

Unveiling Malaysia's Geospatial Revolution: Empowering Communities through Spatial Information Sharing and Smart Cities

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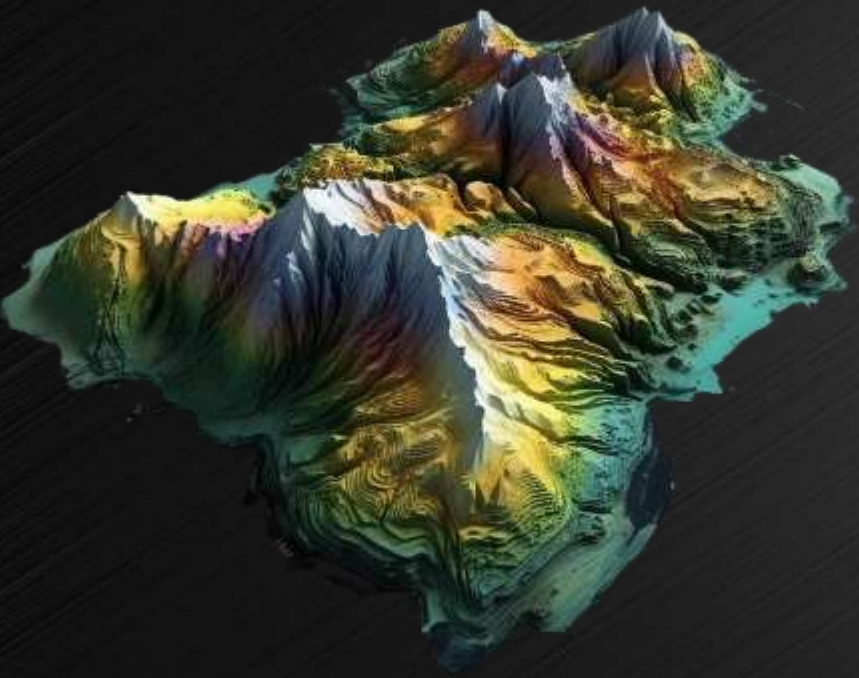
SmartMap Insights Sdn Bhd

28th June 2023



Presentation •

Agenda



01

Spatial Information Sharing

02

Case Study: MyGeoServe

03

Smart Cities In Malaysia

04

Case Study: SMARTPJ Portal

1

Spatial Information Sharing

What is Spatial Information Sharing?

- Exchange and dissemination of geospatial data and knowledge.
- Spatial information includes geographic locations, features, and attributes.



Why is Spatial Information Sharing Important?



Effective Planning and Resource Allocation



Improved Monitoring and Analysis

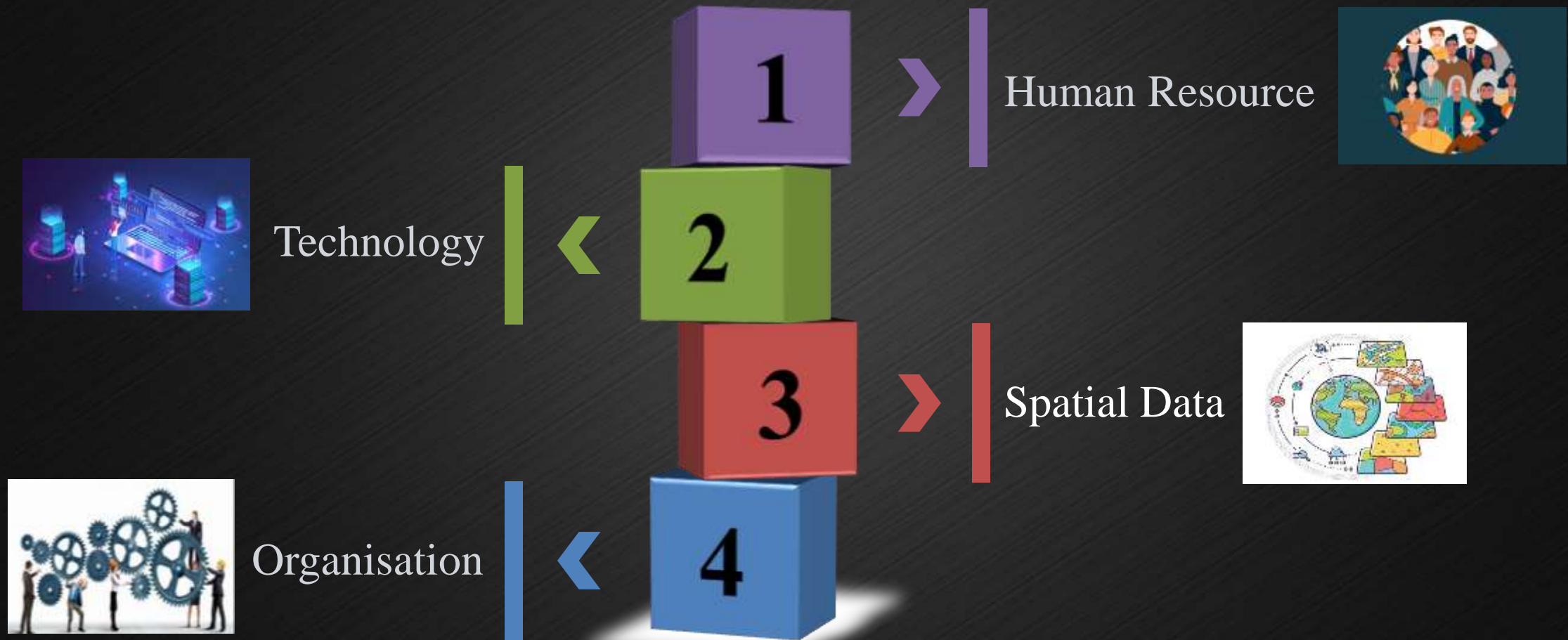


Informed Decision-Making

Enhanced Collaboration



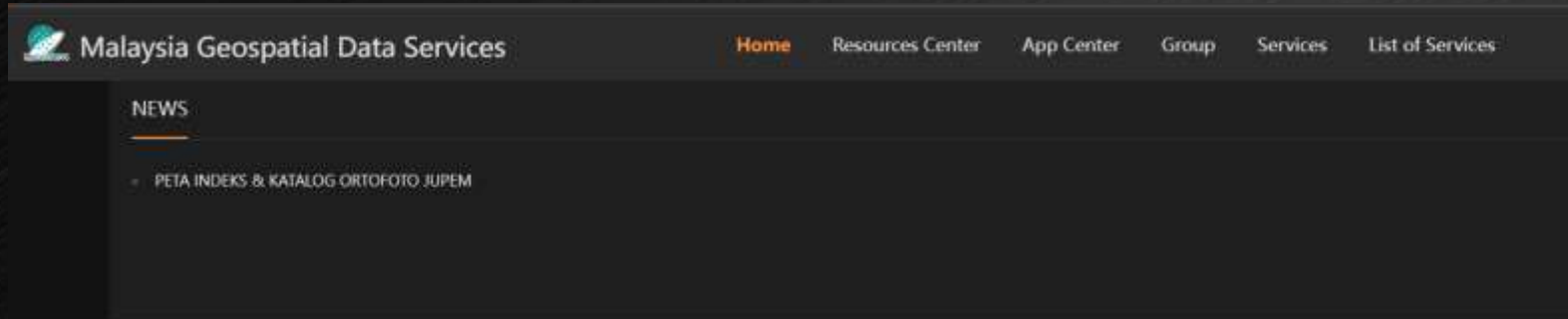
Factors That Affect Spatial Information Sharing in Malaysia



2

Case Study: MyGeoServe

Case Study: Malaysia Geospatial Data Services MYGEOSERVE



APLIKASI RUJUKAN UMUM



PETA INDEKS & KATALOG ORTOFOTO JUPEM

Peta yang menunjukkan paparan indeks dan katalog ortofoto JUPEM



BENCANA MALAYSIA

Cajon Data Bencana bermula Ogos 2021 hingga kini



NDCDB KOTA BHARU KELANTAN

Memaparkan Atribut No Lot, Pylon Adu (PA), Ertusan, Daerah, Mukim Dan Fregent

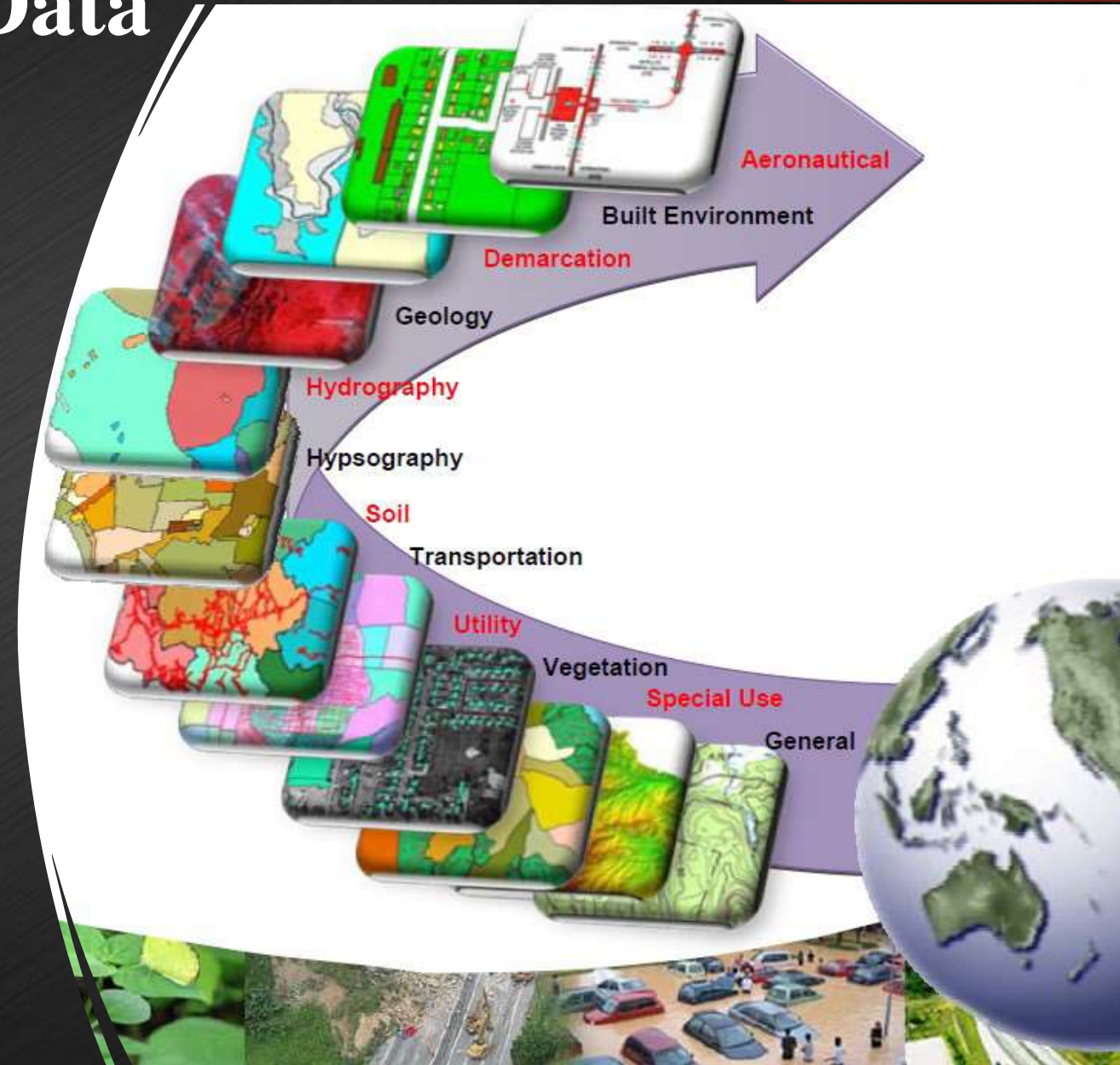
What is MyGeoServe?

- ❑ An online platform that provides a comprehensive solution for integrating, searching, sharing, and managing GIS resources.
- ❑ Managed by the Department of Survey and Mapping Malaysia (JUPEM), Ministry Of Natural Resources, Environment And Climate Change.
- ❑ Industry Standard SOA (Service Oriented Architecture).
- ❑ Promotes data sharing and collaboration among several government agencies.

Categories of Geospatial Data in MyGeoServe

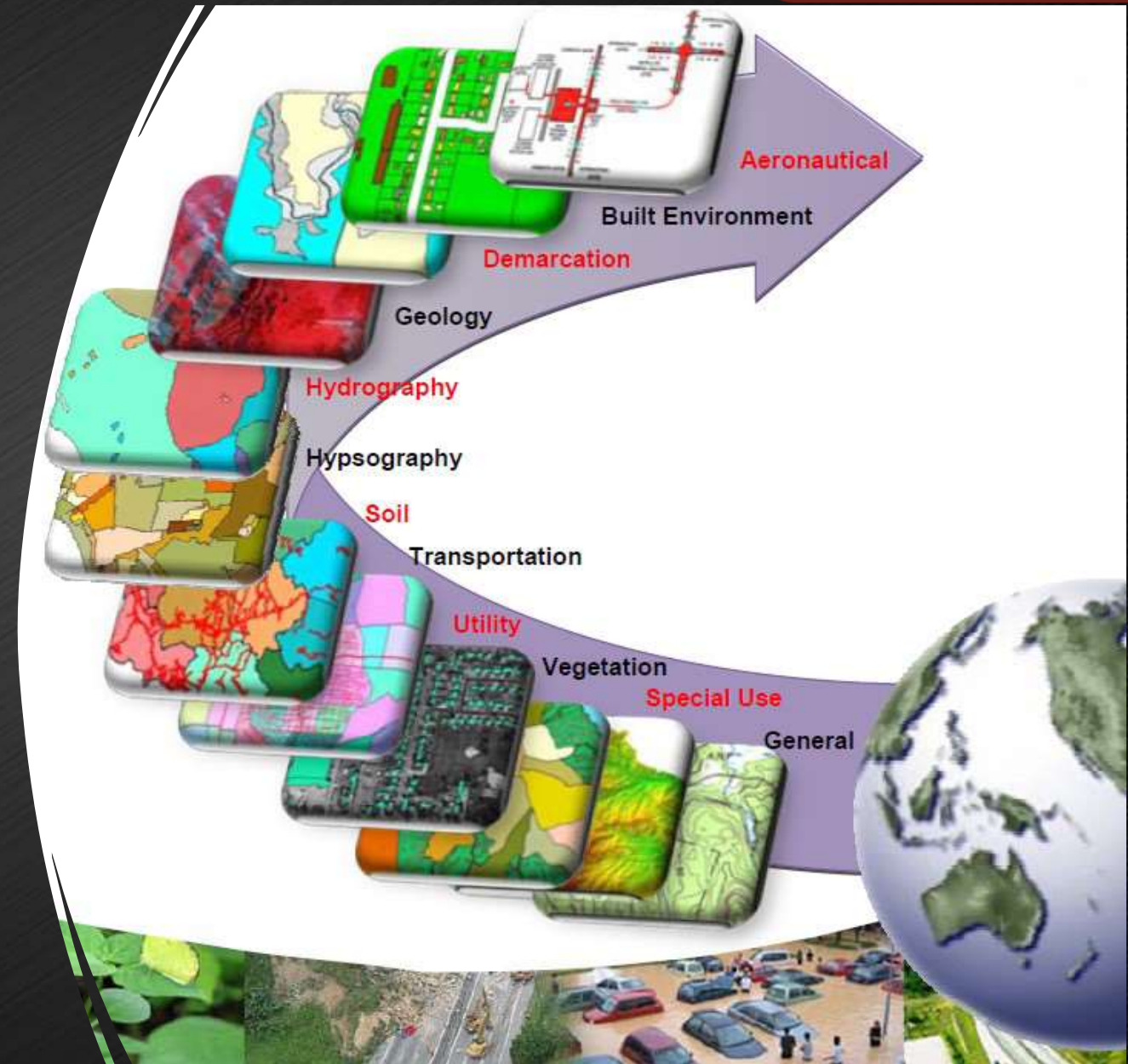
Key layers include:

- Aeronautical: Air transportation, airports
- Built Environment: Man-made structures and infrastructure
- Demarcation: Boundaries and administrative divisions
- Geology: Rock types, formations, and mineral deposits



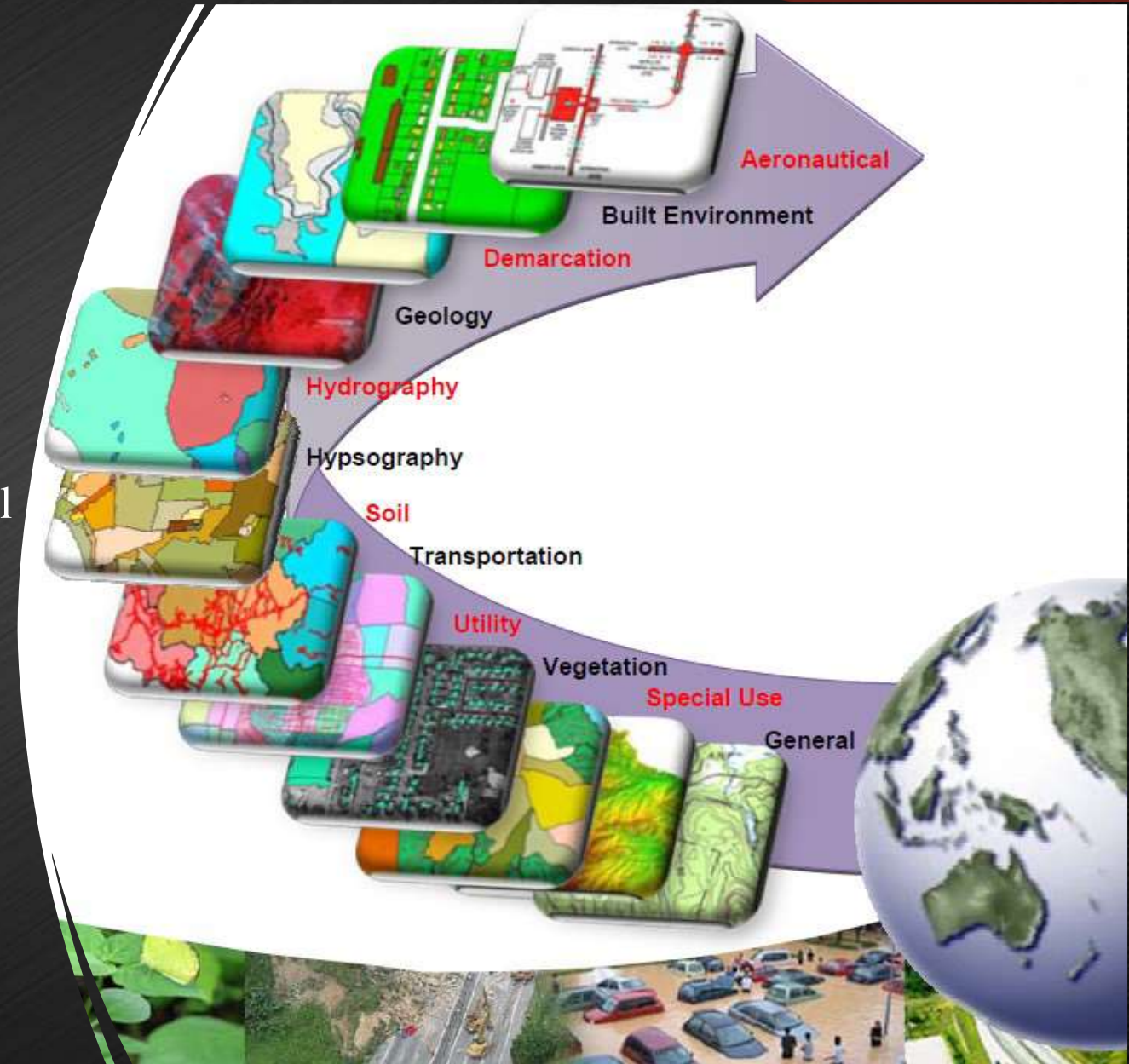
Key layers include:

- Hydrography: Water bodies, rivers, and coastlines
- Hypsography: Elevation and topographic features
- Soil: Soil type and classification
- Transportation: Land and water transportation
- Utility: Electricity, telecommunication, water supply, oil and gas, broadcasting, sewerage and waste management

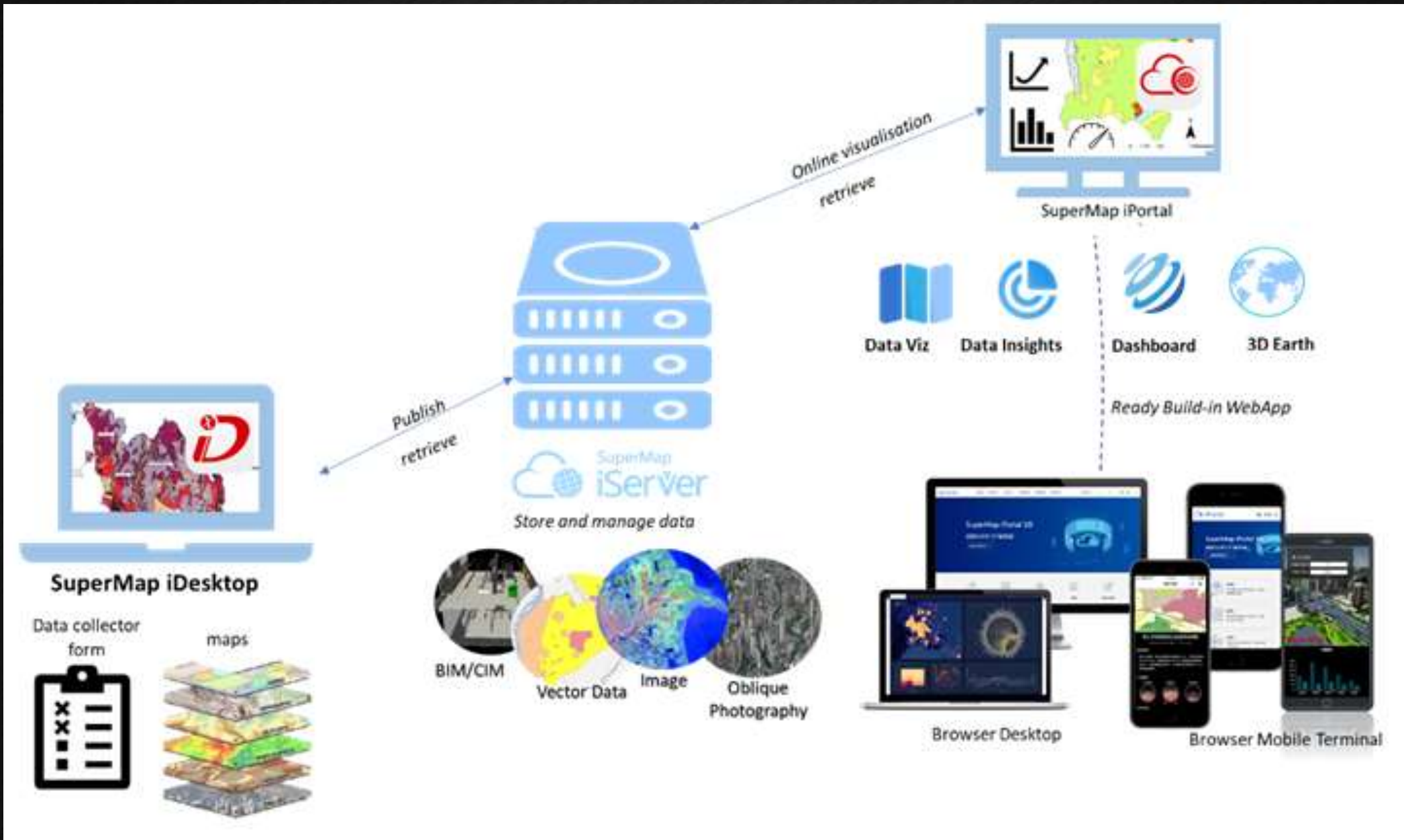


Key layers include:

- Vegetation: Agricultural land use activities, boundaries and areas of vegetation
- Special Use: Terrain analysis dataset, meteorological dataset
- General: Monumented control points and remote sensing imagery



SuperMap Product & Workflow used in MyGeoServe



WebApps in MyGeoServe



DataViz

- ❑ To create online maps, such as thematic maps, topographic maps, cadastral maps, and many more

Map Dashboard

- ❑ To create interactive monitoring and analysis dashboards that support multiple charts, videos, and tables, facilitating seamless interaction with maps.

DataInsights

- ❑ Analyze large datasets, identify patterns, and derive insights through advanced spatial analytics and data visualization techniques.

iEarth

- ❑ To create, browse 3D scenes like points cloud, DEM/DTM/DSM and perform analysis operations

Dashboard for Monitoring & Surveillance

Kajian data bencana bermula : Ogos 2021
 Tarikh kemaskini : Jun 12, 2023

MAKLUMAT BENCANA ALAM MALAYSIA

MAKLUMAT BENCANA ALAM MALAYSIA

HEAT MAP

ANALISIS BENCANA ALAM MALAYSIA

POINT LOKASI BENCANA ALAM

MAKLUMAT

LOKASI BENCANA
Kampung Cendering

JENIS BENCANA
BANJIR KILAT

PUNCA BENCANA
HUJAN LEBAT

NEGERI
PAHANG

DAERAH
KUANTAN

MUKIM
PEKAN TANJUNG LUMPUR

TARIKH
06 Februari 2023

INFOGRAFIK

GAMBAR BENCANA

VIDEO BENCANA

BIL	LOKASI	NEGERI	DAERAH	MUKIM
495	Kampung Beletik	PAHANG	LIPIS	TELANG
496	Kampung Sempadan	PAHANG	JERANTUT	HULU CHEKA
497	Batu Balai	PAHANG	JERANTUT	HULU CHEKA
498	Sri Buntar	PAHANG	BERA	BANDAR TRIANG
499	Kerayong Jaya	PAHANG	BERA	TRIANG
500	Tok Deh	KELANTAN	PASIR MAS	GUAL PERIOK

Natural Disaster Management



Orthophoto Map Index & Catalog

Malaysia Geospatial Data Services Home Resources Center App Center Group Services List of Services Sign In Sign Up

Home / News Center / Content

DataViz

Indeks & Katalog Ortofoto...

Update time: 2023-05-02 12:32:26

Peta yang menunjukkan lokasi paparan indeks dan katalog ortofoto (RPEM) dari tahun 2004 sehingga tahun 2021. Indeks tersebut juga ada dengan label nama lembar, skala lembar dan tahun penerbitan. Sumber indeks adalah lembar, diperolehi dari pihak IPTM.

Label: indeks_ortofoto, indeks_penerbitan, ortofoto, katalog_ortofoto, ortofoto_semananjung, ortofoto_sabah

User: ruzaimie_bpdgn

Search layers

- 2022 - Lembar 5k
- 2021 - Lembar 10k
- 2020 - Lembar 10k
- 2019 - Lembar 10k
- 2018 - Lembar 10k
- 2017 - Lembar 10k
- Lembar 10k
- Lembar 5k
- 2014 - Lembar 5k

National Digital Cadastral Database for Kelantan

NATIONAL DIGITAL CADASTRAL DATABASE (NDCDB) KELANTAN

NDCDB KELANTAN KOTA BHARU

<input type="checkbox"/>	LOT	KELUASAAH	PA	NEGERI	DAERAH	MUKIMP
<input type="checkbox"/>	2693	1739.339	PA56078	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	2694	1072.975	PA56078	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	2696	1428.805	PA56078	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	2698	572.838	PA56078	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	2699	981.824	PA56078	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	13800	12.108	PA224810	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	13801	144.019	PA224818	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	13610	12.568	PA224875	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	13611	12.575	PA224875	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	13612	12.561	PA224875	Kelantan	Kota Bharu	Kota
<input type="checkbox"/>	13613	12.562	PA224875	Kelantan	Kota Bharu	Kota

Hak Cipta Terpelihara © Jabatan Ukur dan Pemetaan Malaysia (JUPEM)
 Kerajaan Malaysia dan Jabatan Ukur dan Pemetaan Malaysia (JUPEM)
 tidak akan bertanggungjawab ke atas apa-apa kerugian
 atau kerosakan yang disebabkan oleh penggunaan
 mana-mana maklumat yang diperolehi dari mydashboard (JUPEM) ini.

3

SMART CITIES IN MALAYSIA

Who should be involved?

City Managers, City
Planners / Landscape &
Building Architects

Energy Planners & Providers

Economists, Finance
Planners, Businesses &
Factories

Transport Planners /
Engineers & Builders

Professionals –
Healthcare, Tourism,
Agriculture, Education,
Security

Systems / Software
Engineers, Technologist
& Information Builders

People – Entertainers,
Artists, Hospitality &
Food gourmet, etc



Utility & Telecommunication
Managers / Planners / Engineers

A city skyline at dusk, featuring a prominent highway interchange in the foreground. The sky is a mix of purple, orange, and blue, and the city lights are beginning to glow. The text is overlaid in the center of the image.

**So, what's driving the
development of
smart cities initiatives?**

Rapid Population Growth in Cities in Malaysia

2018 - 2020



Next 30 years



People living in cities & urban centers



People living elsewhere

Technological Advancements

Technological Advancements



- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Big Data Analytics

Connected Infrastructure



- Smart grids and energy management systems
- Intelligent transportation systems
- Sensor networks for environmental monitoring

Data-Driven Decision-Making

- Real-time data collection and analysis
- Predictive modeling and optimization
- Open data platforms and APIs

Growing Stress

- Increasing populations
- Increase traffic congestion
- Environmental and stringent regulatory compliances
- Declining tax bases & budgets and increasing costs
- Varied pollution (air & noise)
- Inadequate housing
- High unemployment
- Rising crime

Resource Scarcity and Environmental Challenges

- ❑ Scarce resources like water and energy require careful management.
- ❑ Environmental challenges, such as climate change and pollution, impact cities.
- ❑ Smart city initiatives focus on sustainability, resource optimization, and eco-friendly practices.



Growing Congestion and Traffic Delays

- ❑ Up to 500 million hours per year commuters spent in traffic
- ❑ Studies reported lost of US\$1.4 billion in productivity
- ❑ Increase in health risk (*stress, fatigues etc*)
- ❑ Adds to adverse environmental impact
- ❑ Wasteful utilization of energy



Inadequate Infrastructure

- ❑ Urbanization putting strain on city infrastructures
- ❑ Existing infrastructures are nearing or over-extend its design or operational life



4

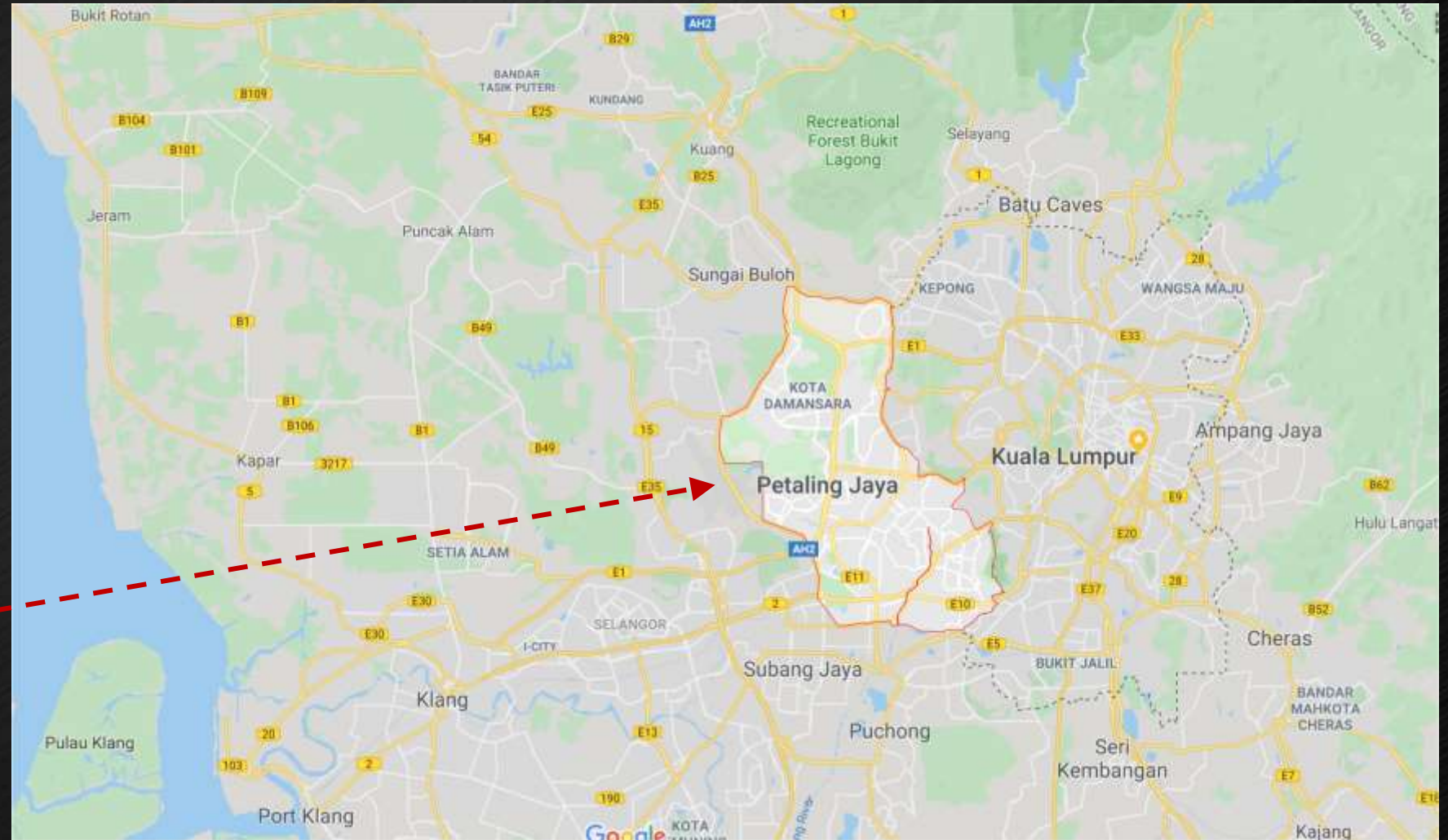
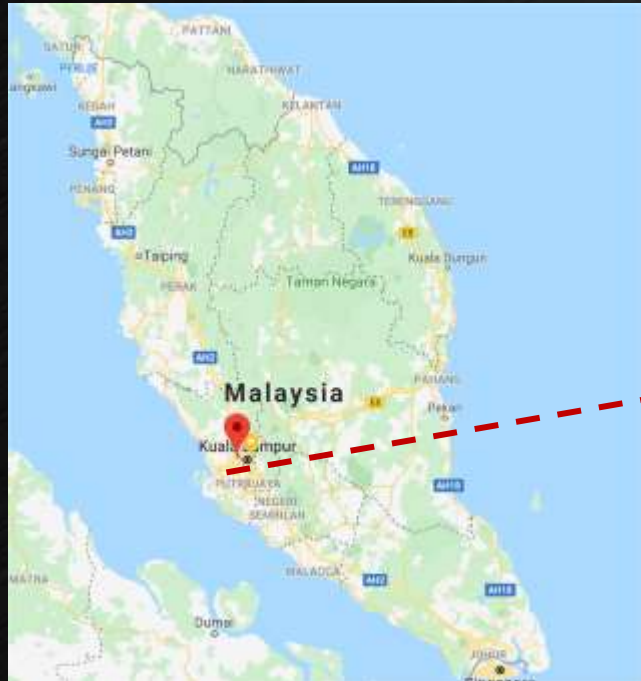
Case Study: SMARTPJ Portal

Case Study: PJ SMART CITY



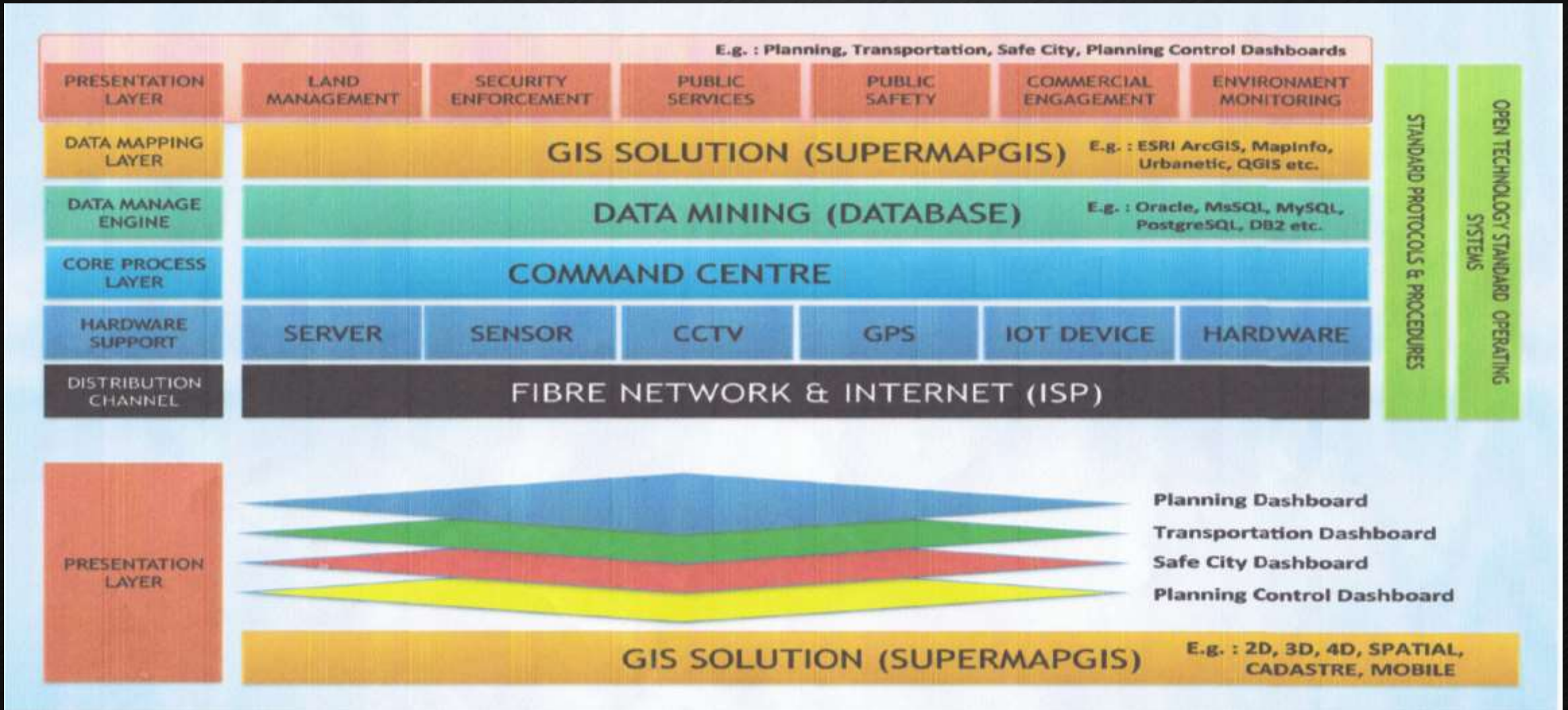
- ❑ Project initiated in 2016
- ❑ To embrace GIS as the unifying technology for planning & development of SMARTPJ
- ❑ Develop SMARTPJ Planning & Development Standards and Policies.
- ❑ Development & implementation budget to spread over 2 major 5-year plan budgets
- ❑ Develop applications for on web and mobile to engage citizens.

Location





Architecture of SMARTPJ Command Centre



SmartPJ Portal Dashboards

PJ Smart City Home App Center **Resource Center** Groups Data Published Data Programming, Data Formatting & Designing Management Admin

Public Shared With Me My Group My MapDashboards Create MapDashboard

Input keyword

Resource Type

- All (892)
- Map (175)
- Service (334)
- Scene (0)
- Data (335)
- Insight (0)
- MapDashboard (48)**

Tags Multi

- CBE (1)
- CPD (1)

 SmartUPP - PJ 2023-06-15 10:00 199 Admin	 SmartWaste - PJ 2023-06-15 09:58 288 Admin	 SmartResponse - PJ 2023-06-15 09:53 283 Admin	 SmartLicence - PJ 2023-06-15 09:51 313 Admin
 SmartEnforcement- PJ 2023-06-15 09:50 367 Admin	 SmartProject- PJ 2023-06-15 09:47 205 user_001	 Smart Billboard 2023-06-15 09:46 208 user_001	 SmartOSHE - PJ 2023-06-15 09:37 266 Admin

SmartResponse Dashboard

SmartResponse - PJ

SmartResponse - PJ

Analysis

11 SUSTAINABLE CITIES AND COMMUNITIES



58

Bilangan Aduan Diterima Hari Ini

6,618

Jumlah Keseluruhan Aduan Tahun 2020 (sehingga 22 December 2020)

2,614

Bilangan Aduan Selesai

1,235

Bilangan Aduan Dalam Tindakan

SASARAN 2030

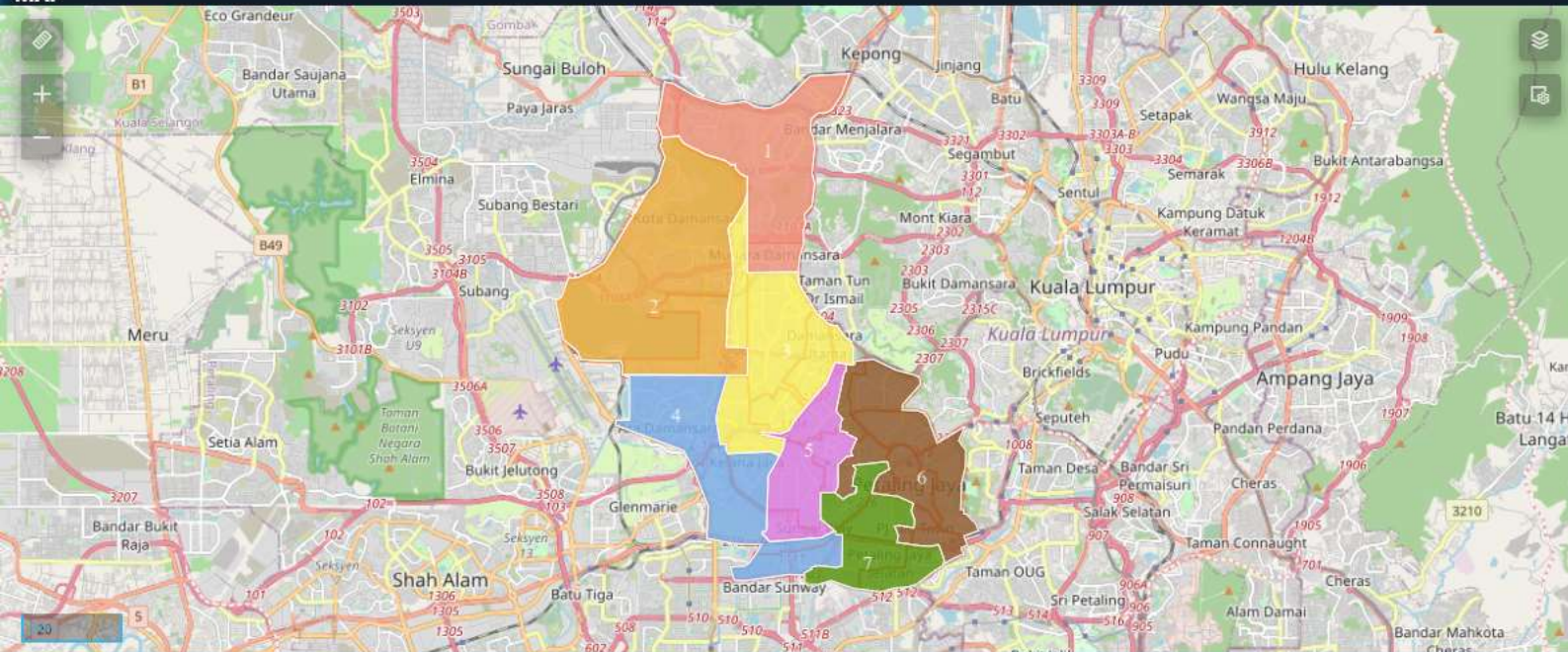
MEMBUAT ADUAN BERKENAAN KEMUDAHAN, FASILITI DAN YANG BERKAITAN PENTADBIRAN PJ

SASARAN 2023

PERANCANGAN DAN STRATEGI UNTUK MENGURANGKAN KADAR ADUAN DAN PENYELESAIAN ADUAN SECARA LEBIH BERKESAN
NISBAH KES ADUAN KACAU GANGGU AWAM BERBANDING JUMAH PENDUDUK KESELURUHAN KURANG DARIPADA 5 KES : 10,000 PENDUDUK

Tarikh Dikemaskini: 18 may 2022

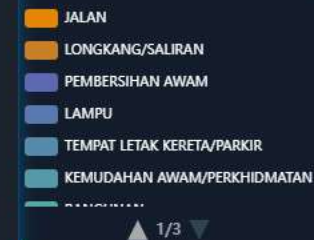
MAP



Tarikh Dikemaskini: 22 November 2021

ADUAN ANALISIS

PERATUS MENGIKUT JENIS ADUAN



ADUAN ANALISIS

PECAHAN/PERATUS TINDAKAN ADUAN MENGIKUT BULAN



Tarikh Dikemaskini: 18 May 2022

SmartLanduse Dashboard



SmartLanduse - PJ

SmartLanduse

Analysis

11 SUSTAINABLE CITIES AND COMMUNITIES



97.2 km²

(9720.6 Hectare)

ACREAGE

254,201

Number of Building

DEVELOPMENT PLAN

RTPJ1	20.558 km ² (2,055.805 hec)
RTPJ2	68.233 km ² (6,823.295 hec)
RKK Seksyen 13	1.048 km ² (104.894 hec)
RKK Kwasa	7.366 km ² (736.653 hec)

7.40 km² (740.891 Hec)

Greenfield

77.73 km² (7,7731.21 Hec)

Brownfield

SASARAN 2030

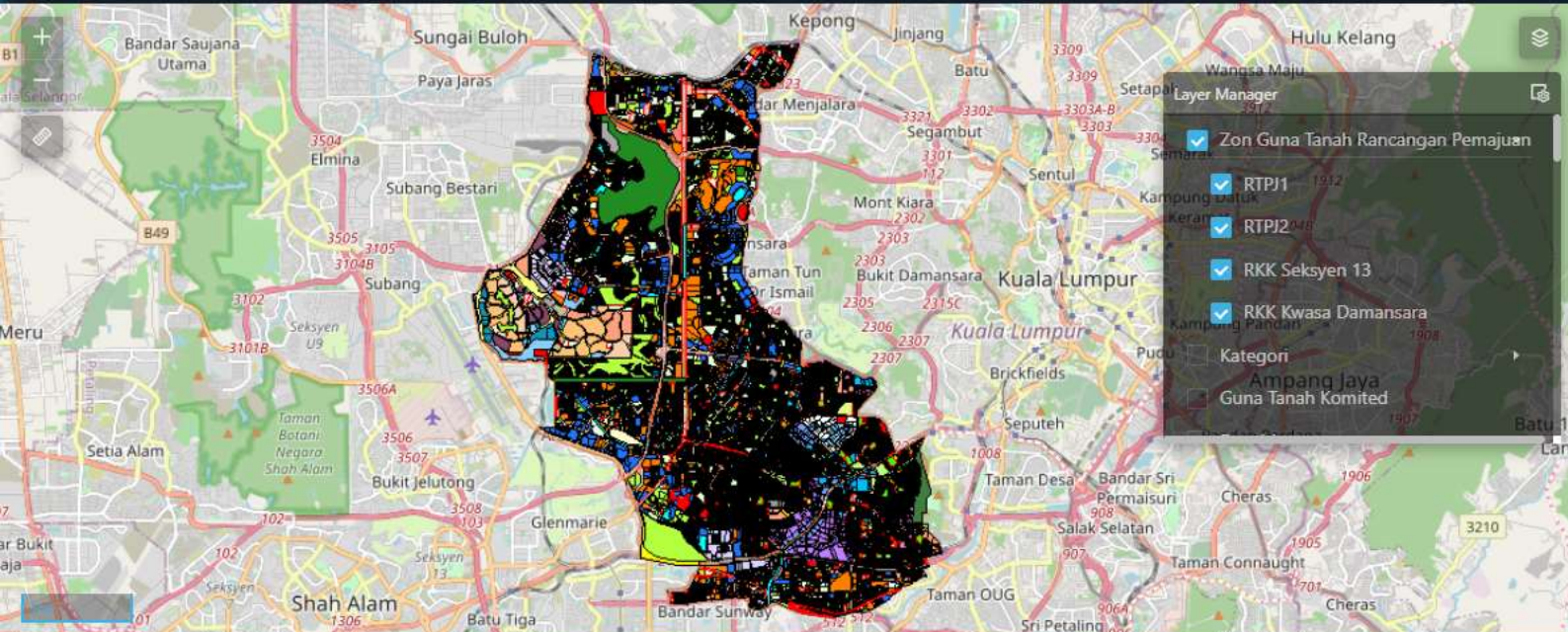
Melengkapkan maklumat gunatanh PJ bagi kawalan dan perancangan bandar yang lebih efisien

SASARAN 2023

Kawasan PJS & Seksyen

Tarikh Dikemaskini: 18 May 2022

MAP



Tarikh Dikemaskini: 22 November 2021

LANDUSE OF PETALING JAYA

- Perumahan
- Infrastruktur & Utiliti
- Perdagangan
- Perindustrian
- Kawasan lapang & Rekreasi
- kawasan kemudahan awam



PECAHAN GUNA TANAH RTPJ 1

PROFIL BANDAR

BILANGAN KEDIAMAN PETALING JAYA 2021



Tarikh Dikemaskini: 18 May 2022

SmartWaste Dashboard

SmartCE - PJ

SmartWaste Analysis



101
Jumlah Kebuk Sampah

208,809.17
Data Sehingga November 2020
2019 : 243,751.31

3
Pusat Kompos Sisa Komuniti

21
Jumlah Tong 3R

77,122.14
Data Sehingga November 2020
2019 : 141,379

4
Pusat Kompos Sisa MBPJ

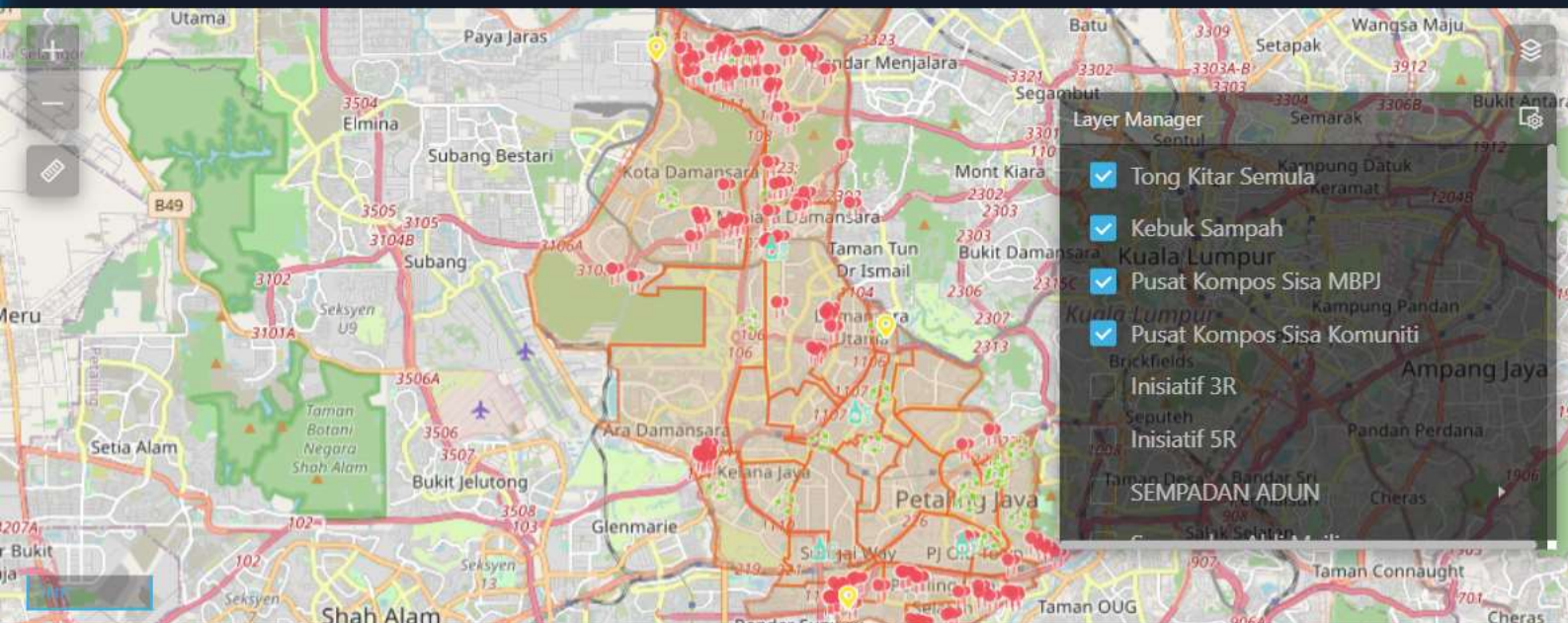
SASARAN 2030

- Sisa Pepejal Perkapita Kurang Daripada 10%
- Zero Waste - Kadar Kitar Semula Sampah 30% / Kadar kenaikan Tahunan Kitar Semula Melebihi 2%

Sasaran 2023

Tarikh Dikemaskini: 18 May 2022

MAP

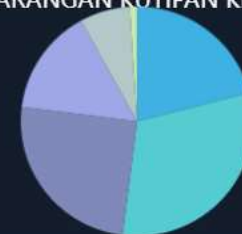


Tarikh Dikemaskini: 22 November 2021

Peratus Kitar Semula Mengikut Kategori Barangan

- KERTAS
- KOTAK
- PLASTIK
- KACA
- TIN
- LAIN-LAIN

STATISTIK BARANGAN KUTIPAN KITAR SEMULA



Jadual

SENARAI LOKASI TONG KITAR SEMULA

DETAILS



Tarikh Dikemaskini: 18 May 2022

SmartLicense Dashboard



SmartLicense- PJ

SmartLicense- PJ Analysis

8 DECENT WORK AND ECONOMIC GROWTH



RM 27,627,600.00

SASARAN KUTIPAN KESELURUHAN

RM 16,691,655.50

JUMLAH KUTIPAN KESELURUHAN (Sekatat 5 November 2022)

RM 15,004, 688.50

KUTIPAN HASIL LESEN PERMIT DLL (setakat 5 November 2022)

RM 1,686,967.00

KUTIPAN HASIL SEWAAN (setakat 5 November 2022)

SASARAN 2030

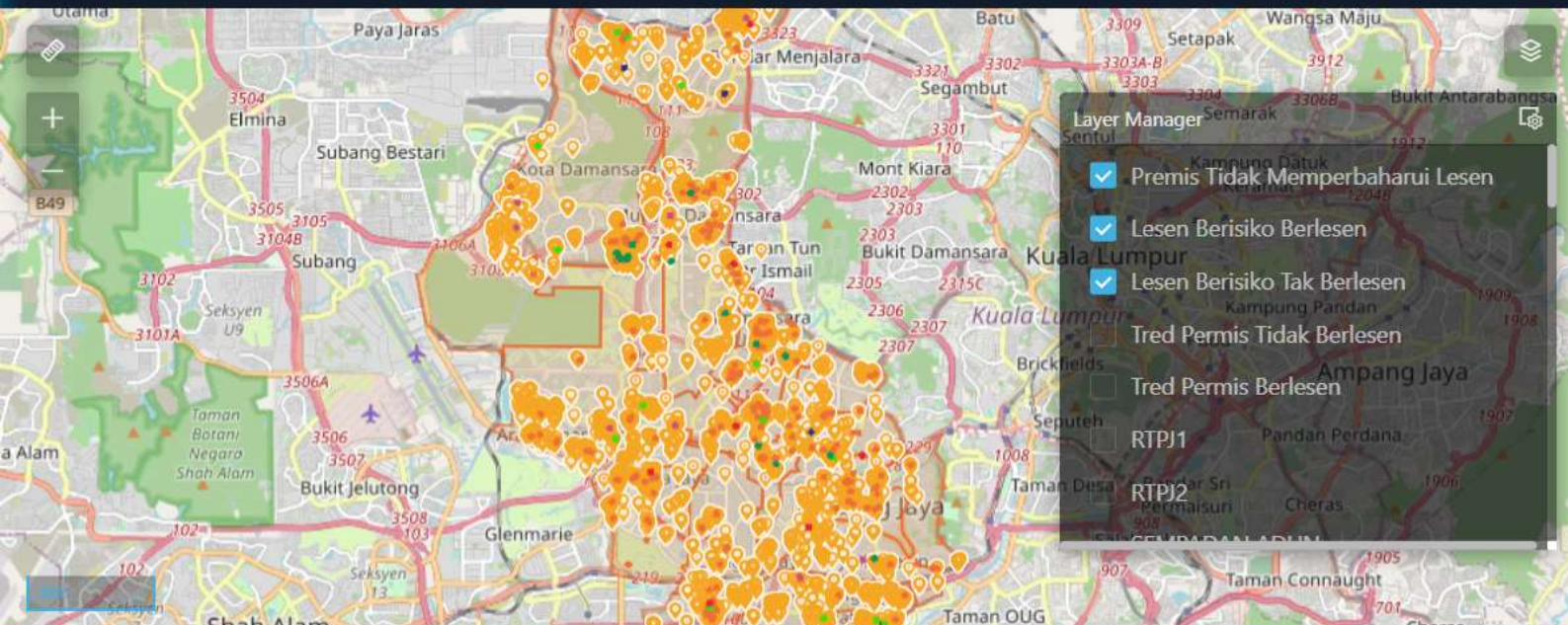
- Kesemua 23 pusat bandar utama bercirikan UD dan disahkan oleh pengguna
- Semua Pembangunan baru swasta dan Majlis bercirikan UD

SASARAN 2023

- Projek UD di Pusat Bandar SS2
- Semakan pelan pembangunan bagi pematuhan UD

Tarikh Dikemaskini: 18 May 2022

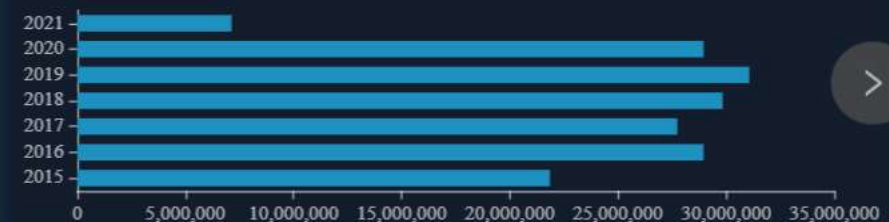
MAP



Tarikh Dikemaskini: 22 November 2021

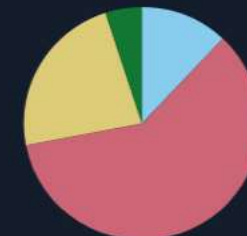
JUMLAH HASIL

TREND KUTIPAN HASIL PERLESENAN MENGIKUT TAHUN



PERATUS PEMBATALAN MENGIKUT ZON

- PJS
- PJU
- SS
- SEKSYEN



Tarikh Dikemaskini: 18 May 2022



Thank You All!

GISTC | 2023地理信息软件技术大会
空间智能 因融至慧 | 2023 Geospatial Information Software Technology Conference