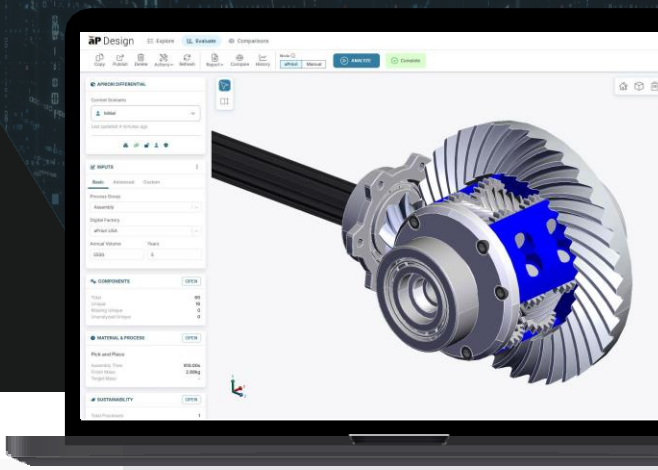
aPriori

aP Design

Accelerate time-to-market by leveraging manufacturing insights early in the design phase



aP Design Overview

aP Design provides early-stage product design guidance for manufacturability, cost, and sustainability. Design Engineers can use the aPriori cloud application to gain detailed insights from automated analysis of 3D CAD parts and assemblies. Leveraging aPriori's interactive guidance allows enhancements to be made quickly to optimize designs and address potential bottlenecks and other risks.

Platform Features

Digital Factories

Create a digital twin of your in-house or supplier factories to simulate a variety of machines, materials, processes, overhead rates, and more.

Manufacturing Simulation Engine

Using the geometry extracted from 3D CAD models and aPriori digital factories, aPriori evaluates manufacturing feasibility, calculates cycle times, determines material usage, and tooling needs. The result is real-world manufacturing and product analysis with actionable manufacturability guidance in seconds.

3D CAD Geometric Intelligence

Generate automatic geometric analysis from 3D CAD models rapidly for single parts and complex assemblies. aPriori plug-ins for all major 3D CAD applications simplify and accelerate our in-app guidance.

Actionable Insights into:

- Cost
- Manufacturability
- Sustainability

Empowering:

- Design Engineers
- Product Development

Unlock the value in your digital twins with automated manufacturing insights that include:

Product Cost Management

- Should cost
- Make vs. buy

Sustainability

- CO_2e footprint
- Design for Sustainability

Design Guidance

- Design for Manufacturability (DFM)
- Design to Cost (DTC)

Manufacturing Optimization

- Machine selection
- Process routing

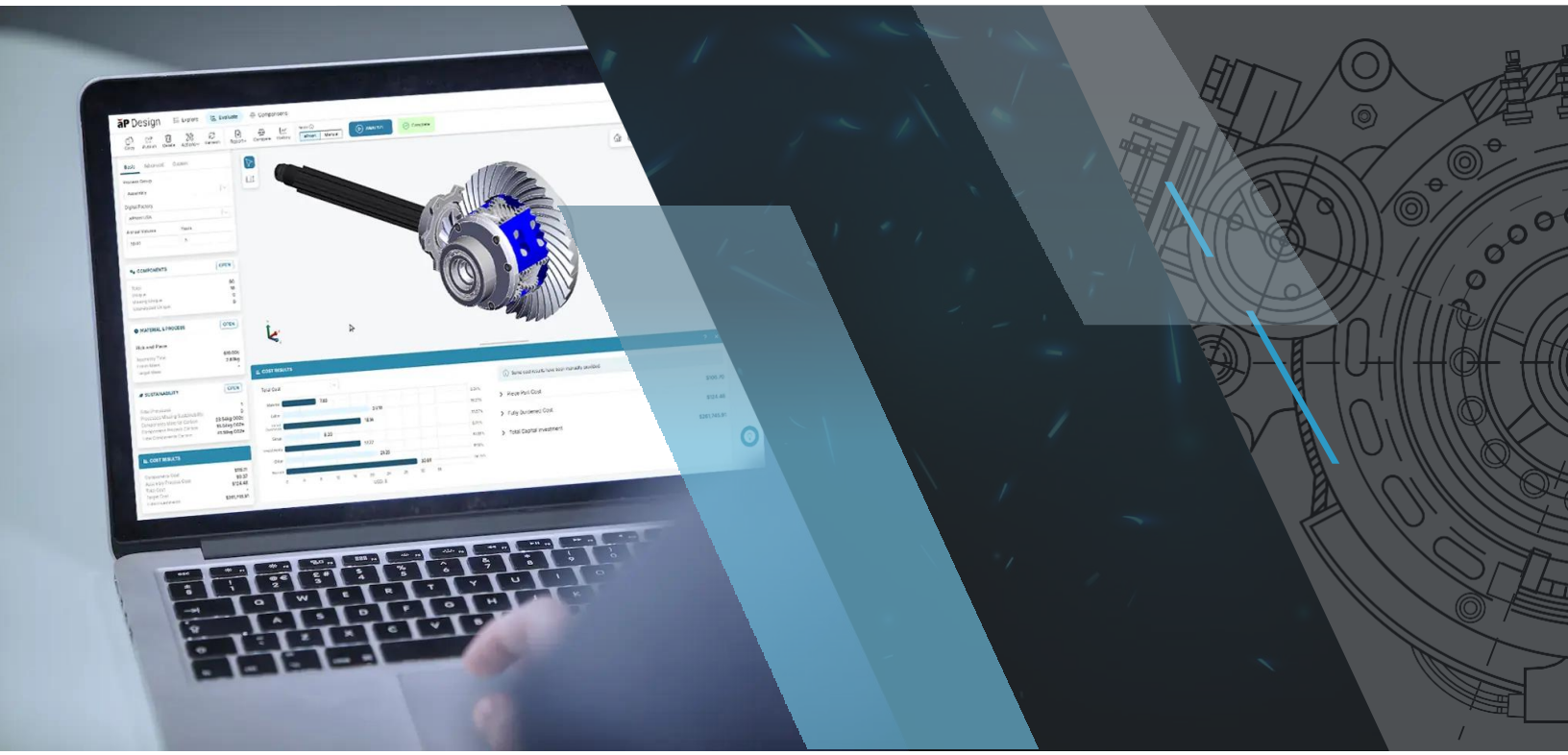
aP Design Features

Accelerate Product Development

Use aPriori during the design phase to pinpoint where manufacturability and cost issues can impact product profitability and cause delays.

aP Design enables product development teams to:

- Get early insights into cost and sustainability from 3D CAD
- Identify design issues proactively with automated manufacturing insights
- Reduce design review iterations and minimize time requirements on cost/value engineering teams
- See how a design change will impact tooling, cycle time, or fixture costs
- Compare designs, materials, manufacturing processes, and specifications with trade-off analysis on cost and CO_2e



aP Design Use Cases

Design for Profitability

Prevent Late-stage Engineering Changes

Design for manufacturability. aP Design allows Design for Manufacturability (DFM) issues to be identified earlier, reducing Engineering Change Orders (ECOs).

Provide Early Insights into Cost

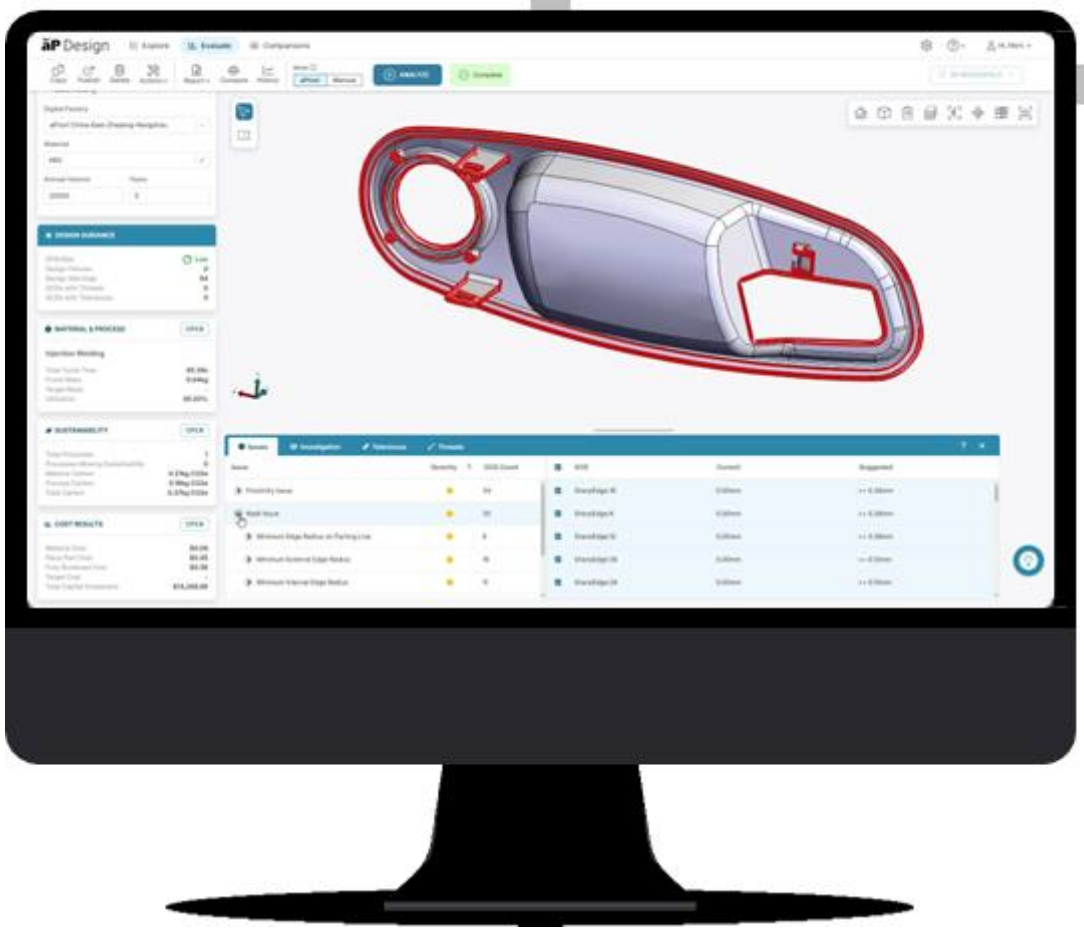
Design Engineers outnumber cost & value engineers, and rarely get visibility into cost of the designs they are producing. And yet, design is responsible for 80% of product cost. With aP Design, product engineers have new levels of insights and guidance to innovate and improve manufacturability, profitability, and sustainability.

Optimize for Cost and CO_2e

Execute trade-off analysis to make data-driven design decisions quickly and early based on cost and carbon equivalent emissions without any expert involvement or time-consuming detailed analysis.

BENEFITS:

- Proactive, early evaluations of the Digital Twin for Cost and Manufacturability, eliminating engineering changes and delays.
- Equip design teams with visibility into product cost and carbon dioxide equivalent emissions.



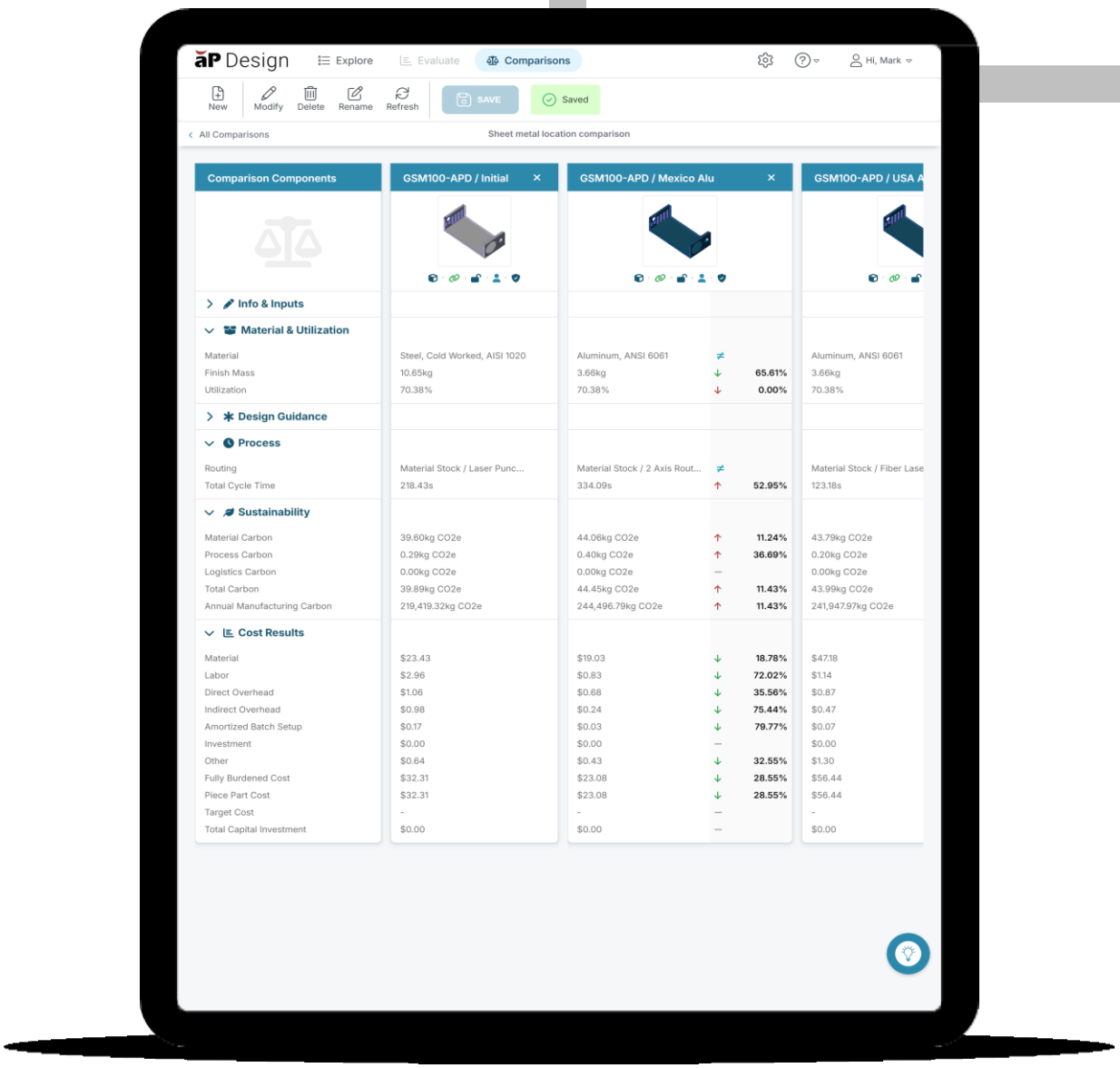
Sustainability

Make data-driven design decisions for more sustainable products

aP Design can not only give insights into cost and manufacturability, but also the environmental impact. Without any additional inputs, the design's carbon footprint is calculated in real time. This is broken out into material and each manufacturing process, allowing you to focus on where you can make the biggest impact.

BENEFITS:

- Conduct trade-off analysis among designs, materials, manufacturing processes, and locations in minutes.
- Focus resources to make the biggest impact on profitability and sustainability.



Proactive carbon avoidance

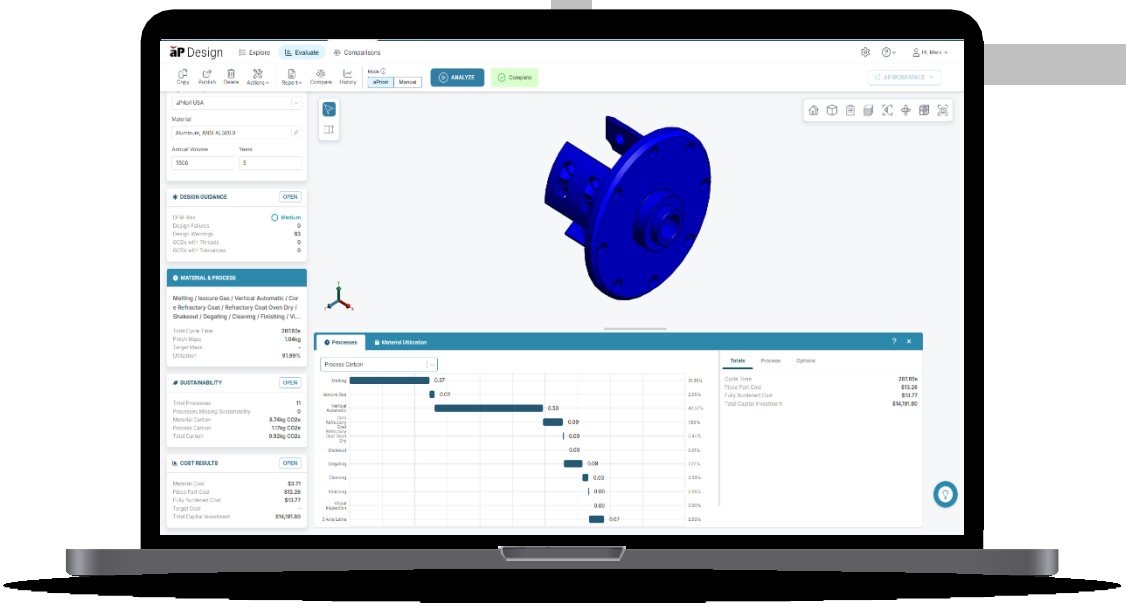
Lifecycle Assessments are complex and time consuming to conduct, and the lengthy report based on industry averages doesn't have the precision or speed to drive design improvements. Sustainability Insights in aP Design allows carbon reduction, to proactively reach net zero goals more quickly.

Select the best design specification to ensure Profitability and Sustainability

Execute trade-off analyses to make data-driven design decisions quickly and early based on cost and carbon equivalent emissions without any expert involvement or time-consuming detailed analysis.

BENEFITS:

- Leverage sustainability insights to evaluate design trade-offs and ensure recyclability and serviceability.
- Gain a competitive edge with sustainable product differentiations and generate long-term value.



WANT TO LEARN MORE?

CLICK HERE to learn more about aP Design, a role-based cloud application for Design Engineers.

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