



mrt jakarta
Increasing mobility, improving life quality

Governing Digital Transformation in MRT Jakarta

Diskusi Panel GRC Series 2021

8 Juli 2021

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- MRT Jakarta
- MRTv
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Management System
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Introduction

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MRT Jakarta: Menjawab Tantangan Kota Jakarta

PEMBANGUNAN INFRASTRUKTUR

Stasiun, Depo, Rel Kereta, &
Kereta of MRT Jakarta



OPERASI & PEMELIHARAAN

Stasiun, Depo, Rel Kereta, &
Kereta of MRT Jakarta



BISNIS & KAWASAN BERORIENTASI TRANSIT (KBT)

Bisnis di Stasiun dan sekitar
stasiun, Kawasan Berorientasi
Transit



VISI:
**Increasing
Mobility,
Improving Life
Quality**

THRIVING IN VUCA



VOLATILITY



UNCERTAINTY



COMPLEXITY



AMBIGUITY

Latar Belakang



01 **TEKNOLOGI INDUSTRI**
Industri mengalami *shifting* menjadi basis digital dan *online*.



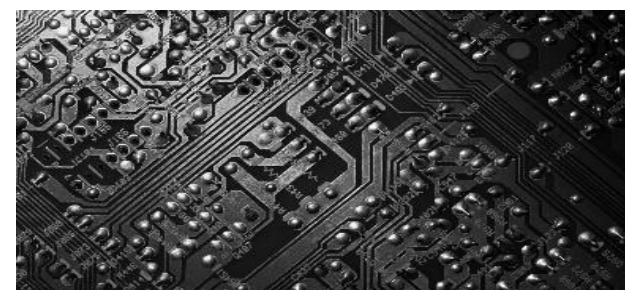
02 **DISRUPSI**
Membawa masa depan ke hari ini. Dikembangkan oleh orang-orang baru (berpandangan-berilmu-bersemangat masa depan), mayoritas berusia muda.

DINAMIS
Teknologi tidak berhenti dan stagnan, melainkan selalu ada yang baru setiap saat.

03

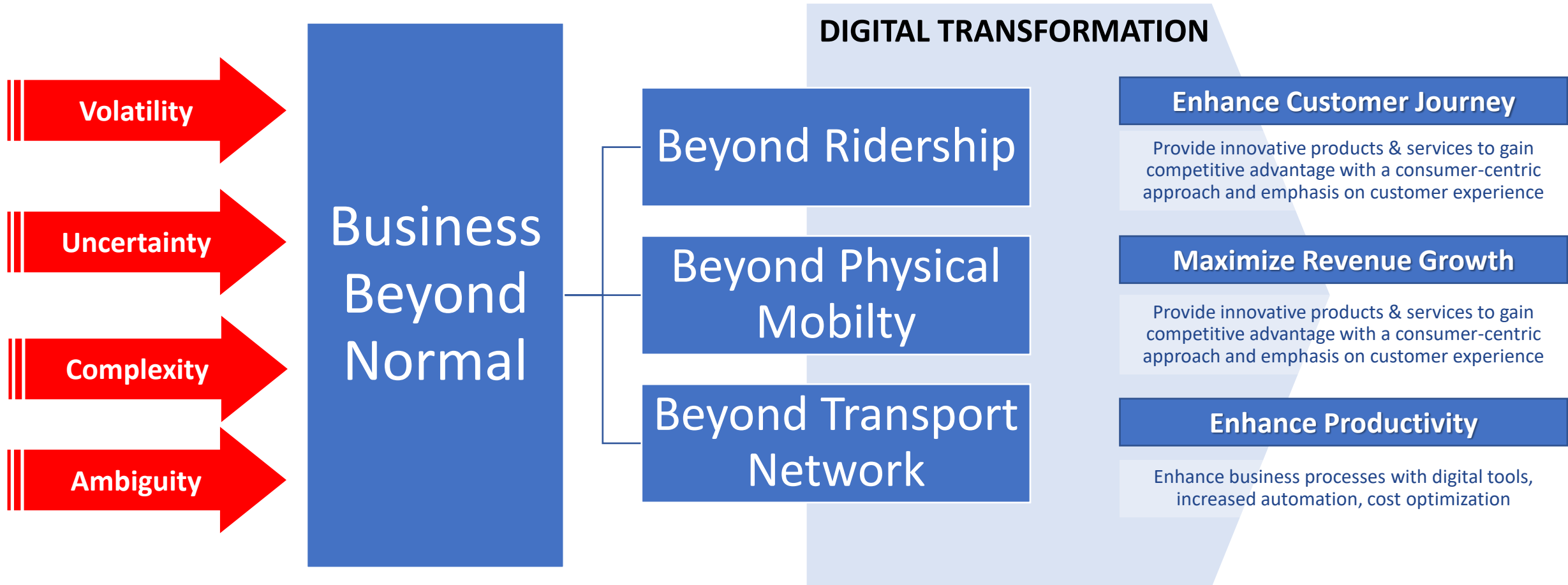


05 **PLATFORM**
Transformasi produk yang memungkinkan untuk dapat bekerja dengan produk lain melalui *Platform*.

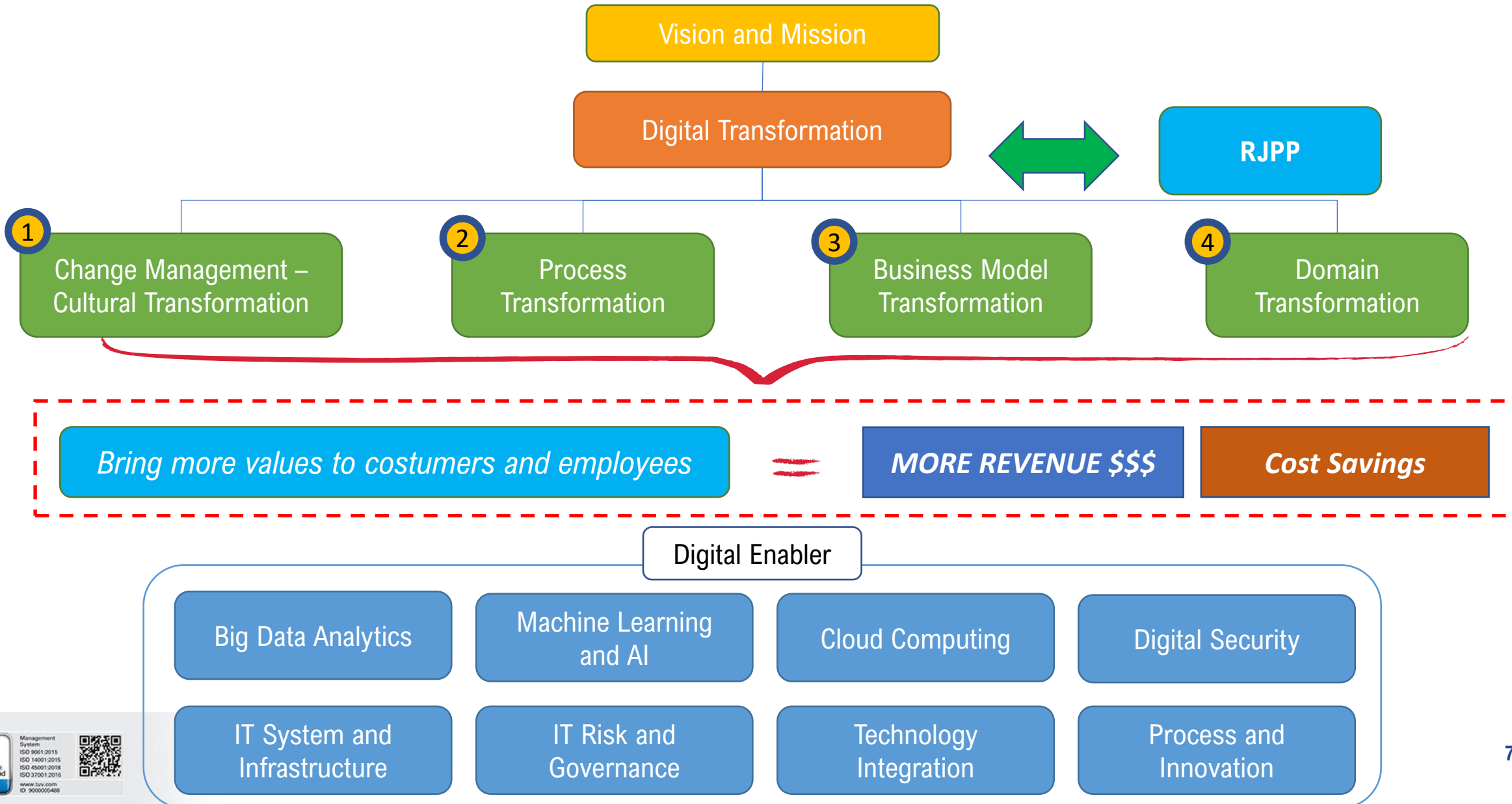


04 **BUDAYA DIGITAL**
Perubahan dalam cara bekerja, bersosial menjadi kolaboratif dalam jejaring, cepat dan serempak.

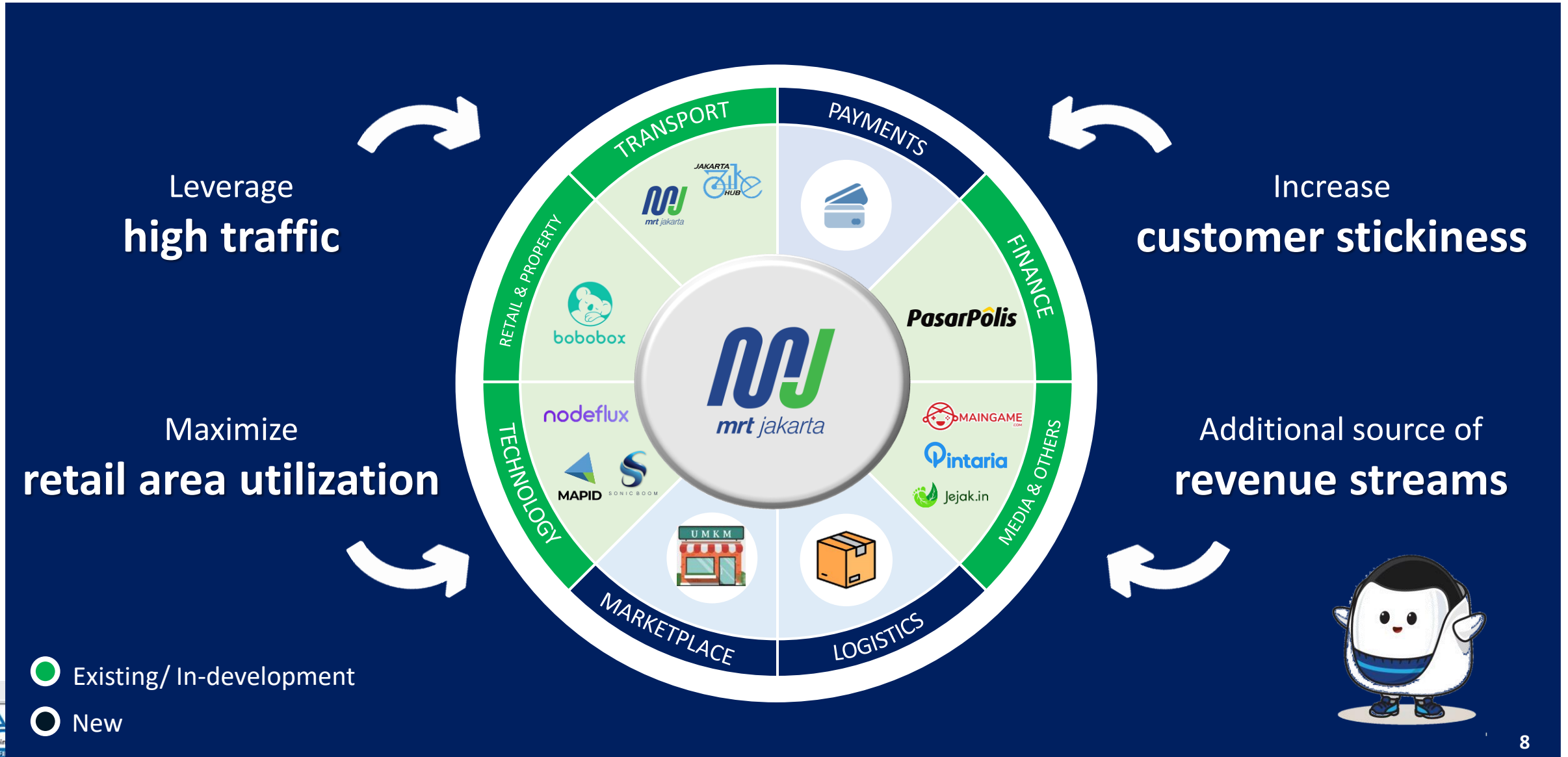
Latar Belakang



High level concept of Digital Transformation



MRTJ must digitally transform to become an ecosystem player





WHAT CAPABILITIES MUST WE HAVE

MRTJ Digital Transformation Building Blocks

RESULTS

we want to achieve

Vision

Business Sustainability | Best Customer Experience | Innovative Services

Value Proposition

NETWORK PROVIDER

URBAN PLATFORMER

CITY REGENERATOR

Initiatives

WINNING PORTFOLIO OF STRATEGIC DIGITAL INITIATIVES

ROUTES

to get us there

Direction

1

INCREASE NFB Revenue

- Revenue diversification
- Asset monetization
- Data & Insight

2

STRENGTHEN Operational Capability

- Digitation & Digitalization
- Innovation & Collaboration

3

UPGRADE Customer Experience

- Innovate, incubate, improve
- Go to market, Go public

4

ENHANCE Socio-economic Impacts on TOD

- MRTJ corridor service enrichment

Approach

CONSOLIDATION | COLLABORATION | CO-CREATION

Roadmap

MILESTONES

CHANGE MANAGEMENT

QUICK WINS

RESOURCES

we need to have

Enablers

People & Culture

Governance

Technology

Data

Technology

Big data

Cloud

Platform

Analytics

UI/UX

Security



Digital Transformation Phases

MRTJ Digital Transformation Building Blocks

RESULTS

we want to achieve

Vision

Business Sustainability | Best Customer Experience | Innovative Services

Value Proposition

Focus on Directions and Enablers

Initiatives

WINNING PORTFOLIO OF STRATEGIC DIGITAL INITIATIVES

ROUTES

to get us there

Direction

1 INCREASE NFB Revenue

2 STRENGTHEN Operational Capability

3 UPGRADE Customer Experience

4 ENHANCE Socio-economic Impacts on TOD

Phase 1.0 Build and Evolve Digital Capability and Competency (2021-2022)

- Ads Ecosystem Synergy
- Insight from Passengers data for monetization

- Innovation Growth Program
- Integrated Internal apps

- 360° customer engagement capability
- MRTJ apps as platform

Big data collection and analytics for decision making

Phase 2.0 Gear Up into Digital Culture (2023 - 2024)

- New Business Operating Model
- Data as Service Monetization

- Crowd based innovation & Collaboration

MRTJ as urban mobility platform

Support Society 5.0

RESOURCES

we need to have

Enablers

People and Culture

Process/Governance

Technology

Data

Phase 1.0 Build and Evolve Digital. Capability and Competency (2021-2022)

- digital-ready talent program
- faster innovation through collaboration program
- Build & influence digital culture

- IT Masterplan & Transformation Capability
- Data Management & IT Governance

virtual collaboration tools & workplace transformation

Data Driven solution

Phase 2.0 Gear Up into Digital Culture (2023 - 2024)

Agile product development and process improvement

Governance and policy to accommodate Internal & external collaboration at scale

- Fully integrated tech & information (extensive utilization of ai, big-data, cloud, iot, cybersecurity technology)
- Connect all data from machine and equipment with Social Media data, Mobility data to get new insights

Jak
Lingko

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Digital Business

Transforming Our Business Processes

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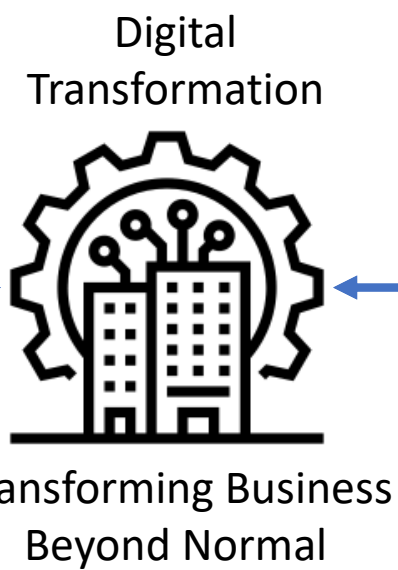
Where are we now (Focusing on Transformation V. 1.0)

INCREASE Non-Fare Revenue

- Passengers Data Management
- Advertising Ecosystem Synergy

UPGRADE Customer Experience

- MRTJ Mobile Apps
 - Content Management System
 - Loyalty Program
 - Implementation of ABT
- Omni Channel Digital Listening Tools
- Customer Relationship Management



STRENGTHEN Operational Capability

- Innovation Program
 - MRTJ Accel
 - MRTJ Incubator
- eOffice
- Dinamiq
- Kinetics
- eProc
- ERM
- GAAS
- Sistem Monitoring Pembayaran Proyek
- Digitalization of Project Management (BIM, CDE)
- KLOLA
- Success Factor
- Integrated Internal Apps
- Contract Monitoring Tools
- Other internal initiatives

ENHANCE TOD SocioEconomic Impact

- TOD Data Platform in collaboration w/ MAPID

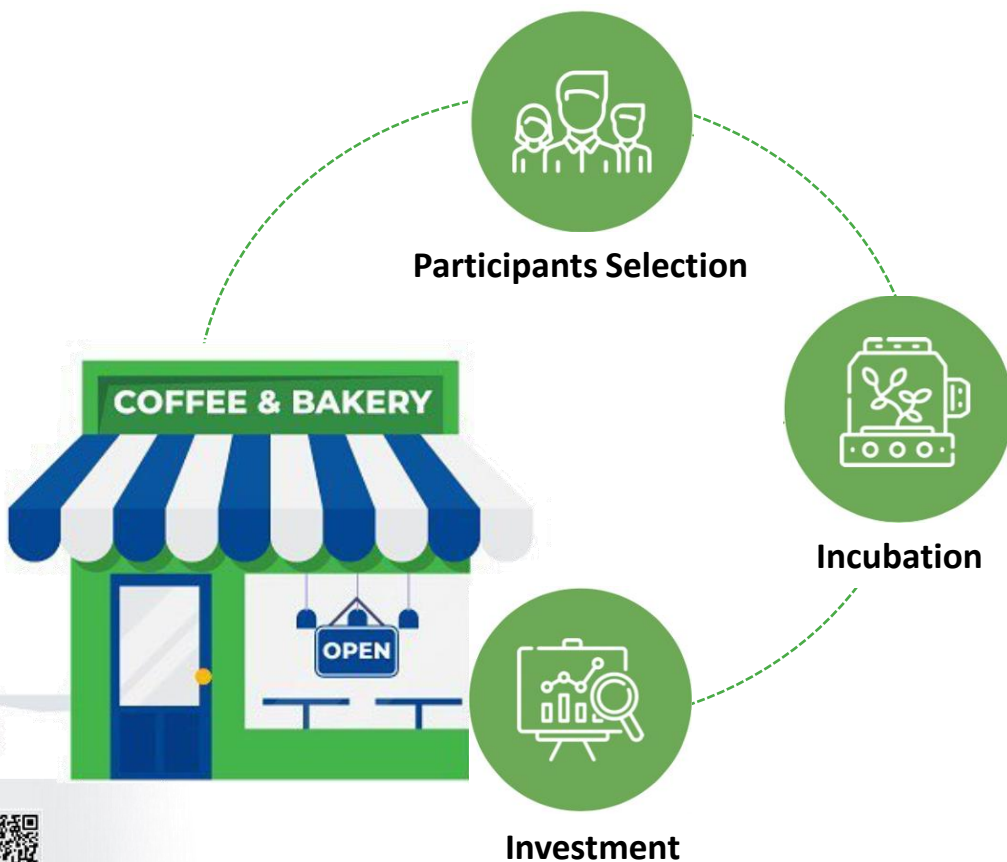
ENABLERS

People and Culture	Process/Governance	Technology	Data
<ul style="list-style-type: none"> Faster Innovation through Collaboration Innovation Center/Transformation Office Digital Talent Program 	<ul style="list-style-type: none"> Digital Transformation Roadmap IT Masterplan Implementation of Data Management and IT Governance 	<ul style="list-style-type: none"> Infrastructure and policy to promote Mobile Working and Virtual Collaboration MS Teams OneDrive 	<ul style="list-style-type: none"> Data Lake/Center Big Data Analytic Tools

Exist or already implemented In progress or development phase Not exist

MRTJ Incubator Partnership

3-month program focusing on impacted individuals due to COVID-19 situation and fresh graduates of IT background, through providing support from mentorship to investment to grow both MRTJs and their businesses in developing Minimum Viable Products

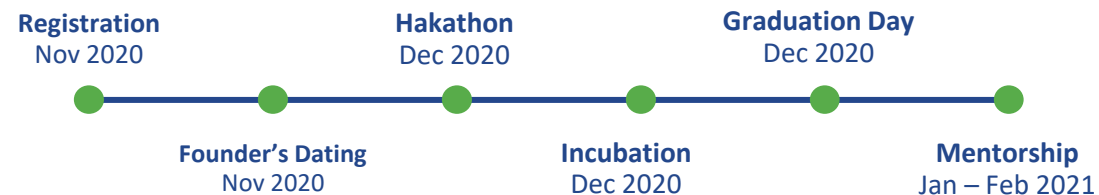


4 Selected Partners

Out of 998 Individual Applicants & 219 Ideas



Timeline



MRTJ Accelerator Program



MRTJ Accel is an accelerated program hosted by MRT Jakarta to collaborate with start-ups to create innovative products or services with the end goal of commercializing together with MRT Jakarta

Selected Startups

nodeflux



Pintaria



Jejak.in

PasarPólis



SONIC BOOM



bobobox



MAPID

The objective of this program is to launch new solutions (Products or Services) that will benefit both parties such as increase Revenue, Branding, and Customer Experience

Digital Construction with BIM Implementation

Lesson Learnt from Phase 1 Project

- Non-automated working process (manual CAD design drafting)
- Dispersed Asset Data for maintenance records

The need for Improvement

MRT Jakarta | for
Vision & Objectives | Phase 2A Project

To implement BIM successfully, We need to adapt our **MINDSET** to upscale the project's process through CDE/BIM

- Cross coordination process between organization become more effective
- Avoid re-work with clash detection during design stage
- Standardize business process for all parties including document and asset naming
- Enhance traceability & accountability
- Interoperability of all project information
- Working in one platform/common data environment.

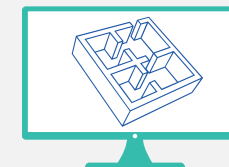
BIM FEATURES

SIMULATION



Provides greater project insight for cost, schedule, and constructability

VIRTUAL



Uses 3D models to capture, explore, and maintain consistent and coordinated planning, design, construction, and operational data.

INTERCONNECTED



Enables prompt response to change with processes that are smarter and faster

INTEGRATED



Uses and shares the same consistent data whether you're at your desk or in the field

Leveraging Digital Assets: Social Media

Growing Social Media Assets

of Followers



290,201



64,208



62,956



17,552



8,225

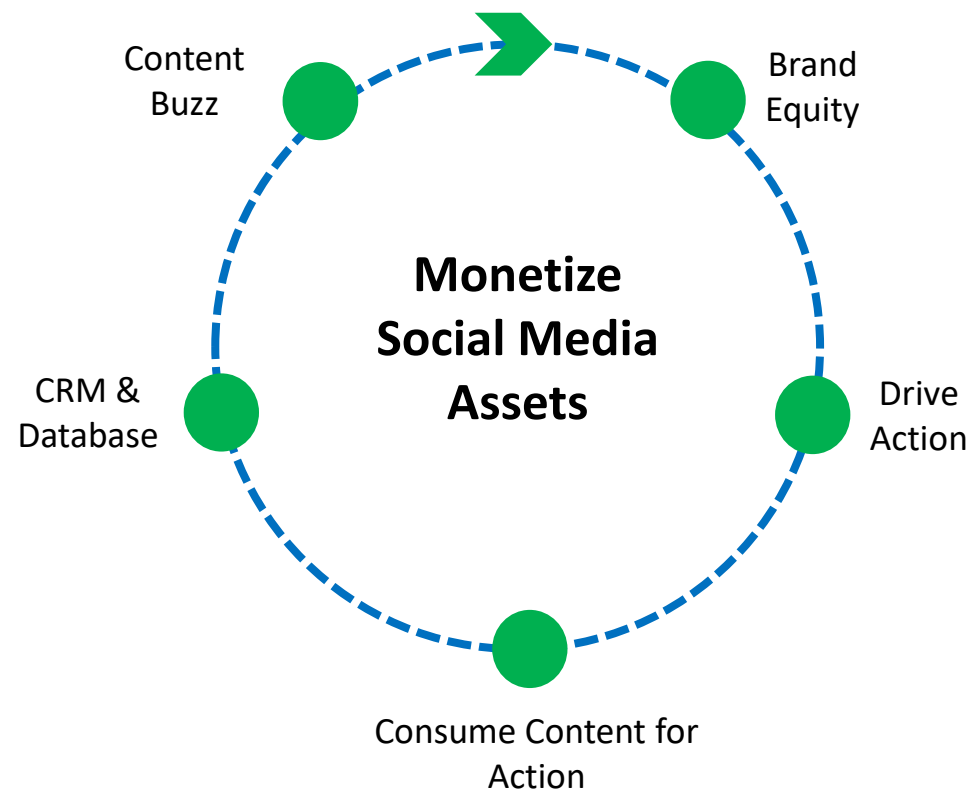


Focusing on Advertised Content

80% : 20%

Owned Content

Commercialized Content



Jak
Lingko

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Digital Governance

Governing Transformed Processes
through Digital Oversight

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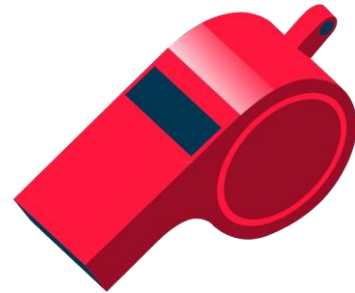


Digital Oversight on Governance



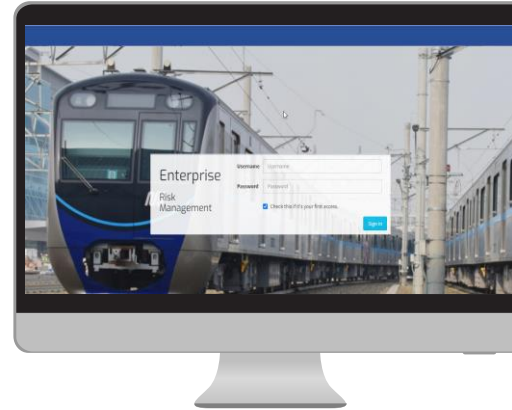
KPI Dashboard

PT MRT Jakarta telah memiliki sebuah sistem monitoring pencapaian KPI unit kerja yang dilakukan secara online dan bisa diawasi secara langsung oleh Direksi dan Komisaris



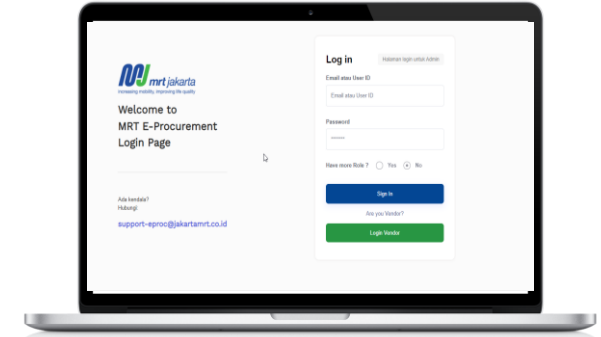
Online Whistle Blowing System

PT MRT Jakarta telah memiliki sebuah sistem pelaporan dugaan pelanggaran (*Whistle Blowing System*) yang sudah mengatur tata cara pelaporan dugaan pelanggaran sebagai bentuk perlindungan terhadap para *stakeholders* dan perlindungan nama baik perusahaan



Enterprise Risk Management System

MRT Jakarta telah memiliki database Risk Register dan Risk Monitoring dalam jaringan VPN yang diisi secara berkala oleh seluruh unit kerja. Hasil dari pengisian ini kemudian diolah oleh Divisi Risk Management menjadi Corporate Risk Profile dan menjadi dasar pelaksanaan audit Divisi Internal Audit



SAP and Online Procurement

Pengadaan di MRT Jakarta sudah menggunakan e-procurement sehingga pelaksanaan pengadaan dapat diawasi dengan transparan dan akuntabel. Data ini juga terintegrasi dengan SAP Divisi Keuangan untuk keperluan pencatatan pembayaran

Implementing IT Risk Management Framework

IT Risk Management (ITRM) Framework

The key drivers and business objectives of IT in most companies.

Business Objective	Business Growth	Innovation and Agility	Cost	Customer and Clients	Risk and Compliance
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Six operating model components required to support IT risk management across the company.

Operating Model Components	GOVERNANCE AND OVERSIGHT The organisational structure, committees, and roles and responsibilities for managing IT risk.	POLICIES AND STANDARDS Management expectations for the management of technology and technology risk.	MANAGEMENT PROCESSES Process to manage risks in Line 1 (technology operations and risk management) and Line 2 (risk oversight).	TOOLS AND TECHNOLOGY Tools and technology that support risk management lifecycle and integration of risk with IT domains.	RISK METRICS AND REPORTING Reports identifying risks and performance across IT domains; communicated to multiple levels of management.	RISK CULTURE Tone at the top, clarity on risk appetite, appropriate training and awareness, etc. to promote positive risk culture.
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Typical IT management domains required to implement IT capabilities in an organisation.

IT Management Domains	IT Strategy	Program Management	Information/Cyber Security	Service Delivery and Operations	Supplier/Third Party Management
	Data Management	System Development Lifecycle	Service Continuity Management	Financial Management	Talent Management

Penerapan ISO 27001

Goal:

- Protecting Fraud in IT Transaction terutama dgn Pihak 3rd Party
- Protecting from Cyber Security

SECOND LINE

Corsec

- Kewenangan Akses Informasi
- Whistle Blowing System - Pelaporan Insiden IT

RMQA

- Framework ISO 27001
- Kebijakan;
- Stakeholders Mapping;
- Objective Target Program (OTP)
- Audit Internal
- Fasilitasi Tinjauan Manajemen;

IT

- Master Plan IT
- Implementasi SOP & Proses
- Pengelolaan Infrastruktur & Aplikasi

Finance

- Revenue Consolidation - ERP

FIRST LINE

HC

- Membangun mindset Inovasi
- Karyawan - Kebijakan Keharasaan Informasi Perusahaan

Railway OM Directorate

- OCC
- Sistem Signal – CBTC
- Sistem AFC (*)
- Sistem QR Code (*)
- MMS Maximo
- Security Command Center

Busdev Directorate

- Digitalisasi Commercial & Retail
- Monetisasi Digital Assets

Construction Directorate

- Building Information Modelling
- Electronic Data Management System

Identifikasi insiatif/ Kegiatan- Internal Audit



INCREASE NON-FARE REVENUE



STRENGTHEN OPERATIONAL CAPABILITY



UPGRADE CUSTOMER EXPERIENCE



TOD SOCIO ECONOMIC IMPACT

2021

1. *Internal Audit Management System (IAMS)*
 - Perencanaan, Pelaksanaan, Pelaporan Audit
 - Monitoring Tindak Lanjut
 - Ditargetkan selesai Tahun 2021
2. IAMS ini akan terhubung dengan ERM dan BPC sebagai input untuk perencanaan audit dan hasil auditnya akan masuk ke dashboard BOD – BOC dan ERM

2022

1. *Continuous Audit Monitoring System*
 - Monitoring kegiatan pada unit kerja dengan parameter yang ditentukan
 - Data Terintegrasi dengan setiap unit kerja dengan tools Data Analytics

Challenges and Opportunities in Implementing Digital Governance



Digital Transformation Readiness Survey

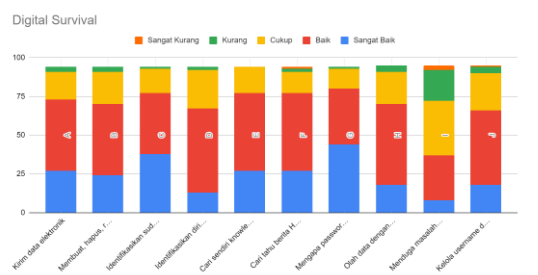
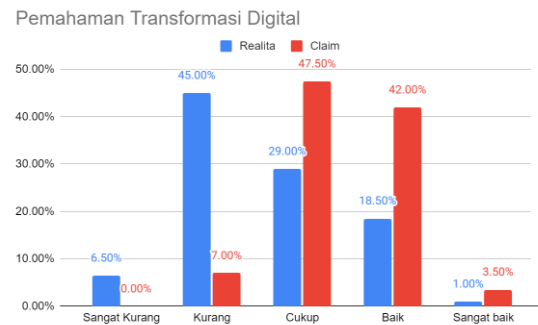
Survey Aspects

Digital Transformation Readiness Survey was done to assess organization's capability to run digital transformation

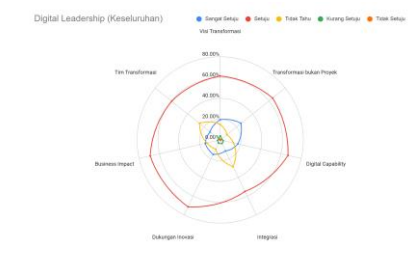
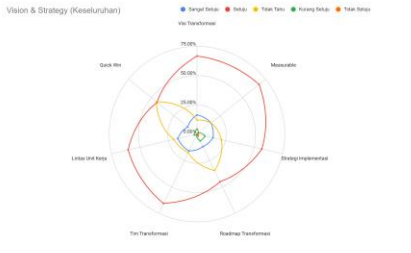
Digital Transformation Readiness Survey was conducted from 19 March 2021 – 21 March 2021 for all MRTJ Employees (From Staff to BoD)



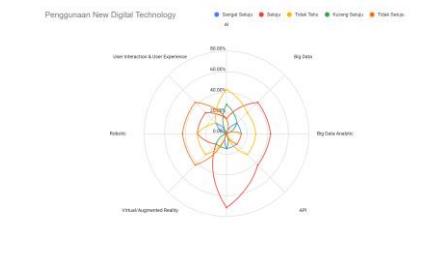
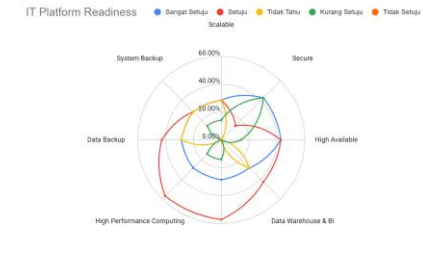
PEOPLE



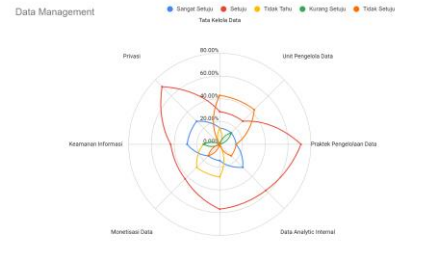
PROCESS



TECHNOLOGY



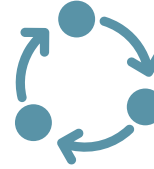
DATA MANAGEMENT



Conclusion

From Digital Readiness Survey, MRT Jakarta already achieved readiness score 85%, therefore the consultant (ITB) concluded that MRT Jakarta as an organization is ready to implement Digital Transformation

Peluang dan tantangan



PELUANG

PEOPLE

700+ Employee

80% are Millenials and Gen Z

PROCESS/PROCEDURE

ISO Certified

ISO9001:2018

ISO45001:2018

ISO14001:2015

ISO37001:2016

TOOLS

ERP SAP

Office365

Cloud and On Premise Server

Smart Office

TANTANGAN

Bagaimana menyiapkan SDM yang terampil dan tech savvy?

Bagaimana process/prosedur yang telah ada dapat terintegrasi?

Bagaimana menciptakan ekosistem technology yang terjamin keamanannya, user friendly dan up to date?

Implementing Digital Governance



Terima Kasih



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