

HxGN SDx® – Enabling Digital Transformation for Project Excellence

One Solution Supporting the Entire Lifecycle



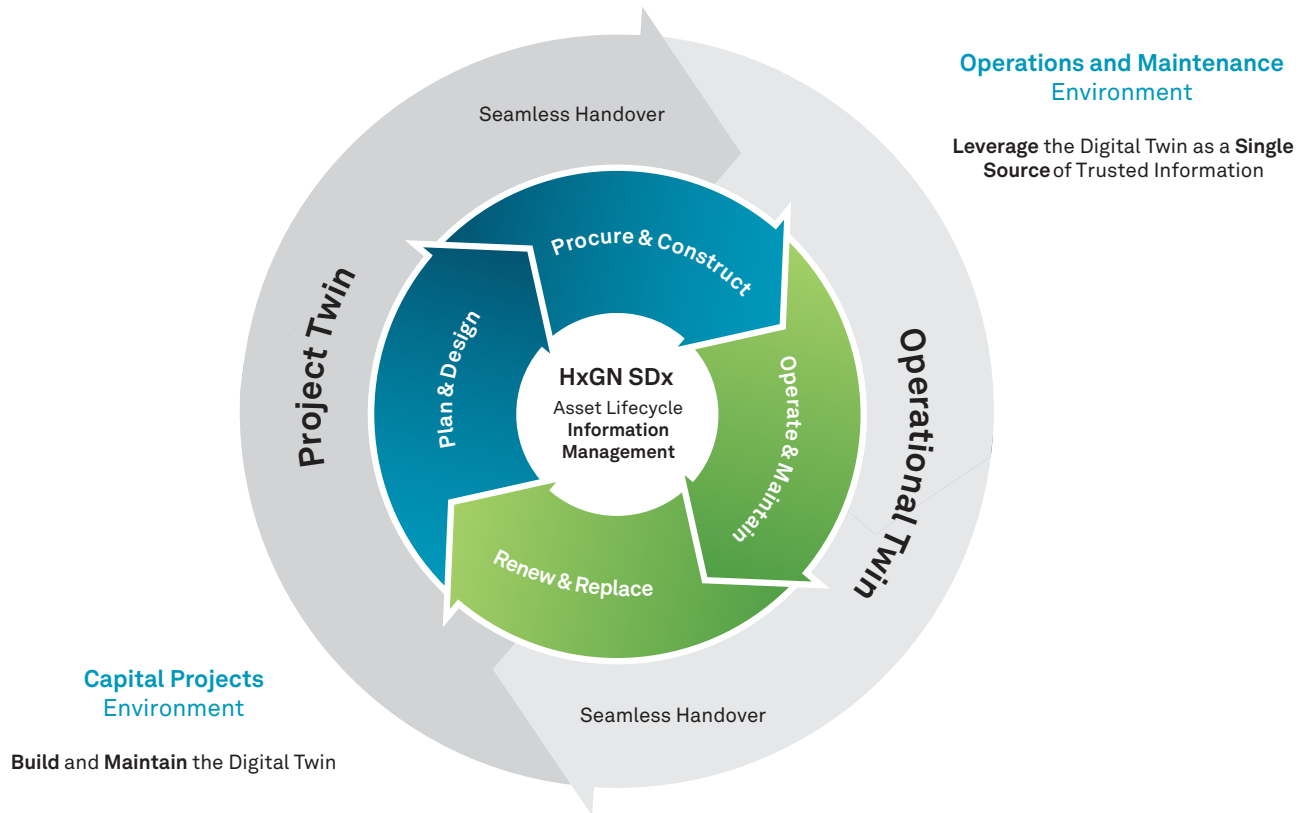
HxGN SDx

Transitioning EPCs toward Data-driven Collaboration

The engineering, procurement and construction (EPC) industry has transitioned to more data-driven and collaborative processes. This approach has resulted in reduced isolated working and greater project visibility. The challenge of making this transition has been software systems inadequately designed to meet the needs of EPCs and contractors. At Hexagon, we heard what our customers need and delivered it with HxGN SDx.

HxGN SDx is designed to be the “digital twin” for project execution, providing everyone working on the project access to a single source of truth for the design. This enables stakeholders from across the globe to actively participate in the design process, fostering greater collaboration among contractors, clients and vendors. With HxGN SDx, rework and confusion are reduced and surprises are eliminated. It’s the digital thread your clients demand, substantially curtailing the costs, efforts and hassles associated with handover.





Transforming Project Efficiency and Collaboration

Quality and on-time, on-budget delivery generates satisfied clients and helps win more work. However, increasingly complex projects and schedules make the risk of overruns even higher. A collaboration platform reduces these risks, enabling communication between all involved, while providing stakeholders access to connected, quality information at the right time.

Owners and operators started to mandate digital twins as part of project deliverables. Offering a project twin during execution can make you the EPC of choice.

HxGN SDx is an asset lifecycle information management (ALIM) solution that improves project and operational efficiency across the entire asset lifecycle – boosting

safety, increasing profitability and reducing risks and costs.

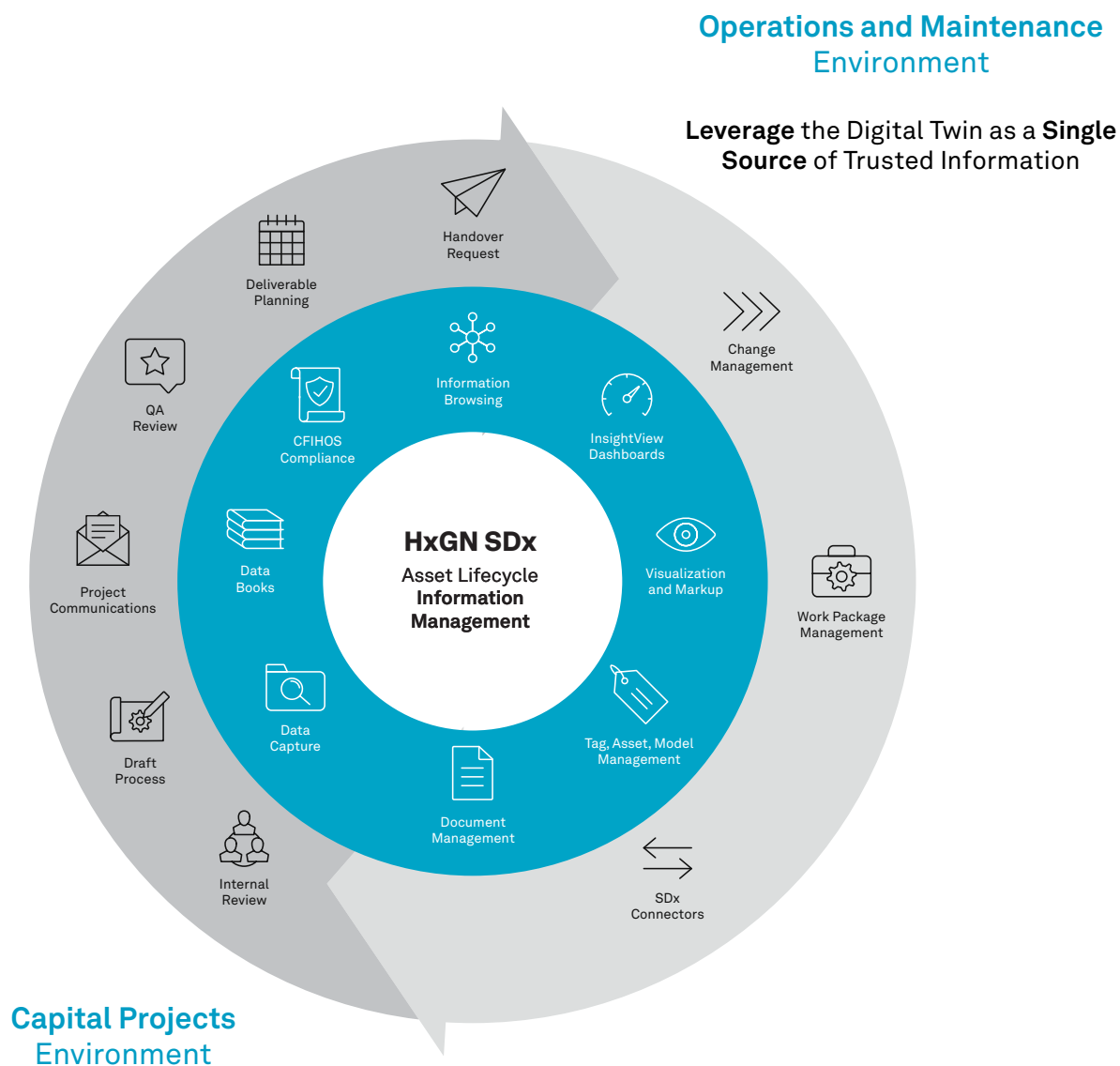
It helps organizations incrementally create a digital twin of the facility during the project. Stakeholders see a dynamic view based on the scope they're assigned, while those with operational roles see a controlled, more static view of the as-operated facility.

Recognizing that every company operates differently, HxGN SDx is also designed to be highly configurable to satisfy the unique processes and requirements of any organization.

HxGN SDx's Core Capabilities

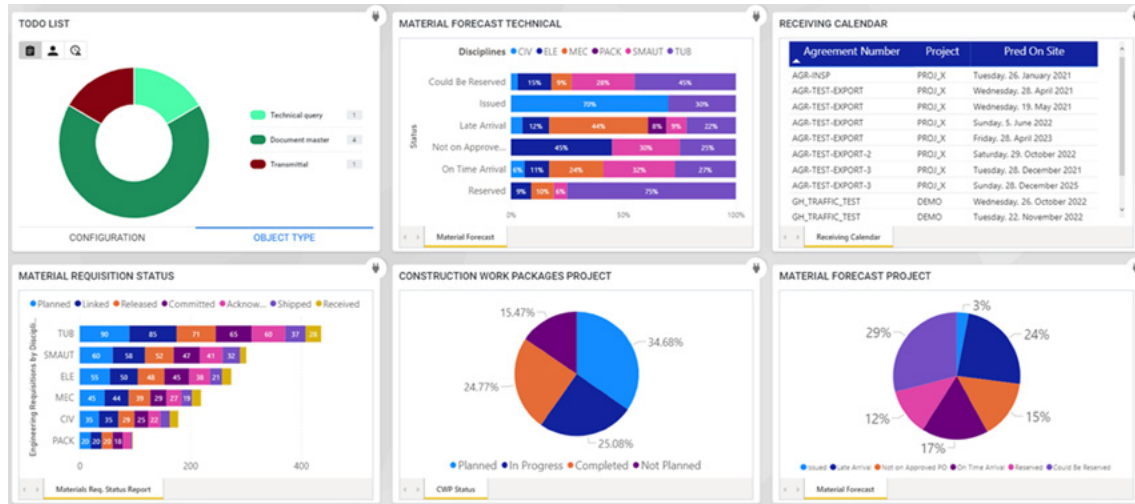
HxGN SDx allows you to aggregate data from multiple sources and quickly find what you need, whether it's a tag name, document number, unit, system or discipline. Its Info Map allows users to graphically see all related information from an element of interest.

One Solution Supporting the Entire Lifecycle



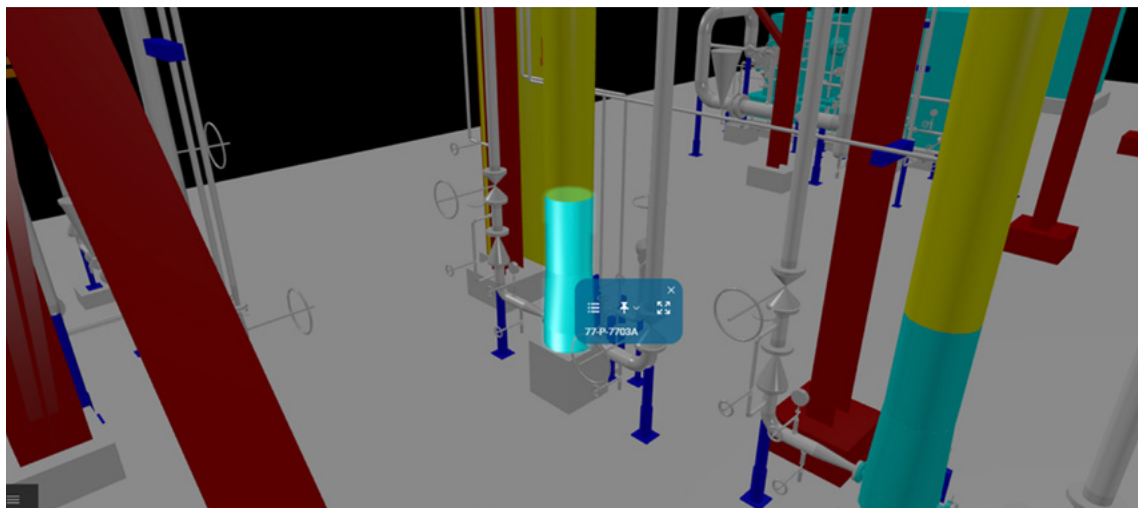
InsightView Dashboard

A configurable, widget-based dashboard displays relevant user role-based information via a single pane of glass. Widgets are interactive, allowing users to drill down into the details of various data sources and reach the right decision.



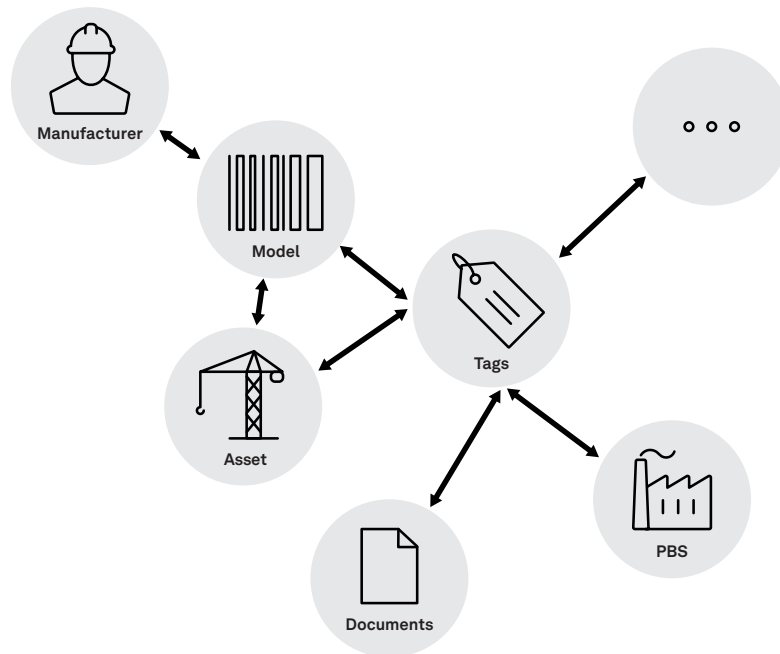
Visualization and Markup

HxGN SDx's zero footprint web client allows you to visualize and redline more than 150 file formats, including PDFs, AutoCAD®, MicroStation and Intergraph Smart®, as well as 3D models, without requiring native applications. Users also have access to a variety of redlining tools, including annotations, change marks, stamps and importable symbols.



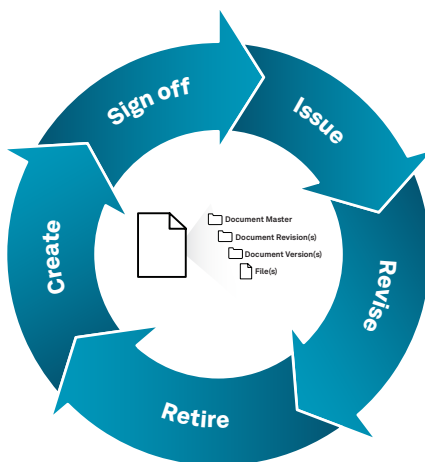
Tag, Asset and Model Management

HxGN SDx manages all your engineering information, allowing you to link the engineering tag to the physical asset in the facility and the model and manufacturer of the equipment. Tags are also linked to other elements within HxGN SDx, like documents, plant breakdown structure (PBS), work packages and change requests.

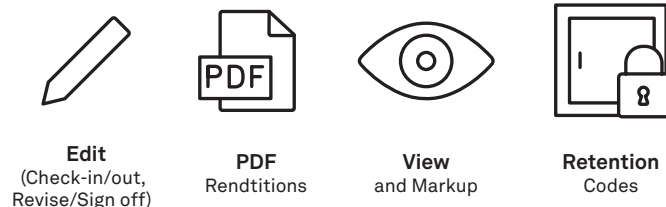


Document Management

HxGN SDx provides basic document management and control capabilities, including number generation, automated revision and version control, check-in/out, sign off and revise. Change history is stored in HxGN SDx, so at any point users can compare differences in the system side by side.

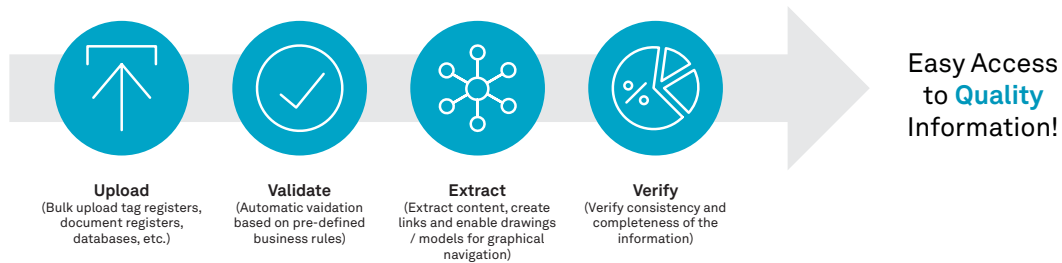


Support to the **Entire Lifecycle** of Documents



Data Capture

HxGN SDx's data capture engine enables you to bulk upload information, such as documents, tags and assets, then validate it using predefined, configurable business rules. This helps to verify accuracy and completeness before importing it into the system. Documentation can be processed to capture tags and create links between all information (e.g., tag to document relationships). Once set up, the capture process is automated and requires minimal manual intervention.



Data Books

HxGN SDx provides the electronic data books functionality, keeping maintenance records, fabrication records, vendor records and process safety information more up-to-date and accessible to the operation's users. Additionally, data books provide the capability to form structured document collections, facilitating the organization of documentation and categorization of tag information into chapters and subchapters.

The screenshot shows the '77- PSM Data Book' interface. On the left is a navigation tree with categories like 'Hazards And Materials', 'Process Design Basis', 'P&ID And UFD', and 'Equipment Design Basis'. The 'P&ID And UFD' category is selected. The main area displays a table of documents under the heading 'P&ID And UFD (Utility Flow Diagram)'. The table has columns for Name, Title, and Rev. It lists 11 documents, each with a file icon, a name (e.g., 77-D-G-006), a title (e.g., Process, P&ID - SRU, ...), and a revision (e.g., 01A).

P&ID And UFD (Dynamic)			
P&ID And UFD (Utility Flow Diagram)			
Documents 21			
	Name ↑	Title	Rev
	77-D-G-006	Process, P&ID - SRU, ...	01A
	77-D-G-007	Process, P&ID - SRU, ...	01A
	77-D-G-008	Process, P&ID - SRU, ...	01A
	77-D-G-009	Process, P&ID - SRU, ...	01A
	77-D-G-010	Process, P&ID - SRU, ...	01A
	77-D-G-011	Process, P&ID - SRU, ...	01A
	77-D-G-012	Process, P&ID - SRU, ...	01A
	77-D-G-013	Process, P&ID - SRU, ...	01A
	77-D-G-014	Process, P&ID - SRU, ...	01A
	77-D-G-015	Process, P&ID - SRU, ...	01A
	77-D-G-016	Process, P&ID - SRU, ...	01A



Capital Facilities Information Handover Specification (CFIHOS) Compliance

The HxGN SDx data model complies with CFIHOS, a global industry standard that manages the practical implementation of the International Organization for Standardization standard 15926. This assists with managing asset information at all stages, from design through to commissioning and handover, to modifications and maintenance, to – eventually – decommissioning. These specifications include:

- Standards and regulations, including export controls to be used
- Security of information to be exchanged
- Quality of information
- Information received through the supply chain via subcontractors
- Information review and approval
- Format of information
- Delivery of information via transmittals
- Applications used by contractors

HxGN SDx Support for Project Execution

With all project data and documents in a single location, it's only logical to leverage it to streamline standard business procedures. HxGN SDx establishes these digital workflows, enhancing project team efficiency and enabling timelier and more traceable communications. This means the right information gets to the right people at the right time.

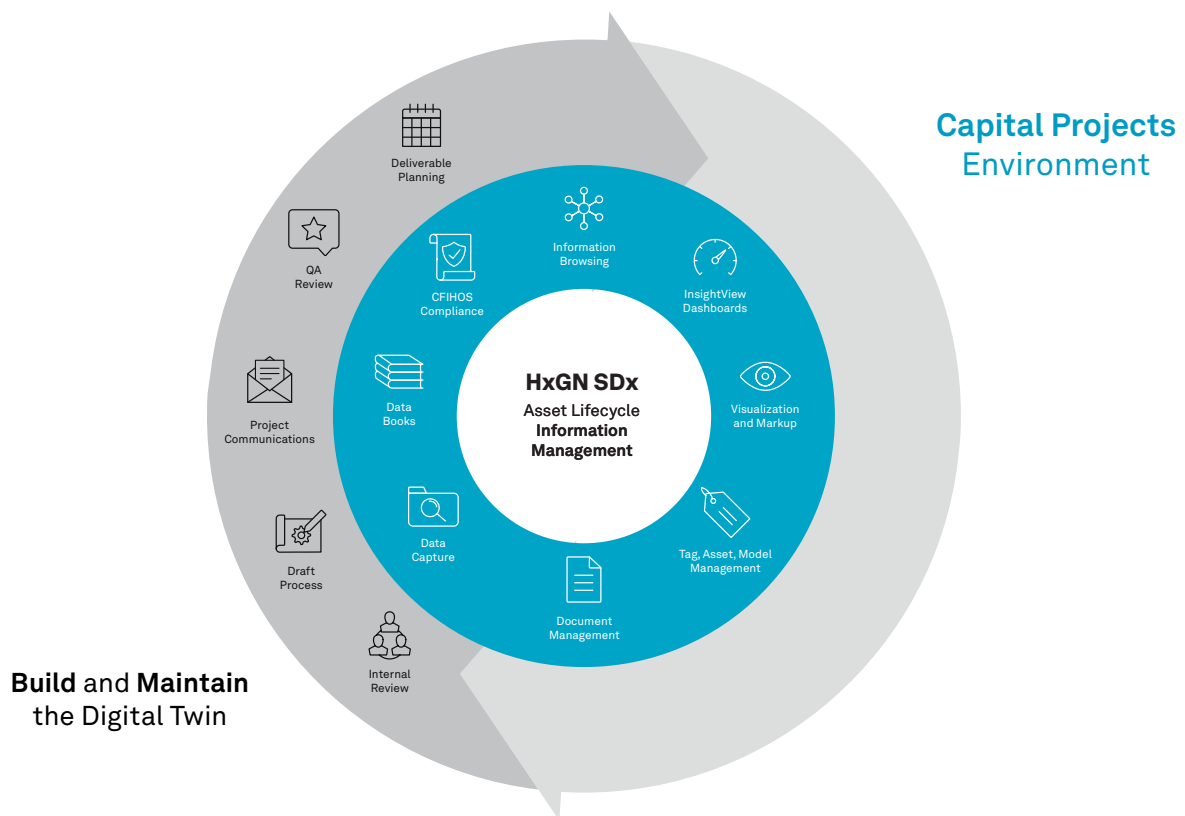
Client Collaboration

Review cycles usually have a limited duration, which the system calculates based on contract information. All response dates are tracked and the customer and project management consultant may respond to the contractor as needed. Multiple reviewers can leverage the view and markup capabilities to make annotations in parallel.



Deliverables Planning

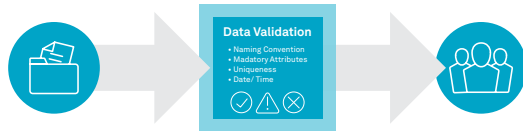
Planned information for project deliverables can be loaded and compared with actual issue dates.



Project Communications

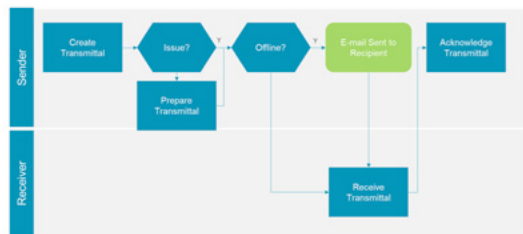
Web-based Submittals

Contractors, vendors and other contributors can send information through web-based submittals for review.



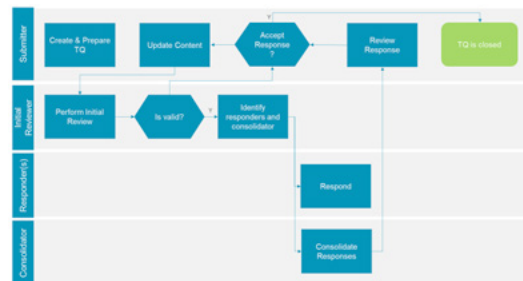
Transmittals

HxGN SDx offers outgoing, internal and incoming transmittal scenarios. The transmittal cover letter is automatically generated based on the project template, incorporating all necessary details. Additionally, it includes a ZIP folder containing all associated documents.



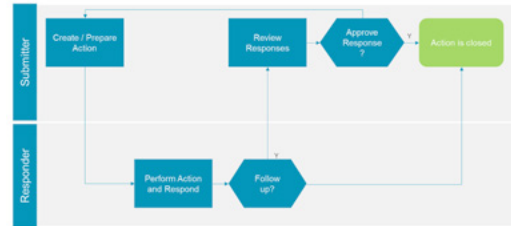
Technical Queries

Technical queries can be associated with pertinent elements within the plant breakdown structure, such as tags, documents, work packages and disciplines. This ensures access to relevant queries via various pathways. In addition, purpose-built interfaces facilitate the monitoring of all communications among responders.



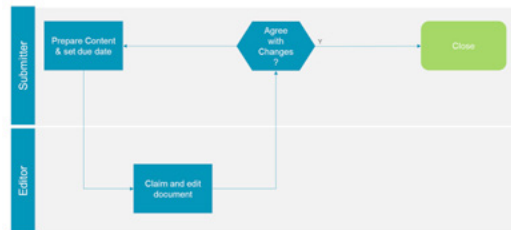
Action Items

When observations require follow up, internal or external action items can be created and become part of the QA review.



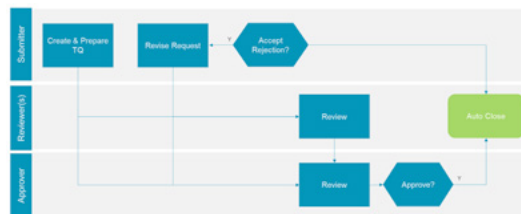
Draft Process

During engineering and design, the draft process enables users to allocate documents to engineers so working documents can be revised.



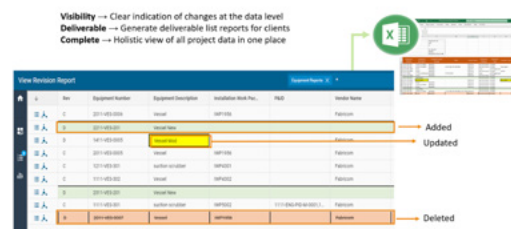
Internal Review Process

During engineering and design, the internal review workflow may be used to transmit documents to fellow engineers for review and approval.



Revision Controlled Engineering Lists

HxGN SDx makes the creation of data lists simple and provides clear evidence of any changes.





Change Management

With HxGN SDx, you can initiate the change management process by defining the scope of change by selecting components, like equipment and piping, directly within the context of 3D models or drawings. An impact analysis is then conducted to identify scope considerations that may have been overlooked, such as drawings linked to components. This process offers visibility into potential changes that share overlapping scope, enabling consolidation or collaboration on these prospective modifications.

In addition, the electronic workflow engine efficiently routes change requests to appropriate reviewers, enabling them to provide estimates and make necessary adjustments to drawings or 3D snapshots.

Conclusion

Organizations often invest significant resources into developing their own systems or purchasing point solutions that require extensive customization, often only to achieve the most basic integration of work processes. In fact, these efforts frequently result in high internal maintenance costs for systems that fail to deliver desired outcomes.

HxGN SDx spares organizations these pitfalls by providing a modern, user-friendly system that seamlessly integrates project data and documents into daily work processes. This integration places all your project information within easy reach of your project team, significantly reducing time and effort while enhancing decision-making capabilities.

HxGN SDx also delivers a collaborative platform that facilitates communication between all project stakeholders. This means clients gain greater visibility into the project, while vendors and contractors can participate more effectively. All communications are streamlined, tracked and auditable.

One of HxGN SDx's many strengths lies in the interconnected nature of its data. It makes locating reliable information incredibly easy and provides valuable context, enabling your team to effortlessly link data to drawings, 3D models and laser scans.

Discover how HxGN SDx can transform your organization's operations and propel its projects toward success. Contact us today for more information and to get started.



About Hexagon

Hexagon is the global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Asset Lifecycle Intelligence division helps clients design, construct, and operate more profitable, safe, and sustainable industrial facilities. We empower customers to unlock data, accelerate industrial project modernization and digital maturity, increase productivity, and move the sustainability needle.

Our technologies help produce actionable insights that enable better decision-making and intelligence across the asset lifecycle of industrial projects, leading to improvements in safety, quality, efficiency, and productivity, which contribute to Economic and Environmental Sustainability.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,000 employees in 50 countries and net sales of approximately 5.5bn USD. Learn more at [hexagon.com](https://www.hexagon.com) and follow us [@HexagonAB](https://twitter.com/HexagonAB).