

Space-Time Asset Composite

Space-Time Asset Composite:

delivers holistic geospatial asset intelligence, enabling optimized oil & gas production, and reducing down-time.

- Real-Time Data Integration
- Condition-Based Maintenance
- Geospatial Visualization of Asset Condition
- Geographic Visualization of Maintenance Activities and Asset Performance
- Financial Impact Analysis
- Environmental Impact Analysis
- Automated Compliance Reporting
- Situation Room

Real-Time Data Integration

Seamless integration of data from sensors, enterprise systems (GIS, EAM, CBM, cost analysis, production forecasting, dispatch, environmental, health, and safety (EHS), compliance, inventory), and real-time weather and temperature feeds

Condition-Based Maintenance

Features detect and identify the issue, and enable analysis to determine maintenance schedule

Geospatial Visualization of Asset Condition

to prevent costly downtime with timely alerts and dashboards, including key performance indicator (KPI) thresholds

Geospatial Visualization

of Maintenance Activities and Asset Performance

Visual Environmental Impact Indexing

displays the Environmental Impact of assets based on real-time data, including sensor data

Visualized Rate of Failure Analytics

for specific equipment by geographic location or category of environmental factors for easy understanding

“Where Used” Identification

preventing downtime and asset failures by identifying and geospatially visualizing all locations where a faulty part or process is in use

Regulatory Compliance

Automated regulatory compliance and reporting features

Space-Time Asset Composite geospatially displays asset condition and asset performance correlated with external factors such as severe weather and other extreme events, maintenance history and schedule, and inventory and parts accessibility, helping production and field supervisors and engineers understand and manage the impact of each factor on production. Alerts and intuitive satellite and site-level views offer options for optimizing asset management, including condition-based maintenance. Remedial action schemes and workflow links enable fast, authorized action - from the same screen.

HALFWAY SOLUTIONS ARE FOR HALF-SCALE PRODUCTION

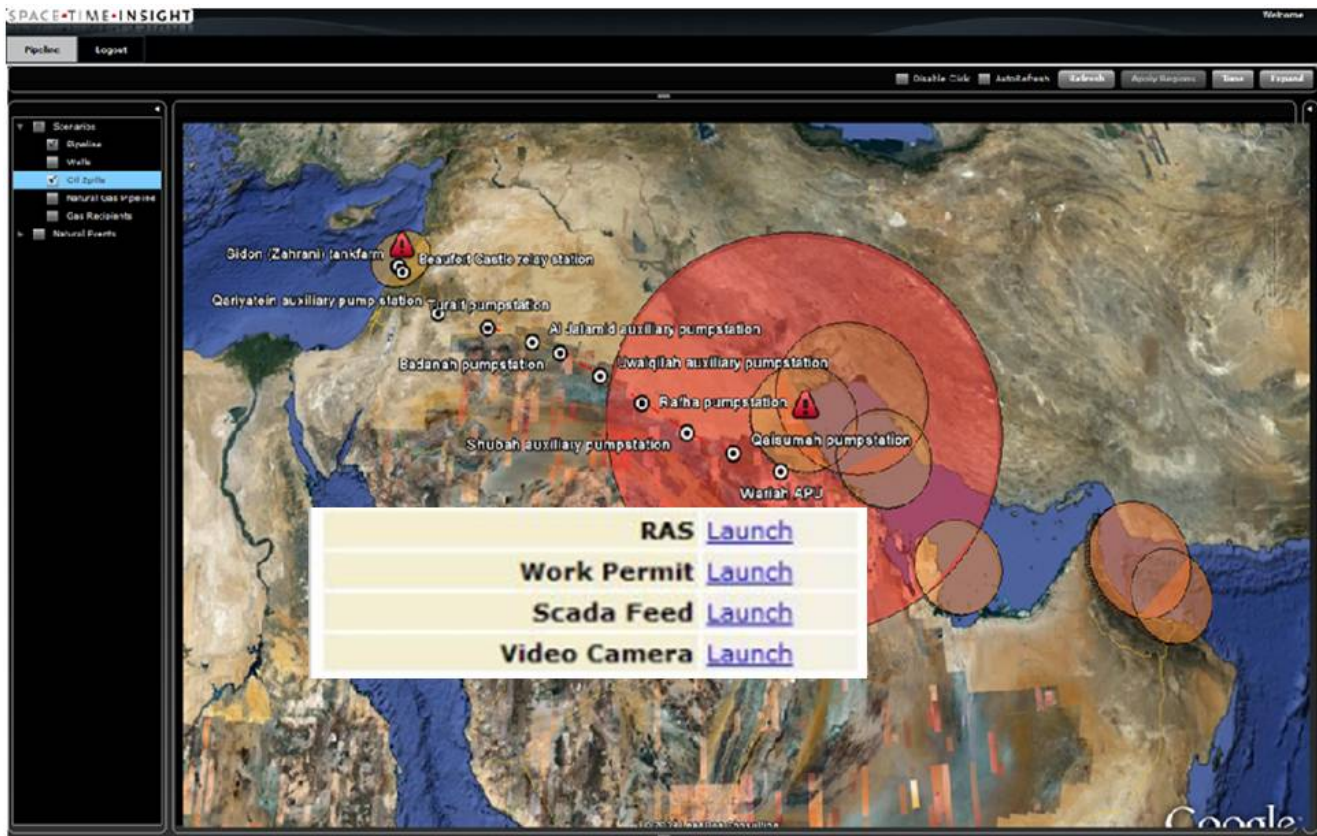
You have data in lots of systems, including GIS, enterprise asset management (EAM), production forecasting, field engineer scheduling and dispatch, cost analysis, environmental, health, and safety (EHS), compliance, and inventory systems. You have real-time sensors and field engineers that report back assets' condition. You can see the weather report and the news. Given enough time, you could process most of the information you need to improve production all over the world with the systems you have.

So, what's the problem? In the oil & gas industry like no other, time is money.

Every second of downtime, every second an asset underperforms, production is needlessly diminished. Every second a leak or spill goes undetected, the cost of environmental and public relations cleanup escalates - exponentially. The competition in your industry is ferocious. A lot of your assets are located in remote and hostile places – where extreme weather and temperatures, vandalism, local activism, and even terrorism are commonplace. Every second matters.

Currently, the data needed for asset management exists in several separate silos. You can't tell what one set of data means in the context of all the others. It's likely that none of the systems you have give you an accurate view of the impact of real-time factors such as weather, temperature, and vandalism – or let you take action to counter these in advance. There's no single system that gives you the whole picture in real-time – or lets you take action using full understanding. The systems you have lack the ability to give you real-time situational awareness. Real-time situational awareness involves having all the information you need presented intelligently, geospatially, intuitively, on one screen – satellite and site-level images – from which you can take action.

Space-Time Asset Composite helps oil & gas companies realize the vision of intelligent asset management for optimized production by providing usable, holistic asset intelligence – and the ability to take informed, authorized action from the same screen. Data and functionality from operational and information technology investments, integrated with real-time web feeds like weather and temperature conditions, are shown as a geospatial visualization, enabling the intuitive understanding needed for fast and well-informed decision making. Links to remedial action schemes and workflow systems enable fast, authorized action from the same screen.



Space-Time Asset Composite visualizes asset data from multiple systems in situational context and enables users to initiate action from the same screen.

Space-Time Asset Composite – Features & Benefits

- **Early Detection of Asset Repair and Replacement Needs via Geospatially Visualized Asset Condition and Production Levels** with timely alerts and dashboards including key performance indicator (KPI) thresholds for asset performance management
- **Condition-Based Maintenance**, reactive, proactive, and preventive maintenance are enabled with views of warranty, CAD drawings, instrumentation, parts and procurement information on a single screen
- **Visualization of Rate of Failure Analytics** for specific equipment by geographic location or category of environmental factors for easy understanding
- **“Where Used” Identification enables prevention of unwanted downtime and asset failures** by identifying and geospatially visualizing all locations where a faulty part or process is in use
- **Visual Environmental Impact Indexing** displays the Environmental Impact of assets based on real-time data, including sensor data
- **Geospatially Informed Financial Impact Analysis** regarding asset performance and downtime financial impact under a variety of conditions. Includes opportunity cost, break-down cost, and environmental cost.
- **Geospatial understanding of Maintenance Activities correlated with Asset Performance**
- **Mitigated Liability Exposure** by enabling timely replacement and repairs of hazardous and critical assets
- **At-a-Glance Understanding of Variances** by supplier and required versus available skill sets
- **Intuitive Prioritization of Asset Management** activities by visualization of financial and environmental information
- **Improved Asset Management:** greater asset reliability, uptime, and ability to reduce negative environmental impact while cutting costs
- **Automation features for Regulatory Compliance and reporting**