Alumni Gathering MMSI 2022

Digital Bank
Trends and Regulations in Indonesia

Jakarta, 19 March 2022

Wirianto Widjaja, S.Kom, M.Kom
Presenter’s Brief Profile

Career Summary, Area of Expertise, Education Background, and Professional Achievements & Recognitions

Wirianto Widjaja, S.Kom, M.Kom
Chief Technology Officer of PT. Asaba Computer Centre | CEO of PT. Finpoint Solusi Indonesia (FINPOINT) | CEO of PT. Indonesia Digital Security (IDAS) | Commissioner of PT. Kode Inovasi Teknologi (CODR)

Area of Expertise
Strategic IT Consulting, Enterprise Architecture, Data Management/Data Governance, Project Management, Financial Service Business Process and Data Model, Information System Analysis and Design, Customized Business Application Development, Data Warehouse and Business Intelligence, Big Data Analytics, and Artificial Intelligence

Education Background
• Manajemen Sistem Informasi, Binus University Online Learning (2019)
• Magister Manajemen Sistem Informasi, Binus Graduate Program (2022)

Achievement & Recognition
• Lead and successfully deliver more than 50 large IT projects, with more than 70 team members, within 24 years of his career
• Speaker of Indonesia 2019 Big Data Conference, presenting “Big Data Technology Support for Active-Active Data Center: Design Consideration and Technology Options”
• Speaker of OneX virtual expo, presenting "Neobank, the Future of Banking Industry"
• Two times BINUS Award of Excellence: 2019 Information System Best Graduates and 2022 Binus Graduate Program Best Graduates for 4.0 GPA and on-time graduation
Background

Digital Transformation
The dawn of the digital era has risen and brightly shine

Digital transformation is the changes that digital technology causes or influences in all aspects of human life.

Madakam et al., 2019

**Digital Revolution**
Digital Revolution: Shifting from Mechanical Analogue to Digital Electronics

**Digitization**
Generation of data out of business and life events

**Digitalization**
Business Process Reengineering based on Digital Technology to disseminate data in quick and secured ways. This way, organization could get the job done in faster, efficient and the best way possible
Opportunities & Challenges

Digital Transformation

(Stolterman & Fors, 2004)

**Potential Benefits**
- Enhanced data collection that provides strategic insight
- Higher productivity and efficiency through better resource management and collaboration improvement
- Shorter product life cycles that increase business agility through faster GTM, review, and swift strategy adjustment based on feedbacks
- Mass customization towards better customer experience
- Increasing safety and environmental protection
- Strategically enable precision and timely decision-making support
- Enable autonomous transaction
- Breaking physical and time boundaries
- Create competitive advantage and improve the overall bottom-line

**Considerations & Risks**
- Organizational Changes
- Information & Cyber security risk exposure
- Significant amount of capital investment
- Implementation failure risks
- High degree or absolute dependencies over technology

Unlock Potential

Mitigate the risks
Digital Bank
Historical Background
The 2007-2009 financial crisis began with cheap credit and lax lending standards that fueled a housing bubble.

Caused by predatory lending practice and excessive risk taking by global financial institution on subprime mortgage loan.

Housing bubble burst, teaser rate, and subsequent high interest rate resulted into payment default.

At its peak, delinquency rate is 13.33% and causing Lehman Brother declared its bankruptcy and triggered banking crisis.

BASEL III Framework

The Basel Committee on Banking Supervision (BCBS) issued Basel III Framework, with a comprehensive set of reform measures in banking prudential regulation to strengthen the regulation, supervision and risk management of the banking sector.

Induce chronic distrust to global Banking system
The rise of Neobank

The banking sector has historically been a monopoly. The crisis disrupt this situation

Regulator open for greater competition

A new breed of digital-only called as Neobanks are starting to break this hold

Better service, transparent, secured, cheaper/low-cost, and its agility drive unprecedented growth and success of Neobank

Neobank capitalize on the negative perception towards long-established financial institutions.

![Europeans trust banks least](chart.png)

Thinking generally about banks, to what extent, if at all, do you trust banks?

<table>
<thead>
<tr>
<th>Country</th>
<th>Trust Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>89%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>75%</td>
</tr>
<tr>
<td>UAE</td>
<td>74%</td>
</tr>
<tr>
<td>Japan</td>
<td>71%</td>
</tr>
<tr>
<td>USA</td>
<td>64%</td>
</tr>
<tr>
<td>Australia</td>
<td>60%</td>
</tr>
<tr>
<td>UK</td>
<td>55%</td>
</tr>
<tr>
<td>Germany</td>
<td>43%</td>
</tr>
<tr>
<td>France</td>
<td>39%</td>
</tr>
<tr>
<td>Italy</td>
<td>37%</td>
</tr>
</tbody>
</table>

Source: YouGov International Omnibus, 2017
About Neobank

The Definition of Digital Bank

A neobank (also known as an online bank, internet-only bank, virtual bank or digital bank) is a type of direct bank that operates exclusively online without traditional physical branch networks.

Neobanks: creating a digital bank from scratch among the FinTech firms, some aspire to become banks and to provide a purely digital alternative to traditional institutions.

( BBVA Research, 2017 )

A new kind of digital-only financial institution known as a ‘neobank’ has emerged to capitalise on the distrust felt towards the industry’s incumbents.

(Ballard, 2018)

"Neobanks don't replace traditional banks. Some allow to link your traditional bank accounts to the neobank to enjoy the best of both worlds."

(Pritchard, 2021)
A neobank (also known as an online bank, internet-only bank, virtual bank or digital bank) is a type of direct bank that operates exclusively online without traditional physical branch networks.

A new kind of digital-only financial institution known as a ‘neobank’ has emerged to capitalise on the distrust felt towards the industry’s incumbents (Ballard, 2018).

Neobanks: creating a digital bank from scratch among the FinTech firms, some aspire to become banks and to provide a purely digital alternative to traditional institutions.

Strategically important and essentials in the middle of digital transformation stream

“Bank Digital adalah bank yang menyediakan dan menjalankan kegiatan usaha yang utamanya melalui saluran elektronik dengan kantor fisik yang terbatas atau tanpa kantor fisik selain kantor pusat”.

OJK, 2021

Its acceleration were driven by the pandemic situation and the rise of Neobank in the global landscape.

(BBVA Research, 2017)

(Pritchard, 2021)
Impact of Digital Transformation in Banking Industry

1. The changes in customer expectation on Banking Products and Services
2. Data Enhanced Products
3. Financial Technology and Big Technology Companies Collaboration
4. The transformation of banking Industry business to Digital Adopted Model

Industry 4.0 Transformation Agenda
Trends of Digital Bank
Neobanks
Neobank as the new direction of modern financial technologies development: A case study of Russia

Digitalization
McKinsey: “by 2036, about 50% of economic processes will undergo automation and digitalization”

Enhance engagement
The Fidor bank set the interest rate on its loans depending on the number of Likes on the client's page. Every 2K new "likes" reduced the loan interest rate by 0.1%

Unprecedented growth
“According to the report for 2018, the Tinkoff bank sold over 2.7 million credit cards, which ensured the growth of the loan portfolio by more than 50%”

Bottom-line impact
Nielsen: In 2018, O. Tinkova's TCS Group reached record levels in the history of the company - net profit amounted to 27.1 billion rubles, exceeds the indicators of 2017 by 43%
Digital Bank Key Characteristics

(Nikolaienko, 2002; Hopkinson et al., 2019)
# Differences to Traditional Bank

*Temelkov, 2020*

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Traditional</th>
<th>Digital Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service access hour</td>
<td>Limited</td>
<td>Round-a-clock</td>
</tr>
<tr>
<td>Speed of service</td>
<td>Depends on employee’s qualification and experience</td>
<td>Immediate</td>
</tr>
<tr>
<td>Channel of service</td>
<td>Flexible but limited</td>
<td>Flexible with more options</td>
</tr>
<tr>
<td>Maintenance cost</td>
<td>High, often rendered as service charge</td>
<td>Low, most services are free of charge</td>
</tr>
<tr>
<td>Scope of service</td>
<td>Limited, depends on branch type</td>
<td>Unlimited, beyond geographical location boundaries</td>
</tr>
<tr>
<td>Status of operator</td>
<td>Performed by employee of the bank</td>
<td>Performed by bank’s client</td>
</tr>
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<td>Learning and promotion nature</td>
<td>Relatively require more time and cost</td>
<td>Can be quickly carried out by push notification, SMS, or email</td>
</tr>
<tr>
<td>Prominent cost structure</td>
<td>Staff and physical assets maintenance</td>
<td>Servers and software package</td>
</tr>
<tr>
<td>Business Orientation</td>
<td>Product and Service</td>
<td>Customer Needs</td>
</tr>
</tbody>
</table>
Bank Digital di Indonesia

Existing

jenius
wokee
digibank
PT Allo Bank Indonesia
BNC
bank neo commerce
TMRW
Jago
QNB

Ongoing Transformation

blu
BCAdigital
raya
BankCapital
LINE Bank
by Hana Bank
Onboarding

Automated Kiosks in Convenient Location

Millions of Customers

Create account anytime, hassle free

Immediate processing

Online application submission

Document upload and e-KYC

Account creation

Cards issuance

Monitoring
Onboarding

Automated Kiosks in Convenient Location

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Account creation

Cards issuance
Transactions

Online payment, transfer and remittance
Any-time, anywhere
Ability to use a global account and card without challenges

QR payment
Customer and merchant apps
Static and dynamic QR support
Payment integration
Teller and cash desk extension

Wallet
Cash in and cash out
Payments and transfers
Cards linking
Payment gateway integration
Transactions

Online payment, transfer and remittance
Anytime, anywhere
Ability to use a global account and card without challenges

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Investment Management

Provide key information and execute decision for Investment portfolio management

Trading (Buy/Sell)
Buy stocks, currencies/crypto, etc.

Portfolio Performance
Compositions, current market value, capital gains, etc.

Common Interface
FIX protocol and custom REST/API
Investment Management

Provide key information and execute decision for Investment portfolio management

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Common Interface
FIX protocol and custom REST/API
Personal Financial Management
Manage the entire money life-cycle effectively

- Single consolidated view
  Add accounts and compile transactions information from multiple institution into a single view

- Expenses management
  Monitor, categorize, and track personal expenses

- Data visualization
  Different types of visualization, including: donuts, bar, and bubbles
Personal Financial Management

Using different accounts

- Checking and current
- Saving and deposit
- Loan, credit and installment

Own Accounts

External Accounts

Overdraft accounts

Single consolidated view
Add accounts and compile transactions information from multiple institution into a single view

Expenses management
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Different types of visualization, including: donuts, bar, and bubbles
**Personal Financial Management**

Using different accounts

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External accounts

- Instant opening
- Immediate use for purchase

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**Own Accounts**

- Checking and current
- Saving and deposit

**External Accounts**

- Loan, credit and installment
- Instant opening
- Immediate use for purchase
Personal Financial Management

Oversees and control the money spending

Expenses and income breakdown
Intuitive UI
Graphics and Charts
Change tracking
Expense overview by period
Categorize your transaction
User defined

Expenses limit
In app limits and alerts

Saving goals
Gauge and dashboard

AI Advisory
User defined

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Data visualization
Different types of visualization, including: donuts, bar, and bubbles.
Identify and define customer segment
Plan, launch, and monitor marketing campaign
Customize visualization based on specific needs and purposes
Manage communication with end customer by providing communication channel
Gateway to marketplace. Targeting customer based on their spending pattern
Personalized Marketing
Super App

Super-app is a type of the application (mobile or web) that allows for easy extensibility by third parties like in WeChat app that enables connecting 3rd parties directly to the app.

Conveniency for customer

a single portal to a wide range of virtual products and services
Partner content: Marketplaces, Internet shops, Fintechs, Education, Games and kids content
Does not require re-publishing

Using vast wealth of data

To deliver better service to customer
Full control and recording of customer inputs

Disintermediating transactions

Tap into the opportunity or generate demand from a larger business ecosystem
Re-sell and cross-sell capability
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Super-app conveniency for customer:
- a single portal to a wide range of virtual products and services
- Partner content: Marketplaces, Internet shops, Fintechs, Education, Games and kids content
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Using vast wealth of data to deliver better service to customer:
- Full control and recording of customer inputs
- Disintermediating transactions
- Tap into the opportunity or generate demand from a larger business ecosystem
- Re-sell and cross-sell capability
Configurable
STT and TTS support
Siri, Google Assistant, Alan (new)
Step-by-step guidance for transactions
Action/payment template triggers
Media embedding
HITL (human-in-the-loop)

Customer Engagement

Disputes
In-app and application request
Dispute reason selection
Optional message
Customer Engagement

Disputes

In-app and application request

Dispute reason selection

Optional message

Configurable STT and TTS support

Siri, Google Assistant, Alan (new)

Step-by-step guidance for transactions

Action/payment template triggers

Media embedding

HITL (human-in-the-loop)

English

Nama

Email

Nama: [Your Name]

Email: [Your Email]

Submit
Customer Engagement

Disputes

In-app and application request

Dispute reason selection

Optional message

Configurable STT and TTS support

Siri, Google Assistant, Alan (new)

Step-by-step guidance for transactions

Action/payment template triggers

Media embedding

HITL (human-in-the-loop)
**Multi Role Enablement**

**Merchants**
- Teller and cash desk extension
- QR Sell and refunds
- Transaction reports

**Agents**
- Customer registration
- Cash-in and cash-out
- Agent reporting and performance
Platform Agnostic
Cross-platform code for Android/iOS, web, and desktop
Accommodate variety of use cases and user preferences

Design Driven Development
Functional metadata driven, low-code approach
UI and business logic libraries

Flexible and Adaptive Infrastructure Technology
Microservice architecture for scalability
Clouds ready by preparing container-ready to enable elasticity

Full server-side control
Add, remove, and edit app centrally to allow rapid deployment

API native and Open Banking Oriented
Implementing “Banking as a Service”
Allow future integration and extensibility
Preparing for large ecosystem integration
Other Considerations

System Architecture

Investment and Effort
- Infrastructure
- Software Provisioning
- Installation and Implementation
- Rollout

AISP, PISP, TPP Implementation
Implementation of open banking standards (SNAP)

Omni channel layers
Efficient system development and consistent experience

API Management
Integration with others application solution

Comprehensive and Modular Architecture
Remote banking, Integration, back-end, marketplace, fraud control, AI
Zero Bank Branches
Card Issuances through Smart Kiosks
Online POS and Merchant Acquiring
ACS for Online Payment
e-Commerce gateway
Fraud Management

50K customers
In 2 Months

1M+ customers
In 12 Months

Access to 40,000 ATMs
750 Service Kiosks
10,000 Cash Points
95,000 Transactions per day

Unique Low-cost Innovations to their clients
Adoption Strategy

On Premise
Own and managed by Customers

- SV Applications
- Data
- Middleware
- Operating System
- VM’s
- Hardware
- Network

Solution as a Service (SaaS)

- SV Applications
- Data
- Middleware
- Operating System
- VM’s
- Hardware
- Network

or

Proven
Proven system with clear track record and relevant experiences

Zero Capex
No initial capital expenditure, SLA based service
The system availability is part of the service provisioning

Secured
All software is audited and certified

Hassle less
Full support from partners, from initialization to operations

Alignment with Corporate Digital Transformation Strategy
Related Regulations
Digital Bank in Indonesia
Digital Bank Related Regulations
Current and Future Anticipation

PERATURAN OTORITAS JASA KEUANGAN
REPUBLIK INDONESIA
NOMOR 12 /POJK.03/2018
TENTANG
PENYELENGGARAAN LAYANAN PERBANKAN DIGITAL OLEH BANK UMUM

PERATURAN BANK INDONESIA
NOMOR 23/6/PBI/2021
TENTANG
PENYEDIA JASA PEMBAYARAN

RANCANGAN
UNDANG-UNDANG REPUBLIK INDONESIA
NOMOR ... TAHUN ...
TENTANG
PELINDUNGAN DATA PRIBADI

Future Regulations
Institutional Regulatory Requirement of Digital Bank on Article 24

1. New Business Model
2. Min. of Capital 10 Trillion IDR
3. Personal Data Protection
4. BOD members with Solid IT Competency
5. Risk Management
6. Contribution to Financial Ecosystem Development and Financial Inclusion

Legal standing for Digital Bank in Indonesia
Digital Banking as a business strategy
Readiness checklist for Digital Banking Service Provisioning

- All Digital Bank Service is subject for approval
- Any issuance should meet certain regulatory requirement

Organization Structure and Overseeing Management

Policies, System, Procedures and Governances

ICT Infrastructure Readiness

Risk Assessment and Analysis Result

Cyber and Information Security related Risk Management

1 (one) year business plan
Institutional Regulatory Requirement for Providing Payment Services in Digital Bank Context

**Institutional**
Could be Bank or Non-Bank
E-wallet/e-money, payment gateway, remittances

**Capital and Financial**
15 Billion for category 1, 5 Billion for category 2, and 1 billion for category 3

**Risk Management**
Policies, system and procedure for risk management
3rd party collaboration

**ICT Capability**
Security control
Fraud Management System
IS Audit
ICT Infrastructure and Capabilities

Digital Bank should meet the regulatory requirement for Payment related Services
RANCANGAN UNDANG-UNDANG REPUBLIK INDONESIA TENTANG PELINDUNGAN DATA PRIBADI

Regulatory Requirement to allocate resources for personal data protection

Started in 2012

Full name, Gender, Citizenship, Religion, Identification, Medical record, Biometric, Genetic, Personal Ideology, Financial Information

New Role: DPO

Up to 70 billion sanction infringement

Personal Data Type

The role of Government and Public

Official/Staff/DPO

Data Owner Rights

Data Holder and Processor: Obligation and Responsibilities

Personal Data Transfer

Personal Data Processing

Dispute Resolution

International Cooperation

Personal Data Exception

Administrative or Criminal Sanctions

New Role: DPO

Up to 70 billion sanction infringement
About us

PT. Finpoint Solusi Indonesia
ASABA Group of Companies

Reputable and Successful Business

Established in May 1974

A solid, respected, and reputable Indonesian company

Over 40 Years of Lasting & Continuous Strategic International Partnerships

Strong business units excel and leading in each establishment and market

Variety of business models: Manufacturing, Distribution, Franchise, and Consulting

Business Pillars:
Office & Stationary, Consumer Foods, and Others

Evolving and Transforming
Over 45 years of business establishment, coming from Industrial towards Digital Business

Independent Subsidiary Companies
More than 70 Companies operating under the group as a profit center
Digital Platform Provider

Reputable IT Company

Founded in 1990, as an IT Business unit of Asaba Group of Companies. Has served medium and large companies, focusing in the financial service industry, government, manufacturing & distribution and others market.

Thrive in Digital Era

Solution as a Service (SaaS) Provider
Digital Platform Provider

Transformed Towards Digital Era

- Digital Platform
- Business Solution Service
- IT Consulting
- Training Services
- IT Managed Service

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Thrive in Digital Era

Solution as a Service (SaaS) Provider

- Financial Service Platform
  PT Finpoint Solusi Indonesia
- Digital Security Solution
  PT. Indonesia Digital Security
- Distribution Platform
  PT zestHub Inovasi Mandiri
- Cyber Security Consulting
  PT Alpha Citra Siber Indonesia
We are providing a world class Digital Banking, CMS, Payment Switching, and Fraud Management solutions for Financial Service businesses, available as a Solution as a Service (SaaS) platform or a managed service.

Our intention is to expedite digital transformation initiative and become an efficient and more competitive business with less risk and hassle free.
International Partners

BPC Banking Technology

An international banking and payments technology firm with 230+ clients include leading financial institutions in more than 90+ countries and several of the world’s largest banks. We provide long-term support and partnership for our customers, that’s why we have global network of 19 offices, all with local language support.
Conclusions

Digital era promotes transformation and disruption in many aspects of life, social, and businesses, including in Financial Service Industries.

A digital bank (also known as an neobank, online bank, internet-only bank, virtual bank or digital bank) is a type of direct bank that operates exclusively online without traditional physical branch networks.

Digital Bank don’t replace traditional banks. Some allow to link your traditional bank accounts to the neobank to enjoy the best of both worlds.

Neobank/Digital Bank is one of the manifestation of digital transformation in FSI. It also serves as strategy and tools to launch cutting-edge business innovation, tap into new opportunities and in many cases promote unprecedented growth.

With correct strategy, Neobank can be adopted with manageable risk and less hassle.
Daftar Referensi


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