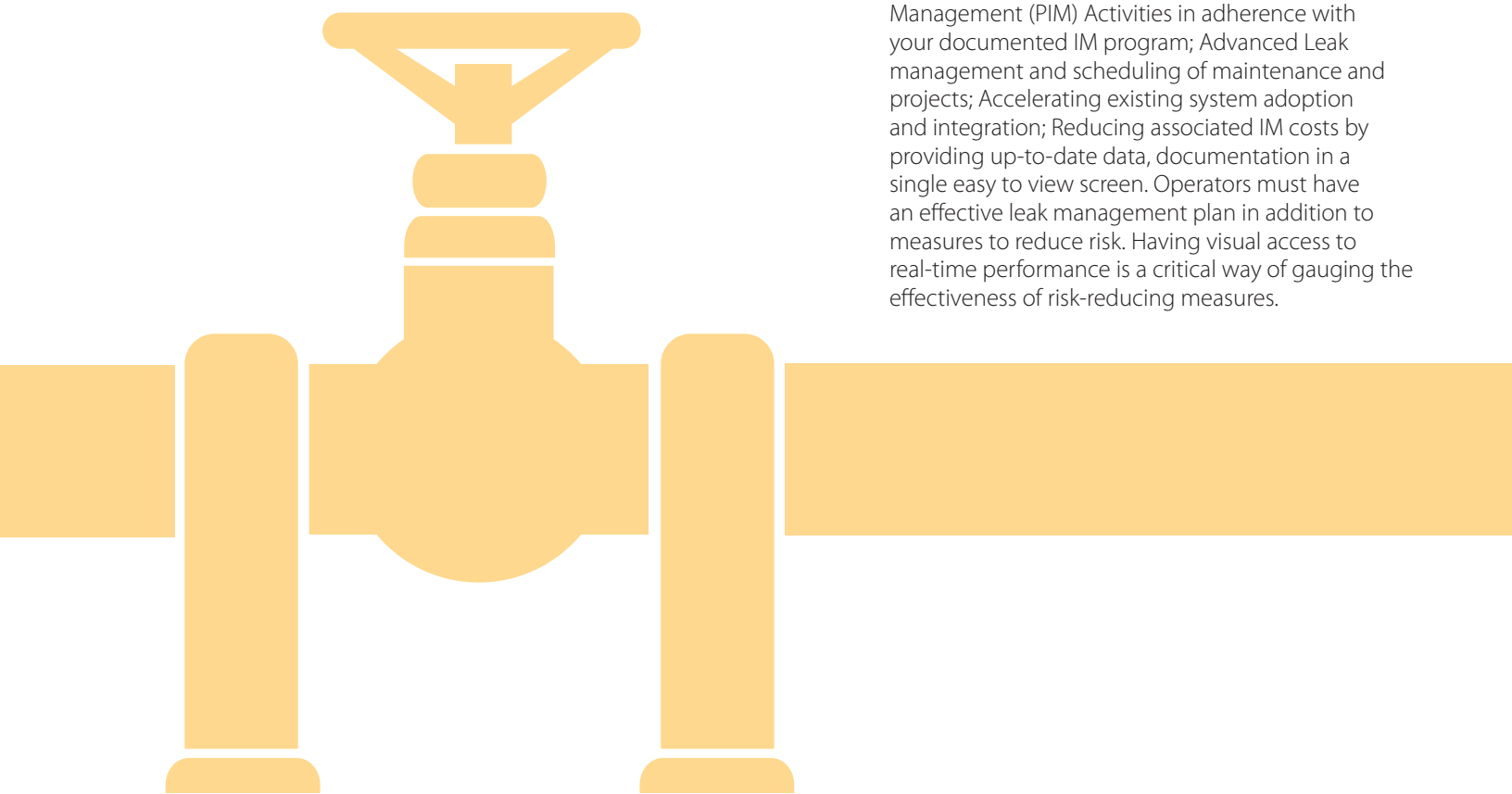
Rolta OneView™

New Pipeline Integrity Management Tool

Design, Content, Engineering, Operations and Asset Lifecycle
Information Management solution based on compliance KPIs

Ease Compliance of U.S. DOT/PHMSA Regulatory Statute 192 Subpart Pipeline- DIMP 192.1007 and Operators TIMP 192.901-951

Despite the fact that overall Pipeline Governance is improving, an increasing focus is being placed on strict regulatory compliance and Risk Mitigation/ Threats/HCAs/Leak Management/Incidents are still major concerns for Midstream Oil & Gas companies, with incidents costing millions of dollars each year. The US DOT Pipeline & Hazardous Materials Safety Administration reports that 19 fatalities occurred last year – the highest in the last decade. Pipeline incidents resulted in 94 injuries and cost more than $195.7 million. Recent faults in the reporting and identification of HCA/Time-elated Threats and associated data have cost companies hundreds of millions more.



Ensuring ongoing compliance with Federal pipeline safety regulations is not only required, it is good business. Yet Midstream Oil & Gas companies struggle with managing the collection of workflow and data from disparate legacy systems for all required pipeline documentation. It is even more difficult to tie information from internal business units and external contractors into GIS in accordance with DIMP/FINSA regulatory statutes.

Rolta OneView™ for Midstream Oil & Gas is an enterprise solution encompassing all requirements of an Integrity Management (IM) Program. It reduces the costs of compliance by automating the key elements of your documented IM program and processes, directly and seamlessly integrating with your best available data. The Pipeline Integrity Content Management System of Rolta OneView provides critically needed functionality and benefits accommodating the systems, processes, culture and IM programs of Midstream companies. Benefits from Rolta OneView include:

- **Pre-configured Operational Insights**

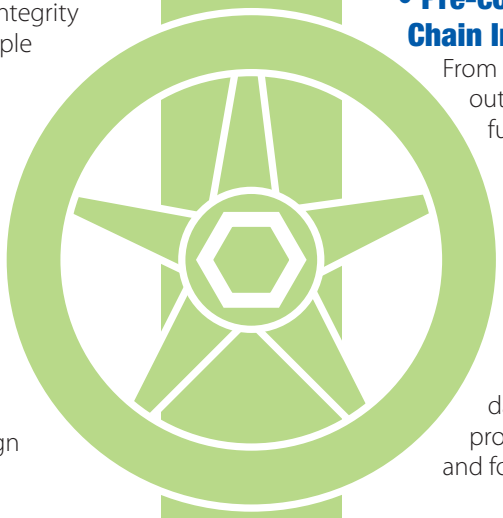
Real-time monitoring of your Pipeline Integrity Management (PIM) Activities in adherence with your documented IM program; Advanced Leak management and scheduling of maintenance and projects; Accelerating existing system adoption and integration; Reducing associated IM costs by providing up-to-date data, documentation in a single easy to view screen. Operators must have an effective leak management plan in addition to measures to reduce risk. Having visual access to real-time performance is a critical way of gauging the effectiveness of risk-reducing measures.

• Pre-configured Asset Insights

With the Asset Historian tracking function, the integrity of your transmission and distribution network is simplified through advanced positioning of analytics. This dramatically improves the quality of both structured and unstructured data and maintenance of assets. Provides operators a higher level of operational excellence and reduction in the management of an operator's infrastructure, ultimately reducing cycle times for laborious IM-related business processes. Measurement of performance over time from an established baseline so while information is aggregated operators can drill down to any level of detail for visibility into a single or multiple components of an IM program. Highly optimized persistence of data from varied data sources for high performance analytics and a cohesive view of asset data across business functions. Additionally, provides operators with early insight on asset risks by viewing actual pipeline operating ranges against the recommended operating ranges and receives automated notifications on parameters and thresholds.

• Pre-configured Maintenance and Reliability Insights

KPIs provide a unique view of the integrity of your data attributes across multiple processes and functions providing operators a 360 degree of your infrastructure functionality and integrity 24/7. Ability to collate multi-source master data traceable to source, as Rolta OneView is completely GIS-enabled in tying all maintenance-related insights back to GIS location. Reduces maintenance failures through better access to data and retrieval of recommended equipment design ranges for more efficient operating parameters. Interface for retrieving all documents for equipment, design, engineering, work orders, repairs and drawings.



• Pre-configured Health, Safety and Environmental Insights

Creating an environment of Pipeline Safety Management for internal and external use is now supported by all major gas associations as well as the DOT/PHMSA. Process Safety Management, utilization, and ongoing safety initiatives, all in easy to view KPI panels designed for your unique operating environment. Enables operators at all levels of your organization to make accurate and on-time decisions by visualizing a vast amount of data in real-time providing the foundation to make fact-based decisions with a high degree of confidence. The result is overall increased operator performance and operational improvement. Mitigate risk, improve safety performance, conduct incident pattern analysis, and incorporate spatial data to identify geographic influences. Can create real-time visibility/ data/analytics into your "call before you dig" program enterprise-wide.

• Pre-configured Supply Chain Insights

From purchasing through the closing out of technically complete 'as-built' functions, Rolta OneView will follow the lifecycle and asset management of all required elements of DIMP, TIMP and FINSA. More importantly, Rolta OneView is geospatially-enabled in all its modules. So now with the click of a mouse on a segment of pipeline, all information and data related to an operator's IM program will be available internally and for audits.

• Pre-configured Project Insights

Provides a lower total cost of ownership and CapEx. Maximize capital investment efficiency with cost vs. consequences analytics. Operators can increase asset life with full lifecycle awareness from beginning of capital intensive projects, scheduled repairs for compliance, and move from a reactive to pro-active management of your project and ongoing operations of the transmission or distribution infrastructure. Operators can achieve this through Rolta OneView's automated notifications completely configurable with your project management legacy systems.

• Pre-configured Sustainability Insight

Ongoing adherence and year-to-year improvement of your documented IM program is critical for compliance. Sustainability will rely on real-time data and transactional data merging with performance management and analytics. Rolta OneView can deliver operators organizational data KPIs necessary for functional users, line managers, functional managers, functional specialists, strategists and executive management – all in alignment with your IM program and built to maximize your business processes and provide operational excellence through improvement of data quality. Ongoing and sustainable intelligence of real-time operational and business data from multiple data sources such as SCADA, Historians, SAP, Oracle, and Maximo, etc.

• Pre-configured Business Insights

With pre-configured KPI for Fixed Cost Analysis, Human Resources, CapEx, ROI, Marketing, and analytics as needed by operators, multitudes of paper and analysis for insight into your particular business environment can now be seen in singular modules. These tools will support raw data, data arrangement, reporting, ad-hoc reports, descriptive and predictive analysis and optimization. With improved visibility into your data and information, your business knowledge and more importantly your technology-driven business intelligence will transcend your business and compliance to levels before thought of as only requirements in adherence to DOT/PHMSA statutes.

The Help You Need Now

The Rolta OneView Pipeline Integrity Management system does not require a major investment for additional legacy systems specific to IM because it is deployed on your SAP/Oracle infrastructure. It is scalable to meet the ongoing DOT/PHMSA requirements to show year-to-year improvements, acquisition and investment of third party IT infrastructure to maintain and regulate key requirements (i.e., HCAs, Maintenance, Leak Management, GIS including buffer zones and facilities in those zones, all Gas Mains-Services and real-time data for MOP/MAOP/SG technologies). With our deep domain expertise and comprehensive understanding DOT/PHMSA requirements, Rolta is a valued partner to our Oil & Gas Midstream clients and Distribution Operators as we work with them to build solutions that ensure ongoing improvements reduce your costs, improve the quality of your data, and move the organization toward operational excellence through a reduction in cycle times.

True value results for Midstream/Distribution Operators when they utilize Rolta OneView as a tool to analyze needs and progress, not as a regulatory exercise or leak management program. IM Programs have been shown to be cost-effective in the long term in ensuring the safe and reliable operation of pipeline systems, and benefit greatly from the enterprise-wide insights available from Rolta OneView.

Pipeline Integrity Management System– DIMP 192.1007
Compliance Checklist for Rolta OneView IM:

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192.1007 Regulation Element	Rolta OneView Capability
1 **Knowledge**	***YES***
2 **Identify Threats**	***YES***
3 **Evaluate and Rank Risk**	***YES***
4 **Address Risks**	***YES***
5 **Measure Performance, Monitor Results and Evaluate Effectiveness**	**YES**
6 **Periodic Evaluation and Improvement**	***YES***
7 **Report Results**	***YES***

Element 1: Knowledge

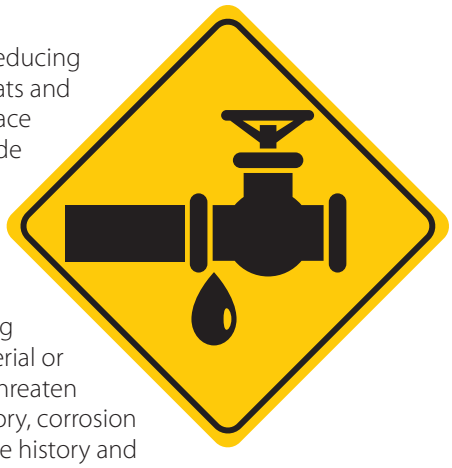
Regulations require that operators know their pipeline systems, including design and location of their pipeline and equipment, and be able to assemble the best information available. To comply, operators must devote considerable effort to sort through records and legacy systems from design, construction, O&M, field surveys and patrols.

Rolta OneView has the ability to integrate with a wide variety of documents and information types needed for Pipeline Integrity Management and links them with pre-defined information relationships. From one type of information, a user can quickly navigate to other relevant pieces of data. Using typical pipeline taxonomy for drill down, PODS Models, and the solution links with geospatial identification of documents (structured, unstructured, and semi-structured) via GIS, users can see the full status and history of all pipeline documentation.

Business benefit

Integration of data to identify existing and potential threats requires an appropriate level of resource allocation. Rolta OneView enables operators to easily demonstrate they have full knowledge of the pipeline information from station to station. Operators can show how users have a holistic view of all the information types for the pipeline, the history over time and links to geospatial locations. Procedures for identification and collection of additional information is easily included or referenced to ensure consistent collection and processing. This further ensures that data quality is maintained and can be accurately and easily reported per DOT/PHMSA mandates.

Element 2: Identification of Threats



Identifying threats is vital to determine the appropriate measures required for reducing risk, and an IM program must include adequate details addressing specific threats and risks in the operator's unique operating environment. Procedures must be in place to continually re-evaluate and identify new or potential threats, and must include procedures to evaluate and obtain data from external sources available to identify Time Dependent or Independent categories of threats.

Threat identification and risk assessment requires strong data gathering and integration capabilities to ensure that threats to the integrity of the pipeline are addressed. Operators must consider a number of threat categories, including corrosion, natural forces, excavation damage, other outside force damage, material or welds, equipment failure, incorrect operations, and other concerns that could threaten the integrity of the pipeline. Sources of data may include incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history and excavation damage experience along with others.

Rolta OneView, through geo-coded documents and data, provides analytics on defining potential threats and confirms regulatory inspection. Rolta OneView can provide business intelligence through our binding scheduling to date of execution to ensure that no deadlines are missed for repair or replacement of HCAs, leaks and other key areas that could potentially put an operator at risk of being fined for non-compliance. Rolta OneView Geo-spatial Fusion integrates HCA buffer zones on pipelines that, based on boundaries for that particular pipe, automatically delivers a GIS-based proximity analysis for structures, businesses and households without having to "walk the line" or "GPS Field Validate," including all these assets already geo-coded with address/identification of unit type and exact proximity within the buffer zone.

If conducted manually, a highly populated area could take 2-3 GIS resources weeks and most likely incur additional costs, in that the buffer zones would include assets that are not within the required HCA area for compliance. And updating and maintaining those facilities costs time and money. With Rolta OneView, operators can conduct the proximity analysis for a 600-yard buffer zone in an HCA with just one GIS resource and only one walking of the line as designated. This further reduces costs and cycle times, while improving the quality of your data. This is the advantage of having already integrated data versus working with non-integrated spatial datasets.

Business Benefit

Operators can demonstrate they have complied with the threat identification aspect of the regulation and in line with their written IM plan. More importantly, the integration of critical data from a variety of sources without the need to manually update them not only keeps the threat of incidents low it helps eliminate them.

Element 3: Evaluate and Prioritize Risks

Regulations require that the evaluation and ranking of risks appropriately analyzes risks present in the within the operating environment predicated on threats (materials, construction, etc.) and consequences (HCA/Threat/Risk in high density population areas, etc). Segmentation may need to be refined to accommodate different failure rates. For example, geographical segmentation may be appropriate when systems are separated by space or a where specific threats exist (e.g., where flooding can be expected, earthquake prone areas). The IM plan must explain the process used to validate the data used in the risk ranking and ensure the output is reasonable.

Rolta OneView manages documents which identify risks associated with pipeline facilities and shows records/data that demonstrates the risks are evaluated and delineates the mitigating actions that can be validated with regulators or state entities when called upon. More importantly, Rolta OneView helps mitigate risk by providing pre-configured KPIs for clear and concise visibility into potential threat and risk mitigation.

By bringing together disparate legacy systems and data, Rolta OneView helps mitigate risk by providing operators an enterprise-wide view into particular drivers and risk models for evaluation and ultimately how they will be managed for compliance.

Business benefit

Rolta OneView makes it easy for operators to demonstrate they have fully evaluated and assessed pipeline risks and tracked any required corrective actions. The solution introduces more efficiency and visibility of risks across a broader audience by managing the information digitally.

Element 4: Identify and Implement Measures to Address Risk

Based on the results of the relative risk ranking, the next step is to implement appropriate techniques to management and reduce risk. The IM Plan must contain or reference an effective leak management plan, unless all leaks are repaired when found, which must be stated in the DIMP. Self-assessment by the operator of the leak management program is a key component of an effective plan. The plan must provide for a link between the specific risk (either a threat or consequence) and the measure to reduce risk that has been identified and implemented.

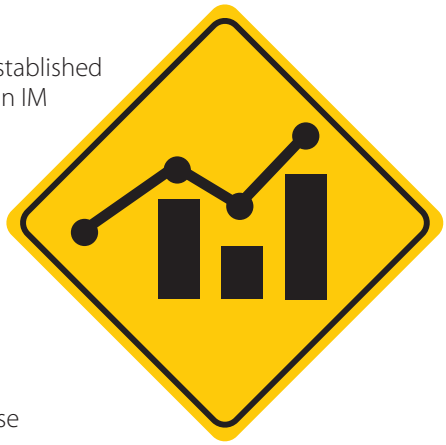
Safety improvements result when operators use content and workflow analysis to implement focused changes and devote resources where they are most needed. Measures to address risk mitigation include:

- Accelerate replacement or rehabilitation of poor performing pipe
- Perform better leak surveys
- Review data
- Modify locating, maintenance, patrolling, monitoring, construction and records procedures
- Implement results of ongoing R&D
- Draw from "Additional and Accelerated" (A/A) actions as well as from noteworthy industry practices

Business benefit

Rolta OneView enables operators to be able to demonstrate they have fully evaluated and assessed the pipeline risks and tracked any required corrective actions. The solution introduces more efficiency and visibility of risks across a broader audience by managing the information digitally.

Element 5: Measure Performance and Monitor Results



Each measure implemented to reduce risk must have a performance measure established to monitor its effectiveness. In order to accurately evaluate the effectiveness of an IM program, operators must develop and monitor performance measures from an established baseline. A documented IM Program must include procedures for establishing baselines for Performance Measures for this element required in 192.1007(e). Some plans identify "triggers" to initiate development of new performance measures, depending on the program performance and the operating environment. The Performance Measure must include:

- Number of excavation damages
- Number of excavation One Call tickets
- Number of leaks either eliminated or repaired and categorized by cause
- Number of hazardous leaks either eliminated or repaired and categorized by material
- Number of hazardous leaks either eliminated or repaired and categorized by cause
- Any additional measures the operator determines are needed to evaluate the effectiveness of the IM program in controlling each identified threat

Rolta OneView stores records in an organized manner that provides evidence of performance measurements and links the information to a chronology of when and where the recording was made. It makes it easy to quickly identify the accurate and complete evidence required.

Business benefit

Operators can demonstrate through the stored reports that they are completing the measurements and inspections on the required periodic basic across the pipeline network. Operators have better capabilities to track and manage field assets and logistics operators will be able to recover significant amounts of unused materials.

Element 6: Periodic Evaluation and Improvement

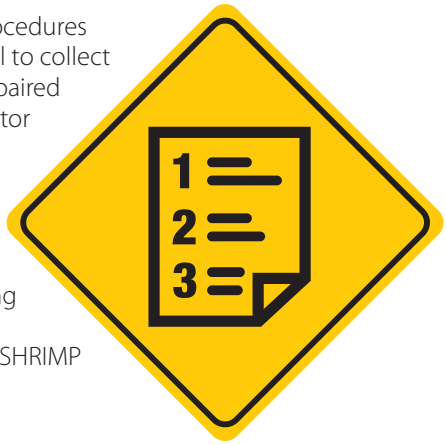
An IM Plan must contain procedures for conducting periodic evaluations and are expected to include procedures for notifying appropriate operator personnel of changes and improvements made to the plan or requirements when they are affected by the change. While the operator must determine the correct interval for evaluation based on complexity of the system and changes in risk factors, the complete IM program should be reviewed and evaluated at least every 5 years.

Rolta OneView, in collaboration with your legacy lifecycle and asset management, ensures a single collection point for all regulatory associated compliance and data. Additionally, pre-configured KPIs provide easy access to information on any IM-related data in our systems.

Business benefit

Operators can demonstrate plans for the periodic assessments and show how they are keeping full records from the assessments.

Element 7: Report Results



As part of the annual report to PHMSA, the IM Plan must include (or reference) procedures describing the collection and reporting of Annual Report data. Some operators fail to collect and analyze performance measures that address hazardous leaks eliminated or repaired and categorized by material, as well as performance measures developed to monitor actions implemented to control identified threats and reduce risks.

Rolta OneView provides visibility into all the document and data elements required for quarterly and annual PHMSA reporting and links them together. It allows for links to the chronology for each reporting period. The document management system provides visibility for operators and regulators, demonstrating due process and that records are being maintained and tied into GIS for PHMSA reporting, audits and approvals. Rolta OneView also allows easy data migration to SHRIMP or the DOT/PHMSA annual reporting documentation.

Business benefit

The operator can automate the annual reporting process and retain all the records submitted as historical evidence in case of future inspections.

Rolta OneView

Designed and Built from Real-world Experience

Rolta is a company with decades of experience in combining IT, GIS, engineering and operational systems for the benefit of its customers. Rolta OneView was designed and built on the basis of hands-on experience in the oil and gas industry, and benefits from the insights of industry experts employed by Rolta, as well as feedback from our customers.

For further information

To learn more about how Rolta OneView can help you maximize your Pipeline Integrity Management program, visit Rolta at www.rolta.com.

About Rolta

Rolta is a leading provider of innovative IT solutions for many vertical segments, including Federal and State Governments, Defense/HLS, Utilities, Process, Power, Financial Services, Manufacturing, Retail, and Healthcare. By uniquely combining its expertise in the BI, Big Data, Engineering and Geospatial domains, Rolta develops exceptional solutions for these segments. The Company leverages its industry specific know-how, rich repository of intellectual property that spans photogrammetry, image processing, geospatial applications, business intelligence, analytics, field-proven solution frameworks, and deep expertise in cutting-edge technologies like Geo BI, Cloud computing, Software Defined Infrastructure and Big Data for providing sophisticated enterprise-level integrated solutions. Rolta is a multi-national organization headquartered in India. The Company operates from 40 locations worldwide through its subsidiaries, and has executed projects in over 45 countries.