aPriori

aP Generate

Automate and Accelerate Actionable Manufacturing Insights

aP Generate Overview

Product teams face the constant challenge of launching complex products that satisfy customer needs, comply with sustainability regulations, and meet profitability goals. Competitive pressure creates even shorter windows of opportunity, driving the need to validate product designs rapidly and get to market faster. But this ad hoc process is typically manual, which causes delays and missed opportunities because product development teams don't have the insights or resources to analyze all parts and components effectively.

aP Generate addresses these challenges by providing automated insights at scale, along with proactive alerts for product design teams to review potential design issues quickly and efficiently. aP Generate is an automated and collaborative cloud-based software solution within aPriori's insight platform that integrates with an organization's product lifecycle management (PLM) system. By automating design analysis, product teams significantly reduce administrative tasks that hold them back from addressing strategic initiatives.

"You should not have to do a manual should cost analysis on everything. It's practically impossible and is not a valuable use of time. aP Generate allows us to use less of a 'sledgehammer' approach and more of a 'surgical scalpel' approach. We can cost an entire bill of materials with great efficiency and accuracy using aP Generate that is just not possible manually."

VALUE ENGINEERING MANAGER, CARRIER

Unlock 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

Benefits to your Product Development Lifecycle

Transform Product Launch Stress Into Success

- Automatically analyze designs for cost, manufacturability, and sustainability when they are checked into the PLM system or via a defined trigger
- Conduct cost and manufacturability checks throughout the development cycle to help mitigate risk, keep product launch on schedule, and reduce late-stage issues or ECOs
- Send actionable status notifications to design engineers, cost engineers, workflow owners, managers, or key stakeholders with alerts to DFM Risk ratings and cost results

Example of a DTC Part Summary Report

Transform Off Course Designs into Optimized Products

- Proactively notify stakeholders of products with the highest potential for improvement to help prioritize workload
- Expedite access to aP Design for feature-level guidance to reduce late-stage ECOs and help meet target costs
- Increase speed and coverage of analysis – ensure full product structures are evaluated against target goals
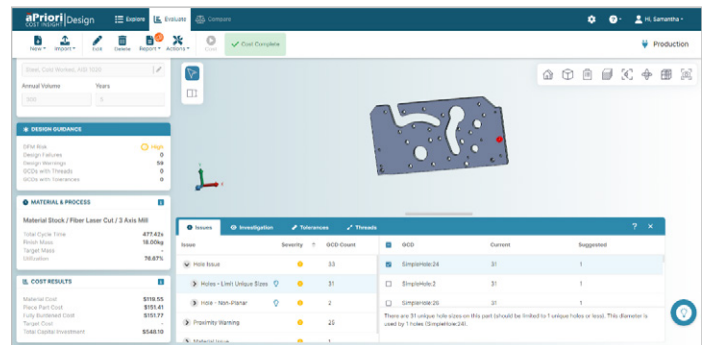
aP Generate provides a direct link to aP Design for feature level guidance

Transform Backlog Into Cost Reduction Opportunities

- In a matter of seconds, consider multiple alternatives based on design, materials, and production volumes
- Analyze entire commodity groups faster than ever before while identifying outliers and cost reduction opportunities
- Optimize productivity through automated analysis, allowing time for proper validation and potential trade-off analysis
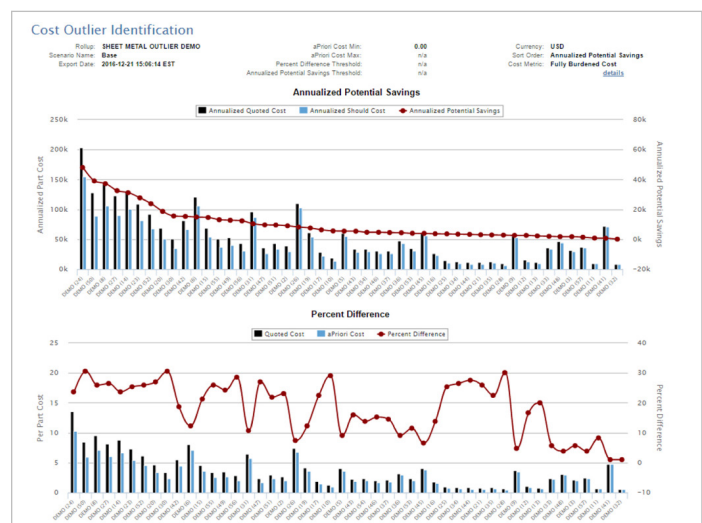

Example of a Cost Outlier Identification Report

aP Generate Highlights

Automated Analysis and Guidance

aP Generate allows manufacturers to automatically run aPriori analysis on multiple components as they get checked into PLM systems or during other user-defined conditions. This enables cost engineering, design engineers, and managing stakeholders to get product status quickly and efficiently. aPriori enables teams to analyze a broader set of product backlog to spot outliers and easily identify parts that need immediate attention.
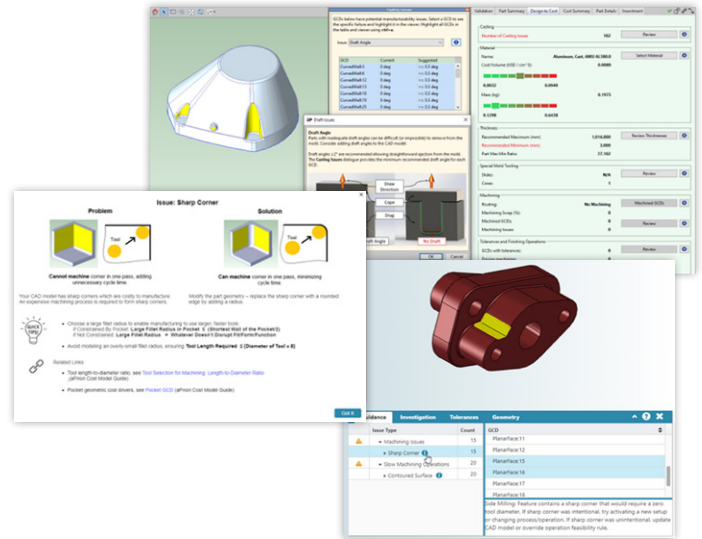
Example of aPriori Design Guidance

Access Rich Insights and Feedback in A Single Click

aP Generate emails manufacturability reports to authorized stakeholders, which include a DFM Risk rating for each part to help prioritize designs for further analysis. The DFM Risk rating indicates the extent and impact of manufacturability issues for the part. Users can also download detailed reports for specific parts.
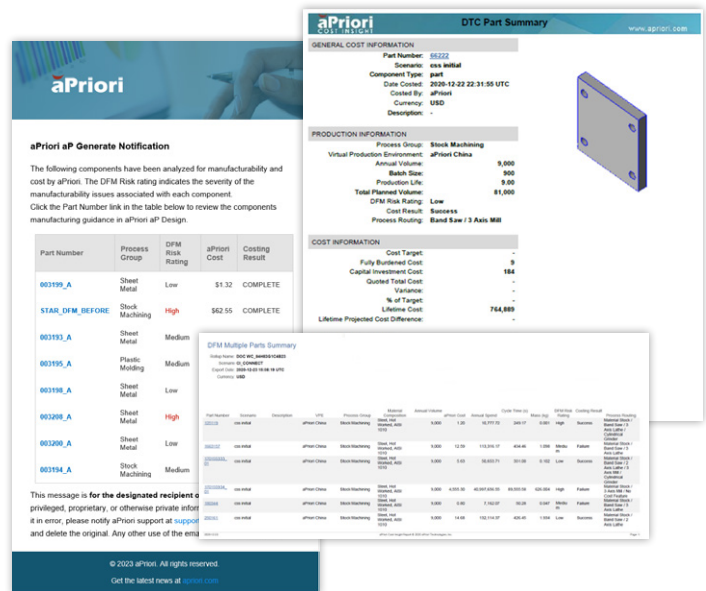
Example email notification and reports

"Automation unlocks the potential to do a lot more should cost calculations–and that means the ability to review more bids. In the past, our team could analyze about 1,000 parts per year. Now, this number is 10,000+."

DFX MANAGER, SIGNIFY

Collaborative Integration

Aside from design engineers, product development team members often lack access to native CAD data. And it's a tedious process for other team members to get this information from the PLM system, export it, and view it in other systems. Therefore, when other systems require specific inputs from the PLM system, it adds extra time and possible rework.

With aP Generate, manufacturers enable streamlined process workflows that eliminate manual rework and enable secure organizational access to analyzed components and results. This feature closes the loop by authoring insights to the master system of record to maintain traceability throughout the design process and maintain a single, centralized product design file.

Extract Part and CAD Files

PLM

aPriori Cloud

Publish DfX Metrics, Cost Estimates, and Reports
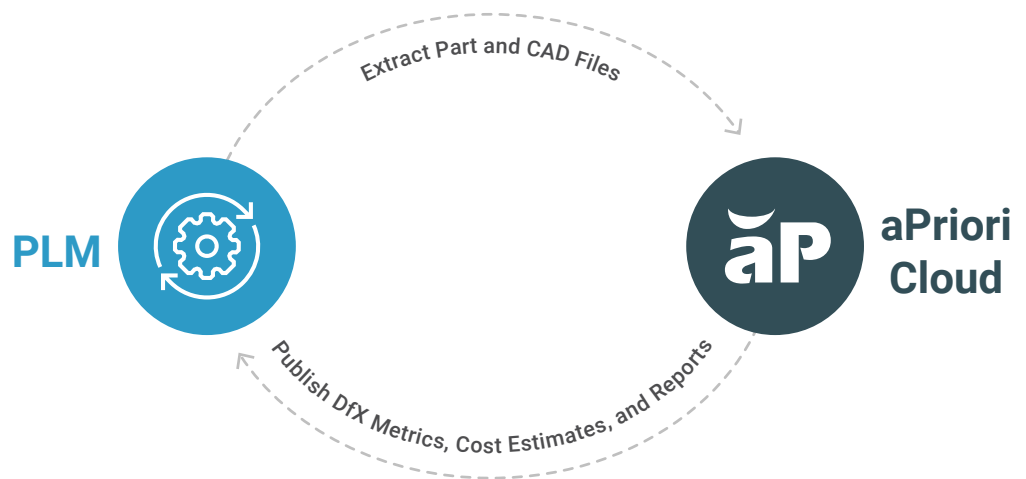
aPriori-PLM system integration extends the digital thread by leveraging PLM attributes and product manufacturing information (PMI) from CAD files. aPriori accesses design changes automatically, analyzes them for DFM, and sends recommended insights back into the PLM system of record. This helps design teams contextualize insights for faster, more informed decision-making.

WANT TO LEARN MORE?

CLICK HERE to learn more about aP Generate, an automated analysis tool that accelerates your productivity and alerts you to critical items needing your attention.