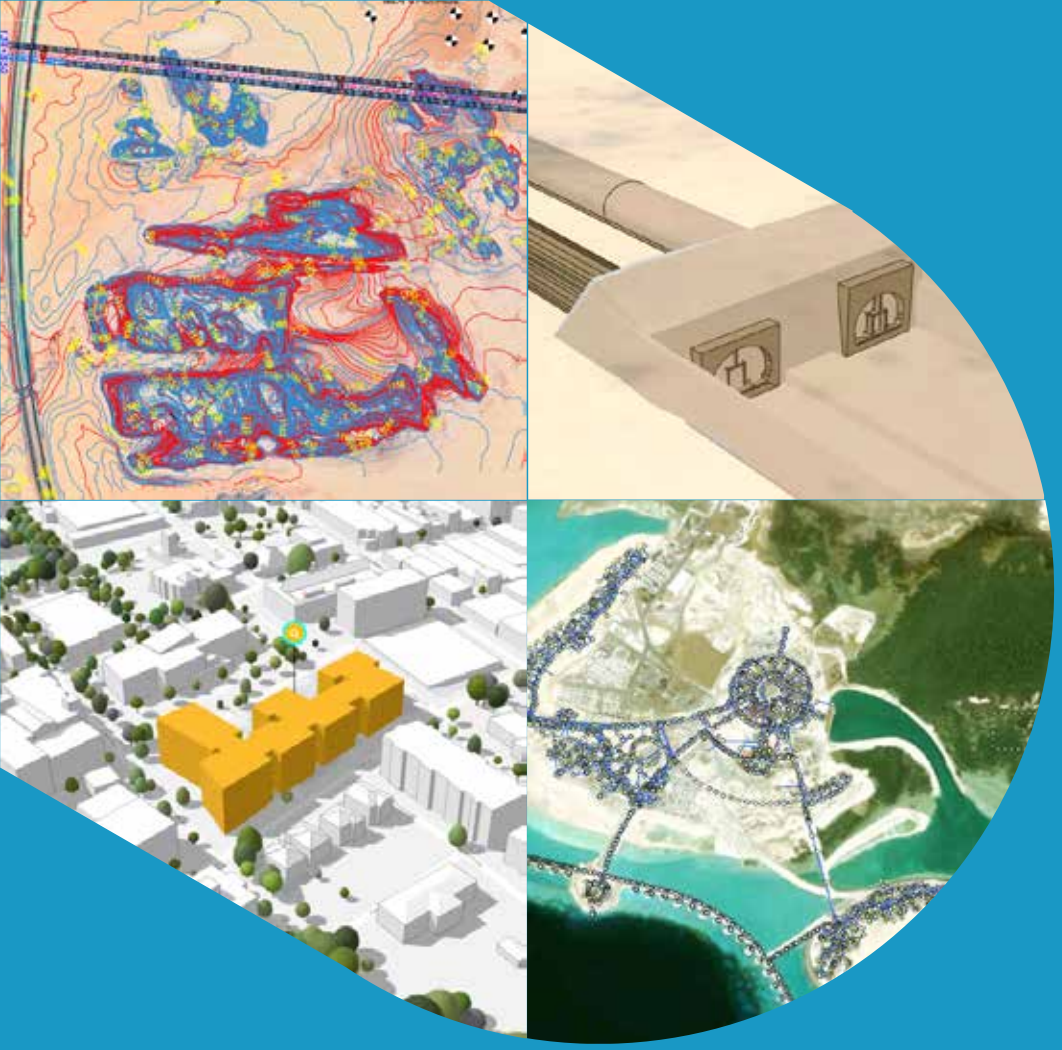

ISO 19650
Certified

GIS Intelligence for Precision Engineering

30+ years

pinnacleinfotech.com

Pinnacle
Construction Lifecycle. Reimagined.

Mission

Enable smarter design, engineering, construction, and operations through integrated digital solutions, driving performance, efficiency, and sustainability across:

- Intelligent design delivery
- Collaborative pre-construction planning
- Agile construction execution
- Reliable operations & facility management

Vision

To redefine the global construction lifecycle through intelligent digital transformation.

Associations:

Our Values

E **Excellence**
We take pride in our passion for excellence. It is a way of life for us.

A **Agility**
We are always at the edge of technology and driven by agile transformations.

R **Reliability**
We have ISO-certified processes and workflow to produce consistent and reliable performance.

T **Teamwork**
Pinnacle provides an environment where teams collaborate effectively to excel.

H **Honesty**
We win the trust of our stakeholders through integrity, straightforwardness, and transparency.

Our Way of Giving Back

Ankuran Foundation

A first-of-its-kind, not-for-profit, national network of world-class learning centers that impart Science Education through experiential learning to school students from diverse backgrounds. To learn more, visit Ankuran.org

Ankuran
Where Knowledge Germinates

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1. Introduction

GIS Mapping

Pinnacle delivers advanced geospatial solutions that help organizations improve asset intelligence, infrastructure planning, and data-driven decision-making across complex built environments.

We specialize in providing a comprehensive suite of services, from Spatial Data Migration and 2D/3D Mapping to cutting-edge GIS Digital Twin creation and seamless BIM-GIS Integration.

Our expertise in GIS empowers clients across various industries to achieve precise asset management, optimized planning, and data-driven decision-making for complex infrastructure and construction projects.

2600+ Clients

18000+ Projects

30+ Years Exp.

4700+ Engineers & Architects

47+ Countries

15 Delivery Centers

2. Services Offered

Pinnacle offers a comprehensive suite of GIS services to empower clients with insightful geospatial data analysis and visualization. Our experienced GIS team leverages cutting-edge technology to deliver tailored solutions across multiple industries. Our specializations are:

2.1 Spatial Data Migration and Conversion

- Multi-Format Data Transformation: We efficiently convert and transform data between all industry-standard formats, including shapefiles, CAD, BIM, and geodatabases.
- Rigorous Quality Assurance (QA/QC): Our processes include stringent checks to maintain the accuracy, completeness, and consistency of the migrated data by validating geometries, attributes, and projections.
- Legacy Data Modernization and Integration: We specialize in updating and preserving valuable historical and legacy datasets by converting them into modern, georeferenced formats.

2.2 Data Interoperability

- Data Transformation: Convert between shapefiles, CAD, BIM, and geodatabases.
- Quality Assurance: Maintain accuracy, completeness, and consistency.
- Interoperability: Adapt data for use in GIS, BIM, and CAD systems.
- Legacy Integration: Update and preserve historical datasets in modern formats.

2.3 Asset Management

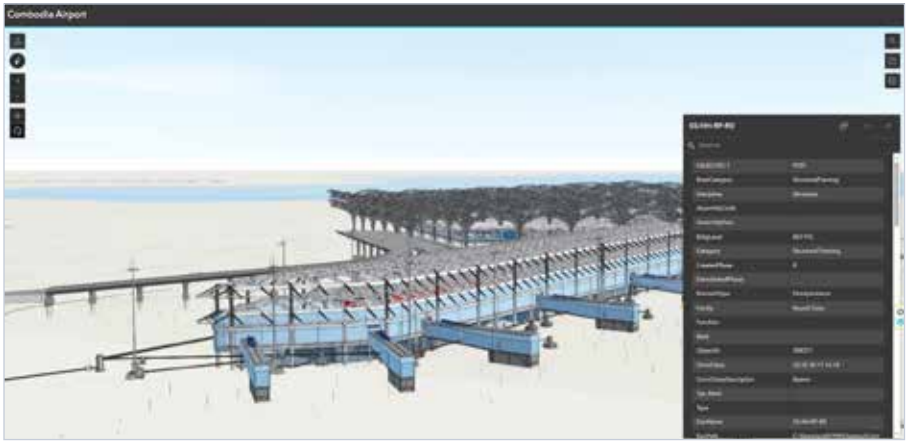
- Developing centralized platforms to monitor, maintain, and manage assets.
- Enabling lifecycle analysis and predictive maintenance of infrastructure.

2.4 2D & 3D Mapping

- Creating detailed maps and models for electrical, architectural, and structural components.
- Integrating elevation and spatial details into engineering workflows for enhanced planning.

2.5 GIS Digital Twin

- Building virtual replicas of real-world assets by combining BIM geometries with GIS data.
- Supporting urban planning, resource optimization, and emergency response through simulation.



Digital Twin of an Airport

2.6 Pre-Bid Estimation

Pinnacle's Pre-bid estimation services aid contractors in winning bids through accurate estimates aligned with industry standards.

Digital estimation tools offer our estimators the capability to estimate quickly. Moreover, they allow customization of labor and material rates as per requirements.

3. Proficiency in BIM integration to GIS

3.1 BIM Data Import and Conversion:

We can efficiently import BIM models (Revit, ArchiCAD, etc.) into GIS platforms, converting complex building information into geospatially accurate formats while preserving key attributes and metadata.

3.2 Spatial Analysis and Visualization:

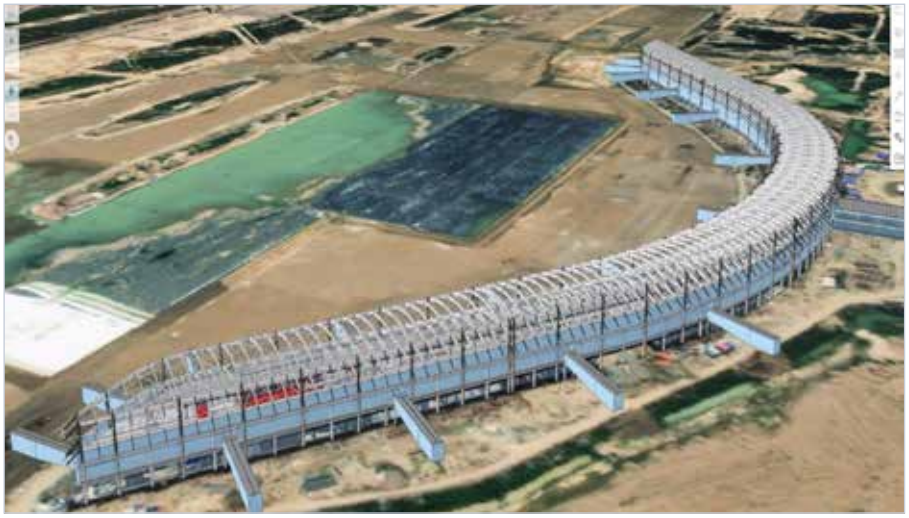
Our team integrates BIM data into GIS to enable advanced spatial analysis, 3D visualization, and interactive mapping for better decision-making in urban planning, infrastructure, and facility management.

3.3 Georeferencing and Alignment:

We ensure BIM models are accurately georeferenced within GIS environments, aligning building and infrastructure data with real-world coordinates for precise mapping and location-based analysis.

3.4 Data Management and Interoperability:

We maintain seamless interoperability between BIM and GIS systems, enabling consistent updates, attribute synchronization, and integration with other GIS datasets for comprehensive geospatial insights.



BIM-GIS Integration of an Airport Project

4. GIS Strength

Pinnacle uses a comprehensive suite of licensed GIS software and tools, enabling the organization to successfully execute core GIS projects across diverse domains.

GIS Existing Strengths and Opportunities

4.1 Land Use and Land Cover Mapping (LULC)

Analyze land use patterns worldwide using satellite imagery to monitor deforestation, urban growth, and agriculture.

Software: QGIS, Google Earth Engine (GEE), ArcGIS Pro, AutoCAD

4.2 Transportation /Road Network Analysis

Optimize transportation routes and assess accessibility.

Software: ArcGIS Network Analyst, QGIS, OpenStreetMap, AutoCAD, ArcGIS Online

4.3 Smart City Infrastructure Mapping

Create GIS databases for utilities, roads, and public facilities.

Software: ArcGIS Urban, QGIS, AutoCAD Map 3D, ArcGIS Dashboard, ArcGIS Online

4.4 Web GIS Dashboard Development

Develop an interactive online GIS portal for real-time data visualization.

Software: ArcGIS Online, Leaflet.js, Mapbox, Power BI, ArcGIS Dashboard

4.5 Basemap Creation

Analyze and manage watersheds, rivers, and reservoirs.

Software: ArcGIS Network Analyst, QGIS, OpenStreetMap

4.6 ArcGIS Online Integration

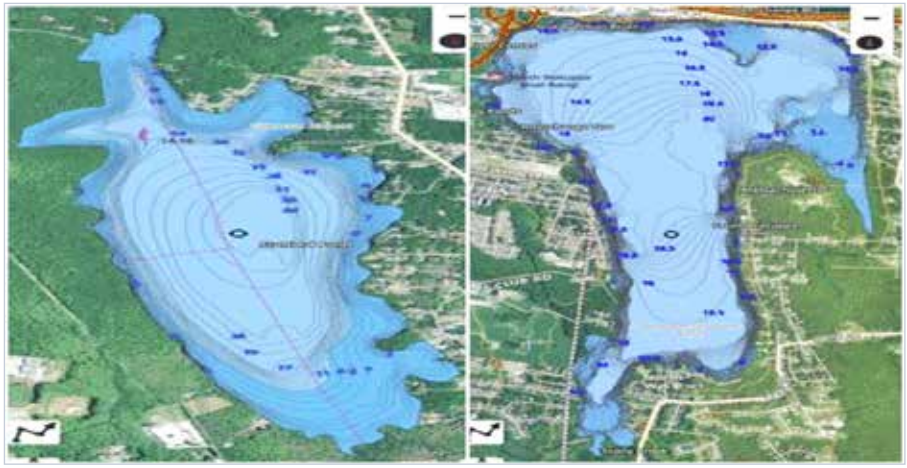
Create interactive GIS dashboards and web maps for real-time data visualization, integration, and collaboration through ArcGIS Online.

Software: ArcGIS Pro, ArcGIS Online, ArcGIS Dashboard, ArcGIS Story Map

4.7 Water Utility Mapping

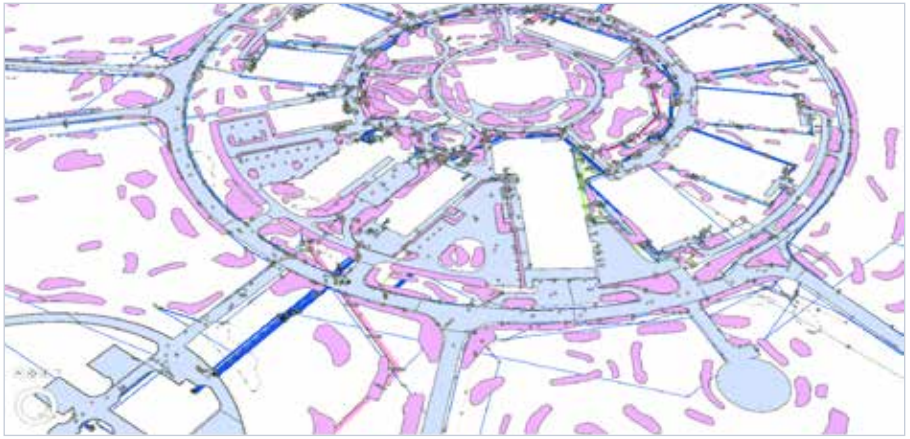
Visualize, analyze, and manage the entire water utility network with precision using advanced GIS mapping solutions.

Software: ArcGIS Pro, ArcGIS Online, ArcGIS Dashboard, Google Earth Pro, QGIS, Autocad, Civil 3D



Bathymetric Analysis

Road Network Digitization



BIM GIS Integration

Construction Monitoring GIS Dashboard

5. MEP & ACS Services with GIS

Integrating MEP (Mechanical, Electrical, and Plumbing) services with GIS can significantly enhance project planning, design, and maintenance. By combining the detailed 3D models of MEP systems with the spatial context of GIS, we can achieve a comprehensive understanding of the built environment.

5.1 Integration with BIM

- This integration brings together the precision of BIM models and the spatial context of GIS, unlocking the potential for holistic infrastructure management.
- The GIS platform provides a range of tools and applications for providing geographic context to BIM data.
- From desktop software to online applications and mobile apps, GIS can be integrated into all phases of the construction life cycle.

5.2 Asset Management

GIS-Based Asset Management

Develop centralized platforms to monitor, maintain, and manage MEP assets efficiently.

Geotagged Assets

Store components with metadata (specs, install dates, maintenance schedules).

Condition Tracking

Monitor performance over time for predictive maintenance.

Integration

Link precise geospatial data with facility management software.

Visualization

Link precise geospatial data with facility management software.

Lifecycle Analysis

Support data-driven infrastructure management.

5.3 2D & 3D Mapping

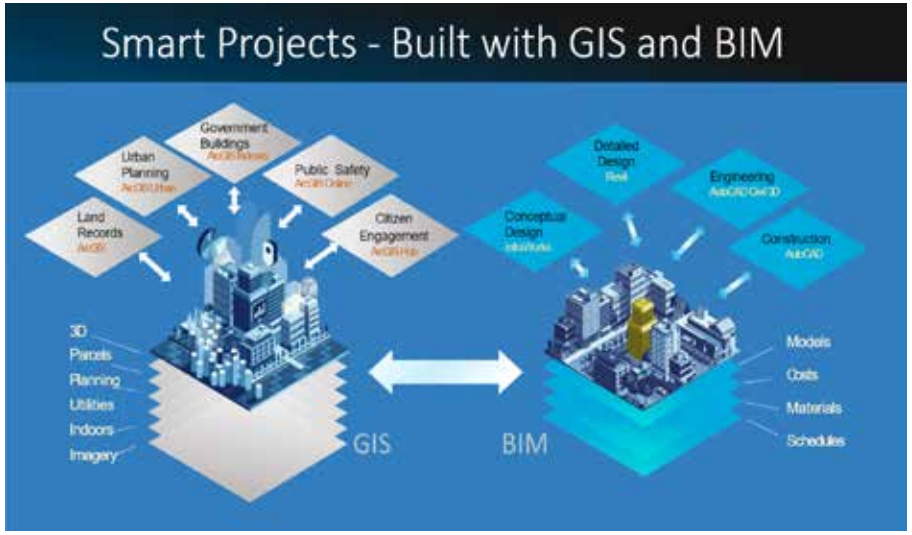
- Creating detailed maps and models for electrical, architectural, and structural components.
- Integrating elevation and spatial details into engineering workflows for enhanced planning.

5.4 GIS Digital Twin

- Building virtual replicas of real-world assets by combining BIM geometries with GIS data.
- Supporting urban planning, resource optimization, and emergency response through simulation.

Benefits

- Improved Design Precision: GIS ensures accurate alignment of MEP components with structural layouts, minimizing errors.
- Enhanced Maintenance: Geotagged components simplify inspection routes, reducing downtime and improving system reliability.
- Cost Savings: Optimized routing and energy-efficient designs reduce installation and operational costs.



BIM-GIS Data Exchange

6. Utility Network Mapping

Utility network mapping is a critical service that provides a precise representation of underground and above-ground utility infrastructure. This service supports effective management, planning, and maintenance of essential networks, ensuring safety, efficiency, and operational reliability.

6.1 Data Acquisition and Preparation

Mapping electrical distribution networks involves capturing and documenting the layout, connections, and components of electrical systems. Key aspects include:

Collect Data

Gather data from various sources like field surveys, LiDAR, aerial imagery, and existing GIS data.

Data Cleaning

Ensure data accuracy and consistency by cleaning and validating data.

Data Conversion

Convert data into a suitable GIS format (e.g., shapefile, geodatabase).

6.2 Create Utility Network Dataset

Define Feature Classes

Create feature classes for different utility components (e.g., pipes, cables, transformers).

Establish Relationships

Define relationships between features (e.g., connectivity, hierarchy)

Assign Attributes

Assign attributes to features to store information like material, diameter, and voltage.

6.3 Spatial Analysis

Network Analysis

Analyze network connectivity, shortest paths, and service areas.

Buffer Analysis

Identify areas affected by utility infrastructure.

Overlay Analysis

Combine multiple layers to identify potential conflicts.

6.4 Visualization and Mapping

Create Thematic Maps

Visualize utility networks using thematic maps to highlight specific features or attributes.

3D Visualization

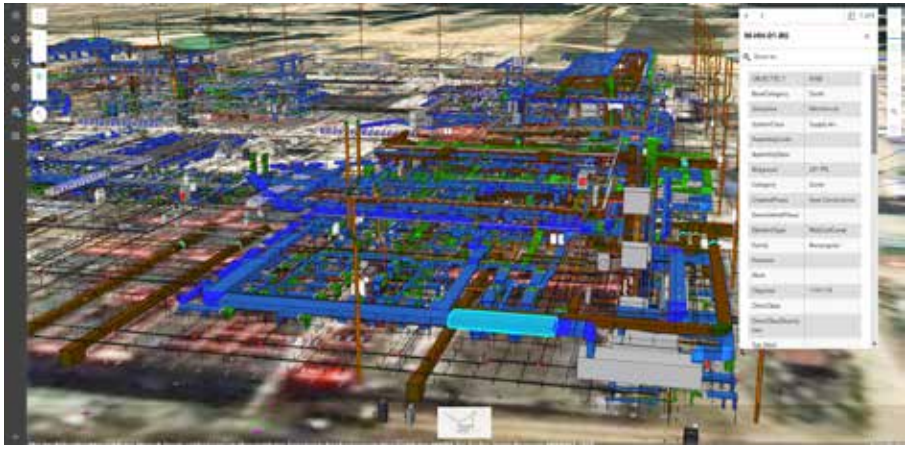
Create 3D models of utility networks to understand spatial relationships and potential conflicts.

Interactive Maps

Develop web maps for sharing and collaboration.

Benefits

- Data Quality Assurance: Implement rigorous data quality control procedures to ensure data accuracy and consistency.
- Standardization: Use standardized data models and attribute schemas to facilitate data sharing and integration.
- Collaboration: Foster collaboration between GIS and engineering teams to ensure seamless integration of data and workflows.



3D Utility Network Mapping

7. Designing and Implementation of Online Applications

The designing and implementation of online GIS applications play a transformative role in digital workflows by enhancing accessibility, accuracy, and decision-making efficiency. These solutions are tailored to deliver real-time insights and interactive experiences, streamlining operational processes and improving collaboration across teams and stakeholders.

7.1 Web GIS Systems

Web GIS applications provide centralized platforms for sharing, analyzing, and visualizing spatial data in real time. Key capabilities include:

Dashboards

Designing interactive dashboards for monitoring critical data, such as asset performance, environmental conditions, or urban planning metrics.

Real-time integration with IoT sensors and databases for up-to-date information.

Analytics and Reporting

Incorporating tools for spatial analysis, trend detection, and predictive modeling. Generating detailed reports and visualizations for decision-makers.

7.2 Survey Protocols

Standardized survey protocols ensure consistent, efficient, and accurate data collection, processing, and management. Services include

Workflow Development

Creating streamlined survey methodologies tailored to project requirements.
Automating repetitive tasks like data validation and integration.

Training and Support

Conducting workshops and field training for survey teams.
Providing tools and documentation to ensure consistent use of applications and equipment.

7.3 Custom Web-GIS Applications

- Designing applications for specific industries such as disaster management, energy, transportation, or public utilities.
- Embedding APIs and custom plugins for advanced functionalities like 3D visualization.
- Prioritizing ease of use with intuitive interfaces and role-based access controls.
- Supporting multi-platform compatibility (desktop, tablet, mobile).

7.4 Mobile GIS Systems

- GIS enables real-time monitoring of assets, infrastructure, and environmental conditions.
- Designing user-friendly interfaces for mobile devices to capture location-specific data, photographs, and measurements.
- Supporting offline data collection and seamless synchronization when back online.
- Connecting field data with central databases for immediate analysis and decision-making.
- Enabling multi-user collaboration across different locations.

Custom Web GIS Application

8. GIS Software Capabilities

Pinnacle offers a comprehensive range of licensed GIS software and tools, providing seamless access to all types of GIS-related data. Our expert team specializes in data editing, spatial analysis, mapping, and geospatial modeling, ensuring efficient handling of all GIS software platforms. From data visualization and geoprocessing to advanced cartography and GIS database management, we deliver precise, reliable, and customized solutions tailored to your project needs.

Our Software Proficiency in Core GIS

At Pinnacle, our team is highly skilled in a wide range of GIS software and tools, including but not limited to:

- *ArcGIS (ArcGIS Pro, ArcGIS Online, Dashboard)*

Mapping, spatial analysis, and geodatabase management.

- *QGIS*

Open-source GIS solutions, data editing, and visualization.

- *GEE*

Remote sensing and raster data processing.

- *FME (Feature Manipulation Engine)*

Advanced data transformation, integration, and automation.

- *AutoCAD Map 3D / Civil 3D / Revit– CAD-GIS*

Integration, mapping, and drafting.

- *Google Earth Pro & Google Maps API*

Geospatial visualization and location-based services.

- *PostGIS & Spatial Databases*

Geodatabase design and management.

- *Other GIS Tools*

LiDAR processing, GPS data integration, and custom geospatial tool development.

- *Custom Geospatial Tool Development*

Designing and implementing tools for automation, spatial analysis, and data processing.

9. Why Pinnacle

Each of our employees is committed to the core values - 'EARTH' of our organization.

Excellence | Agility | Reliability | Teamwork | Honesty

Excellence

Excellence is a way of life for us. Our commitment to hard work, creativity, and innovation allows us to reach our full potential in approach, operations, and collaborations. We foster a culture of excellence from the ground up within our organization to achieve operation at the highest industry standards.

Agility

We understand that every business is different. We are highly agile and can adjust quickly to changing market conditions and client requirements. In addition, we offer a variety of business models to suit your specific needs at competitive prices.

Reliability

Pinnaclites rely on trusted ISO-based processes to consistently produce excellent results. We have over 30 years of experience in the AEC industry, and our work processes are ISO-certified.

Teamwork

We work together to scale every challenge. We understand that teamwork can provide the best possible results for our customers. Pinnacle fosters a team-oriented culture where everyone is valued, and their contributions are encouraged and recognized.

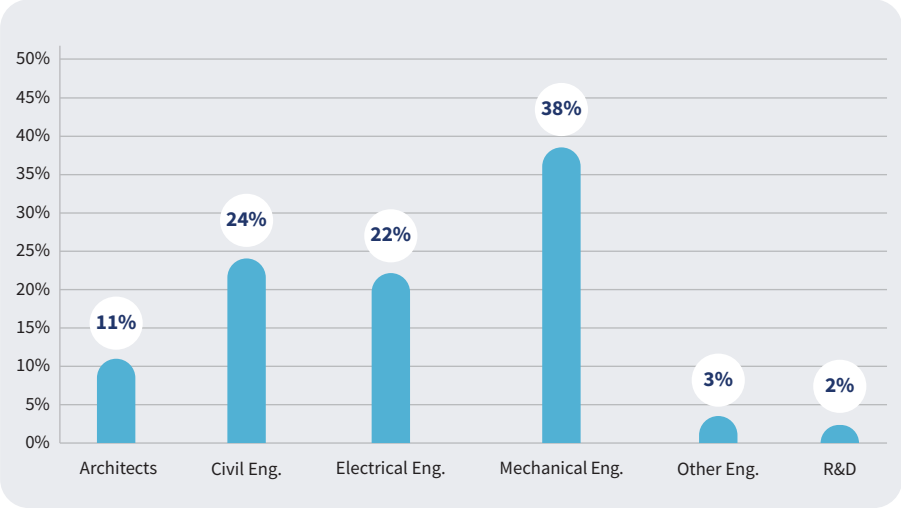
Honesty

Honesty is our key value, and we hold ourselves to the highest standards of integrity. We are transparent and clear in our communication to ensure that our clients get the best value for the money.

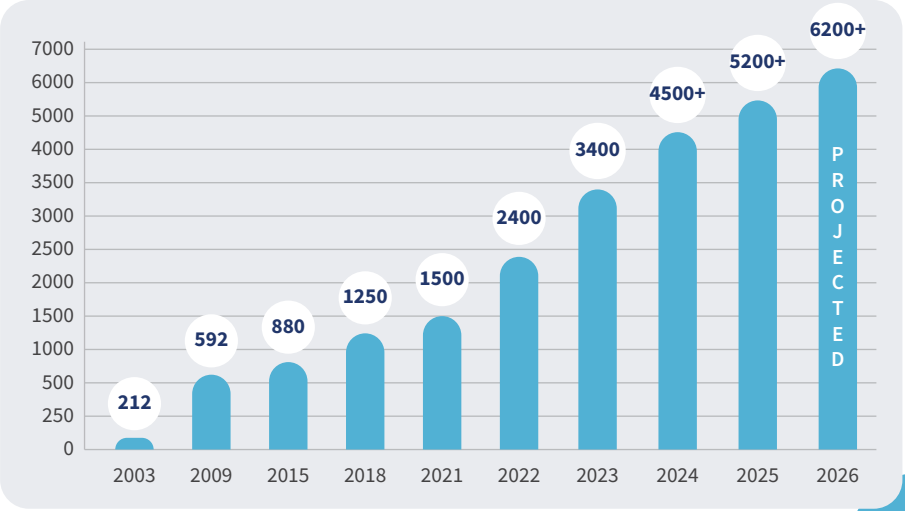
10. Our Team

Integrating digital delivery solutions across the AECO lifecycle, Pinnacle brings together engineers, architects, and construction technologists with expertise in international construction codes and standards. Through 15 global delivery centers, we support complex infrastructure and building projects with precision-driven workflows.
Our multidisciplinary teams deliver across sectors, including stadiums, airports, data centers, semiconductor facilities, mixed-use developments, healthcare, and more.

Employee Background



Workforce Growth



11. Our Infrastructure

Pinnacle has large state-of-art campuses in Durgapur, Jaipur, Kolkata & Madurai, comprising facilities like High-speed Bandwidth, Blade servers, an R&D center, a Datacenter, recreational zones, playgrounds, and more.

We also have equipped global delivery centers in the US (Houston, Atlanta, and San Jose), Canada (Toronto), UK (London), KSA (Riyadh), UAE (Dubai), Singapore, Germany (Cologne), and Japan (Tokyo) that allow our employees to work in the same time zone as our customers.

Pinnacle's Constructability Installation Lab provides construction site experience to employees, integrating theoretical learning with practical experience. It enables our employees to deliver integrated AECO solutions on time and with accuracy.

12. Our Work Processes

We strongly emphasize the significance of efficient work process management and consistent communication in the context of outsourcing services. Our process orientation and quality control are per ISO standards – 9001:2015, 27001:2022, 19650-2, 19650-3, and 19650-5. As holders of **ISO 19650-5**, the esteemed international certification for BIM services, we ensure adept data management and transparent collaboration. On orders, we assign a dedicated Relationship Manager, a competent Project Delivery Head, and Project Managers for focused execution.

Relationship Management

Our relationship managers are co-located with customers, ensuring clear communication, managing timelines, and handling deliveries promptly to surpass customer expectations. They advise customers on the services Pinnacle provides and build long-term business relationships.

Production Process

Project teams report to Project Delivery Head (PDH). The PDH provides technical leadership to the team and ensures standard work processes (as per ISO norms) are followed. They oversee project delivery. Project Delivery Heads periodically communicate with the client to get regular feedback and ensure the successful completion of the project.

Project Managers handle small teams for a customer and are responsible for understanding project requirements, project standards, invoicing processes, and communication protocols. They prepare project templates per project specifications, plan resources and align project delivery schedules.

Auditing Process

The COE team is an independent body in the company for Process and quality management and monitors the process and quality through various audit parameters, sets up feedback management processes, carries out investigations in case of any complaints/concerns, and provides action items. This way, Pinnacle ensures consistency in the final deliverables throughout the company.

Quality Control Process

Pinnacle’s efficient processes and stringent quality control mechanisms have added certainty to 15000+ projects worldwide. Our process orientation and quality control are per ISO 9001:2015, ISO/IEC 27001:2022, ISO 19650-2, ISO 19650-3, and **ISO 19650-5** standards and are managed by an independent QC team.

13. Project Portfolio

Dubai International Airport

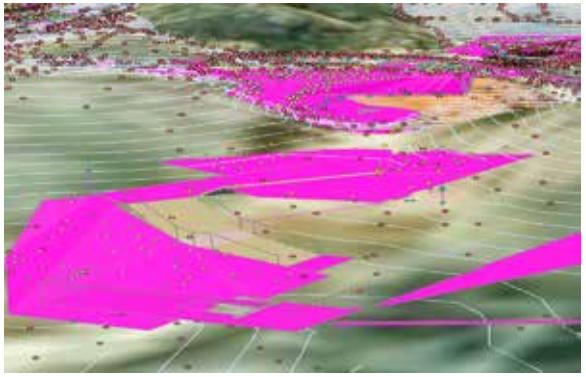
Dubai, UAE

Hotel 10, Sheybarah South

Saudi Arabia

Hotel 13, Desert Rock Hotel

Saudi Arabia



Lusail Stadium

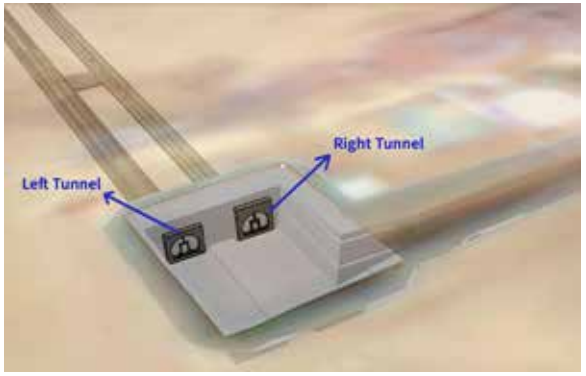
Lusail, Qatar

Cambodia Airport

Cambodia

Underground Tunnel

Saudi Arabia



14. Clients Speak

"It has been very good to work with the Pinnacle team. The team we work with works very hard & always gives 100%."

Black & McDonald, Canada

Tony Marchione

"Pinnacle is a valuable business partner in delivering an iconic world-class Project. The most important aspect of having Pinnacle on board is the instrumental role in overcoming challenges by providing satisfying solutions."

HBK Contracting Company, Qatar

Leonidas Tzevelekas

"The Pinnacle team assigned to my company knows exactly what we expect on each project, and they always deliver. They are quite capable of designing projects on their own with minimal assistance/input from my company."

Thompson Engineering, USA

Dustin Linquist

"Our Pinnacle team has been very helpful and very dedicated to our projects. The team is very good about asking questions and learning the process while meeting deadlines."

Commonwealth Electric Company, UK

Stewart Bohrer

"They delivered excellent work with smooth communication and maintained strict adherence to the project scope and schedule."

Alfanar, KSA

"This was a very large project with 5 jobs at the same time. The schedule was aggressive, with lots of DRBs and RFIs to incorporate. Pinnacle did a great job being organized and hit our deadlines almost 100% of the time. "

Hoffman Structures, USA

Garnette Rouse

"Nearly 15% of project costs were reduced as Pinnacle had validated the layout with the shortest path according to the MEP service reduction based on international codes. Pinnacle did an excellent job of deputing a large experienced team of BIM Engineering professionals."

Jeddah Tower, KSA

Ziad Aboul Hosn

"Working with Pinnacle for detailing services has been very rewarding for our fabrication department. Their commitment to our company is unmatched compared to their competitors', and having a dedicated team for all of our projects makes it a virtually seamless process and gives our fabricators quality drawings every time."

Winger Contracting Company, USA

Matt Thompson

"The quality of their deliverables was top-notch, along with smooth execution processes. Pinnacle's team was technically proficient and very responsive with project updates."

Saudico Salco Contracting, Saudi Arabia

"I am very pleased with the level of service and, more importantly, the results generated from your services. Thank you for all your services to date, and I look forward to continued success working with your organization in the future."

BK Gulf, UAE

Costas

"Pinnacle Team was incredible. There were some challenges on our job, and Pinnacle made our lives easier by working alongside our site team seamlessly."

Modern Niagara, Canada

Chris Gour

"As usual, Pinnacle continues to provide amazing service and outstanding flexibility. The team did an excellent job on this project and finding and solving issues ahead of time."

Miller Mechanical C & E, USA

Eric Diamond

"Tasked with complicated parameters, the team has performed admirably. There have been multiple occasions where the ability to provide results has been restricted or denied altogether; when those situations have occurred, the Team has been patient and professional while the external obstacles are resolved. Further, the Team has become intimately aware of the process and has been proactive in identifying potential issues and sharing them in a timely fashion - a most helpful and appreciated effort."

ENGworks Global, USA

Eric Swanson

"This process went very well. Not only did the team deliver what we required, but Pinnacle also advised on better project completion methods."

William Farrell Limited, Ireland

Owen McSweeney

"Working with the Pinnacle team is a pleasure. All required schedules are met, and their attention to detail is always reflected in the work provided. They are humble, respectful, and always willing to learn new things from a contractor's perspective."

HPS Mechanical, USA

Scott Fox

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