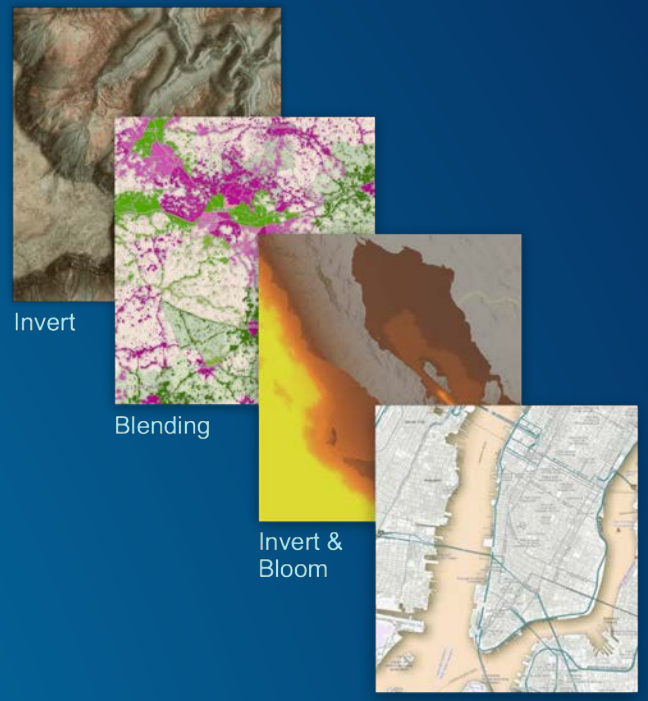
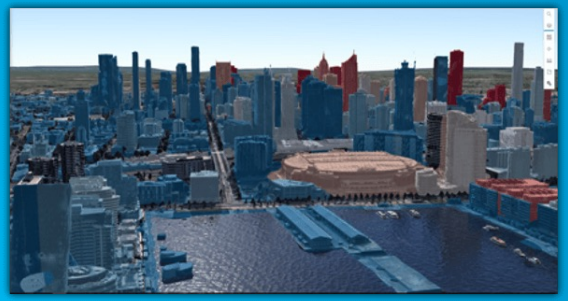
Definisi *GIS*

GIS adalah kumpulan yang terorganisir dari perangkat komputer, perangkat lunak, data geografis, dan personil yang dirancang secara efisien untuk memperoleh, menyimpan, mengupdate, memanipulasi, menganalisis, dan menampilkan semua bentuk informasi yang bereferensi geografi.

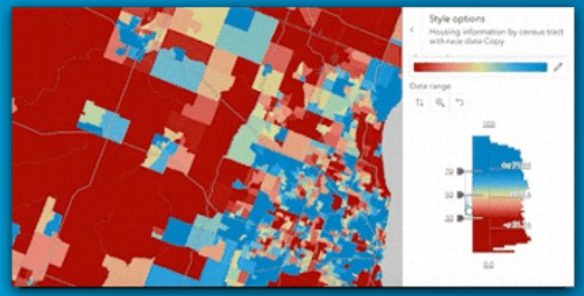
Layer Effects & Blending



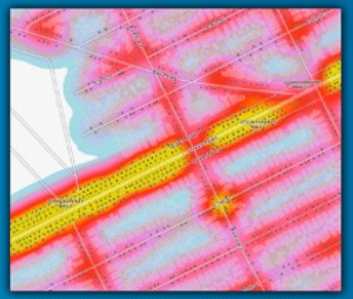
3D



Interactive Maps / Charts

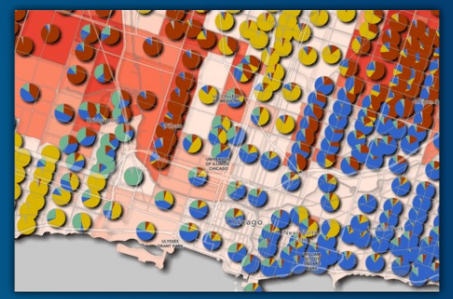


Heat Maps



Accessible for Vision Deficiency

Pie & Donut Charts



Outlines

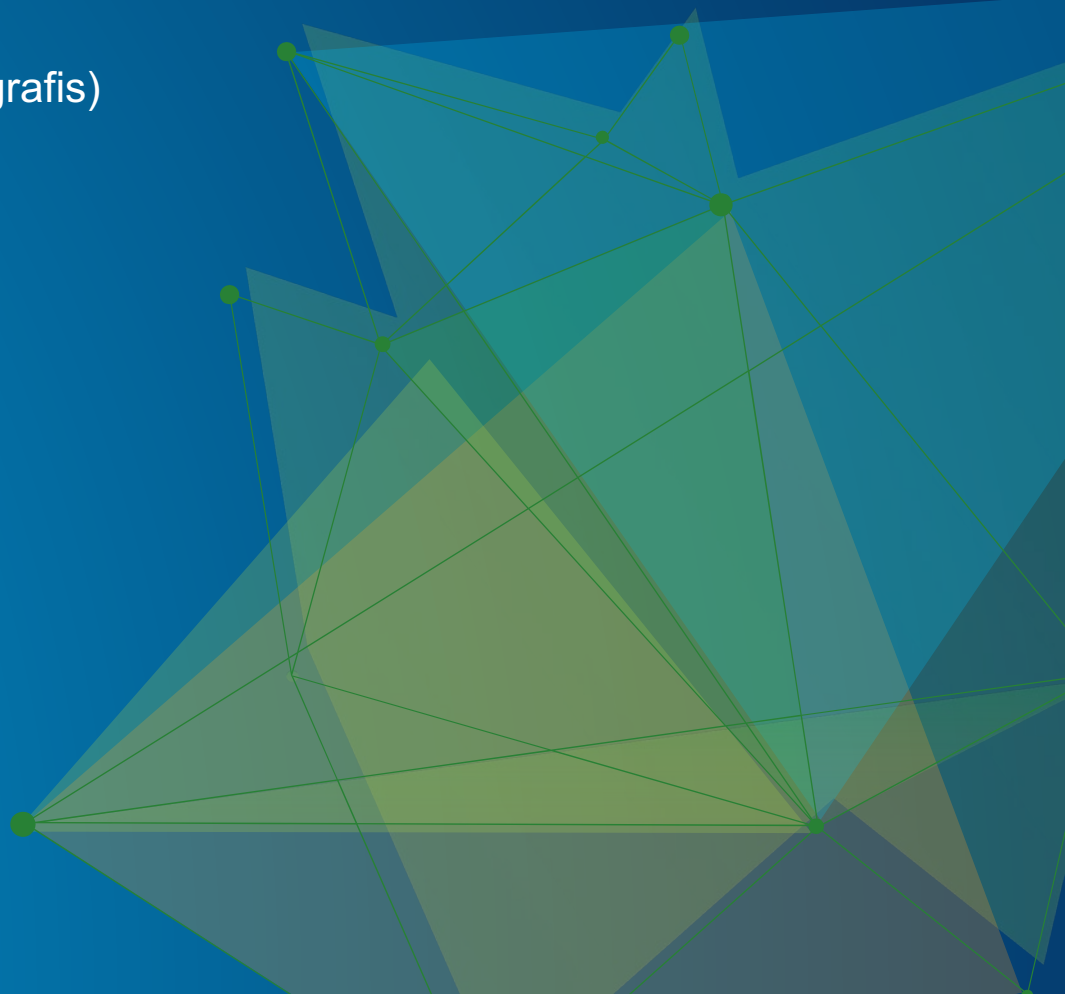
Tentang GIS

(Geography Information System /Sistem Informasi Geografis)

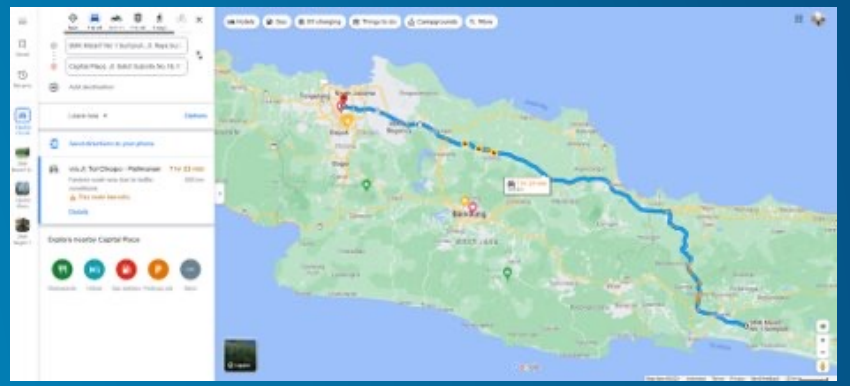
- Definisi
- Aplikasi
- Keunggulan
- Software / Perangkat lunak GIS

Tentang Esri

- End-to-end service
- Esri Indonesia portfolio



Pernahkah kamu menggunakan?



Aplikasi *GIS* | Contoh real-world

- Gunung Merapi – Oktober 2010
  353 orang meninggal dunia
  >320,000 orang kehilangan tempat tinggal

- Dimana?
  - Dimana kerusakan terparah terjadi?
  - Kemana lahar akan mengarah
  - Dimana petugas terdekat yang dapat merespon kejadian
  - Bagaimana profil demografi yang terdampak di lokasi?

Aplikasi *GIS*

- Bidang sumber daya alam (inventarisasi, manajemen, dan kesesuaian lahan untuk pertanian, perkebunan, kehutanan, perencanaan tata guna tanah dsb.)
- Bidang perencanaan (perencanaan pemukiman transmigrasi, tata ruang wilayah, pemukiman, dsb)
- Bidang perpajakan (SI untuk penarikan pajak, billboard yang terkait dengan data posisi, ruang, dan masa berlaku)
- Bidang ekonomi bisnis (penentuan lokasi Mesin ATM, kantor cabang, gudang, show room, dsb)
- Bidang pendidikan (penentuan lokasi pendidikan)
- Dll.

Keunggulan *GIS*

- Sangat efektif dalam membantu pembentukan pengetahuan, prasangka, dan anggapan terhadap lingkungannya secara visual
- Dapat memisahkan data-datanya, sehingga mampu menyajikan presentasi berbagai bentuk.
- Mampu menguraikan unsur di bumi dalam beberapa layer atau coverage data spasial, yang nantinya dipresentasikan dalam bentuk nyata
- Software yang digunakan bisa dikomunikasikan dengan software pengolah data atau bahasa pemrograman
- Dapat bertindak sebagai map-server atau GIS-Server yang siap melayani permintaan (query) melalui jaringan internet.

Software *GIS* = Esri

Dalam pembuatan GIS di perlukan software yang menyediakan fungsi tool yang mampu melakukan penyimpanan data, analisis dan menampilkan informasi geografis. Dengan demikian, elemen yang harus terdapat dalam komponen software GIS adalah:

- Tool untuk melakukan input dan transformasi data geografis
- Sistem Manajemen Basis Data (DBMS)
- Tool yang mendukung query geografis, analisa dan visualisasi
- *Graphical User Interface (GUI) untuk memudahkan akses pada tool geografi.*

Tentang Esri Indonesia

If **Facebook** is the "**Who**",
And **Google** is the "**What**",
Then **Esri** is the "**Where**"
Andre F Bourque,
Enterpreneur.com

" Esri's vision for location intelligence is to help organizations understand why things happen and when they happen, with the goal of gaining business advantage through better understanding. "

-The Forrester Wave, 2018

1
Market Leader
Leading the geospatial industry in mapping and spatial analytics

54
Years History
Esri was founded in California, USA by Jack Dangermond in 1969. Present in Indonesia since 1987

2200
Customers
More than 2200 customers in Indonesia and 550,000 worldwide

100
Professionals
A team of geospatial and industry professionals servicing customer

End-to-end services & solusi geospasial

Consultancy

Subject matter experts working with your team

Ready Solutions & Project Services

Delivering Transformational Capability

Content

Building your foundation data

Premium Support

Personalized and prioritized case management

Training

Building workforce capabilities and capacity

Custom Training

Training to meet your specific needs

Technical Support

Extensive resources and expert support

Our Global Users

National Government

- US Geological Survey
- Ordnance Survey UK
- Environmental Protection Agency
- Abu Dhabi Digital Authority
- Centers for Disease Control
- Land Registry Hong Kong
- Singapore Land Authority
- NASA
- Geoscience Australia
- US Census Bureau

National Security

- US Department of Homeland Security
- US Department Of Defense
- North Atlantic Treaty Organization
- Central Intelligence Agency
- International Hydrographic Organization
- Ministry of Defense UK

Agriculture

- US Department of Agriculture
- AU Department of Agriculture
- Fera Science UK
- Sime Darby Plantation
- Sinarmas Forestry
- Peanut Company of Australia

Commercial

- Starbucks
- Carrefour
- ANZ
- Bank Muamalat
- FedEx
- UPS
- General Motors
- JLL
- AEON
- British American Tobacco

Local Government

- City of Los Angeles
- City of Boston
- City of San Francisco
- City of Toronto
- Urban Redevelopment Authority Singapore
- City of Charlotte

NGO

- United Nations
- World Health Organization
- UNICEF
- IFRC

Utilities

- DUKE Energy
- Perusahaan Listrik Negara
- Korea Electric Power Corp
- Power & Water Corp
- Dubai Electricity & Water Authority
- AT&T

Oil & Gas

- Chevron
- Shell
- British Petroleum

Transportation

- US Department of Transport
- Transport for London
- Schiphol Group

Serving 2200+ Organizations in Indonesia

Government

Retail & Manufacture

AEC

Real Estate & Property

Bank & FSI

Transportation

Utilities

Oil and Gas

Mining

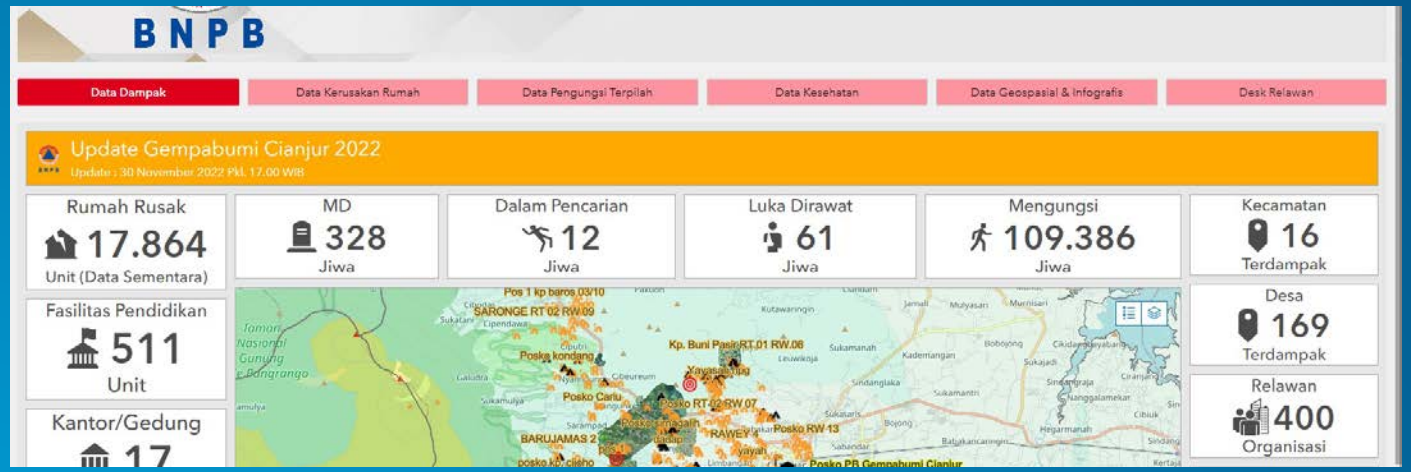
PFA

ArcGIS System

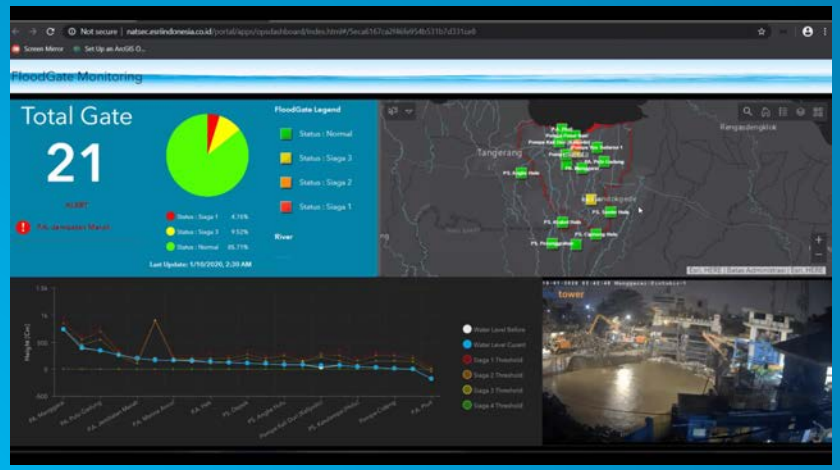
- A complete geospatial solution

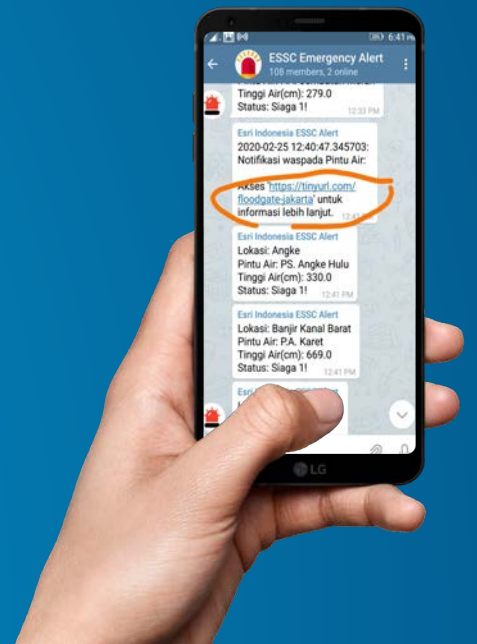
Cianjur – Rapid response

https://gempacianjur-essc.hub.arcgis.com/



Disaster Mitigation Flood Gate

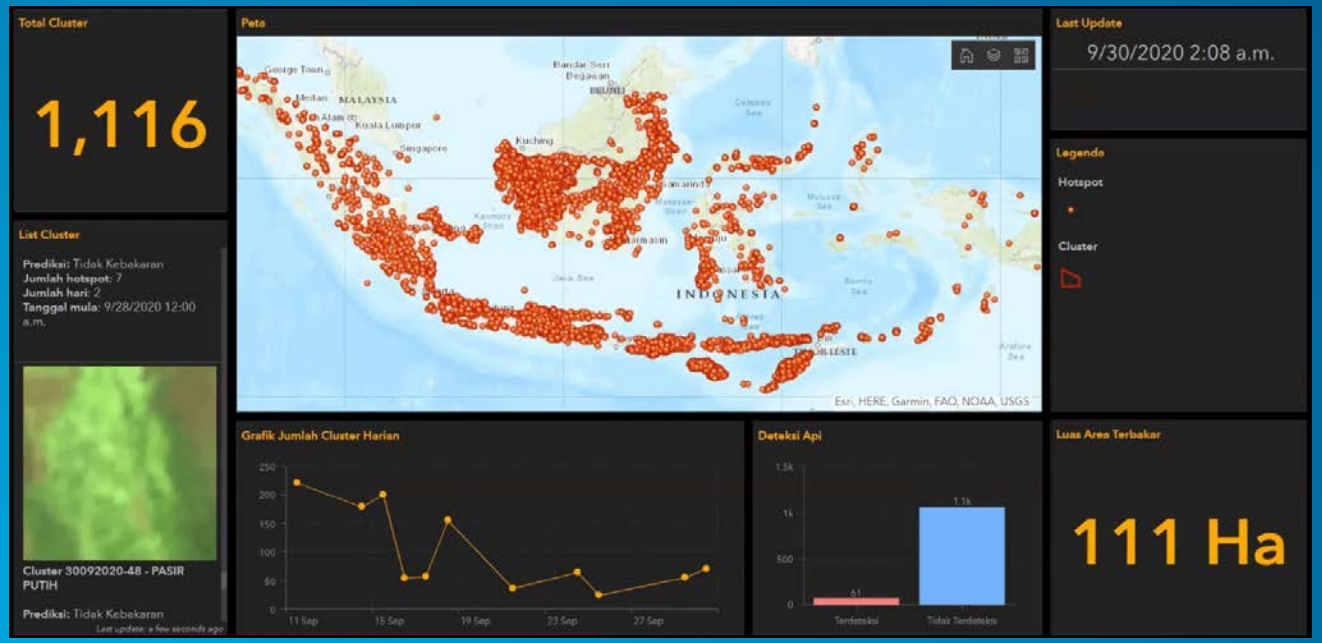




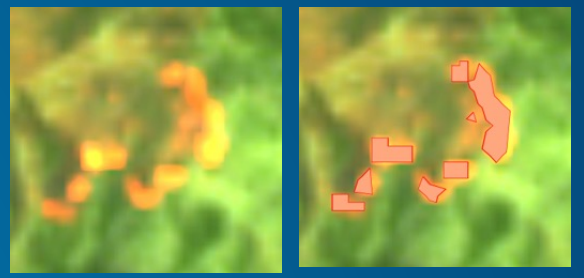
Join Chat Emergency Alert Chatbot Esri Portal Banjir Jakarta

Emergency Management

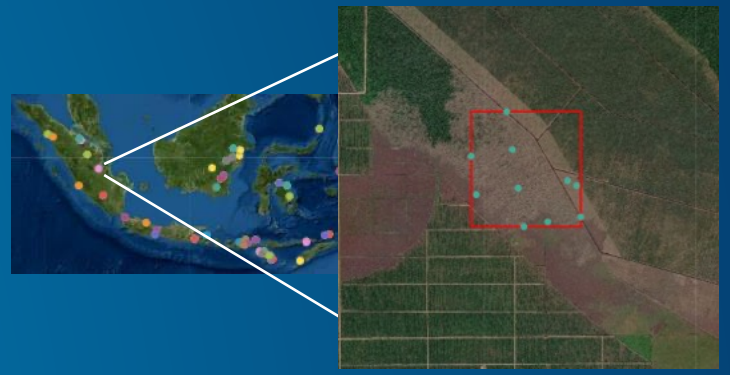
Result



Automated Forest and Land Fire Detection



Impact Analysis



Find Pattern of Hotspots

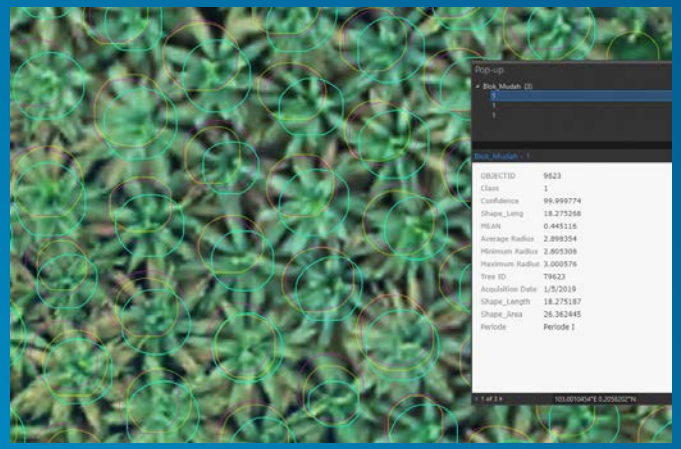
Precision Plantation

https://arcg.is/0rm5XL

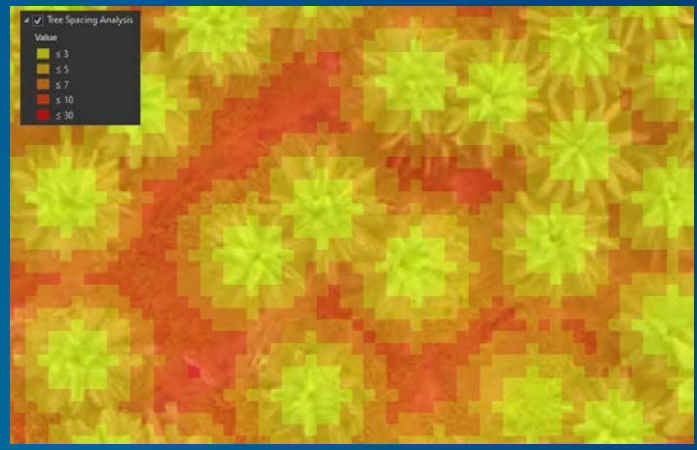
Tree Detection

Health Analysis

Temporal Analysis



Blankspot Analysis 1



Crown Size Analysis

Blankspot Analysis 2

esri Indonesia
THE SCIENCE OF WHERE

Palm Oil Anomaly, Nutrient Deficiencies Detection and Fertilizer Need Assessment

Informasi per Blok Kebun

011C
Luas : 1.120447 (ha)
Sawit : 140 (p)
Produksi Potensial : 2,009.99 (kg/bulan)
Produksi Aktual : 1,485.96 (kg/bulan)
Potensi Kerugian : 26.07 %

013A
Luas : 3.932549 (ha)
Sawit : 463 (p)
Produksi Potensial : 4,149.42 (kg/bulan)
Produksi Aktual : 3,293.54 (kg/bulan)
Potensi Kerugian : 20.63 %

013C
Luas : 6.322415 (ha)
Sawit : 750 (p)
Produksi Potensial : 10,520.69 (kg/bulan)
Produksi Aktual : 8,479.68 (kg/bulan)
Potensi Kerugian : 19.40 %

012C
Luas : 12.564651 (ha)
Sawit : 1086 (p)
Produksi Potensial : 14,418.78 (kg/bulan)
Produksi Aktual : 11,683.72 (kg/bulan)
Potensi Kerugian : 18.97 %

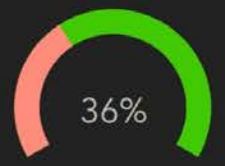
012B
Luas : 24.530889 (ha)
Sawit : 2922 (p)
Produksi Potensial : 30,603.84 (kg/bulan)

Total Sawit (p)

8332

Last update: a few seconds ago

Prosentasi Anomali vs Normal

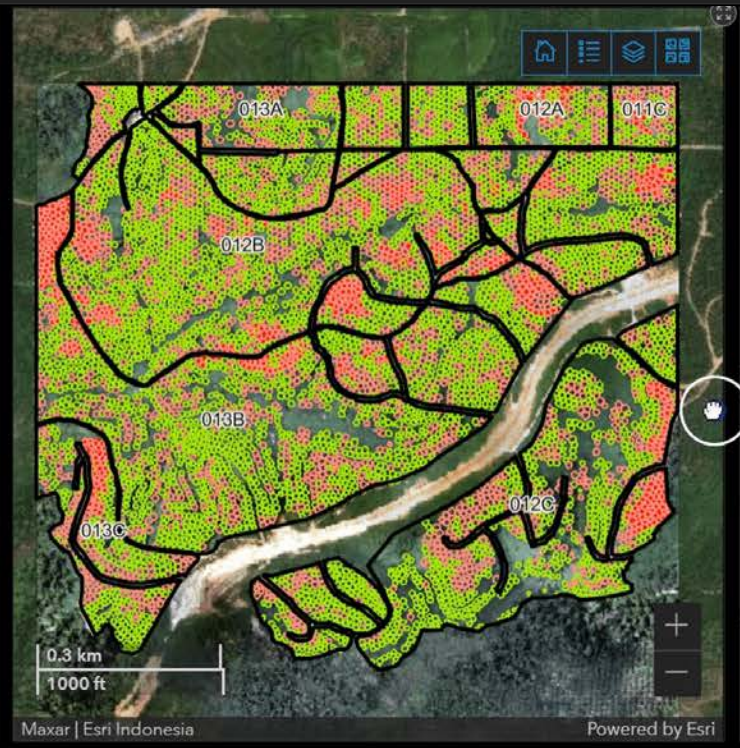


Anomali (p)

3017

Normal (p)

5315



Dosis dan Kebutuhan Pupuk Sawit Anomali (kg/p)

013A-1

	UREA	RP	MOP	DOL
Dosis S1	1.5	1.5	1	1.5
Dosis S2	1	1.5	1	0
Kebutuhan S1	2.3	2.3	1.5	2.3
Kebutuhan S2	1.3	1.9	1.3	0

013A-2

	UREA	RP	MOP	DOL
Dosis S1	1.5	1.5	1	1.5
Dosis S2	1	1.5	1	0
Kebutuhan S1	2.3	2.3	1.5	2.3
Kebutuhan S2	1.3	1.9	1.3	0

013A-3

	UREA	RP	MOP	DOL
Dosis S1	1.5	1.5	1	1.5
Dosis S2	1	1.5	1	0

Dosis dan Kebutuhan Pupuk Sawit Normal (kg/p)

013A-11

	UREA	RP	MOP	DOL
Dosis S1	1.5	1.5	1	1.5
Dosis S2	1	1.5	1	0
Kebutuhan S1	1.5	1.5	1	1.5
Kebutuhan S2	1	1.5	1	0

013A-15

	UREA	RP	MOP	DOL
Dosis S1	1.5	1.5	1	1.5
Dosis S2	1	1.5	1	0
Kebutuhan S1	1.5	1.5	1	1.5
Kebutuhan S2	1	1.5	1	0

013A-16

	UREA	RP	MOP	DOL
Dosis S1	1.5	1.5	1	1.5
Dosis S2	1	1.5	1	0

Rerata Produksi Aktual

11650.6

(kg/bulan)

Rerata Produksi

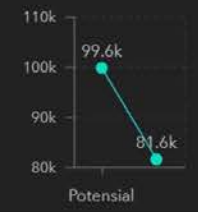
14231.9

(kg/bulan)

Rerata Kerugian

20%

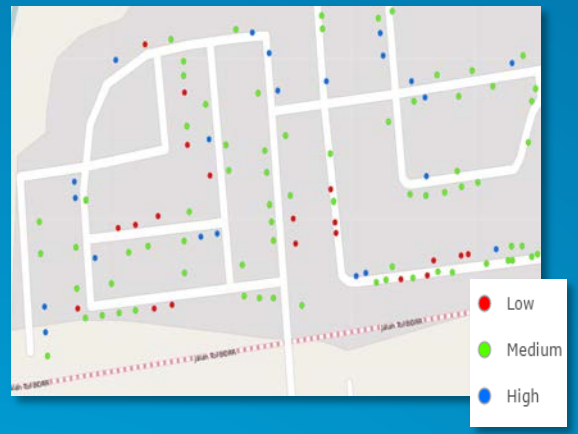
Total Produksi (kg/bulan)



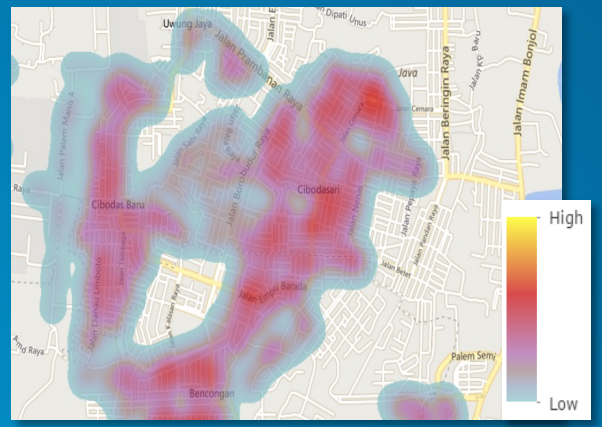
	Urea (kg)	RP (kg)	MOP (kg)	DOL (kg)
Semester 1 (S1)	10425.5	12499.5	10407.0	12499.5
Dosis Kebutuhan	12345.1	14817.8	12351.3	14817.8
Semester 2 (S2)	8333.0	10425.5	4185.0	0
Dosis Kebutuhan	9106.0	11385.3	4559.2	0

Telekomunikasi

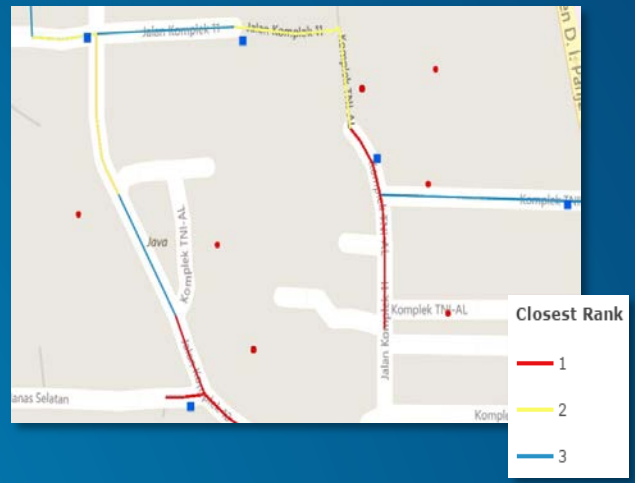
Customer Segmentation



Service Availability

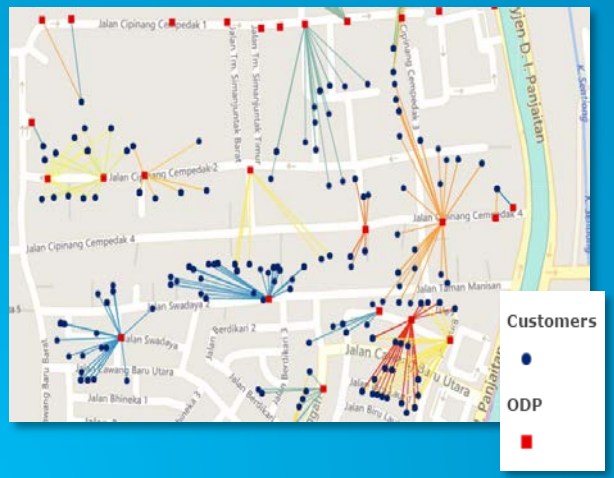


Finding Closest Service

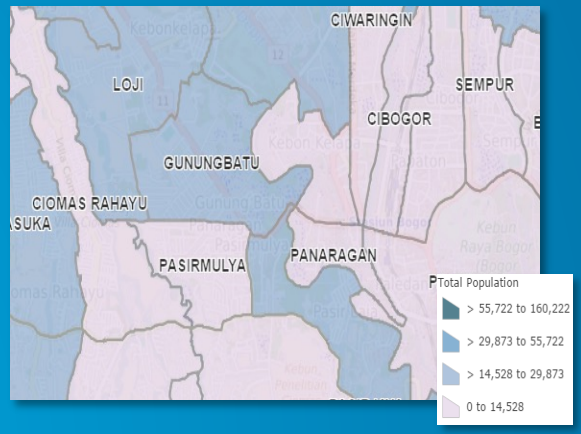


Subscribers :
Targeting 4.000.000 *IndiHome* triple-play *customers* by end-2016

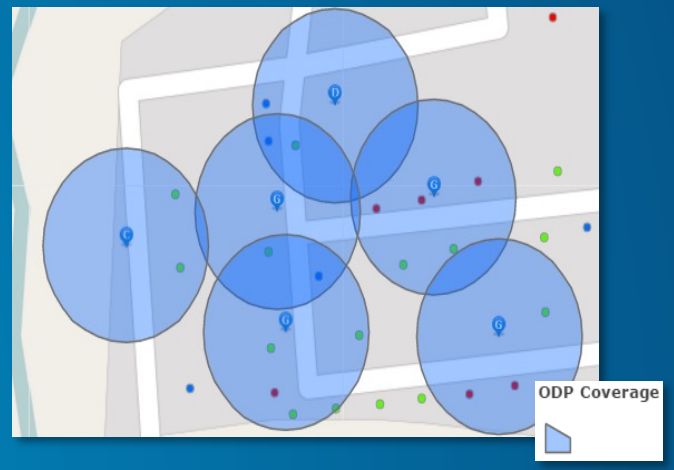
Service Connectivity



Demographic Analysis

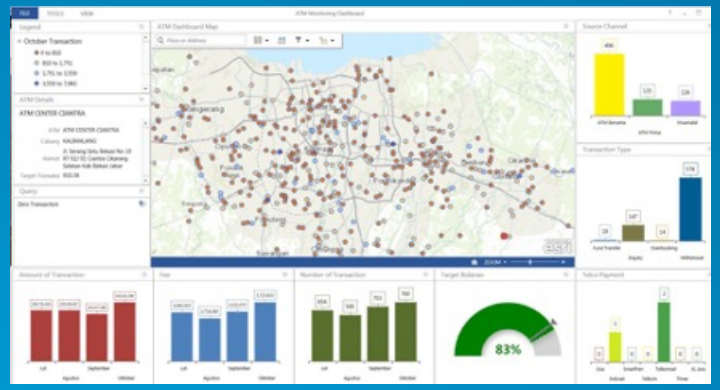


Coverage Analysis

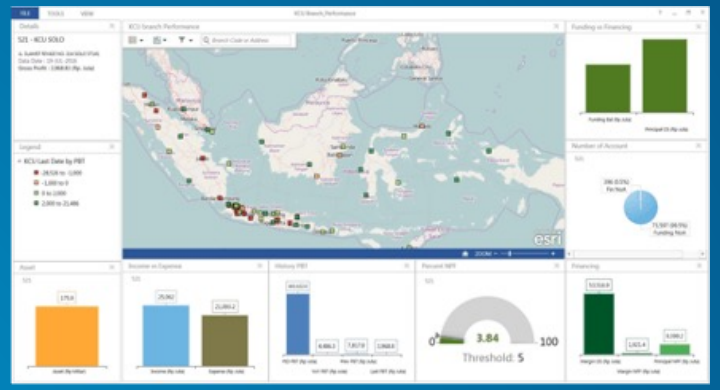


Perbankan

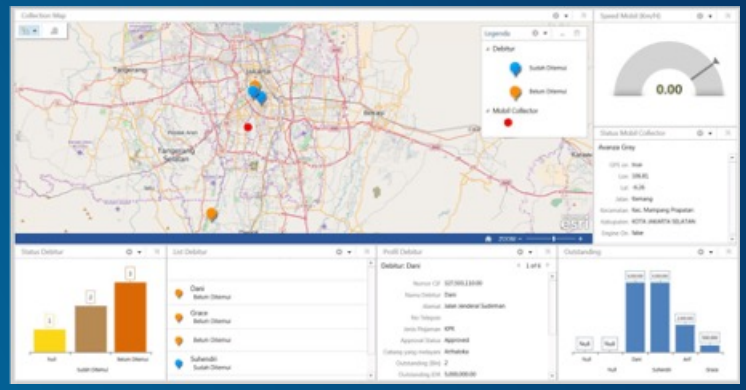
Bank Muamalat



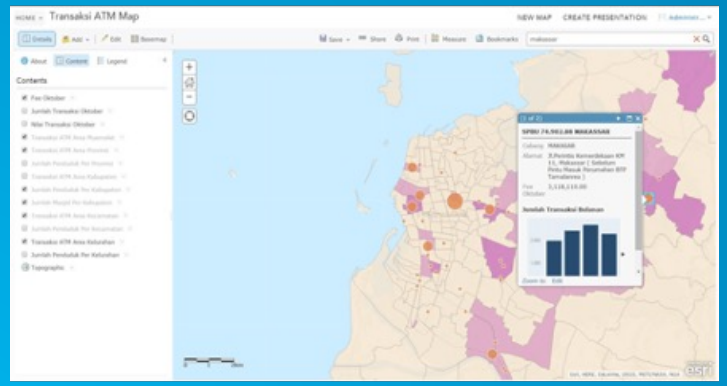
ATM Dashboard



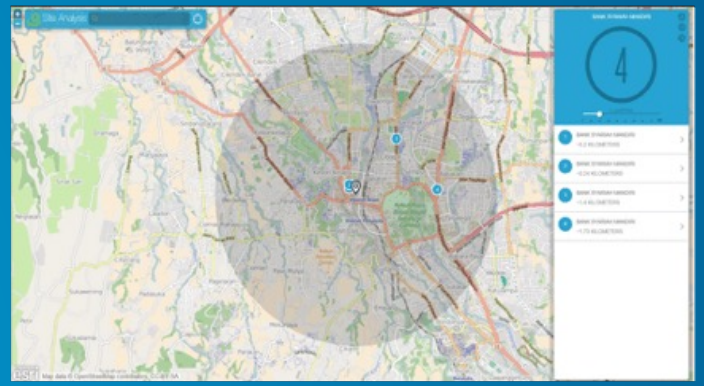
Branch Dashboard



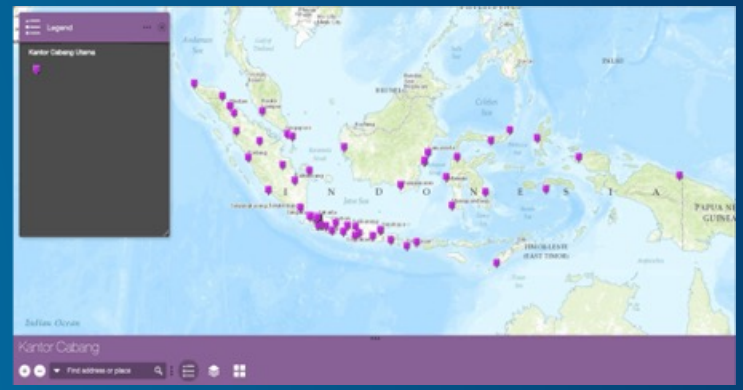
Live Tracking



Transaction per ATM



Site Analysis

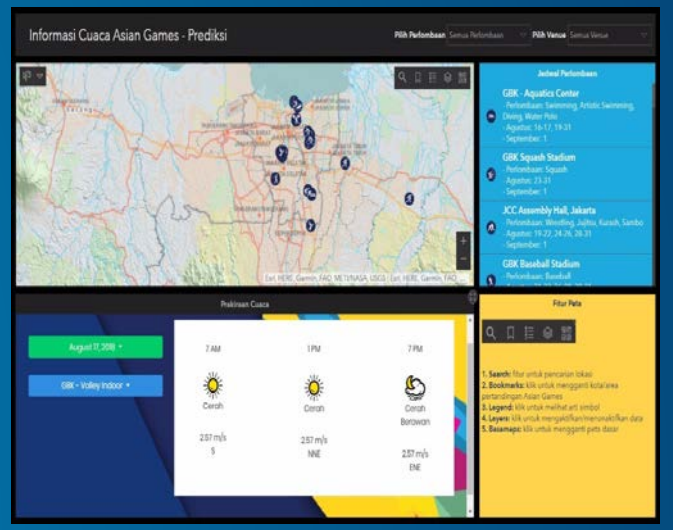


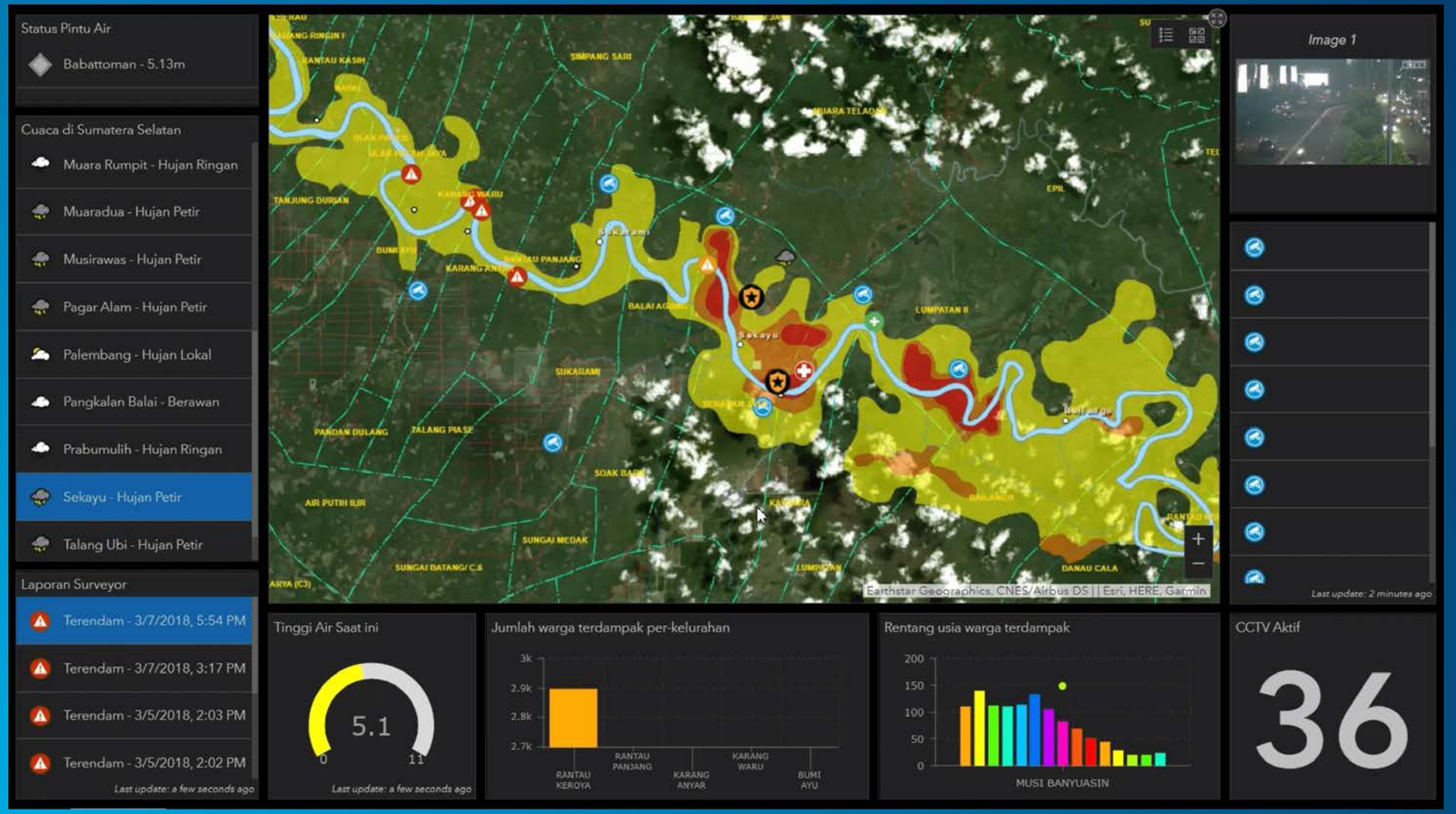
Branch Network

Asian Games 2018 mengandalkan GIS

Interactive Real-Time Weather

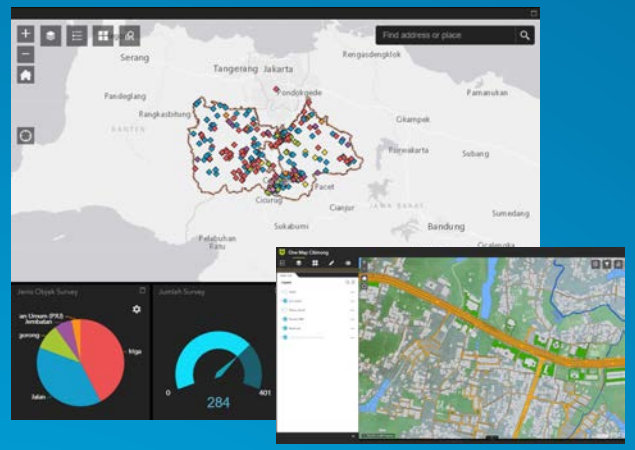
Smart-Weather Forecast




Status Pintu Air
Babattoman - 5.13m
Cuaca di Sumatera Selatan
Muara Rumpit - Hujan Ringan
Muaradua - Hujan Petir
Musirawas - Hujan Petir
Pagar Alam - Hujan Petir
Palembang - Hujan Lokal
Pangkalan Balai - Berawan
Prabumulih - Hujan Ringan
Sekayu - Hujan Petir
Talang Ubi - Hujan Petir
Laporan Surveyor
Terendam - 3/7/2018, 5:54 PM
Terendam - 3/7/2018, 3:17 PM
Terendam - 3/5/2018, 2:03 PM
Terendam - 3/5/2018, 2:02 PM
Last update: a few seconds ago
SIMPANG SARI
TANJUNG DURIAN
KARANG WARU
BUMI AYU
RANTAU PANJANG
KARANG ANYAR
BALAI AGUNG
Sekayu
LUMPATAN II
SUKARAMI
PANDAN DULANG
TALANG PIA SE
SOAK BAH
AIR PUTIH ILIR
SUNGAI MEDAK
SUNGAI BATANG/ C.6
DANAU CALA
Earthstar Geographics, CNES/Airbus DS | | Esri, HERE, Garmin
Image 1
Last update: 2 minutes ago
Tinggi Air Saat ini
5.1
0
11
Last update: a few seconds ago
Jumlah warga terdampak per-kelurahan
3k
2.9k
2.8k
2.7k
RANTAU KEROYA
RANTAU PANJANG
KARANG ANYAR
KARANG WARU
BUMI AYU
Rentang usia warga terdampak
200
150
100
50
0
MUSI BANYUASIN
CCTV Aktif
36

Actionable Insight untuk Pemimpin Daerah

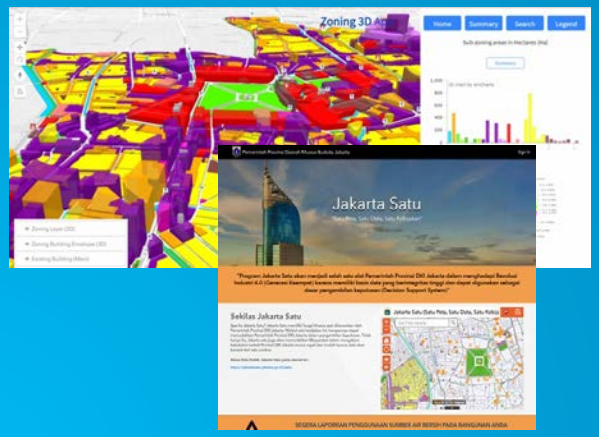
Bogapeta
Kabupaten Bogor



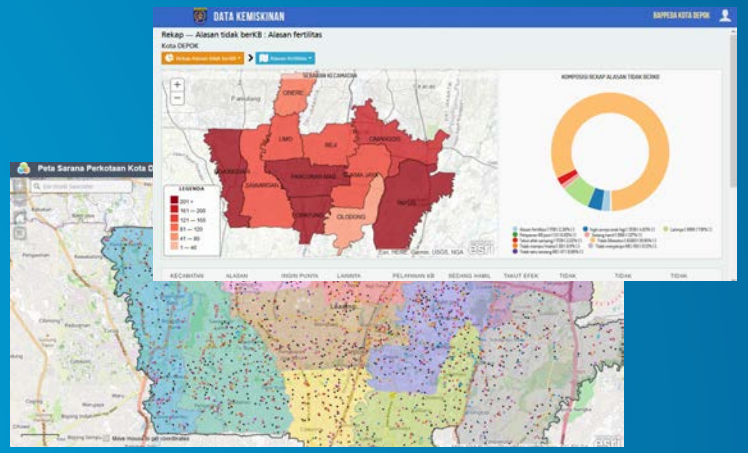
Live Room
Kota Tangerang

Portal GIS Covid
Kota Palembang

Jakarta Satu
Pemprov DKI Jakarta



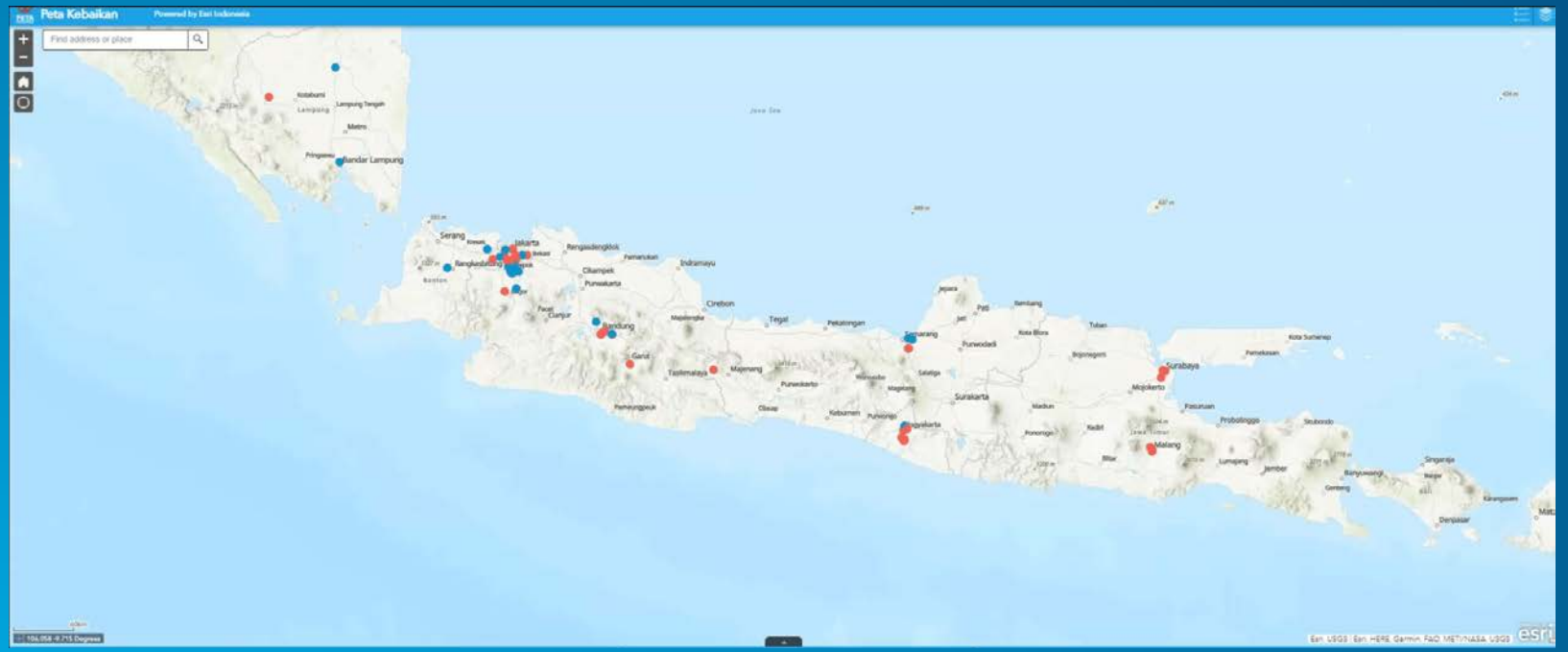
Geoportal Data
Kota Depok

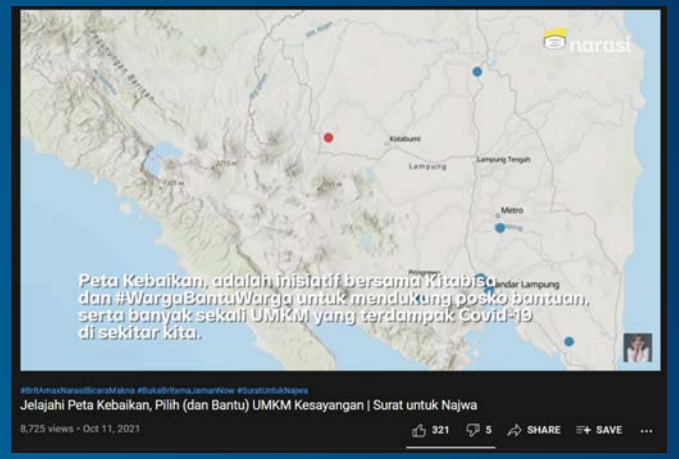


Geoportal Data
PUPR Maluku Utara

and many more …

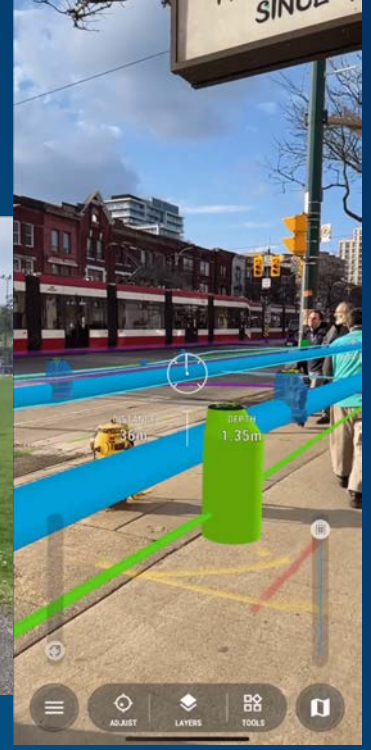
Initiatives to help others with GIS





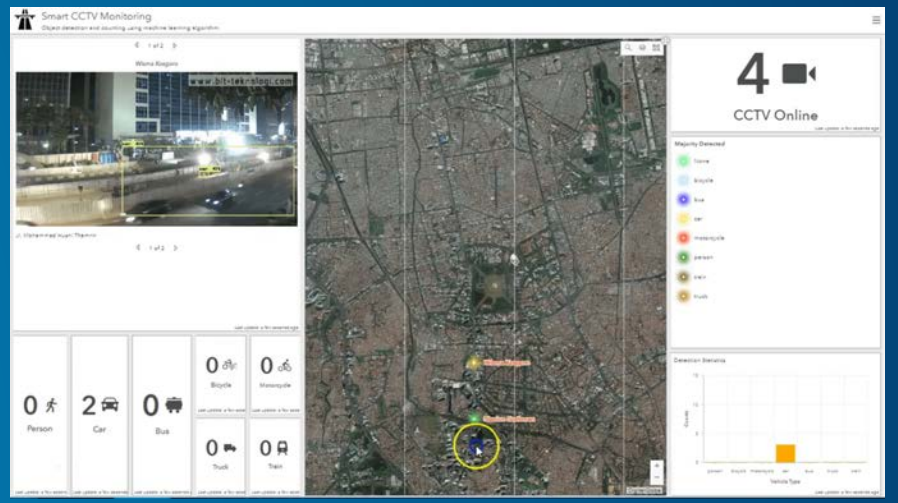
Perencanaan Tata Kota

AR & Digital Twins



Pengembangan Game dengan GIS

Smart CCTV Monitoring



CIMIC Group/EIC Activities, Simon Bowles