



Catenda spun off from SINTEF, a leading Scandinavian research institute. Since 2004, we've been at the forefront of implementing open BIM in Norway, a testament to our commitment to open standards and collaboration. We've developed an ISO19650 compliant CDE system that fosters an open culture throughout construction, from design to maintenance.

the open
way

Catenda





Table of Contents

About Us	3
References	4
Our Solutions	5
Common Data Environment	6
Catenda Hub	7
A complete solution to meet your needs.	8
Innovative workflow solutions for architects.	11
A unique, cutting-edge viewer.	16
Adopt a Clear and simple solution for challenging projects	17
Catenda Boost	18
Application examples	19
Catenda Duo	21
Our commitment to your data security	22



ABOUT US

Our ambition is to make the industry more sustainable: this means adopting lower-impact site management methods, maintaining ethical profitability, significantly reducing our impact on the planet through less waste generated while ensuring the well-being of all stakeholders.

For us, this means more than just providing an effective BIM platform. It's about having a measurable positive impact. At Catenda, we firmly believe that openness of data, approach and thinking is the key to achieving our goals.

For over 15 years, we have been committed to building a strong and secure ecosystem, aligned with open international standards. Your data belongs to you and can be accessed anytime, from anywhere.

Our 4 main solutions, Catenda Hub, Catenda Site, Catenda Boost and Catenda Duo will cover you throughout the whole project's lifecycle, from organizing data, facilitating collaboration, supervising construction sites, advancing your existing systems to managing maintenance.

Catenda has an international DNA with headquarters in Oslo, Norway, and a team, partners, customers and users spread around the world.

Our essence lies in our international DNA, shaped by a robust and fair financial structure, with the active participation of our employees, founders and the support of a renowned private equity partner. Our philosophy is based on unfailing transparency, enriched by cultural diversity and expertise built up over many years.

This set of values positions us well as dedicated collaborators in the development of open BIM standards with buildingSMART International, demonstrating our commitment to innovation and excellence in our sector.





REFERENCES

CONSTRUCTION/ENGINEERING COMPANY



REAL ESTATE DEVELOPER



CONSTRUCTION AND TRANSPORTATION PROJECT MANAGEMENT



KSP ENGEL

TRANSPORTATION INFRASTRUCTURE OPERATORS AND MANAGERS



CONSULTING, PLANNING, DESIGN



STATSBYGG

REGION OR LOCAL GOVERNMENT



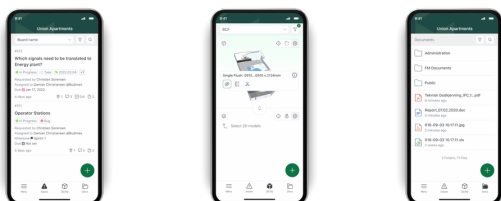
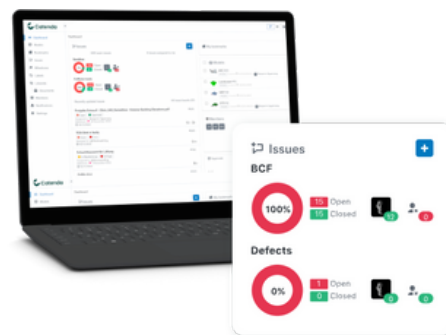
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OUR SOLUTIONS

Catenda Hub

Catenda Hub (formerly known as Bimsync) is an ISO19650 compliant Common Data Environment (CDE) that helps construction and infrastructure stakeholders manage their projects. A cloud platform based on open standards allows information exchange, planning, assignment of topics and central management of all project data (2D plans, 3D models, documents, etc.).

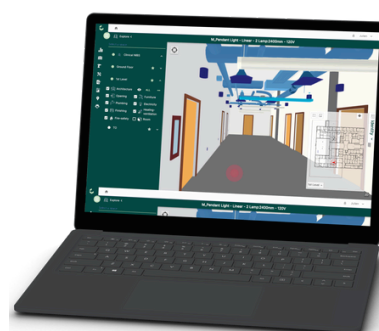


Catenda Site

Catenda Site is an on-site BIM application. You can access Catenda Hub projects in the field, take pictures, create topics, access floor plans and documents through the application.

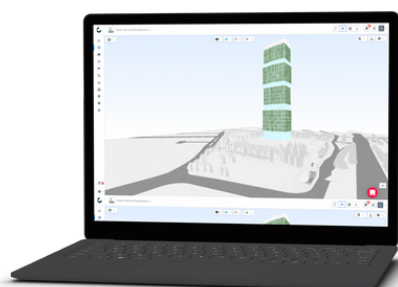
Catenda Duo

Catenda Duo (formerly Catenda BOS) is a platform that allows you to collect and optimize all your building data. This easy-to-use building operations system allows you to reduce your building's environmental impact.



Catenda Boost

Catenda Boost is a rich set of software building blocks that allow you to extend your existing software or build new innovative BIM solutions to enhance your digital workflows.





COMMON DATA ENVIRONMENT

A **Common Data Environment (CDE)** acts as a central hub for all project information in the construction industry. It is a single platform where architects, engineers, and contractors can access and share plans, models (2D & 3D), documents, and other project data.

What information is included in a CDE?



Drawings & BIM Models

2D drawings and 3D BIM Models



Documentation

contracts, schedules, reports, estimates, specifications



Relevant Information

asset information, design & construction processes

Advantages of using a CDE



Promoting **feedback exchange & collaboration**



Improving project **quality & efficiency**



Enhancing data **security & transparency**



Enabling **real-time access** to updated data



Gathering data for **reuse & in-depth analysis**

The main elements defined in the BIM Execution Plan for the CDE

1. Identify the environment of **information management solutions** within the project
2. Define the **information management environment** chosen for the project
3. Define the chosen **project management environment** (if it is different from the information management environment)

How to implement a CDE in your BIM project?



Solution

Decide a digital platform hosting data and providing tools & work space



Process

Provide technical practices and team training to help the CDE function properly & effectively



REVOLUTIONIZE YOUR PROJECT MANAGEMENT.

Catenda Hub is the all-in-one solution for simplified information management: from design to completion, coordinate your teams, manage your documents and make effective decisions.



01

Centralize all your data

Catenda Hub combines a BIM viewer and document management. Collaborate efficiently by centralizing all your data in a single, ISO certified secure environment.

02

Monitor your exchanges

Catenda Hub offers optimal, centralized task planning. Monitor interaction between your teams with a clear visualization of dependencies for smooth coordination.

03

Manage your projects with complete transparency

Catenda Hub integrates change tracking and document approval. Our solution lets you manage different versions of a document and approve new incoming documents. Benefit from a complete history for seamless collaboration.

04

Make the best decisions

Catenda Hub lets you share updates quickly and easily. Communication between your teams becomes much smoother. Make the best decisions for your construction project, based on verified and validated information.

05

Analyze, correct, perform!

Thanks to Catenda Hub and our mobile application Catenda Site, you can monitor the progress of your project wherever you are. Instantly view key performance indicators and identify potential errors. Anticipate and secure your objectives.

A COMPLETE SOLUTION TO MEET YOUR NEEDS.

Model Viewing and Management

Catenda Hub offers a powerful BIM viewer to see 2D and 3D models online and offline. All objects in the models are stored securely and information like name, entity, property, dimension, materials, and size can be exported to common formats for more efficient access.

To ensure perfect alignment between 2D plans and 3D models, the 2D overlay feature can be activated for specific disciplines like electrical and HVAC trades.

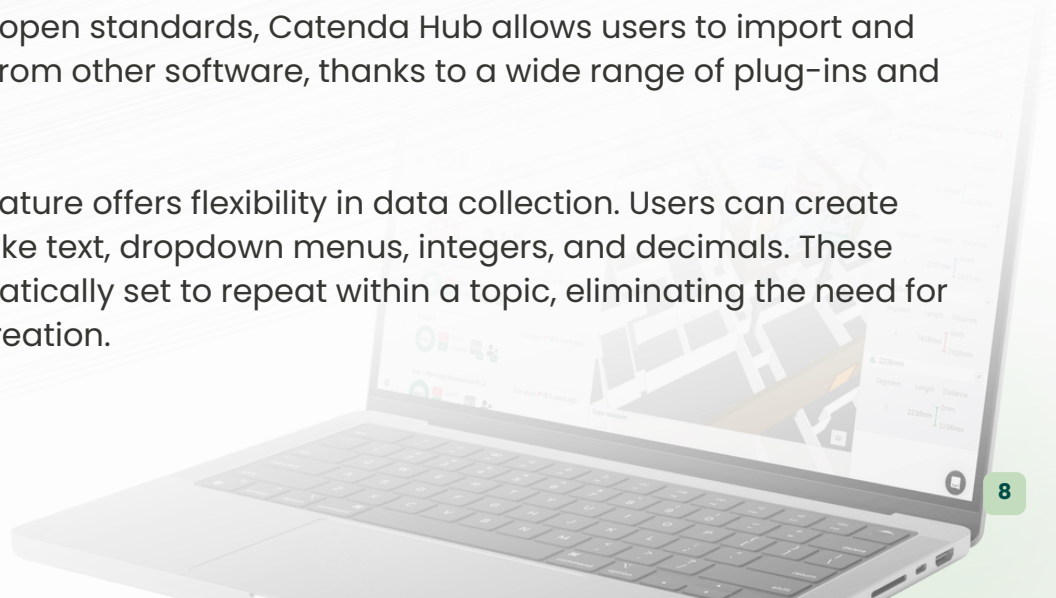
The BIM viewer in Catenda Hub can be personalized with colorization to improve coordination and clarity, avoiding unexpected errors especially for complex projects. These models can also be easily shared with other project participants, even outside the organization, via QR code or link thanks to the Bookmark feature.

Topic Management

Catenda Hub's topic management function streamlines project communication by centralizing all topic information in one place. Project participants can easily store, link topics with relevant documents and model objects, and collaborate seamlessly in the BCF format. Users no longer struggle with missing information – they can easily research everything within a single window for a clear overview of all project topics.

Strictly aligned with open standards, Catenda Hub allows users to import and export topics, even from other software, thanks to a wide range of plug-ins and integrations.

The custom fields feature offers flexibility in data collection. Users can create various data types like text, dropdown menus, integers, and decimals. These fields can be automatically set to repeat within a topic, eliminating the need for repetitive manual creation.





Document Management

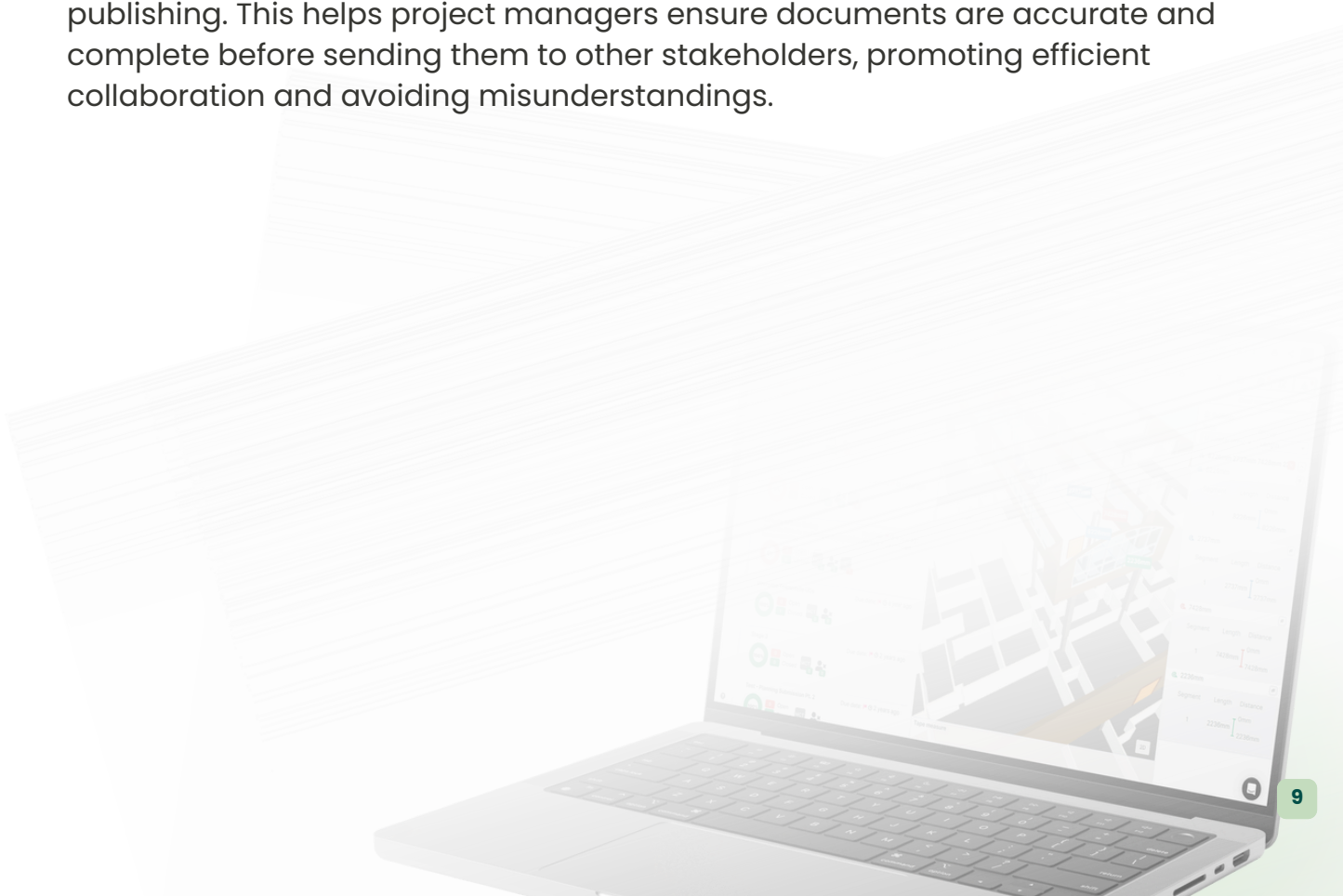
Catenda Hub securely hosts all project information with an unlimited storage capacity for documents. It also allows users to view and manage IFC, PDF, DWG, and Microsoft Office files.

Catenda Hub supports point cloud, CityGML and other data visualization formats. Users can easily view, measure, and federate models in these formats to enrich data throughout the project lifecycle.

Catenda Hub promotes consistent file organization by enforcing specific naming conventions. This makes it easier for everyone involved in the project to find the documents they need.

To effectively manage project documents, Catenda Hub offers two key features: document approval and access control management. The document approval system provides workflows in order to approve incoming documents. With access control management, users can assign specific access rights to documents and topics. This ensures internal or private documents are not shared with unauthorized users.

Catenda Hub facilitates document approval and validation processes before publishing. This helps project managers ensure documents are accurate and complete before sending them to other stakeholders, promoting efficient collaboration and avoiding misunderstandings.

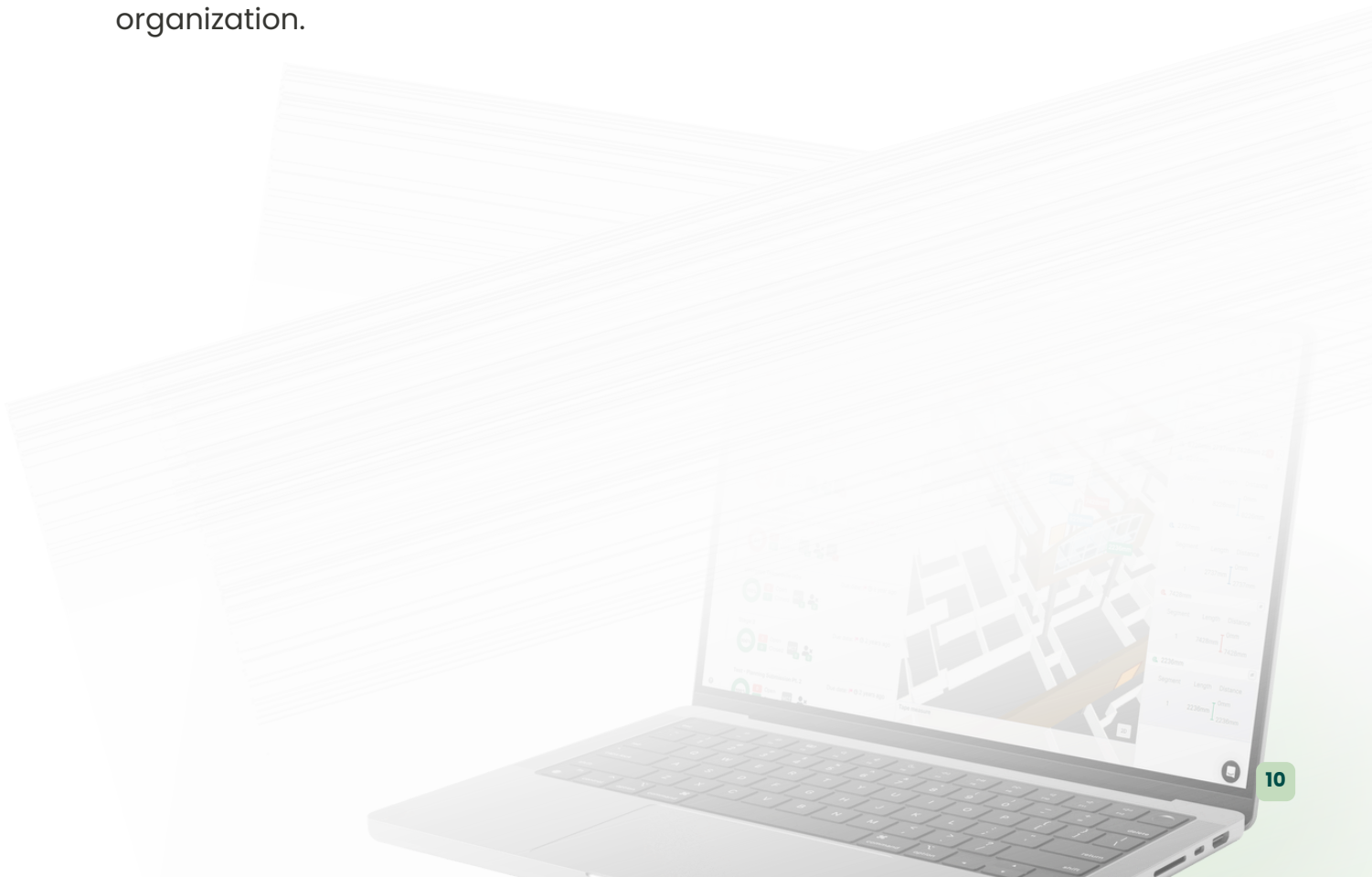


Model as Document

Catenda Hub's "Models as documents" feature streamlines IFC file management. When you create a model in the Models section, a linked document is automatically created in the Documents section. Similarly, uploading an IFC file in the Documents section allows you to use the "make model" function to create a linked model. This means you can manage models like documents (download, revise, control access) and access documents like models (view in 3D).

BENEFITS OF MODELS AS DOCUMENTS IN CATENDA HUB

- Unified Workflow: Manage IFC files (building models) in one place (create, revise, download).
- Simplified Collaboration: Treat models like documents (labels, access control, 3D view).
- Enhanced Findability: Locate models faster with filters, folders, and labels.
- Increased Efficiency: Perform bulk actions (download, delete) and create models from multiple IFCs at once.
- Granular Control: Grant specific access rights to individual models.
- Streamlined Approvals: Upload IFCs as drafts for review before publishing.
- Flexible Naming: Use separate names for models and documents for better organization.



INNOVATIVE WORKFLOW SOLUTIONS FOR ARCHITECTS

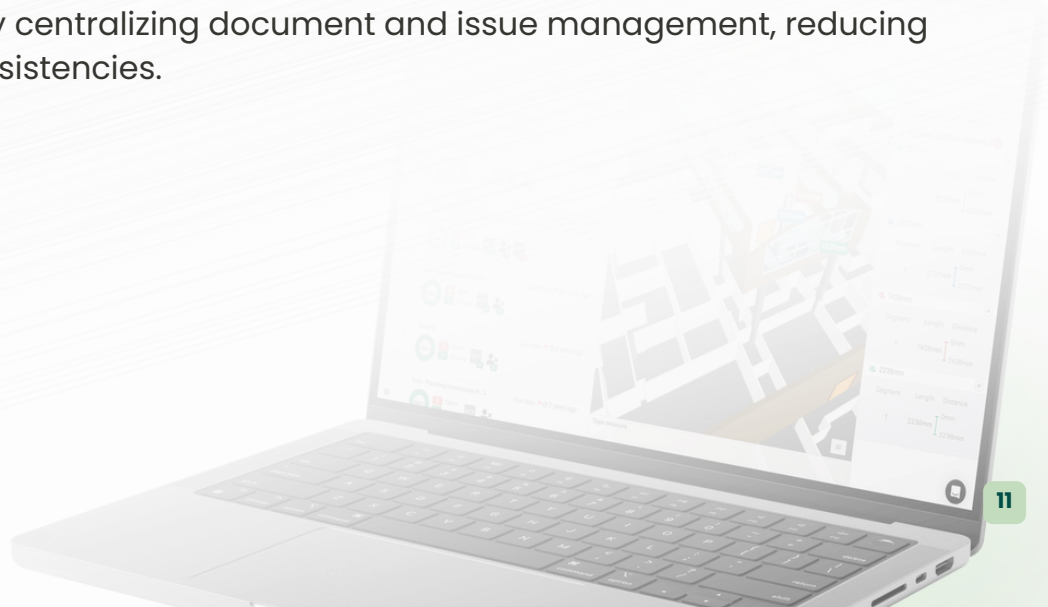
In today's fast-paced construction industry, effective collaboration and accurate information sharing are essential. Catenda Hub integrates seamlessly with tools like Revit and Solibri, offering powerful workflows for document approval, issue tracking, and model synchronization. Our comprehensive platform ensures that all project participants work together smoothly, enhancing efficiency, reducing errors, and improving project outcomes.

BENEFITS FOR ARCHITECTURAL PROJECTS

Enhanced Collaboration and Efficiency

Catenda Hub's integration with Revit, Solibri, and advanced document approval workflows brings numerous benefits to architectural projects:

- **Enhanced collaboration:** Connect Revit and Solibri with Catenda Hub, allowing all project stakeholders, including architects, designers, engineers, and clients, to access and collaborate on documents, issues, and models in real-time.
- **Accessibility:** Access project documents, issues, and models from anywhere, anytime, ensuring continuous workflow and productivity.
- **Improved accuracy:** Maintain precision in architectural plans and specifications by centralizing document and issue management, reducing errors and inconsistencies.



BENEFITS FOR ARCHITECTURAL PROJECTS

Enhanced Collaboration and Efficiency

- **Streamlined workflows:** Simplify the review, approval, and revision process, ensuring timely updates and reducing rework.
- **Faster approvals:** Expedite the review and approval process with real-time notifications and updates, ensuring projects stay on schedule.
- **Compliance and traceability:** Maintain a comprehensive audit trail for all document changes and approvals, essential for regulatory compliance and quality assurance.
- **Enhanced decision-making:** Provide all team members with access to the latest information, facilitating informed decision-making and faster resolution of issues.



TECHNICAL OVERVIEW

Catenda Hub's integration with Revit and Solibri is designed to streamline your construction workflows by effectively managing documents, issues, and models. Here's a detailed look at how it works:

Solibri integration:

- **Plugin Installation:** Download and install the Catenda Hub plugin for Solibri. This plugin allows seamless communication between Solibri and Catenda Hub.
- **Authentication:** Sign in with your Catenda Hub credentials to securely link your Solibri projects. This ensures that only authorized users can access and modify project data.

Document management:

- **Upload Process:** Easily upload construction documents (PDFs, DWGs, etc.) to Catenda Hub. The platform supports bulk uploads, reducing manual effort.
- **Version Control:** Track document versions to ensure that all team members are working with the latest information. Older versions are archived but still accessible for reference.
- **Status Management:** Activate document statuses (e.g., Draft, Published, Approved) to manage the lifecycle of each document. Customize these statuses to fit your project needs.

Model synchronization with Revit:

- **IFC Export:** Export Industry Foundation Classes (IFC) files from Revit and upload them directly to Catenda Hub. IFC is a neutral, open file format that ensures interoperability between different software applications.
- **Automated Updates:** Set your models to update automatically in Catenda Hub whenever changes are made in Revit, ensuring all stakeholders have access to the most current models.
- **Manual Updates:** Alternatively, choose to update models manually, providing control over when changes are shared with the team.

TECHNICAL OVERVIEW

Quality control and validation in Solibri:

- **Model Validation:** Use Solibri's powerful validation tools to ensure that all elements in your model meet project standards. Check for missing properties, incorrect classifications, and other potential issues.
- **Clash Detection:** Conduct detailed clash detection to identify and resolve conflicts between different model elements (e.g., structural beams intersecting with HVAC ducts). Solibri's advanced algorithms can detect hard clashes (physical overlaps) and soft clashes (clearance issues).
- **Real-Time Synchronization:** Ensure that validation and clash detection processes are based on the most recent model versions from Catenda Hub, avoiding errors due to outdated information.

Issue management:

- **Issue Creation:** Generate issues directly within Revit and Solibri, attaching them to specific model elements. Include detailed descriptions, screenshots, and relevant metadata.
- **Issue Tracking:** Use Catenda Hub to track the lifecycle of each issue, from creation to resolution. Assign issues to team members, set due dates, and monitor progress.
- **Automated Issue Generation:** Configure Catenda Hub to automatically create issues based on document approval outcomes, ensuring that all feedback is systematically addressed.

Document approval workflow:

- **Setup:** Define a document approval workflow in Catenda Hub, specifying roles such as publishers (responsible for final approval) and reviewers (providing initial feedback).
- **Approval Process:** Automate the approval process, ensuring that documents are reviewed and approved according to predefined criteria. Catenda Hub can send notifications to relevant stakeholders at each stage.
- **Outcome Configuration:** Automatically assign document statuses (e.g., Approved, Rejected) and create corresponding issues based on review outcomes. This ensures that any necessary changes are tracked and implemented.

TECHNICAL OVERVIEW

Collaboration and review:

- **Integrated Review Tools:** Utilize Catenda Hub's built-in tools to review, comment on, and approve models and documents. Annotations and comments are saved and can be accessed by all team members.
- **Inclusive Feedback:** Enable team members without Revit or Solibri expertise to participate in the review process. Catenda Hub's intuitive interface makes it easy for all stakeholders to provide valuable input.
- **Real-Time Notifications:** Keep all team members informed with real-time notifications about updates, reviews, and approvals. This ensures that everyone is aware of the latest developments and required actions.

Real-time collaboration and accessibility:

- **Catenda Site Mobile App:** Access and manage project documents on-the-go using the Catenda Site mobile app. This is ideal for site visits, client meetings, and remote work scenarios.
- **Global Access:** Ensure that all team members, from architects to project managers, have access to the necessary documents, issues, and updates in real-time. This enhances productivity and collaboration across different locations and time zones.
- **Offline Access:** Download important documents and models for offline access. Changes made offline can be synchronized with Catenda Hub once an internet connection is available.

By leveraging the integration of Catenda Hub with Revit and Solibri, alongside our advanced document approval workflows, your architectural projects will benefit from enhanced efficiency, accuracy, and collaboration.

Our comprehensive platform ensures that all project members are working with the most up-to-date information, reducing errors and driving project success to new heights. With Catenda Hub, you can streamline your workflows, improve communication, and ensure that your projects are completed on time and within budget.



A UNIQUE, CUTTING-EDGE VIEWER

Catenda Hub's powerful viewer stands out due to its ability to handle both 3D and 2D formats, display complex models smoothly, and integrate seamlessly with other features within the platform, facilitating a streamlined BIM workflow.

- **3D and 2D capabilities:** Catenda Hub's viewer combines both 3D models (IFC, Point clouds and GML) and 2D documents (BCF, PDF, Images, Open office, Rich text, Plain text) used in construction projects. This combined functionality allows users to switch between different views for a comprehensive and profound understanding of the construction projects.
- **Handling large and complex models:** The viewer can manage IFC files to process large and intricate models smoothly.
- **Supporting as many of the most common filetypes that are used for the ease of use of Catenda Hub:** Catenda Hub supports displaying several proprietary image formats under the form of Open standard image formats, Documents (bmp, wmf, emf, jpg, tif, tiff), Topics - Text formatting (bmp, jpg) and Topics - Viewpoints (jpg).
- **Integration with Catenda Hub features:** The viewer seamlessly integrates with other Catenda Hub functionalities like revision control, issue management, and access control. This integration allows users to not only view models but also collaborate and manage them effectively within the platform.





ADOPT A CLEAR AND SIMPLE SOLUTION FOR CHALLENGING PROJECTS.

In today's AECO industry, the focus should be on core competencies – building, designing, engineering, and efficient project management. The ideal software shouldn't require extensive learning curves.

In any project, the "time to value" should be a top priority when evaluating new tools.

Collaborators should be able to quickly grasp the software's functionality and start realizing its benefits.

Catenda's cloud-based platform is designed for ease of use. With an intuitive interface and seamless workflows, our solution leads your team to gain in productivity in minimal time. Catenda Hub frees them to focus on what they do best – delivering exceptional projects.

Catenda is more than just a performant softwares' ecosystem. Our experienced customer success team provides ongoing support and guidance. We support you to ensure a smooth implementation process and help you leverage the full potential of Catenda's features. This comprehensive approach minimizes learning curves and maximizes the positive impact on your projects.

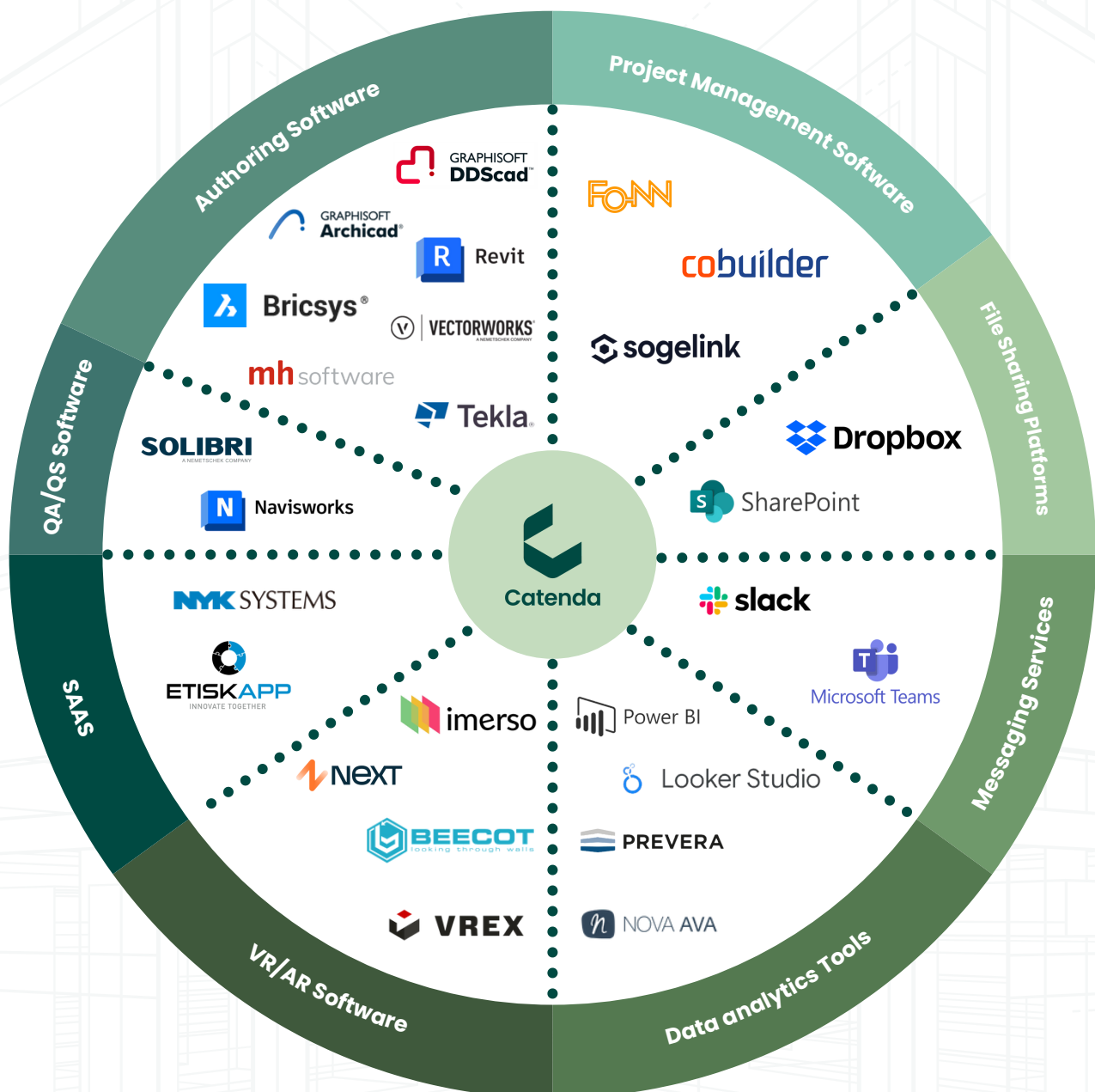
Change management becomes easy.





BOOST YOUR BIM WORKFLOW WITH AN OPEN STANDARD BASED API.

Build your software's foundation with Boost, concentrate your efforts on perfecting your workflows and creating a dynamic front end. This strategic choice not only saves you valuable time, but also ensures that you have a proven, market-ready solution at your disposal.



APPLICATION EXAMPLES



Archicad is a BIM software program designed for architects. It allows them to create 2D/3D models for design, visualization, documentation and collaboration throughout a project's lifecycle. Archicad supports architects for designing buildings from the conceptual phase all through to the construction phase. For enhanced design collaboration, Archicad can be seamlessly integrated with Catenda Hub through open formats (IFC and BCF).

From Catenda Hub, it is possible to view the uploaded models directly from Archicad and visually communicate any deficiencies or changes detected. All project members will be able to check the changes and close the issue or, alternatively, continue adding requests and comments. All this in a transparent way and in real time.



Navisworks is a 3D design review product from Autodesk. It is used primarily in construction industries to complement 3D design packages. Navisworks allows users to open and combine 3D models, navigate around them in real-time and review the model using a set of tools including comments, redlining, viewpoint, and measurements.

Users can definitely integrate Navisworks with Catenda Hub via a plugin. This integration helps architects manage and collaborate on issues directly in Catenda Hub, linked to specific elements in their Navisworks model. By combining the power of Catenda Hub and Navisworks, architects can work together to streamline BIM communication and issue management efficiently.



» Catenda Boost

Revit

Revit is a design and documentation platform that supports the design, drawings, and schedules required for building information modeling (BIM). Revit allows users to create detailed 3D models of buildings and structures. In the Revit model, users can navigate information project design, scope, quantities, and phases in real-time.

Revit can integrate with Catenda Hub through a dedicated add-in based on open formats. Once installed, the plugin enables various workflows between Revit and Catenda Hub. Users can upload Revit models directly to Catenda Hub as an IFC file. They can also access, manage, and create topics (issues) related to the Revit model within Catenda Hub. Moreover, project participants can collaborate on design issues and clarifications through Catenda Hub's communication tools.

Overall, the Revit integration with Catenda Hub enhances communication and collaboration on BIM projects by providing a centralized platform for managing issues and model information.

SOLIBRI A NEMETSCHKE COMPANY

Solibri is a software program specifically designed for BIM Quality Assurance and Quality Control.

Solibri offers two main methods for integration with Catenda Hub, via BCF or Solibri Documents API. This integration helps centralize communication by keeping all BIM issue data in Catenda Hub, fostering smoother collaboration. Thanks to that, stakeholders can easily access and discuss BIM issues within Catenda Hub, leading to faster resolution and improved project outcomes. The integration also streamlines the BIM issue management process, saving time and effort for project teams.

VECTORWORKS A NEMETSCHKE COMPANY

Vectorworks is like a one-stop shop for design professionals. It allows for sketching, drawing, and modeling in a fully integrated BIM workflow. From the schematic design phase, Vectorworks software can analyse the information, quantify, create schedules and calculate costs. It provides the opportunity to deliver accurate documentation with increased efficiency and steadfast creativity.

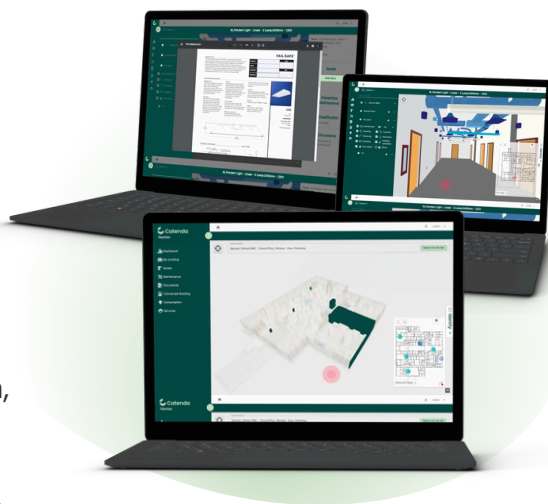
Through open formats, Vectorworks can be integrated seamlessly with Catenda Hub. This integration fosters a more efficient and collaborative BIM workflow.



EMPOWER YOUR ASSET MANAGEMENT WITH OPEN STANDARDS

Elevate your asset management with our digital twin software, designed for everyone, with no specific technical expertise. Duo is a human-centered solution, reinventing cutting-edge technology as an integral part of people's lives in an eco-friendly perspective.

Optimize your building throughout its entire lifecycle with our user-centric approach and a data-enriched viewer.



01

Centralize and streamline operational and maintenance systems online.

Catenda Duo saves you time by consolidating all your operational systems into a single platform, making information accessible to all stakeholders responsible for asset maintenance and operations. With API connections and BOS (Building Operating System), you will experience seamless integration with the rest of your ecosystem already implemented.

02

Making data-driven decisions to improve their impact.

Track essential building KPI's and take the most strategic decisions regarding asset operations and maintenance by monitoring potential hidden costs. With Catenda Duo, efficiently organize your service providers' interventions. Gather essential data from different sources and softwares to make smart and steadfast decisions.

03

Keeping your data up-to-date is now easier.

Catenda Duo is an open solution for real-time asset data. Unlimited users foster widespread adoption, ensuring all stakeholders actively engage. Thanks to Catenda Duo, you can optimize data management, secure data consistency and guarantee effortless updates.

04

Effortless interoperability for all stakeholders.

With Catenda Duo, day-to-day tasks are simplified thanks to an intuitive interface. User-friendly and tailored for everyone thanks to APIs, our solution provides an easy, seamless experience for owners and occupants, ensuring data transparency, from user to software and from software to software. All building users can track the maintenance of their apartments or offices in real time.

05

Improve occupant satisfaction while preserving energy.

Optimize asset value with Catenda Duo—seamlessly monitor and control sustainability decisions with real-time data, transforming spaces into eco-friendly environments that enhance occupant well-being. Our solution ensures positive choices for a sustainable, resilient future.



OUR COMMITMENT TO YOUR DATA SECURITY

ISMS and ISO 19650 Certifications and their strategic importance for Catenda

ISMS Certification

ISMS (Information Security Management System) certification is grounded in the ISO/IEC 27001 standard. This comprehensive framework allows us to effectively manage information security risks, ensuring the confidentiality, integrity, and availability of our information assets.

Key aspects of ISMS Certification:

- **Protection of information assets:** We safeguard sensitive information against unauthorized access, disclosure, alteration, and destruction.
- **Risk management:** We systematically identify potential security risks and implement robust controls to mitigate them.
- **Legal and regulatory compliance:** We ensure our operations meet all relevant legal, regulatory, and contractual requirements.
- **Continuous improvement:** We commit to ongoing monitoring, review, and enhancement of our information security processes.

ISMS Certification for Catenda:

- **Enhanced trust:** Demonstrating rigorous information security practices strengthens trust with our clients, stakeholders, and partners.
- **Risk mitigation:** We proactively manage and mitigate risks to prevent data breaches and security incidents, protecting both our data and that of our clients.
- **Competitive differentiation:** Certification distinguishes us from competitors, showcasing our dedication to high standards of information security.
- **Regulatory adherence:** We ensure compliance with data protection laws and regulations, thereby avoiding legal penalties and preserving our reputation.



OUR COMMITMENT TO YOUR DATA SECURITY

ISO 19650 Certification

ISO 19650 certification pertains to the management of information throughout the lifecycle of a built asset using Building Information Modelling (BIM). This series of standards provides a robust framework for managing information efficiently in the architecture, engineering, and construction (AEC) sectors.

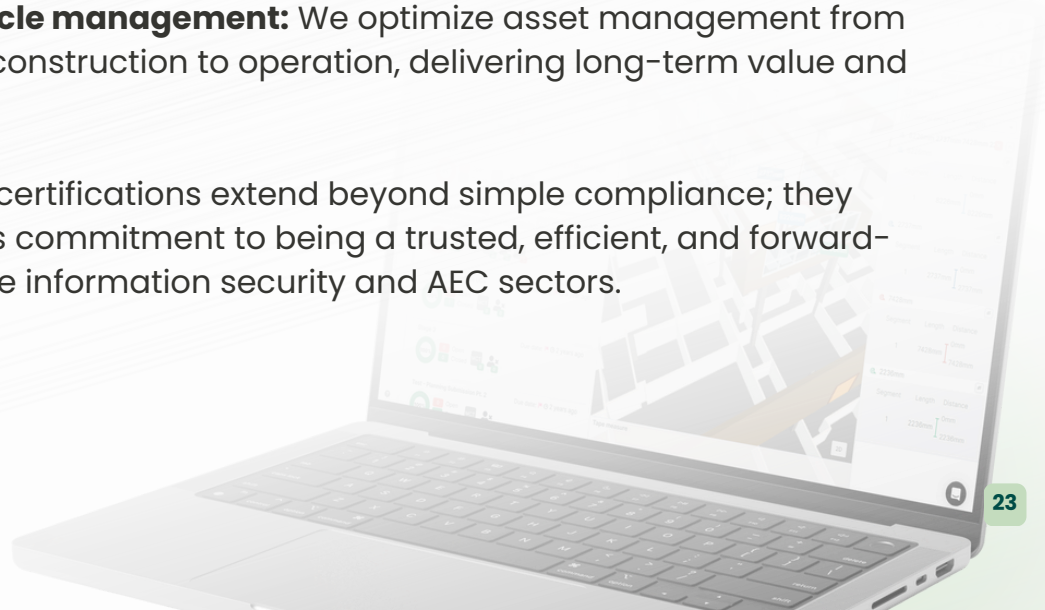
Key Aspects of ISO 19650 Certification:

- **Collaborative working:** We standardize information management processes to foster better collaboration among project stakeholders.
- **Efficient information management:** We improve the quality and consistency of information throughout the asset lifecycle.
- **BIM implementation:** We utilize Building Information Modelling to enhance planning, design, construction, and operational management.

ISO 19650 Certification for Catenda:

- **Improved collaboration:** We enable smoother cooperation with clients, contractors, and stakeholders, leading to more successful project outcomes.
- **Operational efficiency:** We streamline processes and reduce costs through efficient information management, minimizing errors and rework.
- **High standards in project delivery:** We adhere to best practices in information management, ensuring superior project delivery standards.
- **Enhanced lifecycle management:** We optimize asset management from design through construction to operation, delivering long-term value and benefits.

ISMS and ISO 19650 certifications extend beyond simple compliance; they represent Catenda's commitment to being a trusted, efficient, and forward-thinking leader in the information security and AEC sectors.





Catenda
the open way