



GETTING STARTED WITH AUTODESK TANDEM



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Setting the scene for Autodesk Tandem

Both AEC firms and owners work towards the same thing. But for many collaborators, their ability to share project information from planning to handover is slow, inefficient, and complicated. It's also wasteful, with 95.5% of engineering and construction project data unused.

This is an opportunity for AEC firms to take a different approach. One that is increasingly requested and favored by 58% of owners—focused on end-to-end visibility and seamless collaboration.

That's where Autodesk Tandem comes in.

Autodesk Tandem's role in the digital twin space

What is Tandem, and how does it work?

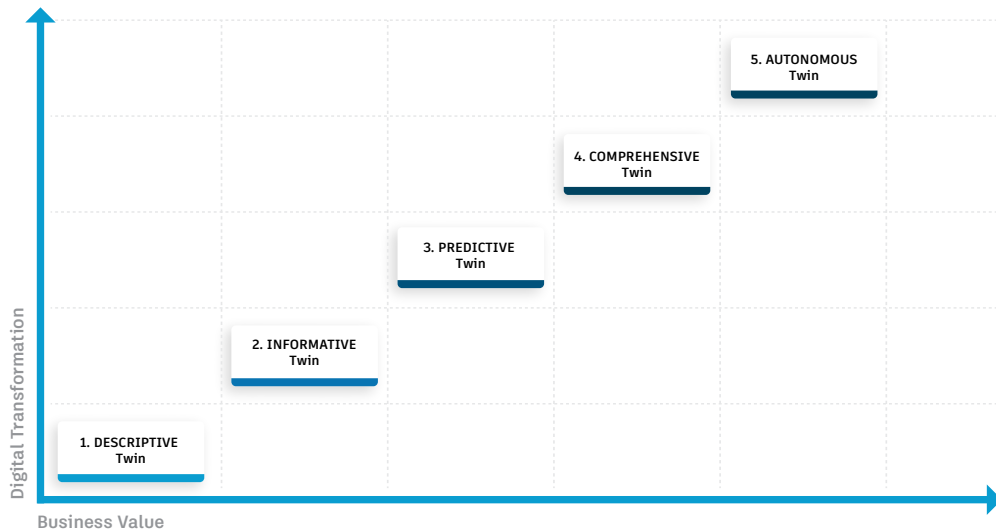
Autodesk Tandem is a cloud-based platform that harnesses BIM (Building Information Modeling) data throughout a project's development to create and handover a digital replica of the building or structure—essentially a digital twin. This process allows owners to connect operational systems to the digital twin, turning fragmented information into accessible, organized, and actionable data.

Digital twins—an integral part of today and tomorrow's world

Digital twins join design, construction, and operational data by creating an up-to-date replica of a physical asset. Their ability to incorporate real-time operational data means they will eventually be able to simulate, predict and inform decisions based on real-world conditions.



The road to Digital Twin maturity



Source: Verdantix Smart Innovators Digital Twin For Industrial Facilities

According to this digital twin model, developed by Verdantix, their maturity is comprised of five levels:

- Descriptive twins describe the as-built assets, systems and spaces.
- Informative twins add operational and sensor data to the model.
- Predictive twins leverage operational data for insights.
- Comprehensive twins add future scenario simulations to its capabilities.
- Autonomous twins learn and act on behalf of users.

Adopting digital twin technology sooner will let you build towards 'comprehensive' and 'autonomous' twins—faster. And while each level of 'twin' may need a greater degree of BIM maturity and digital transformation, you'll be able to capitalize on their growing business value.

Start digital and deliver digital —from concept to handover

Although digital twins seem like a leap into the future, your project teams will be in familiar territory. Autodesk Tandem can extend and integrate your workflows with the software you already have or work with while compiling the valuable data you need. But integration and efficiency are only the beginning—with Autodesk Tandem, you can:

Track every change

You'll enjoy unparalleled project clarity by tracking every change made to your digital twin from each responsible party. Your ability to verify contributions from multiple disciplines optimizes data accuracy and quality from design through to construction.

Build it your way

Your success comes from having the control to do things your way. That's why Autodesk Tandem is a platform that values open data standards and open APIs. Having an open platform at your fingertips enables a greater degree of customization and extends the value of your digital twin.

Set up your customers for success

Start every Autodesk Tandem project with the end in mind. By specifying the data they need during the planning stage, customers allow teams to begin projects with a well-structured foundation. Meaning the resulting digital replica will have all the information your client needs.



ENABLING DIGITAL HANDOVER

Specify. Capture. Verify.

Project teams and owners collaborate in the **specifying, capturing** and **verifying** of data—making project handover the seamless delivery of accessible, contextual, and insightful data that makes for ready-to-go operations. Here's how it works in three steps.

1 Enabling the digital handover: Specify

The first step in your Autodesk Tandem journey is to **specify** the asset, space, and system data that owners want to include in their project.

Specifying your data means you start with your project's end in mind.

- Ensuring a streamlined process for Data Managers that is primed to deliver on owners' desired operational outcomes.
- Supporting productive collaboration between owners, operators, and project teams.



Creating Facility Templates in Autodesk Tandem

Data specification affords a way to work that is both repeatable and scalable—thanks to Autodesk Tandem’s Facility Templates. Providing you with a simplified tool that assists BIM Managers and AEC teams in achieving data consistency across a portfolio of facilities.

How to get started with Specify

- First, define your asset breakdown structure – base it on a standard classification system OR build your own based on the owners’ needs.
- Second, leverage our library of pre-defined parameter sets or create your own to define what data needs to be managed within your digital twin.
- Finally, define your template to bind which parameter sets apply to each asset type in your asset breakdown structure.

Team

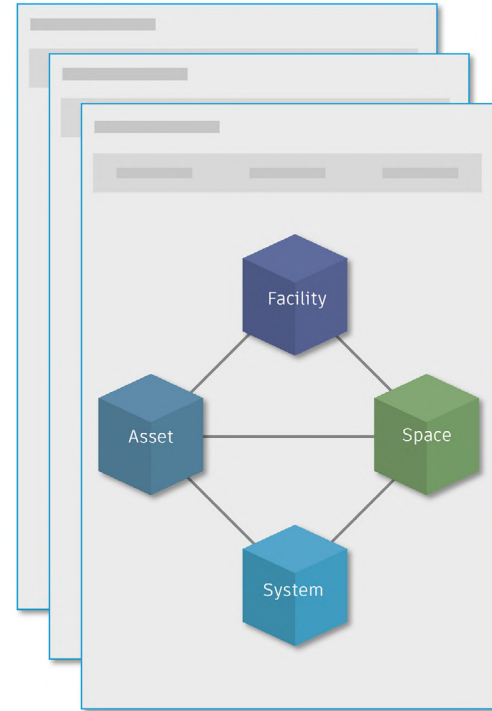


Owner



AEC Firm

Facility Templates



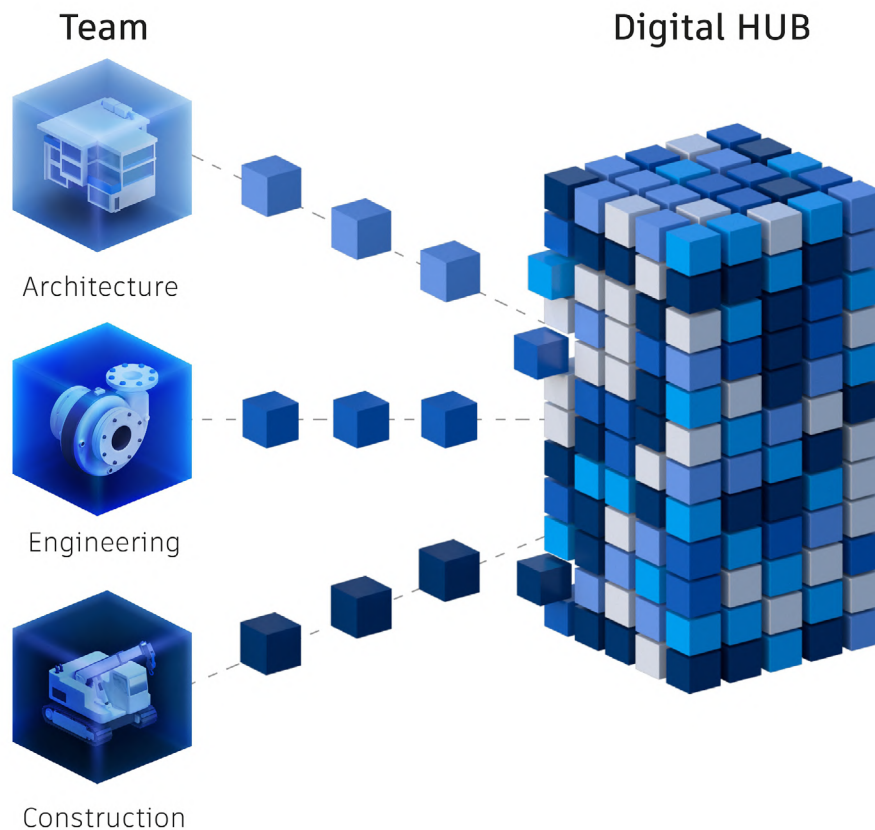
2 Enabling the digital handover: Capture

Once data has been **specified**, BIM Managers and team members can **capture** all of the necessary data for every stage of the project—from the very beginning.

Capture the intent put forward by Architects and Engineers and combine it with as-built installation and commissioning data to ensure you have an accurate as-built descriptive twin.

Autodesk Tandem lets you add, visualize, and update the captured data, giving Project Managers clarity during collaboration with owners.

Unite captured model data from Autodesk Docs or other Common Data environments without losing any metadata along the way. Then map it directly into your asset properties—eliminating duplicate data entry.



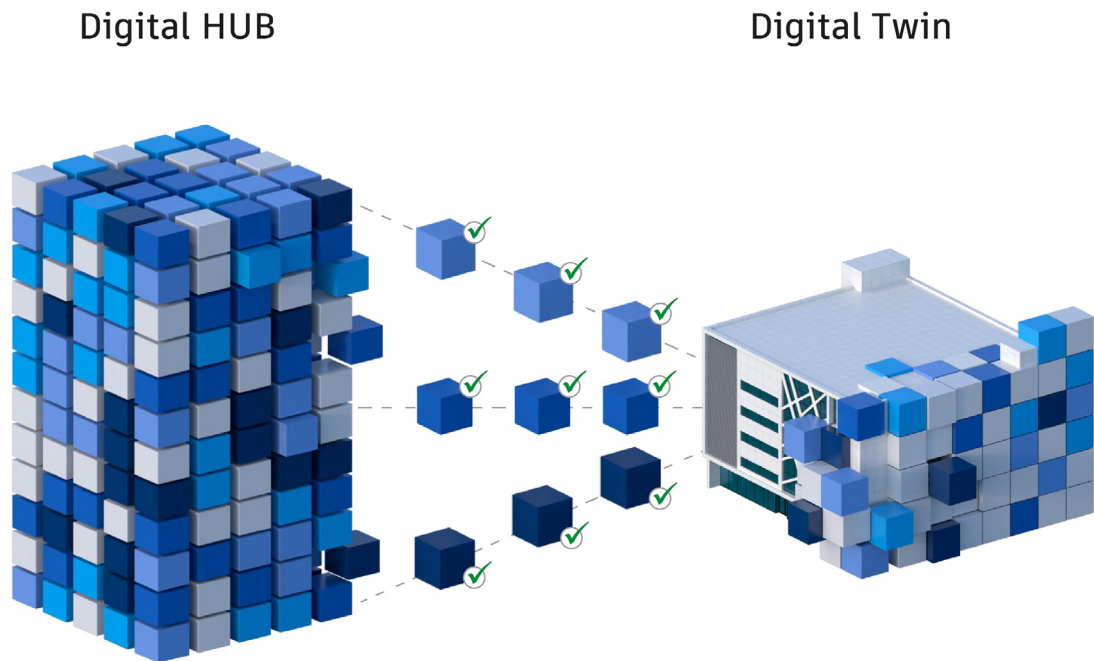
3 Enabling the digital handover: Verify

After **specifying** your data and **capturing** it within a digital hub, you'll be able to **verify** it.

Having structured data means you can easily **verify** the completeness and accuracy of each asset, space, and system.

'Change tracking' enables you to see every alteration made to your digital twin. This way, BIM Managers, Capital Project Managers, and Facility Managers alike can visualize a 'digital thread' of information for every asset and space in the facility.

Validate that the right team, contributes the right data, at the right time to ensure the digital twin is complete and it's data is accurate.



A simpler and smarter owner handover

By **specifying** data requirements, **capturing** relevant engineering and construction data, and **verifying** assets as they change, you'll achieve a seamless digital twin handover.

- Win more new and repeat business by empowering your customers to operate their facilities efficiently from day one.
- Deliver complex projects faster with repeatable and scalable processes by using Tandem's facility templates.
- Future proof your business and be ready to thrive in a world where digital twins dominate the AEC landscape.



Digital Twin curation user flow

1 Facility Setup



The user's goal is to establish an environment where data can be curated for digital twin. For us, this will typically happen when a build team is established. A project is initiated by AEC-O as a lead, others are invited to collaborate and contribute

2 Manage Files



The user's goal is to initialize their facility, set up all of the source files and begin to identify the initial structure of data within the facility. For us, this means sourcing their models and project document management system

3 Initial Breakdown



The goal is to break apart the facility into manageable worksets. Within Tandem, this means filtering specific groups based on model data, creating views, managing inventory columns, initial Revit > Twin data mapping, general understanding of scope of data to be collected

4 Type Assignment



The user is now ready to begin the actual process of defining asset types, or assigning the appropriate classification value

5 Data Capture



Contributors from multiple functions can now interact with views/packages and contribute data. Leads during this process can source data requirements from Tandem and share with counterparts for data collection

6 Data Validation



As data is captured, curation manager provide validation process to understand completeness and accuracy

7 Handover



As data is validated and packages are ready for handover, the information can be transferred to the owner



Your Autodesk Tandem journey starts here

At Autodesk, we see the adoption of digital twins as a vital part of our world—today and tomorrow. That's why Autodesk Tandem has been developed to help AEC firms build their digital twin capabilities from the ground up.

Autodesk Tandem's digital design, collaboration, and feedback journey is designed for the AEC industry, by the AEC industry—to help turn your project vision into reality.

Begin your digital twin journey today.

[Start using Tandem for free](#)

