

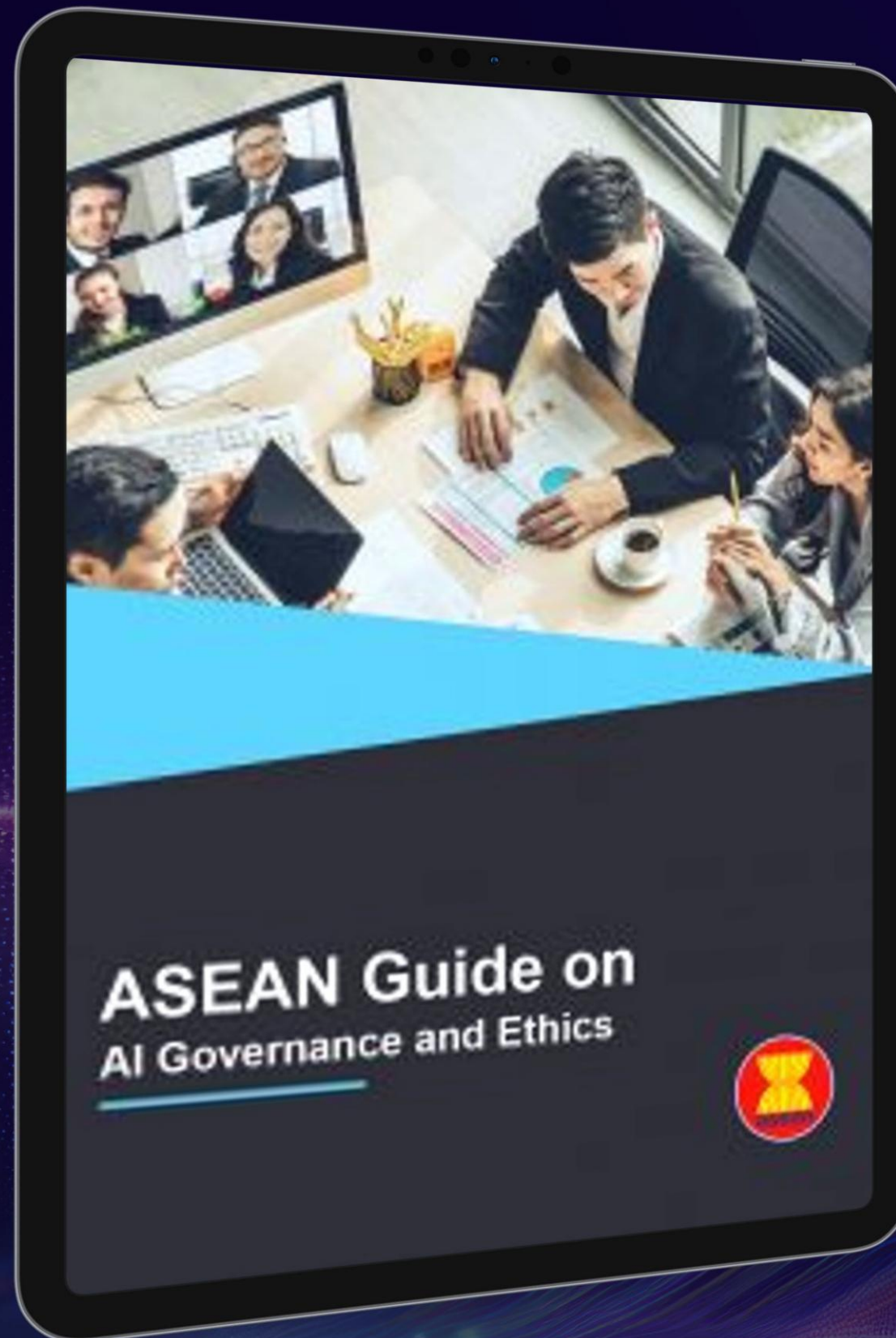


MEREVOLUSI
SISTEM PENYAMPAIAN PERKHIDMATAN
MENERUSI AI:
MEMPERKASA KECEKAPAN DAN KECEMERLANGAN

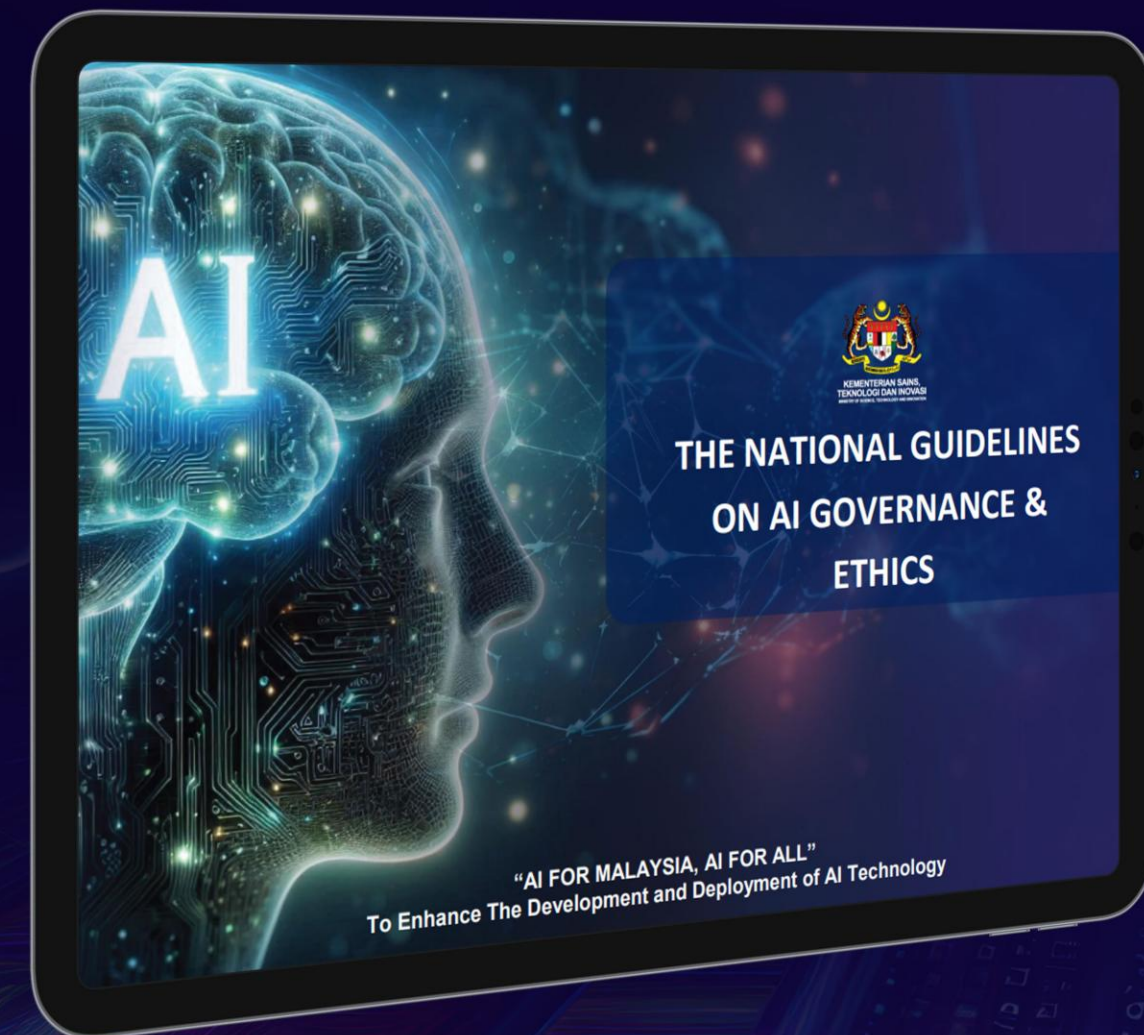
DISAMPAIKAN OLEH

YB DATUK SERI PANGLIMA Sr. HAJI SAFAR BIN UNTONG, JP
SETIAUSAHA KERAJAAN NEGERI SABAH

GOVERNMENT POLICIES ON ARTIFICIAL INTELLIGENCE (AI)



**ASEAN GUIDE ON AI
GOVERNANCE AND
ETHICS**



**THE NATIONAL
GUIDELINES ON AI
GOVERNANCE & ETHICS**



NATIONAL AI OFFICE (NAIO)

NAIO will play a pivotal role in transforming Malaysia from an AI consumer into an AI producer by building a robust AI ecosystem and will act as the central authority for advancing the nation's AI agenda.

AGENSI PEMACU BERKAITAN TEKNOLOGI DIGITAL DAN AI

AGENSI NASIONAL

BERKAITAN TEKNOLOGI DIGITAL DAN AI

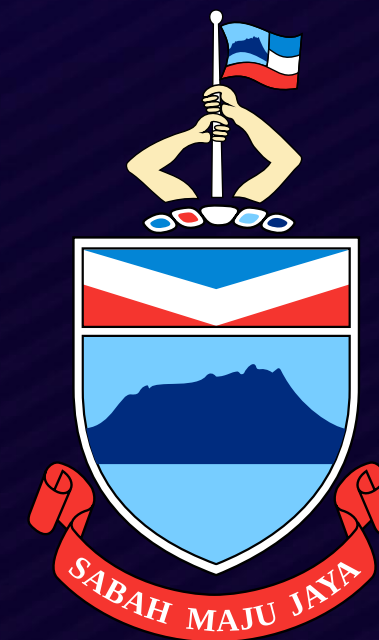


MINISTRY OF DIGITAL

- The National AI Office (NAIO)
- Malaysia Digital Economy Corporation (MDEC)

AGENSI NEGERI

BERKAITAN TEKNOLOGI DIGITAL DAN AI



- Kementerian Sains, Teknologi dan Inovasi Sabah
- Jabatan Perkhidmatan Komputer Negeri Sabah
- Bahagian Kerajaan Digital, Jabatan Perkhidmatan Awam Negeri Sabah

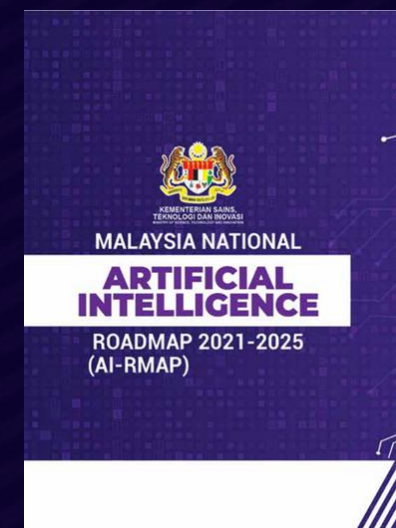
INISIATIF NASIONAL

BERKAITAN TEKNOLOGI DIGITAL



MALAYSIA DIGITAL ECONOMY BLUEPRINT (2021-2030)

National initiative to transform Malaysia into a digitally-driven, high-income nation and a regional leader in the digital economy by 2030



ARTIFICIAL INTELLIGENCE ROADMAP 2021-2025

The main goal of AI-Rmap is to create a thriving and sustainable AI innovation ecosystem that will make Malaysia a high-technology and high-income nation by exploiting AI.



PELAN TINDAKAN AI KEBANGSAAN 2026-2030

National preparedness efforts in Malaysia's aspiration to become an AI-centric nation by 2030

INISIATIF NEGERI

BERKAITAN TEKNOLOGI DIGITAL



SABAH DIGITAL GOVERNMENT STRATEGIC PLAN (2020-2024)

A five-year roadmap aimed at transforming Sabah's public service delivery through digitalization



SABAH DIGITAL GOVERNMENT STRATEGIC PLAN 2.0 (2025-2030)

Continuity to the SDGI 2020-2030 aimed to further enhancing the Sabah's public service delivery through digitalization and Artificial Intelligence

MEREVOLUSI SISTEM PENYAMPAIAN PERKHIDMATAN MENERUSI AI:

Penyampaian perkhidmatan yang cekap, inklusif, dan berdaya tahan menerusi tiga tonggak utama iaitu



INTEGRITY
INTEGRITI



**GOOD
GOVERNANCE**
TATAKELOLA BAIK



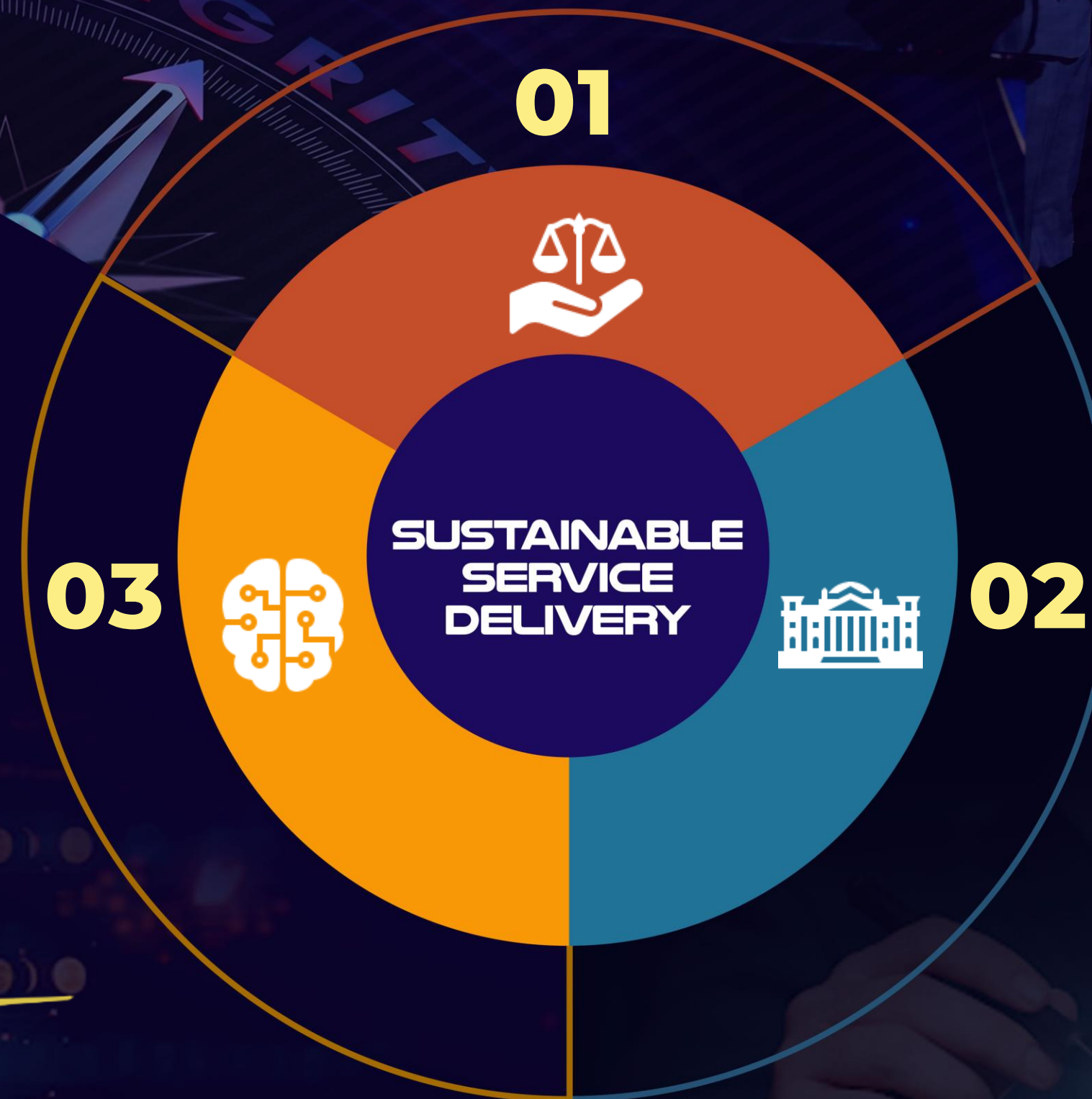
**ARTIFICIAL
INTELLIGENCE**
KECERDASAN BUATAN

INTEGRITY INTEGRITI

Menekankan amalan ketelusan, akauntabiliti,
dan kejujuran dalam perkhidmatan awam

ARTIFICIAL INTELLIGENCE KECERDASAN BUATAN

Penggunaan teknologi digital dan data
pintar (Smart Data) untuk meningkatkan
kecekapan perkhidmatan awam.



GOOD GOVERNANCE TATAKELOLA BAIK

Memastikan dasar dan keputusan
kerajaan berlandaskan tatakelola baik
untuk memberi manfaat dengan adil
dan berkesan



CABARAN SEMASA

SISTEM PENYAMPAIAN PERKHIDMATAN



PROSES MANUAL & DATA SILO

Proses kerja masih bersifat manual dan data terasing antara jabatan



TIDAK EFISYEN (INEFFICIENT)

Masa pemprosesan melewati penyampaian perkhidmatan



DATA TIDAK BERSEPADU (NOT INTEGRATED)

Data tidak bersepadu dan kurang kebolegunaan analitik



EKSPEKTASI RAKYAT TINGGI

Permintaan rakyat semakin tinggi terhadap perkhidmatan segera dan tepat



KESILAPAN MANUSIA (HUMAN ERROR)

Kelewatan atas faktor integriti, batasan fizikal atau mental manusia



LIMITED SCALABILITY

Sistem dan prosedur sedia ada sukar ditambahbaik kerana norma kebiasaan

SERVICE DELIVERY SYSTEM ARE **THE BACKBONE** OF PUBLIC SERVICE (DEPARTMENTS/MINISTRIES)



Challenges



- Proses Kerja Manual dan Data Silo
- Tidak Efisien (Inefficient)
- Data Tidak Bersepadu (Not Integrated)
- Kesilapan Manusia (human error)
- Limited scalability



Solutions



Digital Transformation and Artificial Intelligence (AI) offers transformative solutions to these problems

Technology evolves. Algorithms improve. Policies update.

But leadership?

5A

VISI PENDIGITALAN ACCESSIBLE BY ANYONE AT ANYTIME, ANYWHERE AND BY USING ANY DEVICES

SAFAR, 2020



DIGITALIZING PROCESSES

Digitalisasi menyeluruh operasi kerajaan daripada manual (analog) kepada digital



DATA BASED DECISIONS

Pendekatan berasaskan data untuk membuat keputusan



CITIZEN CENTRIC SERVICES

Perkhidmatan awam berpaksikan rakyat dan impak

SMART DATA UTILIZATION

BETTER DECISIONS, IMPROVE OPERATIONS, AND
CREATE NEW PRODUCTS AND SERVICES

PENAMBAHBAIKAN PEMBUATAN KEPUTUSAN MENGUNAKAN AI

- AI dibangun menggunakan data sedia ada dalam pangkalan data untuk membolehkan penggunaannya

DATA SEBAGAI PERKHIDMATAN

- Setiap Kementerian dan agensi menyimpan dan mengumpul data ke dalam pangkalan data
- SM2 sebagai sumber utama data



REVOLUTIONIZING SERVICE DELIVERY WITH **ARTIFICIAL INTELLIGENCE**: UNLOCKING EFFICIENCY AND EXCELLENCE

SCALABILITY

AI membolehkan agensi kerajaan mempertingkatkan operasi penyampaian perkhidmatan mereka dengan lancar.

COST SAVINGS

Keupayaan automasi AI diterjemahkan kepada penjimatan kos yang ketara.

IMPROVED DECISION-MAKING

Cerapan dipacu data AI membolehkan membuat keputusan yang lebih baik merentas spektrum penyampaian perkhidmatan.

ENHANCED EFFICIENCY

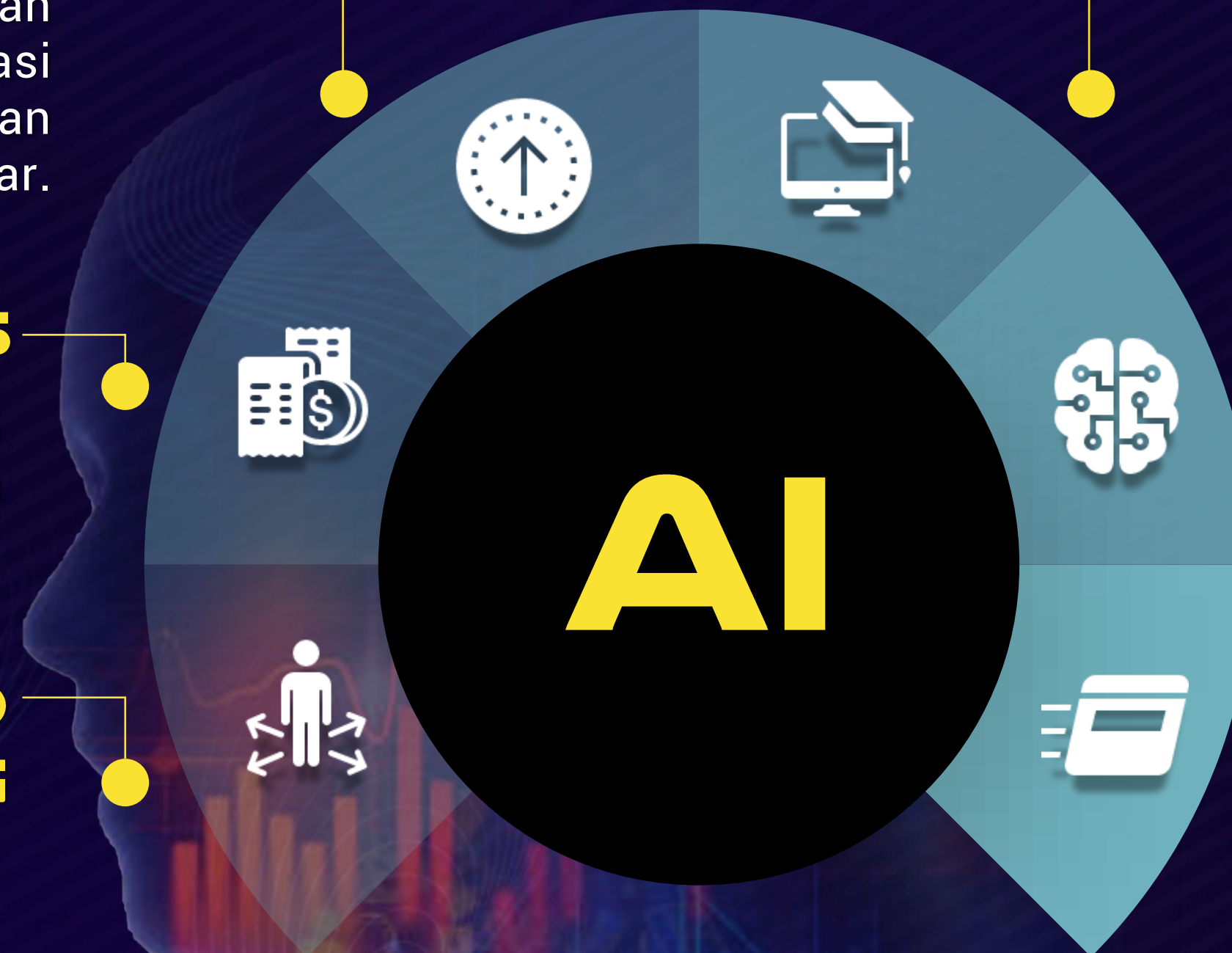
AI mengautomasikan tugas rutin

PERSONALIZED CUSTOMER EXPERIENCE

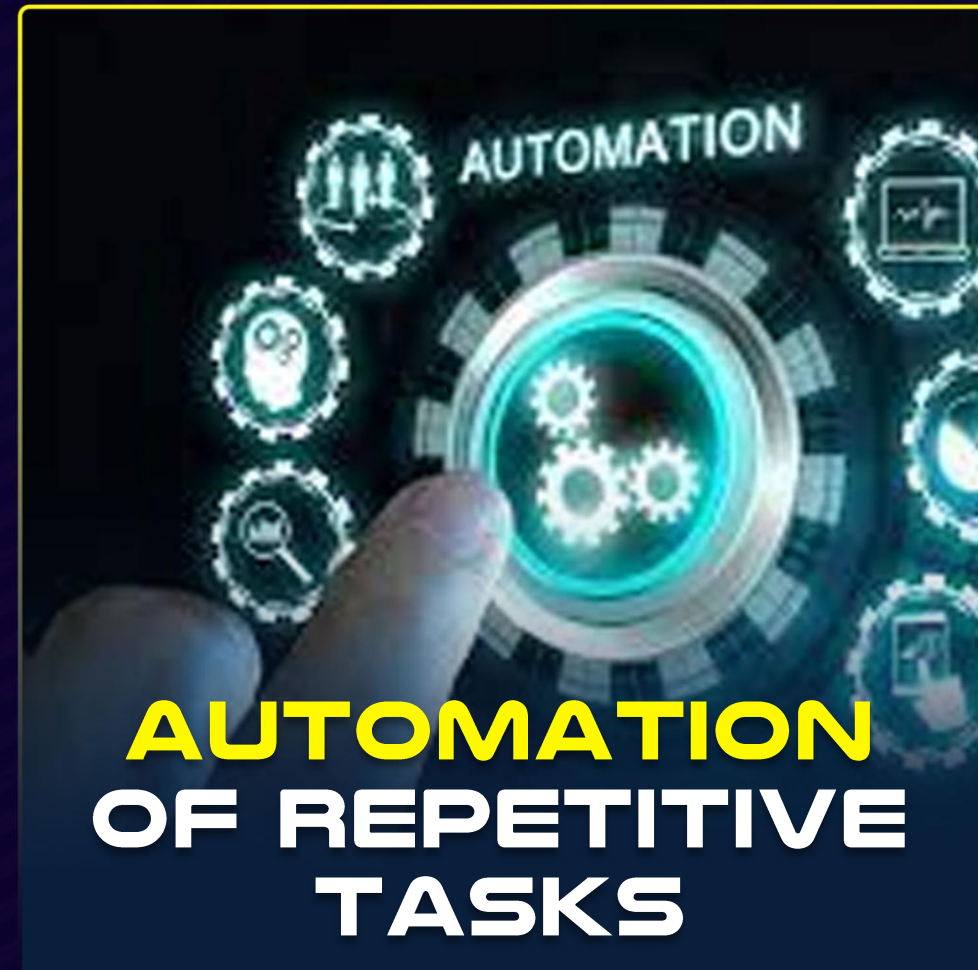
AI boleh membantu dalam menganalisis sejumlah besar data untuk memahami kehendak dan gelagat pelanggan (rakyat).

PROACTIVE ISSUE RESOLUTION

Analitis ramalan, dikuasakan oleh AI, boleh meramalkan potensi isu sebelum ia berlaku.



ROLE & BENEFITS OF AI IN PUBLIC SERVICE DELIVERY



**AUTOMATION
OF REPETITIVE
TASKS**



**DATA-DRIVEN
DECISION
MAKING**



**PREDICTIVE
ANALYTICS
FOR DEMAND
FORECASTING**



**PERSONALIZED
CLIENT
INTERACTIONS**



**REDUCED
OPERATIONAL
COSTS**



**CONTINUOUS
PERFORMANCE
IMPROVEMENT**



**INCREASED
EFFICIENCY AND
SPEED**



**ENHANCED
ACCURACY AND
CONSISTENCY**

KEY ELEMENTS OF EXCEPTIONAL SERVICE DELIVERY

KOMUNIKASI

Komunikasi yang telus dan tepat pada masanya adalah penting. Pelanggan harus dimaklumkan pada setiap peringkat proses penyampaian perkhidmatan.

KONSISTEN

Menyampaikan kualiti yang konsisten dalam setiap interaksi membina kepercayaan dan kebolehpercayaan.

EFISYEN

Kepantasan dan kecekapan dalam menyelesaikan isu membuat perbezaan yang ketara dalam pengalaman pelanggan.



PERSONALIZATION

Perkhidmatan disesuaikan untuk memenuhi keperluan pelanggan

FEEDBACK LOOP

Mengumpul dan bertindak mengikut maklum balas pelanggan secara kerap membantu meningkatkan kualiti penyampaian perkhidmatan secara berterusan.

KEY TECHNOLOGIES POWERING AI TRANSFORMATION



MIL (MULTIPLE INSTANCE LEARNING)

Improves decision-making over time



NATURAL LANGUAGE PROCESSING (NLP)

Enables chatbots & virtual assistants



ROBOTIC PROCESS AUTOMATION (RPA)

Automates workflows for speed and accuracy

REVOLUTIONIZING GOVERNANCE: STANDARDIZING EXCELLENCE WITH DIGITAL INTELLIGENCE

O1 DIGITAL FIRST APPROACH

- Rangka Tindakan Kerajaan Digital Sabah sebagai panduan kepada transformasi digital.
- Gunakan portal dalam talian dan aplikasi mudah alih berpusat untuk semua perkhidmatan awam.

O2 AI AUTOMATION FOR BETTER SERVICES

- Chatbots & Pembantu Maya – Mengendalikan pertanyaan awam 24/7.
- Kelulusan Automatik – Percepatkan pelesenan, permit dan pendaftaran.
- Analitis Ramalan – Jangkakan keperluan awam (cth., trafik, penjagaan kesihatan).

O3 CITIZEN-FRIENDLY DIGITAL SERVICES

- Sabah Super App – Aplikasi tunggal untuk semua perkhidmatan negeri.
- ID Digital – Akses selamat dan lancar kepada perkhidmatan kerajaan dalam talian.
- E-pembayaran & E-Borang – Kurangkan kertas kerja dan memudahkan transaksi.

O4 DATA-DRIVEN DECISION MAKING

- Papan Pemuka AI – Pantau operasi keadaan dalam masa nyata.
- Data Terbuka – Tingkatkan ketelusan dan kepercayaan awam.
- GIS & IoT – Meningkatkan infrastruktur dan perancangan bandar.

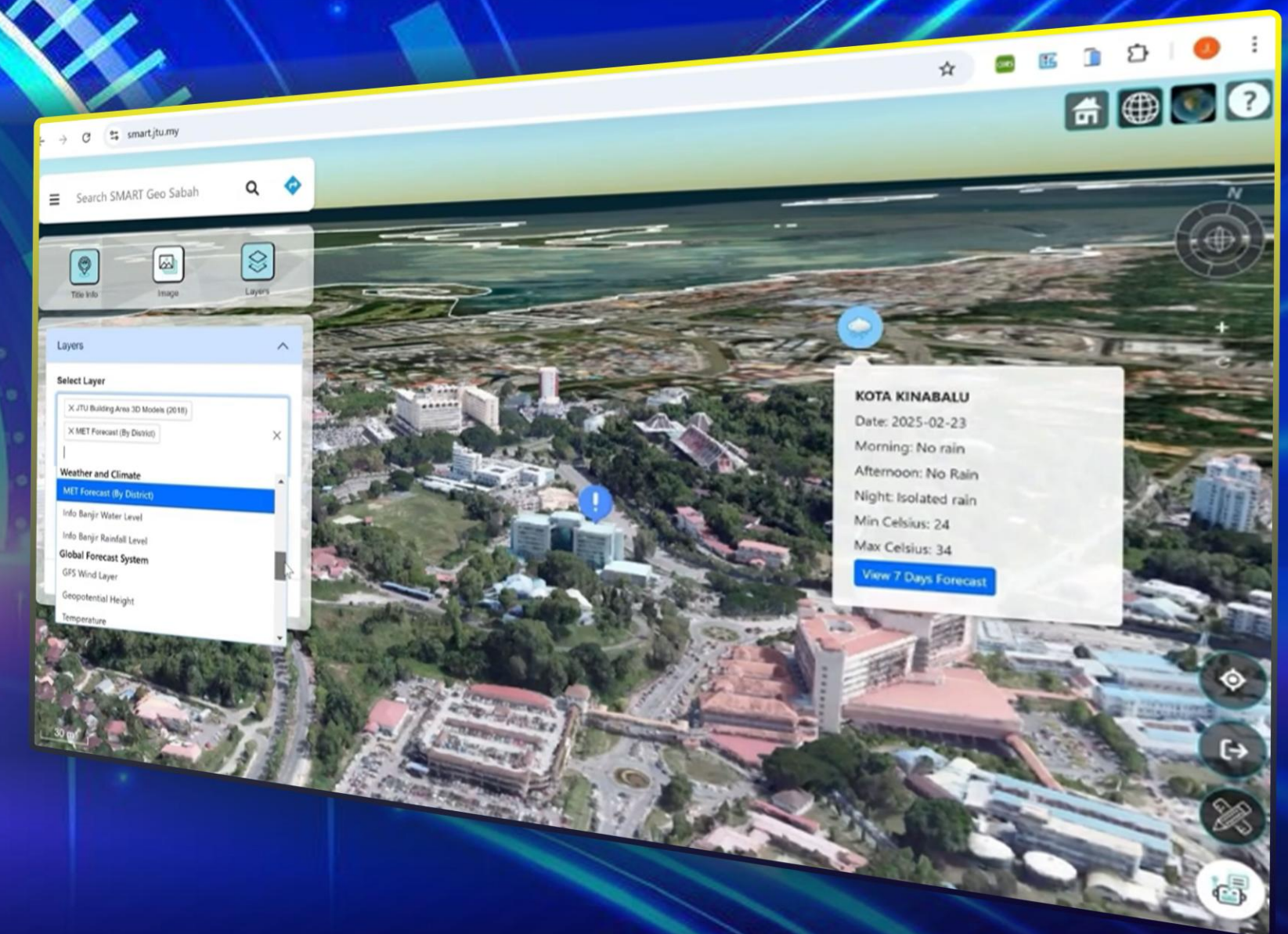
O5 TRACK PERFORMANCE & IMPROVE CONTINUOUSLY

- Gunakan analisis AI untuk memantau kualiti perkhidmatan dan kepuasan rakyat.
- Wujudkan Kad Skor Kerajaan Digital untuk mengukur kemajuan.

CURRENT AI APPLICATIONS IN GOVERNMENT OF SABAH (GENERATIVE AI)



BAYU AI
By Sabah State Secretary Office



SMART GEO SABAH
By Sabah Land & Survey Department

BAYU AI

PEJABAT SETIAUSAHA KERAJAAN NEGERI SABAH



SMART Geo Sabah Portal:



Gen-AI & LLMs:



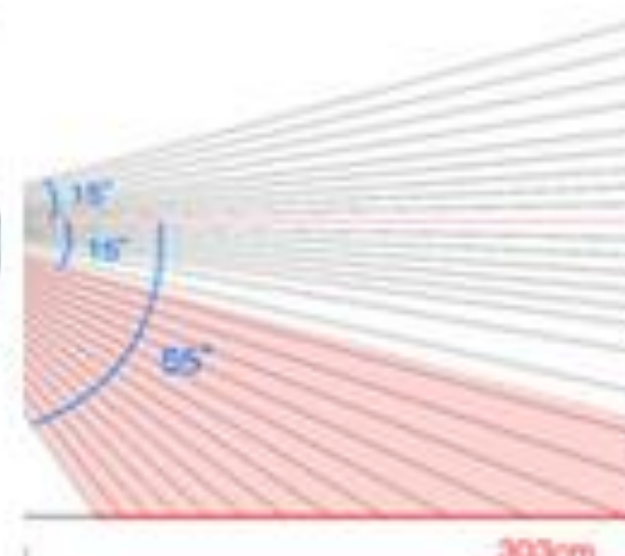
GIS Data Management:



3D Modelling:

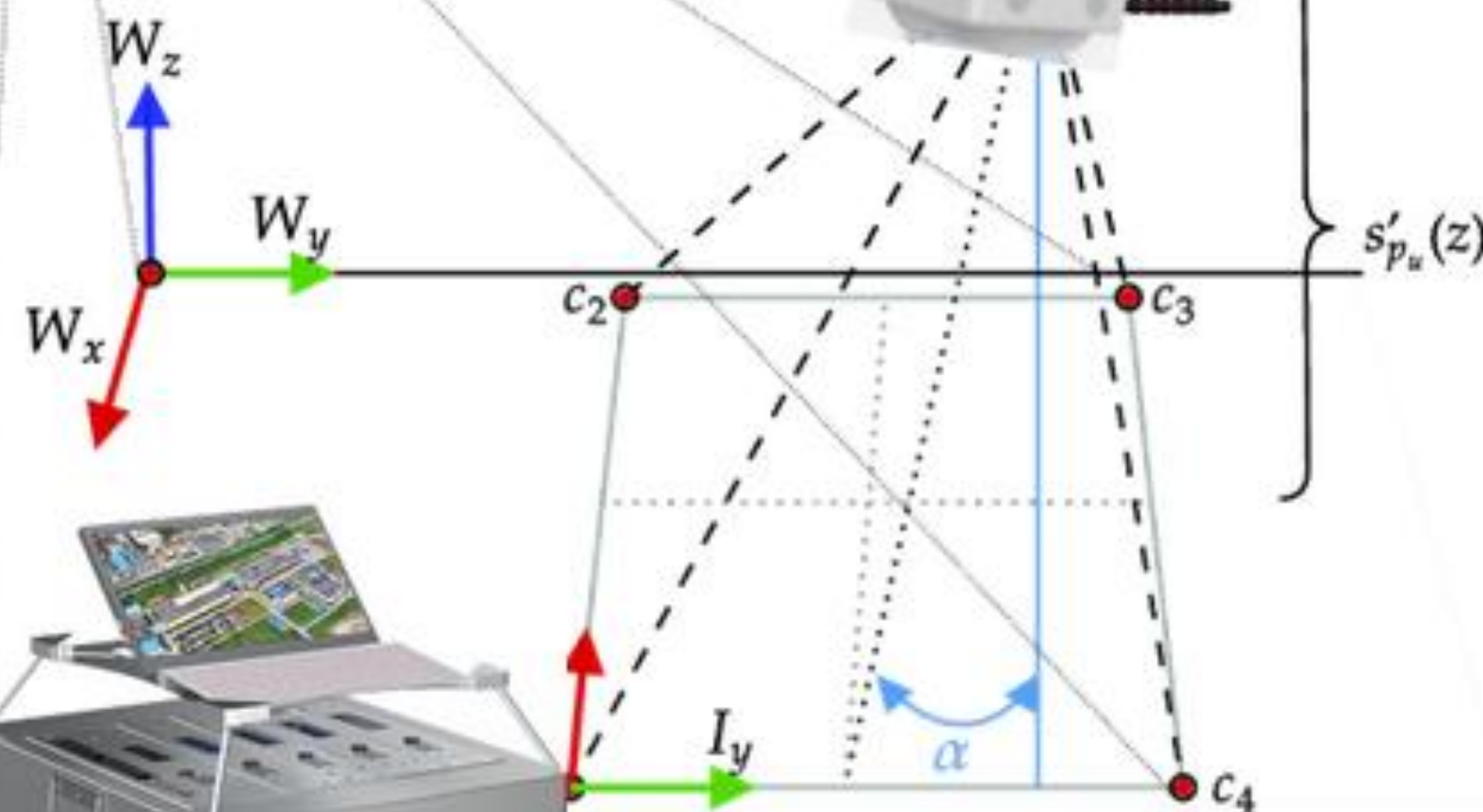


R200 SLAM



Satellite Stereo Imagery

Drone + 5-Eyes Camera



Basemap & coordinate systems selection

GeoAI-modelling & simulation e.g. wind

Above- & under-ground data stacking

Generative AI & Large Language Models

3D Model Farm Lite



AI Server

KEY FEATURES OF SMART GEO SABAH

Integrating with Gen-AI for Conversational Interactions

Allows users to use natural language to search & locate land information

Land related
Information
Search



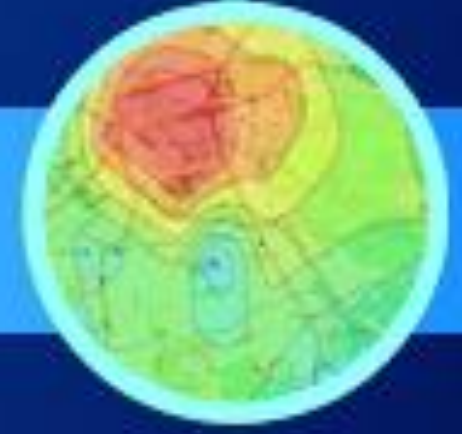
Time series Imagery
comparison and
change detection



Routing & Navigation



Environmental
& Risk Data



Geospatial
Information
Search



3D Modelling for
Aboveground &
Underground



Statistic, Land
processes & Sabah
Land Ordinance Cap.68



SMART GEO SABAH



CHALLENGES & CONSIDERATIONS



**DATA PRIVACY
AND SECURITY**



**ETHICAL AI USE
AND BIAS
PREVENTION**



**WORKFORCE
ADAPTATION AND
RETRAINING**



**INTEGRATION WITH
LEGACY SYSTEMS**

THE FUTURE OF AI IN SERVICE DELIVERY



**AI-DRIVEN SELF-SERVICE
ECOSYSTEMS**



**AUTONOMOUS DECISION-
MAKING SYSTEMS**



**PREDICTIVE SERVICE
MANAGEMENT**



**CONTINUOUS INNOVATION THROUGH
HUMAN-AI COLLABORATION**

WHAT'S NEXT AFTER GENERATIVE AI?

AGENTIC AI (AUTONOMOUS AI SYSTEMS)

The next big leap is likely from generative to agentic AI – systems that don't just create outputs, but can act, plan, and reason over time to achieve goals.

MULTIMODAL INTELLIGENCE

This leads toward systems that can **perceive and reason like humans**, not just in text or images, but across all senses.

PERSONALIZED & LOCAL AI

On-device AI (running on your phone or laptop), tuned to your behavior, preferences, and data

AI REASONING & UNDERSTANDING

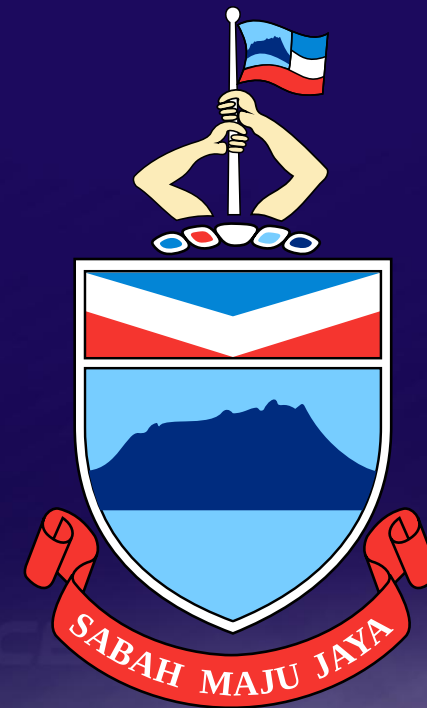
Next-generation models (true cognitive models) will likely combine **symbolic reasoning, simulation, and commonsense logic** with neural networks

ARTIFICIAL GENERAL INTELLIGENCE (AGI)

systems capable of learning and reasoning across domains as humans do.

KESIMPULAN

- AI mentakrifkan semula **kecekapan** dan **kecemerlangan** dalam penyampaian perkhidmatan.
- Organisasi yang menggunakan AI akan lebih **berdaya saing**.
- **AI bukan menggantikan manusia**, tetapi memperkukuh keupayaan kita untuk berkhidmat dengan lebih bijak dan berintegriti



GOOD
GOVERNANCE

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