaries are farmers belonging to the age bracket of 45 to 54, openness towards new technology is relatively low on average. Thus, the customer acquisition process remains arduous due to the lack of proximity of these farmers and their willingness to learn new techniques.

Challenges	
Talent scarcity	Finding the right talent with the appropriate industry knowledge is difficult due to the low interest of graduates in the field. When it comes to university graduates from agriculture-related majors, only less than 20% of them continue to work in relevant fields.
Limited options of funding for hardware models	There is a limited funding opportunities for hardware models that require high initial capital to kickstart the operation. Most of the investment made in the sector goes into marketplace and financing models. An alternative funding scheme to facilitate the R&D phase is desired by start-ups to speed up production and distribution processes.
Overlapping regulation	Agriculture start-ups are faced with impractical and overlapping regulations when it comes to raw material procurement (e.g., for IoT devices) or for product distribution, inflating the supply chain cost.

Opportunities	
Demand for good quality food and following the trend of healthy food products	As the importance of food is absolute, entrepreneurs are taking advantage of the increase of the upper middle class, globalization, and rapid circulation of information, which leads to the consciousness of healthy living. The awareness of sustainability and impact for the BOP in the agriculture industry means a greater market opportunity for innovative and impactful products; especially the organic ones.
Huge room for innovation	93% of Indonesia's total number of farmers are small family farms that grow the bulk of the country's staples such as rice, corn, and cassava. However, the majority of smallholder agriculture is practiced with very minimal use of modern tools. Among the country's smallholders, only 10% of them utilizes a high level of mechanization, leaving a significant room of new innovative tools to penetrate the market.
Government agenda in aquaculture	"Gemarikan (*Gemar Makan Ikan*)" movement to promote higher fish consumption as a solution to counter stunting problems that are prevalent in the country, paving the way for improvement in the aquaculture sector to support the program.
Government's commitment on food security	As there are challenges awaiting in feeding more than 9 billion of the world population in 2050, the government has made a National Action Plan For climate change adaptation (RAN-API). This support from the government will boost the demand for agritech and sustainable food products.

1.4.2. Healthcare

Despite being one of the government focus areas where it channels the second-biggest state budget (ABPN), healthcare provision in Indonesia remains hampered by inefficiencies through several factors. Low practitioner to patient ratio and uneven distribution of healthcare service coverage leaves significant room for health service improvement that is still centralized in major cities. Indonesian start-ups in this sector are spread across focus activities that are based on service provisions. Current start-ups solutions are concentrated around the diagnosing phase; especially those that facilitate out of hospital care. Telemedicine and financing platforms are also emerging as promising models to provide inclusive access to health services for Indonesians in rural areas. Their role will be significant considering that medical practitioners and expertise density is still low outside Java[27]. The two biggest Indonesian healthtech start-ups have received multiple series of funding rounds, and one of them is projected to be a unicorn. This reality will be attractive for new innovation to come and bring a healthy competition in the market.

There is already existing cooperation between the two countries in this field. Both recognize the shared challenges and joined forces to find smart solutions together. In 2018, the Governments of Indonesia and the Netherlands signed an MoU to strengthen the mutual cooperation in the healthcare sector[28]. The topics covered in the MoU and action plans include digitalization and e-Health, primary health, cancer, tuberculosis, hospital strengthening, academic collaboration, elderly care, and many others. This agreement clearly shows the interest from both the Dutch and Indonesian governments and their concrete efforts to collaborate in the sector. In addition to this, there are already existing partnerships between Dutch and Indonesian private companies and knowledge institutions in this field. For three consecutive years, the Dutch Government has facilitated three Economic Missions to Indonesia, consisting of a large group of Dutch life sciences and health companies and knowledge institutions with presence and interest for partnership and collaboration in Indonesia. These missions have successfully facilitated exchange of knowledge and expertise between stakeholders from both countries, while providing a platform to establish and strengthen their network[29].

[27] Global Health Workforce Alliance, *Indonesia*, https://www.who.int/workforcealliance/countries/idn/en/
[28] Read the MOU here: http://treaty.kemlu.go.id/apisearch/pdf?filename=NLD-2018-0116.pdf and the Joint Action Plan here: http://treaty.kemlu.go.id/apisearch/pdf?filename=NLD-2019-0121%20-%20Signed.pdf
[29] More at Bit.ly/NLMissionBooklet

Figure 11 - Healthcare Sector core activities and its start-ups value proposition

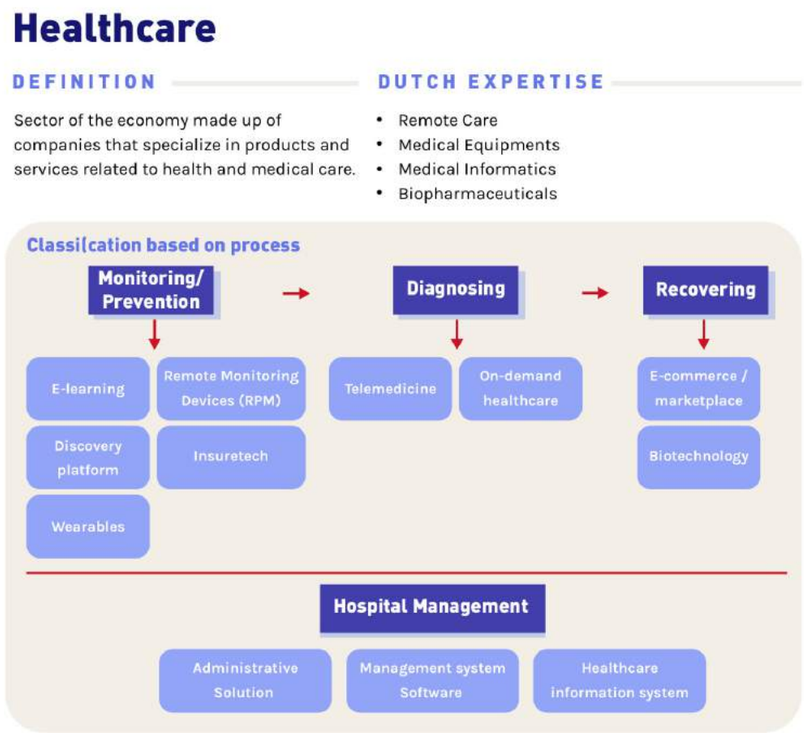


Table 3 - Indonesia Healthcare Sector Challenges & Opportunities

Challenges	
Raising health literacy and awareness remains a challenge	Health literacy remains a problem as the majority of Indonesians are not well aware of healthcare options (especially preventive solutions) and will only seek healthcare service for curing purposes.
Health talent scarcity	A limited available talent pool, especially in the medical device engineering area and lack of capacity building initiatives about to practice innovation in the field.
Seeking strategic investors with relevant industry expertise and background	Healthcare start-ups are looking for strategic investors who are part of the industry they're in; beyond investment, operational know-how, and access to healthcare groups are desired to help them navigate around the market.
Regulatory Environment	As it is in other countries, healthcare is one of the most regulated industries[30]. This challenge can also be found in Indonesia, where innovators are required to comply with certain permits and regulations. For instance, hardware production is hindered by three factors: permit, production capacity, and unavailability of components needed for production. Regulatory requirements, such as licensing for hardware products sometimes create an obstacle in the product development stage. Facilitated by the Indonesian Health-Tech Association, Indonesian Health-Tech startups and scaleups are actively having a dialogue with the Government, such as to provide a regulatory sandbox in order to accelerate innovation in this field[31].

Opportunities	
Low and unequal healthcare market penetration	Low healthcare practitioner to patient ratio and uneven distribution of healthcare facilities across the country provides plenty of room for the development of telemedicine to provide solutions for underserved areas.
Rising middle class demand for healthcare products	A growing number of middle-class population in the country will trigger greater demand for healthcare services and higher willingness to purchase new solutions.
Healthcare as one of government's focus sectors	In line with the current state budget allocation towards the sector (second biggest in the country), the government is actively attracting investment into healthcare technology, placing a greater role for start-ups to contribute to increasing the operational efficiency of the healthcare sector.
Increasing accessibility and connectivity	Improvement in connectivity and accessibility between cities facilitates more natural distribution of healthcare products and services.

[30] Health Venture Lab, 2019, *"What legal regulations to consider when you're testing your healthtech startup"*, https://hvlab.eu/blog/article/what-legal-regulations-to-consider-when-youre-testing-your-healthtech-startup

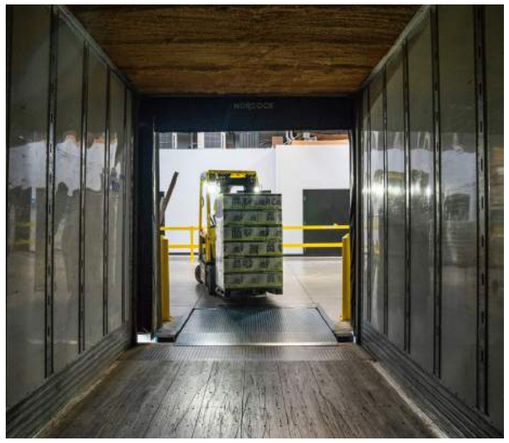
[31] Health Tech, 2020, *"Asosiasi Healthtech Indonesia Usustorlkan Skema Regulatory Sandbox untuk Kesehatan"*, https://healthtech.id/2020/03/07/asosiasi-healthtech-indonesia-usulkan-skema-regulatory-sandbox-untuk-kesehatan/

1.4.3 Logistics

With approximately 17,000 islands and around 80% of the territory of Indonesia being the seas, connectivity remains one of Indonesia's most concerning challenges. Logistical costs in Indonesia remain high as the World Bank's Logistics Index[32] showed that Indonesia is in the 46th position out of 160 countries when it comes to logistical expenses, with 72% of logistics costs going to transportation. These high costs of logistics are attributed to inefficiencies, infrastructure hurdles, and poor service quality in some areas in the logistics sector. With growing support from governments and the private sector, logistics start-ups are embracing the momentum, where there is rapid growth and interest from ecosystem players in the logistics industry. Logistics focus sector activities most common classification is transportation, warehousing, fulfillment, last-mile delivery, and supply chain management. Ride-hailing start-ups, last-mile delivery services, and other eCommerce enabler logistics start-ups are taking off and are gaining massive traction as they succeed in revolutionizing the logistics industry in Indonesia. There are rising interests and shifts of focus from investors, government, and industry players to bring in innovation in another chain of the industry. At least six of Indonesia's logistics start-ups received various stages of disclosed funding amounting to more than USD 87 million throughout 2019 and investment is predicted to maintain vigourous this year[33].

Indonesia and the Netherlands have especially strong cooperation in the Maritime sector. Both countries signed an MoU in 2016, including *Port Development and Logistics System Efficiency* as one of the areas of cooperation. This agreement allows both countries to exchange knowledge and innovation, such as through education, training, and conferences. A *Bilateral Maritime Forum (BMF)* is organized yearly, allowing public and private stakeholders from both countries to intensify their partnership through meetings and discussions.

In addition to this, many Dutch companies in the Maritime sector are active in Indonesia, ranging from dredging to marine telecommunications. For instance, supported by the Dutch Government, a group of companies and institutions are partnering to strengthen the shipbuilding sector in Indonesia. The Maritime sector was also one of the focus sectors of the 2020 Economic Mission to Indonesia, where also during that occasion, Dutch Company Royal Vopak confirmed a cooperation deal to develop fuel storage tankers in Tanjung Priok Port, and Pelindo (Indonesia Port Cooperation) announced partnership with Port of Rotterdam on Maritime Logistics and Infrastructure[34]. We view that there is a need for further innovative cooperation involving Indonesian logistics start-ups as well, taking advantage of the existing network and cooperation.



[32] World Bank, 2018, Country Score Card: Indonesia 2018. https://lpi.worldbank.org/international/scorecard/radar/254/C/IDN/2018?sort=asc&order=LPI Rank#datatable

[33] Daily Social, 2019, *"Smart logistics is the Indonesian Digital Economy's Up-and-Coming Sector"*, https://dailysocial.id/post/smart-logistics-is-the-indonesian-digital-economys-up-and-coming-sector

[34] The Jakarta Post, 11 March 2020, *Indonesia, Netherlands sign US$1b worth of deals during Dutch king visit.* https://www.thejakartapost.com/news/2020/03/11/indonesia-netherlands-sign-us1b-worth-of-deals-during-dutch-king-visit.html

Figure 12 - Logistic Focus core activities and its start-ups value proposition

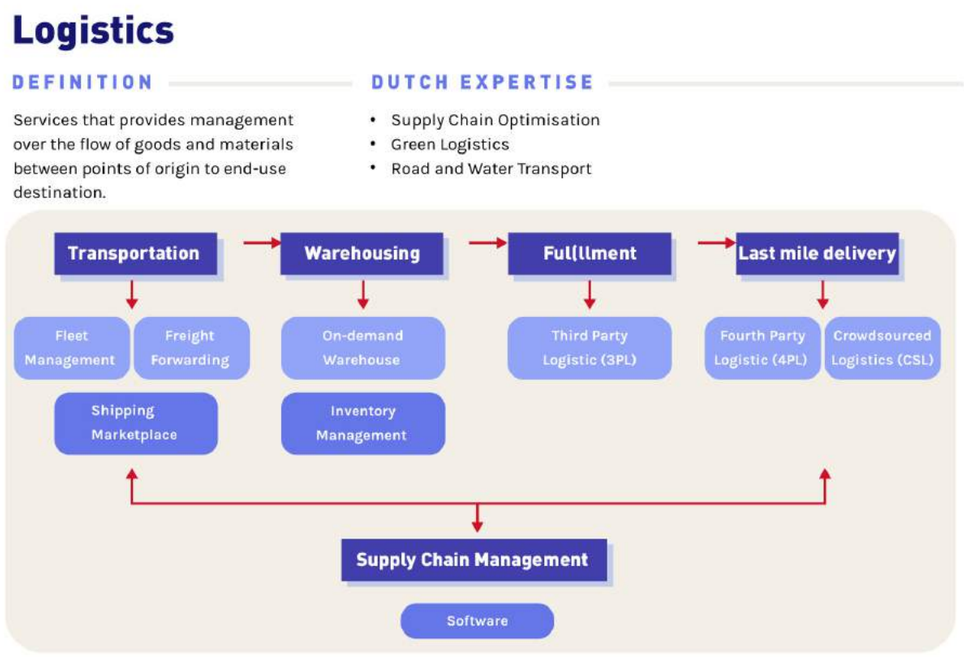


Table 4 - Indonesia Logistics Sector Challenges & Opportunities

Challenges	
The market is still sticking to the conventional way	Customer acquisition remains challenging due to the traditional nature of the logistical operations. The clients' acquisition process is costly and lengthy as clients are used to the conventional way of logistics services and places. In an industry that deals with corporate clients, reliability is also highly important and is highly demanded. Hence they are sticking to existing processes and are less open towards adopting new technology.
Red tapes and bureaucratic hurdles	Obtaining an operational license for new technology remains challenging as there is a limited scope when it comes to the type of technology supervised by the administration office. Thus, new technologies remain unclassified, causing more extended periods of adjustments to receive the government's approval.

Opportunities	
High logistical cost	Indonesia's logistical costs remain one of the highest in Southeast Asia (taking up to 24% of the GDP), as inefficiencies across the logistics chain are still rampant, this leaves room for improvement by new technologies. Connectivity is always an issue in Indonesia, acknowledging the geographic landscape with thousands of islands. Inefficiencies across the logistics chain give plenty of room for improvement to be occupied by new technologies.
Thriving eCommerce activities	An ever-rising increase in eCommerce transactions creates a growing demand for logistical services. Existing data point towards a positive trajectory for the sector, something that is also echoed by investors and other players.
Time to look beyond last mile	Regardless of plenty of underlying opportunities for start-ups to seize in the area, available solutions are concentrated on the last-mile delivery and trucking stages. There is still room to address challenges in the blue economy.
Attractive market	Investors are actively looking and eager to invest early in the sector, hoping to find game changers and possible champions in the industry who will be the next disruptor in Indonesia's famous archipelago logistical challenges. They are confident that there is still plenty of innovation that will be brought up by start-ups in logistics chains in the upcoming years.
Infrastructure development	President's commitment to encouraging the development of infrastructure and maritime connectivity by building a motorway of the sea, seaports, logistics and shipping industry, and maritime tourism.

1.4.4 Fintech

Fintech dominates the investment landscape and will be further boosted by the financial inclusion agenda of the Indonesian government, and by international players like Official Development Assistance (ODA) and Development Financial Institutions (IDF) like the World Bank and Asian Development Bank (ADB). Based on Bank Indonesia's classification of Fintech, the majority of Indonesian Fintech Start-ups are in the e-payment area (32%) where the major players like OVO and Gopay are active as well. In 2019, two fintech start-ups have gained the title of Centaurs (valuation of more than USD 100 million), Akulaku and Kredivo. Both are emphasizing their installment payment service. Currently most Indonesian start-ups' focus is still to reach a sustainable business model, profit-making, but competition to get better funding. This can be an opportunity for fintech to help start-ups raising the capital.

The Indonesian Government has done many efforts in this field, especially to ensure safety. The Financial Services Authority (OJK) issued a regulation on digital innovation in finance, and together with the central bank, Bank of Indonesia (BI), issued *Quick-Response Code Indonesia Standard* (QRis) in 2019 to create synergy between fintech start-ups. QRis is a single QR-Code for all licensed and legal fintech companies for each merchant or payment post. This reflects the responsive progress by the government to follow the fast growth of this sector, The protective measures for customers by the government increase the appetite of end-users to use fintech services and triggers emergence of new start-ups with even more disruptive ideas.

The government is also endorsing the growth of the Sharia Fintech ecosystem, with a similar learning-as-we-do attitude. Considering that Indonesia is the country with the biggest Muslim population, incorporating Islamic finance systems is seen as relevant. However, implementation and the macro impact it brings is yet to come.

Bank Indonesia and the Netherlands Central Bank (De Nederlandsche Bank - DNB) have been partnering in multiple activities and on several topics, such as a Technical Assistance program on Retail Payment and Market Infrastructure in 2016[35], and an international conference on *Payment Systems and Fintech*[36] in 2019.

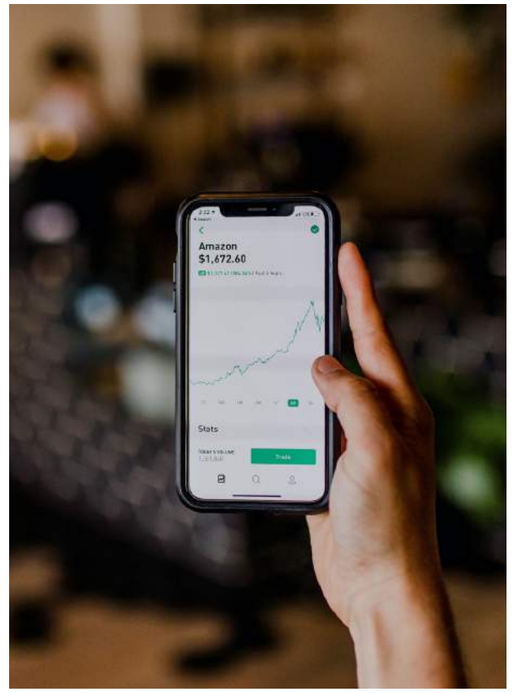


Figure 13 - Fintech core activities and its start-ups value proposition

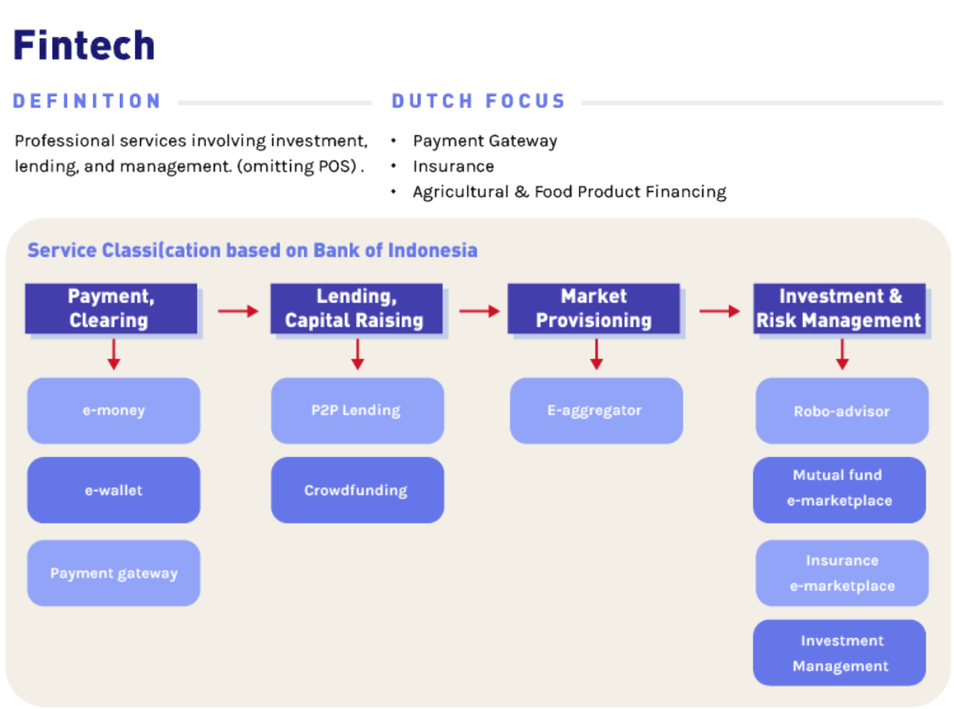


Figure 14 - Unbanked population in Indonesia (Source: Google ASEAN Economy Report 2019)

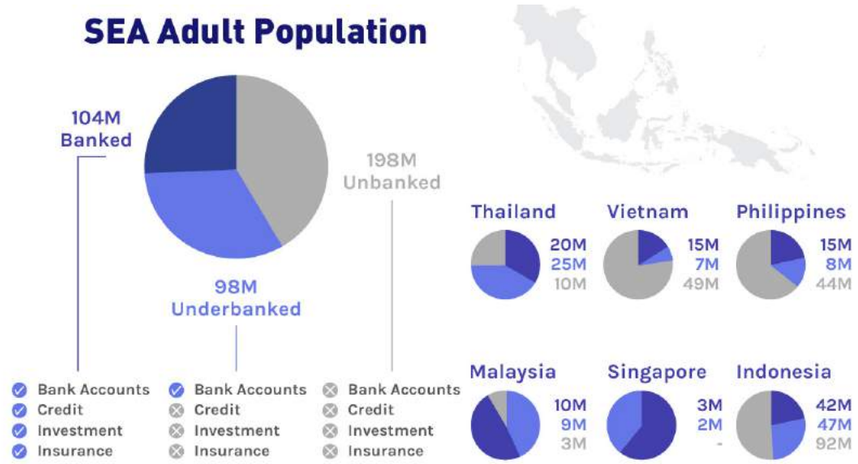


Table 5 - Indonesia Fintech Sector Challenges & Opportunities

Challenges	
Slow market penetration due to low financial literacy	Despite the increasing awareness of fintech products, the low financial literacy rate remains a challenge for start-ups as educating customers to avoid irresponsible transactions (e.g., bad debt) takes a significant amount of time. There is also a lack of a referral platforms to market the fintech products on a greater scale. Market acquisition is also more costly due to the tight competition between existing players.
Access to growth-stage fund	As fintech start-ups become more mature, they need better access to growth-stage funds. However, available funding options are focusing on either the early-stage or post-Series B stages. Thus money is currently circulated only between big players and for follow on purposes (of the existing portfolio), leaving limited options for growth stage start-ups to tap into suitable investment.
Opportunities	
Embracing the unbankable	There is a vast untapped market in the fintech sector, for approximately only 36% of Indonesians who are bankable (eligible for bank loan/ credit services). Raising financial inclusiveness is embraced as both homework and opportunity. With 203 million or 81.5% of Indonesian are at the lower end of the economic pyramid, a huge room for opportunity is laid in remote areas.
Improved data protection and privacy regulation	Triggered by the exponential increase of popularity and use of P2P and e-payments, governments are actively improving the customer protection and transparency mechanism to crack down on unregulated and illegal fintech. With these regulations, the market will feel safer in using fintech products. Hence, improving the attractiveness of the sector from a market perspective.
Financial inclusion agenda	The National Strategy for Financial Inclusion (Strategi Nasional Keuangan Inklusif/SNKI) will focus on six pillars: financial education, public financing facilities, financial information mapping, supportive regulations, distribution networks, and intermediation facilities and consumer protection as the national strategy to raise financial inclusion in Indonesia, and opens up access to financial services for more Indonesians.

1.4.5 Waste Management

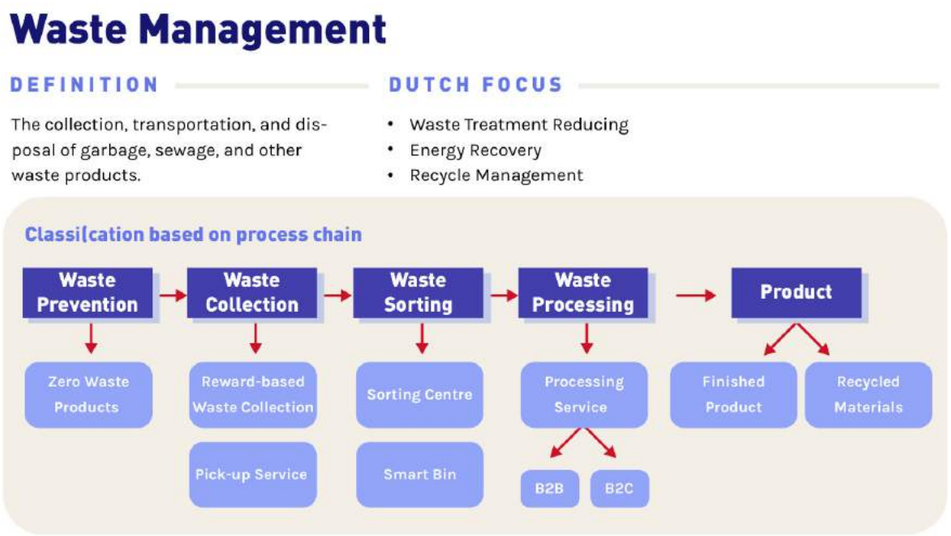
The waste management sector (waste prevention, collection, sorting, processing, recycling, and the trading of recycled materials) in Indonesia is heavily related to sustainable living movements, including environmental conservation, hence, we can find more start-ups in the form of social enterprises[37]. Currently, the waste prevention activity in the value chain is saturated by growing numbers of social movements and NGOs advocating less waste usage. The value propositioned by start-ups as social enterprises needs to be harnessed with the integration of technology. With the current landscape of social movements and NGOs in this sector, there are plenty of opportunities for disruptive innovation to penetrate the market. We summarize the existing challenges in this sector in Table 2 below.

Indonesia and the Netherlands have agreed to strengthen cooperation in the field of Circular Economy and Waste Management. An MoU between both Governments was signed in 2017, and was renewed in March 2020 during the Economic Mission to Indonesia[38].

Furthermore, Waste Management and Water Technology were a sector of focus during the Mission, with many companies and organizations in the field joining the delegation[39].

Further partnerships between Dutch and Indonesian stakeholders in this field could be beneficial. In fact, there is already a consortium of six Dutch companies, supported by the *Netherlands Enterprise Agency* (NEA/RVO), signed under a P*artners for International Business* (PIB) program on Waste and Circular Economy Indonesia[40]. The program is connected to an ongoing *Private Sector Development* program in the same field, and the mentioned MoU between the Ministry of Environment and Forestry of Indonesia and the Ministry of Infrastructure and Water Management of the Netherlands. This program is expected to explore market opportunities addressing the circular economy in Indonesia. Existing partnerships in this field can also be a gateway for the Dutch private sector to be involved in Indonesian start-ups focusing on the waste management sector.

Figure 15 - Waste Management core activities and its start-ups value proposition



[37] Social enterprise is a hybrid organization to adopt a business or commercial model to achieve a certain social mission.
[38] https://en.antaranews.com/news/143214/indonesia-dutch-discuss-cooperation-in-waste-management
[39] More info at Bit.ly/NLMissionBooklet
[40] More info at https://www.rvo.nl/subsidies-regelingen/projecten/waste-and-circular-economy-business-indonesia-netherlands

Table 6 - Indonesia Waste Sector Challenges & Opportunities

Challenges	
Businesses and governments as a more significant target market as the public awareness about the issue is still nascent.	Outside the upper-middle-class group in primary cities, awareness towards sustainability is still low. Households rely on traditional waste collectors to pick up their waste and do not see additional processing service to be of importance. Targeting corporates and government bodies as clients become the go-to-market strategy as retail customers are still struggling to see the importance of waste management.
Aiming to find impact investors who're willing to invest early in start-ups	Investment activity is still low. The majority of start-ups operating in this sector are still in the market validation stage, where they are still looking for small investments to be injected. Due to the impact orientation of start-ups in this sector, they are also looking for investors with the same values that place impact creation on top of profitability. However, in reality, they still find it difficult to access suitable funding opportunities that are in line with the nature of the business.
Facing setbacks caused by overlapping and inconsistent regulation	Overlapping regulation and regional differences limit start-ups' room to grow. Waste management activities are regulated under the environmental protection and management law that is applied without an appropriate benchmarking at city level. Given the legal enforcement status in the industry, start-ups are still struggling to cooperate with all involved parties.

Opportunities	
A massive number of unmanageable waste	190K tons of waste are produced every day in Indonesia, with a recycling rate that stands at 10% out of the total amount of waste (similar rate to China and Japan), leaving a huge untapped opportunity to be leveraged by start-ups in the sector.
Rising interest in the sustainable lifestyle	Upper-middle-class Indonesians are becoming more aware of environmental responsibility. As customers grow to become more eco-conscious, demand for eco-friendly products and processes will rise; paving the way for innovative products and services to capture the market.
The Indonesian Government aims to reduce the waste output by 30% and advance waste recycling in 2025.	This sector can expect full support from the government.

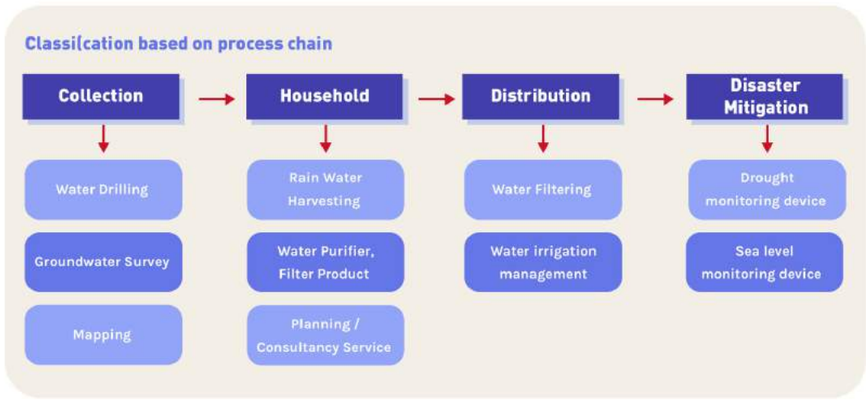
1.4.6 Water Management

Start-ups operating in the Water Management sector can be divided into three key areas of activities, which are collection, processing, and distribution. Access to clean water remains a crucial issue due to the uneven water distribution in Indonesia. Thus, the majority of start-up solutions are centered around water processing and distribution activities to serve Indonesian households. An ever-growing population also creates a bigger opportunity for private sector involvement in identifying new ways of procuring water. Start-ups seize this opportunity by providing water collection solutions for corporates and local municipalities ranging from field surveys to management services.

Indonesia and the Netherlands have a strong, established, and intensive cooperation in Water Management. The countries have an MoU on Water Management, covering among others cooperation on integrated water resources management, water supply and sanitation, ports and coastal development, water and climate, and many other fields[41]. Both Governments recently agreed to revise and renew their cooperation, with a new agreement planned in October 2020[42]. The Dutch Government and a.o. Dutch companies in the water sector have been collaborating with Indonesian stakeholders in finding solutions towards water related challenges together, such as through developing plans for infrastructure projects, exchange of knowledge and information, and capacity building. Collaborations in this field are much empowered by relationships between private companies, organizations, and knowledge institutes.

Several notable cooperation projects are for instance, *Building with Nature* (on coastline in Northern Java), *Dutch Training and Exposure Program*[43] (sharing best practices on water management with Jakarta City government officials), *Joint Cooperation Program*[44] (aims to improve water management in Indonesia), and together with South Korea, *National Capital Integrated Coastal Development* (on prevention of flooding of North Jakarta).

Figure 16 - Water Management core activities and its start-ups value proposition



[41] Read the MOU here: http://treaty.kemlu.go.id/apisearch/pdf?filename=NLD-2015-0093.pdf
[42] Antara News, 10 March 2020, "*Indonesia Belanda Sepakat Perpanjang Kerjasama Pengendalian Banjir*", https://www.antaranews.com/berita/1347282/indonesia-belanda-sepakat-perpanjang-kerja-sama-pengendalian-banjir
[43] Read more on DUTEP: https://www.nuffic.nl/en/subjects/dutep/
[44] Read more on JCP https://www.jcp-indonesia.org

Table 7 - Indonesia Water Sector Challenges & Opportunities

Challenges	
B2B/B2G as the most feasible business model	Indonesians see water as a necessity that should be provided by the local government. Therefore, it's harder for water start-ups to target retail customers. For smoother market acquisition, water start-ups are serving corporates and government clients on a project basis. However, relying on project-based operation limits start-ups' ability to quickly scale up their operation.
Limited funding options for hardware solutions	The majority of the water management sector provides a hardware-based solution. There are limited funding opportunities for hardware models that require high initial capital to kickstart the operation. An alternative funding scheme to facilitate the R&D phase is desired by start-ups to speed up their production and distribution process.
Finding (impact) investors to invest early in start-ups	Investment activity in this sector is still low. The majority of start-ups operating in this sector are still in the market validation stage, where they are still looking for small investments to be injected. Due to the social and environmental impact orientation of start-ups in this sector, they are also looking for investors with the same values that place impact creation on top of profitability. However, in reality, they still find it difficult to access suitable funding opportunities that are in line with the nature of the business.
Growth is still highly dependent on surrounding local stakeholders approval	In Indonesia, the commercialization of domestic water resources is subjected to approval from stakeholders in the surrounding area. The current regulatory environment in the water management sector is less friendly to private businesses where room for opportunity is restricted and the national accreditation system for water innovation is not yet in place.

Table 7 - Indonesia Water Sector Challenges & Opportunities

Opportunities	
Consciousness of the impact of climate change, more innovations are highly demanded	Climate change is affecting the cycle of water[45], leading to altered water quality and quantity. Adaptation and prevention measures are required to stabilize and minimize the negative occurring social, economical, and environmental impact. Indonesia, with high risk of floods and droughts seeks more high technology innovation to tackle the impact of a.o. climate change.
Poor water management and distribution	The government is taking clean water and equal distribution increasing seriously since 2 of 5 causes of mortality in Indonesia are fecal borne illnesses which are linked to inadequate water supply and sanitation issues. There is insufficient access to water in some parts of the country due to poor water management, limited infrastructure, and uneven economic development between regions. Whereas water supply is hardly keeping up with economic and population growth, people tend to underestimate their water amount and quality usage, especially the population at the bottom of the pyramid. There is a need of private sector intervention to solve this problem.
PAMSIMAS (Community Based Drinking Water Supply and Sanitation) Program	PAMSIMAS (*Penyediaan Air Minum dan Sanitasi Berbasis Masyarakat*) program is established by the Government of Indonesia in collaboration with the World Bank and is currently spreading in over nearly 23,000 villages. It is assisting low-income and remote areas populations with improved water supply to 17.2 million people. Strategic partnership and market penetration relating to and supporting this program is highly possible for this sector's start-ups.
Smart village program	Smart villages program encouraging villages to have a Smart Institution, Smart Infrastructure, Smart Service Delivery, Smart Technology, and Innovation, and Smart Societies will require a wiser and better water management system.

[45] IUCN, *Water and Climate Change*, https://www.iucn.org/resources/issues-briefs/water-and-climate-change

02

CHAPTER 2

Dutch Start-up Ecosystem Overview

2.1 Start-up Ecosystem Overview

2.1.1. Macro Key Economic Sectors and Internationalization

The Netherlands is ranked as the most competitive economy in the European Union (EU)[46], and the World's second most innovative economy[47]. The country proves a successful collaboration between public, private sector, and knowledge institutions, in ensuring sustainability and inclusivity, especially in its nine key sectors: Agriculture, Creative Industries, Chemical Industry, Energy, High Tech, Horticulture and Starting Materials, Life Sciences & Health, Logistics, and Water.

As one of the best countries for technology and innovation, with supporting business climate, quality infrastructure, and strategic location, the Netherlands is chosen to be the (international) headquarter for many world-class companies like Netflix, Cisco, Tesla, and Nike.[48] In 2019, there are 397 international companies chose to invest in the Netherlands.[49] The country provides a conducive ecosystem for local and international businesses seeking collaboration with globally recognized companies and knowledge institutions. Its open culture with emphasis on entrepreneurship and innovation allows more than 7500 innovative tech Start-ups and scaleups to grow and expand, with hundreds of ecosystem builders and enablers. Entrepreneurship is said to be embedded in Dutch DNA – the country ranked eighth worldwide in the 2019 Global Entrepreneurship Index[50], the entrepreneurial climate thrives with 4.73 firms created per 1,000 workers employed. The landscape is indeed clarified and facilitated by fostering collaborations between the private sector and the government.

The Netherlands is also known as a *trading nation* – a country where a large part of its economy comes from international trade activity. The Netherlands is always placed in World's Top 10 Traders of Goods and Services from 2008 to 2018, according to World Trade Organization (2019), ranked fifth as World's largest exporter and seventh as largest importer in 2018.[51] International trade is an important source of income for the Dutch economy, accounting for 34% (around one third) of its GDP in 2017, providing more than 30% of total employment in the country[52].

Investing in Global Prospects (2018), reflects ways the Dutch Government maintains the country's competitive position in the world, including in promoting sustainable and inclusive growth and climate action worldwide, and enhancing the Netherlands international earning capacity. Through this policy note, the country promotes innovation in support of the Sustainable Development Goals (SDGs), where results areas and indicators are aligned with SDGs framework where possible. Hence, international trade for the Netherlands is more than exchanging products and services, but also about exchanging knowledge and expertise. While being known as the World's expert for solving global challenges like water supply and food security, the Netherlands is keen to co-create with partner countries all around the world – including Indonesia – to strengthen economic relation in finding innovative solutions for global challenges.

[46]World Economic Forum, 2019, *Global Competitiveness Index 4.0 2019*
[47]World Intellectual Property Organization, 2019, *Global Innovation Index*
[48]Read morehttps://investinholland.com/business-operations/headquarters/
[49]Government of the Netherlands, 19 February 2020, Record Number of Foreign Companies Choose the Netherlands, https://www.government.nl/latest/news/2020/02/19/record-number-of-foreign-companies-choose-the-netherlands
[50]The Global Entrepreneurship and Development Institute, 2019, Global Entrepreneurship Index
[51]World Trade Organization, 2019, *World Trade Statistical Review 2019*
[52]CBS NL, 2019, *Dutch Earning from International Trade,* https://longreads.cbs.nl/dutch-trade-in-facts-and-figures-2019/dutch-earnings-from-international-trade/

2.1.2 Start-ups in The Netherlands

From 2016 up to mid 2018, the global start-up economy amounted to USD 2.8 trillion, equivalent to the G7 economies combined in the same period[53]. The significance of innovation driven enterprises has been proven globally. The Netherlands is now home to more than 12 unicorns, 7,500 start-ups, 90 accelerators and incubators, with more than 400 active VC funds, and leading a fast-growing engine of jobs creation[54]. Adyen, Booking.com, and TomTom are among the many success stories of Dutch homegrown leading tech companies.

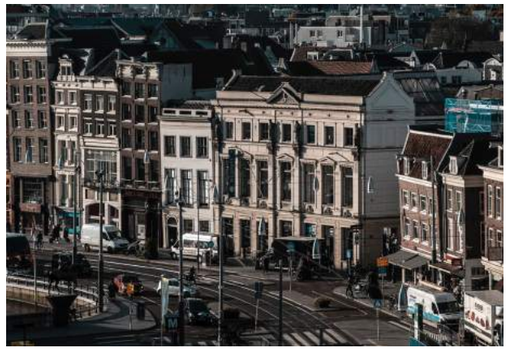
New firms, especially "gazelle" firms (fast-growing new firms, start-ups included) promote economic dynamism by injecting fresh ideas and new technologies into the economy. They are essential to the process of "creative destruction," whereby innovative new firms replace less innovative incumbents, raising productivity in their sectors or even creating new sectors, and growing the economy as a whole. These gazelle firms in the start-up sector are facilitated by the government of the Netherlands, for instance through an easier access to network, finance, market, and talents, with many available (financial) instruments[55].

Both in Indonesia and the Netherlands, innovative companies like start-ups are often pioneers in bringing game-changing, breakthrough solutions, through entrepreneurship and technology. As has been discussed in the previous chapter on Indonesia, start-ups are undoubtedly the drivers for future innovation. While Indonesia and the Netherlands are going through a more and more future-looking bilateral economic relationship, taking advantage of the strengths and developments in both countries by connecting the two ecosystems can be mutually beneficial.

In the Netherlands, strengthening its start-ups ecosystem has been the priority of the Dutch Government. Public Organizations, Corporates, Innovation Hubs, and Knowledge Institutions are working together to create an enabling, international-ready ecosystem (see Figure 18- Overview of the Dutch Start-up Ecosystem Builders). Led by the non-profit publicly funded organization "TechLeap" (previously "Startup Delta"), the country aims to empower the ecosystem with an improved access to critical resources in developing start-ups and scaleups, among others: capital, market, and talents. Recently, TechLeap publishes their Action Plan for 2020[56] which elaborates these goals. This includes its ambition to support Dutch scaleups with international success.

The Dutch government also put a greater emphasis on supporting Small and Medium-Sized Enterprises (SMEs) and Start-ups going international, such as by optimizing services provided, international cooperation for innovation and knowledge diplomacy, and public-private cooperation. Another emphasis is also being put at digitalization for sustainable and inclusive growth, especially in taking its advantage in driving innovation and solving societal challenges.

Coming back to the relation between Indonesia and the Netherlands in this field, there have been several existing cases of partnerships and collaborations between Dutch and Indonesian start-ups and ecosystem builders, such as Alodokter and Philips[57]; Efishery and AquaSpark[58], CoHive and Get in the Ring[59]. In addition to these, there are a number of Dutch start-ups and investors actively collaborating with Indonesian ecosystem builders. While these cases serve as inspiring examples, there are also many possible partnership and collaboration schemes that both Dutch and Indonesian players can dig deeper into. Some of them will be revealed at the end of this report.



2.1.3 The Gateway to the EU: A Welcoming Start-up Ecosystem for Global Innovators

The Netherlands does not only offer a thriving business climate[60] to multinational companies, but also to innovative entrepreneurs outside the EU. The Dutch government allows international entrepreneurs to apply for the so-called "Start-Up Visa", enabling entrepreneurs to collaborate with Dutch experienced facilitators to start or scale up their innovative business, taking advantage of the country's creative and competitive environment and quality workforce. After a year, the start-up entrepreneur may have the duration of their permit extended on the basis of the Dutch government's self-employment scheme, or after meeting the applicable standard requirements to the self-employment scheme[61].

Did You Know: Market Your Jewelry, a company founded by an Indonesian entrepreneur in the field of smart jewelry, successfully started the business in the Netherlands using the Start-up Visa.

Startup Delta (now Techleap.nl) in Startup Fest Europe 2019

(Retrieved from starttupfesteurope.com)

Why pick the Netherlands for my startup?

"The Netherlands is an early adopter for new technology, and our small market size makes it an attractive scale for a test market. If it works here, you can expand to Europe and far beyond. This makes the Netherlands the ultimate launchpad. Start-ups with a product-market fit can launch from the Netherlands into Europe, and on to the world, because we offer an abundance in mentors, events, seed-capital and last but not least multinationals that help you grow. That is why the Netherlands is Europe's West-Coast for awesome start-ups."

[53]Startup Genome, 2019, *Global Startup Ecosystem Report*,
[54]Techleap.nl, iamsterdam.com, dealroom.co
[55]The Government of the Netherlands, *Startupbox*, https://business.gov.nl/startupbox/
[56]Techleap.nl, 2020, 2020 Action Plan https://issuu.com/techleap/docs/techleap.nl_2020_action_plan_____public__single__p?fr=sNGJhNjcyODgyMg
[57]Te27.co, 16 October 2019, *Alodokter raises USD 33 Million in Series C Funding*, https://e27.co/alodokter-raises-us33m-in-series-c-funding-20191016/
[58]Traced at: https://www.aqua-spark.nl/portfolioitem/efishery/
[59]Cohive, 11 April 2019, *Cohive Supports Startups Go Global Through Get in The Ring*, https://cohive.space/press/press-release/cohive-supports-startups-go-global-through-get-in-the-ring-jakarta-2019
[60]https://english.rvo.nl/subsidies-programmes/residence-permit-foreign-startups/why-start-netherlands
[61]Read more about Residence Permit for Foreign Startups here: https://english.rvo.nl/subsidies-programmes/residence-permit-foreign-startups/why-start-netherlands

The info-box above defines how the Netherlands' start-up ecosystem positions themselves as the big innovation incubator to develop an EU market fit product and solution. Access to the market becomes one key objective for Techleap.nl. It stated its commitment to facilitate access to entrepreneurs and investors.

Crucially, policymakers also need to employ innovation policies that foster entrepreneurship throughout all sectors of the economy. In the context of corporate-start-ups collaboration, the Dutch government established "Startup Delta" (Now Techleap.nl), an organization aimed to further connect start-ups and corporates, knowledge institutions and financiers, and other ecosystem builders.

2.1.4 Collaborative Work as a Key for a Thriving Ecosystem

As mentioned before, the Dutch Government ensures a strong collaboration between public, private, and academic institutions to foster the innovative entrepreneurial climate in the country. The presence of network organizations all over the country provides a platform for the diverse range of ecosystem builders to connect. Access to the network is indeed a one of the key ingredients needed for start-ups to scale. The Netherlands is the place where founders can find a diverse range of SAOs; from internationally recognized ones towards the sector-specific ones. Several Dutch home-grown tech leading companies also provide these platforms, aimed to empower founders and innovators with their valuable knowledge and experience.

For instance, leading universities in the Netherlands nurture their "studentpreneurs" through university-based incubators and accelerators, providing not only the knowledge and know-how in building an innovative business, but also connecting them to industry experts and capital providers. YesDelft, a non-profit SAOs, affiliated to Delft University, is one of the earliest players to nurture the "studentpreneurs". Such SAOs are often act as a bridge towards corporates and investors. Typically, they engage the entrepreneurs with mentorship under investment readiness programs, and afterwards connect them with potential investors. Some of them facilitate entrepreneurs in exchange for a success fee upon the first investment made. At times, corporates are involved as a sponsor of the incubation program. The university incubators provide a gateway for mostly entrepreneurs coming out of the universities to deliver their disruptive innovations to the market. However, they also welcome local and international entrepreneurs who want to operate in the Dutch market, not limited to the affiliated Uni alumnae only.

Beside companies and knowledge institutions, the Dutch Government also acknowledges the importance of providing these key ingredients to founders and entrepreneurs growing their businesses. On the other side, collaborating with innovative Dutch or international start-ups helps the government to find solutions in tackling key challenges. For instance, the "Start-up in Residence" program[62] has been done for a few years by several Ministries in the Netherlands, along with a number of local governments, where start-ups and government institutions can work together for those challenges, while at the same time accessing the (city) network, including corporates.

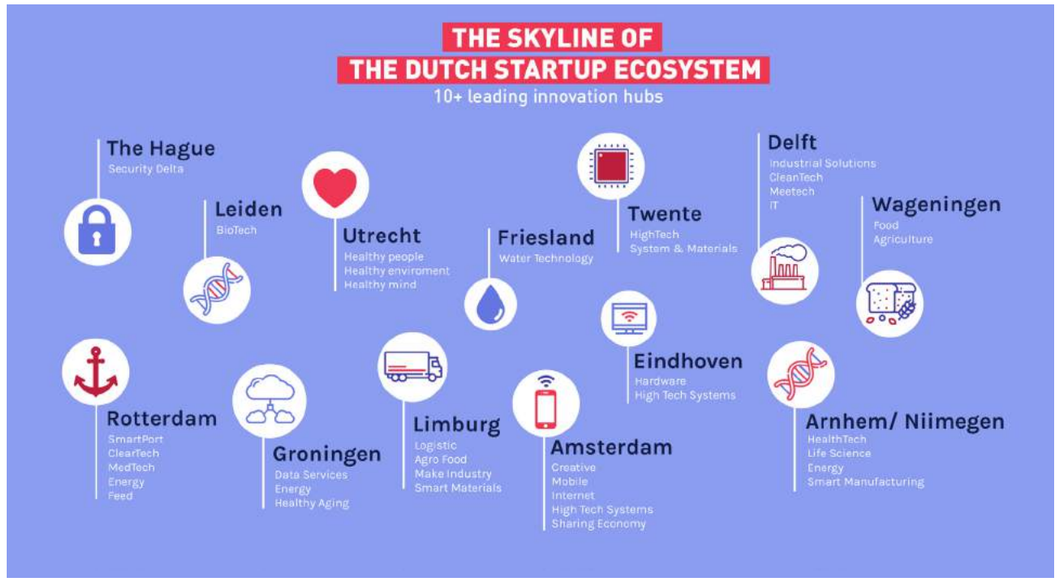
In addition to this, the Dutch Government is also actively engaging with private sectors, establishing public-private partnership entities across different cities. Founded in 2015, Startup Amsterdam for instance is a regional SAO with a mission to accelerate growth of the start-up ecosystem in Amsterdam. Startup Amsterdam works alongside universities, corporates, and government bodies across the country to facilitate start-up operations starting from ideation up to scale-up stage.

Internationally, "Orange Corners" initiative is made by the Dutch Government through its network in Africa and Middle East, to empower young entrepreneurs in the region with training, network, and facilities to start and grow their start-ups. This is done by partnering with public, private, and knowledge institutions[63].

[62]Detailed program of Start-up in Residence can be accessed at https://startupinresidence.com/

[63]More info at https://www.orangecorners.com/

Figure 17 - 10 Dutch Cities as Innovation Hubs to Thrive Gazelle Firms across the Netherlands (source: Startup Delta – now Techleap.NL)



The strong collaboration between players is possible when there are plenty of players with same interests, be it in sectoral focus or gathered by the same support in a consortium or a network. Amsterdam as a melting pot of people from around the world, home for European HQ for giants is ranked 15th as the Top Global Startup Ecosystem[64]. Supported by those companies, excellent English proficiency, cooperating government, and warm welcome for international students and professionals is a comfort for smooth, borderless collaborations. Figure 18 depicts the current start-up ecosystem builders, showing that not a component is controlled by one entity. All kinds of support for start-up is available with plenty of options, hence to build a collaborative work, a start-up might choose partners that are the most suitable ones for them to grow.

[64] Startup Genome, 2019

Figure 18 Showing Overview of the Dutch Startup Infrastructure
(Source: Halbe & Kenraads)

2.1.5 Collaboration Highlight: Corporates - Start-ups

In achieving economic growth in both developed and developing countries like Indonesia, raising productivity and innovation across the board in all sectors is essential. This can be done, in part, by implementing innovation policies that spur productivity growth in existing firms. Looking at the "start-up wave" across the globe, many large companies have worked together with start-ups to "spice up" their business activities; promoting innovation, tapping into new markets and new technology for instance. On the other side, start-ups gain advantage by working with corporates, for instance in tapping the established network and infrastructure.

Corporates-Start-ups collaboration in the Netherlands has been a topic of discussion even since years ago. In 2015, KPMG the Netherlands conducted research on how corporate and start-up can collaborate with all the differences they had[65]. The collaboration between two are likely as corporates find start-up attractive to bring innovation, contribute to the changes the corporates need in order to follow up with rapidly changing market trends. Yet, start-ups are typically reluctant to any external interference that might bother their principles and philosophy. They prefer to maintain liberty in doing their business.

Nonetheless, the KPMG research shows how the collaboration between two entities are in favor of start-ups in access to the market, access to funding, and sales network or economies of scale. However challenges remain in longer decision making and red tape especially considering the great hierarchical structure of the corporates, culture clash where start-up entrepreneurs are mostly driven by innovation and "crazy" and risky ideas meanwhile the corporates tend to get things slow and sure to lower the risk, and the difficulty to find the right corporates with aligned mission, efforts, and budget to make a the collaboration effective. But then the challenges can be overcome by the types of collaboration that are mutually beneficial for both parties like: capital providing through CVCs, corporate acceleration programs, coming as business partners (customer-supplier relations) and licensing agreement that might occur in products or idea assimilation. Acquisition can also be another option, however limited to start-ups that have gone beyond the growth stage.

[65]KPMG, 2015, *On the Road to Corporate-Startup Collaboration*

2.1.6 Dutch Ecosystem's Internationalization

As noted in the beginning of the chapter, the Netherlands has nine key sectors where the country has identified as strengths: where the Netherlands own world-class expertise. Through this "top sectors" policy, the Government encourages innovation through enabling cooperation of public, private, and knowledge institutions. Various instruments and incentives are available for companies offering innovative products. The top sectors in fact account for one-quarter of the country's GDP, and also according to Netherlands Statistics (CBS), among all enterprises in the Netherlands, 23 percent belong to one of these top sectors, while these sectors combined account for 20% of all employees in the Netherlands. Not only domestically, but the Dutch top sectors are known to have established strong positions, even being leaders, in the international market.

Southeast Asia is becoming more and more prominent as the Netherlands trade partner. For instance, in 2019, the Netherlands remains the biggest investing country in Indonesia among EU Countries[66]; Malaysia and Singapore are top 20 import trading partners[67]. Southeast Asia remains an attractive region for Dutch companies, as reflected by several economic missions facilitated by the Dutch Government: State Visit with large Economic Mission in 5 sectors to Indonesia (2020); AI and Blockchain Mission to Singapore (2019); Life Sciences and Health Mission to Indonesia (2018 and 2019 – with an emphasis on digital health); as well as Agriculture & Food Mission to Indonesia (2019). Cooperation between Dutch economic network within ASEAN-5 countries also strengthened, for instance in organizing the yearly regional-level innovative solutions challenge Orange ASEAN (orangeasean.com)[68].

As one of the biggest Dutch trade partners in Southeast Asia, Indonesia is a bullish market for Dutch innovation and solutions. In addition to historical and cultural ties, both Governments and businesses of both countries already have several bilateral agreements and ongoing cooperation in place, including in the fields of Agriculture, Circular Economy, Life Sciences & Health, Maritime, and Water. Moreover, a large Dutch business community has long been established in Indonesia, consisting of multinationals, SMEs, and investors in various sectors. The ecosystem is being supported also by the presence of network organizations like *Dutch Business Network*, and the recently established Dutch Government Representative *Netherlands Business Support* Office in Surabaya, and of course the Embassy.

[66]Badan Koordinasi Penanaman Modal/Indonesia Investment Coordinating Board (BKPM), 2019, https://www.bkpm.go.id/images/uploads/file_siaran_pers/Paparan_Bahasa_Inggris_Press_Release_TW_IV_2019.pdf

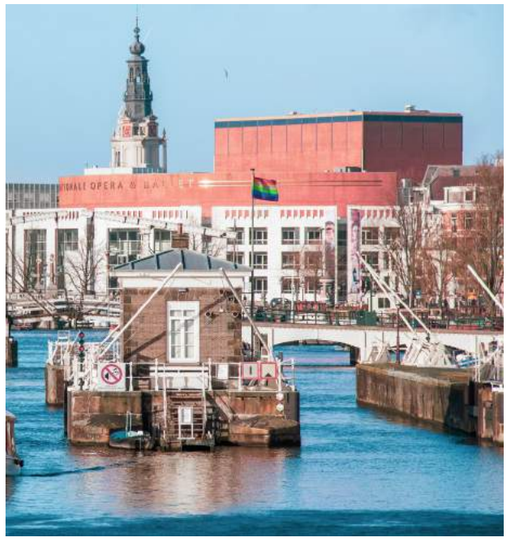
[67]CBS, 28 November 2019, *Factsheet International Trade*, https://www.cbs.nl/en-gb/background/2019/48/fact-sheet-international-trade

[68]In addition to this, many instruments are available for Dutch companies wishing to expand to the region or seeking collaboration with excellent players in the region *(see rvo.nl)*.

The key priorities elaborated in *Investing in Global Prospects* act as a foundation that fits Indonesia's context where the start-up sector is emerging, while both countries have already economic diplomacy implementation in place. This vision is also portrayed on the 2020 Netherlands Economic Mission,[69]focused on agri-food, life sciences and health, water and maritime technology, waste management and the circular economy, and aviation, which provided a platform for stakeholders in both countries to find smart solutions for a sustainable future.

2.2 Focus Sectors Activities in The Netherlands

These sections describe the focused sectors' activities in the Netherlands to know the potential and align the interest of Indonesia and the Netherlands to be complemented in identifying the possible collaborations. Each subsection explains the Netherlands positioning in the sector, existing players, and on-going internationalization in Indonesia, if any.



[69]Netherlands Worldwide, 6 March 2020, *Netherlands Economic Mission to Indonesia*, https://www.netherlandsworldwide.nl/latest/news/2020/03/06/netherlands-economic-mission-to-indonesia-2020

2.2.1 Agriculture

Supported by the advancement of R&D around the sector, Netherlands is the home of agrifood research and private investment of agrifood R&D. Wageningen University & Research (WUR) and Utrecht University are among the world's top research publishers about the sector, while the earlier is in the top three of global agrifood universities[70]. Given the innovation by cutting edge research and development, the Netherlands is the second largest exporter of agricultural products in the world, after the USand the home of more than 4,000 agrifood-related companies[71].

In Indonesia, Institut Pertanian Bogor (IPB), a leading agri-focused university is closely in partnership with WUR in co-researching in related sectors, especially to develop the Agri sector in Indonesia, exchanges of expertise, and more collaboration to come. WUR can be the first intermediary to build another partnership between the two countries in the sector, as they are also partnering with Tanijoy, Indonesian leading agri-sector start-up, as a research partner. Another existing collaboration happened between Larive and Iwake. Larive, the network of Dutch companies, through their fishery-focused network arm is choosing Iwake (fishery tech-based conservatory) as the prototype start-up.

Current Ecosystem Activities:

- Start-ups innovation in the agrifood sector ranges from biotech, agritech as in data-driven soil, crops, and livestock treatment, enhancing supply chain finance and blockchain, up to the logistic solution for longer durability of products.
- Agriculture focused SAOs are also in place to provide mentorship, networking, pre-seed capital, and connecting to investors for follow-on rounds of fundings. They also showcase the strong collaboration with other ecosystem players like provincial government, universities, and private sectors.
- Networking SAO as an ecosystem builder in the Netherlands offers a platform of networking for local and international agrifood practitioners to accelerate innovation and expand their market. This networking platform is also the product of ecosystem players' collaboration from various SAOs, business networks, investors, knowledge institutions, and the government.
- **Wageningen University and Research[72]:** One of the leading university in the Netherlands that are currently collaborating with Indonesian university and Start-up, namely Tanijoy in their research and development

[70]Retrieved from Invest in Holland's Agrifood infopage at https://investinholland.com/industries/agrifood/
[71]Invest in Holland, 2019, Agri/food The Netherlands, https://investinholland.com/wp-content/uploads/2019/10/NFIA_Agrifood_Brochure_2019_A4.pdf
[72]Part of NL Economic Mission to Indonesia; read more at http://bit.ly/NLMissionBooklet

2.2.2 Healthcare

The health sector is flourishing for the Dutch, especially the digital ones. Known as one of the best healthcare systems and quality in Europe, the market is pushing innovators to bring new technologies or products to increase the efficiency of the system. The demand can be seen in the Dutch Digital Health Challenge[73] and other competition focusing in this sector keep coming[74]. Currently, most of the innovators in the country are focusing on products and services in the areas of remote care, medical apparatus, and diagnostic coupling between Pharma and Medtech. In Indonesia, a prominent Dutch private partner is Philips, the provider of medical appliances and already in partnership with Indonesian healthtech start-up, Alodokter. This kind of partnership can trigger the other to come as the partnership in this sector has become the other priority point in bilateral economic trade between Indonesia and the Netherlands.

Current Ecosystem Activities:

- Several health sector-focused SAO is available in the Netherlands, for instance, Health Valley Accelerator is an health sector-focused accelerator and a networking association like Health-Holland Industry[75] as the umbrella of academia and government partnership. Health-Holland facilitates funding, networking and business support.
- Dutch healthcare start-ups have intensified the deep technology integration to their products and some of them are specified for ascertain illness. For instance, there is a start-up developing a chatbot digital assistant to assist patients with chronic bowel conditions to identify and redirect their lifestyle by advising them through an app to improve their quality of life.
- The Embassy of the Netherlands as a SAO in Indonesia hosted a panel discussion last year about Health-tech Developments in Indonesia and The Netherlands. The discussions brought experts, private sectors, and stakeholders from the two countries in Indonesia Hospital Expo in October 2019, showing the support from the Netherlands to collaborate in this sector.

[73]RVO, 2019, *The Digital Health Market in the Netherlands and Switzerland*
[74]This Week in Digital Health, January 2020, *Open Call Dutch Digital Health Startups*, https://thisweekindigitalhealth.com/event/open-call-dutch-digital-health-startups/
[75]Part of NL Economic Mission to Indonesia 2020; read more at http://bit.ly/NLMissionBooklet

2.2.3 Logistics

The Netherlands is the home of most active ports and airports in Europe with well-developed infrastructure of railroad and highway. The Netherlands ranked 6th in the World Bank's Logistic Performance Index, with strong points in timeliness and infrastructure[76] and received a perfect score (10/10) from Inbound Logistics' Global Logistics Guide, mainly due to the county's renowned transportation and supply links, strong governmental support and favorable policies that continue to attract foreign investment, entitled to "the model for European logistic excellence"[77]. The infrastructure is clearly supporting the growth of logistics start-ups. Increasing trade and the popularity of eCommerce drive the logistics sector to prosper in the country. Currently there are more about 150 logistic tech companies in the Netherlands, with main innovations like optimizing the use of different options for transportation, the intensive use of data and the efficient consolidation of transport streams and capacities.

Considering the similarities of the growing eCommerce, room for collaboration is wide open in the logistics side. Innovation breakthroughs through digitalization or SaaS implementation is needed to tackle the lack of infrastructure in Indonesia. The two countries share the same trend of growth in eCommerce sector, however from the perspective of the infrastructure advancement Indonesia is still way behind the Netherlands. It would be interesting when joint R&Ds are developed between two markets, maximizing the potential using the expertise of the two.

Current Ecosystem Activities:

- Major start-ups in this sector incorporate software as a service (SaaS) in transportation management, supply chain management, and freight forwarding management. The growth of logistic start-ups is also triggered by the intensifying activities from the eCommerce sector as more to provide smart-logistic for eCommerce delivery.
- TKI Dinalog: Knowledge and Innovation Partnership in a consortium of business, knowledge institutes and government in the innovation program called the Dutch Topsector Logistics. TKI Dinalog supports public private partnerships in research and development by matchmaking of partners, support in the development of collaboration, strategic planning of innovation topics, and the preparation of research programs.

[76]Retrieved from World Bank Online Dataset with queries:https://lpi.worldbank.org/international/scorecard/radar/254/C/NLD/2018?sort=asc&order=LPI%20Rank#datatable
[77]Invest in Holland, 13 April 2018, Holland Receives Perfect Score on Global Logistics Rating, https://investinholland.com/news/holland-receives-perfect-score-on-global-logistics-rating/

2.2.4 Fintech

Currently, more than 400 fintech companies are operating in the Netherlands[78]. The Dutch mobile-banking penetration, talent development and (digital) infrastructure offer a flourishing breeding ground for fintech.

Based on Statista data search, the Netherlands has a large e-commerce market worth EUR 25.7 billion in 2019 and growing at 8% per year. The market's largest fintech segment is Digital Payments, with a total transaction value of USD 32 billion in 2020. The top 3 banks of ING, Rabobank and ABN AMRO with a combined market share of around 85% in Retail and Corporate Banking; are offering a similar, modern banking experience with a high emphasis on innovation. Large banks and insurance companies across the Netherlands are actively embracing the innovation and transparency afforded by the fintech start-up scene and actively support them like New10 from ABN AMRO. An Indonesian peer-to-peer agri-focused lending platform, Crowde has received grants from Rabobank as Top 5 Sustainable AgChallenge in 2019.

The cashless culture and technology can be transferred to developing countries, like Indonesia where people still tend to keep their money in cash for a sense of "security" especially for those in BOP. Several partnerships have taken place between the two ecosystems. Finch Capital, an Amsterdam-based fintech focused VC will be launching its SEA-focused USD 75 million fund this year with Indonesia as their main target. As of this year, they already have eight Indonesian portfolio companies. Another case is from Lendahand, a Dutch crowdfunding platform for SMEs in developing markets. They have channeled a total of USD 75 million for its successful campaigners who are spread across 25 countries. Despite not having any active campaign portfolio In Indonesia, Lendahand has established a partnership with Nusa Makmur (cooperatives arm of Nadhatul Ulama) as part of its strategy to navigate through the market. Along with Solidaridad, it has also initiated a new crowdfunding platform called Plusplus that is focusing on the Indonesian market and other developing nations across Asia, Africa and Latin America.

Current Ecosystem Activities:

- Looking at the Dutch fintech landscape, the start-ups range from local-based companies such as to the established multinationals operating in the Netherlands with over 7,500 employees and operating worldwide.
- An Amsterdam-based payments service provider, and one of the largest fintechs in Europe, has grown exponentially in the past years to over EUR 1 billion of revenues in 2017 and recently succeeded to go public.
- The government, taking role as an SAO, is even taking proactive steps to ensure fintech entrepreneurs, start-ups and the wider financial community have all the knowledge they need to be successful and compliant. InnovationHub was set up by De Nederlandsche Bank (DNB, Dutch central bank) and Autoriteit Financiële Markt (AFM or Dutch Financial Markets Authority).
- HollandFintech: an independent network of players in the sector and provide access to knowledge, talent, and capital. It comprises more than 500 companies and more than 22,000 individual members. They have hosted 250 events, showing their liveliness as an SAO.

[78]Holland Fintech, 2019, *Dutch Fintech Landscape Perspective*

2.2.5 Waste Management

The Netherlands is one of the most advanced countries in waste management by successfully recycling 64% of all the waste and turning it into renewable energy to generate electricity[79]. The Dutch expertise in waste management can be traced back to the creation of Lansink's Ladder, named after a Dutch parliament member in 1979, describing the steps that should be taken in waste management, becoming an official policy in 1993[80]. The success of waste management in the Netherlands has been proven by 90% of Dutch households complying with waste separation management[81]. Currently, most private manufacturing industries and governments are taking over the biggest share of recycling to then distribute the recycled products as raw material for another mass-production phase. This shows that downcycling (reducing the value of product after being recycled) remains the main practice, although Dutch start-ups are showing other solutions. Start-ups in the Netherlands are now focusing on a smaller market, but with added value put into the recycled waste, for instance recycling plastic waste and transforming it into exclusive household products from chairs to art/sculptural works; or developing other methods of circular economy such as reducing waste[82].

Current Ecosystem Activities:

- Broad range of waste management start-ups. From "recycling" such as a start-up to recycle plastic waste and turn them into large objects like statues, or lounge chairs, "reducing" by providing insight to business, for instances, to minimize the food waste generated from corporate's lunch and meetings with cloud-based data integration, and "reusing", as done be a bike rental start-up who rents out bicycle from one to another, avoiding junking the whole old bicycles on the pedestrian road or into the Dutch canals.
- There has been at least a sector-focused SAO in the form of a community focused on circular economy start-ups. They also provide incubator and accelerator programs.
- The Dutch Waste Management Association: with 50 members of Dutch waste management companies, the association comprises two-thirds of the whole Dutch waste market. The members are in chains of the whole waste industry from collection, processing, and logistics.

[79]Waste Management World, 1 January 2010, https://waste-management-world.com/a/dutch-successes
[80]More information at: https://www.adlansink.nl/voorbeeld-pagina/%20(Dutch)
[81]Dutch Review, 22 February 2018, *Waste Separation in the Netherlands: Why it's the best,* https://dutchreview.com/culture/waste-separation-in-the-netherlands/
[77]Utrecht University, 2019, *How Circular Startups Can Accelerate the Circular Economy Transition.*

2.2.6 Water Management

As about one-third of the country area is below sea level, it is not strange that the Netherlands is the world leader in water management, especially in flood management and treatment of water supply. This kind of expertise is much needed in Indonesia, especially Jakarta, which today is known as a sinking city and hit by numerous floods every rainy season. The water sector has 3 primary focus areas: water technology, maritime technology, and delta technology[83]. The focus areas lead to a range of businesses that are concerned with protecting the land, generating energy, developing smart technologies for water recycling, and safe and efficient ships. Most of the start-ups in this industry are working in management of waste water.

The Netherlands is a major supplier of sustainable systems for the production and supply of water and for the collection, treatment and partial reintroduction of "used" water into the system. The Dutch water sector includes several large engineering firms with global operations. Many companies and organizations through several initiatives promote international cooperation and are already working in Indonesia. The water sector is strongly focused on exports and continuous innovation. For instance, Wavin, a Dutch water company has expanded to Indonesia. Water sector start-ups in the Netherlands have also covered the B2C models for household technology, rather than limiting themselves to B2B or B2G models which are common in this sector.

Current Ecosystem Activities:

- The Netherlands Water Partnership[84]: a network of Dutch companies in the sector, aiming to globalize their market by offering expertise through knowledge and technology sharing. This network is claimed to be the first point of contact when one is in need of water expertise.
- **The start-ups have moved from macro water management to household level of water management. For instance, there is** an award winning start-up for the innovation in household water recycling systems where it claims to recycle 85% of domestic water by installing a patented water technology which can reuse the bath water for toilet flushing, garden, or pool. A social enterprise is also taking the role in household water filters that aims to provide safe drinking water for people.

[83] *Retrieved from Dutch Water Sector official information page: https://www.dutchwatersector.com/expertise*
[84] Part of NL Economic Mission to Indonesia 2020; read more at http://bit.ly/NLMissionBooklet

03

CHAPTER 3

Connecting Indonesia & The Netherlands Ecosystems

From our primary data collection from stakeholders from each ecosystem, further deepened with desk research, we found that the Netherlands' start-up ecosystem is already reaching the maturity stage and is ready for expansion. With strong collaborative values, the Dutch ecosystem players welcome partnership with international stakeholders, nurture, and share their advancement especially in technology. In contrast, the Indonesian start-up ecosystem is still growing, in the right direction. As the home of five unicorns and with billions of funding injected in the start-ups, Indonesia has proven itself as an attractive place for investment and partnerships, while offering big market opportunities. With growing numbers of start-ups and increasing entrepreneurial spirit of the youth, Indonesian start-ups need more partners who are mission-aligned and willing to be their strategic partner to grow. Joining the strengths of the two countries, increases the likelihood to have centaurs, unicorns, or even decacorns born from collaborative work between the Netherlands and Indonesia. At the same time, the Netherlands can deeply engrave their label as the world's leading innovator which brings higher credibility of Dutch companies and technologies as value-added to their products.

This chapter provides further potential works that go beyond market assessment that has been done in the previous two chapters.

3.1 Potential Collaborations: Three Proposed Models

Based on our data collection in the Netherlands, we highlight the following insights about the Indonesian start-up ecosystem through the lens of Dutch start-ups, SAOs, and early-stage capital providers:

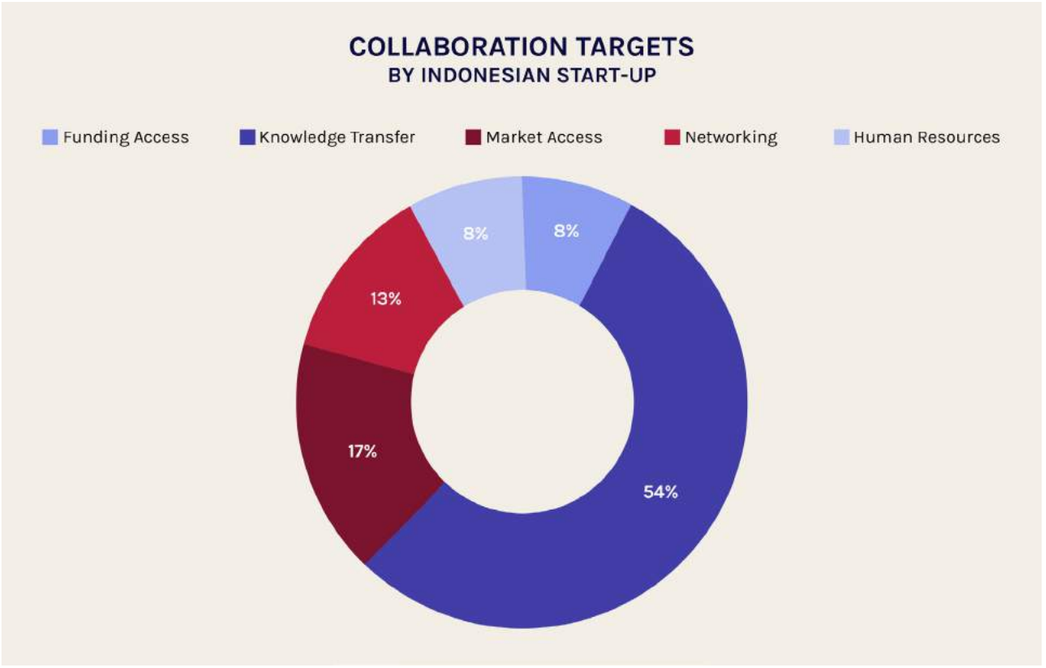
- Players who are already operating in the market perceive the Indonesian start-up ecosystem as an attractive market and indicate their intention to stick around.
- Players without any prior engagement with the Indonesian market indicate that low market visibility, and high geographical and cultural distances between the two countries are some of the contributing factors that are affecting their current decision to as yet to be in the market.

Hence, this report will serve as a guide for Dutch ecosystem players who are looking to enter the Indonesian market or to develop their engagement even further in the focused sectors. We are aiming to unlock potential ways that the Dutch and Indonesian ecosystem players can learn from each other's strengths and leverage them to form a strategic and mutually beneficial partnership.

A thorough study between the two countries' policies, start-up sectoral context, and key players' input, leads to several possible ways to connect the players, namely Indonesian start-ups and the Dutch's SAO ecosystem for better innovation and economic growth. Options developed are based on a blend of the Netherlands' strategic objectives and the identified challenges and opportunities of Indonesian start-ups:

- Knowledge transfer between the two countries' fields of expertise
- Accelerating tech development in the start-up ecosystem
- To connect available access to appropriate funding for focus sectors
- Establishing access to a new market for start-ups with scaling up initiatives
- Obtaining best practices for capacity building from Dutch SAO programs

Figure 19 - Collaboration Targets by Indonesian Start-ups (source: data collection)



(Knowledge transfer to include joint R&D, new technology, sector-focused mentoring, and education)

Asking the Indonesian entrepreneurs, the above figures show that highly desired collaboration initiatives with the Dutch ecosystem are centered around pursuing transfer of knowledge, which mostly addresses:

1. The need to acquire access to new technology
2. Obtaining strategic connections with corporates by leveraging their networks and markets.

This report comes up with possible models for upcoming collaborations, based on the focus sectors we identified in Chapter 1, the insights derived from both Indonesian and Dutch ecosystem players (start-ups and SAOs) and the needs for collaboration results reflected in the previous figure.

Of course, the possible ways for collaboration are not limited to the below recommendations. However, our models are built to be relevant to the top six growing start-up sectors in Indonesia and are based on both market needs and opportunities which enable us to identify the missing link or the gaps in each market, and subsequently define the right structure to close the gap.

3.1.1 Model 1: Corporate Innovations

Corporate innovation is defined as the process of incorporating new innovative solutions into existing business models. Stemming from the premise that corporates are often seen as less innovative and less agile, hence unable to compete with the wave of start-up ideas. Yet, they need to stay relevant in the market. Corporates have historically proven to be immensely successful at advancing existing business models. However, they often fail to identify new disruptive opportunities for growth and expansion. On the other hand, start-ups are great at re-envisioning how an industry can operate and grow. Innovation is crucial to a corporate's success by giving a competitive edge in penetrating markets faster.

One way to solve the corporate's problems is to involve the growing start-up sector and jump on the train to welcome innovations and new opportunities. This is done by establishing a partnership with start-ups to enhance corporate business development while getting fresh input from the start-ups. The collaboration, that centers around innovation, is highly needed for corporates and start-ups as it will lead to mutual benefits coming from unlocking new business and market development. For instance, start-ups can gain access to appropriate industry resources, while corporates can leverage new technology and market-disruptive ideas to improve their operational efficiency.

Although we're framing the connection to be between Indonesian start-ups and Dutch corporates, the nature of participation, in general, is not limited between Dutch corporates and Indonesian start-ups, but as well vice versa.

Figure 20 - Model 1: Corporate Innovations Logic

Suitable Sectors: Fintech and Logistics

Suitable Sectors: Fintech and Logistics
In the logistics sector, where start-ups are delivering B2B oriented products and services, gaining strategic access to corporates is highly desirable as a strategy for them to expand their market share by acquiring new potential clients and means of producing new disruptive technology.

Fintech start-ups offering lending solutions can also reap benefits from tapping into strategic access to financial institutions that can provide them with a connection to potential lenders for the lending platforms and resources to develop complementary technology.

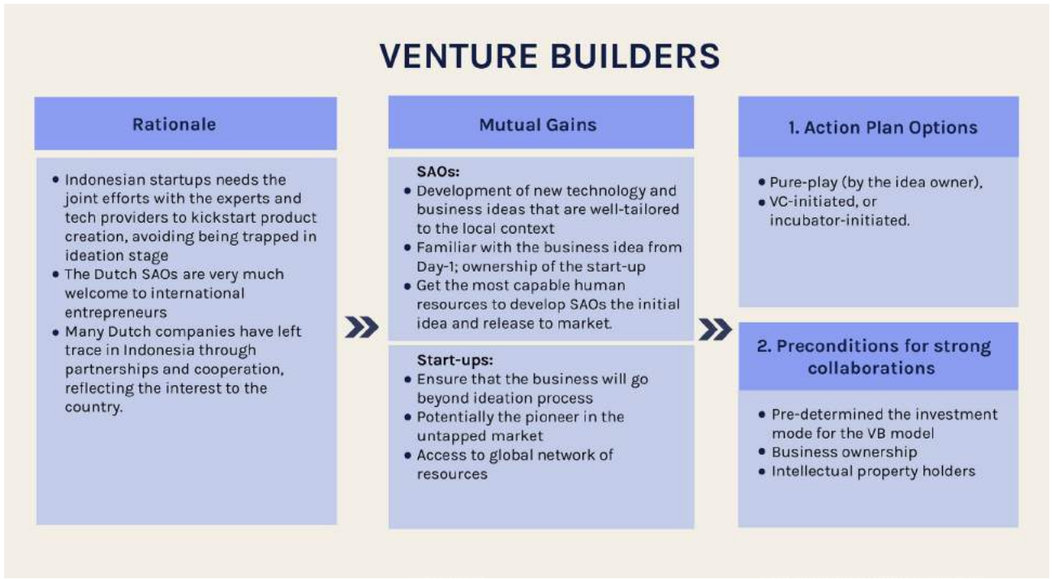
3.1.2 Model 2: Venture Builders

This model allows SAOs or corporates (the venture builders) with initial business ideas in a specific industry to build their own A-team through an intensive period of building the business (venture building). Venture builders with a particular impact orientation can also source existing business ideas that are well suited to their impact objective. The result of this model would be new co-founded start-ups with assimilated ideas from both the entrepreneurs and venture builders. The venture builders are often successful entrepreneurs, investors, or experts in the industry that will re-use their knowledge or entrepreneurial experience for the collaboration. Hence, increasing the chance of the newly founded ventures' success in the long run.

Our Indonesian start-up interviewees pointed out the need for sector-focused programs, as the majority of SAOs in the country are sector agnostic and hence provide a generalist approach to their program. On the other hand, SAOs saw that some Indonesian entrepreneurs still find it challenging to move from the ideation stage to achieving the product-market fit even after graduating from an incubation program. This model can provide solutions to the problems mentioned earlier as the edge of this model is that it nurtures a start-up from ideation and moves them beyond that stage to, at least, an investment-ready stage.

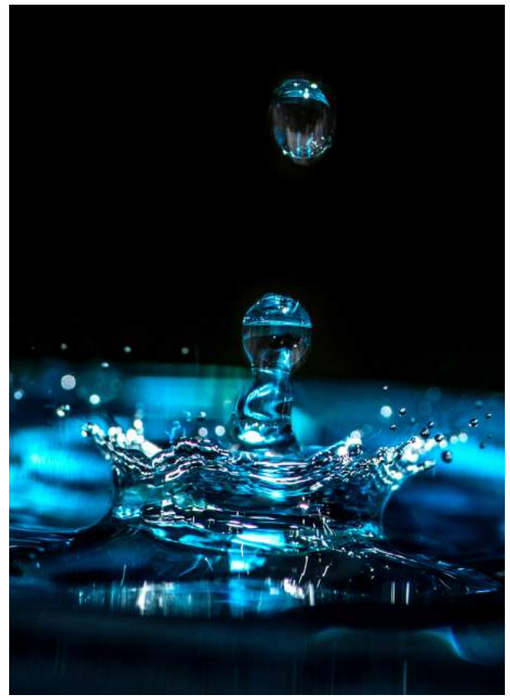
The venture builder model is well-suited for deep tech venture creation and is particularly helpful in industries with longer business cycles or those that are capital intensive, like agriculture, biotech, and consumer goods industries. The model can hopefully deliver pioneers in nascent industries. In the case of entering the Indonesian market, the Dutch SAOs can take advantage of the vibrant Indonesian capital market, on top of the early-stage funding that a builder often offers. The model will produce a new start-up equipped with a great mix of Dutch developed technologies and best practices along with Indonesian high-spirited and local, knowledgeable entrepreneurs.

Figure 21 - Model 2: Venture Builders Logic



Suitable sectors: Waste Management and Water Management

Nascent industry sectors like waste and water management in Indonesia are in need of new market disruptive technology. Innovation in the water management sector is driven mostly by hardware-based solutions that require high initial capital and longer lead time to deliver the product to the market. Due to the nature of the industries that are dependent on environmental impact, the majority of start-ups in this sector are also looking for specific funding opportunities that allow them to pursue impact creation on top of commercial return. Hence, a venture builder model targeting a particular overarching theme is more likely to be suitable for these two industries considering the tremendous operational know-how (e.g., intensive mentorship, business development) that it can bring to propel the development of innovative ideas in these sectors strategically.



3.1.3 Model 3: Joint R&D

Research and Development (R&D) in Indonesia is a challenging part of start-up growth, as there is a gap in knowledge and equipment availability. Addressing this gap could be a potential Dutch-Indonesian collaboration where Indonesia acts as a test-market fitted to the chosen theory of change. The dynamic situation and challenges in Indonesia could be an interesting R&D case; meanwhile, Indonesian counterparts could absorb knowledge and experience from Dutch start-ups as a transfer of knowledge. This model has the broadest options for stakeholders to be involved. The R&D can be developed between knowledge institutions like universities, incubator/accelerator providers and consulting firms, corporates, and also among start-ups themselves.

Several cooperations have been established between Indonesian and Dutch universities. Institut Pertanian Bogor (IPB) and Wageningen University & Research (WUR) commenced a joint research project on the agricultural sector involving Indonesian agriculture start-up Tanijoy as their research partner as well. This model would accommodate the needs addressed by all sectors highlighted in this research: the needs of knowledge transfer. While this R&D does not necessarily lead to business model prototyping, start-ups or any other ecosystem players might benefit from this model to know the necessity and opportunities of the market, of which start-ups can leverage based on the R&D outcome.

Several Indonesian universities have been actively supporting the start-up ecosystem through establishing incubators, early-stage funds, and entrepreneurial competitions from the likes of IPB (Institut Pertanian Bogor), University of Indonesia, Bandung Institute of Technology, Universitas Gadjah Mada, Prasetiya Mulya University, and Bina Nusantara University. Collaborating with these universities is a more strategic approach to share the R&D outcome and validate it by leveraging their incubator/accelerator participants.

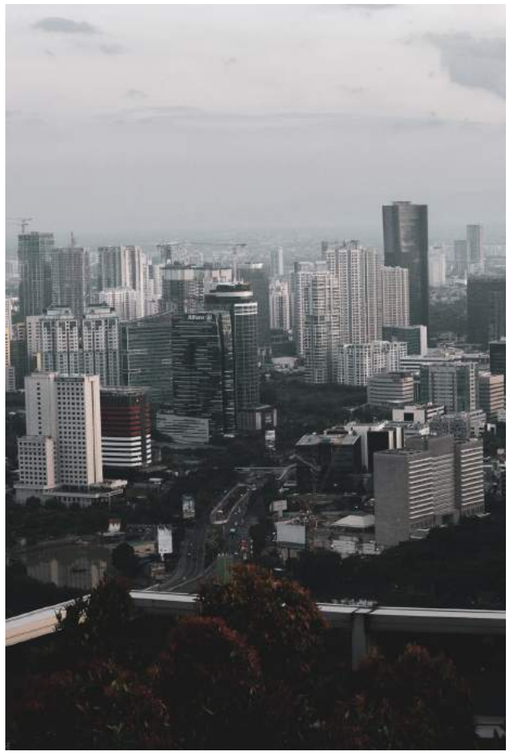
Figure 22 - Model 3: Joint R&D Logic

This particular model can be applied throughout all focus sectors and is particularly relevant for agriculture and health service industries where intensive R&D processes involving industry experts are highly needed. The other sectors have room for improvement in terms of innovation as well, especially in the development of tech-related hard skills and soft skills. The always-changing trends and rapidly developing technologies require a continuous R&D process for each player in the ecosystem to remain relevant, catch up to the global market trends, and address global challenges.

3.2 Recommendations

Following the proposed models of collaboration between the two ecosystems, this section will recommend further what is needed before commencing the partnership. The recommendations below are specified for each of the four Dutch stakeholders: Private Sector (including start-ups and corporates), SAOs, capital providers, and the government who have interest in the Indonesian market. Prior to that, there are two general actions that we recommend, regardless of the entities:

1. **Know your market:** equip yourself with sufficient knowledge of the market and then assess its opportunities taking into account your expertise, mission, and weak points. While unexpected conditions will be inevitable, being prepared will prevent you from dealing with unnecessary challenges caused by being misinformed. The decision to enter the market should be based on your own judgment.
2. **Partner with local:** Foreign players are welcome in Indonesia to support the ecosystem, reflected on the increasing visibility and accessibility of the regulations through OSS while forming an Omnibus Law to boost foreign investment[85]. Once the market fitness assessment is done, we suggest that you be in touch with the key players in the sector or those who are significant to your needs to be the next step. This is to deepen your on-the-ground knowledge of your specified sectors and might provide you with assistance when hurdles are in sights. Afterwards, the recommendation to follow would be specified per your entities' functions. Local players act as not only as support assistance in getting to know the local condition, but also taken as a mandatory requirement at some regulations like establishing the FDI companies.



[85] Please refer to the section of Ease of Doing Business in Indonesia in this report

3.2.1 For Private Sectors (Start-ups and Corporates)

Start-ups are corporates' source for extending their portfolio to new markets, or to keep current market share by fostering innovations. Vice versa, corporates are attractive counterparts for the start-ups to enhance their growth. Corporates offer resources, expertise and networking opportunities useful for the start-up's scalability. To build suitable partnerships for the corporates, we recommend to apply the three models as proposed in the previous section; as they all are applicable for the private sector.

The private sector can apply the models while tailoring them to the corporate's strategic objectives. **Corporate Innovations (Model 1)** is highly applicable for those who aim for product diversification and cultural transformation by incorporating start-ups' ideas into corporate's existing business model. Venture **Builder (Model 2)** is suitable for the private sector to develop their own idea with local experts, who are relevant and able to contribute to the new idea, going towards the establishment of new start-ups in Indonesia. **Joint R&D (Model 3)** are for those who are expanding their market and wish to develop their product or business model to embody local values (to be market appropriate).

3.2.2 For SAOs

A number of SAOs is available in Indonesia, yet our interview insights saw room for improvement for SAOs to be the effective enablers in the start-up ecosystem. The SAOs, especially the incubators and accelerators tend to have a generalist approach to guide all start-ups, when in fact not one size fits them all. Specified and sustainable partnerships between SAOs and the start-ups are still needed. Hence we recommend SAOs to fulfil the selling propositions they can offer and be the trailblazer.

SAOs Operating in Indonesia to Fulfil Unique Selling Proposition

It is important for SAOs to achieve a market fit, as each sector's start-ups have different needs to be catered to during different stages of growth. For instance, an agritech start-up is usually based in an area close to where farming activities take place, far away from cities like Jakarta. By considering sectoral, stage and area differences, SAOs can develop a unique selling proposition for their program to cater to start-up needs and potentially speed up start-ups' growth. Hence closing the gap in the market where the majority of SAO-led programs are centralized in Jakarta and focusing on a generalist approach.

Figure 23 - SAOs Selling Propositions

Be the Trailblazers: Build the Reputation as Credible Mentors through Networking

Trustworthiness, transparency, and the ability to be open to business pivots for the start-ups are important for investors and SAOs. This includes the ability to learn from mistakes, the ability to listen to mentors, and understanding what an investor wants.

Current successful start-ups are led by what we call the Trailblazers: Start-up founders and C-levels with high commitment, prodigal nature, can-do attitude, self-discipline, confidence, and ability to listen as well as adapting to the local market. Governance is an ability one can learn. These trailblazers are yet to be enabled as mentors in their own right.

There is not yet a systemic infrastructure to facilitate this mentorship. What we found, to find these trailblazers, SAOs play a crucial role. There are opportunities to develop peer to peer mentorship by founders employing best practices in order to gain more market access and increase start-ups growth effectively. The internationalization of Indonesia's start-ups is also started by these trailblazers.

To go beyond these trailblazers, it is important for Dutch - Indonesian existing connections to be activated as a platform to build trust between founders, SAOs, and investors such as the Dutch alumni network, Indonesia diaspora network, and Dutch companies and Dutch Embassy referrals. While the formality of networks is not significant in this sense, having the key contacts in hand will be helpful for your operational needs.

Mature Start-ups Funding Needs: SAOs to Develop Scale-up Initiative

As SAOs are more focused on nurturing the early stage start-ups, the growth or mature stage start-ups found it difficult to find another mentoring, when they need it. The fund in this upper stage is also hard to find as typically they need more than angel investors can give however in the smaller amount VC could support. The more mature start-ups, as they see current SAOs are good for networking and product development, but less for deep innovation and scale-up investment. In order to gain traction, bilateral parties are encouraged to develop scale-up initiatives, such as mentorship with intensive networking. Dutch SAOs can also leverage to Indonesian SAO in order to strengthen the development of program models and learn best practice from the developed market. For the scaling-up start-ups, SAOs are mostly needed to provide or connect them with sector-specific strategic partners who can help them to further imprint their name in the sector.

Start-up Assistance Organizations (SAOs)

Aside from well-known mentorship support providers like incubators and accelerators, SAOs encompass other entities that are seen as vehicles to boost the start-up growths by equipping them to exposure for other support like start-up focused media platforms do (Tech in Asia, Deal Street Asia, Tech Crunch, etc), or be the extensive support to help start-up establishing strategic partnership such as a network or association such as angel investment network like ANGIN, Indonesia's VC for Start-ups Association (AMVESINDO) or Indonesia's Youth Entrepreneurs Association (HIPMI).

3.2.3 For Capital Providers

Funding Sweet Spots: Early Stage & Impact Driven Financing

During data collecting, we noted that investors find start-ups need to increase their market knowledge to avoid product mismatch. There is also a funding gap, where early-stage tech-based start-ups face difficulties in securing initial capital to develop their product, especially when it comes to high-tech models like IoT. The majority of early-stage start-ups' products and services in the market are not yet qualified for equity-based funding, provided by venture capitals and the like. Investors (VCs) see that there is a need to bridge funding with grant-mechanisms to ensure traction of start-ups by giving them a chance to develop their products/services to fit the commercial investment market appetite.

However, from the investor interviews, we found that investors find that Indonesia has several interesting potential spots for investment, such as in technology-enabled business, as many inventions of technology are constantly created. Agriculture technology, health-focused technology, logistics, and fintech are examples of investment priorities in the identified focus sectors for investors in Indonesia. This means there is a potential collaboration for knowledge transfer to close the gap between available funds and start-ups availability, as the market for the products and services are abundant (i.e., access to better health service, cashless society trend, etc.). In another spectrum of investment, we noted that there is an opportunity for impact-driven funding to take place, the ones that are focused on SDGs.

3.2.4. For Governments

The Gateway for the Incomings

The government, through the embassy and several agencies, can act as the gatekeeper for Dutch sectors coming to Indonesia. Providing technical assistance such as explaining administrative barriers, providing key contacts and advise to strengthen collaboration. Various programs that the Netherlands Enterprise Agency has funded, for instance, can be great starting points for market knowledge and leveraging.

Building a regional hub of cooperation

Considering the existence of start-up hubs in Singapore by the Netherlands government, opportunity in escalating the collaboration to the regional level is widening. Sharing of knowledge from more developed markets and any other Dutch collaboration hubs is the much needed resource for Indonesian start-up ecosystem players. Networking events and regional seminars or conferences of Dutch collaborative works in start-up ecosystems can be considered as one action plan to connect more ecosystems, exchange experiences and ideas, and also establish a more extensive networking.

Networking or Matchmaking Platform

The local stationed working agencies or embassies should activate their networking functions. A specially tailored and sustainable platform to connect interested parties from both countries is required. There are several instances to take such as building their own accelerators focusing on Dutch related markets for Indonesian start-ups, or continually updated databases of Dutch and Indonesia corporates, SAOs, start-ups who might be interested to work in each other's ecosystem. The database could be an application based on top of internal research; hence, serving the first hand data of legit entities who are surely interested in each other's ecosystem. The matchmaking platform can also cater Dutch corporates or Start-ups with Indonesian Intellectual Property owners (be it researchers or start-up entrepreneurs) for the application for corporate innovations or venture builders model. This is expected to smoothen the process of collaboration in looking for the right strategic entity to partner with.

Providing Capacity Building

Establishment of a continuous learning platform, might be embedded to the matchmaking platform. The capacity building can be in forms of regular, well-tailored, and sector-specific accelerators programs for start-ups by partnering with local SAOs, an online learning platform comprising the two countries' ecosystems updates, regulations, and how to enter the market, as well as basic knowledge on how to build start-ups or investing based on the best practices of Dutch ecosystem as the more developed ecosystem. Seminars or discussions can be provided by hopping or doing roadshows to universities or knowledge institutions to increase the R&D activities and promote Dutch interest to the fresh entrepreneurs and researchers.

3.3 Ease of Doing Business

In order to implement the recommendation and build the collaboration models as above, a party should equip themselves with knowledge about current local regulations and business environment for foreign players. This section should give a macroview of Indonesia's context and for deeper understanding, we suggest to consult with the local embassy.

The World Bank's Doing Business 2020 Report shows that Indonesia ranks 73rd out of 190 countries, this remains unchanged since the report in 2019, and has dropped one position from 74th in 2018. Initially, Indonesia was positioned in 106th position in 2016, so the current positioning shows how Indonesia has significantly improved the business climate through reform since then.

Despite this, foreign company establishment still requires a number of procedures and steps to follow. In 2019, the Government has started to digitalize the application for opening up a business by replacing hard copy documents with digital ones in online portals, through the "Online Single Submission" (OSS). The discourse about starting and registering businesses in Indonesia will be discussed in the following sections. Nonetheless, before jumping on how to set up a business in Indonesia, it is important to address taxation and investment regulations. The following narrative is written for the purpose of incoming international players in the ecosystem.

Figure 24 Indonesia's Ease of Doing Business (Source: World Bank, 2020)

Ease of Doing Business in **Indonesia**

Region	East Asia & Pacific
Income Category	Lower Middle Income
Population	267,663,435
City Covered	Jakarta, Surabaya

DB RANK **73** DB SCORE **69,6**

3.3.1 Foreign Investment and Taxation Regulations

A. **Indonesia's Investment Coordinating Board (BKPM)**

Indonesia regulates its foreign investment activities in one coordinating body, BKPM (bkpm.go.id). Restored to ministry level status in 2009, and reporting directly to the President of the Republic of Indonesia, this investment promotion agency's goal is not only to seek more domestic and foreign investment, but also to seek quality investments for Indonesia.

As foreign investors are heavily dependent on BKPM's criteria and legislation, it is useful to have a better understanding through studying the opportunities and expected challenges that might come prior to making investment decisions in certain sectors in Indonesia. BKPM classifies their regulation on Foreign Direct Investment (FDI) based on business sectors[86] as below:

1. A business sector that is open to investment with conditions (reserved for small and medium enterprises)
2. Business sectors that are open to investment with partnership conditions
3. Negative Investment List of Foreign Direct Investment

[86]Details of business sector listed by BKPM can be found in Appendix VI

3.3.2 Start a Foreign Business in Indonesia

Foreign companies in Indonesia are called Penanaman Modal Asing or PMA (literal translation: Foreign Direct Investment). To invest in Indonesia, a business should have at least one Indonesian director. This to develop quality local talents through knowledge transfers of global best practices. We suggest that Foreign Direct Investment (FDI) companies not automatically limit themselves to Jakarta. Entrepreneurial activities go way beyond the capital city to major creative and business hubs like Bandung, Yogyakarta, Surabaya, Bali, Medan, and Makassar.

World Bank, through its DoingBusiness.org platform, provides a full country profile on Indonesia, which can be accessed publicly to help navigate the ecosystem. Dutch companies (with interest) in Indonesia can contact the Netherlands Embassy to discuss further.

Figure 25 - Basic Requirements of a Foreign-Owned Company (PT PMA) in Indonesia

Organizational Structure

The minimum organizational requirements to establish a foreign-owned company (PT PMA) are as follows:

- 2 foreign (individual or foreign corporation) or combination with local shareholders.
- 1 director (at least there's 1 local director).
- 1 commissioner (can be a foreigner or local).

Minimum Investment Value

While local companies can be more flexible, a foreign company needs to have an investment plan valued at minimum IDR 10 billion.

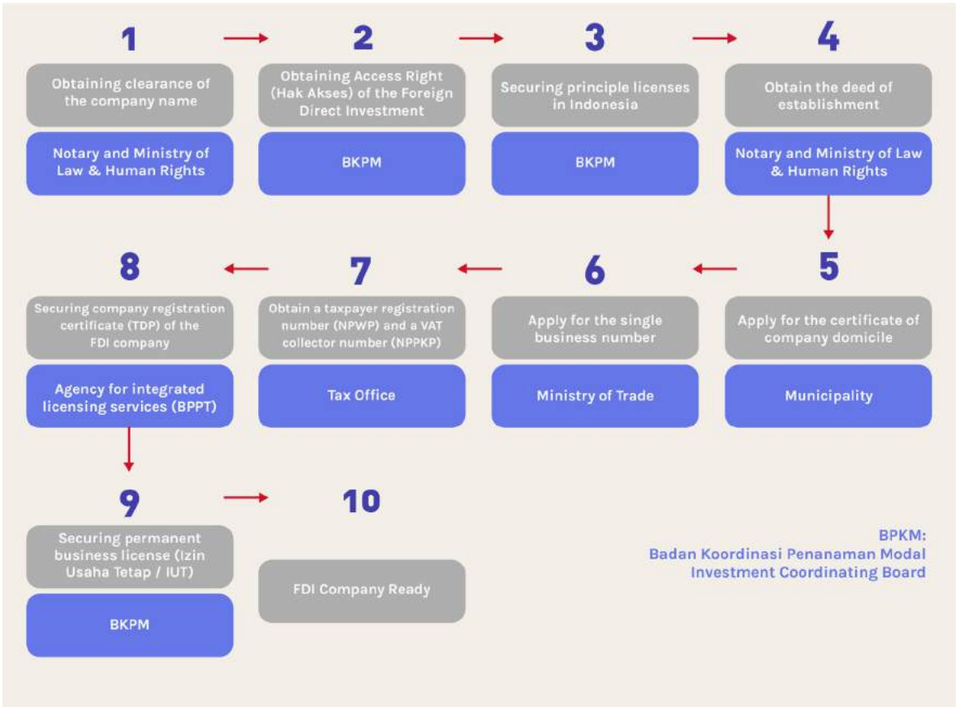
To be exact, 25 percent of this - IDR 2.5 billion - needs to be paid-up capital upfront.

This means that foreign companies have to be categorized as large companies according to Indonesian laws.

Overall, based on the six sectors covered in this research, no significant additional barriers are immediately visible to start a business. Although you should always thoroughly check sector specific and/or new requirements before actually entering the market. The market, the government support, and SAOs seem plenty to support and assist newcomers. In fact, the government is aiming to make Indonesia a hot pot of foreign direct investment by simplifying the regulations for investors through an Omnibus Law. Nevertheless, there are particular challenges faced by start-ups in each sector that have been discussed in 1.4. It is also worth noting that the minimum investment plan for FDI companies should be IDR 10 Billion (between USD 500K-600K), which could be a barrier to medium-sized foreign companies wanting to enter the market.

Registering a business in Indonesia could take longer than in a more developed market. Since 2018, after the digital revolution began, it takes 10 procedures and more than 20 days to set up a local business in Indonesia; much longer than in Singapore where it takes three procedures and 2.5 days. This should be taken into consideration by Dutch companies who want to start their partnership in Indonesia as private companies. Steps in setting up an FDI Company in the country is displayed in the following figure.

Figure 26 Step by step of FDI Investing (Smart Consulting & World Bank Group 2020)



Foreign Direct Investment under Omnibus Law 2020[87]

The Indonesian government ensures that all activities that generate income in Indonesia are subject to tax. This has an implication for foreign (tech) companies that are categorized as *Electronic System Providers* or digital companies[88]. For instance, Electronic Trade Taxes ensures that foreign business actors conducting activities within the territory of Indonesia will be determined as tax subjects and are required to collect, deposit and report Value-Added Tax (VAT) even though they are not physically present in Indonesia. Hence, even without a representative office in Indonesia, the business activities that generate revenue in Indonesia is subject to tax. This ruleset is intended for Over The Top (OTT) service companies, which even though they do not have offices in Indonesia but benefit significantly from their activities in the country. Indonesia's Ministry of Communications and Technology Information grouped OTT services, who are mostly overseas-based, in three: communication services to substitutes the traditional communication service providers, communications service that can substitute traditional broadcasting providers, and[89] companies to add values to the existing infrastructures like online house rental management. As individuals or foreign workers, Personal Tax Subject Arrangements are imposed. One of the arrangements points out that foreign nationals who live in Indonesia for more than 183 days will be subject to tax, but only for income received from activities in Indonesia.

[87]Details of Omnibus Law 2020 can be found in Appendix VII
[88]The Jakarta Post, 24 February 2020, *"5 things you need to know about omnibus bill on taxation"*, https://www.thejakartapost.com/news/2020/02/24/5-things-you-need-to-know-about-omnibus-bill-on-taxation.html
[89] Ministry of Communications and Technology Information, 2019, *"Pemerintah Dorong Konsolidasi Antisipasi Kehadiran OTT"*, https://www.kominfo.go.id/content/detail/18293/pemerintah-dorong-konsolidasi-antisipasi-kehadiran-ott/0/berita_satker

3.3.3 Start Investing in Indonesian Start-ups

Aside from setting up independent FDI companies, investments can be made by putting capital into a collective fund through available VCs as Limited Partners (LPs) or becoming an angel investor by joining angel networks.

From our interviewee lists only, we found at least 18 VCs (foreign- and local-based) are available in Indonesia to cater for investment interest in our six focus sectors. Ten of them are also deploying early stage funds (from pre-seed, seed, and Series A round) for start-ups. The number should go beyond that if we consider all VCs available in the market, which might be more than 50. This shows how VCs are tailoring their services to the local market. As the Indonesian start-ups market is still growing, and the demand for early stage funds keeps rising, VCs, who are used to fund only at the later stage of companies' growth, are now also fueling start-ups by disbursing smaller ticket sizes.

To invest individually, having fun with closer relationships with founders and sharing experiences with them, joining an angel network can be the first step to take. In Indonesia, the most prominent and active angel network is Angel Investment Network Indonesia (ANGIN)[90][91]. Since its first iteration in 2014, ANGIN keeps developing as an inclusive angel investor network with a complete investment services platform. Following the steps of ANGIN, several initiatives started to emerge to gather HNWI, business leaders with the idea to conduct angel investment activities. ANGEL EQ, currently known as Alternative Investors Group and Advisory (ALTIRA), was set up in 2017. It aims to gather 14 leaders with experience in VC, investment and entrepreneurship. The membership of angel networks is not limited to individual investors, but also institutional ones. By committing as a member in a network, the investors can widen their access and exposure to the curated start-ups.

3.3.4 Start to Collaborate with the Existing Ecosystem Players

Both financial and non-financial capital can be deployed by collaborating with the SAOs, government agencies and universities. SAOs provide a diverse set of services that may include experienced mentors, initial funding, talent acquisition, business strategy and product development, market validation, market access, physical working spaces, access to investor networks and follow-on investment opportunities[92]. Building collaborative programs with SAOs can be the initial step in familiarizing with the ecosystem. The options for collaboration and support are extensive as they also serve diverse sets of services.

We also notice that the majority of SAOs apply a more generic and agnostic approach in their selection methodology due to the lack of availability of quality start-ups across different variables, such as gender composition, sector, or venture stage. Currently, the majority of SAOs (78%) in Indonesia are reported to be sector-agnostic either by choice or by evolution[93]. Dutch experts are potentially able to share their expertise by building strategic, sector-focused partnerships. Further recommendations for collaboration are explained above.

[90]More information at [91]Author of this report https://angin.id/
[92]ANGIN, 2018, Startup Assistance Organizations: Taxonomy and Landscape
[93]ANGIN, 2018, Startup Assistance Organizations in Indonesia: Performance, Challenges and Solutions.

Table 8 - Notable Actors Supporting Indonesia's Start-up Ecosystem
Source: ANGIN's Data

SAOs	University	Government
Please refer to ANGIN's SAOs report SAOs Taxonomy & Landscape of Indonesia Report	**University of Indonesia (UI)** Home of RCCC-UI, the leading research center focused on climate change https://rccc.ui.ac.id/ **University of Gajah Mada (UGM)** The oldest state-university in Indonesia who established Innovative Academy Hub to build their own start-up ecosystem https://www.iaugm.com/ **Bandung Institute of Technology (ITB)** Claimed as the top successful start-up entrepreneurs generator; prompted as Entrepreneurial University https://www.itb.ac.id/ **Bogor University for Agriculture (IPB)** With their own Science Techno Park (STP), a creative hub focusing on R&D. Has collaborated with the Dutch WUR http://stp.ipb.ac.id/en/ **Prasetya Mulya University** The leading business school in Indonesia, provides a master program dedicated to striving entrepreneurs calles New Ventures Innovation study program. http://pmbs.ac.id/nvi/	**Ministries and Central Agencies** List of Ministries and Agencies of Indonesia with each of their main duties in brief can be found at https://www.indonesia.go.id/kementerian-lembaga (English page available) Foreign Investment related agencies both in Indonesia or abroad is listed at https://www.bkpm.go.id/en/external-link/indonesian-ministries-agencies **Regencies** A layer of provincial administrative and on par with Cities, Regencies are local administrations who have their autonomous authority and budget management. Regencies are typically rural areas with focus in agriculture, while cities depict the urban and business centers of a province. **Municipalities** An administrative layer under regencies comprises districts with their own bureau for each government administration matter. **Desa (Village)** The small, rural administrative unit in Indonesia, is given Dana Desa/Village Fund from the Central Government

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APPENDIX I - Indonesian Data Collection

	MARKET		TALENT		FUNDING		INFRASTRUCTURE		REGULATION and GOV RELATED	
	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY
LOGISTIC	**Market readiness:** Customer acquisition remains challenging due to the traditional nature of logistic operation. Clients acquisition process is costly and lengthy as clients are used to the conventional way of logistic services and places. In an industry that deals with corporates clients, reliability is also highly important and is highly demanded. Hence they are stickier to process and are less open towards adopting new technology.	**High Logistic Cost:** Indonesia's logistic cost in Indonesia remains one of the highest in Southeast Asia as inefficiencies across the logistic chain are still rampant; leaving room for improvement to be occupied by new technologies. Connectivity is always an issue in Indonesia, acknowledging the geographic landscape with thousands of islands. Indonesia's logistic cost in Indonesia remains one of the highest in Southeast Asia, taking up to 24% of the GDP. Inefficiencies across the logistic chain gives plenty of room for improvement to be occupeid be new technologies **Thriving e-commerce activities:** an ever rising increase of e-commerce transaction creates a growing demand for logistic service. Existing datas point towards a positive trajectory for the sector something that is also echoed by investors and other players. **Time to look beyond last-mile:** Regardless of the plenty of underlying opportunities for startups to fill in the area, available solutions are concentrated in the last-mile delivery and trucking stages. There are still room for opportunity to undertake concerns in the other blue ocean supply chains of logistic issues.	**Expensive IT talent:** in the industry where strong technical knowledge and industry experience are crucial, the available pool of suitable talent are scarce, pushing hiring cost to another level. **Lack of reliable talent to work on the ground:** The logistics sector has to work very closely with the local human resource for implementation in each area regardless of how tech-enabled they are. Considering the remote areas, they need to tap in, and the literacy gap between regions in Indonesia, finding experienced operational and local talents remains a challenge for logistic startups.			Attractive market: Investors are actively looking and eager to invest early in the sector, hoping to find game changers and possible champions in the industry who will be the next disruptor in Indonesia's archipelago famous logistic issues. They are confident that there is still plenty of innovation that will be brought up by startups in logistic chains in the upcoming years.	**Poor logistic infrastructure:** Considering Indonesia's geographical landscape, poor logistic infrastructure is the crucial challenge that hinders the growth of the logistic sector that implicates on the inadequate information and logistic connectivity in Indonesia. There is a massive gap in infrastructure quality and access between areas in Indonesia. The available supporting infrastructure like road access, ports, and electricity hinder startups to offer equal service for the markets in remote areas. **Price disparity between eastern and western area of Indonesia:** There is a huge price disparity of goods between the eastern and western parts of Indonesia which is primarily caused by the high logistic cost on the shipping fee. The inadequate port capacity in some regions and the gap in regional economic development, which is the leading cause of the unbalanced flow of goods, makes the domestic shipping often costlier than the international shipping cost.	*Infrastructure development: President's commitment to encourage the development of infrastructure and maritime connectivity by building a motorway of the sea, seaports, logistics and shipping industry and maritime tourism.	**Red Tapes and Bureaucratic Hurdles** Obtaining an operational license for new technology remains challenging as there is a limited scope when it comes to the type of technology oversees by the administration office. Thus, new technologies remain unclassified, causing longer time period of adjustments to receive government's approval.	**Alignment with government agenda (connectivity and develiomnt SMEs)** government's focus in developing SMEs across undeveloped area in Indonesia require the active role of Indonesia's logistic sector to facilitate their business operation.
AGRICULTURE	Market readiness: The agriculture sector is facing an aging problem where fewer young people are looking to work in the sector. In the market where its beneficiaries are farmers belonging to the age bracket of 45-54 years old, openness towards new new technology is very low. Thus,customer acquisition process remains arduous due to the proximity of these farmers and their willingness to learn.	Room for innovation:93 percent of Indonesia's total number of farmers are small family farms that grow bulk of the country's staples such as rice, corn, and cassava. However, the majority of smallholder agriculture is practised with very minimal use of modern tools. Among the country's smallholders, only 10% of them utilizes high level of mechanization, leaving a significant room of new innovative tools to penetrate the market.	Talent scarcity: Finding the right talent with the appropriate industry knowlegde is difficult due to the low interest from graduates in the field. When it comes university graduates from agriculture related majors, only less than 20% of them continue to work in relevant field.		Finding strategic investors: Considering the high risk nature of the agriculture sector; startups working on new solutions find it hard to find strategic investors with the appropriate industry knowledge who can also bring in support beyond an investment. Limited options There is a limited funding opportunity for hardware models that require high initial capital to kickstart the operation. Most of the investment made in the sector goes into marketplace and financing models. An alternative funding scheme to facilitate the R &. D phase is desired by startups to speed up their production and distribution process.		Majority of farming activities are located in remote areas, thus distribution and network connectivity are still challenging as infrastructure development projects are spread out unevenly.		Overlapping regulation: agriculture startups are faced with unpractical and overlapping regulation when it comes to raw material procurement (eg. for IoT devices) or for product distribution, inflating the supply chain cost.	Government agenda in aquaculture "Gemarikan" movement to promote higher fish consumption as a solution to counter stunting problems that are prevalent in the country; paving the way for improvement in the aquaculture sector to support the program.

	MARKET		TALENT		FUNDING		INFRASTRUCTURE		REGULATION and GOV RELATED	
	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY	CHALLENGES	OPPORTUNITY
HEALTH	Market readiness: Health literacy remains a problem as majority of Indonesians are not well aware of alternatives (especially preventive solutions), and will only seek healthcare service for curing purposes.	Low healthcare market penetration: Low healthcare practitioner to patient ratio and uneven distribution of healthcare facilities across the country provides a plenty room for development of telemedicine to provide solution for underserved areas. Rising middle class: Growing number of middle class population in the country will trigger greater demand for healthcare services and higher williness to purchase new solutions.	Talent scarcity: Limited available talent pool, especially for medical device engineering area and lack of capacity building initiative about to practice innovation in the field.		Industry expertise: healthcare startups are looking for strategic investors who are part of the industry theyre in; beyond investment, operational know hows and access to healthcare groups are desired to help them navigating around the market.	In line with the current state budget allocation towards the sector (second biggest in the country), the government is actively attracting investment into healthcare technology; placing greater role for startups to contribute to the increasing the operational efficiency of the healthcare sector.		Improvement in connectivity and accessibility between cities facilitate easier distribution of healthcare products and services.	Regulations in place are not supportive towards innovation. Hardware production is hindered by three factors: permit, production capacity, and unavailability of components needed for production. Regulatory hurdles complicate licensing process for hardware products and thus create unnecessary delay in the product development stage.	
FINTECH	Market acquisition Despite the increasing awareness towards fintech products, low financial literacy rate remains a challenge for startups as educating customers to avoid irresponsible transactions (eg, bad debt) takes a significant amount of time. There is also a lack of a referral platform to market the fintech products on a greater scale. Market acquisition is also more costly due to the tight competition between existing players.	Embracing the unbankable: There is a vast untapped market in the fintech sector, for there are approximately only 36% of Indonesians who are bankable. Raising financial inclusiveness is embraced as both homework and opportunity. With 203 million or 81.5 percent of Indonesian are at the lower end of the economic pyramid, a huge room for opportunity is laid in remote areas.			Access to growth stage fund: As fintech startups become more mature, they need better access to growth stage fund. However, available funding options are focusing on either early stage or post series B stage. Thus money is currently circulated only between big players &. for follow on purposes (of the existing portfolio), leaving limited options for growth stage startups to tap into suitable investment.					**Improved data protection and privacy regulation:** Triggered by the exponential increase of popularity and use of P2P and e-payments, governments are actively improving the customer protection and transparency mechanism to crackdowns unregulated and illegal fintech. These regulatory improvements increases the barrier to entry for new players and increase the sense of security for existing players. **Financial inclusion agenda:** National Strategy for Financial Inclusion (SNKI) will focus on six pillars: financial education, public financing facilities, financial information mapping, supportive regulations, distribution networks, and intermediation facilities and consumer protection as the national strategy to raise the financial inclusion in Indonesia and opens up greater access to the unbankable Indonesian.
WASTE	Captive Market Outside the upper middle class group in primary cities, awareness towards sustainability is still low. Households rely on traditional waste collectors to pick up their waste and does not see additional processing service to be of importance. Targeting corporations and government bodies as clients become the go to market strategy as retail customers are still struggling to see the importance of waste management.	Huge waste 190k ton of waste are produced every day in Indonesia, with recycling rate that stands at 10% out of the total amount of waste (similar rate to China and Japan), leaving a huge untapped opportunity to be leveraged by startups in the sector. Rising interest in sustainable lifestyle: Upper middle class Indonesians are becoming more aware of environmental responsibility. As customers grow to become more eco-conscious, demand for eco-friendly products and processes will rise; paving the way for innovative product and service to capture the market.			Investment opportunity investment activity is still low. Majority of startups operating in this sector are still in the market validation stage where they are still looking for small investments to be injected. Due to the impact orientation of startups in this sector, they are also looking for investors with the same values that places impact creation on top of profitability. However, in reality they still find it difficult to access suitable funding opportunities that are in line with the nature of the business.			Regulatory setback: overlapping regulation and regional differences limit startups' room to grow. Waste management activities are regulated under the enviromental protection and management law that is applied without an appropriate benchmarking at city level.Given the legal enforcement status in the industry, startups are still struggling to cooperate with all involved parties.	
WATER	B2B/B2G business model Indonesians see the water facility as a necessity that should be provided by the local government.Therefore, it's harder for water startups to target retail customers. For easier market acquisition water startups are serving corporations and government clients on a project basis. However, relying on project-based operation limits startups' ability to quickly scale up their operation.	**Getting more urgent as the economy and population grow:** Around 21% of the water resources in Asia-Pacific are contained in Indonesia. However, there is insufficient access to water in some parts of the country due to poor water management, limited infrastructure, and uneven economic development between regions. Whereas water supply is hardly keeping up with economic and population growth, people tend to underestimate their water amount and quality usage especially population in the bottom side of the pyramid.			The majority of the water management sector provides hardware-based solution.There is a limited funding opportunity for hardware models that requires high initial capital to kickstart the operation. An alternative funding scheme to facilitate the R &.D phase is desired by startups to speed up their production and distribution process. Investment: investment activity is still low. Majority of startups operating in this sector are still in the market validation stage where they are still looking for small investment to be injected. Due to the impact orientation of startups in this sector, they are also looking for investors with the same values that places impact creation on top of profitability. However, in reality they still find it difficult to access suitable funding opportunity that is in line with the nature of the business.			Subject to external approval In Indonesia, commercialization of domestic water resources is subjected to approval from stakeholders in the surrounding area. The current regulatory environment in the water management sector is less friendly to private businesses where room for opportunity is restricted and national accreditation system for water innovation is not yet in place.	Government is taking clean water and equal distribution more seriously as 2 of 5 causes of mortality in Indonesia are fecal borne illnesses which are linked to inadequate water supply and sanitation issues. **PAMSIMAS:** Community Based Drinking Water Supply and Sanitation program is currently spreading in over nearly 23,000 villages, providing low-income and remote areas population improved water supply to 17.2 million people. **Smart village program:** Smart villages program encouraging villages to have a Smart Institution, Smart Infrastructure, Smart Service Delivery, Smart Technology and Innovation, and Smart Societies will require a wiser and better water management system.

APPENDIX II: Respondent Lists

Indonesia

Start-ups: 49
Investor: 24
SAO: 27

The Netherlands

SAO: 6
Investors: 2
Start-ups: 3
Corporate: 4

Start-ups

Duithape	https://www.duithape.com/
Jojonomic	https://jojonomic.com/
Uangteman	https://uangteman.com/
Alami sharia	https://p2p.alamisharia.co.id/
Moduit	https://www.moduit.id/id/
Tunaikita	https://www.tunaikita.com/
Mospaze	https://mospaze.com/
Ritase	https://ritase.com/
Logicnesia	https://logicnesia.com/
Piniship	https://piniship.com/
Linustrans	https://linustrans.id/index.html
Parongpong	https://www.parongpong.com/
Pijakbumi	https://pijakbumi.com/
Ewazte	https://www.ewazte.com/
Ailesh Power	http://www.aileshpower.com/
Nakedinc	
Bungsam	
FUREC	http://www.furecconcept.com/
Tanijoy	https://www.tanijoy.id/
Coklat ndalem	https://www.cokelatndalem.com/
Mitra Sejahtera membangun Bangsa (MSMB)	https://msmbindonesia.com/
Griin	
Cancimen	http://cancimenfood.com/
Poppit	
Peduli indonesia	
Jalatech	https://jala.tech/id/
Indmira	https://www.indmira.com/
Dycodex	https://dycodex.com/
Mangoday	
Nanobubble	https://nanobubble.id/
Meridia	https://www.meridia.land/
Burgreens	https://burgreens.com/
Iwake	
Tele CTG	https://telectg.co/id/
Ceklab	https://ceklab.id/
Jambanid	https://jamban.id/
Wecare	https://wecare.id/
Medup	https://medup.id/
Wujudkan.id (water)	https://wujudkanindonesia.id/
Refillmybottle	https://refillmybottle.com/
Nazava	https://www.nazava.com/en/
Siaga Air Bersih (SIAB)	
Mother jungle	http://www.motherjungle.org/
Earth company	https://www.earthcompany.info/
Titik pintar	https://titikpintar.id/

Investors

Cyberagent Capital (CAC)
BRI ventures
Truvalu
Endeavour
Indogen
UMG Idealab
Gobi Venture Capital
IDX Ventures
Nuniek Tirta Sari (Indonesian Angel Investor)
Sukan Makmuri (Indonesian Angel Investor)
Noni Purnomo (Angel Investor)
Grace Taher (Indonesian Angel Investor)
Adityasa Nurcahya (Indonesian Angel Investor)
Arya Prasetya (Indonesian Angel Investor)
Matheus Siagian (Indonesian Angel Investor)
Anis Fuad (Startup Consultant Gajah Mada University & Health-tech Expert)
Agung Suryawan Wiranata (University of Udayana)

Start-up Assistance Organizations (SAO)

Block71 Yogyakarta	Coworking	Jogja	https://yogyakarta.block71.co/
Block71 Bandung	Coworking	Bandung	https://bandung.block71.co/
Indigo (Telkom)	Incubator	Jakarta	http://indigo.id/
ABP (AMIKOM Business Park)	Incubator	Jogja	http://abpincubator.com/
Enviu	Incubator	Jakarta	http://www.enviu.org/
Cubic	Incubator	Bandung	https://cubic.id/
The Greater Hub	Incubator, Accelerator, Coworking	Bandung	http://thegreaterhub.id/
LPIK ITB	Incubator, coworking	Bandung	http://lpik.itb.ac.id/
Inbis Tohpati Denpasar	Incubator	Bali	https://inbisbdidenpasar.wordpress.com/
Hubud	Coworking	Bali	https://hubud.org/
Kembali (Kumpul)	Coworking	Bali	https://kumpul.id/
GK-Plug and Play Indonesia	Accelerator	Jakarta	https://www.plugandplaytechcenter.com/indonesia/
Ultra Indonesia	Incubator	Jogja	https://ultraindonesia.com/
P4G Indonesia		Jakarta	https://p4gpartnerships.org/
Spaces	Coworking	Jakarta	https://www.spacesworks.com/
Habibie Center		Jakarta	https://www.habibiecenter.or.id/
IDX Incubator	Incubator	Jakarta	http://idxincubator.com/
Hack a farm	Competition	Jogja	https://hackafarm.com/
AFPI (Indonesian Fintech Lending Association)	Community	Jakarta	https://www.afpi.or.id/
MDI Ventures	Accelerator	Jakarta	https://www.mdi.vc/indigo
Healthtech.id	Community	Jakarta	https://healthtech.id/
IAS (Indonesia Aquaculture Society)	Community	Jakarta	
Wework Indonesia	Coworking	Jakarta	https://www.wework.com/
KOTRA (Korea Trade Investment Promotion Agency)		Jakarta	https://www.kotrajakarta.org/
University of Indonesia's Incubator	Incubator	Jakarta	
Creative Hub (C-Hub) Fisipol UGM	Incubator	Jakarta	https://chub.fisipol.ugm.ac.id/

The Netherlands

Finch Capital
Investor Ready NL
Unknown group
Startup Amsterdam
Venture Cafe Rotterdam
Yes!Funded
Enviu.org
Startup World
Ring Theory
Smart Wearable
Lendahand
Cardano Development
CIC Rotterdam
TCX
Water finance & facility

APPENDIX III: Indonesiaís SDGs by Number

Indonesia's SDGs by Number

(Source https://sustainabledevelopment.un.org/memberstates/indonesia)

Inclusive and Consistent Economic Growth

- *GDP grew consistently by 5% annually (2014-2018).*
- *In 2015-2018, unemployment rate decreased with lower female unemployment rate from 6.4% to 5.3%, and 9.38 million jobs were created.*
- *In 2014-2018, poverty rate decreased from 11.25% to 9.82% and Gini Ratio decreased from 0.414 to 0.384.*
- *In 2014-2017, financial inclusion increased from 36% to 49%, with an increase of financial access for the poorest from 22% to 37%.*

Achieving near universal education

- *In 2015-2018, adjusted net attendance rate at preprimary education increased from 79.4% to 83.3%, Gross Enrollment Rate at Junior Secondary School increased from 91.17% to 91.52%, at Senior Secondary School increased from 78.02% to 80.68% and Tertiary level increased from 25.26% to 30.19%.*
- *Gender inequality at all levels is almost non-existent, while access to Primary and Junior Secondary School is almost equal across income groups.*
- *Almost half of youth participates in formal and non-formal education.*

Sustaining Climate Action and Managing Disaster

- *Low Carbon Development has been mainstreamed in the national development planning agenda.*
- *During 2010-2017, GHG emission has been reduced by 22.5% from baseline accumulative of 13 billion ton CO2e, and its intensity by 27% from baseline of 560 ton CO2e per billion rupiah.*
- *During 2010-2017, enhanced disaster management has reduced the number of deaths and missing persons with decrease of direct economic loss by 7 trillion rupiah. The Disaster Risk Index has been reduced by 23.97% (2018).*

Realizing Access to Justice and Inclusive Institutions

- *Indonesia's Democracy Index increased from 70.09 (2016) to 72.11 (2017).*
- *Indonesia's Anti-Corruption Behavior Index increased from 3.59 (2015) to 3.66 (2018).*
- *Birth registration covered 83.55% of all children, 77.11% of children in the poorest households, and 71.92% among under-fives (2018).*
- *In 2015-2018, ± 45,000 legal aid and ± 83,000 non-litigation activities were provided for the poor.*

Innovative Development Financing

- *Innovative instruments, including Green Sukuk, blended finance, Islamic charity, social impact investments have leveraged resource flows from both public and private sources for SDG financing.*
- *SDGs Financing Hub has been established to reduce financing gaps and implement innovative financing sources through multi-stakeholder collaboration.*

Broad, inclusive National Process and Strategic Partnership Building

- *Parliament is involved since early stages of SDGs conceptualization, whereas the Supreme Audit Board is involved in auditing SDGs preparation and implementation.*
- *9 SDGs Centers have been established in prominent national universities.*
- *South-South and Triangular Cooperation have been strengthened with more partner countries and the nexus between peace, humanitarian assistance, and development.*

APPENDIX IV: BKPM Investment Sector List and Omnibus Law Supporting Investment

Figure 27 BKPM Business Sectors (Source: BKPM)

2018	Business Sector	Business Field
List of business sector that are opened with conditions (reserved for small and medium enterprises)	**Agriculture**	• Staple food crops planted in an area of more than 25 Ha: Rice, corn, soy, peanut, green bean, other food crops. • Plantation seeding in an area of +/- 25 Ha: Tobacco, coconut, sugar cane, oil palm, cloves, spices crops, etc. • Venture with specific capacities: Animal oil, dried clove buds, copra, coconut oil, palm oil, dried tobacco leaves, cotton seeds, and fiber, etc.
	Industry **Public Work**	• Fish preservation, brown sugar, fabric printing, embroidery, hand-drawn batik, food processing industry such as tempe and tofu from soybean and legumes, etc. • Construction service with work value of up to IDR 50K mio (USD 3.5 mio). • Business service with work value of up to IDR 10K mio (USD 750K)
	Trade	Retail sale order
	Tourism and creative economy	Travel agent, homestay, tour guides, community broadcasting agency, internet café.
List of business sectors that are opened with partnership conditions.	**Forestry**	Forest business in rattan, bamboo, oleo pine resin, honeybee business, alternative food crops, etc.
	Marine Affairs and Fisheries	Hatchery and rearing of marine fish, brackish water fish, freshwater fish, fishery product processing, marketing, distribution, export of fish products, etc.
	Industry	Copra industry, processed rattan industry, dried tobacco industry, lime industry, precious stone industry, handicraft industry, etc.
Negative Investment List of Foreign Direct Investment	**Agriculture**	• Marijuana farming • Catching endangered and protected fish as listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
	Marine affairs and fisheries	Taking valuable remains from shipwreck, endangering coral lives.
	Industry	Going through the mercury process to make chloral alkali, industrial chemical industry, wine industry, malt beverages industry, etc.
	Transportation	Organization and operation of terminal passenger, weigh station, air navigation service, etc.
	Education and culture	Museums, historical remains
	Tourism and creative economy	Gambling facility

APPENDIX V: Omnibus Law Supporting Foreign Direct Investment

Indonesia is now in the process of legalizing the Omnibus bill[94] that aims to grow the country's GDP by boosting investment, especially Foreign Direct Investment. One of the categories impacting foreign investment is the tax law. Listed below are the highlight points of taxation omnibus bill in relation to foreign direct investment (FDI):

1. **Reduction in Income Tax (PPh) Rates[95].** The government plans to cut corporate income tax from 25% to 22% over the 2012-2022 period and then to 20% in 2023. For companies that will go public, there is an additional reduction of 3% for five years after going public.
2. **The imposition of Electronic Trade Taxes.** Foreign business actors conducting activities within the territory of Indonesia will be determined as tax subjects and are required to collect, deposit and report Value-Added Tax (VAT) even though they are not physically present in Indonesia. This ruleset is intended for Over The Top (OTT) service companies such as Netflix, which even though they do not have offices in Indonesia but benefit significantly from their activities in the country.
3. **Territorial System Settings.** This arrangement is divided into two; first, individuals who earn income from dividends or other income will not be taxed, as long as they are invested in Indonesia. Second, for foreign nationals living in Indonesia, taxation is only charged to income received from work or business activities in Indonesia.
4. **Personal Tax Subject Arrangements.** Relaxation involves two things; first, for Indonesian citizens who live abroad for more than 183 days are exempted from income tax, except for income received from Indonesia, which will be levied under the PPh Article 26 mechanism. Second, foreign nationals who live in Indonesia for more than 183 days will be subject to tax, but only for income received from activities in Indonesia.
5. **Adjustment of Income Tax Article 26.** The imposition of Income Tax Article 26 on interest income by foreign tax subjects will be reduced. The technical provisions regarding this incentive will be regulated through government regulations (*Peraturan Pemerintah/PP*).

[94] https://smartcolaw.com/2018/10/29/fdi-indonesia-big-business-opportunities-2018/
[95] https://dinsights.katadata.co.id/read/2019/11/28/crucial-points-of-the-omnibus-law-bill-in-taxation

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