PETROCHEMICALS

CASE STUDY

Transforming enterprise piping specification governance through digitization, cross-regional standardization and integrated engineering-procurement data alignment.

Multi-Site
Revision control framework achieved

~140
Controlled line classes governed

$1.7M
Annual SAP inefficiency identified

SUMMARY

A North American petrochemical producer sought to digitize its piping specifications and modernize its materials governance. What began as an engineering update, driven by industry changes in material selection and suitability, evolved into an enterprise-wide transformation focused on standardization, cross-regional alignment and long-term specification control.

ReVisionz guided the organization toward system implementation to establish harmonized workflows, aligned commodity coding and integrated engineering-procurement data architecture. The result was a governed operating model that sustained approximately 140 controlled line classes, preserved revision integrity and maintained cross-regional engineering alignment, while reducing engineering and SAP inefficiencies and strengthening enterprise-wide specification discipline.

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Experts guiding your digital journey

Project Snapshot

Client Industry: Petrochemicals
Practice Areas Utilized: Materials Management
Project Duration: ~30 Months (+Ongoing Sustainment Support)

Client Success Criteria

- Embed sustainable specification control, change management and revision discipline across regions.
- Simplify the technology landscape while preserving standardized workflows and data architecture principles.
- Maintain cross-regional engineering alignment and SAP integration independent of platform changes.

Challenges

- Specifications were managed in a paper-based system with inconsistent regional governance.
- Commodity codes and procurement data were not aligned with engineering specifications.
- Multiple design tools and business systems required structured integration and export control.

Key Results

Established Enterprise Spec Governance
Harmonized piping specifications across sites with standardized workflows, controlled release processes and structured revision management.

Integrated Engineering & Procurement Data
Aligned SAP commodity codes with line classes and enabled consistent data flow between 3D models, isometrics and ERP systems.

Embedded a Sustainable Operating Model
Implemented role-based workflows, controlled change management and lifecycle governance so that processes outlived specific software platforms.

ReVisionz' Strategy

- Conducted feasibility analysis and business process mapping to define enterprise specification requirements.
- Configured and fully customized Hexagon Smart Reference Data, including commodity code structures and governance rules.
- Converted legacy paper-based line classes into a digital SRD environment with SAP integration.
- Implemented structured workflows, revision control and change management frameworks across sites.
- Developed documentation, procedures and request systems to support sustained operations.

Tools & Tech Used

Octave Forte
SAP
Custom ReVisionz IP (reporting and request systems)

Takeaways

- Software alone does not solve governance challenges.
- Standardization and process change require organizational alignment across business units.
- Sustainment planning must begin at program inception to ensure long-term control and scalability.

Complexity & Innovation

- Established a multi-region, multi-site governance model integrating design platforms and SAP.
- Implemented a standardized, rules-based valve data sheet system integrated with engineering and procurement.
- Digitized vessel closure and equipment tracking with lifecycle traceability and revision control.
- Configured manufacturer-specific component frameworks aligned to corporate commodity structures.

Get in Touch with One of Our Experts Today

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