Introduction to PODS 7
Intended Audience

• GIS/IT professionals
• New to pipeline industry
• Some exposure to PODS

PODS Training – both PODS Basics and PODS Advanced – create a better understanding of PODS Standards and PODS implementations through geospatial and relational database applications.
Introduction to PODS 7

PODS 7 – the right choice for pipeline data management
Webinar Series Overview

• **Unit 1** – Introduction to PODS 7
  • **Unit 2** – Data Management Planning
  • **Unit 3** – Unwrapping PODS 7, Part 1
  • **Unit 4** – Unwrapping PODS 7, Part 2
  • **Unit 5** – Modifying & Extending PODS
  • **Unit 6** – Information & Analysis
1 Introduction to PODS 7

- Why PODS?
- Organizational data is an ASSET
- Comparing PODS 7.0 with previous versions
- Choosing the right PODS implementation
What is PODS?

- **Pipeline Open Data Standard**
- Data management framework
  - Flexible
  - Comprehensive
- Decision-making tool
- Optimizes performance
- Improves regulatory reporting
The PODS Data Standards

Exemplified in the PODS Data Model:

• a plan defining how all vital pipeline data is connected, stored, and processed.
• “pipeline-centric.”
• designed to reside on spatial (ESRI GIS) and non-spatial platforms.
• GIS Neutral and Vendor neutral
What key drivers shape the PODS Data Model?

- Regulatory Compliance
- Traceability of pipeline equipment, materials
- Quality assurance
- Interoperability with other enterprise systems
- Project management, monitoring
- Industry standards and common language
- Data management strategy
- Consistency through pipeline phases from design to operation
The PODS Data Model

PODS Data Model

- Geographic boundaries
- Compression
- Physical pipeline facilities
- Regulatory compliance
- Operating measures
- Geographic feature crossings
- Inline inspection
- Risk assessment
- Work history
- Site facilities
- External documents, reports
- Close interval surveys
- Offshore lines
- Cathodic protection
- Leak survey
PODS Association

- An organization of pipeline operators and service providers
- Develop, Advance and Steward PODS (the standard and data model)
- Membership
  - Shared purpose and powerful collaboration
- Governed by the Board and the Technical Committee on Governance (TCG)
PODS Association Mission

Develop and advance global pipeline data standards to support efficient data management and reporting for the oil and gas industry

https://www.pods.org
Data Standard vs. Data Model

Data Standards
- Provides the operational framework for managing pipeline data
- Member consensus-driven standards adopted by membership
- Comprehensive documentation

Data Model
- One logical data model, many physical database implementations
Asset Management with PODS

- Relies on PODS for the single source of truth
- PODS promotes better business processes and workflow.
- Data and knowledge capture
- Clear, concise data definitions; plus the ability to clearly delineate data ownership.
Your Pipeline Data is an **ASSET**

What does it mean when data is treated as an asset?

1. **Standards**
2. **Management**
3. **Single source of truth (System of Record, Authoritative source)**
Why is the PODS Data Model Important?

PODS as "the single source of truth" promotes:

• Completeness
• Consistency
• Reliability
• Accuracy
• Regulatory Compliance
• Efficiency
• Safety
• Risk Management
“Good Decisions made on bad data are just Bad decisions you don’t know about yet”.  Scott Taylor – The Data Whisperer
PODS – The Container of choice for Pipeline Data
PODS Data Model Types

**Conceptual Model**

- Concepts, entities and relationships between them
- Helps in understanding and teaching the problem domain
  (concepts, things)

**Logical Model**

- Geographic Mark-up Language (GML) Standard
- Provides a framework or foundation that can be used for documentation and extending the model
  (standard, agnostic)

**Physical Model**

- A physical schema in a physical database
- Allows users to implement the schema in a database platform of their choice
  (specific RDBMS/GIS)
PODS Implementation Choices

PODS Physical Models

- Relational Database Only
- ESRI Geodatabase with APR
- ESRI Geodatabase without APR

How do you choose the correct PODS 7.0 implementation for your organization?

The answer lies inside your organization

e.g., geodatabase for use with Esri APR
One Data Model – Many Implementation Patterns

One PODS 7.0 Conceptual Model
Microsoft Visio

One PODS 7.0 Logical Model
Sparx Enterprise Architect, Shapecache

Managed by the PODS Association

Managed by Users of the PODS Model

Download templates and instructions from PODS website

Multiple Implementation Patterns (templates for different platforms)

RDBMS
Geodatabase
Open Source
Relational

e.g., geodatabase for use with Esri APR
Customize Your PODS Implementation

Database Type
(Select One)
- Geodatabase
- Relational Database

RDBMS
(Select One)
- SQL Server
- Oracle
- PostgresSQL
- Any open RDBMS

Spatial Data Type
(Select One)
- ST_Geometry
- SDO_Geometry
- PostGIS Geometry
- Any supported Spatial Data Type
PODS Implementation - Considerations

• ROI - PODS implementation is financially and resourcefully intensive. If PODS has been or will be implemented for GIS purposes only and not as a system of record for the organization, a compelling ROI may be difficult to argue.

• Your present Enterprise IT infrastructure.

• Current software implementations, particularly database reporting.

• Organizational level of expertise. Will additional expertise be required? If so, what types?
Why Implement PODS?

• PODS is flexible, reusable, and can be implemented in many different technology environments.
• Designed to fit within your existing infrastructure – whatever it is.
• Over 25 PODS implementation patterns – PODS has you covered!
• The PODS Data Model is easy to understand, implement, extend, and use.
PODS Association works with operators, vendors, regulatory bodies, & other industry associations (API, INGAA, PRCI, iPipe)

Enabling for your organization

• Solve complex problems with your access to a wide range of vendors

• Access a wide range of software solutions leveraging the Standard

• Standardized data

PODS 7.0 is now available for download.

Free to download by PODS members
https://www.pods.org/pods7formembersonly/
In Summary - Why Rely on PODS?

1. PODS is a set of data standards as well as a robust, flexible, & proven data model.
2. PODS organization and members shape the data model and standards.
3. PODS 7.0 data model is ready for you to download, customize, and use.
4. PODS standards and data model promote data reliability, workflow efficiency, safety and risk management, as well as regulatory compliance.
End of Unit 1

Any questions?
Resource for This Unit

PODS Association web site

https://www.pods.org