It's time to try something new

Charles Darwin might have been on to something. The biologist noted more than 150 years ago that natural selection favours the adaptable. Today, we can see how commercial success favours those who are proactive in changing their work processes to incorporate new and better ways of doing things. Herein lies the dilemma: How can large industrial projects and operations make the giant leap into digital transformation without introducing unintended risk?

Many years of experience

For Hexagon PPM headquartered in Huntsville, US state of Alabama, digital transformation is a journey we have been undertaking for many years already with our customers, and our next step on this path forward is HxGN SDx. We have taken all we’ve learned as a market leader over the last twenty years of asset lifecycle information management combined with market trends and forward-looking insights to create an integrated environment throughout the asset’s life. HxGN SDx is a modular, cloud-based asset lifecycle information management (‘ALIM’) solution that optimises efficiency, improves profitability, and ensures safety throughout the facility lifecycle. A web-based, data-centric Software-as-a-Service solution, SDx creates a trustworthy digital twin that is intelligently connected to your work processes. SDx leverages the data within the digital twin to provide value-added work processes covering the complete facility lifecycle, improving project and operational efficiency while reducing risk. It is interoperable with engineering design tools and other operations systems to ensure consistent, complete and correct engineering master data. It provides facility operators a vastly improved way of working.

Don’t improve your handover process — eliminate it!

The traditional approach to managing handover of project information is time-consuming and costly, between 1 percent and 3 percent of total investment costs. HxGN SDx creates a digital thread running across all phases of a project to provide a comprehensive, sharable digital twin platform for digital transformation. The HxGN SDx Projects module – developed over a two-year research and development effort with a US-based oil and gas major player – supports the planning, submission, and validation of information deliverables on projects. It impacts both data-centric deliverables such as tag registers, cross-references and 3D models, as well as document deliverables such as vendor documents. Enter, the digital twin of the facility, which is incrementally built up from information submitted by contractors and vendors as the project evolves. 3D models from a wide range of suppliers can be converted and loaded into the system with the intelligence needed to support intelligent navigation with other data and 2D hotspotted drawings and documents. Data can also be extracted from information deliverables submitted as unstructured documents and drawings and be consolidated into the digital twin. All project stakeholders – contractors, vendors, authorities – can submit or access information based on access rights determined by a combination of role and organisation using a zero-footprint web client that just needs access to a web browser.

The digital twin created during the project is automatically available for all SDx modules, including HxGN SDx Operations, which provides the processes for maintaining the digital twin during the operations phase. This means that the digital twin is carried forward intelligently through each stage of the project, avoiding the need to transfer or recreate information. This eliminates the need for final project handover to operations. During this phase, SDx can be integrated with other operational systems such as SAP EAM and OSIsoft PI System, which extends the scope of the digital twin to include maintenance and real-time data, thus ensuring consistent master data management.

SDx is based on the CFHDX (Capital Facilities Information Handover Specification) for data transfer, which defines the data and documents required by owner operators including:

- Data required to populate operational software systems
- Data and documents required for specific work processes
- Data and documents required for Process Safety Management compliance.

SDx details the destination for all data and documents to be handed over from contractors, which maintains the form and format of load files required to keep operational software systems evergreen.

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