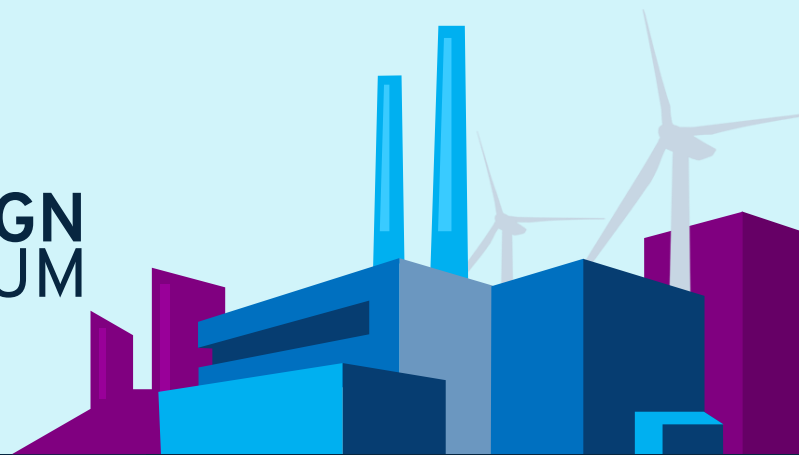




2023
INDUSTRI&DESIGN
FORUM



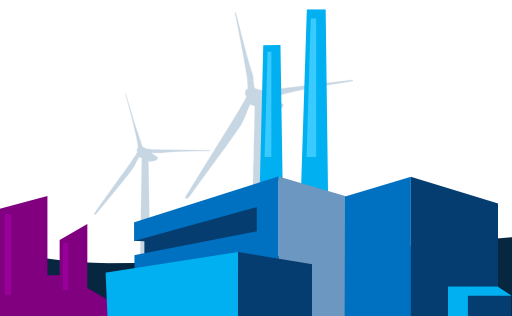
Spor 2

Overser du, hvad du allerede kan i dag?

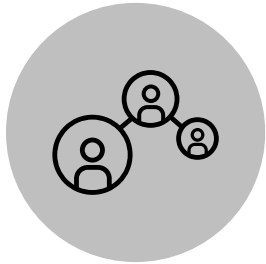


WHO AM I ?!

- René Dyrup Jensen
- 15 years at NTI A/S
- System Consultant
- Solution Architect
- Head of D&M Consultancy in DK
- 25 consultants in the D&M team
- Head of Software Unit at NTI Group

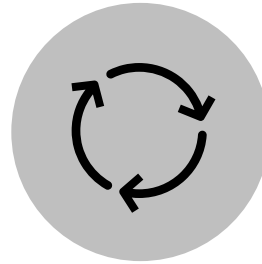


Three questions



ORGANIZATION

Ready for change?



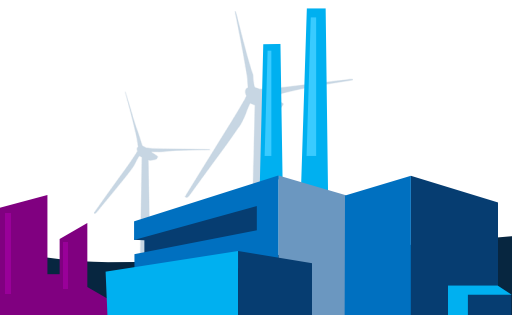
PLATFORM

Are the right systems used?

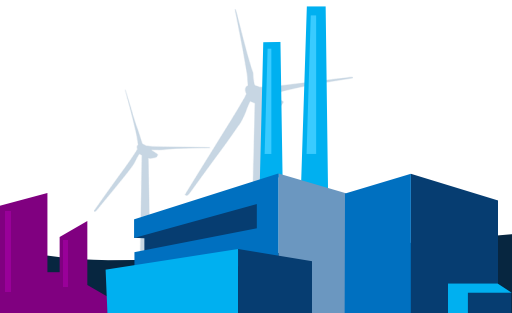
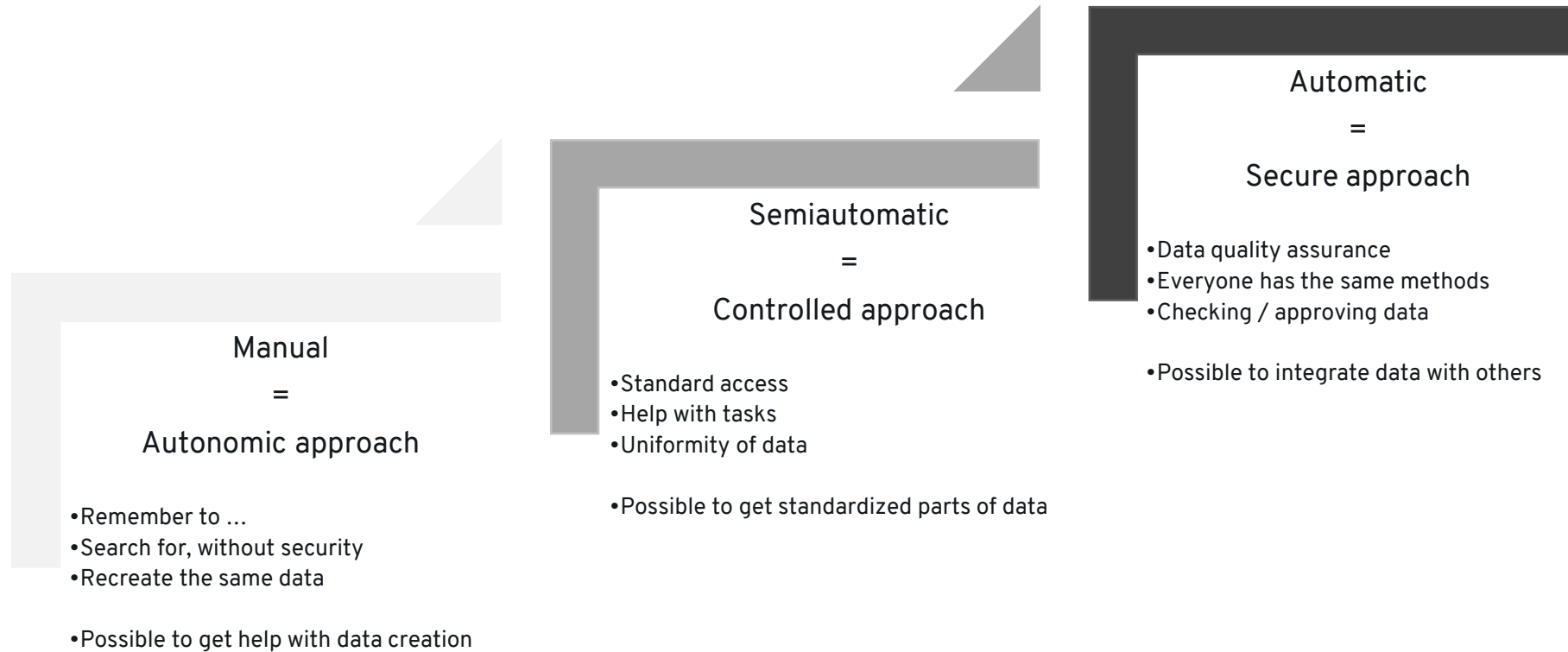


DATA

Are data ready?



Solution Approach



evolver suite

SOLUTIONS BY NTI

 **NTI for Inventor**
PART OF EVOLVER SUITE

 **NTI for Inventor**
PROFESSIONAL

 **NTI for Inventor**
ESSENTIAL

 **NTI Configurator**

 **NTI for Vault**
PART OF EVOLVER SUITE

 **NTI for Vault Client**
VAULT OFFICE

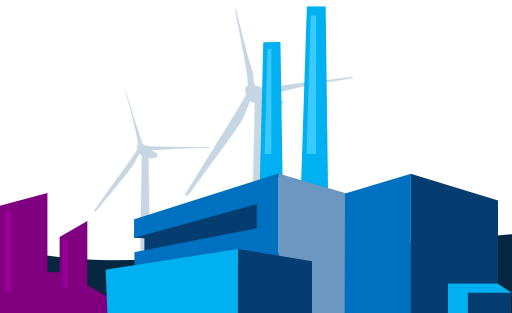
 **NTI for Vault Client**
VAULT PROFESSIONAL

 **NTI for Vault Job**
VAULT JOB PROCESSOR

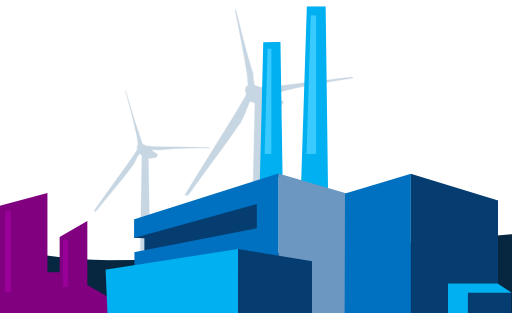
 **NTI Integrator**
PART OF EVOLVER SUITE

 **NTI Integrator**
ERP CONNECTOR

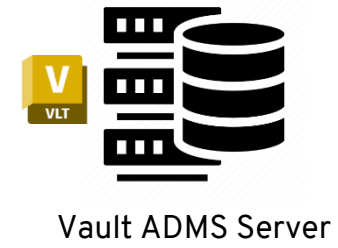
 **NTI Integrator**
PLM CONNECTOR



Solution Levels



Level 1

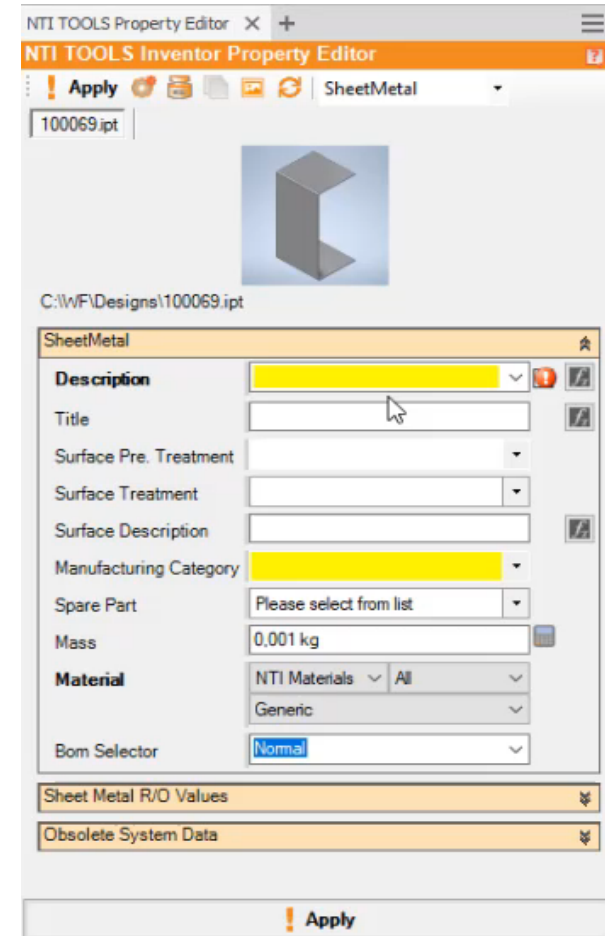


Create



Possible

- Manage iproperties
- Lookup lists
- Material handling
- Build Expressions
- Property groups
- Regular Expressions
- Categorized lists
- External lookup
- Functions like IF-THEN-ELSE, Format etc.



Create



Possible

- Single number generator
- Prefix and surfix
- Same name for IDW and IPN
- Allow custom names
- Property handling
- Extract number from Vault

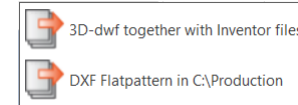
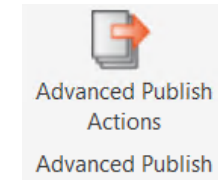
The screenshot shows the "NTI TOOLS InventorSave As" dialog box. On the left is a tree view with "Workspace", "Vault", and "Designs". The main area on the right contains fields for "Save in" (C:\WF\Designs), "File name" (Prefix, Vault Scheme, Generated number), and "File name" (with a Preview button). Below this is a "Properties" section with a "SheetMetal" dropdown. The "SheetMetal" section contains various fields: Description (yellow highlight), Title, Surface Pre. Treatment (Please select from list), Surface Treatment (Please select from list), Surface Description, Manufacturing Category (Please select from list, yellow highlight), Spare Part (Please select from list), Mass (0,000 kg), Material (NTI Materials, Misc), Generic, and Bom Selector (Normal). At the bottom are sections for "Sheet Metal R/O Values" and "Obsolete System Data". The footer includes the "TL TOOLS" logo, "Powered by Mdoc technology", a checked "Update Part Number" checkbox, and "Save" and "Cancel" buttons.

Collaborate

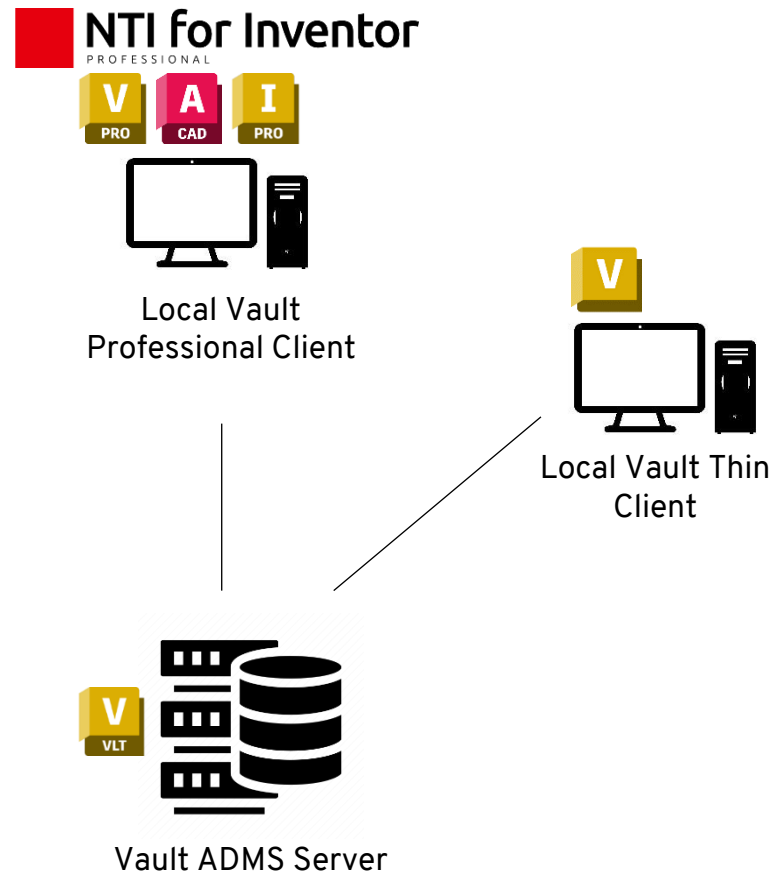


Possible

- Publish files using translators
- Activate publish using button
- Specify buttons in ribbon
- Plot stamp PDF files
- Create compound PDF files
- Specifying publish path



Level 2



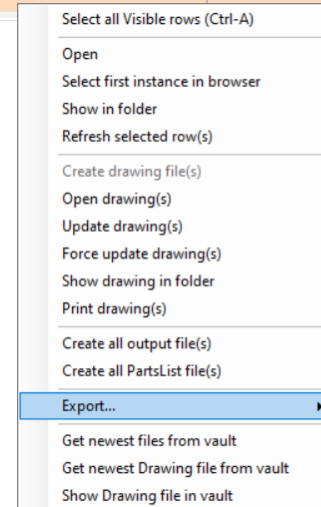
Prepare



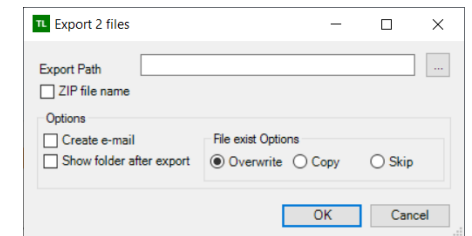
Possible

- Uses advanced publish.
- Create output for all files.
- Icon status overview.
- Update drawings from overview.
- Extract parts list from overview.
- Print drawings from overview.
- Vault status

Pos	thumb	Qty	PartNumber	Description	Drawing file	PDF	DXF
Top		1	✓ 5215000	Playstand	✓ 5215000.idw	✓ 5215000.pdf	
1		2	✓ 5215001	Base plate	✓ 5215001.idw	✓ 5215001.pdf	✓ 5215001_0050x0160_Rev_0.dxf
2		2	✓ 5215002	Side reinforcement	✓ 5215002.idw	✓ 5215002.pdf	✓ 5215002_0110x0500_Rev_.dxf
3		4	✓ ISO 4014 - M8 x 40	Hexagon head bolt - product grades A and B			
4		459,000 mm	⚠ DIN EN 10060 - 18 - 459	Steel bar	⚠ 5215003.idw		



- Export all output file(s)
- Export all parts list file(s)
- Export all output and parts list file(s)

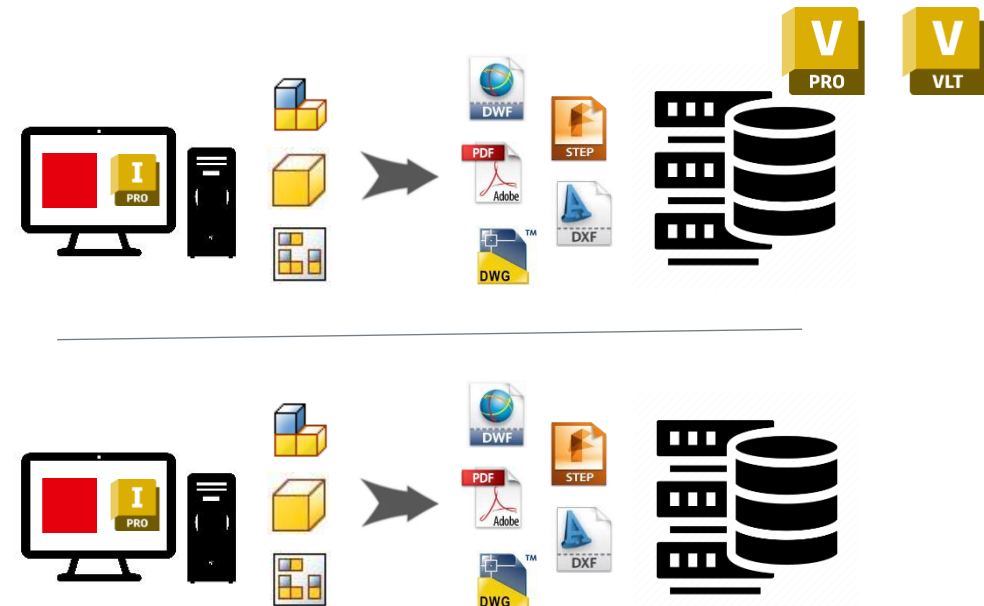
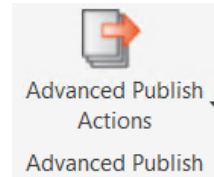


Collaborate



Possible

- Publish files using translators
- Activate publish using button
- Specify buttons in ribbon
- Plot stamp PDF files, like occurrences etc.
- Create compound PDF files (Merged PDF)
- Specify publish path
- Publish to Vault
- Event driven publish, like before save, Check in to Vault etc.

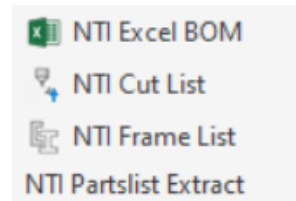


Collaborate







Possible

- Export model BOM, structured and parts only.
- Export drawing partslist.
- Thumbnail support.
- Supported file formats are XLS, CSV and XML.
- Specify buttons in ribbon.
- Extract from Documentation Status dialog.

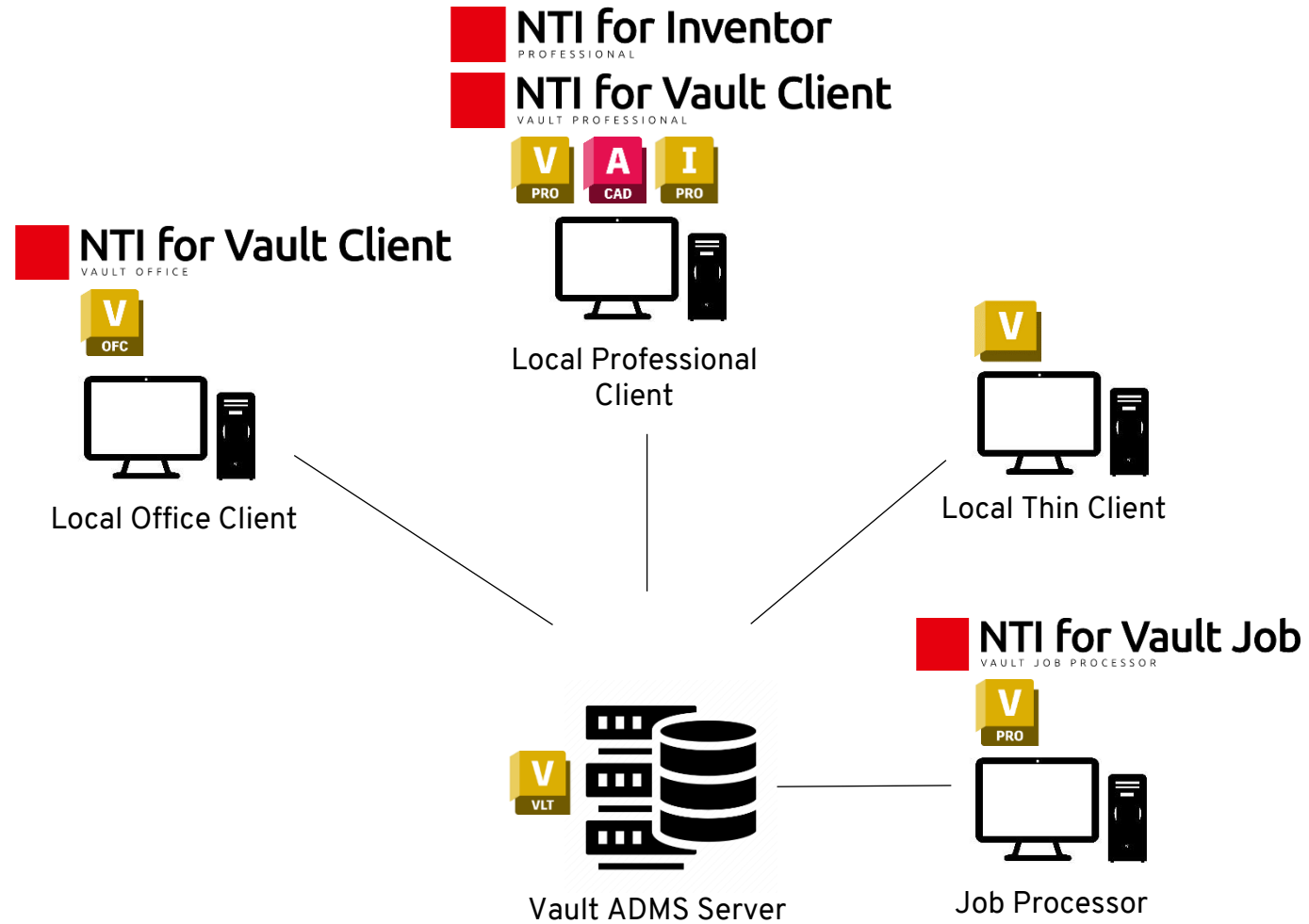


Playstand



Created: RDJ/01-09-2023			Item Number: 5215000			
Pos	Thumb	Amount	Part No	Material	Decription	Mass
1		2	5215001	EN AW-5754	Base plate	0,063 kg
2		2	5215002	EN AW-6060	Side reinforcer	0,074 kg
3		4	ISO 4014 - M8 x 4 Stainless Steel, 440C		Hexagon head bo	0,021 kg
4		459	DIN EN 10060 - 1 EN AW-5754		Steel bar	0,313 kg

Level 3

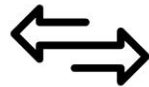


Synchronize Properties



Files

- Revision Table
- Set
- Synchronize



 **NTI for Vault Job**
VAULT JOB PROCESSOR

 **NTI for Vault Client**
VAULT PROFESSIONAL

Files

- Copy
- Set
- Synchronize



Item

- Copy
- Set
- Synchronize

Synchronize Properties

The screenshot displays the Autodesk Vault Professional 2024 interface. The main window is titled "Autodesk Vault Professional 2024" and shows the "Item Master" view. The "Item Master" panel lists items with columns for Number, Description (Item,CO), Title (Item,CO), Revision, and State. The item "0300-160-23" is selected, showing its details in the "Properties" panel. The "Properties" panel is divided into "System" and "User Defined" sections. The "User Defined" section shows various properties such as Area, Area Consumption, Area Unit, Author, Document Sub Type, Document Sub Type Na..., Equivalence Value, Is Content Center, Length, Length Unit, Manufacturing Category, Rev Number, Revision By, Revision Date, Spare Part, Surface Description, Surface Pre Treatment, Surface Treatment, Thickness, Thickness Unit, Width, and Width Unit.

Number	Description (Item,CO)	Title (Item,CO)	Revision	State
0300-160	Support leg for console	0300-160	1	Work in Progress
0300-160-20	Bushing	0300-160-20	0	Released
0300-160-21	Brick for support leg	0300-160-21	0	Released
0300-160-22	Support plate for bushing	0300-160-22	2	Work in Progress
0300-160-23	Support plate for leg	0300-160-23	0	Released
0300-160-24	Support plate for bushing	0300-160-24.ipt	0	Scheduled for ...
0300-165	Lower support leg	0300-165	0	Released
0300-165-20	Foot plate	0300-165-20	0	Released
0300-165-21	Foot plate	0300-165-21	1	Work in Progress
0300-165-30	Bracket for leg	0300-165-30	0	Released
DIN 71412 - AM 6 (con...	Lubrication Nipple, coned Type A	DIN 71412 A AM 6 (coned short)	0	Released

File Name	Version
0300-160-23.ipt	4
0300-160-23.idw	5
0300-160-23.dxf	2
0300-160-23.stp	2
0300-160-23.pdf	5

Name	Value
Author	
Document Sub ...	{9C464203-9BAE-11D3-...
Document Sub ...	Lamiera
Equivalence Val...	0300-160-23
Is Content Center	False
Length	-1
Length Unit	mm

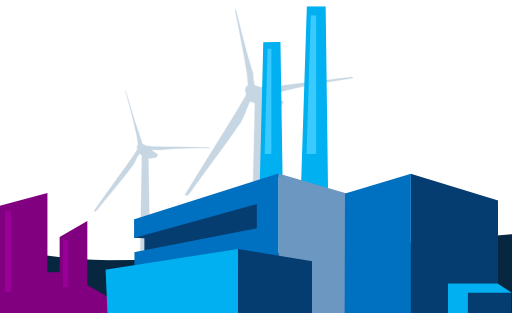
Property	Value
Area	11102,89
Area Consumption	11102,89
Area Consumption Unit	
Area Unit	mm^2
Author	
Document Sub Type	{9C464203-9BAE-11D3-...
Document Sub Type Na...	Lamiera
Equivalence Value	0300-160-23
Is Content Center	False
Length	-1
Length Unit	mm
Manufacturing Category	Laser Cut
Rev Number	0
Revision By	
Revision Date	
Spare Part	
Surface Description	
Surface Pre Treatment	
Surface Treatment	
Thickness	4
Thickness Unit	mm
Width	-1
Width Unit	mm

Prepare (Quality)



Possible

- Four eyes check.
- Check if drawing is updated.
- Check if Item revision is synchronized with file.



Prepare



Possible

- Configuring many “Uses Filter”
- Validate using Source Persistent ID
- “Has XXX” is predefined ready for use

General History Bill of Materials Where Used Change Order View Filtered View Item Uses Where Used					
Drawing Model					
Name	Has dwf	Has pdf	Item State	Checked In	
0300-160.idw	<input type="checkbox"/>	<input type="checkbox"/>	Work in Progress	30-10-2023 10:59	<input type="checkbox"/>
0300-160-20.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-160-21.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-160-22.idw	<input type="checkbox"/>	<input type="checkbox"/>	Work in Progress	30-10-2023 12:40	<input checked="" type="checkbox"/>
0300-160-23.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-165.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:38	<input checked="" type="checkbox"/>
0300-165-20.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-165-30.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-165-40.idw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	13-10-2023 11:38	<input checked="" type="checkbox"/>

General History Bill of Materials Where Used Change Order View Filtered View Item Uses Where Used								
Drawing Model								
Name	Description	Has dxf	Has stp	Has dwf	Item State	Rev Number	Checked In	
0300-160.iam	Support leg for console	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work in Progress	1	30-10-2023 10:59	<input type="checkbox"/>
0300-160-15.ipt	Support for bracket	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-160-20.ipt	Bushing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-160-21.ipt	Brick for support leg	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-160-22.ipt	Support plate for bushing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work in Progress	3	30-10-2023 12:40	<input checked="" type="checkbox"/>
0300-160-23.ipt	Support plate for leg	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-165.iam	Lower support leg	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:38	<input checked="" type="checkbox"/>
0300-165-20.ipt	Foot plate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-165-30.ipt	Bracket for leg	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:39	<input checked="" type="checkbox"/>
0300-165-40.ipt	Pipe for support leg	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Released	0	13-10-2023 11:38	<input checked="" type="checkbox"/>
DIN 71412 - AM 6 (con...	Lubricating Nipple, coned Type A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			05-10-2023 15:30	<input type="checkbox"/>

11 Object(s) (0 selected)


Overview



Possible

- Uses – Where Used
- Supports for both file and item
- Explore dependencies and properties

History Uses Where Used Change Order View Uses Where Used Data Card		
Uses	Where Used	Properties
0300-160.iam <ul style="list-style-type: none">0300-160-15.ipt0300-160-20.ipt0300-160-21.ipt0300-160-22.ipt0300-160-23.ipt0300-165.iam	0300-160-20.ipt <ul style="list-style-type: none">0300-160.iam<ul style="list-style-type: none">0300-160.idw0300-160-20.idw	<div><div>System</div><div>User Defined</div><div>Thumbnail</div></div>

General History Bill of Materials Where Used Change Order View Uses Filter Uses Where Used Data Card		
Uses	Where Used	Properties
0300-165 <ul style="list-style-type: none">0300-165-200300-165-30EN 10210-2 - 120 x 60 x 5 - 110	0300-165-30 <ul style="list-style-type: none">0300-165<ul style="list-style-type: none">0300-160	<div><div>System</div><div>User Defined</div><div>Thumbnail</div></div> <div></div>

Collaborate

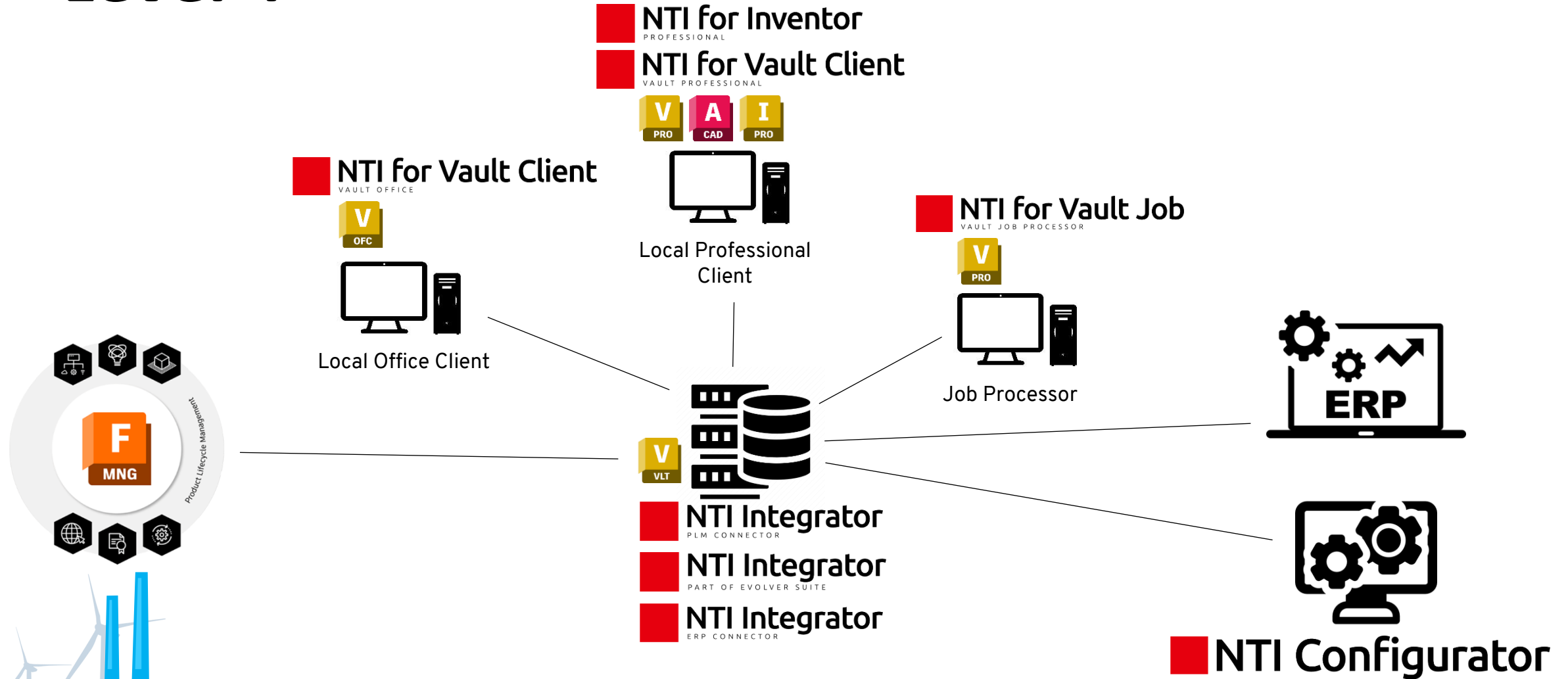
The screenshot displays the Autodesk Vault Professional 2024 interface. The main window is titled "Autodesk Vault Professional 2024" and shows the "Item Master" view. The left sidebar contains navigation options: "Item Master", "My Search Folders", "My Shortcuts", "Add new group", "Home", "Duplicates Dashboard", "Change Order List", "Item Master", and "Project Explorer". The central pane shows a table of items with columns: Number, Description (Item,CO), Title (Item,CO), Revision, and State. The selected item is "0300-160" with the description "Support leg for console". Below the table, the "General" tab is active, showing details for the selected item: Revision (Latest), Number (0300-160), Title (0300-160), Description (Support leg for console), and Units (Each). A small image of the support leg is shown. The "Associated files" section lists three files: "0300-160.iam" (Version 8), "0300-160.pdf" (Version 3), and "0300-160.idw" (Version 10). The "Properties" panel on the right shows the "System" tab with user-defined properties: Author, Document Sub Type, Document Sub Type Name, Equivalence Value, Manufacturing Category, Rev Number, Revision By, Revision Date, Spare Part, Surface Description, Surface Pre Treatment, and Surface Treatment. The status bar at the bottom indicates "13 Items (1 selected)" and the user is "administrator".

Number	Description (Item,CO)	Title (Item,CO)	Revision	State
0300-160	Support leg for console	0300-160	1	Released
0300-160-20	Bushing	0300-160-20	0	Released
0300-160-21	Brick for support leg	0300-160-21	0	Released
0300-160-22	Support plate for bushing	0300-160-22	3	Released
0300-160-23	Support plate for leg	0300-160-23	0	Released
0300-160-24	Support plate for bushing	0300-160-24.ipt	0	Scheduled for ...
0300-165	Lower support leg	0300-165	0	Released
0300-165-20	Foot plate	0300-165-20	0	Released
0300-165-21	Foot plate	0300-165-21	1	Work in Progress
0300-165-30	Bracket for leg	0300-165-30	0	Released

File Name	Version
0300-160.iam	8
0300-160.pdf	3
0300-160.idw	10

Name	Value
Author	
Document Sub ...	{E60F81E1-49B...
Document Sub ...	Assembly
Equivalence Val...	0300-160
Manufacturing ...	Welded
Rev Number	1
Revision By	Administrator

Level 4



Level 5, Integration



Possible

- API
- Supported Code language
 - LUA
 - JAVA Scripting
 - Razor
 - JSON
- Exchange data using any API
- Manage files (Create/Copy/Delete/Edit)
- Manage properties in customized workflow.
- Add SQL Query
- Configure email notifications
- Transfer data to other NTI Integrator module



Level 5, Integration



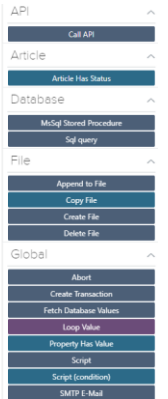
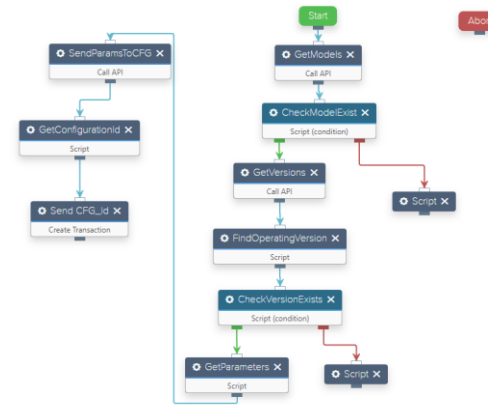
Possible

Autodesk Fusion Manage

- Configure custom job queue
- Create/edit items in Fusion Manage
 - Manage item details, attachment and BoM
- Run Fusion Manage scripts
- Revise items
- Transfer data to Vault

Autodesk Vault 2021- 2024

- Create/edit Vault Files/Items/ECO
 - E.g. revise, add item attachments or properties
- Change item Life Cycle states
- Add job to Vault job queue
- Revise items



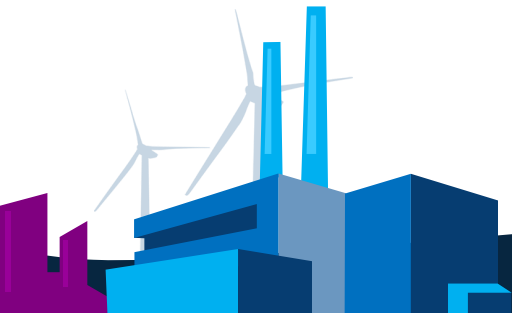
Level 5, Integration

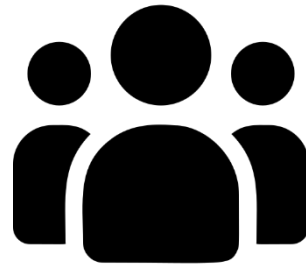


Possible

- Supported ERP systems
 - Monitor G4 and G5
 - Jeeves
 - IFS 8 and 9
 - IFS Cloud
 - Visma
- Future supported ERP systems
 - Infor M3
 - MS Finance & Operations

Configurations				
Name	Module Type	Data Source	Script Type	
CFG to PLM	Fusion Manage	Other	JavaScript	
FLC test	Fusion Manage	Internal Vault 2023	JavaScript	
Monitor G5 - Test Environment	Monitor G5	Internal Vault 2023	JavaScript	
NTI CFG	Generic	Fusion Manage Source	JavaScript	
PLM_To_Vault	Autodesk Vault	Fusion Manage Source	JavaScript	



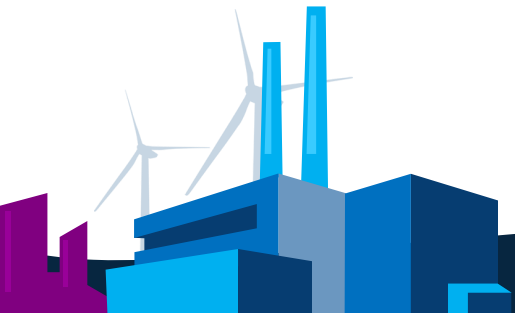


Customer Solution

- Developing hours
- Difficult to maintain and support

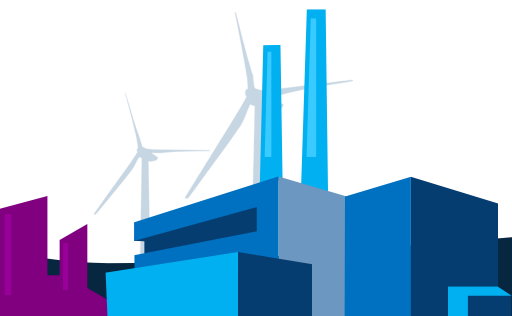
Standard Solution

- Data handling and migration
- Easy to maintain due to standard



Konsulentens Værktøjskasse

- ✓ NTI Inventor Bulk Operations
- ✓ NTI Vault Bulk Operations
- ✓ NTI BCP Utility
- ✓ NTI Inventor iProperty Dump
- ✓ NTI Vault Dump Config
- ✓ NTI Vault Dump Entities
- ✓ NTI Vault Security
- ✓ NTI File Operations





Identify Existing platform

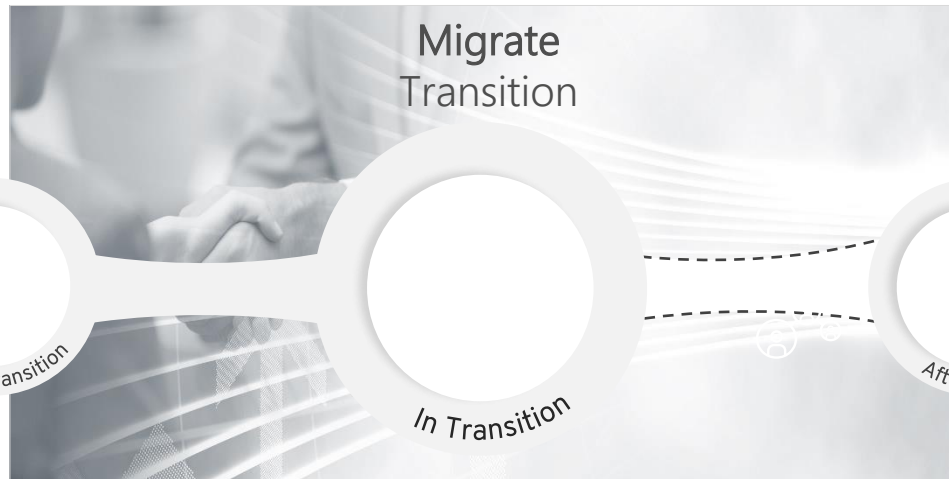
Data health - references and duplicates

Selection - What is in focus.

Data Selection - Priority

Analysis - Drawing Header and BOMs

Data analyze



Migrate Transition

Before Transition

In Transition

Drawings - Replacement of drawing header and bill of materials

Properties - Manipulation of data

Migration - Version migration

Data cleanup - iLogic and VBA

Data Migration



Process New platform

After Go Live

Data - renaming

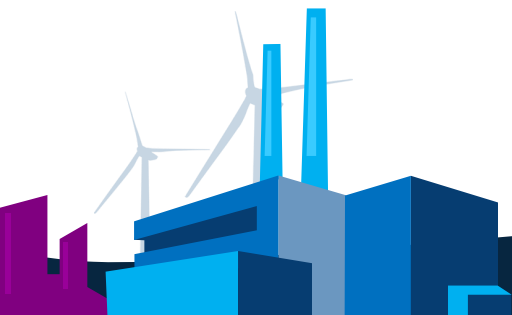
Manipulate - Restructuring

Revision - Bump to match file

Item - Assign

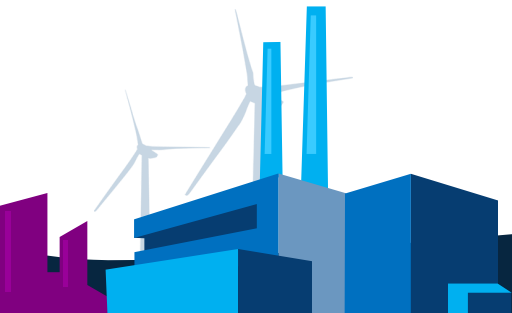
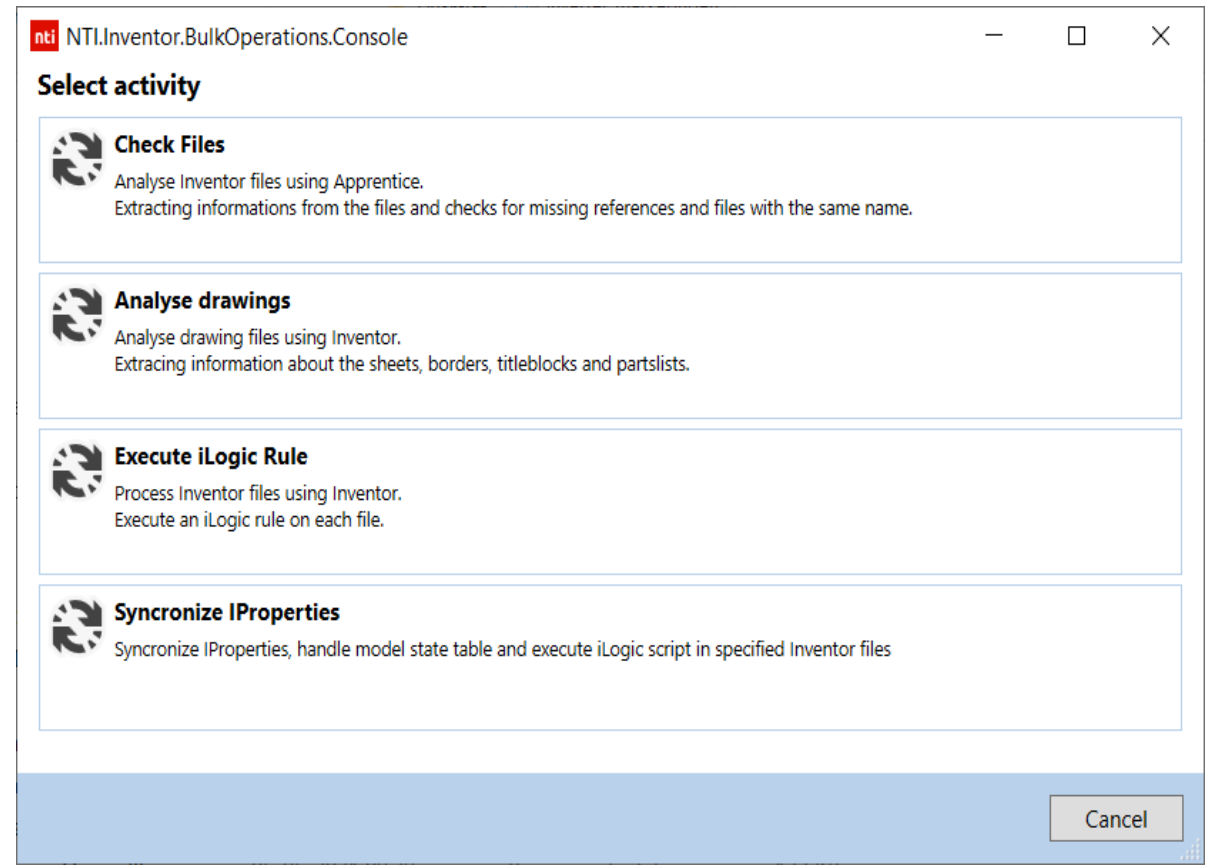
Release - state handling

Data Control



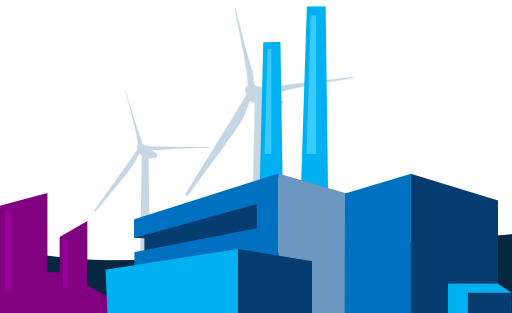
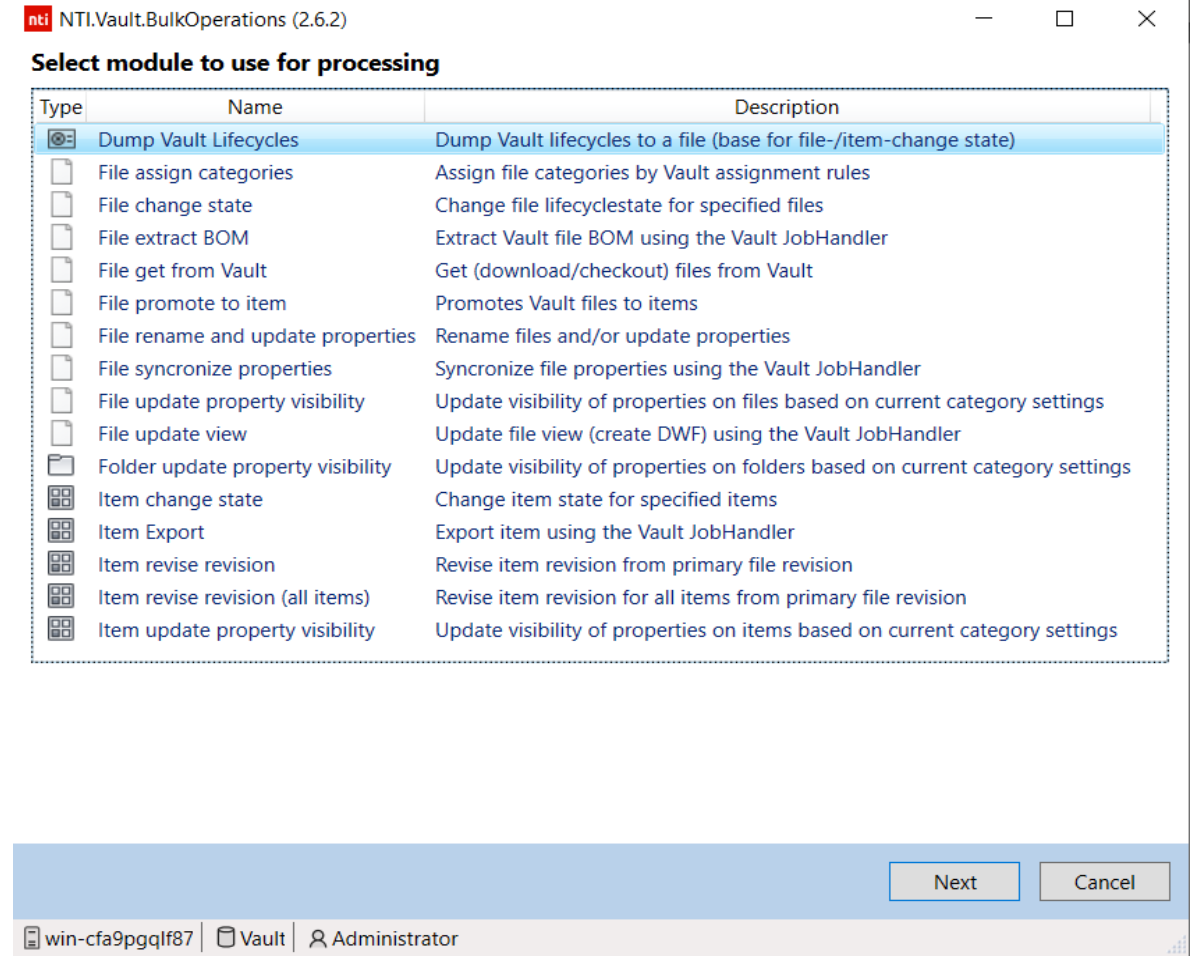
NTI Inventor Bulk Operations

- Check Files
- Analyze Drawings
- Execute iLogic Rule
- Synchronize iProperties



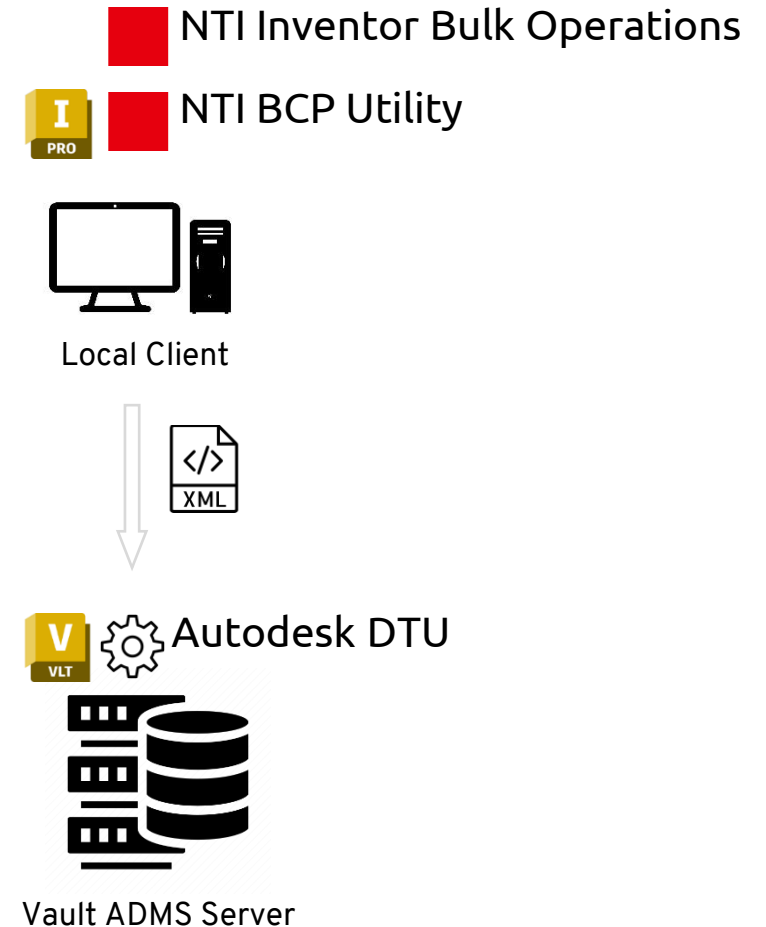
NTI Vault Bulk Operations

- 9 options to manipulate files
- 5 options to manipulate items
- 1 option to manipulate folders



NTI BCP Utility

- Three modes, Trusted, Restricted and Loose
- Define filename and vault path
- Define file category
- Define file revision and scheme
- Define file lifecycle state and scheme
- Works only for Autodesk Vault Professional!



Q&A

