

Digital Twin for Energy Infrastructure

Unlock asset intelligence throughout the life cycle

Transform your assets into living digital models to enable smarter decisions and full transparency across the asset life cycle. Axpo's Digital Twin solution combines high quality modelling, seamless integration and an intuitive platform to maximise your operational efficiency and asset value.

Our Digital Twin solution is a comprehensive modular service that digitises your assets, integrates all relevant data, and provides a powerful platform for visualisation, control and optimisation.

Your benefits

Gain complete transparency and control over your assets with a single digital source of truth, enabling efficient operations and data-driven decisions. Reduce costs and downtime through seamless collaboration across your entire asset life cycle.

End-to-end value chain

Digital asset modelling: We create detailed digital representations of your energy infrastructure, providing a robust planning basis, enabling virtual inspections and delivering spatially referenced inventories.

Digital integration: All asset data, including sensor information and condition status, are consolidated in a single source of truth. This enables efficient access and analysis.

Digital Twin platform: Experience your assets through a simple, intuitive interface. Visualise the digital twin, manage data and gain insights – all in one place.



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Service description

Service	Basic	Medium	Advanced
Process steps / offering	Initialisation	Small scale	Multiple
Frocess steps / offering	project	project	facilities
(1) Digital asset modelling			
Reality capture/survey	•	•	•
BIM As-Built modelling	•	•	•
(2) Digital integration			
Data injection from different source systems (single source of truth)	•	•	•
Linked asset condition information		•	•
Integration of IoT sensor data			•
(3) Digital Twin platform	·		
Web viewer for models	•	•	•
Linked data sources		•	•
GenAl chat agent			•

Use cases

Application areas: substations, powerlines, Battery Energy Storage System (BESS), power plants

Application	Description	
Asset inventory	Maintain a live and spatially referenced register of all assets	
Virtual inspection	Visit your plants virtually at any time from anywhere	
Single source of truth	Find all relevant data efficiently connected in one place	
Condition monitoring	Track asset health from inspections, sensors and analytics. Spot trends early and prioritise maintenance	
Cost and risk	Aggregate quantities and condition to estimate cost and risk. Support investment prioritisation and budgeting	
Al-supported analytics	Interact with your data based on predefined analyses or explore it with the help of a chat agent	

Added value

Features	Benefits	Value
Up-to-date survey data	Virtual on-site inspections	Save trips to your sites
Asset inventory model	Geospatial referenced assets	Gain insights through spatial relationship and context
Linked data platform	Single source of truth	Find your data quickly and easily
Sensor integration	Condition monitoring of assets	Creates awareness of the status of your assets
Data analytics	Al-based analytics	Gain new insights

Technical prerequisites

Existing asset database (ERP), digitised archive with paper documents available as files, plant site plans



Want to know more?

Unlock the full potential of your assets – discover our Digital Twin platform today!

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