AUTODESK UNIVERSITY

The Benefits of Automated Model Checking in the Cloud

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Session Details

Description & Learning Objectives

In this timely panel discussion, hear how building owners, large and medium design firms, and the industry as a whole is using and benefitting from automated model checking. Learn, specifically, how they are reviewing their Revit models in BIM 360 software, generating reports on fidelity issues, and utilizing that data in dashboards. This panel will include a building owner (Denver International Airport) that manages all its design and construction projects in BIM 360; a large design firm (Jacobs) that works with DEN and other owners; a small design firm and how it works on BIM 360 projects; and the product development team responsible for Model Checker for Revit and Model Checker for Forge (CADD Microsystems). Facilitated by an architect on the Autodesk team, you will see and hear about all the great benefits these different project stakeholders have gained by implementing automated model checking on their projects.

- Learn about how automated model checking is being used in the industry
- Discover how building owners with modeling requirements are benefitting from working with their consultants
- Discover how large consulting firms are benefitting from working with building owners and their modeling requirements

Host

Eddy Krygiel

Senior Principal
Major Projects
Autodesk

Your Speakers

90

Chuck Mies

Senior Principal
Major Projects
Autodesk

Jason Kunkel

Senior Practice
Manager
CADD Microsystems

Brendan Dillon

DFI Manager
Denver
International
Airport

90

Chris Pittman

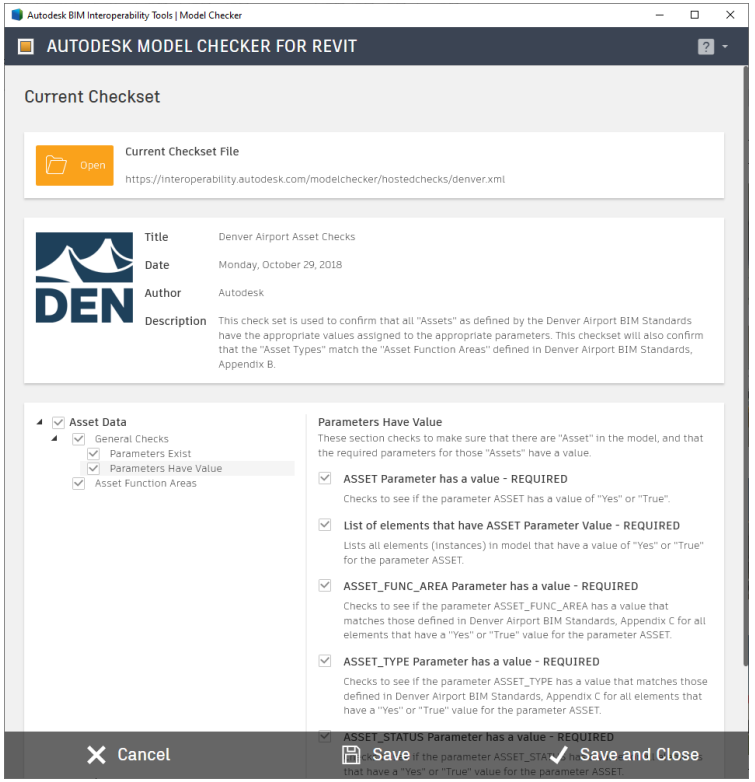
Project Architect
Jacobs

Get to Know
Model Checker on Forge

Model Checker for Revit

Overview

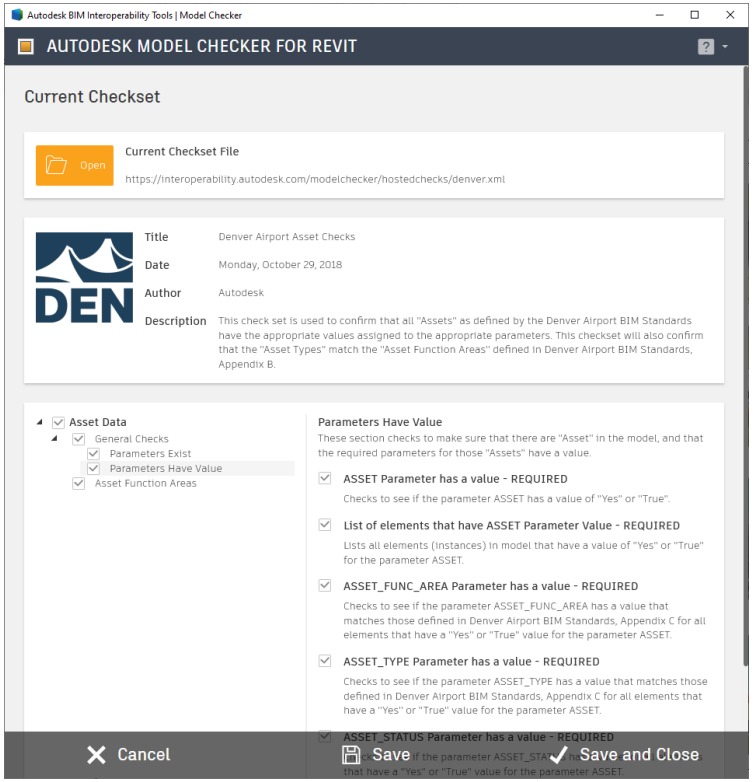
- Desktop version been around for years
- Review Revit model elements and validate data
- Export reports
- Custom checksets
- Use pre-built checksets



Model Checker for Revit

Limitations

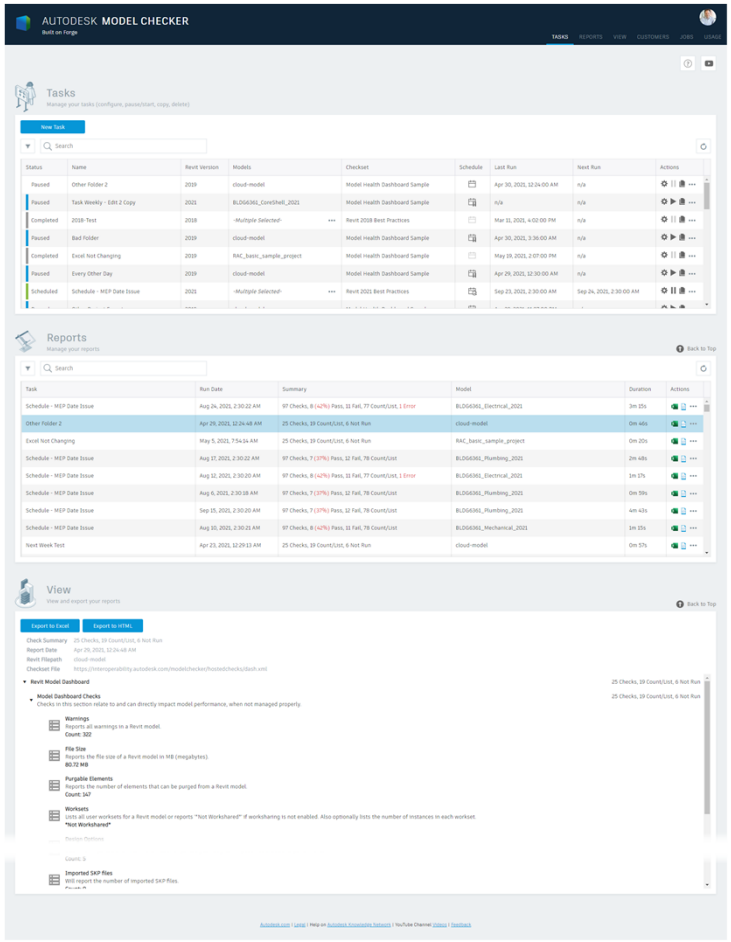
- Runs inside Revit
- Challenging to automate
- Scaling can be an issue
- Maintaining consistency across checksets



Model Checker on Forge

Overview

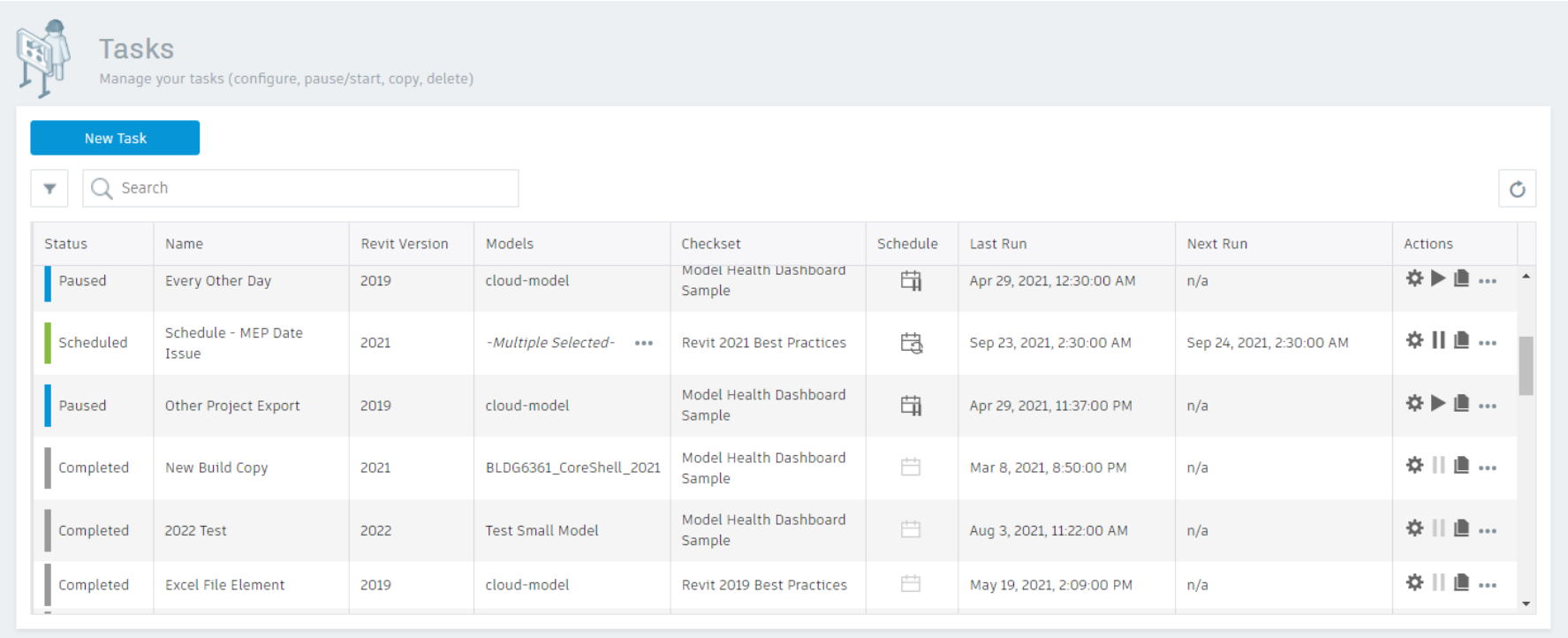
- Cloud-based
- Simple interface – only two pages
- Runs on ACC project published Revit models
- Do not need direct access to Revit
- Create scheduled Tasks
- Maintains history



Model Checker on Forge

Tasks Panel

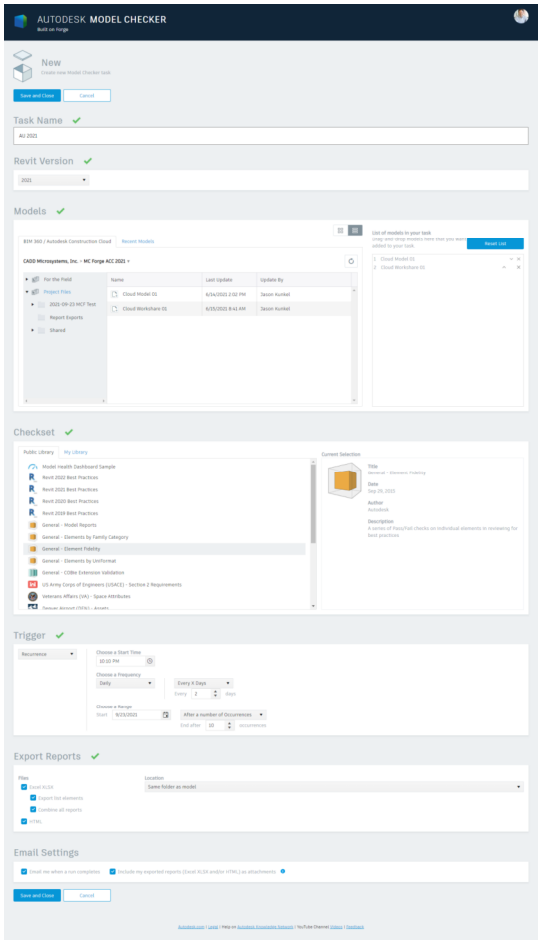
- Shows all your active and completed tasks



Model Checker on Forge

New Task

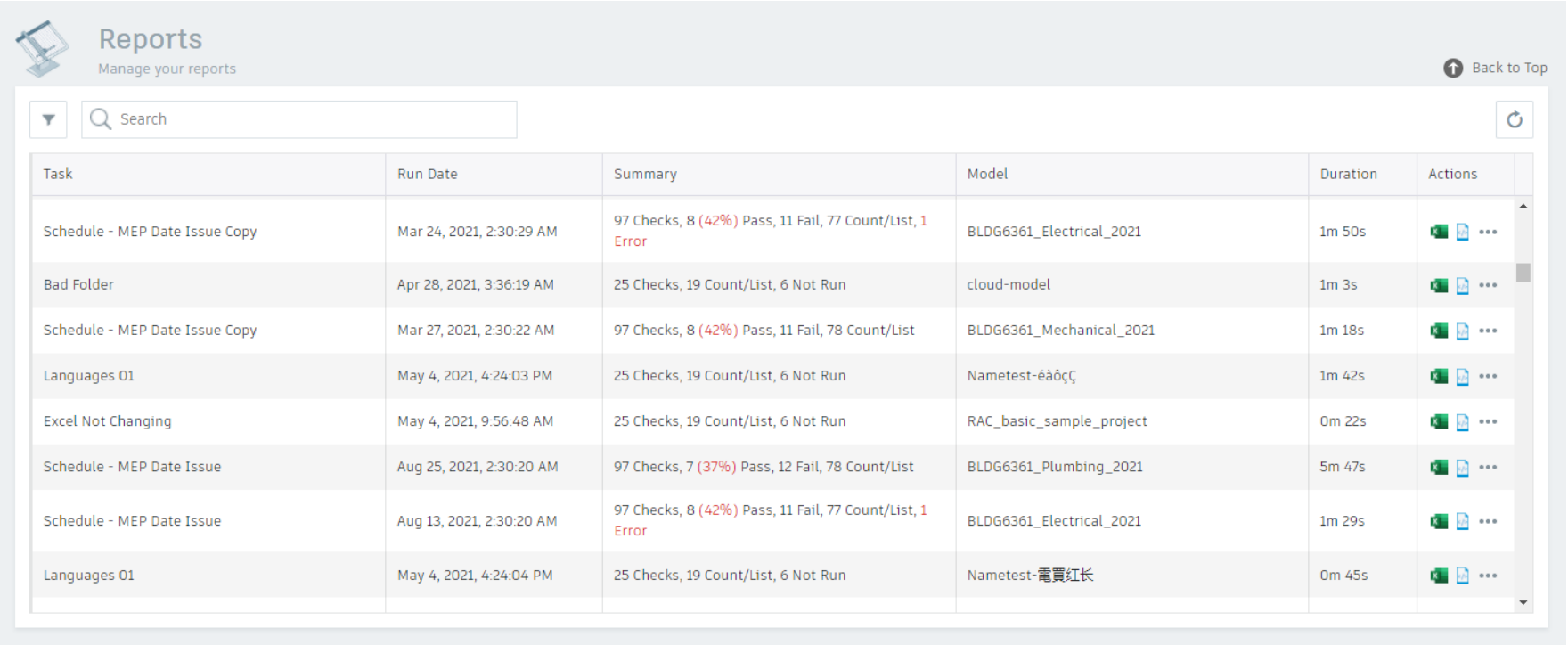
- Name it
- Select Revit Version
- Flag multiple Revit models from a single ACC or BIM 360 project
- Choose Public Library checkset or upload your own
- Tell it when to run
- Deal with reports
- Set it to email results (or not)



Model Checker on Forge

Reports Panel

- Shows result summary from completed tasks

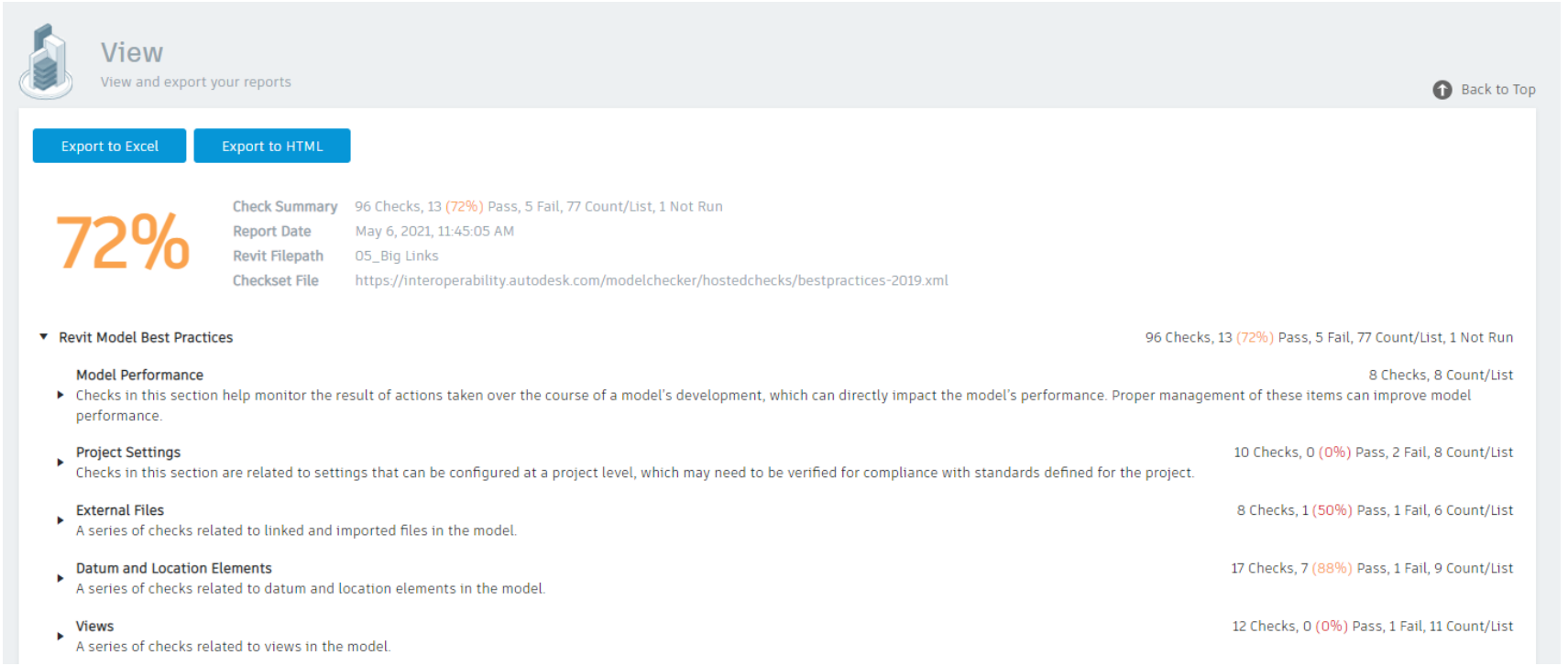


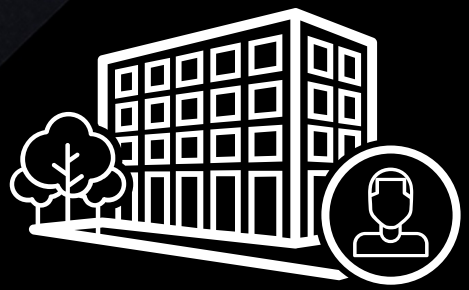
Task	Run Date	Summary	Model	Duration	Actions
Schedule - MEP Date Issue Copy	Mar 24, 2021, 2:30:29 AM	97 Checks, 8 (42%) Pass, 11 Fail, 77 Count/List, 1 Error	BLDG6361_Electrical_2021	1m 50s	
Bad Folder	Apr 28, 2021, 3:36:19 AM	25 Checks, 19 Count/List, 6 Not Run	cloud-model	1m 3s	
Schedule - MEP Date Issue Copy	Mar 27, 2021, 2:30:22 AM	97 Checks, 8 (42%) Pass, 11 Fail, 78 Count/List	BLDG6361_Mechanical_2021	1m 18s	
Languages 01	May 4, 2021, 4:24:03 PM	25 Checks, 19 Count/List, 6 Not Run	Nametest-éàôçÇ	1m 42s	
Excel Not Changing	May 4, 2021, 9:56:48 AM	25 Checks, 19 Count/List, 6 Not Run	RAC_basic_sample_project	0m 22s	
Schedule - MEP Date Issue	Aug 25, 2021, 2:30:20 AM	97 Checks, 7 (37%) Pass, 12 Fail, 78 Count/List	BLDG6361_Plumbing_2021	5m 47s	
Schedule - MEP Date Issue	Aug 13, 2021, 2:30:20 AM	97 Checks, 8 (42%) Pass, 11 Fail, 77 Count/List, 1 Error	BLDG6361_Electrical_2021	1m 29s	
Languages 01	May 4, 2021, 4:24:04 PM	25 Checks, 19 Count/List, 6 Not Run	Nametest-電買红长	0m 45s	

Model Checker on Forge

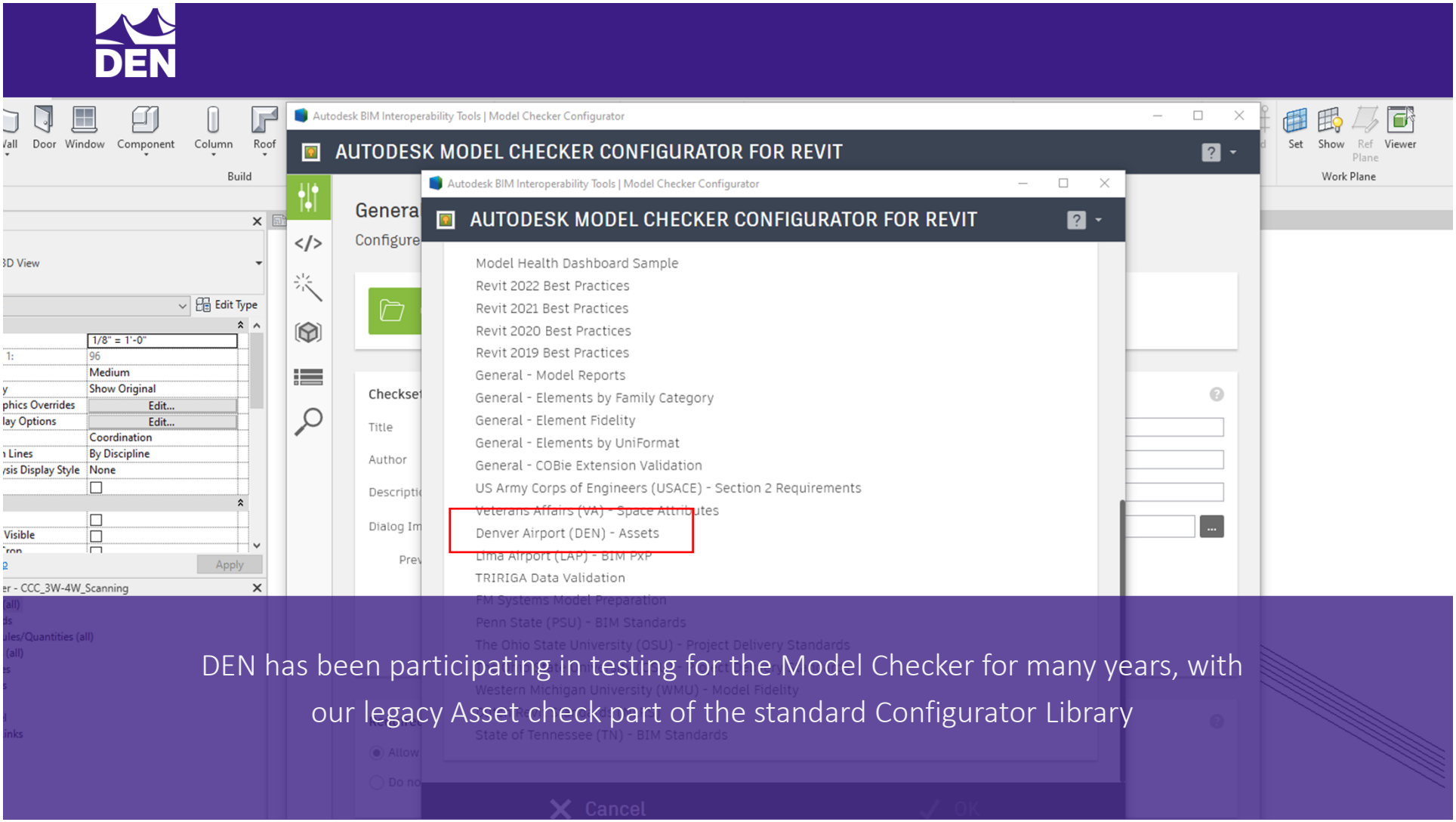
View Panel

- Displays and exports active Report

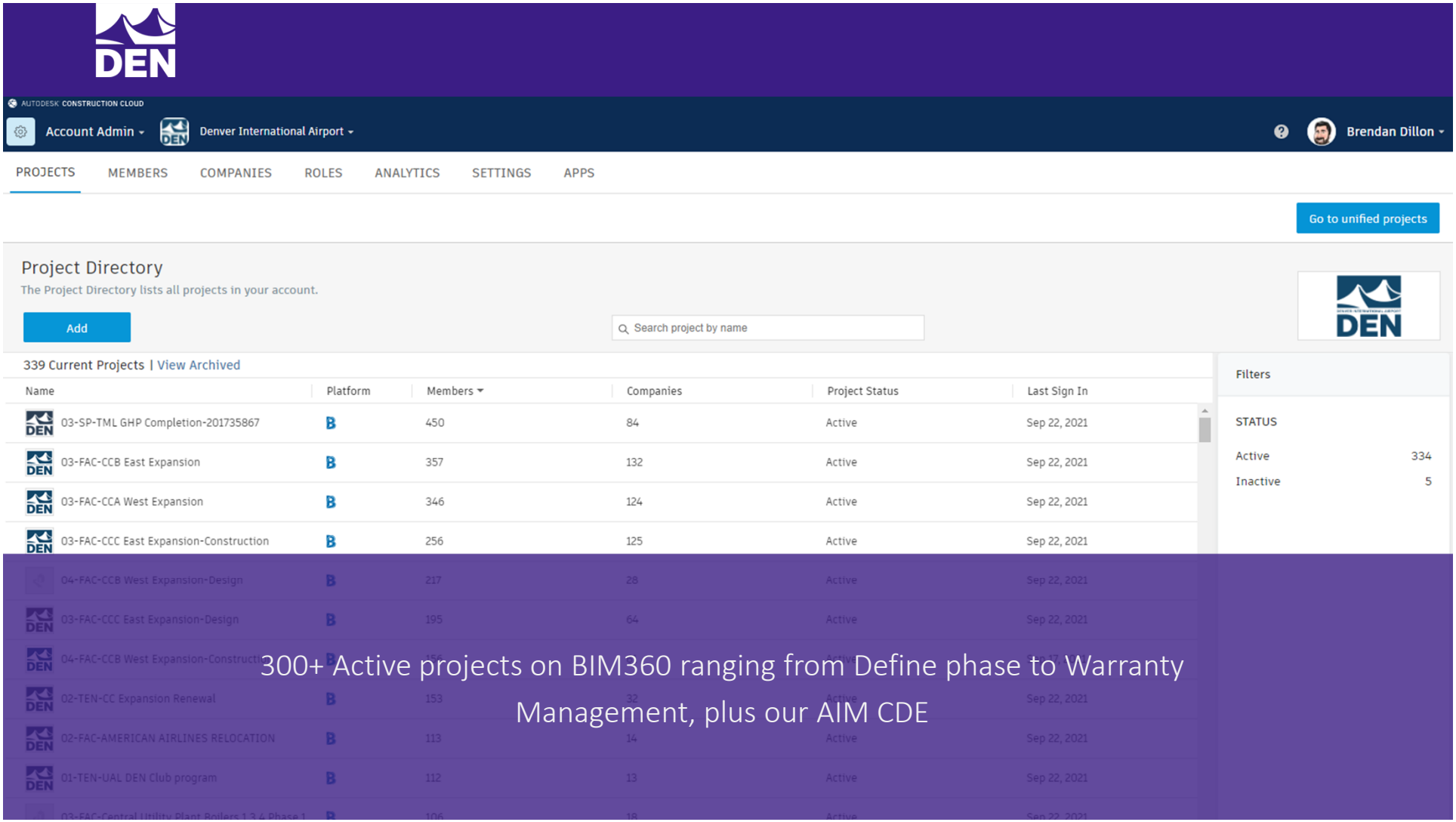




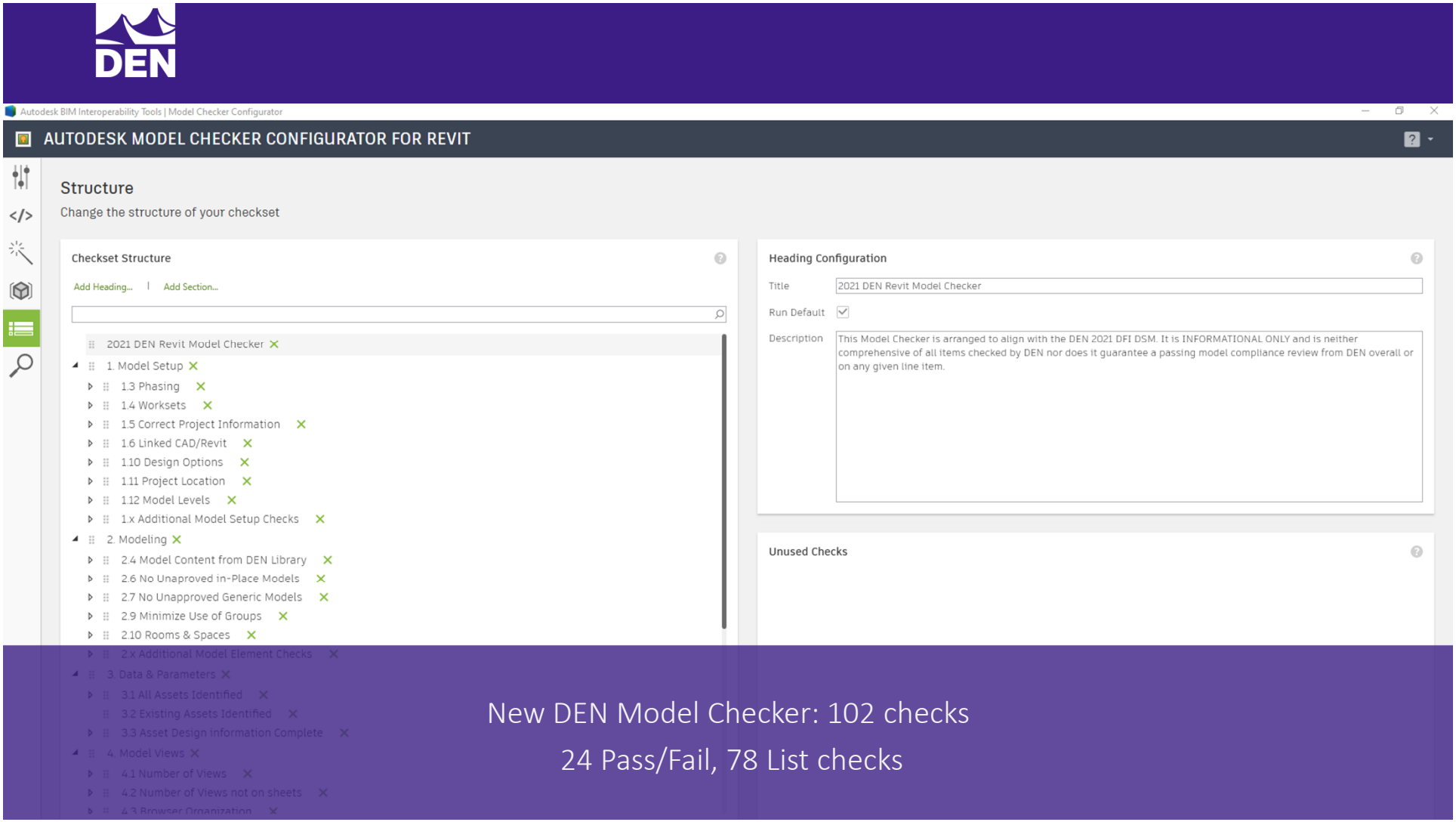
DENVER INTERNATIONAL AIRPORT



DEN has been participating in testing for the Model Checker for many years, with our legacy Asset check part of the standard Configurator Library



300+ Active projects on BIM360 ranging from Define phase to Warranty Management, plus our AIM CDE



New DEN Model Checker: 102 checks

24 Pass/Fail, 78 List checks

ACTIVE APPLICATIONS

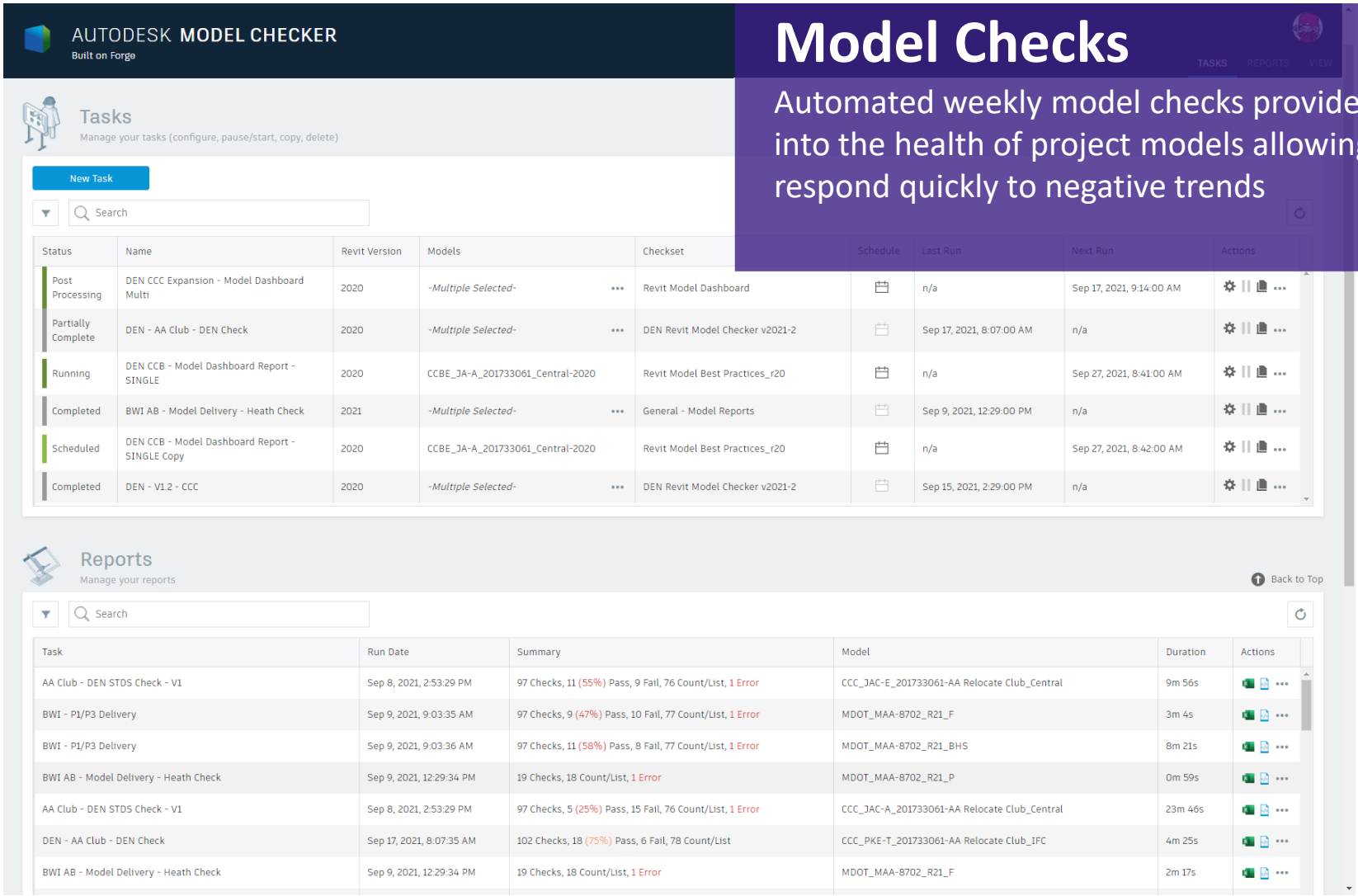
AIM asset data verification for Maximo population via Forge

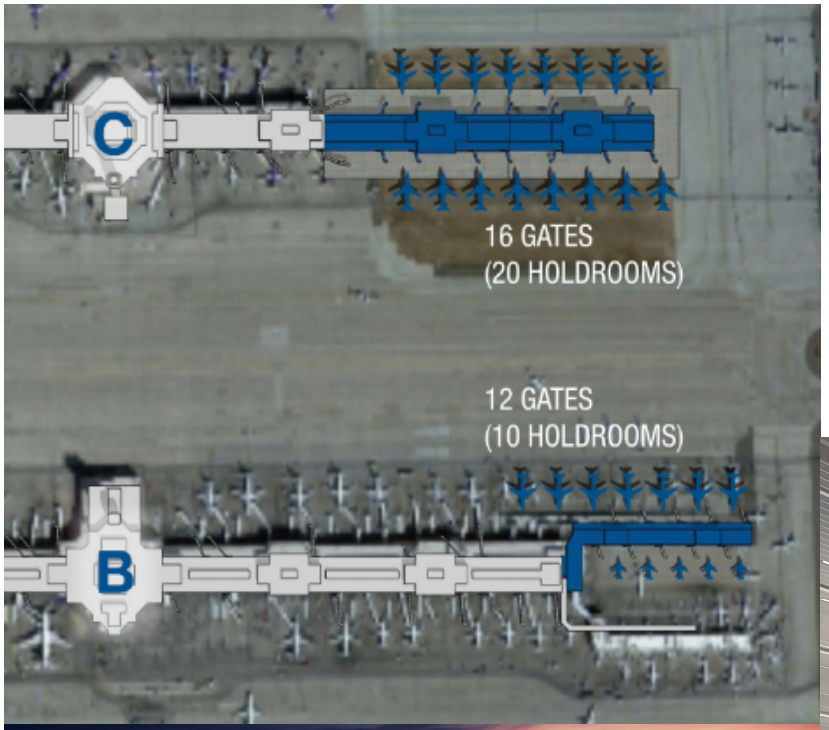
AIM model checking for compliance with DEN standards

Automated PIM model checking for compliance with DEN standards and report distribution

Model Checks

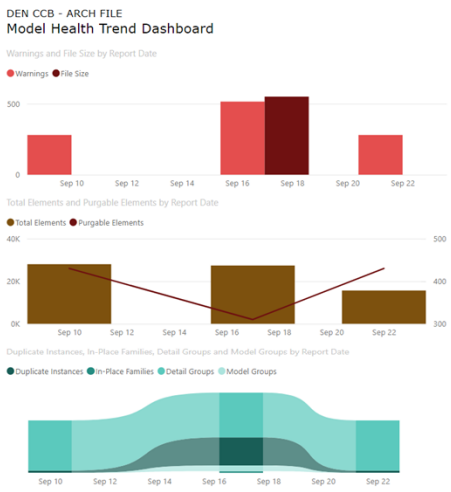
Automated weekly model checks provide key insights into the health of project models allowing team to respond quickly to negative trends

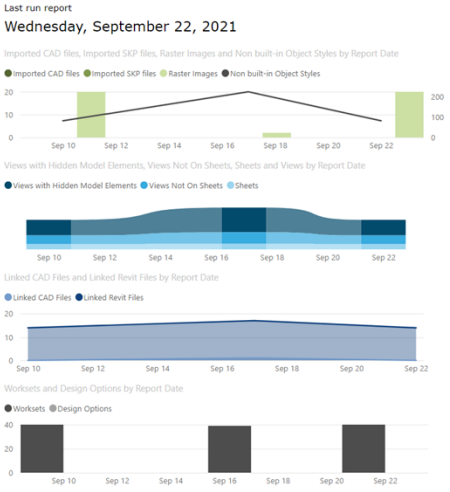




Demonstrated use on 2 large expansion projects at Denver International Airport – weekly reports provided insight into all discipline models to ensure no model downtime in 2+ years.

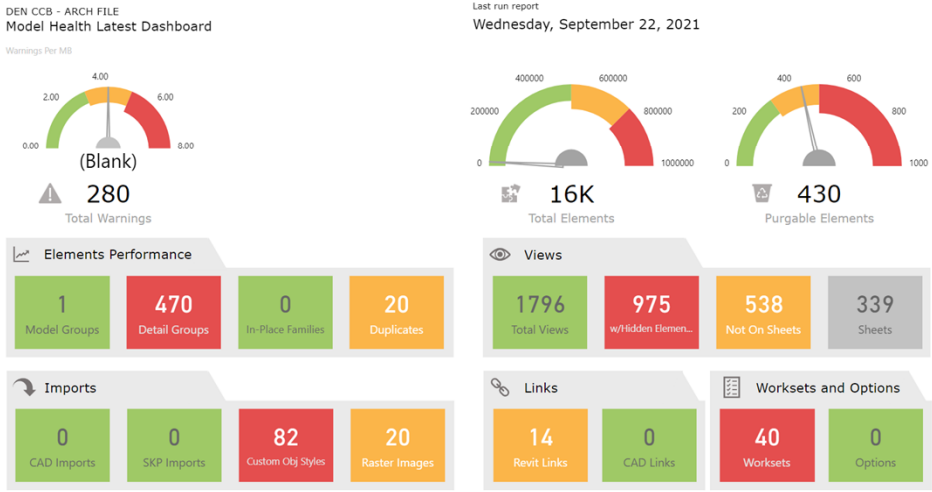
Customized reports to check models against client specific standards

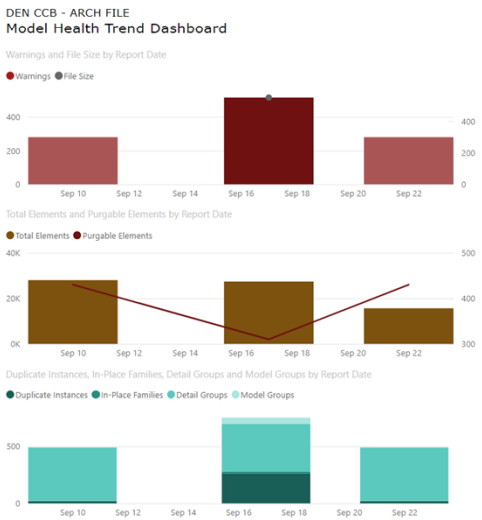


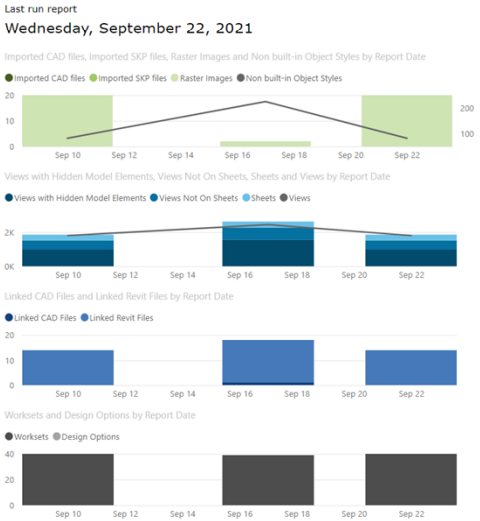


Model Dashboards

Utilizing PowerBI to quickly convert the native output to an easy to understand graphical interface.







Q: WHY DID WE MAKE THIS TOOL?

(JASON / CHUCK - 3 MIN ea)

Q: WHAT KIND OF DATA ARE YOU GETTING? HOW ARE YOU USING IT?

(Brendan / Chris- 3 MIN ea)

Q: WHAT ARE OTHER CUSTOMERS DOING WITH THE DATA

(Chuck / Jason - 3 MIN ea)

Q: HOW WILL THIS CHANGE YOUR WORK WITH A/Es? WILL YOUR EXPECTATIONS FOR DELIVERABLES CHANGE?

(Brendan- 3 MIN ea)

Q: WILL THIS CHANGE HOW YOU WORK WITH OWNERS?

(Chris - 3 MIN ea)

Q: ANY ’AH-HA’ MOMENTS?

(Brendan / Chris / Chuck - 2 MIN ea)