

# **nTech**

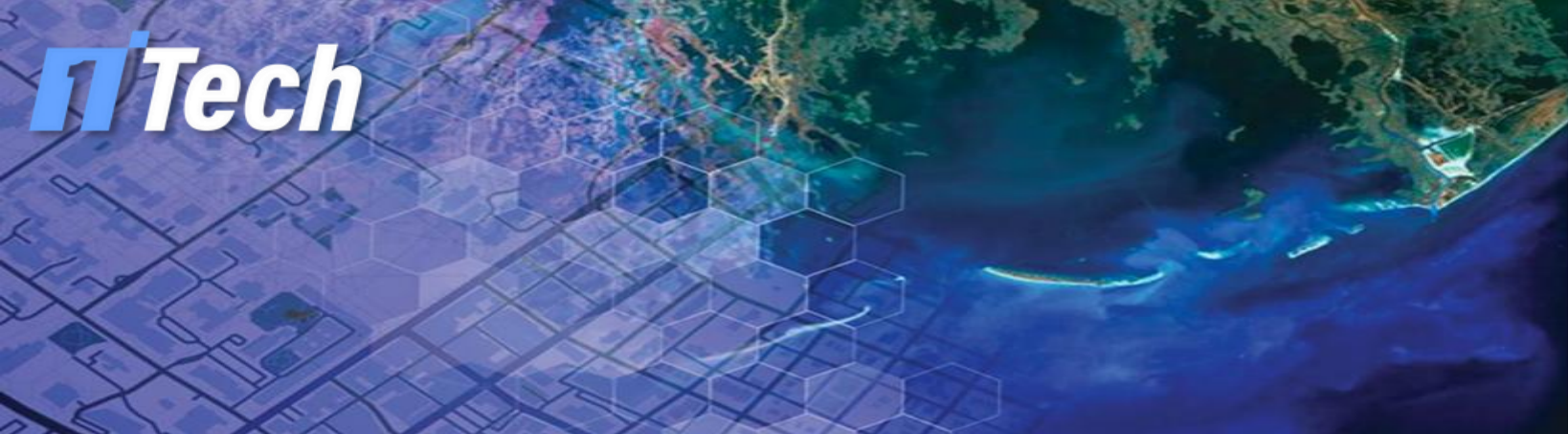
We Dream ... Innovate ... Achieve

رؤية  
VISION  
2030  
المملكة العربية السعودية  
KINGDOM OF SAUDI ARABIA

# Content

- \_\_\_\_\_ About Us
- \_\_\_\_\_ Our Clints
- \_\_\_\_\_ Our Products
- \_\_\_\_\_ Our Services
- \_\_\_\_\_ Our Projects
- \_\_\_\_\_ Our Team
- \_\_\_\_\_ Contact Us





# About 1stech

- **1stech** is a leading Saudi company, established in 2022 to serve as a trusted partner in delivering advanced engineering and geospatial consulting services.
- We provide an integrated portfolio of services that includes engineering consultancy, surveying, urban planning, and GIS solutions, in addition to large-scale management, analysis, and integration of geospatial data using the latest technologies and international standards.
- Our services and the expertise of our team have contributed to empowering government entities and various sectors to establish and operate geospatial data centers, integrate and publish geospatial data, and transform geographic and spatial data into real value that supports decision-makers in forecasting, insights, and planning thereby improving operational efficiency and enhancing project quality.
- Our distinction stems from our experience in delivering and managing large-scale, complex projects, supported by a highly skilled and experienced team, professional management, and a vision focused on innovation, execution quality, and customer service ensuring sustainable solutions that meet our partners' expectations today and align with future requirements.



## Our Goals



We strive to transform geospatial data into intelligent insights and added value through innovative solutions that empower our partners to plan more efficiently, make more accurate decisions, and achieve a sustainable impact that supports the present and shapes the future.

## Our Values



**Innovation:** We create smart geospatial solutions that leverage the latest technologies to transform data into effective tools that support planning and decision-making.

**Reliability:** We build long-term partnerships based on transparency and commitment, while ensuring the highest standards of accuracy and quality.

**Partnership:** We believe that true success is achieved by working side by side with our clients as partners in success.

**Team Spirit:** We believe our strength comes from the strength of our team; our experts collaborate continuously to achieve the best results for our clients.

## SUCCESS PARTNERS



الهيئة الملكية  
للجبيل و ينبع  
Royal Commission for Jubail & Yanbu



هيئة الرماية النووية والإشعاعية  
Nuclear and Radiological Regulatory Commission



وزارة الشؤون البلدية  
والقروية والإسكان  
Ministry of Municipal Rural Affairs & Housing



وزارة السياحة  
Ministry of Tourism



موبايلي  
Mobily



هيئة المساحة الجيولوجية السعودية  
Saudi Geological Survey



نيوم  
NEOM



SDAIA  
الهيئة السعودية للبيانات  
والذكاء الاصطناعي  
Saudi Data & AI Authority



الهيئة الملكية لمدينة مكة  
المكرمة والمشاعر المقدسة  
ROYAL COMMISSION FOR  
MAKKAH CITY AND HOLY SITES

المؤسسة العامة للري  
Saudi Irrigation Organization  
المملكة العربية السعودية



ATHEEB  
GROUP  
مجموعة عذيب



وزارة الصناعة  
والتروة المعدنية  
Ministry of Industry and Mineral Resources



master  
works

هيئة تطوير  
الأحساء  
Al Ahsa Development Authority





SLAM S20  
SHAR



5 Series 105S PRO  
SHAR



UGPS  
IOCTI



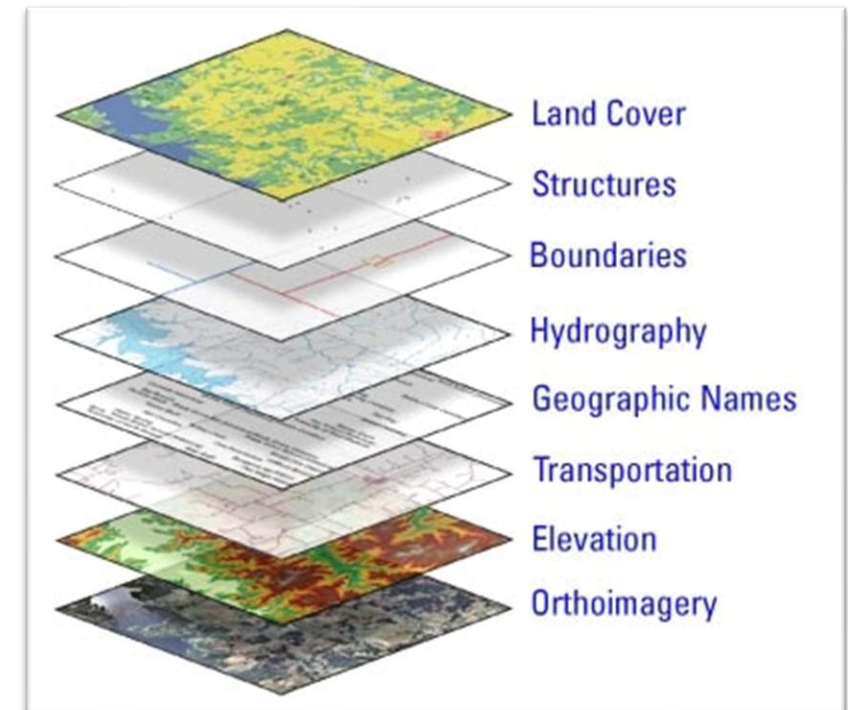
## Our Services

- Geospatial Data Management
  - GIS Consulting & Strategic Advisory
  - GIS Application Development & Geospatial Platform Integration
  - Advanced Spatial Analysis & Modeling
  - Remote Sensing & Satellite Imagery Solutions
  - 3D GIS & Digital Twin Solutions
  - Urban Planning & Land and Parcel Management Solutions
  - GIS Solutions for Architecture, Engineering & Construction (AEC)
  - Drone Surveying & Mapping Solutions
  - 3D Terrestrial Laser Scanning Solutions
  - Mobile Mapping Systems (MMS) Solutions
  - Photogrammetry Solutions
  - Environmental Geospatial Intelligence & GeoAI Solutions
- إدارة البيانات الجيومكانية
  - الخدمات الاستشارية في نظم المعلومات الجغرافية
  - إنشاء وتطوير وتكامل المنصات الجيومكانية
  - التحليل والنمذجة المكانية المتقدمة
  - حلول الاستشعار عن بعد وتحليل الصور الجوية
  - حلول نظم المعلومات الجغرافية ثلاثية الأبعاد والتوأمة الرقمية
  - حلول التخطيط الحضري وإدارة الأراضي والقطع العقارية
  - الحلول الجيومكانية لقطاع الهندسة المعمارية والإنشاءات والبنية التحتية
  - المسح الجوي باستخدام طائرات بدون طيار
  - المسح الأرضي ثلاثي الأبعاد باستخدام الماسحات الليزرية
  - حلول أنظمة المسح المتحرك
  - حلول التصوير المساحي
  - الذكاء المكاني البيئي وتحليل البيانات الجغرافية باستخدام الذكاء الاصطناعي



## 01 Geospatial Data Management

- Collection of geospatial data from multiple sources (maps, satellite imagery, field surveys).
- Standardization and modeling of geospatial data in accordance with approved standards.
- Data cleansing and enhancement of spatial quality and accuracy.
- Management of geospatial databases.
- Integration of spatial data with other enterprise systems.
- Periodic updating and maintenance of geographic layers and datasets.
- Management of metadata and documentation.
- Geospatial data governance and implementation of access and security policies.
- Archiving of geospatial data and ensuring data continuity.
- Supporting data readiness for spatial analysis and decision-making.



### 02 Consulting Services

- Development of GIS strategies and plans.
- Assessment of status and GIS maturity levels.
- Analysis of technical and operational requirements.
- Design of geospatial frameworks and standards.
- Geospatial data governance and policy development.
- Decision support through spatial analysis.
- Preparation of GIS project roadmaps.
- Advisory supervision for GIS project implementation.
- Knowledge transfer and institutional capacity building.



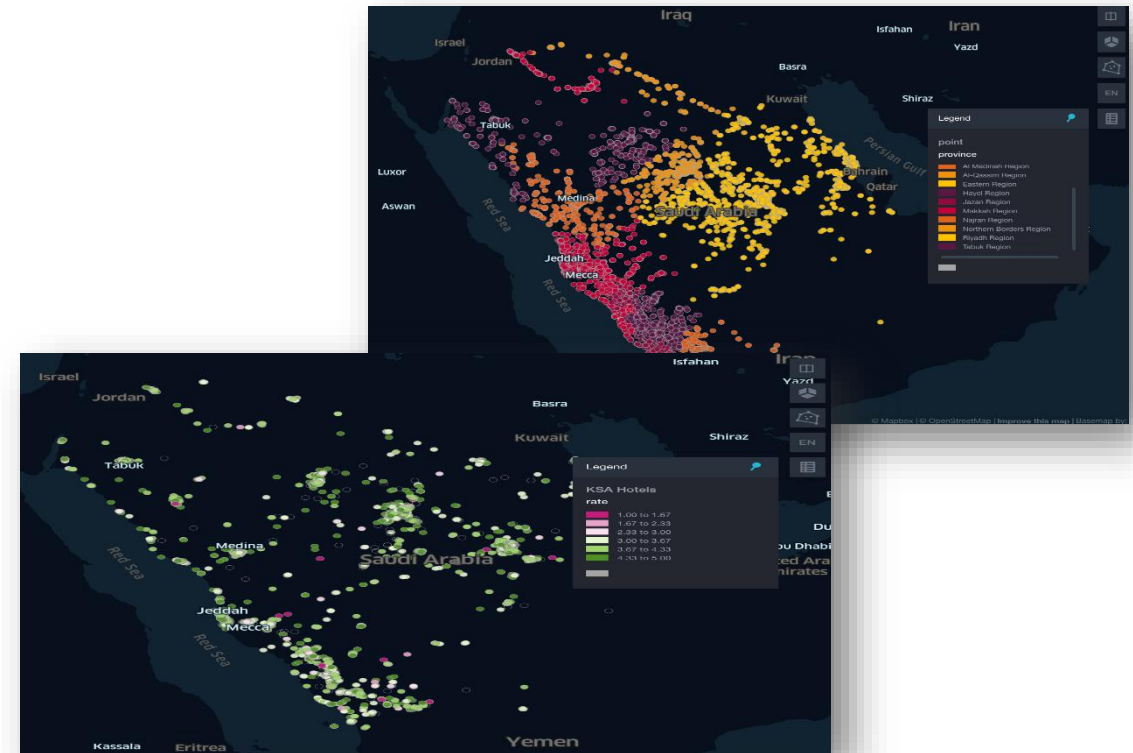
### 03 Application Development & Platform Integration

- Development of GIS strategies and plans.
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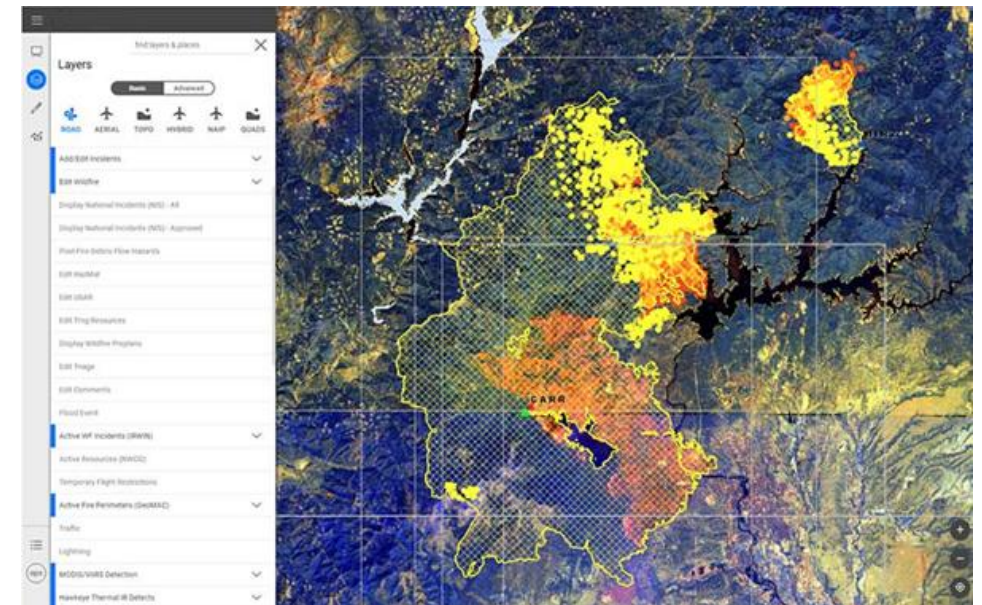
## 04 Advanced Spatial Analysis & Modeling

- Development of GIS strategies and plans.
- Assessment of status and GIS maturity levels.
- Analysis of technical and operational requirements.
- Design of geospatial frameworks and standards.
- Geospatial data governance and policy development.
- Decision support through spatial analysis.
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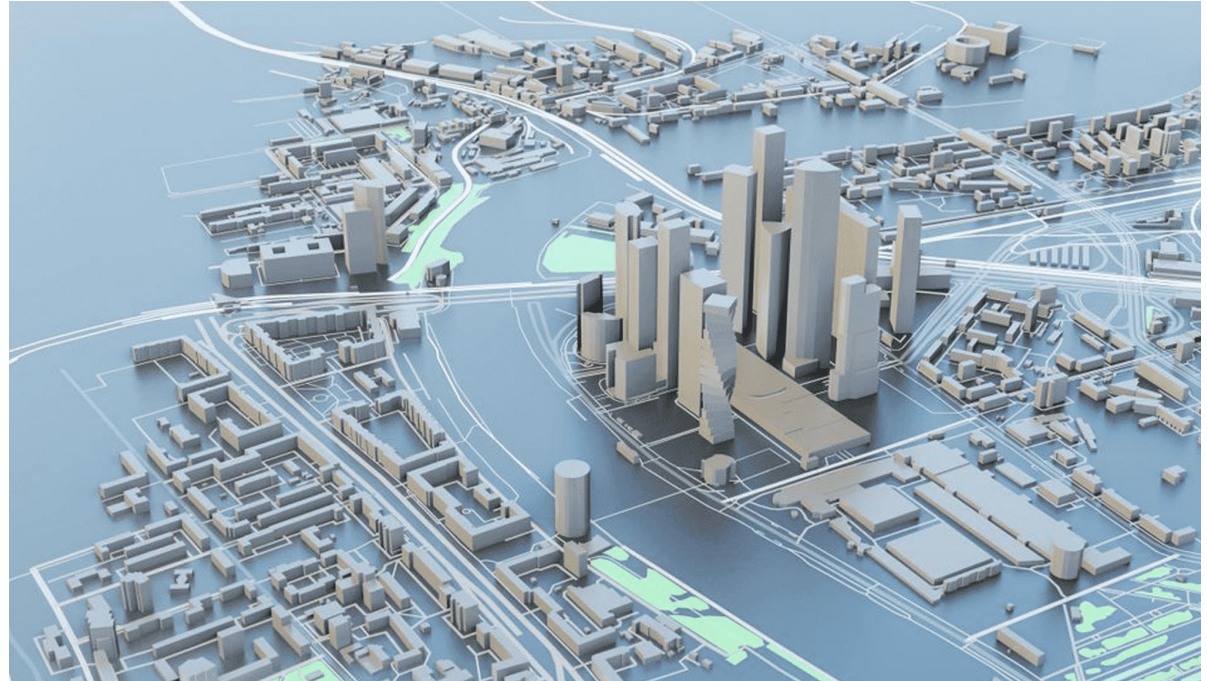
### 05 Remote Sensing & Satellite Imagery Solutions

- Processing and analysis of satellite and aerial imagery.
- Image classification and extraction of geographic features.
- Temporal change analysis and monitoring of spatial developments.
- Production of thematic maps from remote sensing data.
- Integration of imagery data with Geographic Information Systems (GIS).
- Land use and land cover analysis.
- Support for environmental monitoring and urban planning projects.
- Development of customized image analysis models based on client requirements.
- Ensuring the quality and accuracy of image analysis outputs.



### 06 3D GIS & Digital Twin Solutions

- Development of 3D GIS models for cities and assets.
- Creation of digital twins for infrastructure and utilities.
- Integration of spatial data with BIM and IoT models.
- Simulation of operational and planning scenarios.
- Analysis of elevation, massing, shading, and visibility.
- Support for urban planning and smart asset management.
- Visualization of 3D data and interactive dashboards.
- Updating digital twins and linking them with live data.
- Decision support through 3D spatial analysis.



### 07 Urban Planning & Land and Parcel Management Solutions

- Support for data-driven urban planning based on geospatial data.
- Management of land, parcels, and their associated databases.
- Analysis and regulation of land use.
- Preparation of regulatory and development plans.
- Analysis of population and service densities.
- Management of land ownership and cadastral boundaries.
- Decision support for urban development projects.
- Integration of land data with relevant municipal systems.
- Preparation of urban maps and reports to support planning.



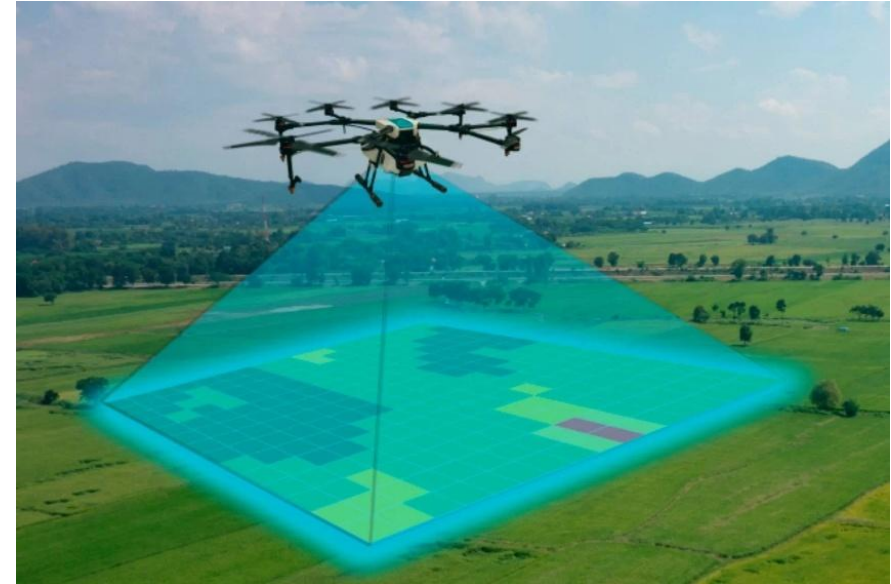
### 08 GIS Solutions for Architecture, Engineering & Construction (AEC)

- Support for engineering and construction projects through geospatial analysis.
- Asset and infrastructure management using GIS.
- Integration of Geographic Information Systems (GIS) with BIM.
- Project progress tracking and site monitoring.
- Site, route, and service analysis.
- Support for planning and execution of infrastructure projects.
- Management of utilities data and engineering networks.
- Preparation of maps and reports to support engineering decision-making.
- Improving operational efficiency and reducing project risks.



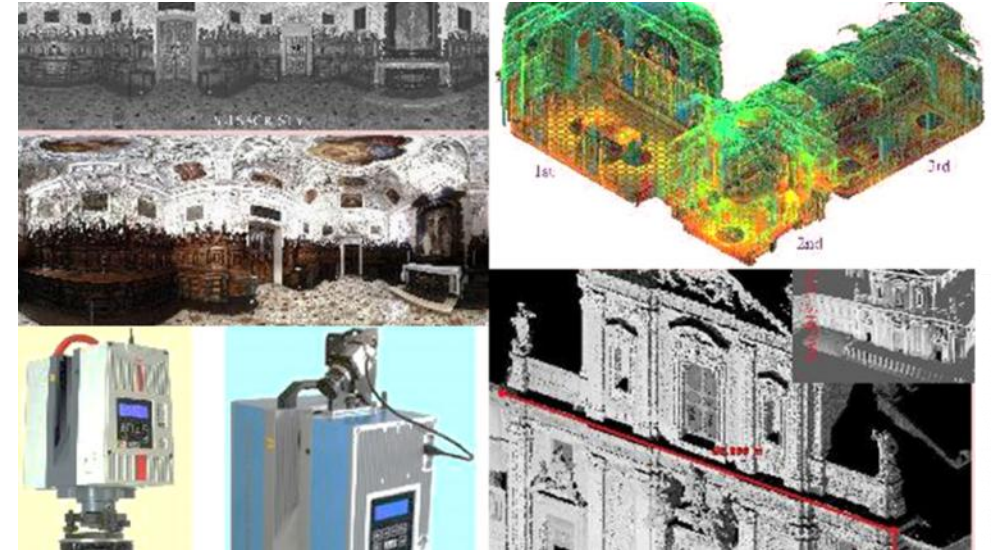
### 09 Drone Surveying & Mapping Solutions

- Execution of aerial surveying and high-resolution imaging.
- Production of topographic maps and digital models (DSM / DTM).
- Creation of 3D models for sites and facilities.
- Calculation of quantities and volumes for construction works.
- Monitoring project progress and tracking spatial changes.
- Support for urban planning and asset management.
- Integration of aerial survey data with Geographic Information Systems (GIS).
- Ensuring data accuracy in accordance with approved technical standards.



### 10 3D Terrestrial Laser Scanning Solutions

- Execution of high-precision 3D terrestrial surveying.
- Generation of 3D point clouds.
- Creation of 3D models for assets and facilities.
- Documentation of the as-is condition of sites and infrastructure.
- Support for Digital Twin and BIM projects.
- Extraction of accurate measurements and dimensions.
- Integration of laser scanning data with Geographic Information Systems (GIS).
- Support for planning, maintenance, and asset management.
- Ensuring the quality and accuracy of survey outputs in accordance with approved standards.



### 11 Mobile Mapping Systems (MMS) Solutions

- Execution of high-precision 3D terrestrial surveying.
- Generation of 3D point clouds.
- Creation of 3D models for assets and facilities.
- Documentation of the as-is condition of sites and infrastructure.
- Support for Digital Twin and BIM projects.
- Extraction of accurate measurements and dimensions.
- Integration of laser scanning data with Geographic Information Systems (GIS).
- Support for planning, maintenance, and asset management.
- Ensuring the quality and accuracy of survey outputs in accordance with approved standards.



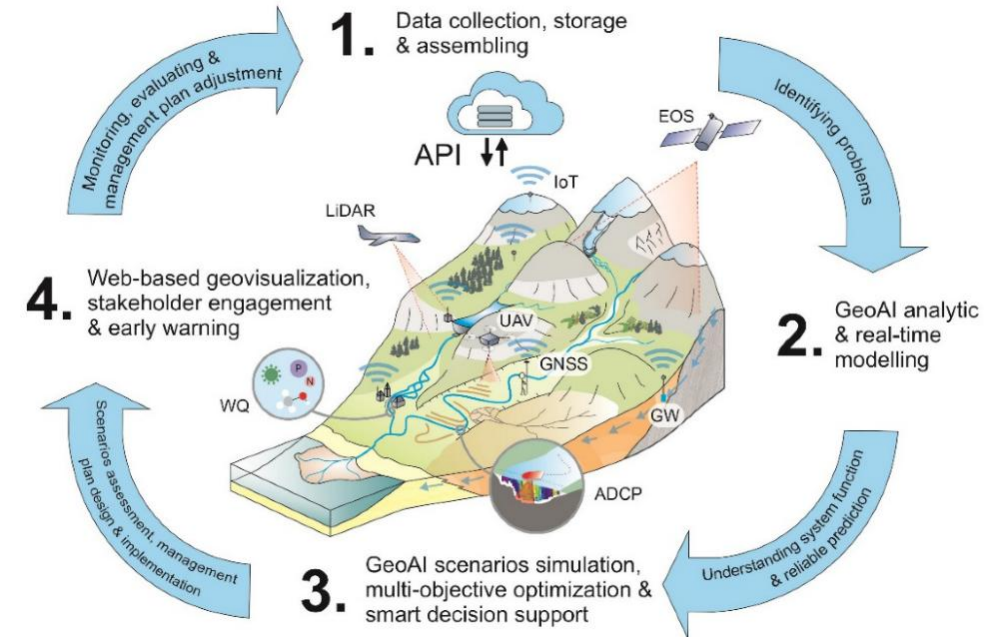
### 12 Photogrammetry Solutions

- Execution of terrestrial and aerial photogrammetry works.
- Production of topographic and detailed maps.
- Creation of 3D models and orthophotomaps.
- Extraction of accurate measurements, distances, and volumes.
- Analysis of spatial changes and monitoring of project progress.
- Integration of photogrammetry outputs with Geographic Information Systems (GIS).
- Support for urban planning and asset management projects.
- Ensuring data quality and accuracy in accordance with approved surveying standards.



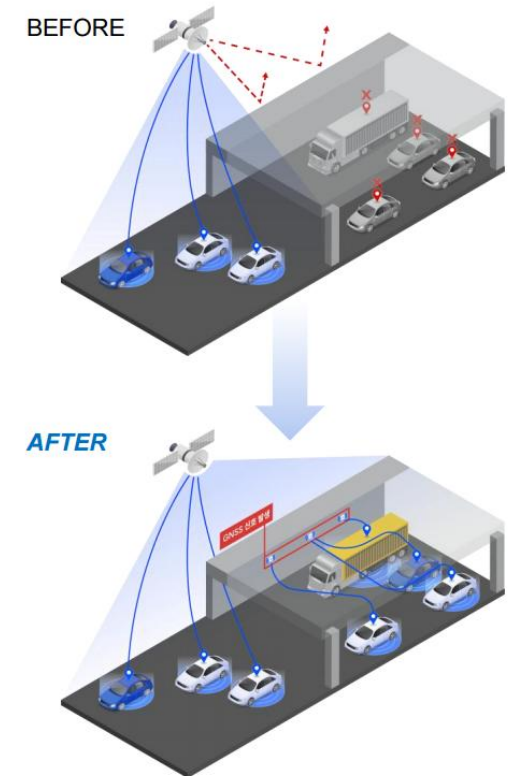
## 13 Environmental Geospatial Intelligence & GeoAI Solutions

- Spatial environmental data analysis using artificial intelligence techniques.
- Modeling environmental changes and predicting potential risks.
- Analysis of vegetation cover and air and water quality.
- Monitoring climate change and environmental phenomena.
- Automation of environmental image classification and remote sensing.
- Support for data-driven environmental decision-making.
- Integration of artificial intelligence with Geographic Information Systems (GIS).
- Development of customized predictive models for environmental sectors.
- Preparation of smart environmental dashboards and reports.



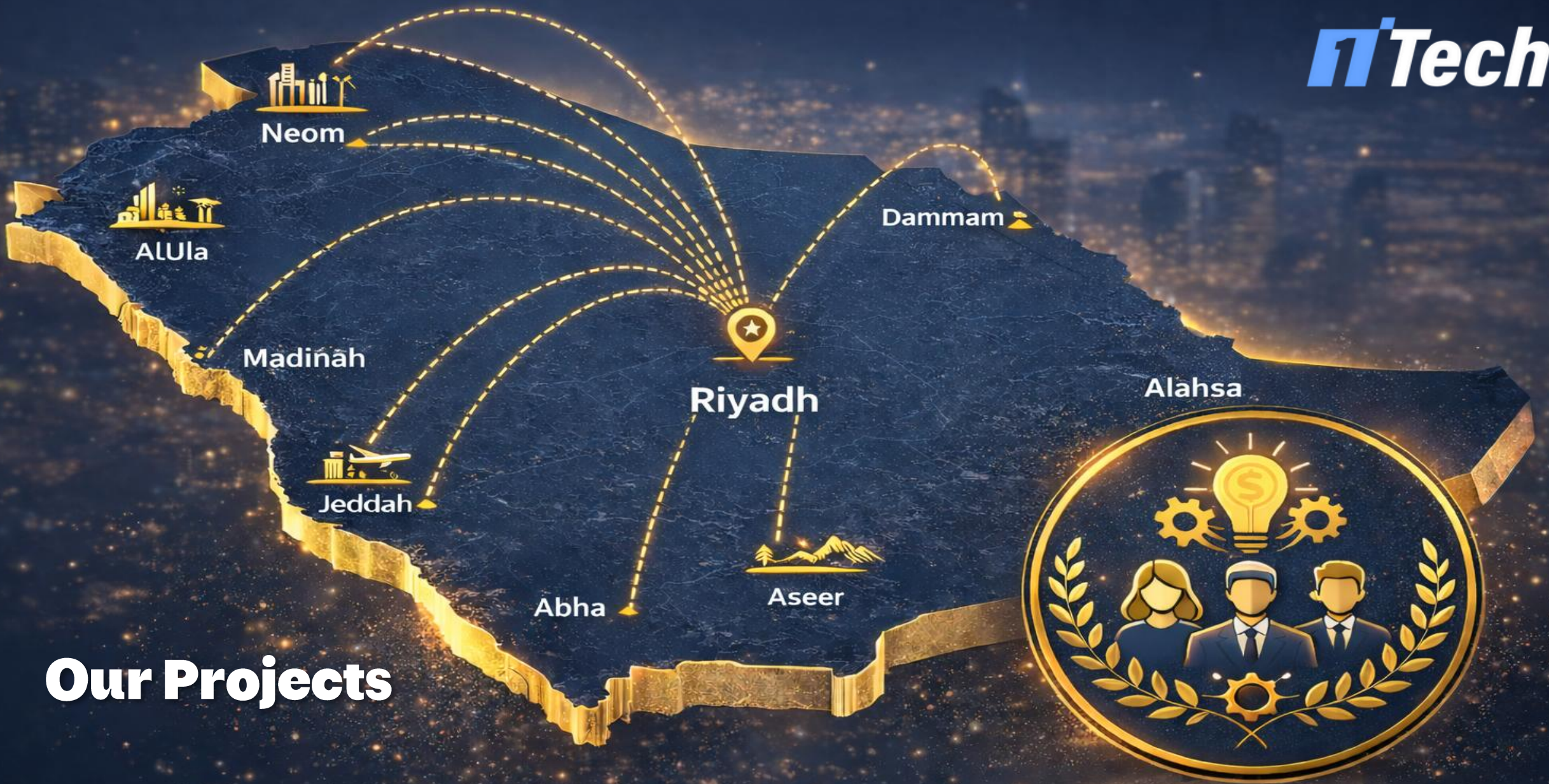
## 14 Global Positioning System (GPS) Disruptions Solutions

- Leading Technology: Micro Global Positioning System (uGPS)
- SDR-based GNSS signal regeneration technology that enables seamless positioning experiences unmatched by current solutions.
- No signal loss... no interruptions
- A solution to GPS challenges in tunnels, underground environments, and dense/indoor areas.
- Universal compatibility: Works with all existing GNSS receivers — no new hardware or software required.
- Accuracy under 3 meters: Maintains accuracy at speeds exceeding 100 km/h in any environment.
- Future-proof infrastructure: Fiber-optic + SDR architecture delivers low total cost of ownership and unlimited scalability.
- Regulatory support: Backed by mandates from the European Union, Korea, and Japan for tunnel safety and autonomous vehicle deployment.



 <p><b>Device Compatibility</b> Fully compatible with existing devices equipped with GNSS/GPS technology.</p>	 <p><b>%100 GPS Coverage</b> Complete coverage of GPS signal shadows in all environments</p>	 <p><b>Accuracy</b> Within 1 meter (RTK) Approximately 3 meters for standard GNSS systems</p>
 <p><b>High-Speed Tracking</b> Accurate real-time tracking performance for moving objects.</p>	 <p><b>Global Standards</b> Compatible with GPS, GLONASS, and Galileo positioning systems</p>	 <p><b>Cost</b> Cost reduction with pricing lower than current solutions</p>





# Our Projects

## Our Projects

### Organization

### Project Name

NEOM

3D model generator for the Sindalah Island to be utilized across all security systems.

NEOM

3D aerial surveying using drones for the Oxagon and Sindalah areas.

NEOM

3D model generator for NC1 and NC2 to be utilized across all security systems.

Border Guard

Provision of GIS consulting services.

Al Ahsa Development Authority

Development of the geospatial center for Al Ahsa Development Authority (Phase One).

Royal Commission for Jubail and Yanbu

Renewal of GIS licenses, secondary maintenance licenses, and concurrent use licenses.

General Authority for Irrigation

Project for supplying licenses and renewing support for GIS systems.

Saudi Geological Survey

Supply of hydrological study software for the Wadiyan Project, including GIS software for map preparation and geospatial data analysis.

Saudi Geological Survey

Development of an application interface and database for valleys, wadis, and their protection zones for the Wadiyan Project.

Saudi Data & Artificial Intelligence Authority (SDAIA)

Renewal of map analysis software licenses.

Nuclear and Radiological Regulatory Commission

Operation and maintenance of Geographic Information Systems.

Ministry of Municipalities and Housing

CityView Platform Project – Phase One.

Ministry of Tourism

Renewal of Geographic Information Systems licenses.


- Our team leads projects with high efficiency, drawing on expertise that in some cases exceeds twenty years, with quality and credibility at the core of every stage of execution.
- We possess advanced capabilities in managing communication with all stakeholders, ensuring seamless coordination and well-structured workflows that fully adhere to approved timelines.
- We rely on continuous development as a fundamental pillar in building our team's capabilities, through investment in training, skills enhancement, and participation in international and local exhibitions and conferences to keep pace with the latest industry developments.
- This integrated approach is reflected in a dynamic, innovative team that delivers advanced solutions with real value and creates an exceptional experience for our clients, driven by our absolute commitment to their satisfaction.




## Contact Us..

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