



SDC Verifier for Mining Conveyors

Structural verification for conveyor galleries and bulk material handling equipment — using your existing FEA results or models built in SDC Verifier.

[Start Free Trial](#)

[Book a Technical Demo](#)

BUILT FOR TEAMS THAT MUST DELIVER VERIFICATION PACKAGE

● Engineering consultancies

● Conveyor / bulk-handling OEMs

● Maintenance/service engineering teams

Where it helps in conveyor projects



Transfer towers and head stations

Load introduction zones, local plate checks, connection hot spots



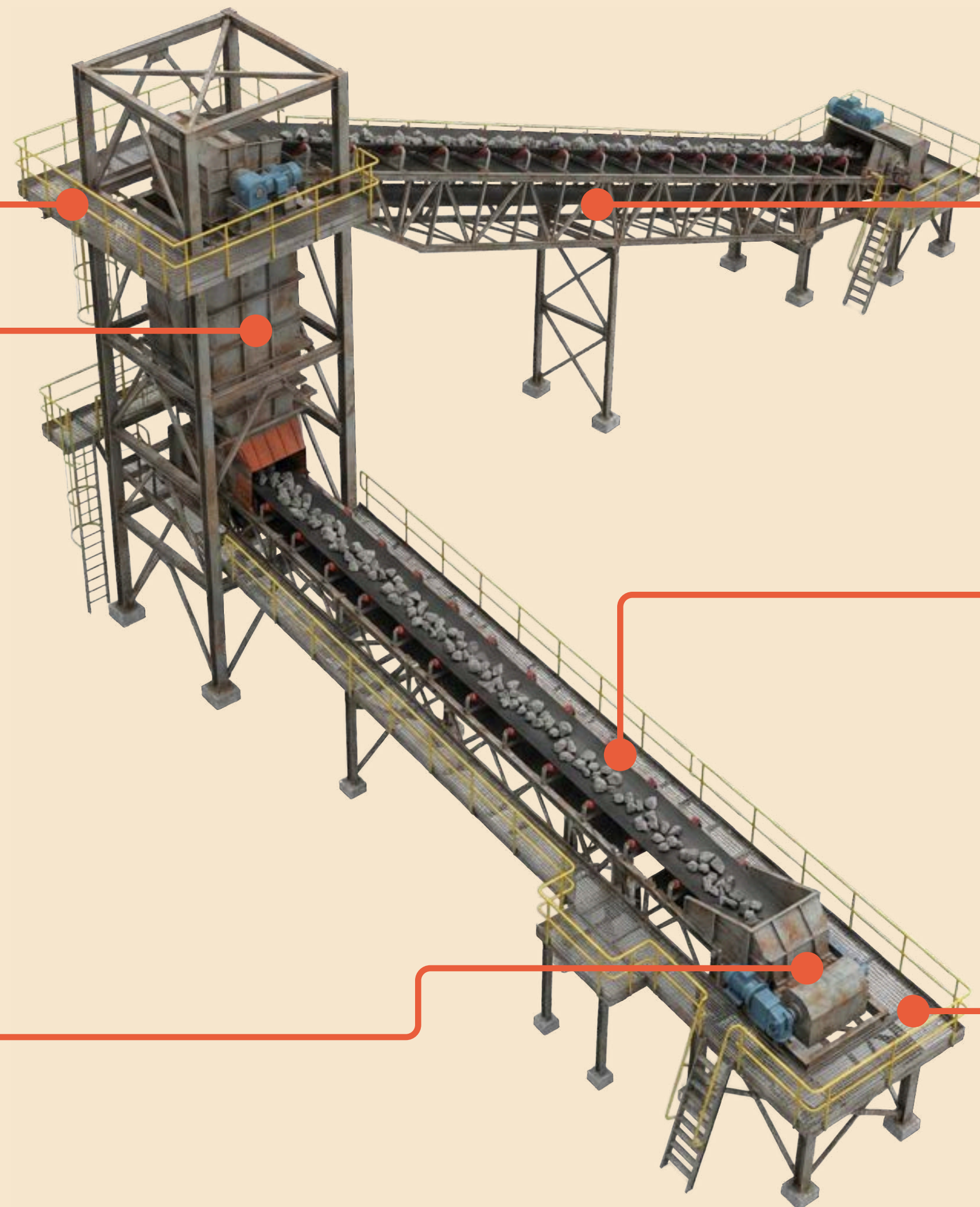
Chutes & impact zones

Local stiffener behavior, plate buckling, reinforced regions



Drive / take-up frames

High forces, fatigue-sensitive weld details, bolted joints



Conveyor truss

Long spans, global strength, stability, deflection control



Idler frames and support brackets

Repeating details; fast screening + governing list



Walkways / platforms / secondary steel

Quick compliance checks against project limits

What you verify

✓ **Truss / girder strength**

Member utilization and governing load cases

✓ **Bolt checks**

Bolt group verification incl. preloaded joints

✓ **Plate / stiffener buckling**

Local panels and stiffened plates

✓ **Serviceability**

Deflection limits and ratios (project specs)

✓ **Weld checks**

Weld strength, welded joint checks, and fatigue where applicable

✓ **Fatigue**

Repeat-load assessment for details that drive maintenance cost



How it works — 5 steps

1

Import

Build the model in SDC Verifier or import STEP geometry; bring in FEA results

2

Define loads and constraints

Apply load cases and boundary conditions

3

Combine

Define load combinations, envelopes, and factors consistently

4

Organize

Group members, plates, welds, bolts into verification sets

5

Verify & Report

Run checks, identify governing cases/details, export a PDF report with pass/fail, plots/tables, and references to relevant standard sections

FEA Integrations



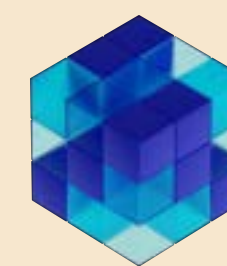
Ansys Mechanical



Simcenter 3D



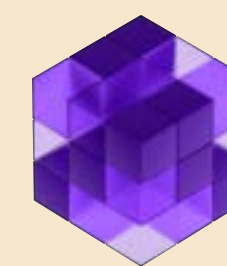
Femap (NX Nastran)



STEP



IGES

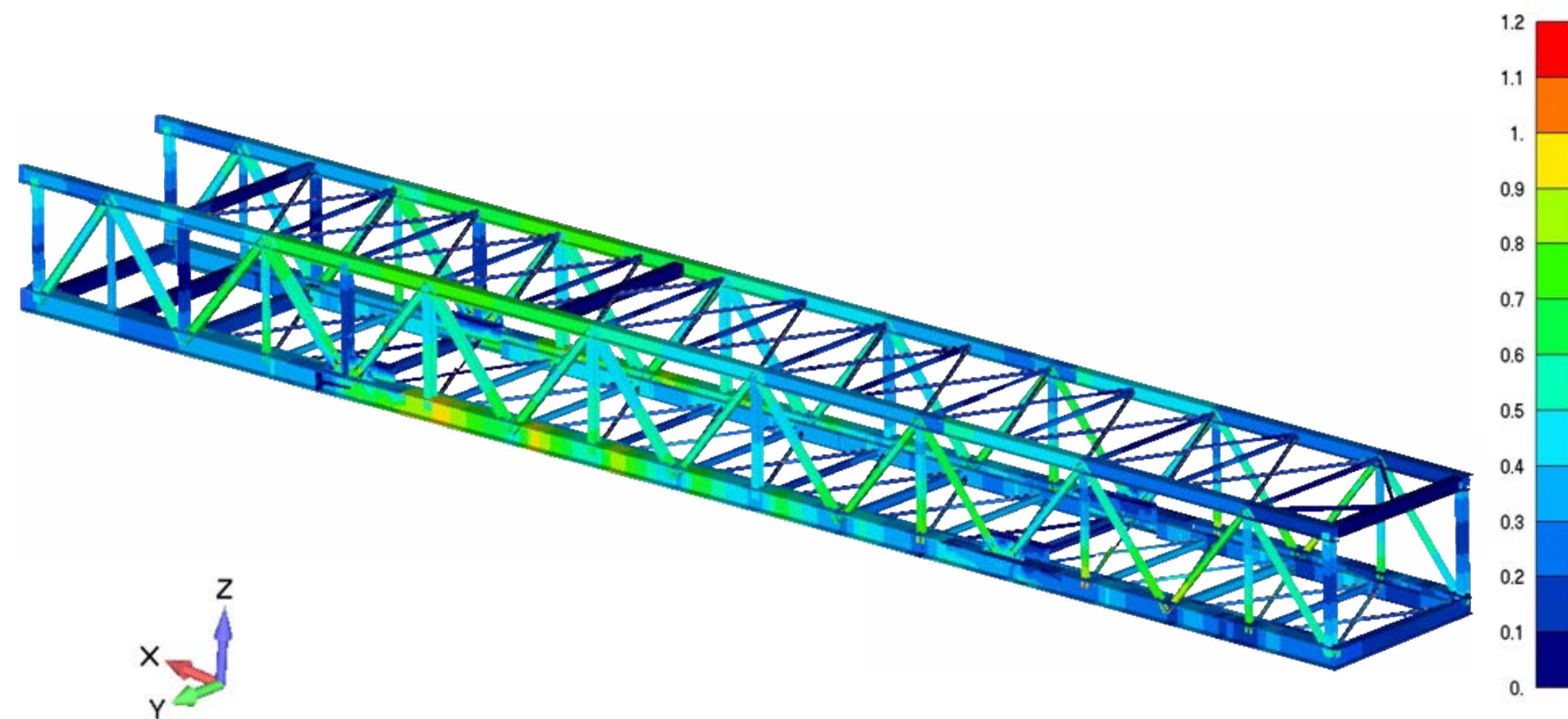


Parasolid
(.x_t / .x_b)

LS-DYNA result reading in Ansys supported

Example Verification Output

Conveyor truss utilization overview



Output Set: SDC.WorkOutputSet
Elemental Contour: Plate Top [S1; Ch1] : [J3] LG4; Utilization Factor, Overall
Third Contour: Beam AbsMax End A [S1; Ch1] : [J3] LG4; Utilization Factor, Over

Aspect	Details
Scope	Verification of a conveyor boom / truss structure under operating load cases.
Modeling	Beam and shell elements with local detail checks where required.
Standards	Eurocode 3 for members, plate buckling, connections, and fatigue; project-specific requirements where applicable.
Loads / Combinations	Multiple operating load cases and code-based combinations defined consistently.
Deliverable	Governing list, utilization overview, visual result plots, and a report for review and sign-off.

Standards supported*

(typical conveyor projects)

Eurocode (EN) (project dependent)



Also supported (project dependent)



Bolted joints



* Selection depends on region and client requirements.

Always applies: Project specifications and client rules (limits, factors, acceptance criteria).

Why engineering consultancies pick SDC Verifier



Lower Delivery Risk

Fewer spreadsheet handoffs and rework loops



Find What Governs Faster

Identify governing cases and critical details quickly



Cleaner client review

Pass/fail + plots + references to relevant standard sections



Scales Across Projects

Reusable setups for revisions, load sets, and report templates

SDC Verifier saved up to

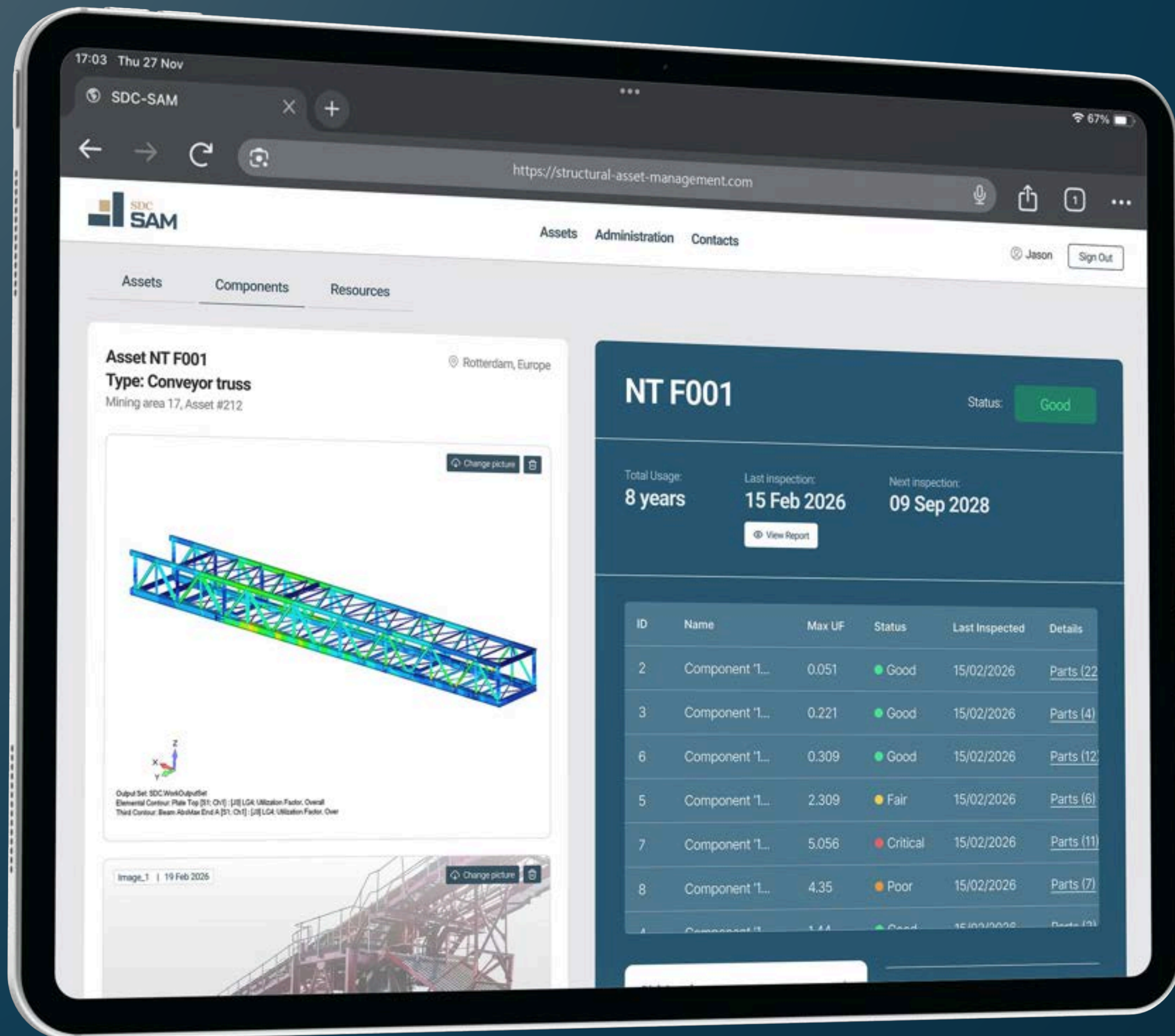
80%

of the time for modeling, analysis and creating report.



Web-Based Solution for Structural Asset Management

[Visit SAM page](#)



SDC SAM provides a digital representation of conveyor structures to support inspection, maintenance, and repair decisions.

It helps engineering and maintenance teams track structural condition across components, review relevant analysis and inspection data, and plan actions over the asset lifecycle.

- Detailed FEA Results
- Inspection Details
- Digital Twins
- Usage & Damage History
- Health Status Monitoring
- Location
- Photos

Get started with SDC Verifier today

See it on your model


Start Free Trial

Book a Technical Demo



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