Magnasoft Transformational Geospatial Services

Efficient Digital Fielding & Design for Fiber Network Deployments

MOUNTAIN CONNECT
BROADBAND DEVELOPMENT CONFERENCE
TRANSFORMATIVE INNOVATION

Speakers

Scott Casey
Vice President. Telecom

sbs

Geon-Claude Grobler
Director
Telecom Engineering

Magnasoft

Randall Rene
Industry Solutions Director
for Telecommunications

esri

Moderator

Mike McGill
Vice President Market Development

Magnasoft

Magnasoft

Industry Pioneers
2 decades of designing, integrating & delivering leading-edge Geospatial & Engineering solutions to leading Telecom companies

Right Size Partner
Agile enough to prioritize your needs, flexible enough to meet your deadlines efficiently

Telecom Specialists

Technology Agnostic
Esri, Bentley Systems, Terra Suite, Leica, Autodesk, NVIDIA, Cyclomedia

Business Values
Perseverance, Quality, Transparency, Integrity & Cooperation

70+ Countries Coverage

20K+ Projects

1000+ FTEs

F500 Clientele

100% Cross-Trained Resources integrate human-in-the-loop with AI/ML

Certifications

Smart Telecom Services

SMART FTTx SUITE

- Digital Fielding Service
- Base Map Development
- High-Level Design
- Low-Level Design
- As-Built Updations
- Permits & Construction Drawings
- Address Verification & Validation
- Pole Load Analysis
- Make-Ready Engineering
- NOC

SMART TOWER MANAGEMENT SUITE

- Drone Survey
- 3D Digital Twin Tower Modelling
- Tower and Mount Mapping (2D Detailing)
- Equipment Analysis
- AI/ML-powered Asset/Inventory Management
- Structural Analysis – As-Built Engineering

Autodesk®
1996

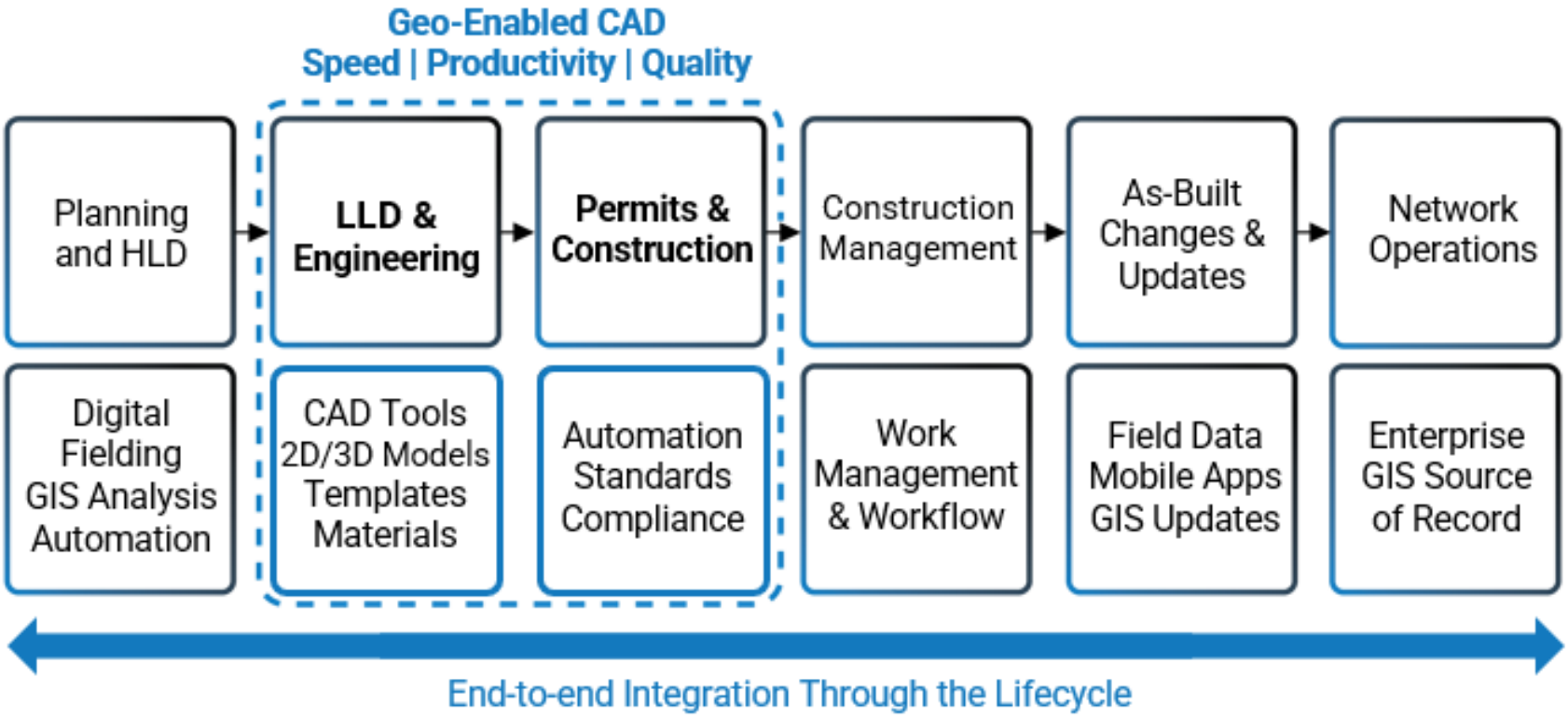
What is GIS?

Who is Jack Dangermond?

Why are we competing with him?

Enhanced Network Deployment Lifecycle

August 5th, 2024
Denver, Colorado



Digital Fielding Components

MOUNTAIN CONNECT
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TRANSFORMATIVE INNOVATION

FDC App

Design Schema & Sourcing

High Accuracy Sensors

Mobilization Model

Automated Feature Extraction

Targeted Fielding

Sensors & Digital Framework = Consistent Quality, Optimized TCP

sbs

What We Offer

- Intelligent Design Software
- Data Integration Solutions
- Professional Services

Our Customers

- Utility Operators
- Telecom Service Providers
- Engineering / Construction Firms
- Renewables

When & Where

- Founded in **2002**
- Headquartered in **Littleton, CO**
- Local Teams in: **US, Canada, Europe, Australia**

Strategic Partners

AUTODESK AEC Industry Partner

AUTODESK CONSTRUCTION CLOUD

esri Partner Network Gold

esri Utility Network Management Specialty

Telecom Design & Engineering Challenges

August 5th, 2024
Denver, Colorado

Detailed, voluminous, and time-consuming construction packages

Rigorous permit process with little room for error

Limited skilled resources, training/ramp-up and on-boarding time

Missing integration with GIS, field data capture, construction, as-builts

IMPACTING SCALABILITY, SPEED, and PROFITABILITY

Key Goals for Intelligent Design Approach

August 5th, 2024
Denver, Colorado

Speed

Increase design team productivity and reduce overall cycle times

Scale

Take on more projects with same resources to grow capacity

Quality

Maintain rigorous standards with configurable models and consistent delivery quality

Profit

Improve margins with standardized & streamlined workflows, elimination of rework, reduced training

Intelligent Design Core Principles

Standardization | Consistency | Scalability | Productivity

August 5th, 2024
Denver, Colorado

Challenge	Solution	Results
Detailed, voluminous, and time-consuming construction packages	Automate detailed design task workflows and construction drawing creation using templates	**Construction-ready packages produced faster with greater consistency and detail**
Rigorous permit process with little room for error - delays and rejections are major problems	Precise 3D design and engineering means technical specifications and compliance information is captured in detail	**Permit applications align with jurisdictional compliance; approval rates go up; cost/schedule risks go down**
Limited skilled resources, training/ramp-up and on-boarding time	Encapsulate engineering rules, models, validation & compliance within the design; accelerate training; use common tools	**Greater productivity from available teams; reduced cycle times; high Quality; consistent standards**
Missing integration with GIS, field data capture, construction, and as-builts	Leverage advanced remote sensing and analytics; streamline GIS & CAD workflows	**Automate field capture and HLD transition to LLD; seamless 2-way GIS-to-CAD integration**

"Freedom within a Framework"

Global Telecommunications Challenges

Network Modernization
- Infrastructure Rebuild
- Technology Evolution

Network Expansion
- Planning
- Capacity

Sustainability
- Equity
- SDG Goals

Resource Availability
- Funding
- Workforce

Resilience
- Natural Disasters
- Security

The Demands of the Telecom Industry are Accelerating

More Competition Throughout the Industry

We Are Now at a Place…

…where our Industry has never been

We Need More Understanding

The issues facing CSPs are not independent…

… demand and competition at a global scale is growing

. . . Collaboration and Action

Traditional Telecom Business

Silos Present Challenges Throughout An Organization

Sales and Market Development

Planning, Design, and Engineering

Permitting and Construction

Fulfillment, Maintenance, and Operations

Dispatch and Customer Service

Executive View and Finance

Business Intelligence

Network Management

Customer Workorder Management

New-build Job Management

Outage Restoration

Capacity Metrics

Network Status

Addressing

Customer Data

Customer Satisfaction

KPI Reports

Forecast

Ops Review

Traditional Telecom Workflow

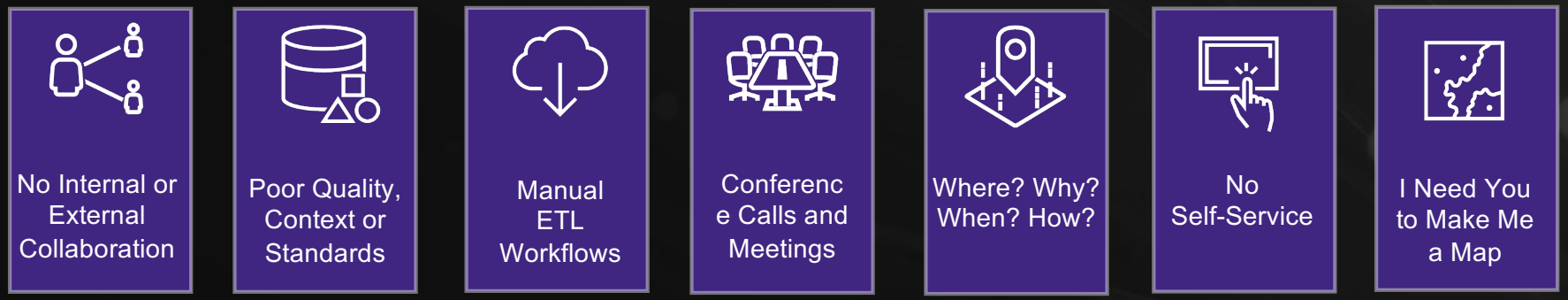
Silos Present Challenges Throughout An Organization

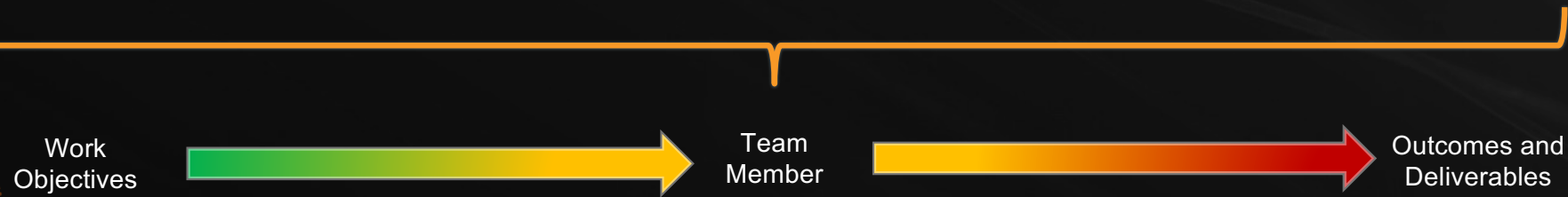
Sales and Market Development | **Planning, Design, and Engineering** | **Permitting and Construction** | **Fulfillment, Maintenance, and Operations** | **Dispatch and Customer Service** | **Executive View and Finance**

- Business Intelligence
- Network Management
- Customer Workorder Management
- New-build Job Management
- Outage Restoration
- Capacity Metrics
- Network Status
- Addressing
- Customer Data
- Customer Satisfaction
- KPI Reports
- Forecast
- Ops Review

Common Issues Affecting Every Organization

Limiting Productivity and Causing Unnecessary Frustration

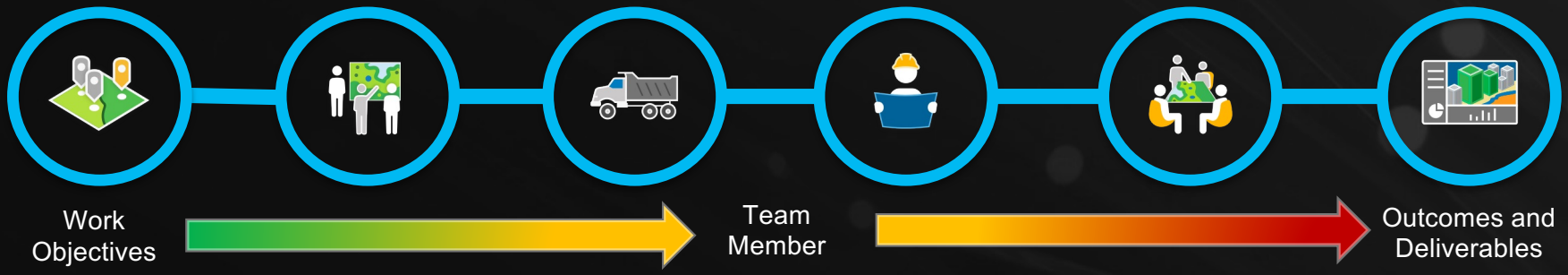




. . .Organizations must modernize workflows

Siloed Data and Workflows Affect KPI

Limiting Earning Potential and Causing Unnecessary Delay



Market Development

Network Design

Permitting

Time to Install

Outage Restoration

Cost Per Connect

ROE Agreement

Walkout Survey Expense

Project Completion

Network Operating Costs

Quality of Service or Experience

Net Promoter Score

Overcoming These Challenges

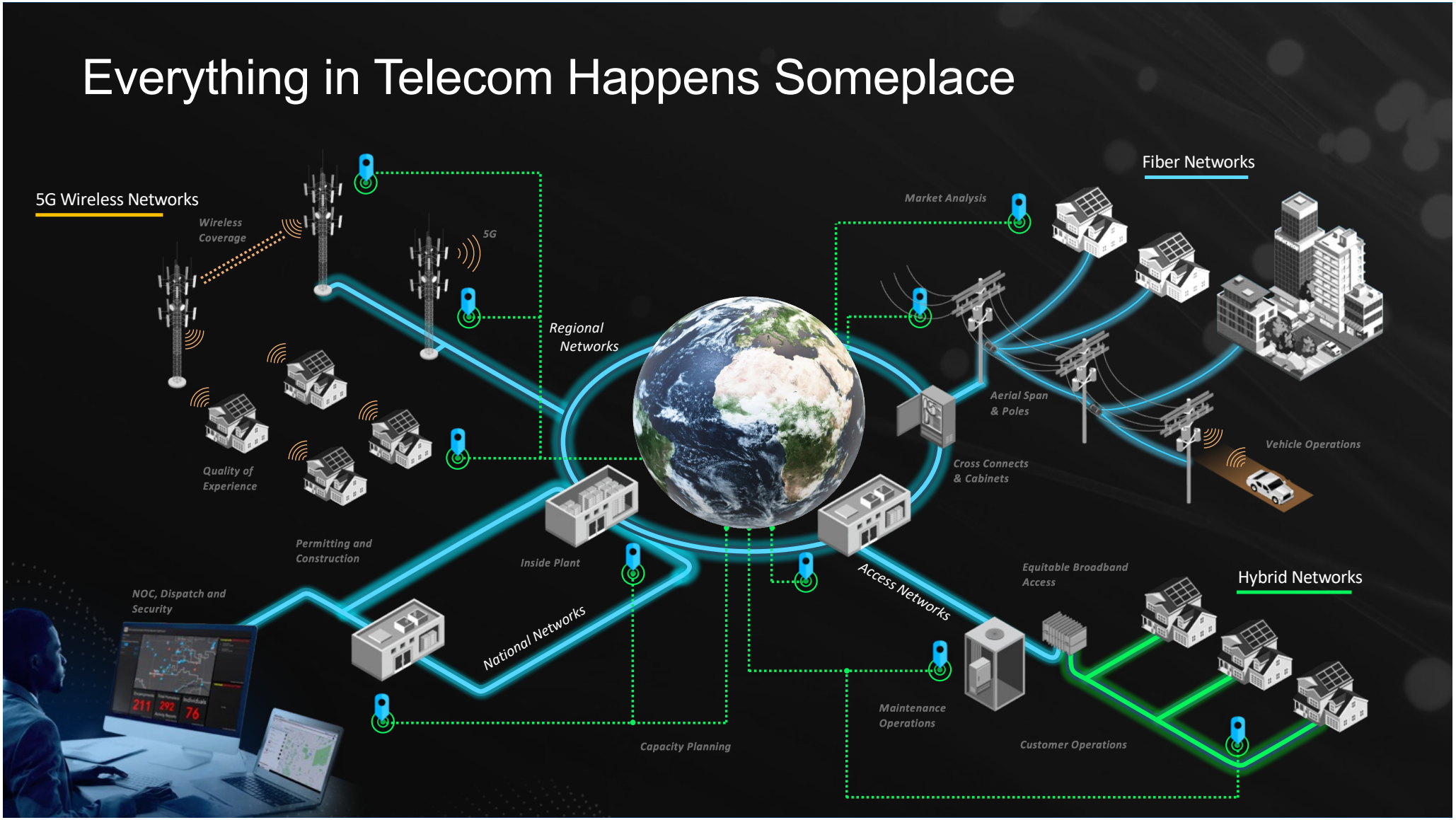
Will Require Shared Understanding
. . . and Significant
Collaborative Action . . .

. . . Bringing Together
Our Best Information, Science & Technology
. . . and Creative Design Thinking

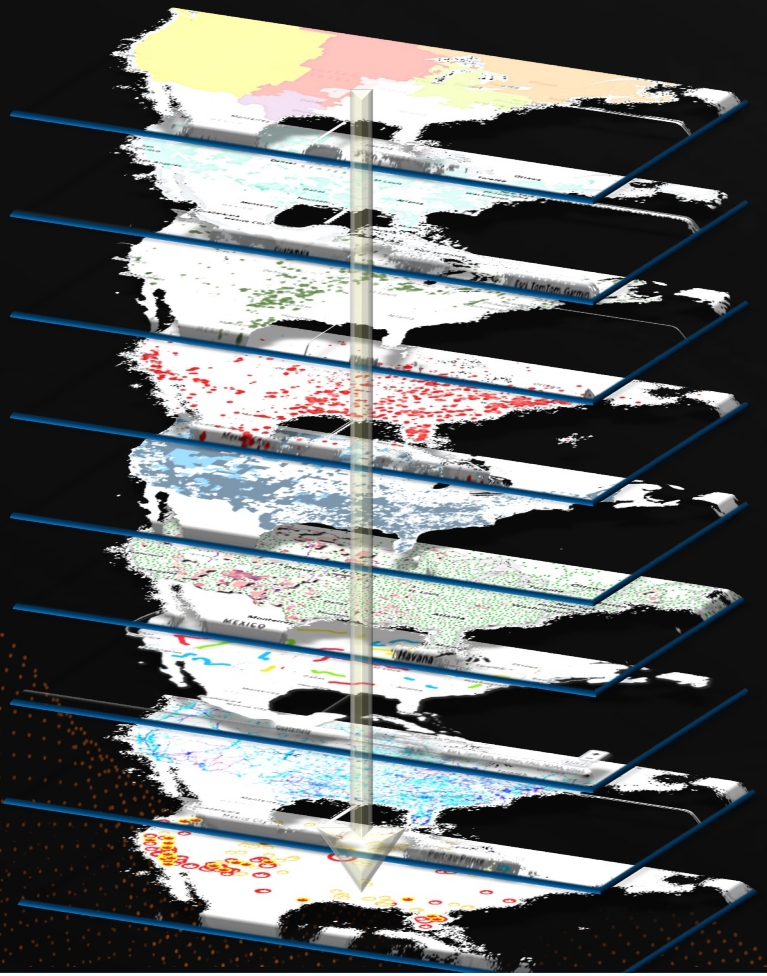
Uniting Around the
Power of Geography

. . . and Doing So Urgently

Everything in Telecom Happens Someplace



Unify Data With Location Intelligence



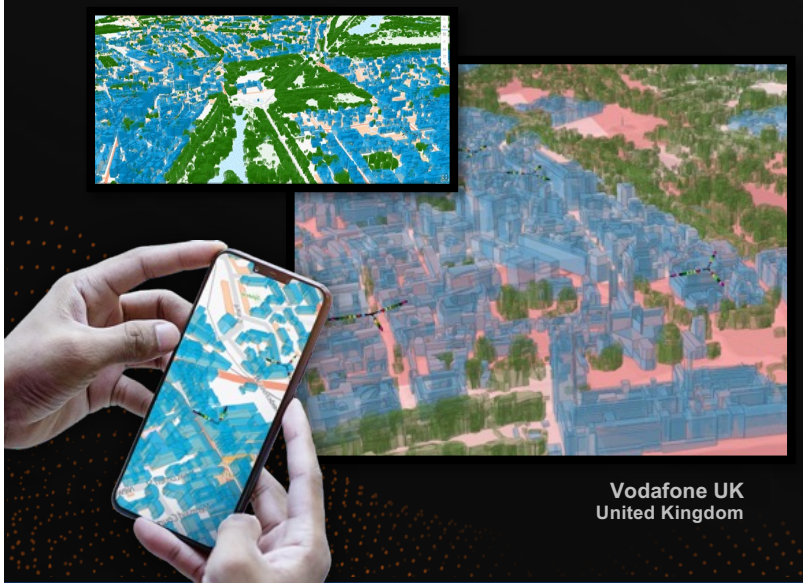
- Regulatory Authorities
- Permitting Boundaries
- Wetlands and Protected Areas
- Sensitive Ecosystems
- Equity /Disadvantaged Communities
- Utility Poles
- Proposed Projects
- Network Infrastructure
- Climate Impacts

GIS Provides the means to Visualize, Analyze, and Communicate Telecommunications Issues and Solutions

Putting the Network to Work

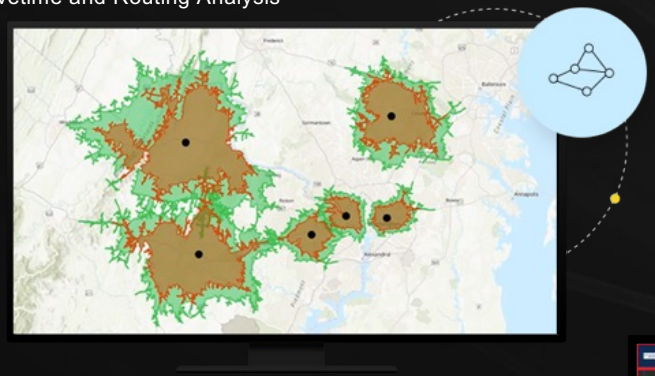
GIS Patterns of Use in Action

5G Planning & Design



Vodafone UK
United Kingdom

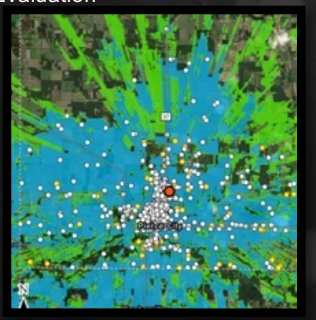
Drivetime and Routing Analysis



Construction Monitoring

Clear Networx LLC
Colorado

Broadband Tower Evaluation



Wisper
Pierce City, Missouri

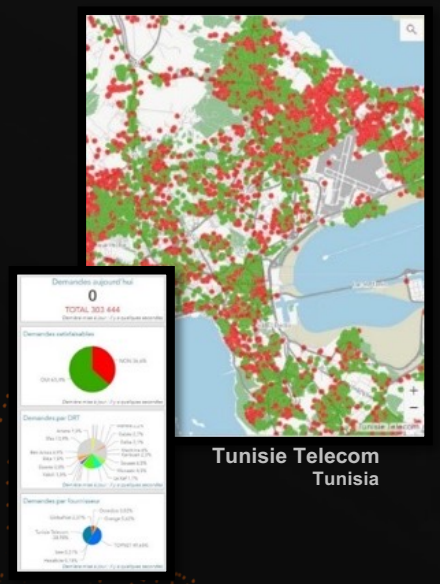
Broadband Infrastructure Inventory

Connected Nation
Michigan

Putting the Network to Work

GIS Patterns of Use in Action

Customer Serviceability Assessments

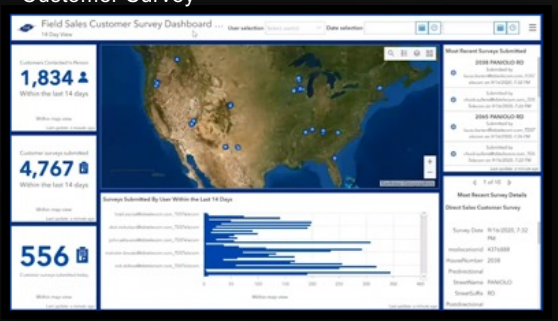


Tunisie Telecom
Tunisia

Construction Monitoring

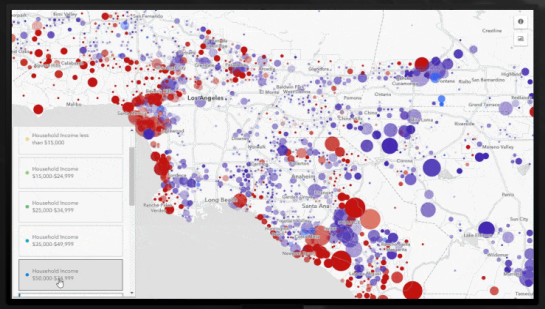
Clear Networx LLC
Colorado

Field-Based Customer Survey

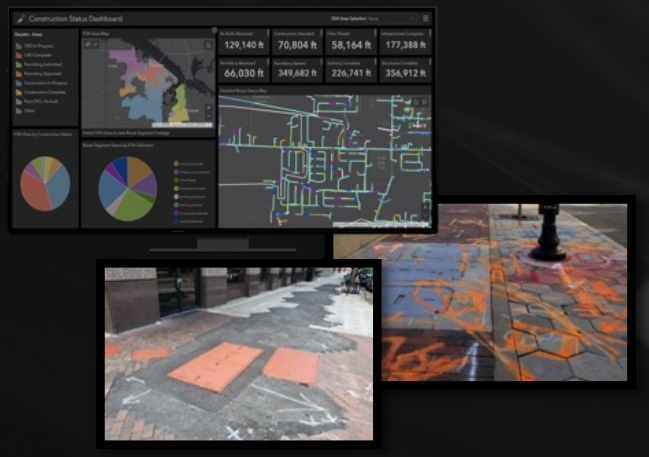


TDS Telecom
Wisconsin

Assess Equitable Access



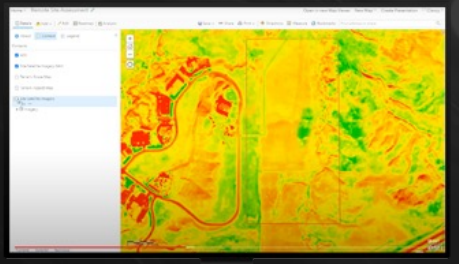
Coordination and Collaboration



Putting the Network to Work

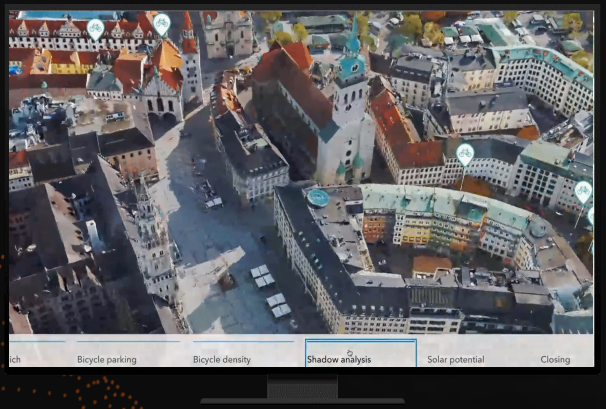
GIS Patterns of Use in Action

Remote Suitability Analysis



Imagery, AI & ML

Green Energy Modeling



Field to Engineer

Transparency and Oversight

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