

Cloud Support Services



Capabilities and Expertise

Our capabilities and technologies are drawn from our decades of operational experience and a reservoir of technical applications to drive performance for our clients. Our high-end teams connect interdisciplinary experts from across our company's 21,000 staff worldwide. Tetra Tech mobilises teams that include analysts, statisticians, digital engineers, and industry experts who effectively implement value-generating and pragmatic solutions for our clients.

Planning

- Asset and Data Assessment
- Software Strategy
- Technology and Industry Trends
- Technology Roadmap
- Methodology, Policies, Procedures
- Sustainability Planning
- Risk Management
- Cybersecurity Policy & Procedures
Security Program Development
- Regulation & Standards Compliance

Data Solutions

- Regulation & Standards Compliance
- Intelligent Asset Management
- Data Governance
- Data Management
- Dash boards and Analytics
- Modelling
- Machine Learning
- Operation Workflow
- Energy and Process Optimisation
- Augmented Reality

Automation

Design

- Field Assessment
- 3D Modeling
- Digital Twin Design
- Process Optimization
- Control Panel Fabrication Design
- Smart P&IDs

Implementation

- Application Development
- Alarm Management
- Control System Configuration
- Testing
- Commissioning
- Support Services
- Training

Cybersecurity

Consulting /Design

- Governance, Risk, and Compliance
- Assessments – Cybersecurity, Threat and Vulnerability, and Compliance
- Auditing
- Cybersecurity Architecture
- Data Security Architecture
- Cloud Security Architecture
- ICS Penetration Testing
- Digital Forensics

Implementation

- Access control
- Mobile device management (MDM)
- Network security monitoring
- Policies and Procedures
- Zero Trust Network Access
- Multi-factor Authentication
- Video surveillance
- Identity and Access Management
- Cyber incident response
- Automation of Compliance
- Training

Operational Technology

Design

- Architecture (Systems, Network, DMZ)
- Radio, Cellular, WIFI
- Fibre Optic
- Component and Software Selection
- Licensing and Certificates
- Cloud Solutions

Unparalleled Insight. Transformational Solutions.

Our **Tetra Tech Delta** technologies encompass the full spectrum of solutions we have developed for our clients worldwide.

Tetra Tech Delta brings together our industry leading technology expertise and in-depth operational knowledge to make technology practical and implementable on projects across our sectors and to create value-generating solutions—from smart data collection and advanced analytics that facilitate decision making, to artificial intelligence applications and simulations to evaluate alternatives and optimise operations.

Tetra Tech Delta combines our deep subject matter expertise with analytics, tools, and smart approaches to create transformational digital solutions that support our clients' goals.

Tetra Tech Delta is the compilation of more than 50 years of research and industry-leading applications that serve as the foundation for the solutions we provide for our clients today. Tetra Tech has more than a hundred patents and trademarked technologies that we use to provide a first-of-a-kind solutions to our clients' most challenging projects.

Our Technology Partners

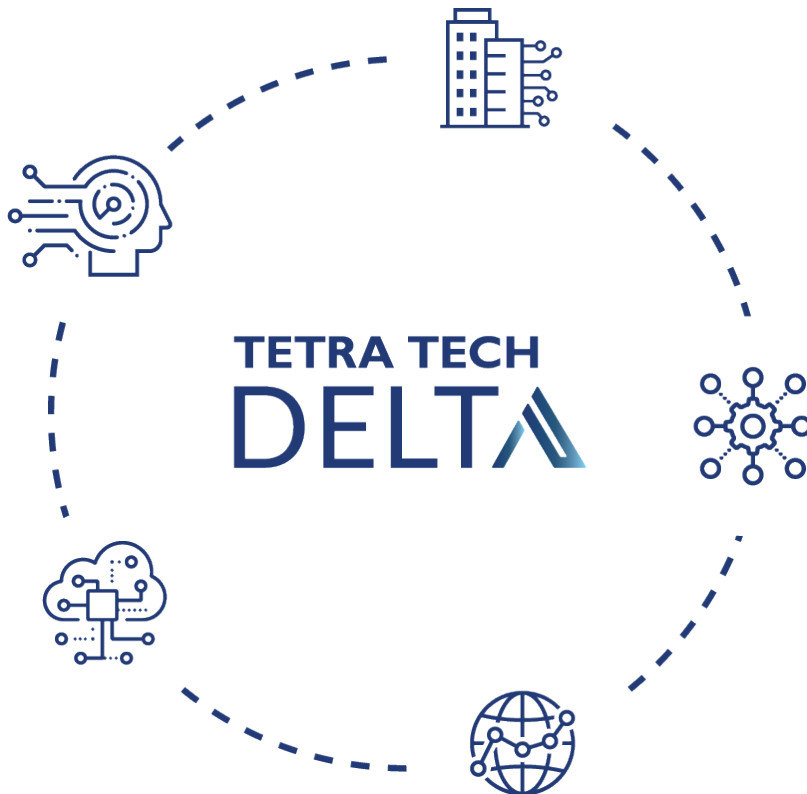


Tetra Tech Delta Solutions

- Digital asset management
- Machine learning for analytics and optimization
- IIoT, digital twins, and AI
- Sensors, drones, and mobile data collection
- Geospatial enterprise data management
- Cloud migration and cybersecurity

Tetra Tech Delta draws on five Specialty Areas:

- **Tetra.Analytics:**
Artificial Intelligence, machine learning, analytics, and workflow and process optimisation
- **Tetra.Cloud:**
Cloud computing, cybersecurity, and software development
- **Tetra.Design:**
Smart buildings, sustainability, and energy and asset management
- **Tetra.Maps:**
Data collection, geospatial analytics, interactive dashboards, and virtual reality
- **Tetra.Simulate:**
Scenario analysis, modelling, forecasting, risk, and impact analysis





Tetra.Analytics

AI, machine learning, analytics, and workflow and process optimisation

Tetra.Analytics starts with identifying the areas where Artificial Intelligence will have the greatest benefit—large data sets, real-time data processing, and high-volume information management. Our teams of industry experts and data scientists work together using tools and technologies to design intelligent, data-driven solutions that generate insights and optimize business performance.

Partnering with our clients to deliver advanced analytics solutions to support their digital transformation and enhance operational performance



Tetra.Cloud

Cloud computing, cybersecurity, and software development

Tetra.Cloud delivers secure, cost-effective, and flexible cloud-based solutions that use tools and technologies to rapidly scale to meet the most demanding mission-critical needs by combining industry-leading technology expertise and in-depth operational knowledge. We open new opportunities for faster, more efficient, and secure data analytics, management, and processing through Tetra.Cloud.

Modernising operations through cloud migration, data management, and custom software development



Tetra.Design

Smart buildings, sustainability, and energy and asset management

Tetra.Design augments traditional design procedures with advanced design tools and proprietary automation to deliver smart building and asset management solutions. Our team of industry specialists draw on our deep expertise in digital design processes, including Building Information Modelling (BIM), digital twins, advanced engineering simulations, and real-time data integration for design optimization, asset optimisation, and predictive analytics.

Combining resilient and sustainable design with connected technologies to provide solutions for smart buildings and industrial applications



Tetra.Maps

Data collection, geospatial analytics, interactive dashboards, and virtual reality

Tetra.Maps provides integrated mapping solutions using our suite of tools for state-of-the-art data collection, airborne sensors and camera systems, enterprise mapping software, and robust information technology infrastructure. We use geospatial tools and geoanalytics to deliver real-time dashboards that support decision-making for our commercial, government, and defence clients.

Applying geospatial solutions that integrate data collection, analytics, and smart delivery to improve decision-making throughout the project life cycle



Tetra.Simulate

Scenario analysis, modeling, forecasting, risk, and impact analysis

Tetra.Simulate leverages our suite of modelling systems to simulate air, land, and water processes, allowing us to predict outcomes and evaluate future scenarios rapidly and reliably. We support science-based decision-making and optimisation by building an understanding of water and environment systems behaviour.

Twinning the physical world through data, numerical models, and predictive analytics to understand outcomes and optimise decision-making

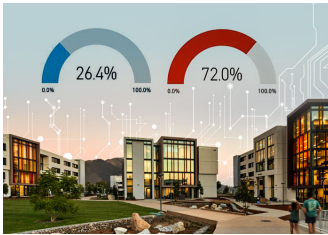
Sample Tetra Tech Delta Projects

Enabling Emergency Response Capabilities with Cloud Migration Services



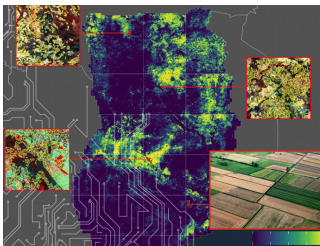
- 3-month migration and operationalization of the ecosystem into the cloud
- Over 12 complex applications integrated
- 99.99% operational availability
- 400% increase in performance when interacting with geospatial services
- Geospatial modernization through cloud computing and integration of development, security, and operations expertise

Supporting Net Zero targets with Data-driven Planning



- Scenario analysis planning tool uses submeter data, inverse energy modeling, and predictive analytics
- Dynamic dashboards for each of California State University's 23 campuses
- 70% reduction potential in natural gas consumption
- Prioritized campuses for carbon-free heating systems
- Supporting California's goal to be carbon neutral by 2025

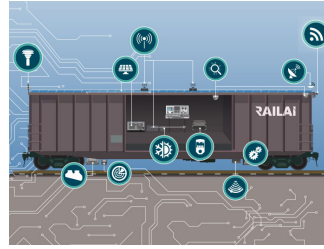
Using AI to Increase Agricultural Production in Developing Countries



- Mobile and chatbot technologies collect local ground truth farm-level data
- Remote sensing data and machine learning tools to monitor and predict yield
- \$2 million in tech investments through the Agricultural Ground Data Acceleration Facility
- 30 public and private sector partners
- 30-month implementation of project Phase One, through June 2022

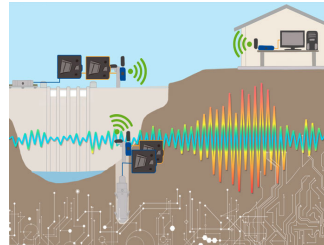
Photo: Remotely captured cropland map of Ghana; Lyndon Estes

Producing Faster Results Using RailAI™



- AI-powered autonomous data collection for immediate and preventative maintenance
- 24/7 fully automated track inspections at 70 mph survey speed
- 5-times the functionality at 1/5 the cost per mile of manned systems
- 16 times greater inspection rate than traditional methods
- 50% reduction in visual inspections

Using Sensors to Increase Safety of Tailing Dams



- 24/7 monitoring of tailing dam stability
- Real-time analytics and information dashboards support safe operations
- More than 500 hundred geotechnical instruments
- 90 microseismic sensors
- 168 high-sensitivity geophones online distributed in 20 monitored structures
- More than 6,000 events recorded yearly per structure

Applying Analytics to Optimize Wastewater Operations



- CSoft® combines data from real-time sensors with predictive modeling and real-time control (RTC) optimization
- More than \$200 million in cost savings from sewer network optimisation
- 95% overflow reduction
- 4-10 times lower cost than non-RTC alternatives
- 2 billion gallons of contaminated water prevented from entering rivers

3 Sovereign Square, Sovereign Street, Leeds LS1 4ER
+44 113 219 7111 | delta@tetrattech.com

