



GIS Based Platform for Network Design and Maintenance Solution

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SEE
WHAT
OTHERS
CAN'T

Chapter objectives

- Cloud base information structure.
- Cross platform client software support.
- Full custom data access privilege control .
- Connect to all thirdparty API and database .
- Integration all data related to network and service in one platform .
- Custom report for geo and none geo data processing and data mining .
- Support all procedure for design , implementation , operation , maintenance and optimization of network.
- Cellular network KPI monitoring , data collection and processing.



Cloud base information structure.

Cloud Future :



- All user can work on one map to read , write and edit geo and non-geo data the in the same time without limitation .
- The unlimited user can connect in same time on cloud data source .
- Expandable and clustered database structure .
- Secure and protected data access protocol .
- Data processing and mining can be done in cloud side or client side based on police and requirement .



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Cross platform client software support

Client Platform Support :



- Support All Desktop and mobile OS platform for installing and use client software .
- In filed user can use clint software for mobile and tablet for see and use geo map and integrated non-geo information and input or edit geo and non-geo data in real time.
- In desktop platform user can use advanced client software for input data and report more detailed information .
- IOT device can connect by middle software engine and standard protocol to send and receive geo and non-geo information to geo cloud data source .

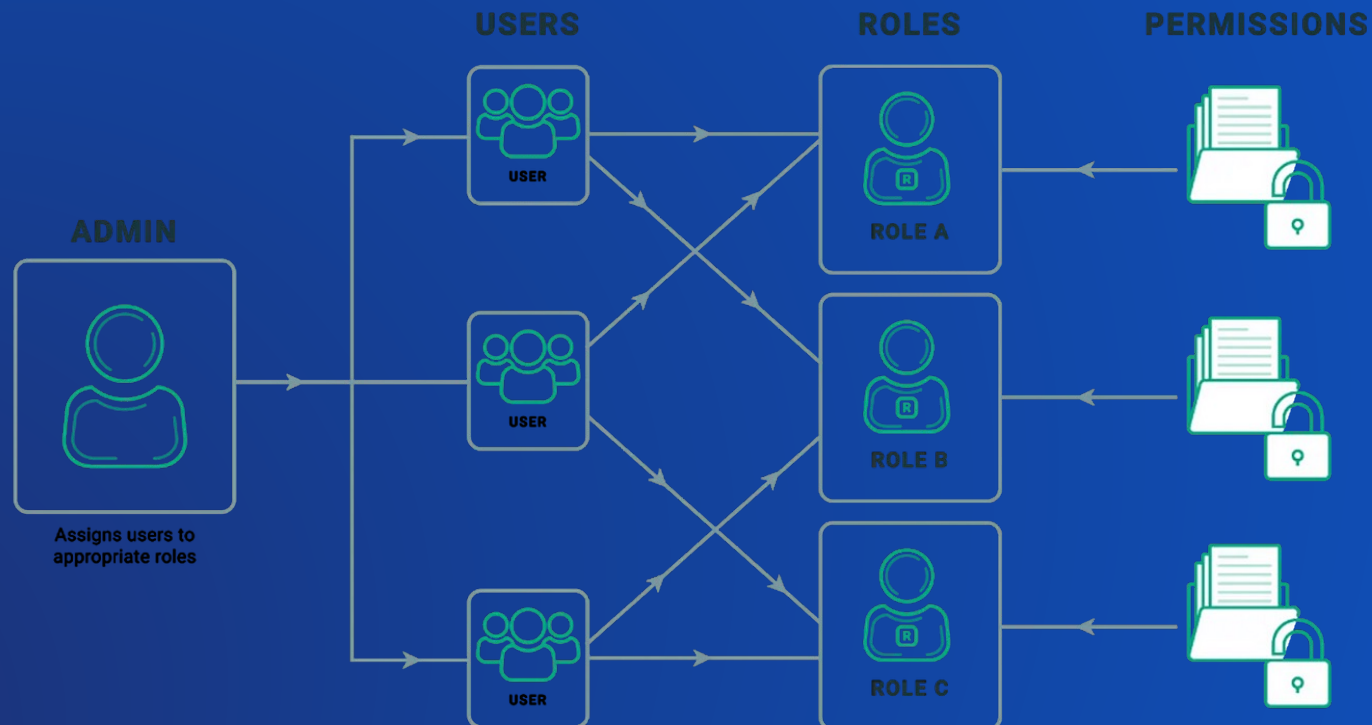


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Full custom data access privilege control

Data Access Privilege Control :

- Implementation off complicated data access management .



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Connect to all third party API and database

Send data to and Resaved data from third party data source platform :



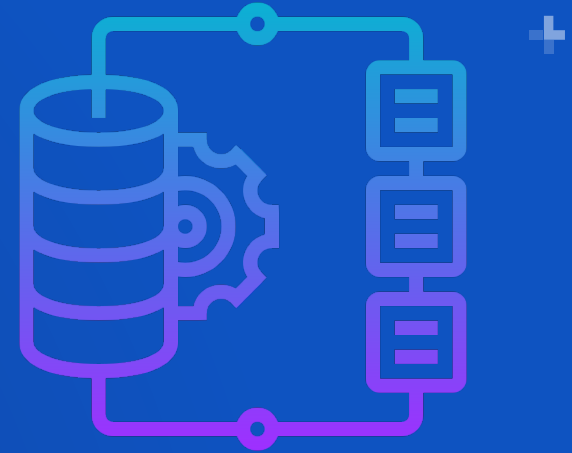
- **GEO-BIT engine can connect to any other software platform like NMS or other OSS to grab network active part status and configuration to show real time data on geo map and use that data for diagnostic processing procedure .**
- **GEO-BIT engine can connect to any inventory software to report any information that they need about the assets they have in network based on geo location and and object relation .**
- **GEO-BIT engine can connect to any staff work management software to report any information that they need about the staff do in filed during implementation or maintenance .**



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Integration all data related to network and service in one platform

Use GEO-BIT Platform for storing all network information data based on location :



- GEO-BIT can store all inventory information about all part on network in geo database and generate any required report based on that .
- GEO-BIT can store all staff activity like location and movement for generating the KPI for metering implementation and maintenance procedure .
- GEO-BIT can integrated and connected to NMS to collect active network part status and store it as geo information based on location and based on passive network relation to give the operator any information that needed for network monitor and maintenance .



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Custom report for geo and none geo data processing and data mining

Use GEO-BIT Platform for crating custom report and query for geo and non-geo data.



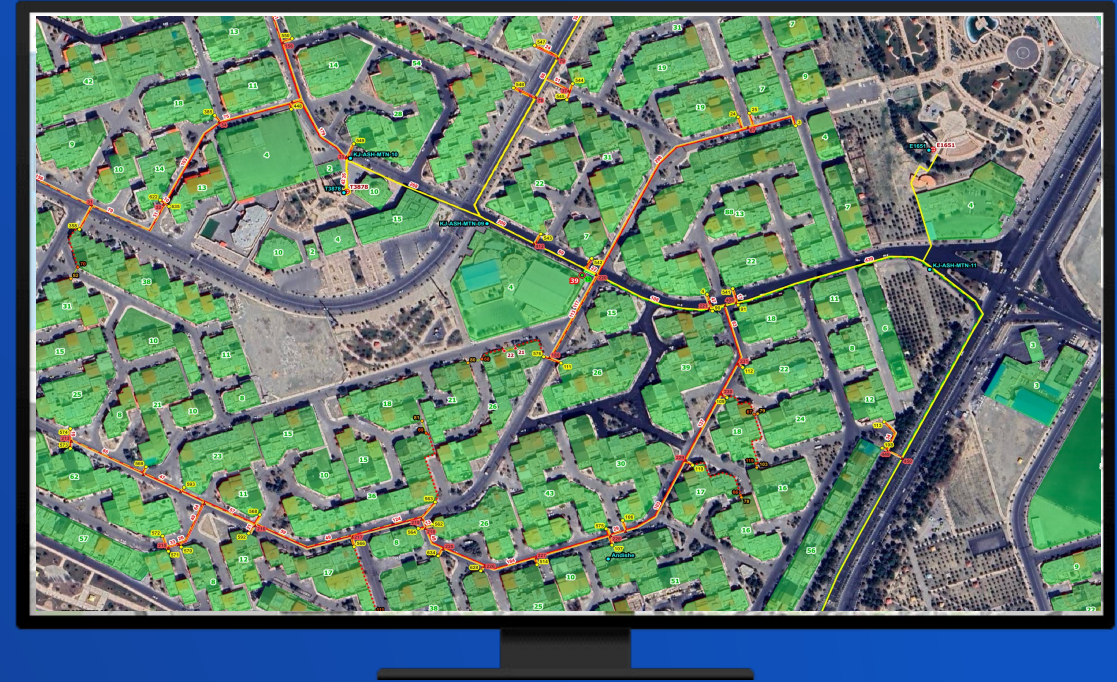
- User can crate custom query for generating geo or non-geo report and standard table data information .
- User can run saved query for generating new standard report based on access and rule management .



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Network Design :

Use GEO-BIT for Design GPON network with all integrated data :



- User can see and can calculate and design optical network based on exact GEO information like :
 - Satellite Image from Google (Google Pro API) , Bing , Yandex , Map Box , ...
 - Street routes and the location of known points in open street map(OSM) and google road and Bing road .
 - Independent building blocks with continuous walls that can be use for drop cable access.
 - Household population living in each independent block that can be use for calculation of optical fiber port quantity for each FAT.



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- All information that related to network in passive part can be show by GEO object in GEO-BIT platform :

- Depth of Excavation
- Length in each section
- Excavation section ID
- Obstacle location and type
- Hand excavation line
- Date ,Time, Who was the designer ...
- ...



Network Design :

Use GEO-BIT for Design GPON network with all integrated data :

- All information that related to network in passive part can be show by GEO object in GEO-BIT platform :
 - Micro-duct information in each section :
 - Type
 - Length in each section
 - Quantity in each way
 - Each section UID
 - Micro-Duct Closure location
 - Micro-Duct Closure pipe Connection MAP
 - ...

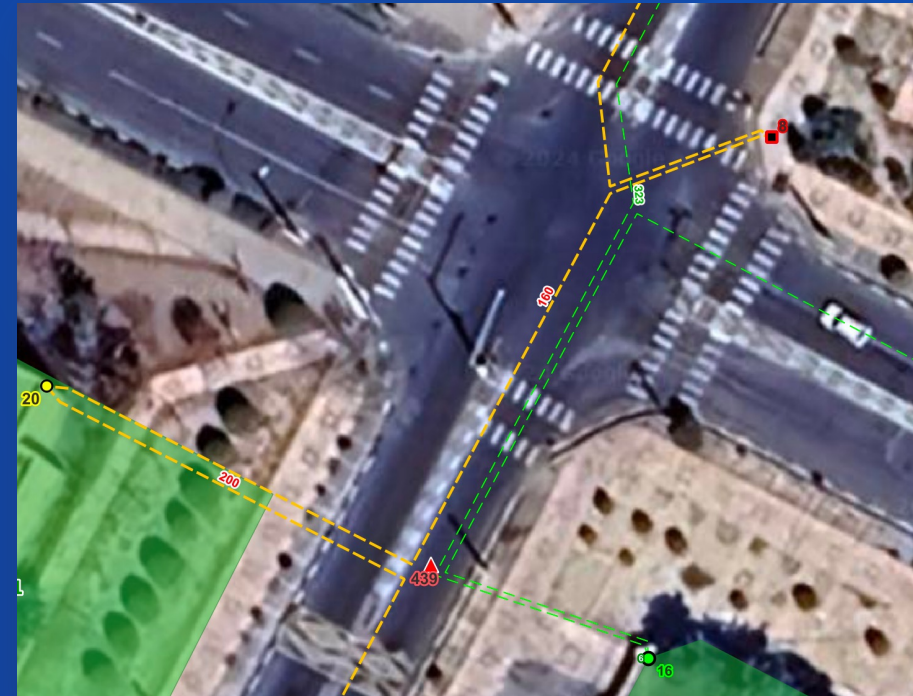


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Network Design :

Use GEO-BIT for Design GPON network with all integrated data :

- All information that related to network in passive part can be show by GEO object in GEO-BIT platform :
 - Micro-Cable information in each section :
 - Type of cable
 - Length in each section for blowing
 - Start and end point of cable
 - Connection topology and micro cable blowing map
 - Fusion MAP for each FAT and ODC
 - Splitter Location and port map
 - ...

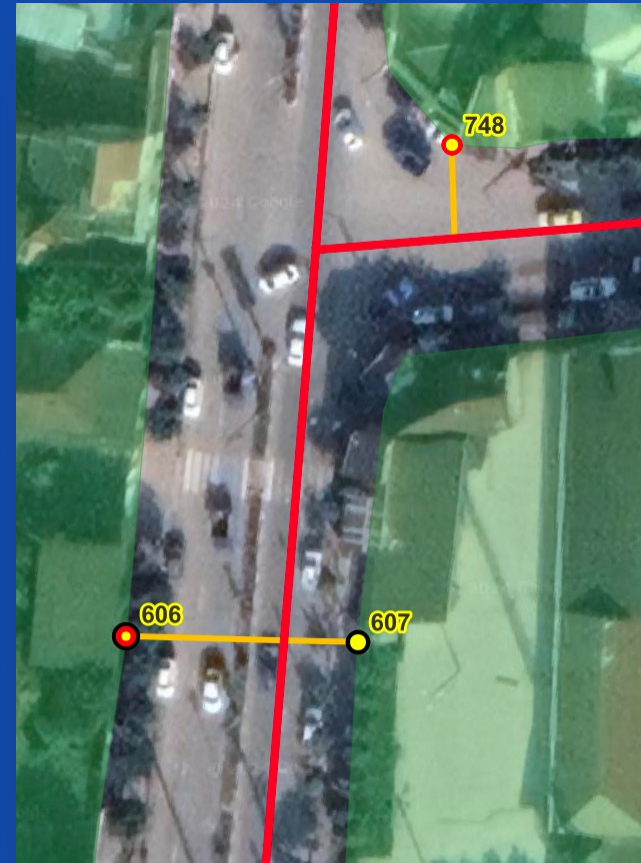


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Network Implementation :

Use GEO-BIT for Implementation information collection and project performance control :

- All information that related to Implementation process of network can be show by GEO object and database query in GEO-BIT platform :
 - Excavation done for each part
 - Concrete done for each part
 - Asphalt Done for each part
 - Show Micro-Duct ball test done for each section
 - Show each FAT , ODC and Micro-Duct closure that be installed
 - Show cable blowing done for each section
 - Show Fusion Done for each ODC and FAT
 - ...



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Network Operation :

Use GEO-BIT as resource for information that use for network operation and expansion and service delivery :

- All information that needed to operate the network can be seen by GEO object and database query in GEO-BIT platform :
 - The information and relation of network passive part :
 - Cable Topology
 - Fusion plan for each FAT and ODC Point
 - Pipe Connection in Micro-Duct closure
 - Splitter location and port
 - Length , type , and relation of Micro-Duct , Cable ,FAT , ODC, ...
 - Drop-Cable route , port and customer location and information
 - ...

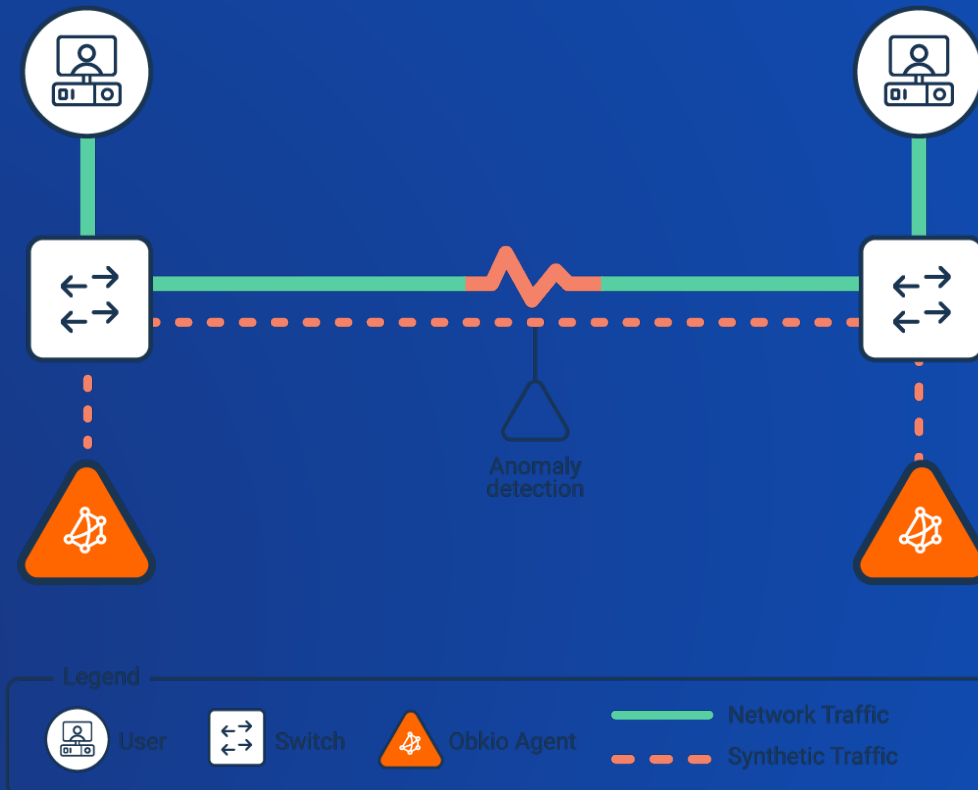


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Network Operation :

Use GEO-BIT as resource for information that use for network operation and expansion and service delivery :

- If GEO-BIT connected to NMS systems it can process this type of data for operation :
 - Data mining process that show witch part of passive network may be impact
 - Show all active network status in GEO object in real time

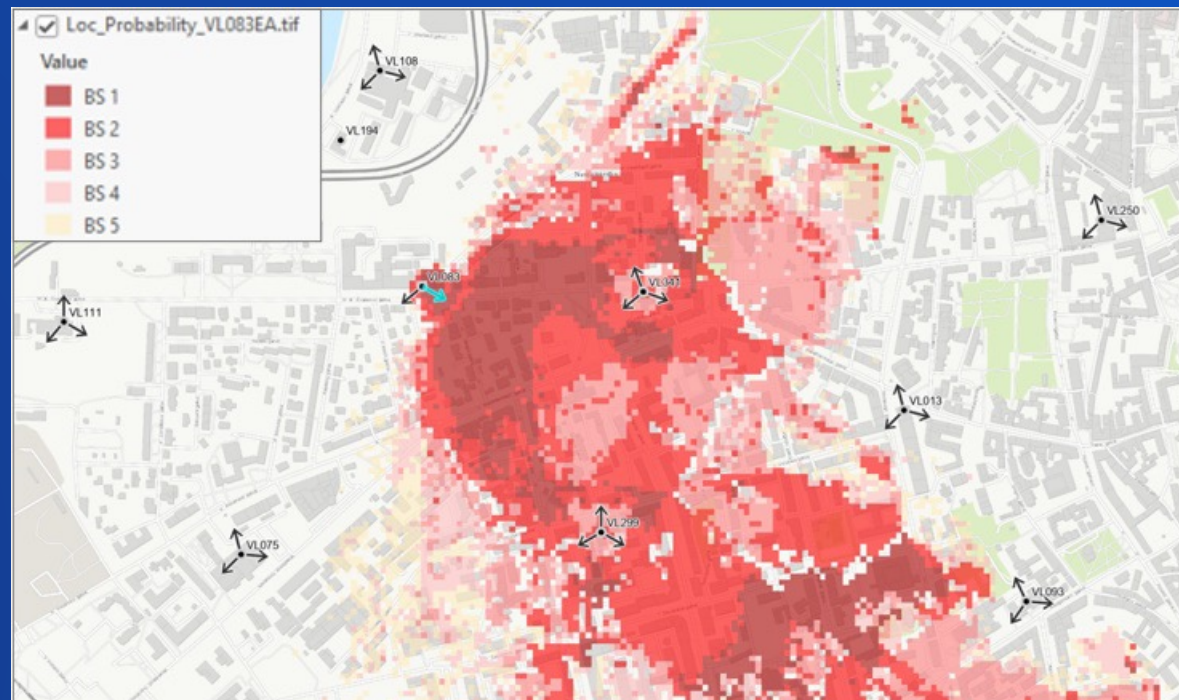


Cellular network KPI monitoring , data collection and processing.

Cellular network data gathering and data mining and result reporting based on geo data



- **Collecting and processing all information that related to cellular network quality and generate information that needed for cellular network optimization .**
 - Data gathering by mobile software
 - Data gathering by IOT device



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Positioning technologies in GEO-BIT platform :

let user and service operator to access all information that usable in the location for send support request and response to support request ASAP.

VLC
(Visual Light
Communication)



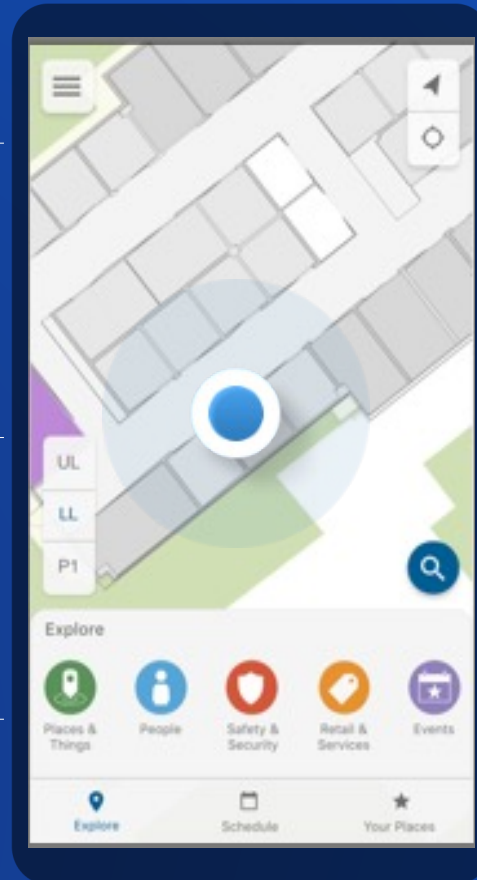
BLE
(Bluetooth
Low Energy)



Wi-Fi



Indoors



GPS
(Global
Positioning System)



GSM
(Global System
for Mobile
Communications)



Outdoors

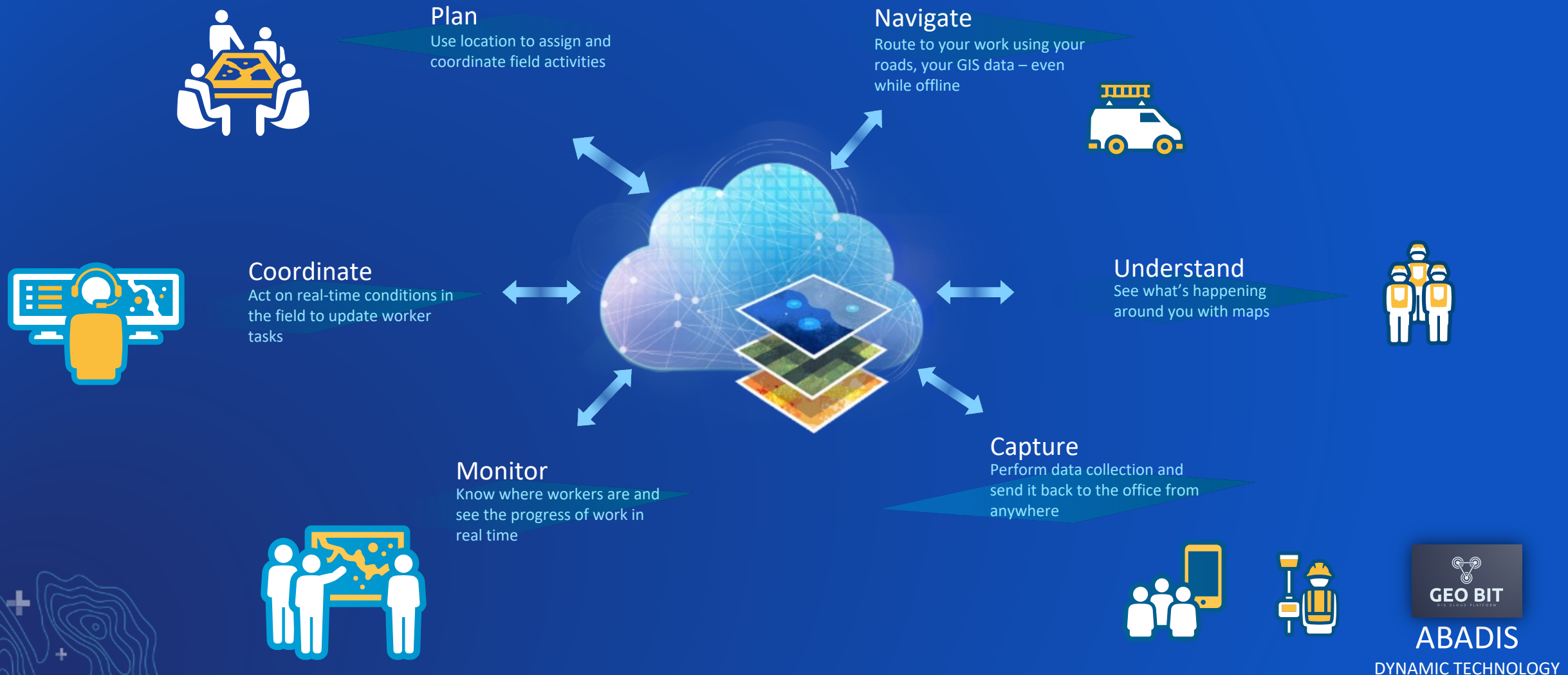


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Feature layer views



GEO-BIT native apps for field and indoor operations



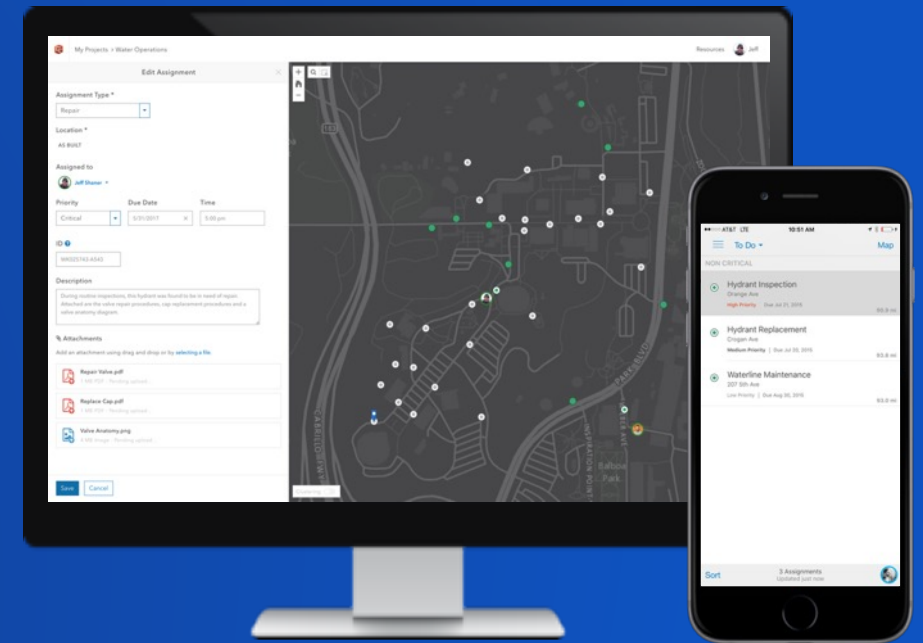
GEO-BIT

Plan and coordinate fieldwork

Plan and coordinate fieldwork

Improve operational awareness

Create and manage fieldwork



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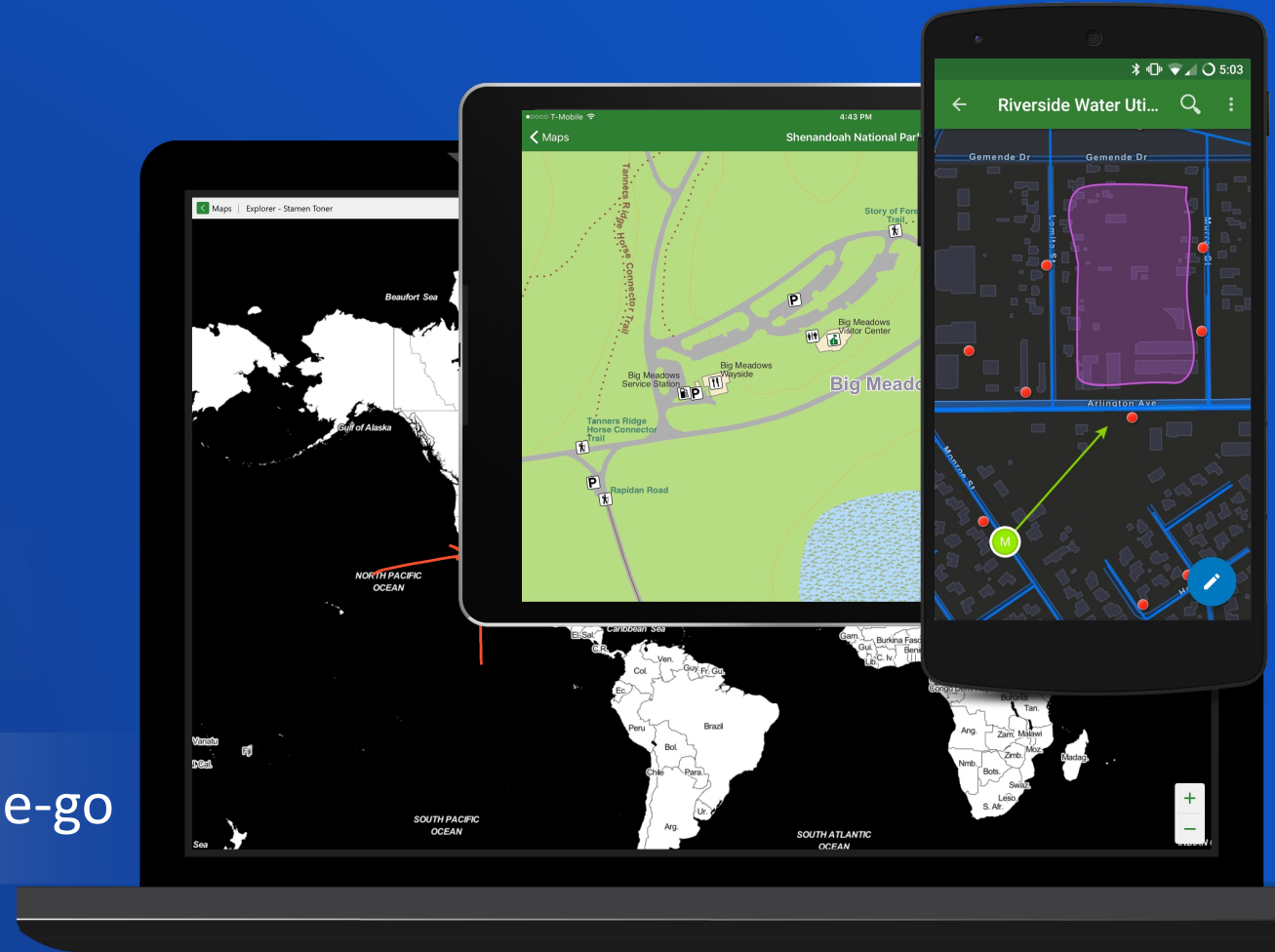
GEO-BIT

Maps anywhere

View your maps anywhere

Easily find field assets

Create and share notes on-the-go

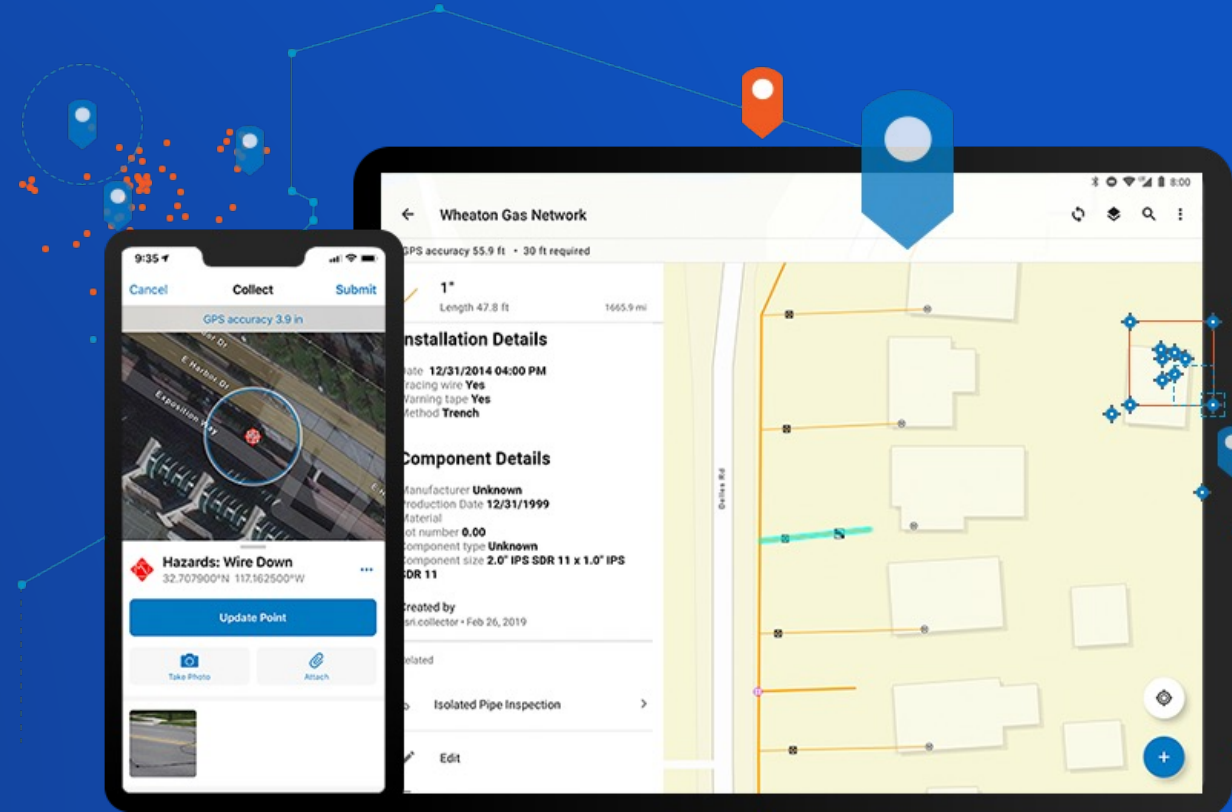


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GEO-BIT

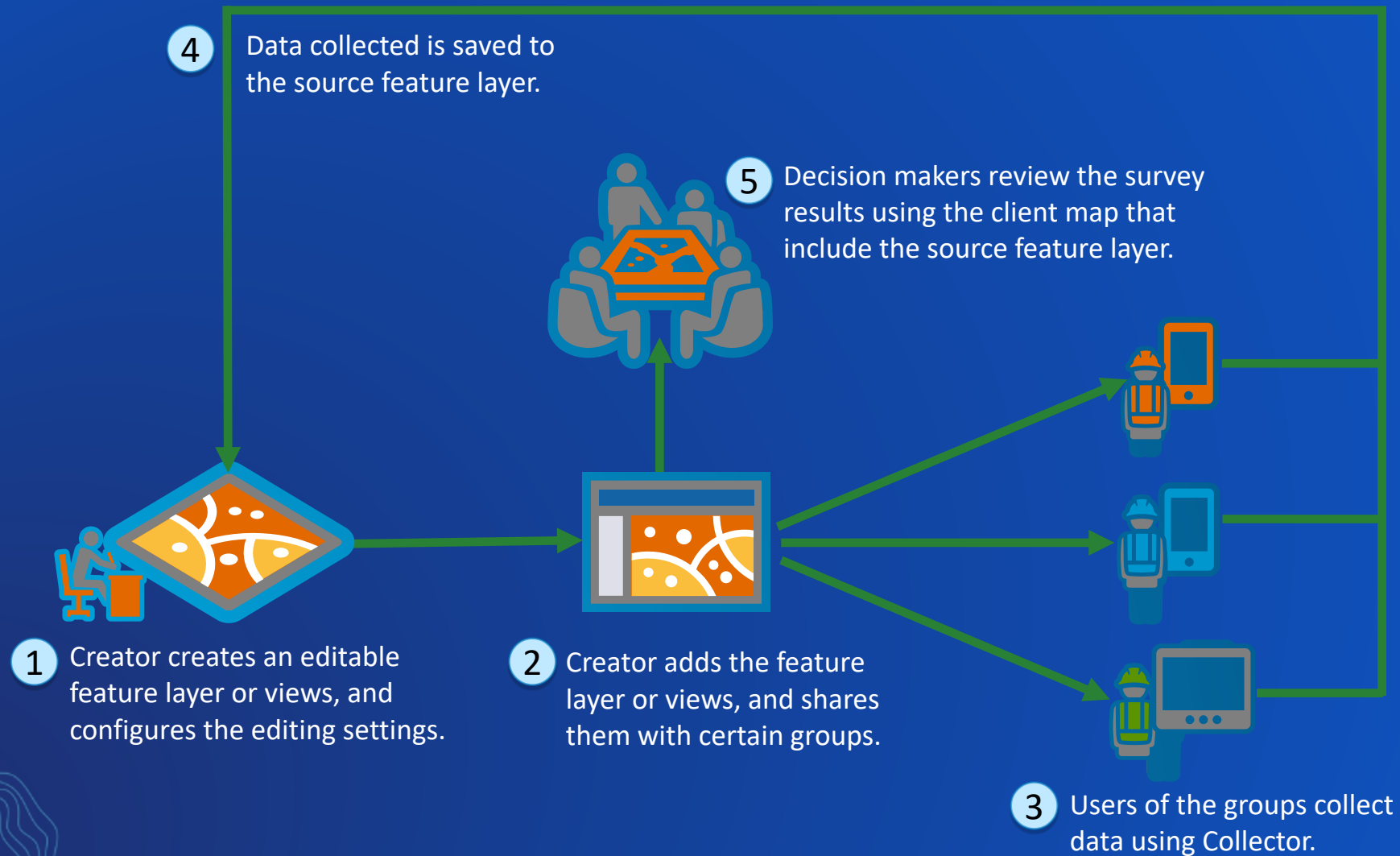
Map Centric data collection

- Collect and update data using the map or GPS
- Collect points, lines, areas, and related tables
- Fill out easy-to-use, map-driven forms
- Use professional-grade GPS receivers
- Search for places and features



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Workflow to use Collector



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Know what happens in the field

Share your location

Know where everyone is

Own your locations



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All the possibilities described finally cause:

Maximum Performance

Maximum Efficiency

Minimum Cost



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THANKS FOR YOUR ATTENTION

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