ADOPTION ACCELERATORS FOR MANUFACTURING
Accelerators help you unlock the potential of Autodesk® technology.

- **Outcomes**: Measurable goals your business wants to achieve
- **Capabilities**: Your technology, workflow, data, and organizational abilities
- **Accelerators**: Easy-to-access services built on Autodesk best-practices
Outcomes

What business goals are you looking to achieve?

- Increase manufacturing efficiency
- Rapid factory design & optimization
- Improve supply chain agility
- Improve time to market
- Reduce defects and non-conformities
- Reduce resource consumption
- Expand product & service offerings
- Increase sales cycle time
- Improve profitability
- Increase sales win rate
- Increase market share
- Reduce environmental impact
- Improve product development velocity
- Improve product aesthetics
- Improve quality & reliability
- Improve business
- Win more business
- Enable increased innovation
- Improve operational efficiency

AUTODESK ACCELERATORS FOR MANUFACTURING
What capabilities can we help you develop?

Example capabilities that reduce errors & rework

- Model Authoring
- Project Insights
- Cost Management
- Model Co-Authoring
- Design Review
Easy-to-access coaching sessions from Autodesk

**Introduction to**
Get familiar with the latest technologies & features

**Examples**
- Introduction to: Assemblies in Inventor
- Introduction to: Generative Design in Fusion
- Introduction to: Sub-D modeling in Alias

**How to**
Learn key workflows that solve specific challenges

**Examples**
- How to: Analyze geometries with Inventor Nastran
- How to: Build a digital product catalog in Forge
- How to: Configure an SQL environment for Vault
How do Adoption Accelerators work?

1. **Discovery Session (30-60 minutes)**
   Meet with your CSM and a subject matter expert to contextualize the content for your team.

2. **Coaching Session (60-120 minutes)**
   Sessions are led by an Autodesk expert, introducing users to new technology or demonstrating workflows with Q&A.

3. **Materials & Feedback (10 minutes)**
   We’ll provide the session recording and presentation materials, and participants are encouraged to provide feedback on the Accelerator through a survey.
Adoption Accelerators

Introduction to

- Forge (General)
- Forge (Manufacturing)
- Digital factory design
- Design validation with Moldflow Adviser
- Assemblies in Inventor
- Generative Design in Fusion
- Fusion simulation
- Vault for DR/BC plans
- Sub-D modeling in Alias
- Hybrid modeling with Nurbs and SubD
- Navisworks (Manufacturing)
- AutoCAD Mechanical
Adoption Accelerators

How to

- Set up a project in BIM 360 Docs
- Create issues and manage documents in BIM 360 Docs
- Share data between Vault and BIM 360 or Fusion
- Analyze geometries with Inventor Nastran
- Configure an SQL environment for Vault
- Build a digital product catalog in Forge
- Work with Inventor models in Revit and BIM 360
- Integrate multiple assemblies into a machine design
- Transition from files to items in Vault
- Plan for a Vault migration
- Present Inventor data for design reviews
- Manage project assets (Issues & Checklists)
- Create high-end visualizations using Arnold
- Review models and identify coordination issues with Navisworks
- Review models with visualized walkthroughs
Ready to Accelerate Adoption?

1. If your company has an Enterprise plan with Autodesk, you can schedule Accelerators with your Autodesk Customer Success Manager (CSM).

2. If you are unsure of how to contact your Customer Success Manager, submit a request and we will connect you.

3. Find Accelerators for more industries and learn more about Autodesk Customer Success.
ACCELERATOR DETAILS
Learn how the BIM 360® Docs ecosystem works, how to set up a project folder structure with permissions, and how to upload record documents.

### Topics
- BIM 360 Docs modules
  - Document Management
  - Desktop Connector
  - Project Home
  - Insight
- Creating a project
- Project settings
- Folder structure
  - Plans vs. project files
- Folder permissions
- Plans upload

### Who it’s for
- VDC Manager
- Project Engineer
- Field Engineer
- Project Manager
- Project Controls

### Capabilities
- Coordination
- Quality Management
- Cost Management
- Design Collaboration
- Document Management
- Commissioning
- Document Management

### Prerequisites
- Enterprise Success Program
- Attendees should have basic knowledge of BIM 360 Docs
Learn how to use BIM 360® Docs to log issues on site, approve and send documents, and use record documents in the field.

**Topics**
- Mark-ups
  - Permissions
  - Creation and visibility
  - Reviewing mark-ups
- Issues
  - Permissions
  - Creating an issue
- Reviews
  - Creating an approval workflow
  - Submitting documents for review
  - Monitoring reviews
  - Reviewing and approving documents
- Transmittals
  - When and how to use transmittals
  - Creating a transmittal
  - Accessing documents on mobile devices

**Who it’s for**
- VDC Managers
- Project Engineers & Field Engineers
- Project Managers
- Project Controls
- Architects

**Prerequisites**
- Enterprise Success Program
- Attendees should have basic knowledge of BIM 360 Docs

**Capabilities**
- Design Collaboration
- Document Management
Get familiar with functionalities of Autodesk Forge™, what tools are required to use it, and how to set up a team for application development.

### Topics
- Understanding APIs
- Forge Overview
  - Common applications of Forge
  - The Forge business architecture
  - Adding Forge to an EBA
- Building online workflows and experiences around your design data
- Practical Forge use cases
- Setting up a team
- Where to get development and support resources
- The functionalities and pricing of each component of Forge

### Who it’s for
- Project Managers
- BIM Managers
- BIM Leads
- Project Engineers

### Prerequisites
- Enterprise Success Program
- Attendees have access to Forge

### Capabilities
- Cloud-based Process Automation
- Data Enrichment
- Management and Delivery
Get familiar with digital factory design workflows using Autodesk® AutoCAD®, Inventor®, and Vault.

### Topics
- **AutoCAD**
  - Creating layouts
  - Updating layouts
  - Placing assets
  - Integrating with Vault and Inventor
- **Inventor**
  - Creating and updating assets
  - Creating and viewing layouts
  - Integrating with Vault and AutoCAD
- **Vault**
  - Storage of Asset Library
  - Storage of Layouts
  - Storage of additional files (Navisworks)

### Who it’s for
- Anyone involved in laying out new factories or maintaining or modifying existing factories

### Prerequisites
- Enterprise Success Program
- Attendees understand how factories are configured, updated, and managed
- AutoCAD Architecture and/or Inventor experience is helpful, but not required

### Capabilities
- Factory Layouts and Planning
- Production Simulation and Analysis
# How to: Review models and identify coordination issues with Navisworks

Learn how to create and navigate a federated model, control visibility, create viewpoints and mark-ups, and run clash detection between trades using Navisworks®.

## Topics
- Why you should use Navisworks for federated models
- Types of Navisworks files
- Appending models in Navisworks
- Creating a federated model demo video
- Navigating a model
- Controlling visibility
  - Toolset options
  - Sectioning plane and box
- Managing toolset options for viewpoints and mark-ups
- Running clash detective between trades

## Who it’s for
- BIM Manager
- VDC Manager
- BIM Manager
- IT Manager
- Design Technologist

## Capabilities
- Coordination
- Design Coordination and Review

## Prerequisites
- Enterprise Success Program
- Basic knowledge on any BIM authoring tool such as Revit is recommended
Learn how to securely sync selective data to extended project teams with BIM 360® and Fusion™ Team.

**Topics**
- Sharing visual representations and getting feedback with Autodesk Viewer
- Delivering files to customers and suppliers with Autodesk Drive
- Exchanging select data with external collaborators automatically
  - External collaboration beyond the firewall
  - The external collaboration workflow
- Collaboration on designs and project sync
- Accessing design data in Autodesk Drive
- How to deploy and use Autodesk Desktop Connector
- Selective exchange of CAD documents
- Job Processor and Desktop Connector

**Who it’s for**
- IT Manager
- Project Engineers
- Field Engineers
- Project Managers

**Capabilities**
- Data Management

**Prerequisites**
- Enterprise Success Program
- Attendees must have a basic understanding of Vault and document management modules in BIM 360 and Fusion Team
Learn how to use CAD-embedded FEA workflows for structural element analysis in Inventor® Nastran.

**Topics**
- The Nastran environment
- Linear static analysis with solid elements
- Defining idealizations
  - Element type and material
- Mesh settings
- Boundary conditions
  - Constraints and loads
- Interpreting analysis results
- Generating a report
- How to duplicate an analysis
- Linear static analysis with shell elements
- Introduction to Contact
- Mesh convergence

**Who it’s for**
- Engineers
- Designers
- Project Managers
- Finite Element Specialists

**Prerequisites**
- Enterprise Success Program
- Access to the CS Learning Course
- Access to Inventor and Inventor Nastran

**Capabilities**
- Product Simulation
Evaluate your SQL server and Vault configuration with a set of purpose-built diagnostic tests that check settings, verify errors, and confirm healthy replication.

### Topics
- SQL settings
  - Cardinality
  - Compatibility
  - Mode
  - Max memory
- CPU
- Memory
- SQL/Window Versions
- Long running queries

- Maintenance
  - Maintenance plan
  - Index health
  - Current Statistics
  - Job statuses
- SQL Errors
- Replication status (if applicable)
- Database Size and growth
- SQL Waits types and causes

### Who it’s for
- Vault Administrators

### Prerequisites
- Enterprise Success Program
- Attendees should have basic knowledge of Vault

### Capabilities
- Data Management
Learn how to securely sync and share selective data to extended project teams using BIM 360® Docs, Fusion™ Team, Autodesk Viewer, and Autodesk Drive.

### Topics
- Collaborative with Vault Professional
  - External collaboration workflows
  - Project sync
- Autodesk Drive
  - Pack & go including transmittal report
  - Accessing design data
- Desktop Connector
- Fusion Team
  - Exchanging data with external collaborators
- BIM 360 Docs
  - External collaboration workflows
  - Project sync

### Who it’s for
- IT Manager
- Project Engineer
- Field Engineer
- Project Manager

### Capabilities
- Data Management

### Prerequisites
- Enterprise Success Program
- Attendees must have a basic understanding of Vault and document management modules in BIM 360 and Fusion Team
Get familiar with validation workflows using Moldflow® Adviser to determine your ability to manufacture a part in the design phase.

**Topics**
- Overview of design concepts and manufacturability
  - Criteria for manufacturability
  - How manufacturability can influence design decisions
  - The pros and cons of custom solutions
  - Designing for manufacturability
- Design and manufacturability conflicts
  - Conflicts of expertise
  - Bottleneck workloads
  - Avoiding resource waste
- How Moldflow Adviser can be used to resolve conflicts

**Who it’s for**
- Project Managers
- Designers
- Tool Makers

**Capabilities**
- Production Simulation and Analysis
- Product Simulation

**Prerequisites**
- Enterprise Success Program
- Attendees have a general knowledge of design tools
Get familiar with the features and workflows for large assemblies in Autodesk Inventor®.

**Topics**
- Establishing your start
- Origin Points in sketches
- Origin Planes
- Constraints

**Who it’s for**
- Mechanical Engineers
- Mechanical Designers
- Machine Designers
- CAD Designers

**Prerequisites**
- Enterprise Success Program
- Attendees should have basic knowledge of Inventor

**Capabilities**
- Model-Based Engineering
- Machine Design
- Civil Structure Model Authoring
Get familiar with generative design for weight reduction and component consolidation in Fusion 360®.

**Topics**
- Manufacturability
- Light-weighting
- Preserve regions
- Obstacle regions
- Loads
- Materials
- Constraints
- Manufacturing methods
- Design exploration

**Who it’s for**
- Project Managers
- Designers
- Tool Makers
- Engineers

**Prerequisites**
- Enterprise Success Program
- Attendees have a general knowledge of design tools

**Capabilities**
- Product Generative Design
Learn how to build a proof of concept web application for publishing CAD models to a digital product catalog with Autodesk® Forge® & Fusion 360®.

**Topics**
- Fusion 360® & Forge Platforms
  - App Capabilities
  - Digital Catalog
- Interactive Instructions
- Solution Architecture
- App Deployment
- Expansion Ideas

**Who it’s for**
- Product Marketing
- Sales Engineers
- Field Engineers

**Capabilities**
- Product Configuration

**Prerequisites**
- Enterprise Success Program
- Attendees have a basic understanding of document management in Fusion Team
Introduction to: Vault for DR/BC plans

Get familiar with how Autodesk® Vault® fits into your DR/BC plan, including disaster recovery procedures, the impact of infrastructure loss, roles and responsibilities, and more.

**Topics**
- Criteria for including Vault in a disaster recovery plan
- Considerations for when the Vault environment is replicated
- 3rd party solutions for backing up and restoring Vault
- What is not included in the default Vault disaster recovery plan
- Planning for disaster recovery
- Considerations for when the Vault server hosts AutoCAD®, Plant 3D, and Revit® data
- Accounting for other applications in the Vault ecosystem when developing a recovery plan
- Roles and responsibilities involved in the disaster recovery plan

**Who it’s for**
- Disaster Recovery Coordinators
- Database Administrators
- IT and Network Administrators
- Vault Administrators
- CAD Managers
- Escalation Managers

**Capabilities**
- Data Management

**Prerequisites**
- Enterprise Success Program
- Attendees must be familiar with their internal disaster recovery process
- A test environment matching the production environment
Introduction to: Sub-D modeling in Alias

Get familiar with the Sub-D toolset in Alias® and the workflows needed to quickly create Sub-D concept models.

**Topics**
- Understanding the anatomy of a Sub-D
- Understanding the Sub-D toolset in Alias
- Workflows for:
  - Box modelling
  - Edge modelling
- Adding details and model refinement
- Understanding topology
- Model clean-up
- Using traditional surface operations to add details and hybrid modelling

**Who it’s for**
- Industrial Designers
- Digital Sculptors
- Math Modelers

**Prerequisites**
- Enterprise Success Program
- Attendees should have a basic understanding of Alias

**Capabilities**
- Surfacing
- Visualization
Learn how to prepare your existing design content in Autodesk Inventor® and publish it for use in Revit® and BIM 360®.

**Topics**
- Connecting Manufacturing and AEC
- Collaboration between Manufacturing and AEC
- Workflows for connecting Manufacturing and AEC
- Publishing Inventor models as BIM objects
- Simplifying Inventor models and removing intellectual property
- Defining MEP connectors
- Publishing BIM content
- Using Inventor data in Revit

**Who it’s for**
- Product Design Engineers
- Mechanical Engineers
- Manufacturing Engineers
- Industrial Engineers
- Architects
- Building Design Engineers

**Capabilities**
- Factory Layouts and Planning
- Design Detailing
- Coordination
- Civil Structure Model Authoring
- Civil Structure Detailing

**Prerequisites**
- Enterprise Success Program
- Attendees should have a basic understanding of Inventor
Learn how to create SubD models in a hybrid environment using Nurbs, Polygons, and Scan Data, and work with multiple geometry sets in Alias®.

**Topics**
- What hybrid modeling is
- Hybrid modeling environments
- Using the surface and surface edit tools to modify a SubD model
- SubD to SubD workflows
- Using scan data in SubD modeling
- Updating NURBS models with SubD
- Working with Maya® data in Alias

**Who it’s for**
- Industrial Designers
- Digital Sculptors
- Math Modelers

**Prerequisites**
- Enterprise Success Program
- Attendees must have access to Alias 2021
- Attendees should be proficient with the Alias application and have experience in SubD workflows

**Capabilities**
- Visualization
Learn how to use sub-assemblies, constraints, and imported CAD data to bring multiple assemblies together into a holistic machine design.

**Topics**
- Establishing your start
- Using sub-assemblies
- Leveraging constraints
- Interacting with imported CAD data

**Who it’s for**
- Product Designers
- Mechanical Engineers
- Manufacturing Engineers

**Capabilities**
- Machine Design

**Prerequisites**
- Enterprise Success Program
- Attendees must have access to AutoCAD and Inventor
Learn how to create, maintain, and link items with files in Autodesk® Vault Professional.

**Topics**
- Overview of Items
- Overview of Item management
- Bills of materials and BOM views
- Managing Items and BOMs in Vault
- BOMs in Inventor
- Types of BOM structures
- Creating Items
- Item masters
  - Managing and maintaining
  - Configuration options for Items
  - Setting types
  - Users and roles
  - Watermarking
- Configuring the Item workflow
- Item commands and tools

**Who it’s for**
- IT Project Engineers
- Project Managers

**Prerequisites**
- Enterprise Success Program
- Attendees should have a working knowledge of Vault’s file, revision, lifecycle, and properties functionalities.
- Access to Autodesk Vault

**Capabilities**
- Data Management
- Bill of Materials Management
Introduction to: Fusion simulation

Get familiar with the Autodesk Fusion 360® simulation environment with an introduction to the static stress analysis.

**Topics**
- Installing Autodesk Fusion 360
- The user interface
- Assigning and reviewing material properties
- Assigning loads to the geometry
- Assigning constraints
- Defining contact between parts of an assembly
- Meshing the geometry
- Analyzing the geometry
- Reviewing and comparing results

**Who it’s for**
- Product Designers
- Design Engineers
- Mechanical Engineers
- Project Managers

**Prerequisites**
- Enterprise Success Program
- Attendees should have a basic understanding of engineering

**Capabilities**
- Not in Airtable
Learn how to migrate your Vault, cover in-place upgrades and new server migrations, and how to handle both multi and single-site environments.

### Topics
- Vault installation
- Vault migration in a multi-site environment
- Vault requirements
- SQL Server Requirements
- Testing and validation
- Migrating in a single site environment
- Migrating in a multi-site environment
- Migration when SSL is configured

### Who it’s for
- CAD Managers
- IT Managers
- Database Administrators
- Vault Administrators

### Prerequisites
- Enterprise Success Program
- Attendees should have knowledge their organization’s Vault environment and current configuration

### Capabilities
- Design Automation
- Design Collaboration
Learn how to prepare, execute, and streamline clear and effective design reviews with peers and all involved stakeholders.

**Topics**

- Definition & Setup
  - Design View Representations
  - Level of Detail Representations
  - Positional Representations
  - Model-based Definitions (3D Annotations)

- Share & Review
  - Inventor Read-only Mode
  - Autodesk Design Review
  - Autodesk Shared Views (Online Viewer)

**Who it’s for**

- Product Design Engineers
- Mechanical Engineers
- Manufacturing Engineers
- Industrial Engineers

**Prerequisites**

- Enterprise Success Program
- Attendees should have a basic understanding of Inventor

**Capabilities**

- Design Coordination and Review
How to: Review models with visualized walkthroughs (Manufacturing)

Learn how to navigate an immersive, animated walk-through of a federated model to identify problems using Navisworks®.

**Topics**

- Preparing federated models for review
  - Navisworks file formats
  - Appending and merging models
  - Transforming models
  - The Appearance profiler
  - Grid and levels
  - Sectioning
- Real-time navigation
  - Steering Wheels
  - View Cube
- Controlling the realism of your navigation
  - Custom avatars
  - Viewpoints
- Reviewing models
- Selecting objects and finding models
- Output viewports and resolving issues

**Who it’s for**

- Project Leads
- Project Managers
- Project Engineers

**Prerequisites**

- Enterprise Success Program
- Attendees should have a working knowledge of Navisworks

**Capabilities**

- Visualization
- Design Coordination and Review
- Coordination
How to: Manage project assets (Issues & Checklists)

Learn how to track and manage the lifecycle of project assets to reduce the time to take asset data into the field, perform commissioning operations and reduce risk.

**Topics**
- What assets are
- Creating issues related to assets
- Using checklists
- Attaching documents to assets
- Exporting asset data

**Who it’s for**
- Superintendents
- Project Engineers
- Field Engineers
- Project Managers

**Capabilities**
- Commissioning
- Equipment Commissioning
- Handover

**Prerequisites**
- Enterprise Success Program
- Attendees should have a basic understanding of the document management module in BIM 360
Introduction to: Navisworks (Manufacturing)

Learn how to coordinate, review, and present your models using Navisworks®.

**Topics**
- Navisworks file types
- Model aggregation
- Clash detection
- TimeLiner
- Model review
- Walkthroughs

**Who it’s for**
- Mechanical Engineer
- Production and Operations Manager
- Manufacturing Engineer
- Facilities Manager
- Industrial Engineer
- Process Engineer

**Capabilities**
- Production Simulation and Analysis
- Design Coordination and Review
- Model Maintenance
- Visualization

**Prerequisites**
- Enterprise Success Program
Get familiar with Autodesk Forge™ APIs in the manufacturing space and how to transition automation from desktop CAD to the cloud.

**Topics**
- Getting started with Forge
- Forge APIs
  - Cloud credit arrangements for Forge APIs
- Governing and administering Forge
- Design Automation for Autodesk Inventor®
- Design Automation for AutoCAD®
- The skillsets and resources need to develop a Forge application
- Web debugging tools

**Who it’s for**
- Mechanical Engineer
- CAD Manager
- IT Manager
- Manufacturing Director

**Capabilities**
- Design Automation

**Prerequisites**
- Enterprise Business Agreement (EBA)
- Access to Forge
Learn how to create realistic visualizations with your CAD data in the Arnold Renderer for 3ds Max®.

**Topics**
- Arnold Renderer Overview
- Installing the Arnold Renderer
- Setting up a 3ds Max scene
- Setting up a render
- Denoise solutions
- Switching between rendering on the GPU and CPU

**Who it’s for**
- Project Managers
- Visualization Specialists
- CAD Engineers

**Prerequisites**
- Enterprise Success Program
- Users have basic knowledge of 3ds Max and Revit®

**Capabilities**
- Rendering
Get familiar with the functionalities and benefits offered by the AutoCAD® Mechanical toolset.

**Topics**
- Standards management
- Drafting and annotation tasks
- Design and engineering tasks
- Advanced features

**Who it’s for**
- Mechanical Engineers
- CAD Managers
- Design Engineers
- Product Engineers

**Prerequisites**
- Enterprise Business Agreement (EBA)
- Attendees should have a basic familiarity with AutoCAD

**Capabilities**
- CAD Interoperability
- Mechanical Drafting