

Data Sheet

Lifecycle Twin

Building X



Lifecycle Twin is a Building X offering that provides a single pane of glass for data related to equipment, other assets and location from different stages of a building's lifecycle integrated via APIs. Customers can create data quality reports to check data quality and refine data. Using the 2D and 3D visualization and navigation customers can maintain and manage their buildings and can create and manage documents and tasks in correlation to the assets.

- An integrated 'Single Source of Truth' database with a visual 2D, 3D interfaces for data collection, analysis, and asset data maintenance over the whole facility lifecycle.
- ISO 19650-compliant Common Data Environment (CDE).
- Support for open information standards, for example COBie IFC.
- Maintain and visualize entire systems, components, and location relations including, quality check of data.
- Maintain and manage document workflows and versions.
- Create tasks for documents, and components and manage task workflows for predictive and reactive maintenance.
- Virtually navigate the building with a possibility to have different views based on discipline and store viewpoints of interest.
- Quick information retrieval by bar code scan of device on mobile.
- Locate assets and evaluate condition by display of live values, and historical information.
- Highlighting areas and components of interest based on custom conditions and animations.

Functions

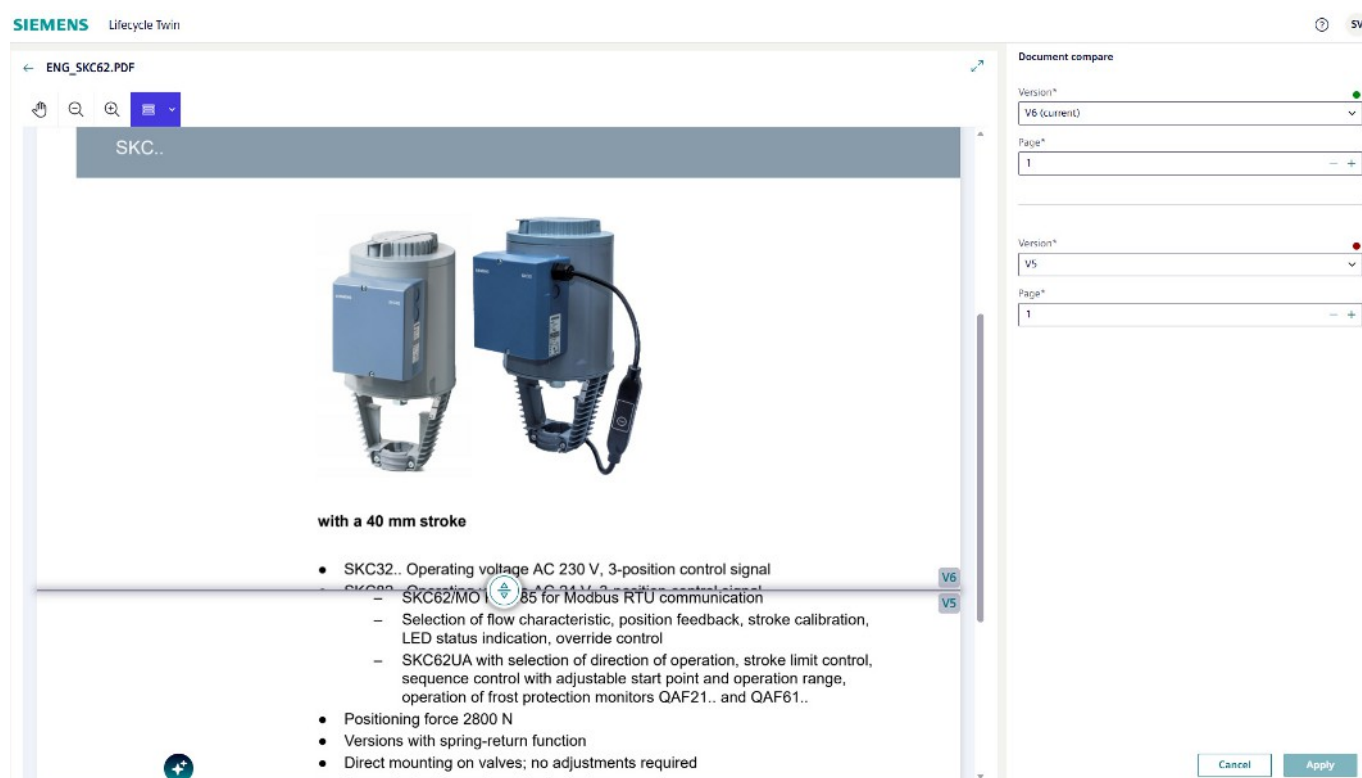
Asset Linked document repository (*Essential, Premium*)

Provides a unified, asset-linked document repository where all building documentation drawings, manuals, certificates, warranties are centrally stored and directly connected to the relevant location, and assets. This ensures documents are not just stored, but contextually embedded, enabling instant access at the point of need.

The advanced document filtering capability enables document managers to efficiently locate and manage documents by combining multiple filter criteria across key metadata fields such as discipline, status, version, category, tags, and other column attributes and save them as reusable filters.

Document Version control and audit trail (*Essential, Premium*)

Ensures complete governance of document changes through automated version control, maintaining a full history of revisions. Every version is captured with timestamps and user references and last state, enabling users to preview and compare versions, track changes, and ensure that only the latest approved document is used. This enables delivery of audit-ready compliance and eliminating risks associated with outdated or uncontrolled documentation.



Document Metadata tagging and classification (*Essential, Premium*)

Documents are enriched with structured metadata and classification, including attributes such as related discipline, category, compliance status, and any other user defined tags. During upload, documents can be automatically named based on predefined naming conventions. This enables standardized naming conventions (aligned with ISO 19650), advanced filtering, and contextual organization, making it easy to manage large volumes of documents while ensuring consistency, discoverability, and lifecycle governance across portfolios.

Workflow based approvals for documents (*Essential, Premium*)

Supports workflow-based document approvals that ensure controlled review including possibility to lock the document for edit by others, validation, and sign-off processes for critical documentation. Documents can move through defined states (e.g., draft, review, approved), with status tracking, fine grained access control and auditability built-in. The solution also preserves and stores document markups with each document version, ensuring comments,

annotations, and review feedback remain traceable across revisions. This enables secure and structured collaboration, faster approvals, and traceable compliance with regulatory and operational standards.

AI powered document search (Essential, Premium)

Leverages AI-powered search to go beyond keyword queries, enabling users to instantly retrieve relevant documents, diagrams, or specific technical information from large repositories. This helps to accelerate information discovery and improve productivity in operations and maintenance workflows.

The screenshot displays the Siemens Lifecycle Twin interface. On the left, a 'Documents' sidebar shows a list of documents with search filters. The main area features an 'Ask Building X' chat interface where a user has asked for 'specification details of motor for grundfos pumps'. The AI response provides detailed technical information:

- Motor Type & Design:** Grundfos pump motors are permanently magnet synchronous motors that are totally enclosed and fan-cooled. They feature integrated frequency converters and PI controllers housed in the motor terminal box, enabling continuously variable speed control.
- Electrical Specifications:**
 - Parameter: 80A (Flange size: 56C)
 - Motor Type: 1.1 kW
 - Rated Power (P2): 50 / 60 Hz
 - Mains Frequency: 1 x 200-240 V (single-phase) or 380-500 V (three-phase)
 - Rated Voltage: 6.80-5.70 A (single phase) or 4.35-3.55 A (three phase)
 - Rated Current: 0.99 (single-phase) or 0.91-0.85 (three-phase)
 - Power Factor (Cos φ): 480-5700 rpm
 - IE Efficiency Class: IES (highest efficiency per IEC 60034-30-2)
 - Motor Efficiency at Full Load: 85.7%
- Protection & Safety Features:**
 - Feature: Details
 - Enclosure Class: IP55 (IEC 34-5)
 - Insulation Class: F (IEC 85)
 - Motor Protection: Built in protection against slow and quick rising temperatures, constant overload, and stalled conditions
 - External Motor Protection: Not required
- Terminal Box Connections:**
 - 1 dedicated digital input
 - 2 analog inputs (0(4)-20 mA, 0-10 V)
 - 1 configurable digital input or open-collector output

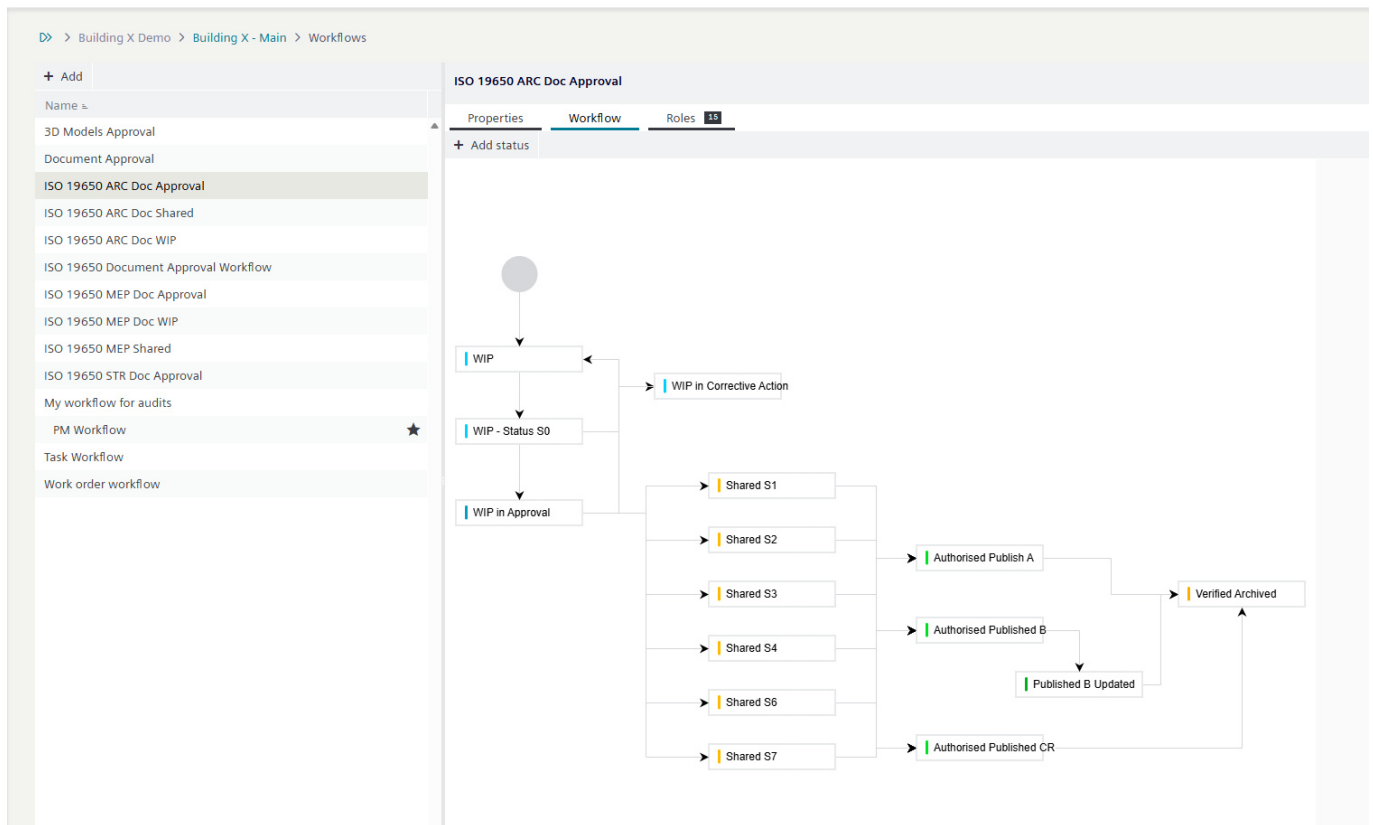
On the right, a table lists documents with columns for Status, Description, and Tags. The status column includes labels like 'WIP', 'Published B Upd...', 'Verified Archived', 'Shared S1', 'WIP - Status 50', 'Shared S3', and 'WIP in Approval'. The description column lists various heating and cooling systems. The tags column includes 'Heating / Heizung' and 'Value Actuator / Stellantrieb'.

Asset Intelligence with System & Relationship Context (Premium)

Delivers end to end asset intelligence by linking assets with their types, systems, spaces, documents, faults, real time and historical values and lifecycle data in a unified model. Users can understand dependencies, relationships, and context across the building, enabling faster analysis, better decision-making, and reduced operational risk.

Customized Workflows (Premium)

Workflows and workflow stages for documents and work orders can be tailored to project and operational needs, ensuring standardized yet adaptable execution across teams and lifecycle stages. Flexible workflow-driven processes allow organizations to define and manage approvals, inspections, issue resolution, and document lifecycles.



Asset Onboarding with iPad (Premium)

Assets can be onboarded and enriched directly from the field using mobile-enabled workflows, including QR/barcode scanning, metadata capture, and documentation linking. This ensures accurate, real-time data collection and reduces manual handover effort.

Maintenance Management including Scheduled Maintenance (Premium)

Enables structured preventive and corrective maintenance management through work order-driven workflows. Recurring maintenance work orders can be systematically scheduled with clearly defined steps and procedures to ensure consistent execution. Work orders are linked to assets, systems, and relevant documentation, providing full operational context and traceability. Operators and service engineers can view, execute, and update work orders directly onsite via iPad in both online and offline modes, capturing progress, comments, and completion status in real time to improve efficiency, compliance, and asset reliability.

D9 > Building X Demo > Building X - Main > Building X Demo > Work orders > Pump Maintenance

Work orders
Clone
Download
Remove

Pump Maintenance

WO-0214

Properties
Information
Files
History
Reminders

Name	Maintenance Centrifugal Pump - Annual
Description	Disconnect and lockout power for inspection.

Subtasks

1	Disconnect and lockout power for inspection.	minutes
2	Inspect bearing frame and foot for cracks, roughness, rust or scale.	minutes
3	In bearing frame, inspect all tapped connections for dirt. Clean and chase threads if necessary.	minutes
4	In bearing frame, remove all loose or foreign material and inspect lubrication passages for signs of blockage.	minutes
5	Inspect shaft and sleeve for grooves or pitting. Check bearing fits and shaft runout. Replace the shaft and sleeve if worn or if shaft runout is greater than 0.05 mm.	minutes
6	Inspect casing for signs of wear, corrosion or pitting. If wear exceeds depth of 3mm, replace casing.	minutes
7	Check gasket surfaces for signs of irregularities. Replace if necessary.	minutes
8	Inspect impeller for signs of wear, erosion or corrosion damage. If vanes are bent or show wear in excess of 3mm deep, replace impeller.	minutes
9	Inspect frame adapter for cracks, warping or corrosion damage. Replace if any of these conditions are present.	minutes
10	Inspect bearing housing for signs of wear, corrosion, cracks or pits. Replace housing if worn or out of tolerance.	minutes
11	Check seal chamber/stuffing box cover for pitting, racks, erosion or corrosion. Inspect for any wear, scoring or grooves that may be on the chamber face. Replace if worn more than 3mm deep.	minutes
12	Check shaft for any evidence of corrosion or wear and straightness. The maximum total indicator reading at the sleeve and coupling journals should not exceed 0.05mm.	minutes

Resources

Lifting Equipment
Personal Protection Equipment
Tool Kit 8

Activity

3/11/2025

Susmita Vaikar: Motor replaced on 3/7/2025
03/10/2025 9:51 AM

Susmita Vaikar: FM - Lab 0041 and 0046 impacted due to maintenance from 13:50 - 15:00
03/10/2025 9:12 AM

Susmita Vaikar: [New -> Open]
03/11/2025 9:18 AM

Susmita Vaikar: [Open -> InProgress]
03/11/2025 9:18 AM

Susmita Vaikar: Priority: Empty -> Emergency AssignedTo: [-> Victor]
03/11/2025 9:42 AM

Victor Chekalin:

[InProgress -> Completed by Technician, Pending Approval]
03/11/2025 10:44 AM

Victor Chekalin:

Checked all parts. No wear and tear in baring , Impeller. Stuffing box intact.
Powered up and functioning properly
03/11/2025 10:44 AM

Victor Chekalin:Location:

[empty -> U1105-]
03/11/2025 10:44 AM

Victor Chekalin:


03/11/2025 10:44 AM

Susmita Vaikar:

[Completed by Technician, Pending Approval -> Approved]
03/11/2025 1:41 PM

Message



ISO 19650 Compliant building lifecycle information intelligence (*Premium*)

As an ISO 19650-compliant Common Data Environment (CDE), it provides a structured and governed foundation for managing building lifecycle information with version control, metadata tagging, and workflow-driven document management ensuring consistent, traceable, and audit-ready data across all phases.

It enables flexible definition of customer-specific asset and location properties, delivering a complete and configurable digital representation of infrastructure in a single place. BIM serves as the core information backbone, providing rich geometric and semantic context to assets and systems, enabling better visualization, coordination, and operational decision-making.

BIM data can be seamlessly imported from IFC/Revit models and exchanged via COBie (import/export), ensuring standardized, interoperable information handover across project and operational stages.

Structured asset data can also be integrated from third-party systems via APIs, creating a unified lifecycle data model. Built-in data quality checks and reporting continuously improve data integrity.

By linking assets, systems, locations, documents, and work orders within the CDE, it delivers a holistic, context-rich view for complete lifecycle visibility, improved collaboration, and efficient facility operations.

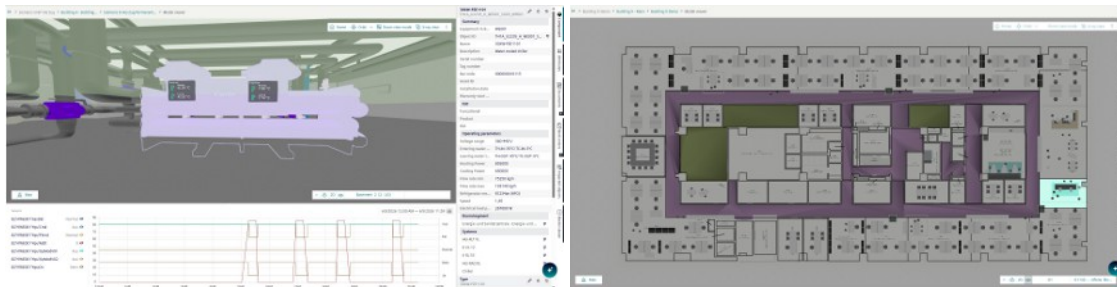
3D BIM digital twin diagnostics (*Premium*)

Leverages 2D/3D BIM-based digital twin visualization combined with real-time, historical, and fault-related data to enable advanced remote diagnostics of building systems. By mapping assets to connected equipment and integrating live values, time-series trends, and detected faults, users can monitor performance, identify anomalies, and proactively diagnose issues from anywhere.

Facility managers and operators can remotely navigate buildings, switch between 2D and 3D views, isolate systems or assets, and enable discipline-specific layers (e.g., HVAC, electrical, fire) to focus on relevant context.

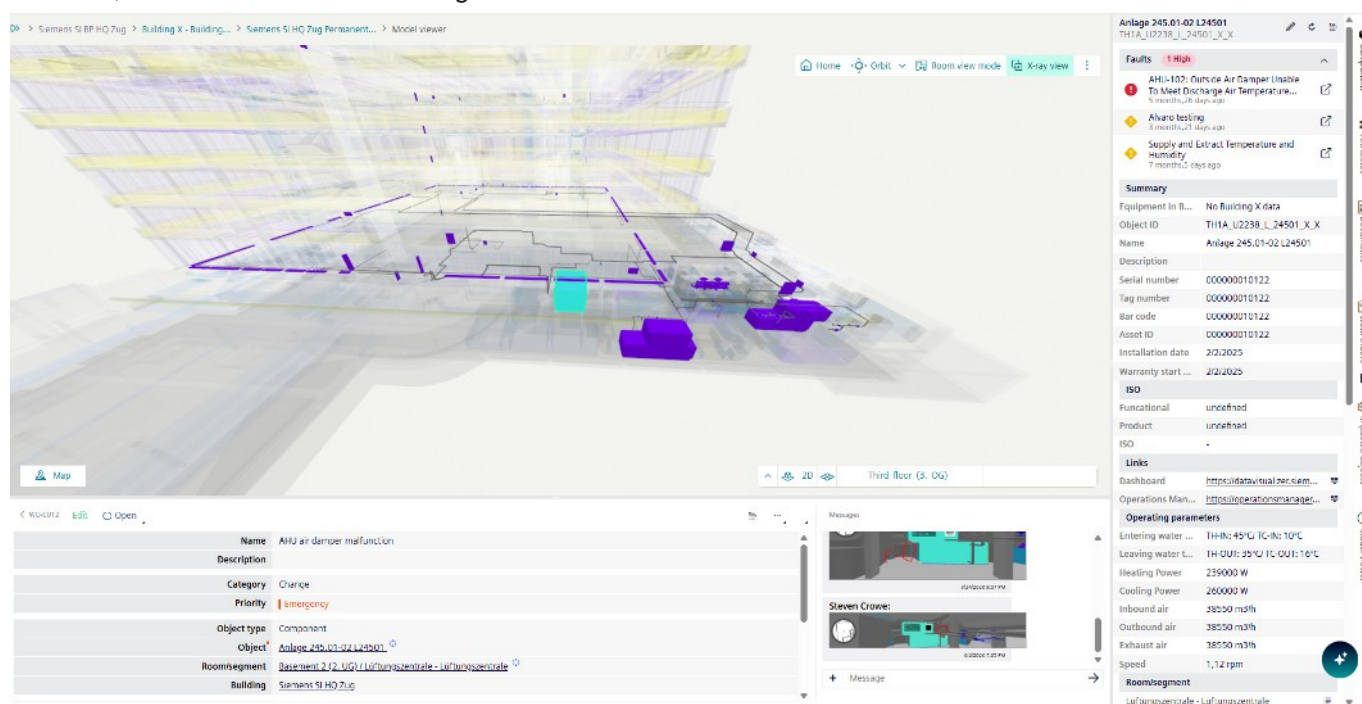
BIM-driven visualization allows users to drill into spaces, hide structural elements, and navigate across floors, enabling deep inspection of systems without being onsite.

Rooms and components can be dynamically highlighted based on custom conditions or fault states to quickly identify areas requiring attention. By correlating geometry, faults, asset data, documents, and system relationships in a single view, it enables faster root cause analysis, improved decision-making, and highly efficient remote troubleshooting.



BIM-based Systems Maintenance (Premium)

Provides a holistic, system-level view of the building with BIM, where assets are not treated in isolation but as part of interconnected systems (e.g., HVAC, electrical, mechanical). By capturing relationships between components, upstream and downstream dependencies, and their spatial context, it becomes significantly easier to investigate issues across the entire system. Maintenance teams can quickly identify how the failure or poor performance of one equipment may be linked to the condition, configuration, or maintenance of related components enabling faster root cause analysis and more effective resolution. This system-centric approach reduces trial and error troubleshooting, improves first-time fix rates, and supports more informed, efficient maintenance strategies.



Audit & compliance support (Premium)

Supports customizable PFD forms for audits, inspections, and commissioning tests, enabling structured data capture directly from the web or iPad during field activities. These forms ensure that audit procedures are consistently executed and documented with all required information, including observations, measurements, and approvals. Completed forms can be securely archived within the document management system, maintaining full version control, traceability, and lifecycle linkage to assets and systems. This enables easy retrieval during audits, simplifies compliance reporting, and ensures all verification activities are digitally recorded, governed, and audit-ready within a centralized environment.

Building X Platform

Accounts Application

Ability to manage users with a role-based access control. New users can be invited to access the Cloud Service and given appropriate access rights via user groups. Users can log in with two-factor authentication and manage their user account themselves. Data can be logically grouped into partitions and given access via user groups.

Data Hosting and Data Usage

Hosts and processes data in a data center located in Ireland. For information regarding processing of personal data Customer may refer to the Data Processing Terms.

Ask Building X

Ability to ask questions in different languages about Building X technical information, utilizing GenAI.

Customer documents uploaded to the Lifecycle Twin document management system can be queried with Ask Building X. Please ensure all documents / folders have the necessary access permissions set and approvals are in place for 3rd party documents uploaded in the Lifecycle Twin document management system and used in conjunction with Ask Building X. Ask Building X follows fine granular permissions and access levels for documents, set in the Lifecycle Twin document management system (refer to the user guide for details).

** The images in this document are examples for the purpose of explanation only and not an exact representation of the offering.*

Subscription

1) Default Subscription Plan if the customer purchases the subscription via the Siemens online store

	Lifecycle Twin Essential	Lifecycle Twin Premium
Functions		
Building X Platform	✓	✓
Asset Linked document repository	✓	✓
Document Version control and audit trail	✓	✓
Document Metadata tagging and classification	✓	✓
Workflow based approvals for documents	✓	✓
AI powered document search	✓	✓
Asset Intelligence with System & Relationship Context	✗	✓
Customized workflows	✗	✓
Asset onboarding with iPad	✗	✓
Maintenance management including scheduled maintenance ISO 19650	✗	✓
Compliant building lifecycle information intelligence	✗	✓
3D BIM digital twin diagnostics	✗	✓
BIM based systems maintenance	✗	✓
Audit & compliance support	✗	✓
Terms		
Subscription metric	Packages of named users 10 users 25 users 50 users 100 users (Storage is capped at 50 GB. Users with View only permission are not counted)	Packages of named users and storage 10 users, 50 GB data 25 users, 125 GB data 50 users, 250 GB data 100 users, 500 GB data 250 users, 1 TB data
Billing term	Annually, payment in advance	
Upscale	Effective immediately, pro-rated billing	
Downscale/Cancellation	Effective with end of subscription term	
Connected Devices	To be purchased separately	

	Lifecycle Twin API - Add-on
Subscription metric	per API integration per year
Billing term	Annually, payment in advance
Upscale	Effective immediately, pro-rated billing
Downscale/Cancellation	Effective with end of subscription term
Connected Devices	To be purchased separately

The base package of Lifecycle Twin must be correctly selected during the first time of purchase and is not reversible. In case live data connectivity or other Building X applications are used together with Lifecycle Twin they should be ordered in the same subscription and belong to the same partition.

The service is available as a base unit of 1 user, 5GB and can only be purchased starting from 10 users and 50 GB storage and available in bands as stated in the above table.

For custom uses cases, long term enterprise contracts, and/or for very large number of users or size requirement, (e.g., more than 250 users and/or 1 TB data) Customer may contact their sales representative for custom subscription plan.

The Lifecycle Twin subscription plan is the regular, scalable Offering for this Cloud Service. The subscription term is twelve (12) months with automatic renewal; the Cloud Service fee is paid in advance. The subscription plan can be upscaled at any time and Cloud Service fees for upscales are calculated on a pro-rated basis. The Customer can also scale down the Cloud Service effective with the end of the current subscription term. The subscription fee will be adjusted for the upcoming billing term. The Cloud Service can be cancelled any time, effective with the end of the current subscription term.

Extended Use entitles Customer to authorize its Affiliates and third parties to access and use the Cloud Services in accordance with the rights set out in the Terms and Conditions.

2) Custom Subscription Plan

Any subscriptions that are not purchased via a Siemens online store are Custom Subscription Plans. Under a Custom Subscription Plan the details regarding functions, subscription metric, term, billing, up- and downscaling, Connected Devices as well as Permitted Users are set out in the agreement between the Customer and Siemens.

Prerequisites

Web browser and Viewing Devices

Chrome is recommended to use the Cloud Service, but other standard browsers might also serve this function. Screen resolution of 1920x1080 pixels or higher is recommended for best user experience.

Internet Connection

The bandwidth of Customer's internet connection determines the performance of the Cloud Service.

Ordering

To order a subscription plan and connected devices, Customer must request a quote from its Siemens sales representative.

Product Documentation

1) Product Documentation under a Standard Subscription Plan

General Contractual Documents	Links
Building X - Lifecycle Twin Data Sheet	www.siemens.com/buildingx/data-sheet/lifecycle-twin
Supplemental Terms for Buildings	www.siemens.com/buildingx/data-sheet/supplemental-terms
General Software Terms and Cloud Supplemental Terms	https://www.siemens.com/global/en/general/terms-of-sale/supplemental-terms.html
Base Terms International	https://www.siemens.com/si/cloud/terms
Siemens Acceptable Use Policy	https://www.siemens.com/si/cloud/terms
Minimum Terms On-Cloud	www.siemens.com/buildingx/data-sheet/minimum-terms
Building X Lifecycle Twin Mobile - End User License Agreement iOS	https://siemens.com/download?A6V15041473
Data Privacy Terms	https://www.siemens.com/dpt/si

General Contractual Documents	Links
Data Privacy Terms Annexes Building X	https://www.siemens.com/dpt/si
EU Data Act	https://www.siemens.com/buildingx/terms

2) Product Documentation under a Custom Subscription Plan

The contractual documents and the Product Documentation are set out in Siemens' offer to the Customer.

3) Technical Documents

Technical Documentation	Link
Building X - Online help	www.siemens.com/buildingx/sid

4) Compliance

Cybersecurity	Link
Cyber Security Alliance - STAR Level 1	https://cloudsecurityalliance.org/star/registry/siemens-ag/services/building-x
IEC 62443-4-1	https://www.siemens.com/en-us/system-certificates/si-b/
ISO/IEC 27001:2022	https://www.siemens.com/en-us/system-certificates/si-b/
ISO/IEC 27017:2015	https://www.siemens.com/en-us/system-certificates/si-b/
ISO/IEC 27018:2025	https://www.siemens.com/en-us/system-certificates/si-b/
SOC 2 Type II Report	Report available on request
SOC 3 Report	https://www.siemens.com/en-us/system-certificates/si-b/

Specific Terms

High-Risk Use

Customer acknowledges and agrees that:

- a) the Offerings are not designed to be used for the operation of or within a High-Risk System if the functioning of the High-Risk System is dependent on the proper functioning of the Offerings; and
- b) the outcome from any processing of data through the use of the Offerings is beyond Siemens' control.

Service Level Agreement

Siemens shall use commercially reasonable efforts to make the Cloud Services available for a yearly uptime percentage of ninety-eight percent (98%).

Except for:

- a) Planned downtime, agreed downtime, routine and emergency maintenance,
- b) Cyberattacks,
- c) the public, third party and/or customer's internet and communications networks,
- d) data, software, hardware, telecommunications, infrastructure, power, build-packs or net-working equipment not provided by Siemens,
- e) Customers and Users negligence or failure in using the Cloud Service and/or in not following the instructions of published documentation,
- f) system configurations and platforms not supported by Siemens,
- g) system administrations, action, commands and file transfers of Customer or User,
- h) modifications or alterations not made by Siemens,
- i) unauthorized access via Customer's credentials and/or
- j) any other failure outside of Siemens reasonable control.

Gen AI disclaimer

This offering is based on artificial intelligence technology, i.e. customer documents uploaded to the Lifecycle Twin document management system can be queried with Ask Building X, our AI assistant.

Do not upload confidential data or personal data to Lifecycle Twin knowledgebase or Ask Building X.

AI generated or based Content, results and responses may not be entirely accurate or reliable. For details on GenAI services, refer to Siemens' "[Artificial Intelligence Terms of Use | Siemens Software](#)".

Customer Support

Siemens offers helpdesk support. Customer may contact its local Siemens representative for support requests. Customers can also submit a support request online: <https://www.siemens.com/support-request>.

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