GTI ENERGY

SAGE

STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

August 13-14, 2025 | Des Plaines, Illinois

PODS Association Origins and Updates:

Opening the Community and Model to More Pipeliners

PODS™
Pipeline Open Data Standard

THE Industry Standard and Community for Efficient Pipeline Data Management

History o

- **Integrate**
  (ISAT) beg
- The origin
  1997 and
  the PODS
  "Project" ir
  - Started
  - Grew to
    and ope
  - **RDBMS**
- August 20
  incorporat

I. ACKNOWLEDGMENTS

The Gas Technology Institute, (GTI) [formerly Gas Research Institute (GRI)] and Advanced Data Design, Inc., its contractor, would like to recognize the following organizations and their employees for their contribution to the Pipeline Open Data Standard (PODS™).

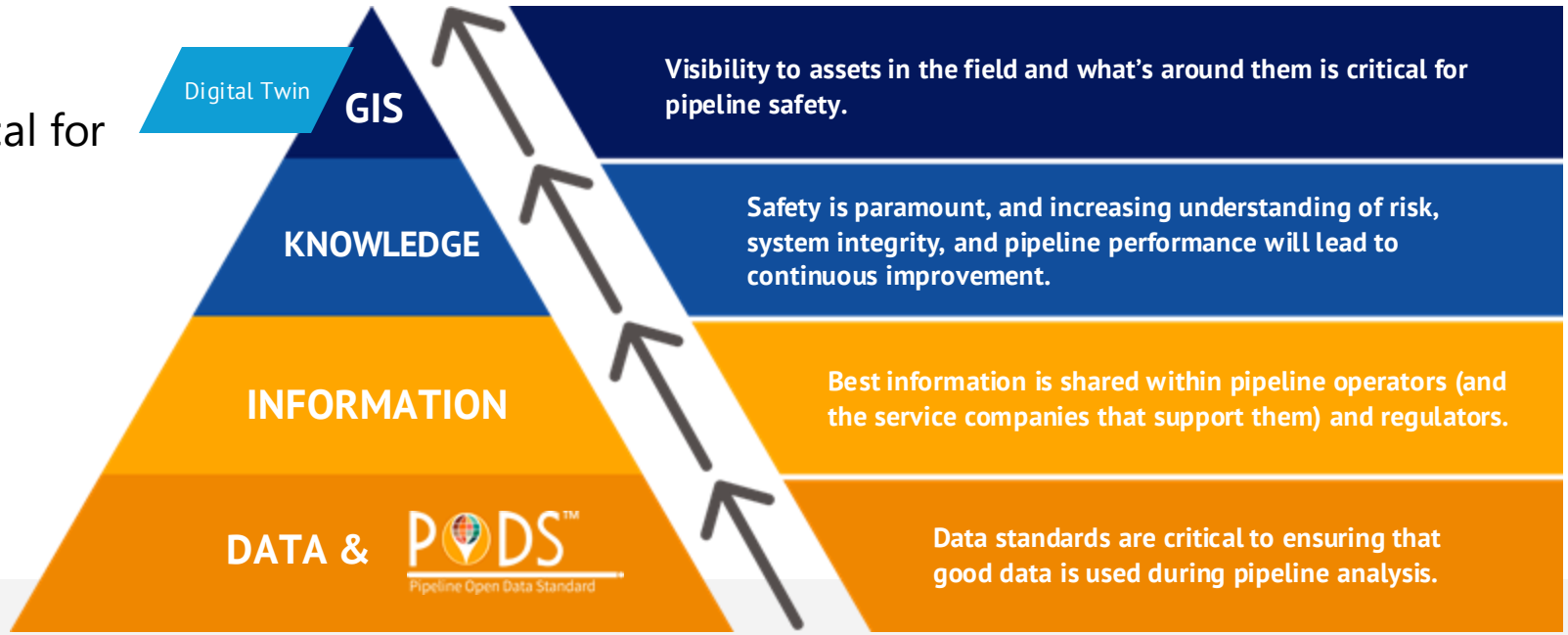
American Petroleum Institute
Bass-Trigon Software, Inc.
Canadian Energy Pipeline Association (CEPA)
Chevron
Conoco
Coral Energy
Duke Energy Services
Dynamic Risk Assessment Systems, Inc.
Dynegy, Inc.
Eagle Information Mapping, Inc.
ESRI, Inc.
GeoFields, Inc.
KinderMorgan Energy, Inc.
M.J. Harden Associates, Inc.
New Century Software, Inc.
Petrotechnical Open Software Corporation (POSC)
Public Petroleum Data Model Association (PPDM)
Reliant Energy Pipeline
Stoner & Associates
TransCanada Pipelines Ltd.
Williams Gas Pipelines

Why Are Pipeline Open Data Standards and GIS So Important?

- Use of GIS technology and data standards increases safety and integrity
- Asset Knowledge Management and the Digital Twin
- Data is an asset and mission critical for optimizing in-ground assets
- Pipeline data continues growing exponentially

PODS:

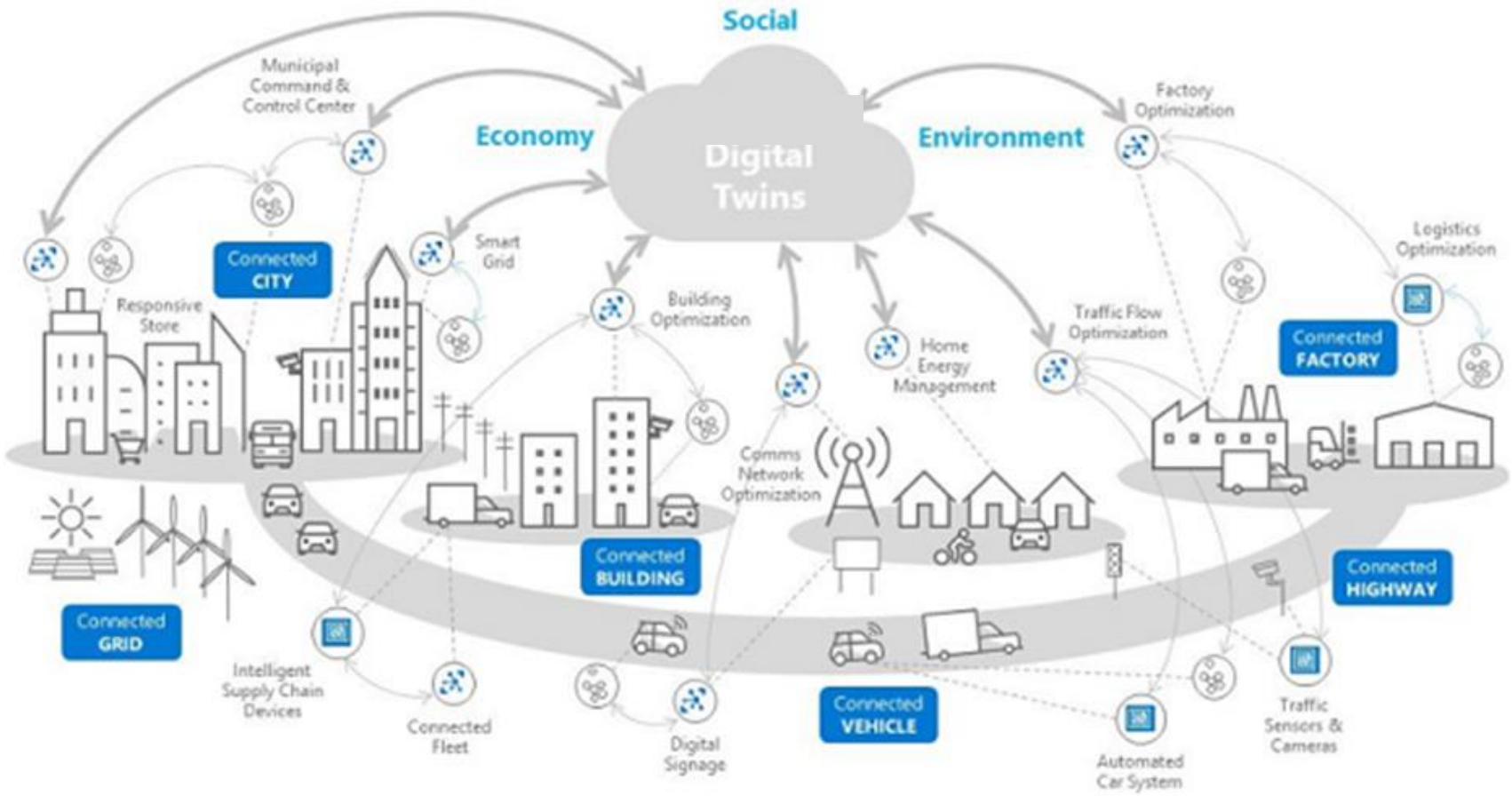
The Foundation for Asset Knowledge Management



Operator designed to comply with regulations, support specific pipeline operations and decrease risk through the digital twin / asset knowledge management

What is the ideal state of your data?

- Accessible through common framework
- Accuracy/age of the data is known
- Geospatially aligned with physical infrastructure
- Updated at appropriate intervals
- Complete across business functions
- …etc.



Digital Value Chain – Why and What?

DESCRIBE	Infrastructure Event Data IoT/Real-Time Data Spatial Reference
ANALYZE	Modeling/Simulation/Predictive Analytics Visualization Business Process Integration AI/ML
ACT	Decision Support Prescriptive Automations Operational Efficiency

Terms & Terminology

ESRI: Location Information Models

- ESRI is the PLATFORM of managing spatial data
  - Web Maps/Apps
  - Field Data Collection/Forms
  - Business Analytics/Reporting
- ArcGIS Pipeline Referencing Extension (APR)
  - Management of Stationing
  - Centerline Management
  - Spatial location
- Utility Network Extension (UNet)
  - Trace Model
  - Connectivity Model
    - Emergency shutoff
    - Flow calculations/throughput

PODS: Business Information Model Community Sourced

- Data Model/Standard for organizing regulated pipeline business information:
  - Specifications
  - TVC, MAOP
  - Regulatory
  - Fitting IDs
  - Document/document linking
  - Activities/Projects
  - Inspection Data
- LOT OF DATA PER MILE
  - ILI, CIS, etc – millions of records, all stationed

PODS Membership & Community

As a PODS Member, your organization becomes a part of a global network and access to a wealth of technical knowledge and experience. PODS members are thought leaders and innovators who share knowledge and expertise to build and maintain the only geospatial data model specifically designed by and for pipeline operators.

Members pay dues annually, share innovation and work collaboratively to develop, maintain, advance and refine the PODS Data Model, discuss new technologies, share passion about pipeline safety and create best practices related to the digital twin and asset knowledge management.

Natural Gas

Hazardous Liquids

Water

Hydrogen

Carbon Sequestration

GTI ENERGY
SAGE
STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

Board & Officers

PODS™ Pipeline Open Data Standard

BUCKEYE PARTNERS, L.P.

CenterPoint Energy

Chevron

ENBRIDGE

esri

MARATHON

ONEOK

Petro IT Solutions with Integrity

PHILLIPS 66

ROSEN empowered by technology

TC Energy

Williams

Some Trade Association Partners

AGA American Gas Association

Canada Energy Regulator

ctdut

GTI ENERGY

U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration

PRCI Pipeline Research Council International

PODS International Chapters

International PODS Chapters exist to foster local and regional networking, to provide a local voice to the PODS Board of Directors and to support the global PODS mission, vision and goals.

The Chapter Principals are advisors to the PODS Board and, as such, are leaders in their industry and will be entrusted to oversee a team to organize and manage local content and activities as well as convey topical and timely information to the PODS Board and Community specific to their Chapter.

Our network of International PODS Chapters are critical for achieving the global PODS mission, vision, growth, and goals by acting at the local/country/regional level, working in conjunction with the global PODS Board and TCG (PODS Technical Committee for Data Governance).

Asia/Oceania

Europe

Middle East

South America

PODS International Forum: Dubai Recap

GTI ENERGY
SAGE
STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

PODS RESOURCES

Adding Value to Members Through Education & Collaboration

- Learning Management System & Education Library
  - Continuing Education Credits
  - PODS Certification coming in 2026
- Searchable Detailed Member Directory
  - Services Listing and Operator Contact Information
- Scholarship Program
- Worldwide Curated Free Live Data Layers
- Federal & State Specific Regulatory Updates
- Technical Solutions for Optimized Operations on PODS 7

As PODS grows, develop additional value to sustain engagement.

- Develop a specific plan to grow small operators, gas gathering companies, water and renewables
- Drive growth based on new regulations and industry visibility worldwide

PODS Data Model Benefits

- Open Esri Compatible Platform
- Database Architecture for a Linear-Referenced Database
- Standardizes and Modernizes Data Management and Reporting
- A Business, Risk, Compliance and Decision-Making Tool
- Pipe-centric Approach to Managing Pipeline Data in a Single Data Repository

Operator designed to comply with regulations, support specific pipeline operations and decrease risk through the digital twin/asset knowledge management.

Benefits of PODS 7 – Operations

Simplified GIS Data and Processes

1

By bringing disparate databases together, the GIS Team will be able to use consistent processes for loading, correcting, and reporting on GIS data.

- Centralized, easily accessible data means easily transformed data, allowing people and groups across the organization to easily integrate data into their projects/workflows and share results.
- Efficiencies in customer support will be gained through greater flexibility in resource allocation focus on GIS projects and analysis.
- Improve reliance on GIS data from additional IOS teams, such as Regulatory Compliance and Pipeline Integrity.

Integrations with key applications

3

Location, location, location…because everything happens somewhere a large percentage of operator data has some amount of spatial attribute information.

- In most GIS environments, integrating data with systems such as Maximo, are difficult or impossible, depending on the business unit's GIS database.
- A consolidated database allows for integrations to be built quickly and scaled efficiently across many business units, thus facilitating faster decision making and collaboration across the organization.

Quality Assurance/Quality Control (QA/QC)

2

Often maturity levels between the GIS database's QA/QC processes varies dramatically.

- Combining data structures enables automated and semi-automated workflows that include QA/QC of data and management of errors through a defined life cycle process allowing users to confidently make decisions

Reporting, Auditing, and Accounting

4

A critical function of GIS is to provide a single source of truth as it relates to the location and attributes of our operating assets. GIS systems are utilized across the organization to support a wide range of regulatory, accounting, and commercial reporting needs.

- Segmented data means that reporting efforts will be highly variable across business assets and require experienced professionals to spend many hours translating data into usable reporting metrics rather being focused on utilizing the data via their subject matter expertise.
- Consolidated or cross-business reporting is easier now on PODS 7 which is built specifically with PHMSA/NPMS and TX RRC Reports in mind. A consolidated data model eliminates challenges and provides a streamlined, reliable, and user-friendly reporting function.

Benefits of PODS 7 - Metrics

MONEY: Large Multi-State Operator

"We are optimizing our pipelines to create value. Our modeling group is responsible for optimizing the flow of products through our pipelines. Previously, they had to manually connect our system and run their model, which took months of work to complete, limiting their ability to perform this task to a few times a year. With PODS 7 and the Utility Network, they now have a fully connected system to work with daily. This enables them to run their models daily and make more informed decisions that optimize efficiency, resulting in increased profitability. Basically, better, more reliable information is available for confident decision making which we have tracked metrics to show savings of $2+ Million per month."

TIME: Large Multi-State and Multi-Country Operator

"Bad Data = Bad Decisions = More Time and Money. We have been able to extend the data model's modular design, allowing us to easily expand and adapt the GIS data structure to accommodate new regulatory requirements or enhancements to existing modules for Pipeline Integrity. We have also been able to execute faster nightly ETL, our past approach spatialized data on-the-fly while PODS 7 Spatial will eliminate the need for this. We are estimating direct time savings of hundreds of hours per month within the GIS and IT Teams with an in-direct time savings of thousands of hours enterprise wide in all business units and in all locations for our end users."

RESOURCES: Small Operator in US

"Using PODS 7 we were able to simplify our data model, enabling our data managers and data analysts the ability interact with the data more easily which supports increasing stakeholder and regulatory needs. Previously our Pipeline Integrity and Regulatory teams spent months and increasing reliance on 3rd party resources to hunt down data to file our annual reports and upload to NPMS each year. Not only have we seen a decrease in the amount of time for reporting but HR is now reporting a higher score on employee job satisfaction. Also related to resource training, a large driver for the success of our new GIS system is end-user adoption and use. To drive higher levels of user-engagement, the GIS Team uses a variety of training methods and forums. Past data models required that multiple training efforts be developed for each distinct business use and that end-users be retrained if they move from one business unit to another. A consolidated data model allows training to be consolidated and end-users to move from system to system with minimal learning curves."

New PODS Modules, Focused on Integrity and Regulation: Opening the Model to More Pipeliners

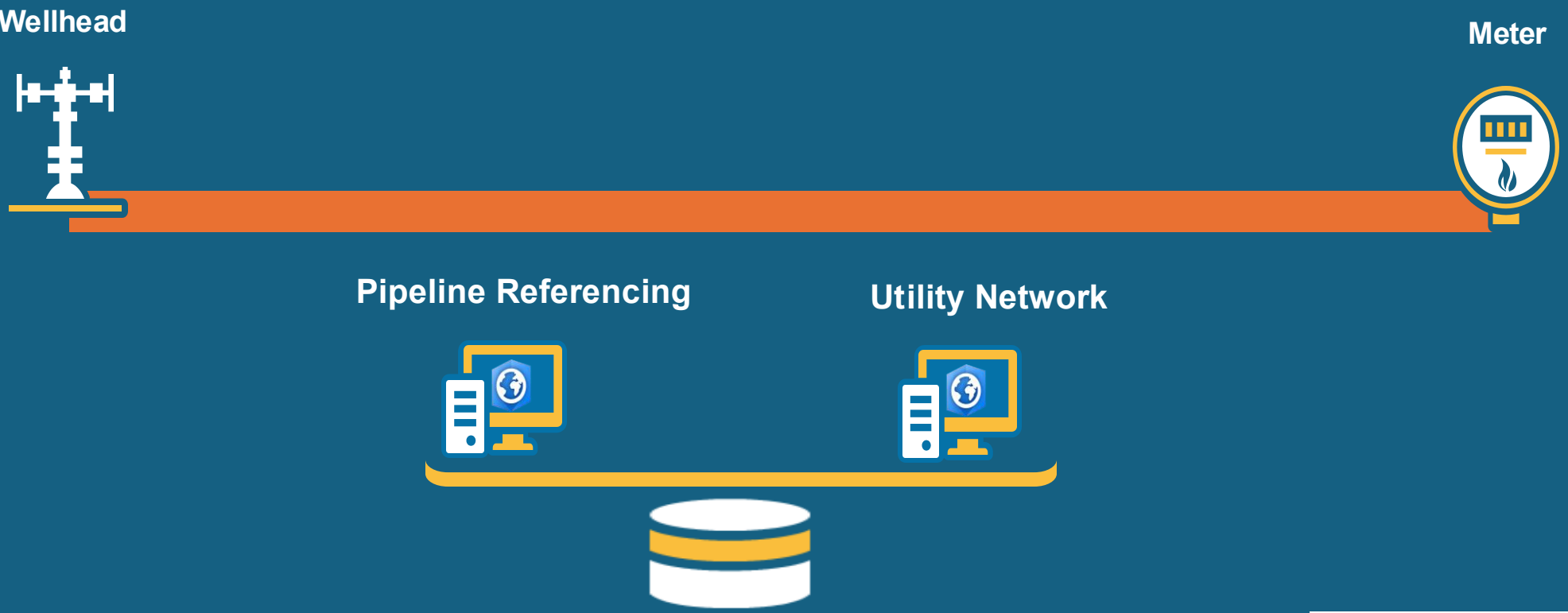
Now more than ever, visibility and optimization of in-ground assets are vital to our industry. The rising cost of failure, the public's focus on pipelines and the energy future, and the need for data transparency and accuracy to meet new regulations and newly regulated assets… everything is changing, so PODS is also!

The PODS Data Model was built for regulated pipeline and is continuously updated as new regulations are published. In fact, PHMSA is a PODS member and uses the model as a baseline for NPMS, so having your data in PODS is the easiest way for operators to submit their annual reports and NPMS uploads.

Our vision is to align more with the needs of operators, especially those with multiple types of assets, and offer specific data solutions geared towards risk, regulation, and compliance. PODS will now offer two core data models - PODS 7 and PODS 7 Utility Network with the option to add regulatory and industry specific modules quickly and cost effectively.

ArcGIS for Pipelines | System of Record

Managing the system from wellhead to customer meter with a single system



Benefits and Value of PODS 7 Utility Network

- Scalable, high performing model now capable of spatial representation of data, providing a comprehensive view of your network
- Ability to enforce data integrity, supporting regulatory requirements
- Improved workflow by having all data is in one system
- Advanced analysis of your network
- Reduction of dependency on 3rd-party editing tools
- Ability to model significant components of your system and how they are connected
- Cost savings due to accurate data available at all times for example with pipeline modeling and route optimization

Harmonizing PODS & Esri: Advantage Program

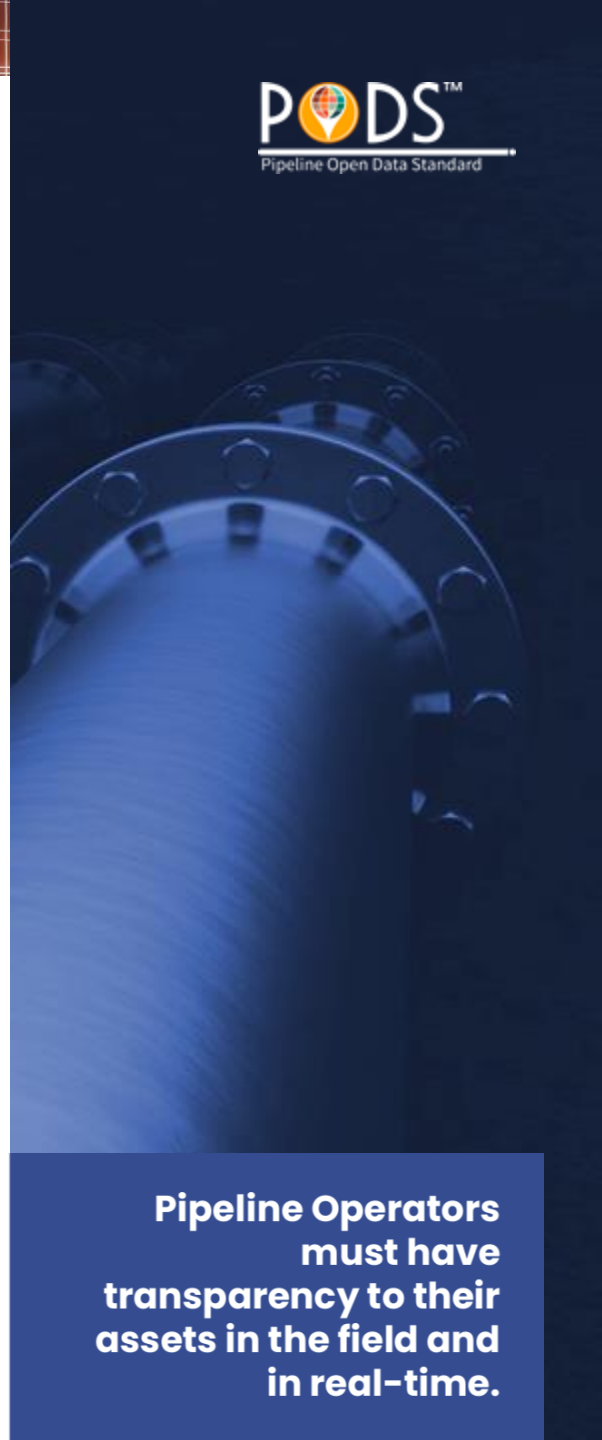
The collaboration between Pipeline Open Data Standard Association (PODS) and Esri is a significant step towards elevating pipeline data management.

This partnership aims to harmonize the PODS data model with Esri's ArcGIS platform, providing users with a more seamless and integrated experience.

This year PODS was added to the Esri Advantage Program to enable more pipeline operators the ability leverage the power of both systems, allowing them to manage their data more efficiently and effectively.

Pipeline operators can easily access and analyze their data, enabling them to make informed decisions that will improve safety, compliance, and operational efficiency.

- Construction (As-Builts)
- Regulatory Compliance
- Inspection
- Risk Analysis
- Integrity Management
- Maintenance & Operations Data



Pipeline Operators must have transparency to their assets in the field and in real-time.

Roadmap: Partnering with Esri

- PODS standardized on the core Esri Geodatabase with two options
  - APR and Utility Network
- Esri bringing PODS into the Advantage Program for their Professional Services Team to assist with projects
  - Donation from Esri to seed the program as well as the ability of Operators to donate credits that are about to expire
  - Speeds up development of new Modules after Working Groups are completed
- Example Project: Esri to incorporate PODS modules on UPDM
  - Expands PODS Modules to Operators without a PODS core implementation welcoming additional companies to our Community

esri®

&

PODS

Pipeline Open Data Standard

GTI ENERGY

SAGE

STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

PODS Modules

IR – Integrity Regulatory

Traces how IMP activities drive the repairs in the field while supporting submission of annual reports (192, 195 and TX RRC) thus improving project prioritization, identifying why you performed a task, and supporting risk analysis and calculations.

Fall 2025

TVC – Traceable, Verifiable, Complete

Organizes data for calculation of operating pressure in compliance with Gas Mega, Gathering and proposed Distribution Rules as well as Hazardous Liquids Rules.

ILI – Inline Inspection

Stores all ILI data with millions of data points, allowing run-to-run analysis no matter the vendor tool.

Spring 2026

CP – Cathodic Protection

Integrates reporting features for in-depth cathodic protection analysis for optimized operations, while meeting the reporting requirements outlined by PHMSA.

SL - SCADA Link

Includes physical ties to sensor locations along a pipeline system, such that the volume factors for line pack calculations can be automated via a Unique ID that links back to SCADA.

Fall 2025

OFF – Offshore

Houses and standardizes data attributes specific to offshore pipeline systems for the first time, allowing links to 3D data for the ability to “walk the line” thousands of feet below sea level.

SCADA Link Module: Introduction

SENSOR_POINT
- Location
- SCADA_ID

SENSOR_PANEL
- Location
- SCADA_ID

PODS Impact: This new module connects the location of pipeline measurement sensors directly to GIS data, streamlining operations for pipeline operators.

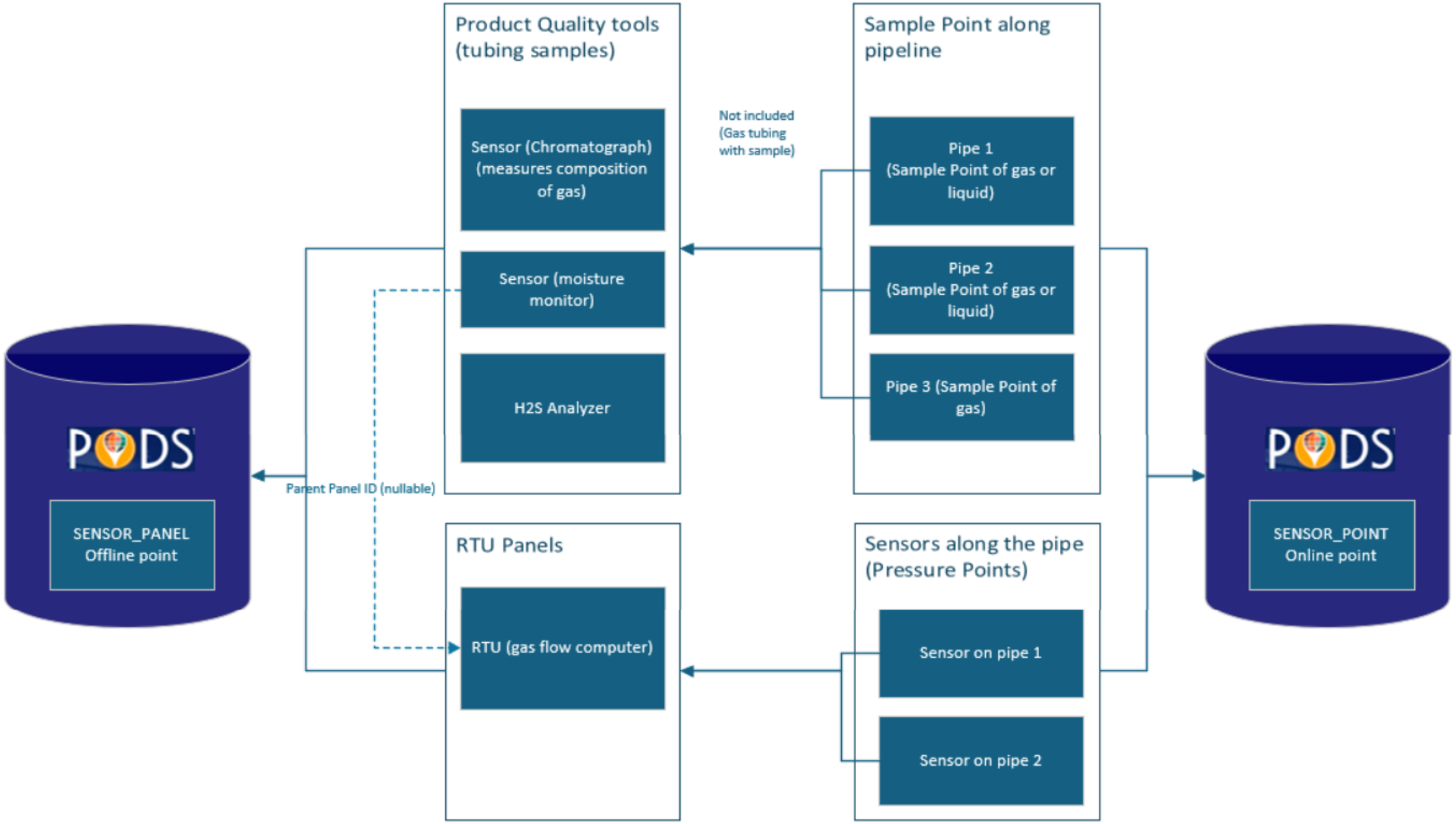
We made the news!

Benefits

- Flow Calibration
- Improved Compliance (API RP 1168)
- Route optimization
- Track inspection & maintenance
- Data Standardization

GTI ENERGY SAGE
STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

SCADA Link: How It Works



SCADA Link Module: New feature classes to hold Pressure Sensors, Sampling Points, RTUs and other sensor panels

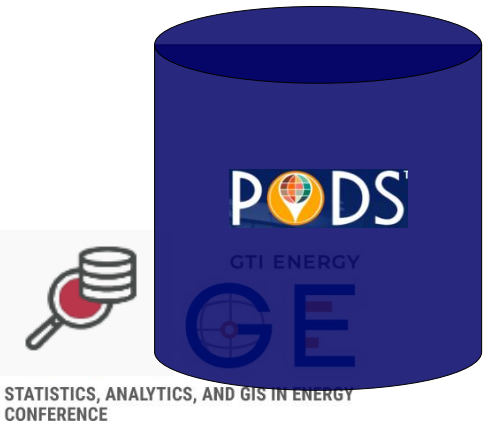
Regulatory Module: Integrity Assessment Data Overview

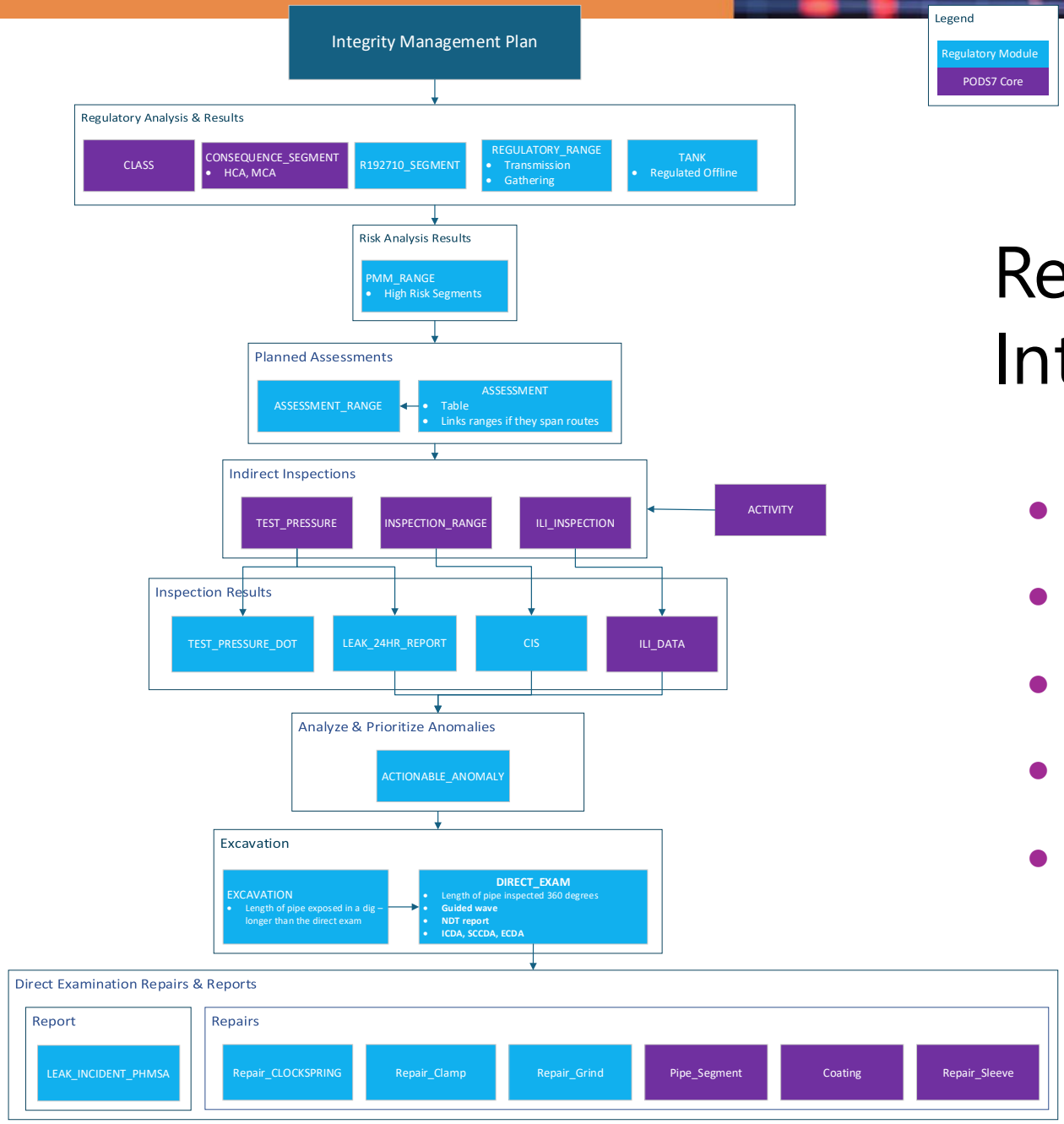
- **What is this data module?**
- Traces how IMP activities drive the repairs in the field while supporting submission of annual reports (192, 195 and TX RRC) thus improving project prioritization, identifying why you performed a task, and supporting risk analysis and calculations.

Regulatory Module –Integrity Assessment Data Overview

WHY Did we create it?

- Extract PODS data for reporting
  - PHMSA Annual Reporting
  - PHMSA NPMS Submissions
  - Federal Pipeline Safety Requirements
  - State Reporting
  - Track integrity assessment data for regulated gathering and transmission pipelines
- Single source of truth
  - Mileage
- Data Standard
  - Store regulatory pipeline categories
- Annual Updates
  - Ensure compliance with the new valve rule





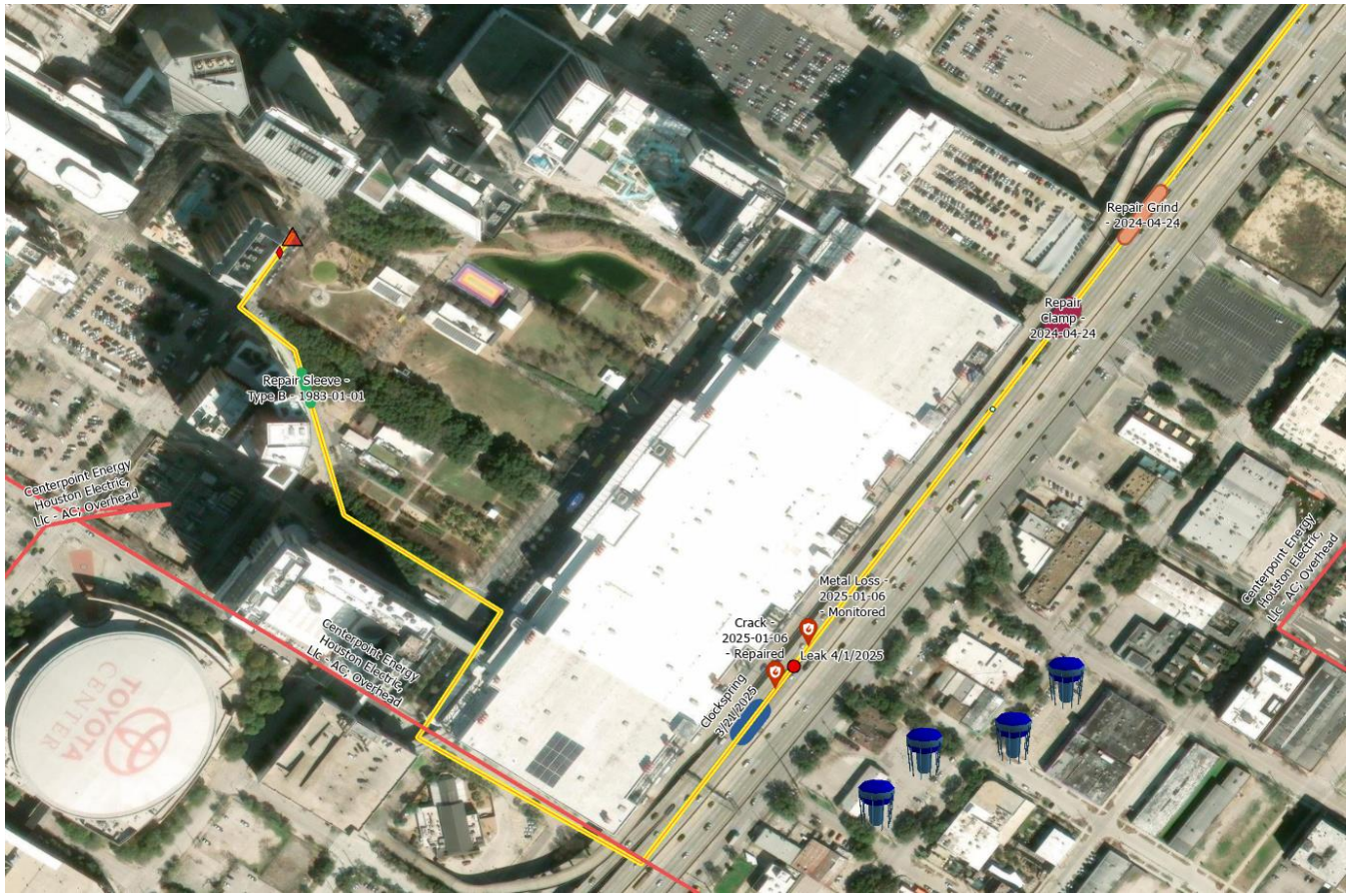
Regulatory Module Integrity Assessment Data

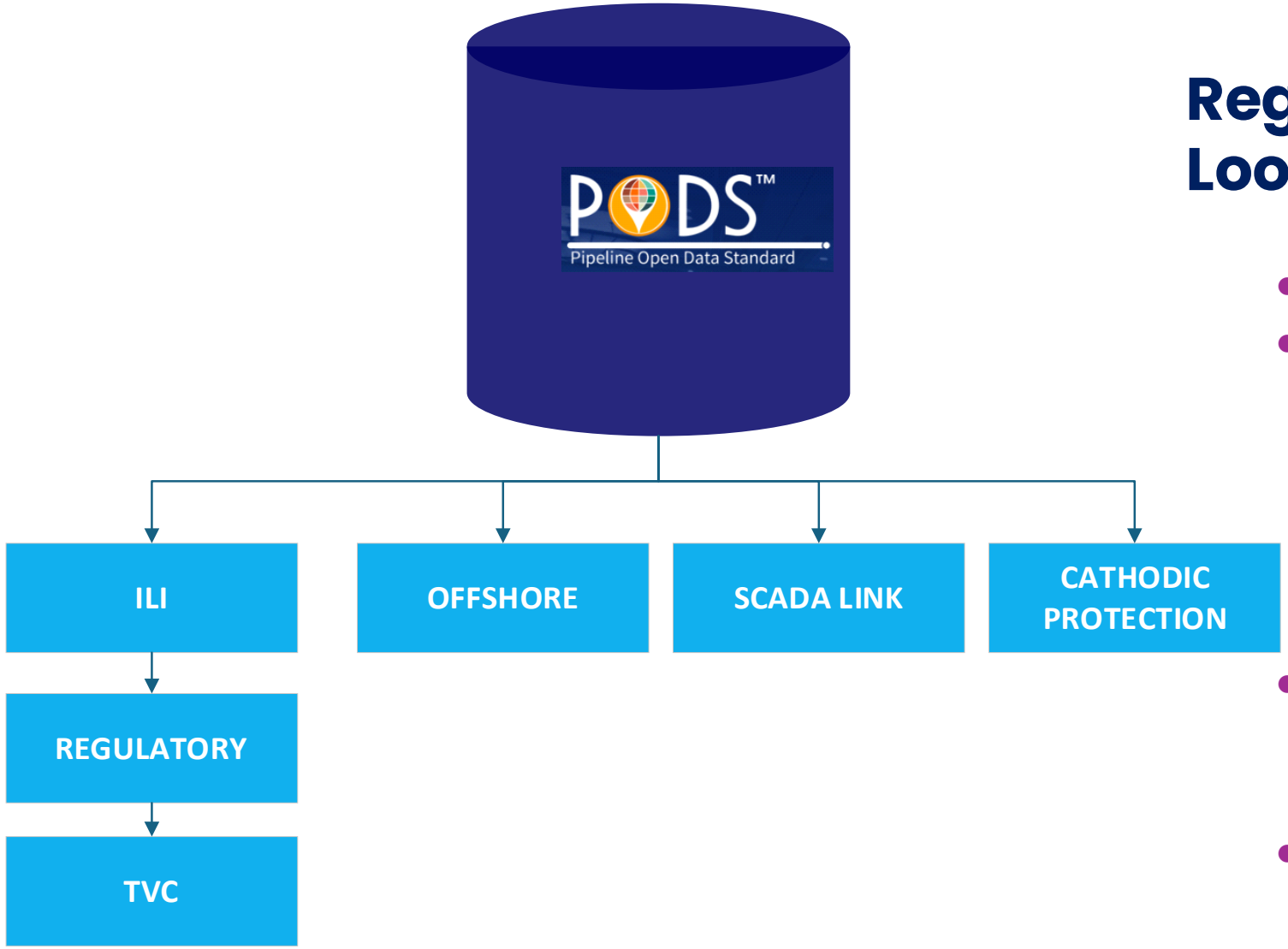
- PHMSA Regulatory data
- Baseline Data & Gaps
- Extract Annual Report Data
- NEW feature classes and tables
- UPDATES to Existing feature classes and tables

GTI ENERGY SAGE
STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

Regulatory Module –GIS Integration

- Integrity & Regulatory Data Standard
- Integrate with Pipeline Asset Data
- One Source of Truth
- Data Consistency
- Efficiency
- Meet & Track Deadlines
- Resilience
- Cost Control
- Time & Money





Regulatory Module Looking Ahead

- Available on PODS member portal
- Annual Workshops
  - Review latest regulatory updates
  - 2025 Workshop
    - NPMS
    - RRC
- Annual updated release
  - Update module for new users
  - Change log for existing users
- Regulatory and TVC are dependent on ILI

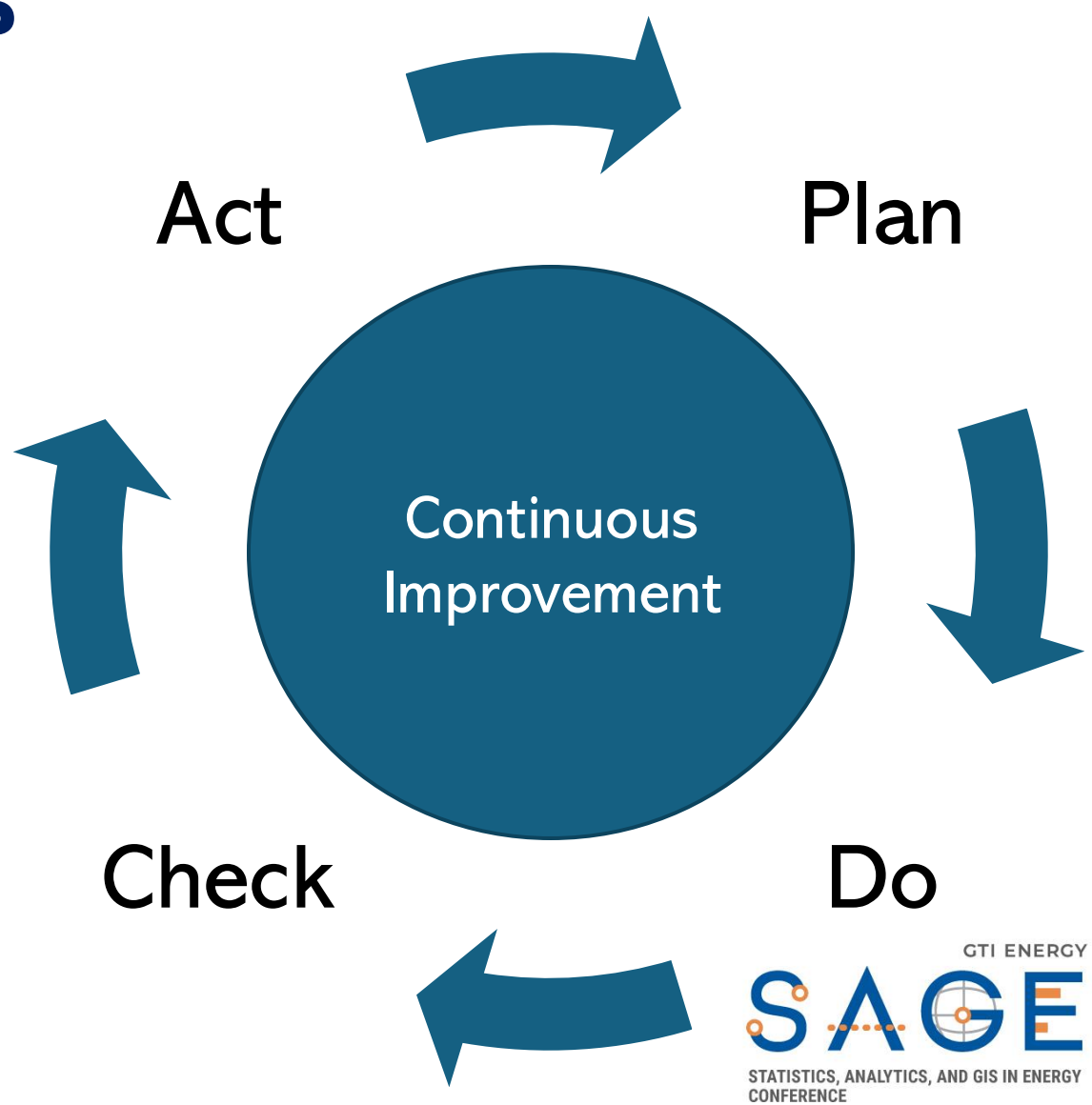
Call to Action

Can I initiate a workgroup?

Absolutely. In fact, all workgroups are started as a result of member interest. Start-up of a workgroup begins with development of a charter document that describes the intent and scope of the workgroup project. The entire membership is solicited for participation and sponsorship of the project, the Board of Directors approves the project and work begins. In general, PODS™ *Association* prefers to see a mixed representation from transmission companies, software vendors and data vendors on each workgroup.

Why are PODS people good at standards/frameworks?

- Considerations:
  - Different **Suppliers**
  - Various **Technologies**
  - Different **Processes**
- Motivated by **adoption, ease of use**
- Cross-sector **collaboration**
- ***Cycle of continuous improvement***



GTI ENERGY
SAGE
STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

Save the Date

Fall Forum

October 21, 2025

Fall Forum and Joint Social with ESRI will be at Top Golf West in Houston

PODS COMMUNITY EVENTS

- **Rio Pipeline –** Rio de Janeiro, Brasil – Sept 9-11
- **PODSCast**: Leveraging PODS to Support Advanced Risk Ass. with Geonamic – Sept 10
- **Esri Pipeline Seminar Denver** - September 17
- **PHMSA 2025 Pipeline Data Public Meeting –** Houston, TX **-** September 18-19
- **Esri Pipeline Seminar Tulsa** - September 24
- **AGA Fall Committee Meetings** - Orlando - Sept 29 - Oct 3
- **Esri Pipeline Seminar Pittsburgh** - October 8
- **PODS Fall Forum - Houston** - October 21
- **Esri Pipeline Seminar** - Houston - October 22
- **Esri ERGIS EU** - London - November 4-5
- **PTC Asia** - Kuala Lumpur, Malaysia - November 11-13
- **PPIM** - Houston - January 19-22 2026
- **PODS International Forum** Abu Daubi and Doha – Early February
- **PODS International Forum and European Chapter Meeting** – Berlin, Germany - April 27
- **PTC Berlin** - April 27-30
- **AGA OpCon & Committee Meetings** – Tampa, FL - April 27-May 1
- **PSIG 56th Annual Conference** – Amsterdam, Netherlands - May 5-8
- **Esri ERGIS** – Houston - May 18-20
- **PODS Spring Forum** - Houston - May 20-21

Asset Knowledge Management

- Pipelines are classified as a high hazard enterprise where failures are sensational as well as increasingly costly
  - When an incident happens to one of us it happens to all of us
- Every single incident since and including San Bruno has been due to:
  - Missing data
  - Data being unavailable to the right people
  - Missing records, incomplete records
  - No data ownership
  - Missing or unfollowed data governance
- Risk & Asset Knowledge Management
  - Know your system and what's around it
  - Regulatory compliance does NOT equal performance

Creating Opportunity via PODS

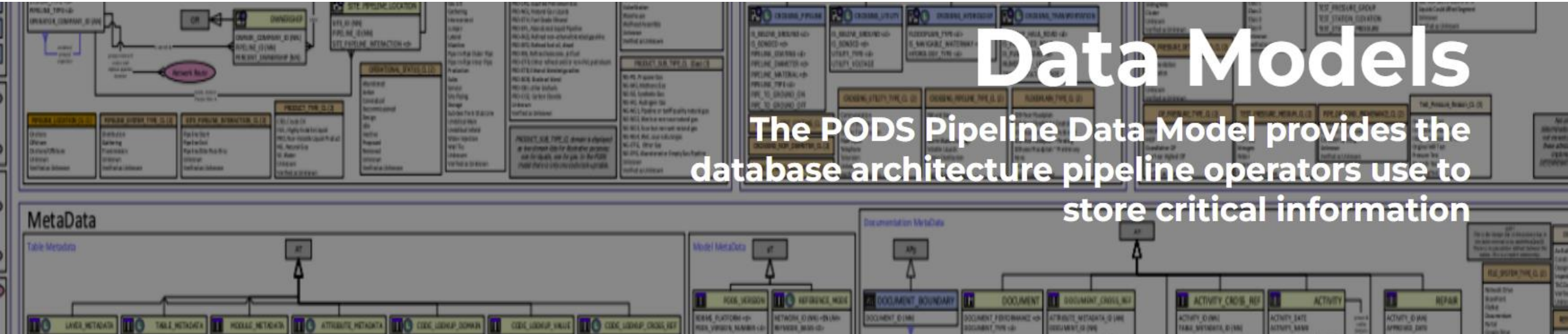
- Expansion of the PODS Model
  - Initially focused on GIS technologists and data management
  - Now includes Integrity management, construction, and project management
- Community Engagement
  - Association has grown into a community
  - Members derive value from diverse fields
- Volunteerism and Collaboration
  - Member-driven volunteer organization
  - Innovative data modeling and standards
  - Competitors collaborate to support pipeline safety
- Upcoming Member Directory
  - Detailed information about all members
- Value to Operators and Service Companies
  - Networking opportunities
  - Easier sales

Support from PODS Service Members

- Collaboration
  - Vendor involvement
  - Importance of network support
  - Opportunity to connect with others
  - Build meaningful relationships
- Model Transition means Revenue
  - Moving to PODS 7
  - Core geodatabase
  - New Modules
- Value of PODS
  - Operators benefit from PODS-based deliverables
  - Community impact
  - Networking opportunities
  - Interaction with operators and other providers

Operator’s Value

- Purpose built database vs standard model like PODS – Price cost and schedule to implement
- Forces a level set of the whole team and their skillset efficiencies
- Acquisitions and Mergers of PODS to PODS versus others
- Attract and retain talent
- Vendors that are PODS members are preferred



Compliance, Efficiency, and Mergers

- Compliance Integration
  - Ensuring regulatory compliance
  - Importance of skilled personnel
- Efficiency in Operations
  - Decision-making process
  - Impact on business operations
  - Business drivers and IT perspectives
- Pipeline Acquisitions
  - Frequent buying and selling of pipelines and pipeline companies

Service Company's Value

- Community and network
- Get in front of operators
- Easier to sell to operators on the standard
- Technical aspect vs business aspect
- Value of PODS now versus before

PODS Marketing – Your Opportunity!

Are you taking full business and personal advantage of exposure through PODS?

- **Network!**

  Attend the Forums, PODScasts, Mini Forums, and meet up at events where PODS has a presence.

- **Be a Sponsor**

  This is HUGE! We build in special care to LinkedIn, ability to present, PODScasts, and so much more to provide your company the right exposure for name recognition and expertise.

- **Ask Questions & Bring Ideas**

  PODS Dubai is a great example of this! Our team loves finding ways to elevate you and your company in all ways.

2 Ways to Sell and 3 reasons operators will spend money

- Sell to the reg or build a business case (ROI)
- Reasons to Upgrade/Migrate (get projects approved)
  - New Technology
  - New process or business needs
  - New Regulation
- ROI Measurement
  - Identify KPIs and Metrics
  - Advanced Analytics and Actionable Insights
- Continuous improvement
  - Monitoring and adjusting based on metrics
  - Reporting

Building a Value Proposition or ROI

- Asset Knowledge Management for Operators
  - Capital vs Operations Budgets
  - Optimize in-ground assets
  - Show data value in your company
  - A documented asset is more valuable

- Service Company Example from Spring Forum
  - Year's worth of travel and $20k vs one free PODS event to see all customers
  - Detailed Member Directory with POC and Services Listing
- Small Operators can benefit from education and free curated data layers
  - How much time is spent on time or contractors to upload to NPMS
- Open the model and membership to DIMP (LDCs)
  - New Integrity /Regulatory Module is built to guide Annual Reports

ROI and Aligning with Management Goals

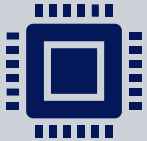
- Importance of ROI
  - Measures profitability and efficiency
  - Guides investment decisions
- Components of ROI
  - Cost removal
  - Revenue growth
- Aligning technology with corporate strategy and roadmaps
  - Ensures strategic goals are met
  - Enhances competitive advantage
- Short-term and long-term impacts (KPIs)
- Importance of data optimization
- Demonstrating value and position GIS and PODS as strategic enablers
  - Not merely cost centers
- Understanding the Value of Data Standards
  - Technical perspective on data standards and models
  - Importance of PODS Community and data standards
- Communicating to Leadership
  - Challenges in conveying the importance to leaders
  - Connecting data standards to management goals
- Management Goals
  - Modernizing equipment and infrastructure
  - Prioritizing data in company objectives

Business Context and Regulatory Compliance

Business Context of GIS and Pipeline Data Management

Past approach has been somewhat lazy

Regulatory requirements necessitate investment



Critical Role of GIS and PODS

Essential for pipeline integrity

Investment in these technologies is crucial

Spending on Compliance

Necessary to meet regulatory standards

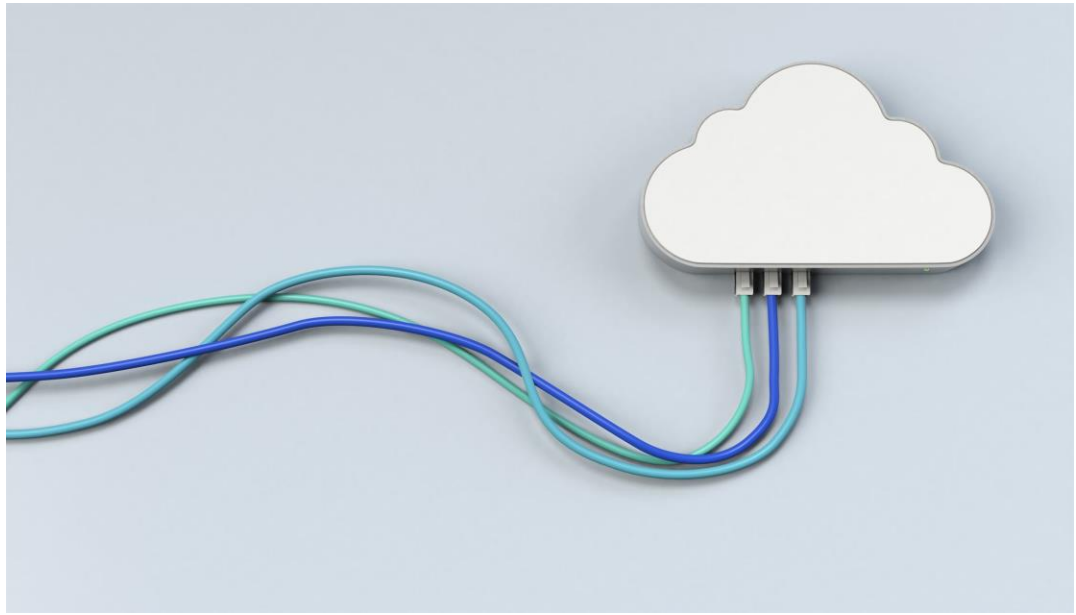
Investment should be strategic

Regulatory Compliance and Performance

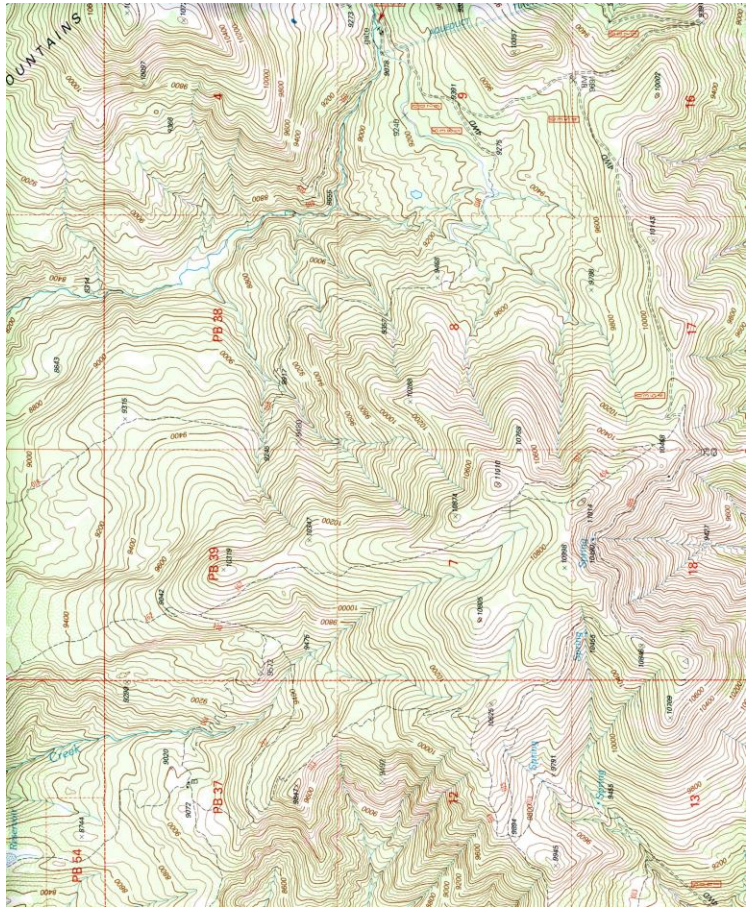
- Organizing and Managing Risk and Assets
  - Understanding your system and surroundings
  - Knowledge management is crucial
- Regulatory Compliance vs. Performance
  - Compliance does not equal performance
  - Continuous learning and improvement are necessary
- Data Integration for Pipeline Operators
  - Regulations require integrated data
  - Integration is just the beginning
- Engagement in Safety Management Systems (SMS)
  - Being part of the conversation is essential
  - Continuous improvement in SMS

Modernizing Systems

- Modernizing systems
  - Adopting web technologies
- Cloud data centers
  - Increasing market competition
- Customer acquisitions and divestments
  - Frequent changes in customer assets
- Conveying these changes
  - Effective communication strategies



Market Competition and Sustainability



- Using GIS in Market
  - Competition and land space considerations
  - Minimizing costs
- Sustainability Options
  - Investment in CO2 and blue hydrogen pipelines
- Potential Users of GIS
  - Groups outside normal pipeline operations
  - Route planning and prediction
- Return on Investment
  - Leveraging existing infrastructure
  - Utilizing other groups for better ROI

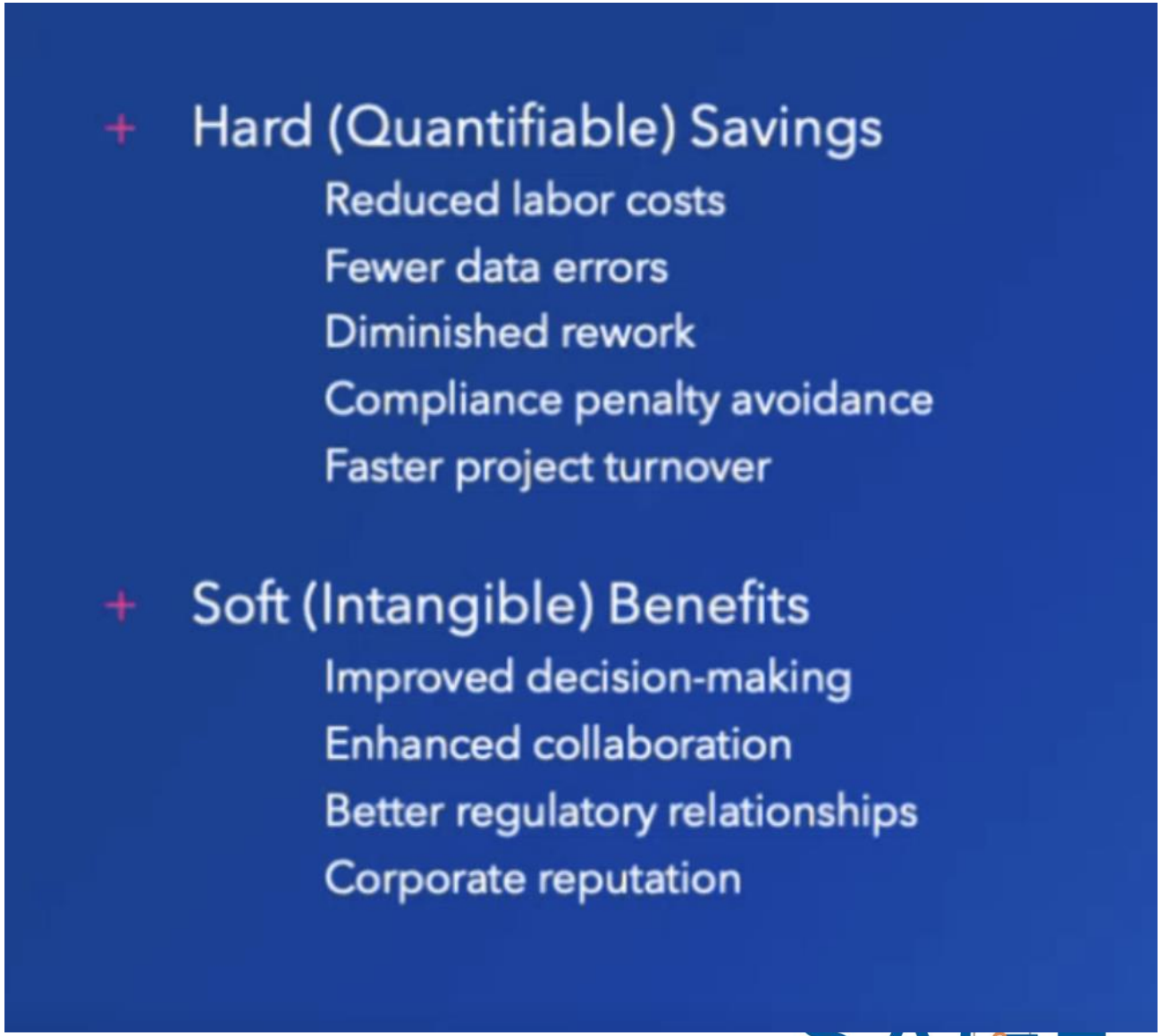
Corporate Strategy Alignment

- Importance of ROI Conversation
  - Aligning technology with corporate strategy
  - Demonstrating alignment supports budget approvals
- Annual Corporate Strategy
  - CIOs and CTOs outline high-level corporate strategy
  - Ensuring tactical actions align with corporate strategy
- Justifying Investments
  - Direct correlation between technology and corporate strategy
  - Supports continued investment in GIS and pods

Short Term vs Long Term Impacts

- Short Term Gains
  - Focus on immediate needs
  - Example: Modernizing GIS due to desktop phase-out
  - Upgrade GIS database
- Long Term Impacts
  - Strategic value over 2-5 years
  - Investment advantages
  - ROI calculation
- Importance of Long Term Vision
  - Resonates with decision makers
  - Helps in budget approvals and justifications

Hard and Soft Savings



Regulatory Non-Compliance and Avoiding Downtime

- Importance of Avoiding Downtime
  - Ensures systems are scalable
  - Improves ROI calculations
- Regulatory Non-Compliance
  - Audits with integrated data systems
  - Easy access to data for auditors
  - Challenges with manual or fragmented systems
- Cost Avoidance
  - Potential fines and actions against non-compliance
  - Having data at fingertips to avoid penalties
- Importance of High Availability and Scalability
  - Systems need to handle multiple groups
  - Requires high availability and scalability
  - Performance is crucial
- Cost Perspective
  - Need for additional servers and hardware
  - Software investments
- ROI of Avoiding Downtime
  - Minimizes disruptions
  - Prevents angry customers
- Impact of Downtime
  - Example of not having Outlook for 20 minutes

Time to Information

- Importance of Data Management
  - Organizations often lack good data management
  - Integration between systems is crucial
- Efficiency in Information Retrieval
  - Time taken to pull information is valuable
  - Reducing time spent on data collection increases ROI
- Resource Optimization
  - Freeing up resources for other tasks
  - Ability to answer multiple questions efficiently

- Importance of Reducing Data Errors
  - Errors can lead to incorrect decisions
  - Quantifying the impact of errors is challenging
- Data Completeness
  - Incomplete data affects report accuracy
  - Ensuring all fields are filled is crucial
- Discussing Value in Conversations
  - Bring up the topic when requesting additional funds
  - Highlight the importance of accurate and complete data

PODS™
Pipeline Open Data Standard

- Data Quality & Consistency
  - Error rates before and after PODS adoption
  - Data completeness
- Time-to-Information
  - Speed of user access to pipeline data
  - Analysis time
- Workflow Automation
  - Reduction in manual processes
  - Turnaround times

Efficiency Gains

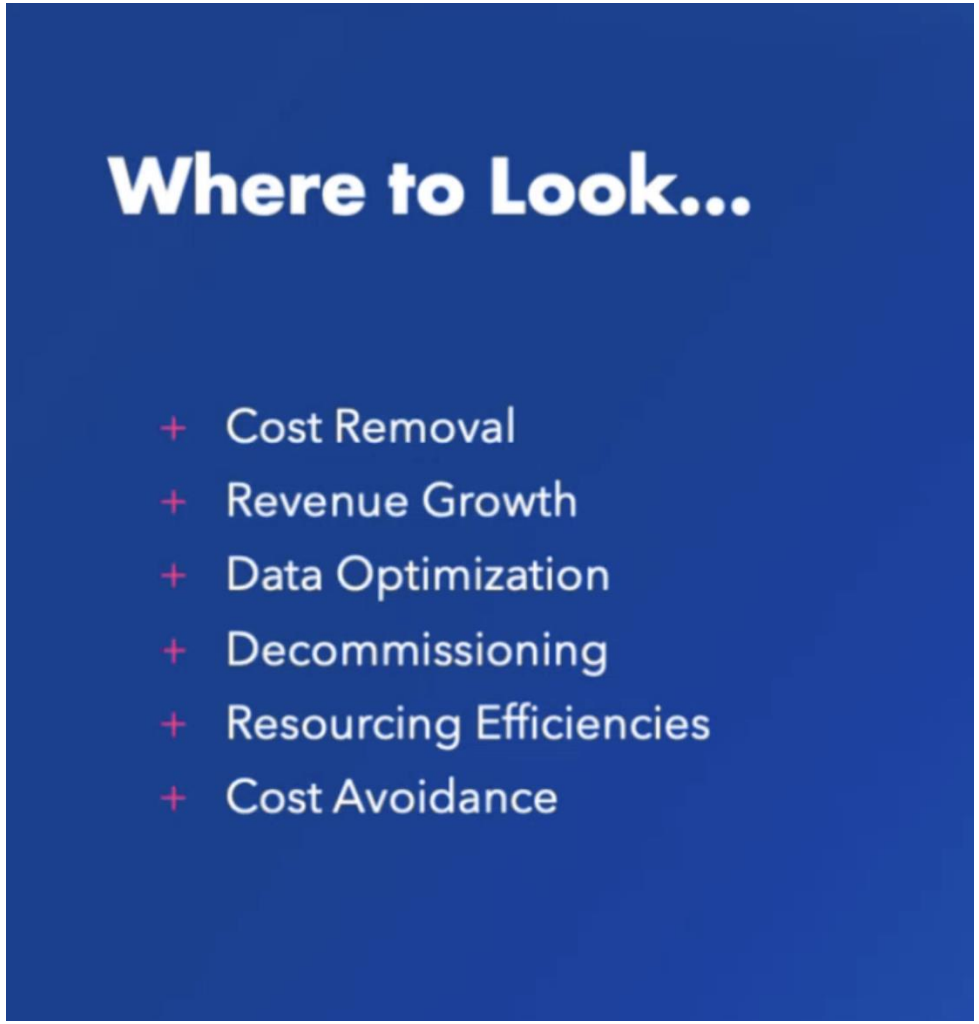
- **Reduced Errors:** With one authoritative data source, there was less confusion about which set of records is correct.
- **Lower Storage & Admin Costs:** Fewer systems to license and maintain
- **Streamlined Workflows:** Teams spent less time reconciling inconsistent records and more time making data-driven decisions
- **Faster Updates:** When new data (e.g., from pipeline inspections) was added, everyone had immediate access without having to synchronize multiple systems.

GTI ENERGY
SAGE
STATISTICS, ANALYTICS, AND GIS IN ENERGY CONFERENCE

Cost Avoidance in Compliance

- Challenges in Regulatory Compliance
  - Operators often delay projects due to audit and annual report preparation
  - Preparation can take up to two months
- Benefits of Streamlined Regulatory Reporting
  - Reduces time spent on compliance processes
  - Ensures data completeness and accuracy
- Automation and Workflow
  - Automated processes can add significant value
  - Improves efficiency in report production
- Importance of Consistent Reporting
  - Annual reports should tie out accurately
  - Consistency in adding or subtracting pipes
- Auditor Verification
  - Ensuring reports match to avoid red flags
  - Annual reports vs. NPMS submissions
- Team Coordination
  - Annual reports from one team
  - NPMS submissions from GIS

- Importance of Quick Access to Incident Data
  - Value of immediate data access during incidents
  - Example of a 2:00 AM pipeline incident
- Integration of Maps in Teams
  - Availability of maps in team chats
  - Locating problem areas, staging areas, and local hospitals
- Real-life Example of Incident Response
  - Responding to a sinkhole near pipelines
  - Challenges in identifying exact locations
- Field Match Feature
  - Enabling photo pin drops on maps
  - Saving time in locating incident areas
- Collaboration Efficiencies
  - Enhances teamwork and data sharing
  - Improves overall productivity
- Predictive Maintenance
  - Utilizes ILI and CIS data for maintenance predictions
  - Integrates with systems like SAP and Maximo
  - Addresses preventative maintenance issues



- Tap into your PODS Community
  - Beyond data model, it's a community
  - Collective problem-solving and experience sharing
- Sharing Processes and Procedures
  - Operators exchange ideas to improve ROI
  - Discovering effective processes to enhance performance
- Benchmarking Benefits
  - Pipeline industry follows herd mentality
  - Connecting operators to share experiences

Case Study – Operational Efficiency Gains

+ Before

Each team (e.g., integrity, operations, maintenance) kept separate spreadsheets and databases for the same pipeline segments.

Data about inspections, asset conditions, and maintenance activities was duplicated across these multiple systems, leading to inconsistencies and extra work to reconcile.

Case Study – Operational Efficiency Gains

+ After

A single, centralized platform (e.g., a shared PODS database) became the "source of truth."

All inspection records, maintenance logs–were ingested once and accessible to all stakeholders.

Integrated dashboards and reports pull directly from the shared data store, eliminating redundant data entry

Targeting the Message

- Focus on Financial Benefits and Risk Reduction
  - Resonates with non-GIS professionals
  - Targets business line managers
- Partner with Business Line Managers
  - Identify resources
  - Operational integrity
- Collaborate for Mutual Benefits
  - Enhance conversations with executives
  - Leverage technology for operational advantages
  - Showcase operational and process improvements