aPriori

CUSTOMER USE CASES

See How Companies Leverage aPriori For Manufacturing Insights

GET STARTED

Introduction

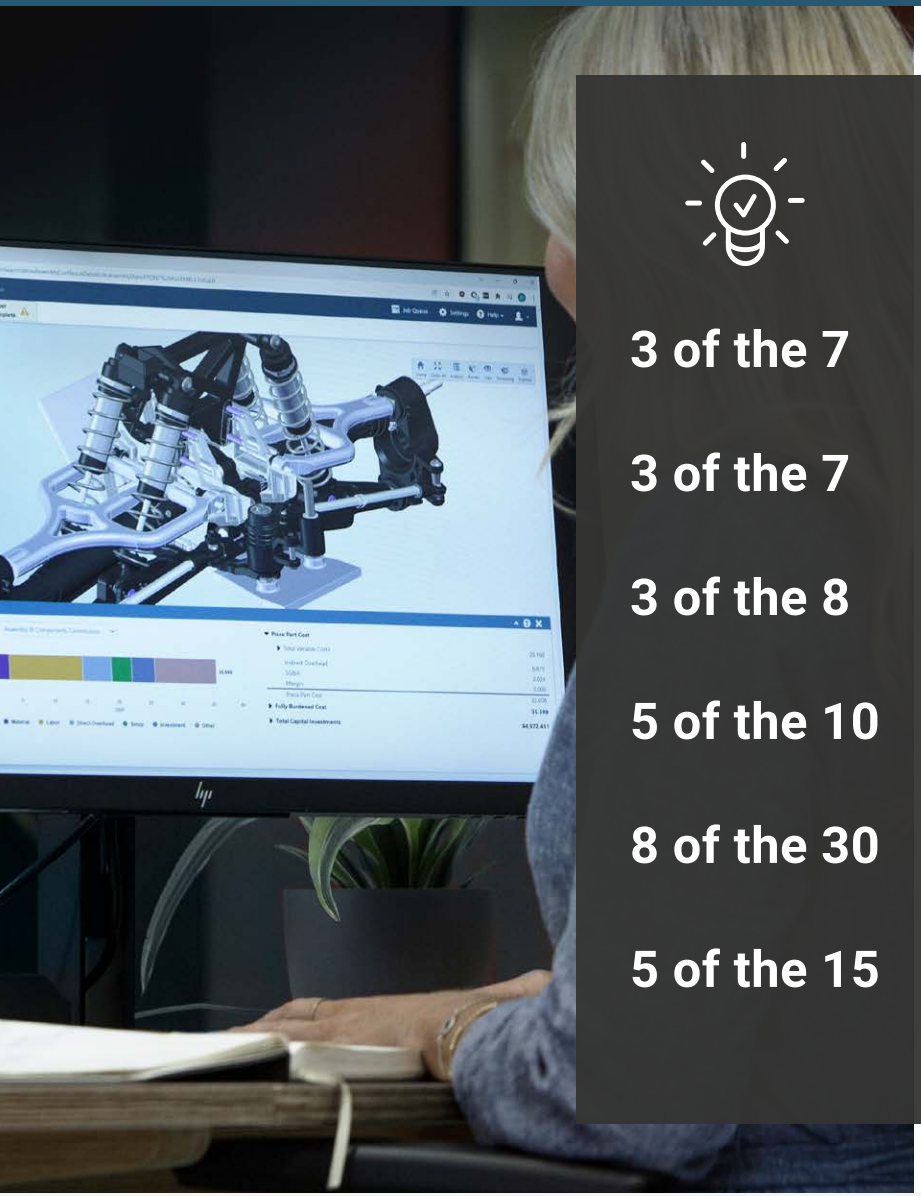
aPriori solutions are for business leaders at discrete manufacturing companies that need to better understand how they can be more innovative, profitable, sustainable and bring their products to market quicker than the competition. Our solutions help you make more informed product design, sourcing, and production decisions confidently.

Unlike other disconnected tools like email spreadsheets and siloed expert knowledge, aPriori automatically combines your product design data with our manufacturing process simulation and regional economic data to yield **insights that accelerate your time to market by 20% while achieving millions of dollars in cost savings.**

We do this by enriching the digital thread and leveraging all the intelligence embedded in your CAD models to enable DfX initiatives such as Design for Manufacturability, Design to Cost, Design for Sourcing, and Design for Sustainability. Innovative companies use these solutions to accelerate time to market, cut costs, increase agility and resilience, and improve sustainability of your manufacturing operations.

The eBook we have assembled here represents a collection of real-world projects and **illustrates the potential and realized savings our customers have identified using aPriori.** Because some of these companies are “brand sensitive” we have removed their names. But rest assured, every one of these examples represents an actual use case.

Who We Work With



3 of the 7	largest tech companies
3 of the 7	largest car companies
3 of the 8	largest heavy truck manufacturers
5 of the 10	largest machinery manufacturers
8 of the 30	largest defense contractors
5 of the 15	most innovative companies in the world

Table of Contents

Design & Cost Engineers

aPriori helps the entire design engineering team by enabling them to manage the manufacturability of multiple projects simultaneously. In just seconds, they can identify and mitigate product cost drivers and highlight manufacturability issues before designs are released. Need real-time DFM and DTC guidance while designing in CAD? We've got that covered too. aPriori offers multiple modes to deliver actionable insights so design and cost engineers can make smarter design decisions in less time.

iRobot

01

Design & Cost Engineers

CHALLENGE

- aPriori was identified as an underutilized resource and regarded as ineffective for supplier negotiations
- iRobot could not challenge supplier numbers because they did not understand the details behind the numbers
- Consequently, they usually defaulted to accepting supplier quotes without an effective way to question the assumptions behind each line item

SOLUTION

- Redefined how to properly utilize aPriori to fit iRobot's current needs
- Customized aPriori for their business model & created specialized digital factories for different suppliers

QUANTIFIED RESULTS

- They established three processes as a corporate standard to maximize aPriori's use:
  - › Take cost out of existing products by leveraging aPriori for value engineering
  - › Use aPriori to drive NPI initiatives ensuring they launch new products at the best cost
  - › Utilize hard data on should cost from aPriori to enable informed supplier negotiations
- Modified negotiations strategy from total cost comparison to cost driver comparison
- Uses aPriori cost models to challenge suppliers' costs based upon facts and assumptions, which pressures suppliers to reveal detailed cost structures and technical parameters

WATCH: THE IROBOT CASE STUDY

EATON

02

Design & Cost Engineers

CHALLENGE

- Eaton wanted to double the output of its NPI investments with a zero-lead time goal and needed:
  - › Intelligent Automated Design – to integrate models, AI and design rules that will guide product design
  - › Connected Infrastructure – to develop solutions for data mapping to enable the digital thread
  - › Model-Based Engineering – to create models to represent systems artifacts

SOLUTION

Relevant aPriori Solution Capabilities

- Design-to-Cost – identify and eliminate cost drivers
- Should Cost negotiations – establish benchmarking for supplier negotiations
- Automated Internal Quoting – build detailed and consistent cost estimates
- Manufacturing Intelligence – optimize manufacturing routing

QUANTIFIED RESULTS

- 87% reduction in design time
- Up to four-fold increase in heat rejected per kg. while also reducing weight by 80%
- Embracing digital technologies significantly impacts engineering lead-time and cost
- aPriori's digital solutions including API and cloud computing supports Eaton's digital strategies

WATCH: THE EATON CASE STUDY

03 Design & Cost Engineers

CHALLENGE

- Aerospace Company had limited resources to develop should cost targets and didn't have an enterprise-wide tool to help with should costing
- They were overpaying for sourced components

SOLUTION

- Implemented a cost engineering team to support use of aPriori – their commodity is machining
- aPriori got Aerospace company up and running quickly – the customer was pleased to realize first value of aPriori in one quarter

QUANTIFIED RESULTS

- $5M realized savings were achieved within the first year of deployment of aPriori
- $4M in potential savings within the first 3 months of implementing aPriori
- aPriori is used to highlight disparity in machine costs and to date, Aerospace company's team has modeled over several hundred parts after aPriori workshops

WATCH: THE WOODWARD CASE STUDY

04 Design & Cost Engineers

CHALLENGE

- With limited resources, this Aerospace Company's team needed to identify parts that were at risk for quality and cost issues
- The build team needed to analyze manufacturability issues using aPriori

SOLUTION

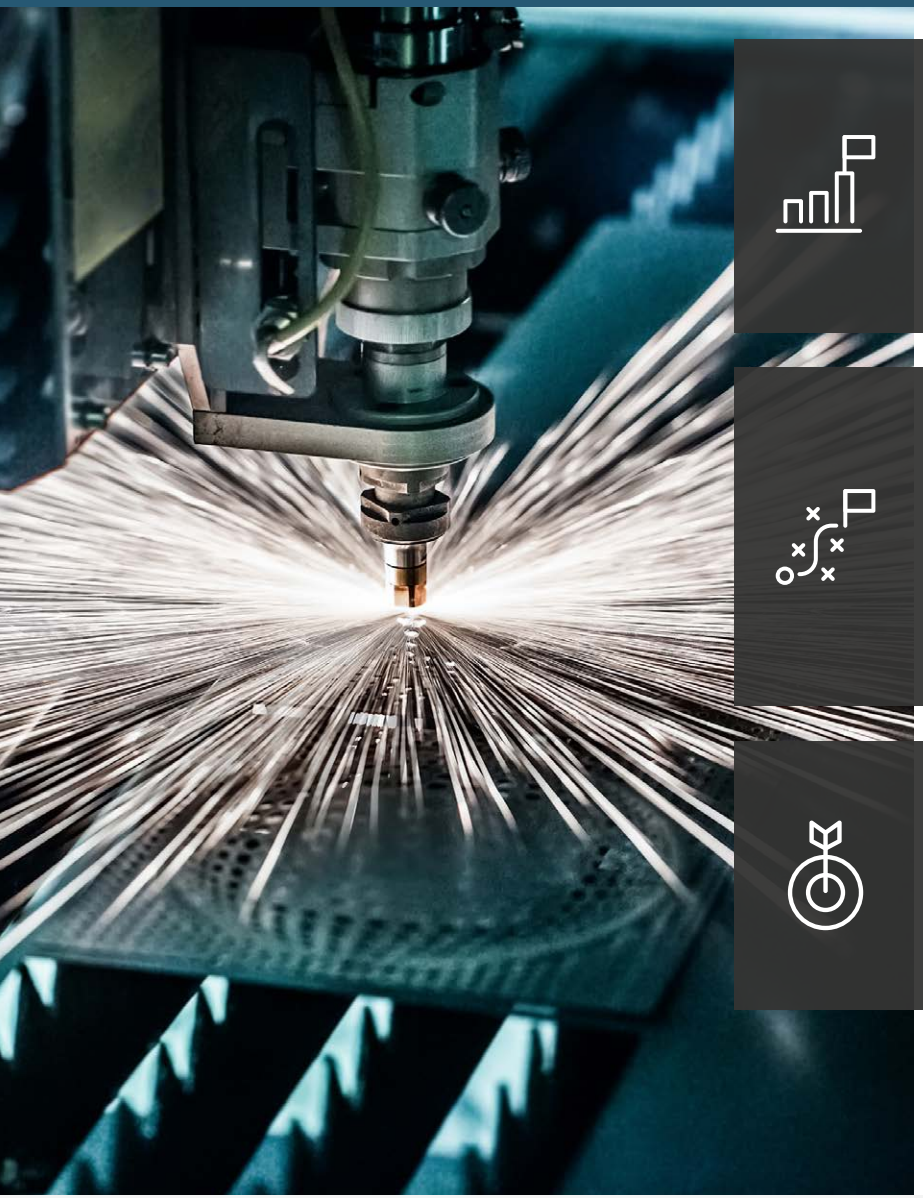
- aPriori was able to match and exceed the analysis of a manufacturability expert at Aerospace Company by identifying additional areas for design improvement
- This validated aPriori as a DFM analysis tool for Aerospace Company
- Now Aerospace Company is looking to drive a larger scale of DFM parts with aPriori

QUANTIFIED RESULTS

- $3M in identified savings over the lifetime of a part
- By leveraging aPriori DFM to redesign the part
- aPriori was used to highlight the part's manufacturing complexity and risk

05

Design & Cost Engineers



CHALLENGE

- Product development for this company was paused due to the proposed design being over-budget
- VAVE team was given a cost reduction target of $1,200 per unit with an urgent 2-week timeline

SOLUTION

- Quickly located parts that could be made more cost-effectively through different manufacturing methods
- Data on regional manufacturing costs pinpointed components that could be effectively outsourced to lower-cost regions
- Analysis identified material cost as a cost driver for large sheet metal

QUANTIFIED RESULTS

- $275K in potential savings identified with aPriori in less than two weeks
- Customer achieved per unit savings of around ~$1500, meeting cost reduction goal
- Identified $150 savings per unit by making more cost-effective design choices

Carrier

06

Design & Cost Engineers

CHALLENGE

- Carrier needed a complete teardown of compressor to get to should cost

SOLUTION

- aPriori generated a should cost for the complex part geometry to determine the expected part cost and machining time

QUANTIFIED RESULTS

- Potential savings of $1.1 million with should cost model for the compressor
- Should cost utilized to identify potential savings for other parts in the part family

READ: THE FULL CASE STUDY

07 Design & Cost Engineers

CHALLENGE

- The customer had a long feedback loop on internal evaluation of materials, design, other processes - as well as with vendors
- Relied heavily on historical data and CAM
- Was using CAM analysis to run parts which was highly time consuming and unsustainable given increasing number of programs and parts; additionally, CAM requires high-level expertise

SOLUTION

- aPriori empowers all kinds of users (technical and non-technical) with easy-to-use information
- aPriori drives cross-functional, organizational impact
- The customer can easily compare designs, achieve directional costing, gather quick design feedback with aPriori

QUANTIFIED RESULTS

- $2.5M+ in realized cost avoidance and 78% reduction in model costing analysis time
- Leveraging aPriori for DFM
- aPriori took 8 hours to complete full machining analysis vs traditional method taking 36 hours
- The customer also saw an 83% reduction in analysis time – taking aPriori only 4 hours to calculate cycle time vs traditional method taking 24 hours
- In another project focusing on machining cycle time, aPriori was within 11.5% of the actual cycle time, supporting the customer's prediction and giving them the confidence, in data, to re-negotiate with suppliers

08

Design & Cost Engineers

CHALLENGE

- Agricultural company needed to identify which components had room for design improvements to reduce costs
- They were also looking to determine if their parts were missing crucial criteria due to legacy carryover parts that required updating

SOLUTION

- With aPriori, they reviewed legacy components and made necessary updates, understanding the true volume for components used across multiple assemblies/platforms
- This allowed them to determine whether the component should be supplied or manufactured in house
- Taking it a step further, they were able to determine which internal factory location would provide the greatest opportunity for cost reduction

QUANTIFIED RESULTS

- $2.1M in estimated savings identified leveraging aPriori for a deep dive assembly cost analysis
- Evaluated 104 unique parts numbers, including a mix of weld assemblies, molded components, hardware, & various sheet metal processes
- After evaluating the feasibility of moving components in house, the company was able to compare internal digital factory locations with aPriori, identifying the best opportunity for increasing margin by realizing a delta of $1,207 per assembly

Danfoss

09

Design & Cost Engineers

CHALLENGE

- This climate control company was looking for advanced ways to analyze their products for cost optimization, ensuring each part of every product was competitively priced

SOLUTION

They established three processes as a corporate standard to maximize aPriori's use:

1. Take cost out of existing products by leveraging aPriori for value engineering
2. Use aPriori to drive NPI initiatives ensuring they launch new products at the best cost
3. Utilize hard data on should cost from aPriori to enable informed supplier negotiations

QUANTIFIED RESULTS

- $20M in realized savings by leveraging aPriori for value engineering as part of their cost down initiative
- A key imperative for them going forward is to maximize aPriori's use across the organization to deliver value to the business and has made aPriori accessible to everyone at the company
- Along with the substantial realized savings, company projected a reduction in target cost by 20-30% with NPI initiatives using aPriori

READ: THE FULL CASE STUDY

10

Design & Cost Engineers

CHALLENGE

- Defense contractor's team needed to transition from low-rate volumes to full production with cost and cycle time challenges
- They had limited manufacturing expertise on the team which required an alternative solution to identify cost savings
- They were bound by strict program time constraints

SOLUTION

- Utilized aPriori to simulate high-risk, machined components manufacturing
- Analyzed alternative manufacturing processes for outliers
- Identify areas where the design specifications were driving their costs

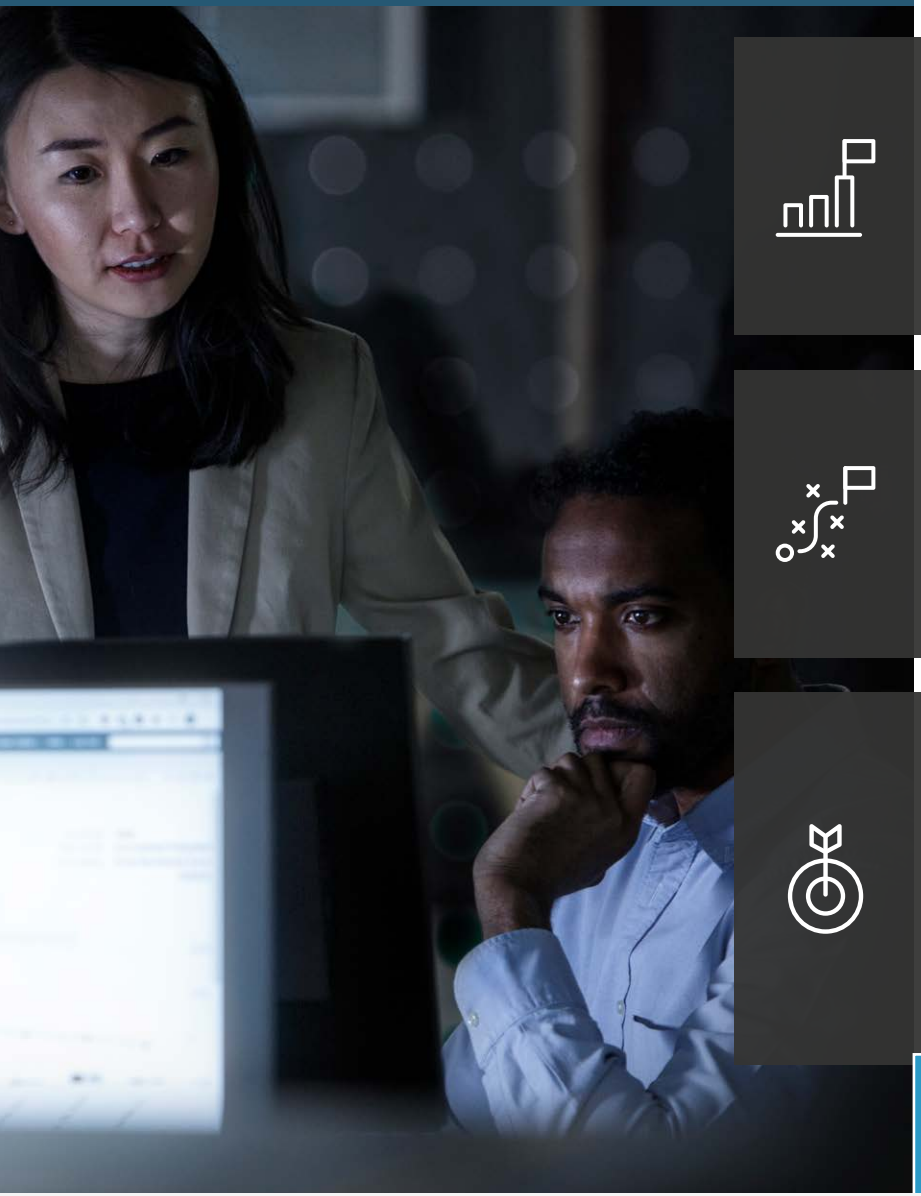
QUANTIFIED RESULTS

- >$100M in expected program lifetime savings (5 years) by uncovering manufacturing alternatives through aPriori
- Company leverages aPriori for significant DFM insight and alternate manufacturing feasibility

RAFAEL
SMART AND TO THE POINT

11

Design & Cost Engineers



CHALLENGE

- Rafael needed to manage cost from design to manufacturing
- Design Engineers were expected to know details A through Z for any given project
- In one case, 10 manufacturers declined a project because it would take too much time and effort based on the design

SOLUTION

- aPriori drives DFM in stocking machining, sand casting, heat/surface treatments, sheet metal, die casting, plastic injection, investment casting, and secondary processes
- They are now able to easily identify design improvement opportunities, decreasing cost and substantially reducing the manufacturability effort

QUANTIFIED RESULTS

- Used aPriori for DFM on a part and achieved cost reduction from ~$1400 to ~$650 by leveraging aPriori for simple and complex design changes
- Once re-designed, the part was accepted by the preferred manufacturer
- Within 10 months of aPriori implementation, Rafael went from a less than 10 to over 100 users

WATCH: THE RAFAEL CASE STUDY

HUSSMANN®

12

Design & Cost Engineers

CHALLENGE

- Hussmann needs to continuously evaluate parts for savings opportunities
- The cost group needed to develop manufacturing cost models capable of driving true supplier cost transparency

SOLUTION

- Parts are run with an initial cost and then moved and qualified into a list for savings opportunities
- Process includes consideration of supplier changes, material changes, or other design opportunities

QUANTIFIED RESULTS

- S10M tracked savings in a three-year period
- aPriori is a central part of the qualification process for identifying which opportunities to pursue

Sourcing & Procurement

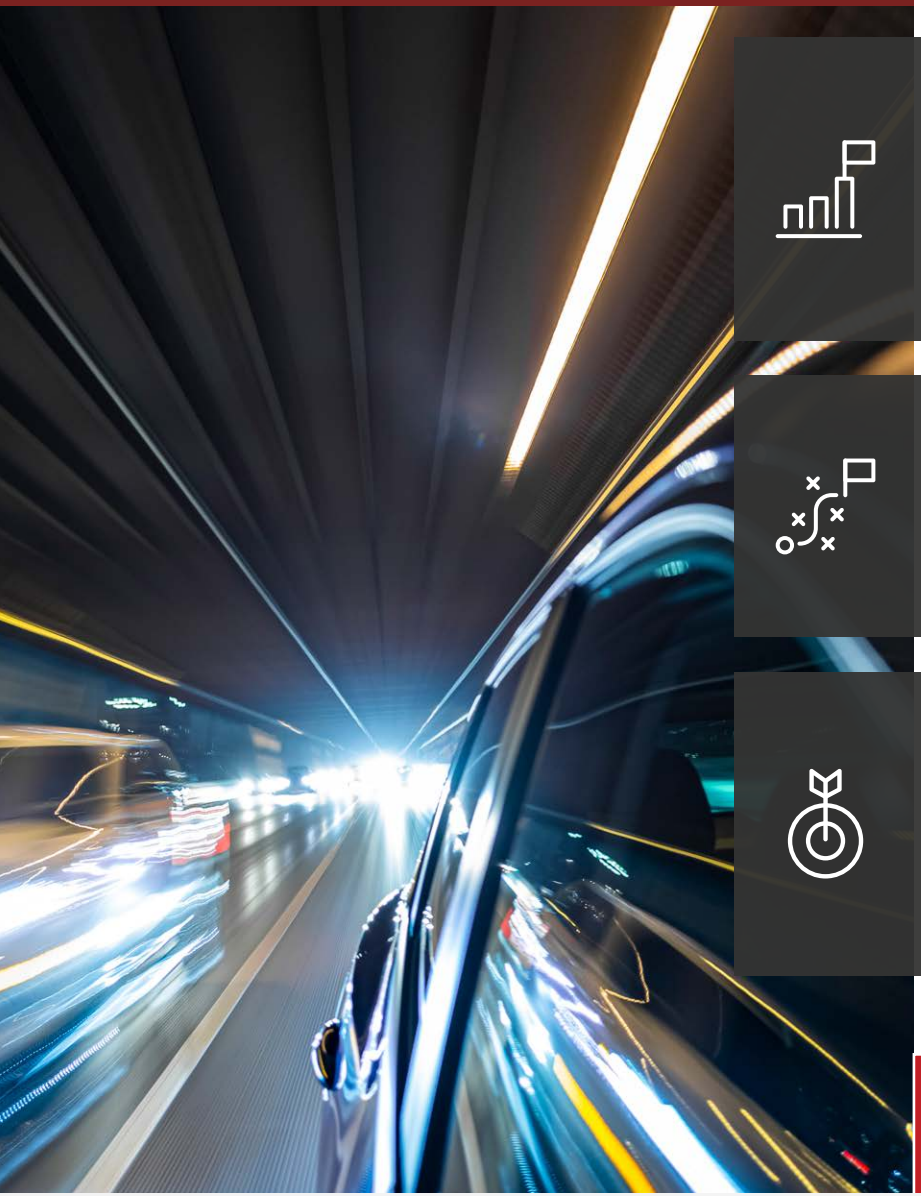
aPriori enables sourcing managers and buyers to identify the best opportunities for cost savings as well as the suppliers that are best suited to make their parts in the most cost-effective way. aPriori helps you engage your suppliers early in the product development cycle to leverage their manufacturing expertise in a cost collaborative manner so that savings are realized and relationships grow.

With aPriori's manufacturing simulation software, procurement teams can rapidly identify key cost components and drivers for products you quote for your customers. aPriori automatically detects potential manufacturability issues for a single part or for an entire bid package. But that's not all. aPriori analyzes cost variances across a range of manufacturing different routings, materials or regions of the world –all in a matter of minutes.

Signify

01

Sourcing & Procurement



CHALLENGE

- Procurement at Signify is tasked with “get more with less” – fact-based negotiations
- Having access to information and the ability to listen and understand their suppliers are crucial components of a successful negotiation
- Should costing entails complexity and is time-consuming

SOLUTION

- aPriori automates and simplifies the process with aPriori
- More data leads to more relevant negotiations and more savings
- Should cost calculations permeates whole departments

QUANTIFIED RESULTS

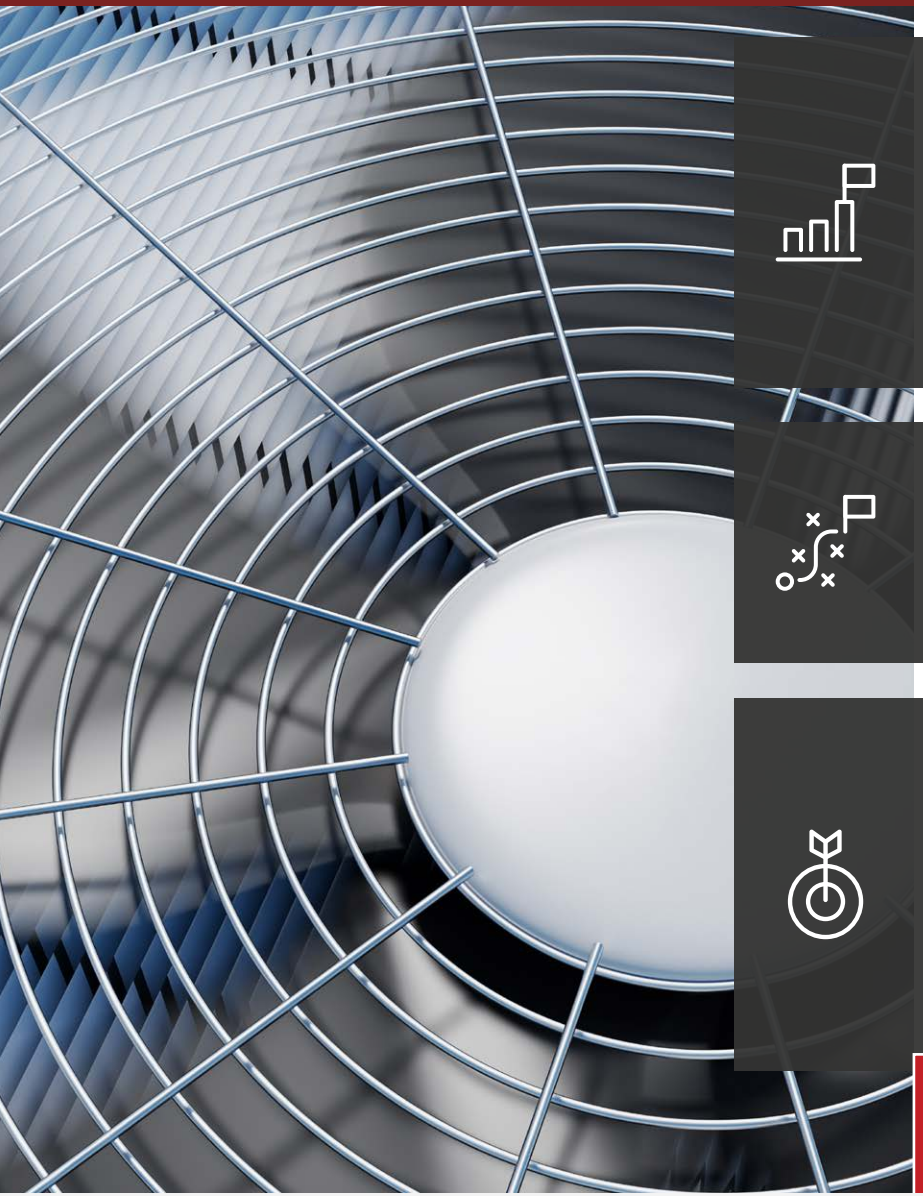
- 10X increase in die casting, plastic injection molding & lenses, sheet metal, and aluminum extrusion should cost calculations
- Simple to access and easy to use for all
- Easy to identify relevant parts for negotiation and track savings

WATCH: THE SIGNIFY CASE STUDY

Carrier

02

Sourcing & Procurement



CHALLENGE

- Carrier is aiming to reduce its customers' carbon footprint by more than 1 gigaton by 2030
- Data Fidelity – measurability of effort; supplier requirements with no means to enforce
- Lack of Metrics – unclear tradeoffs between cost and sustainability as design engineers are being asked for more sustainable parts
- Environmental Product Declarations – can take 8-18 months to complete

SOLUTION

- aPriori Sustainability module allows quick comparison on parts and products
- aPriori generates electricity and material info for LCA Section A calculations
- Auto-create industry reports for parts and products

QUANTIFIED RESULTS

- Created embodied carbon metrics and cost model in 2 months while similar competitor product analysis without cost model took ~18 months
- Single plastic part showed an opportunity to reduce cost and emissions through a material change with savings of $60K and 10T of carbon
- Full LCA took ~12 months - six months faster with several thousands saved in productivity. No need to use third parties or sustainability consultants

WATCH: THE CARRIER CASE STUDY

NIKOLA™

03

Sourcing & Procurement

CHALLENGE

- Increasing vehicle design complexity and need for customization requires new and more tools
- Drastic increase in lead times to get the required tools resulting in product release delays
- Decline in available skilled labor workers is leading to increase in labor costs

SOLUTION

- CAD-Integrated Cost Models – includes injection mold tooling, set cost targets, feasibility checks, and preliminary mold flows
- Detailed Tooling Cost Breakdown – over 50 negotiable items ensuring best pricing and expedited tool production, inclusive of mold trial costs

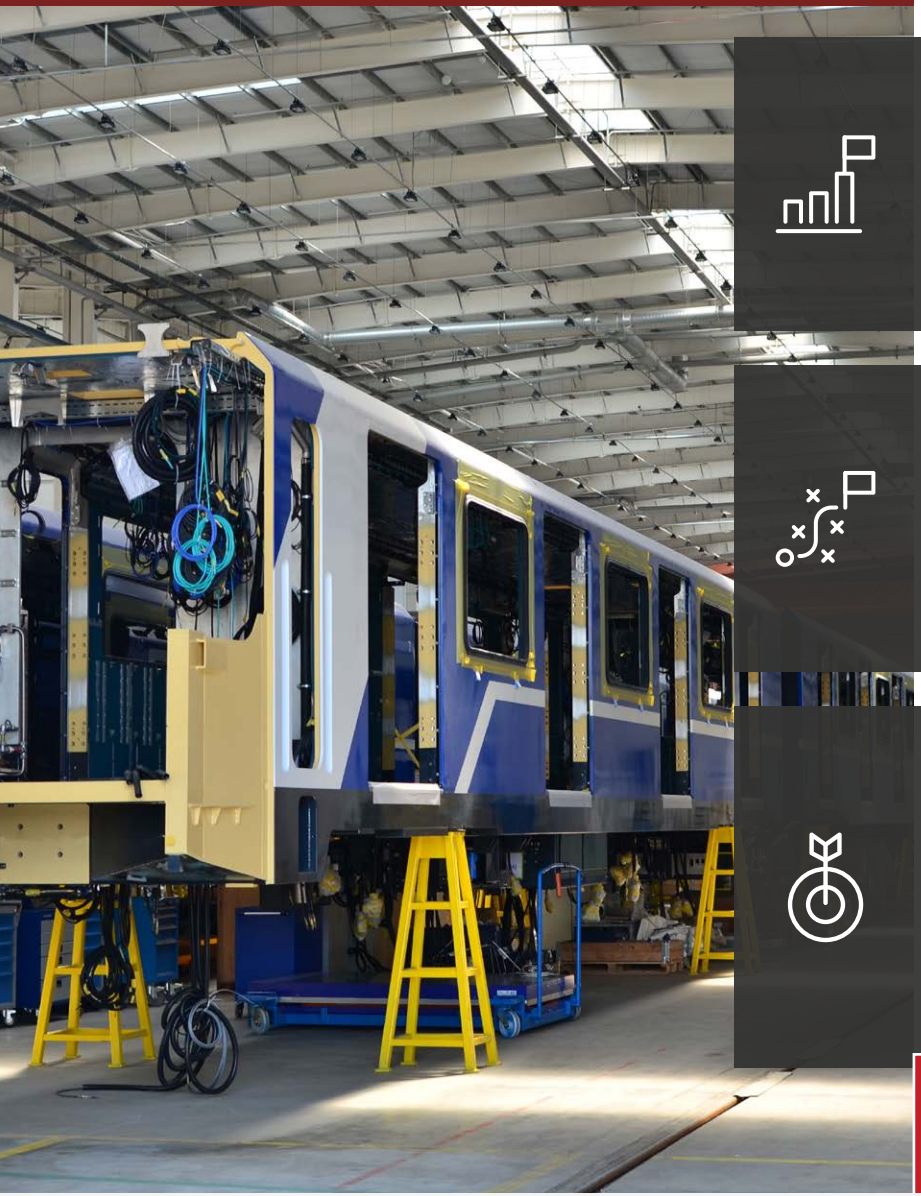
QUANTIFIED RESULTS

- Achieved 20%-30% savings in the first year with aPriori software
- aPriori calculates upfront details on piece price, cycle times, labor costs, and machine burden rates
- Understand optimal pricing for parts across various regions before issuing RFQs

WATCH: THE NIKOLA CASE STUDY

ALSTOM 04

Sourcing & Procurement



CHALLENGE

- The design engineering team was charged with evaluating new projects and developing cost models to facilitate more effective supplier negotiations
- With last-minute RFQs, Alstom could not afford to wait for every bid to come back, which forced them to simply accept the first bid (not necessarily the most optimized bid)

SOLUTION

- aPriori's digital manufacturing simulation is used to model manufacturing costs for 20,000+ annual parts
- Alstom has modeled supplier costs for 100,000+ parts while implementing a Zero-RFQ methodology with aPriori
- aPriori promotes more cost-effective sourcing methods while expanding Zero-RFQ capabilities

QUANTIFIED RESULTS

- 40% savings on recurring costs by implementing Zero-RFQ
- Suppliers collaborating in the Zero-RFQ process reported significant improvements, including: efficiency savings in resources responding to RFQs, stronger customer relationships, and enhanced win forecasting
- Once Zero-RFQ is in place with a supplier, Alstom can simply send a new PO to the supplier, who will start manufacturing the part within days

WATCH: THE ALSTOM CASE STUDY

HARMAN
A SAMSUNG COMPANY

05

Sourcing & Procurement

CHALLENGE

- The cost group at Harman needed to develop manufacturing cost models capable of driving true supplier cost transparency

SOLUTION

- aPriori's ability to configure custom digital factories for a variety of production processes allows for flexible use across a wide variety of products
- The customer leverages digital factories that can be configured to reflect important parameters for different products and suppliers
- The customer has embraced aPriori's Cost Model Workbench to create customer specific cost models for connectors, packaging, and freight

QUANTIFIED RESULTS

- ~$30M realized savings leveraging aPriori for effective supplier negotiations
- With true supplier cost transparency, Harman has worked with suppliers to develop long term plans, rationally consider new investments, and communicate more systematically on savings opportunities

HOW: HARMAN COLLABORATES WITH SUPPLIERS TO REDUCE COSTS

06

Sourcing & Procurement

CHALLENGE

- Company was using Excel and derivative costing methods
- No insight into how parts are manufactured
- Relied on their supplier base for cost

SOLUTION

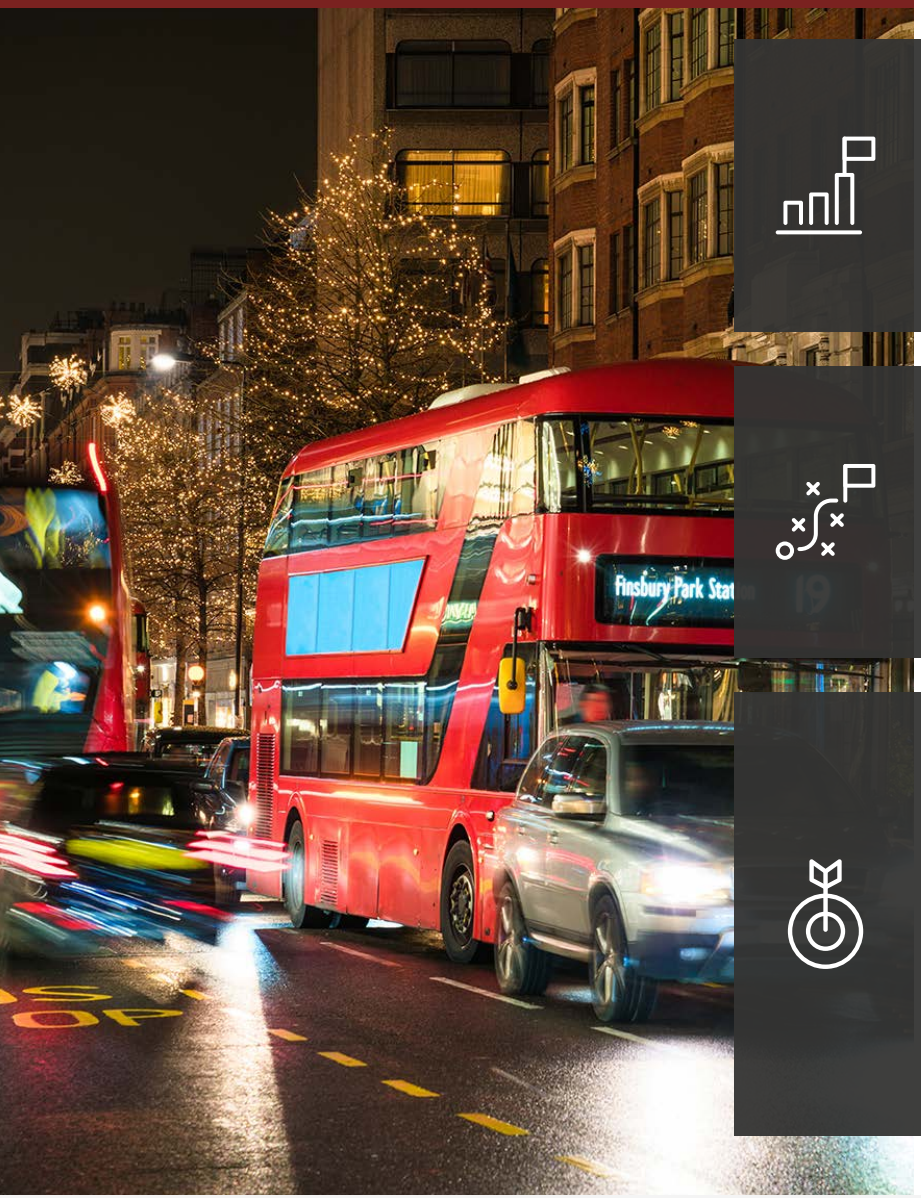
- They primarily leverage aPriori in the AWS cloud to create should cost estimates
- With aPriori, the reduced should cost modeling time went from weeks to 4 days

QUANTIFIED RESULTS

- Realized ~$25M realized savings through supplier negotiations
- Processes run through aPriori include casting, forging, machining, and PCBA

07

Sourcing & Procurement



CHALLENGE

- This new EV industry disruptor had limited insight into the cost of parts coming from a new supply chain
- They didn't have historical data to help them determine what a part should cost
- They were reliant on their supply base for cost information

SOLUTION

- aPriori is implemented in a centralized cost engineering group in the AWS cloud to generate should costs based on supplier's manufacturing capabilities
- This group is using aPriori to model should cost for their sourcing team, arming them with the details they needed to confidently execute fact-based negotiations

QUANTIFIED RESULTS

- $76M+ in annual contracted savings during supplier negotiation
- EV disruptor uses aPriori should cost to have detailed fact-based negotiation with supplier
- aPriori's should cost estimated part cost well below the supplier quoted cost
- A new supplier was then identified that quoted at $1500 less per part on a volume of 50,000 parts
- With aPriori's detailed insights, they were able to understand and discuss mechanistic versus business cost drivers

08 Sourcing & Procurement

CHALLENGE

- This air management systems manufacturer was looking for a technology to facilitate fact-based should cost negotiations
- They needed to commit to developing a cohesive cost strategy

SOLUTION

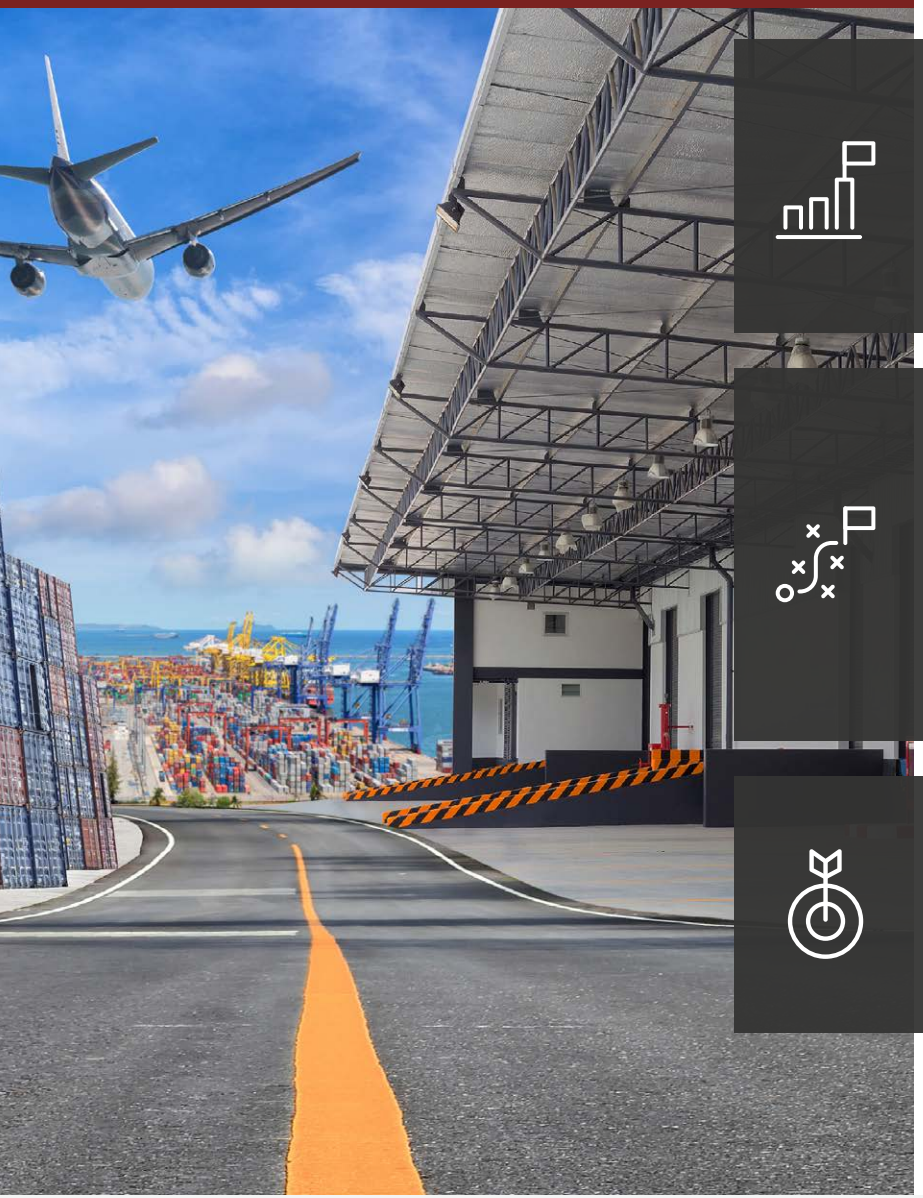
- Executed and closed the loop on first negotiation supported by aPriori results
- Using aPriori, they have confirmed realized savings in metal and plastic parts in sheetmetal, machining, PIM, and vacuum forming projects

QUANTIFIED RESULTS

- 13 million annual hard dollar savings through utilizing aPriori in fact-based negotiations:
  - Metal parts: ~€9M, 25-30%
  - Plastic parts: ~€4M, 35%
- After first €20k of savings, sufficient savings potential identified against annual goal to realize €300k savings
- Additional savings is expected across both commodities as only 30-40% of the parts have been costed/ negotiated

09

Sourcing & Procurement



CHALLENGE

- Company needed a make vs buy analysis when sourcing a part to and needed a make vs buy analysis to determine if they could make it cheaper themselves, continue sourcing, or change sourcing
- Needed a technology that could benchmark costs across various locations

SOLUTION

- aPriori digital factories allow them to compare their internal costs as well as costs to source from different parts of the globe
- aPriori feedback provided the insights they needed to make the decision to move forward with outsourcing the part
- This same feedback provided them with the details they needed to negotiate pricing with supplier

QUANTIFIED RESULTS

- $1M in cost avoidance using aPriori should cost
- To validate the results, they asked for a quote, and it closely approximated the aPriori should cost, increasing their confidence in the technology

10

Sourcing & Procurement

CHALLENGE

- Company was sourcing several parts from different suppliers
- Needed a single technology for should cost standardization across their team of experts

SOLUTION

- They now use aPriori via a central, global team of cost experts to deliver should cost during their annual negotiations with various suppliers
- The company conducted fact-based negotiations with their suppliers to meet should cost targets

QUANTIFIED RESULTS

- $2M in realized annual savings on 1,000 parts from suppliers
- Costing team is now utilizing one centralized platform, aPriori Manufacturing Insights Platform, to automate should costs, improving time to market further automates their should cost

11

Sourcing & Procurement

CHALLENGE

- Company needed a technology to aid in should cost negotiations

SOLUTION

- Executed and closed the loop on first negotiation supported by aPriori results
- After first €20k of savings, sufficient savings potential has been identified against annual goal to realize €300k savings

QUANTIFIED RESULTS

- €20k savings in phase one implementation
- Identified a machined casting that has shown a potential of €12k savings (59% cost reduction potential)

flex

12

Sourcing & Procurement

CHALLENGE

- Flex was using Excel-based tools and had issues with revision history, rate accuracy, and more
- It was difficult for them to coordinate processes throughout the different regions
- Flex wanted to use one consistent, global approach as the company standard

SOLUTION

- aPriori chosen as Flex's standard tool for quoting sheet metal in all of their locations
- aPriori is integrated with their P&L tool that is used to generate customer facing quotes

QUANTIFIED RESULTS

- Improved win rates from 15% to 68% by increasing clarity and consistency with quotes using aPriori
- Time-to-quote has a minimum 35% decrease (75-80% for many parts)
- aPriori gives Flex the ability to forecast material sourcing requirements which is key with everchanging prices for raw material

WATCH: THE FLEX CASE STUDY

13 Sourcing & Procurement

CHALLENGE

- Supplier's manual quoting processes were slow and time consuming
- This resulted in a low number of RFQ responses, therefore a lower total potential value of potential business to be won

SOLUTION

- Supplier leveraged aPriori Expert Services to consistently iterate their digital factories
- Depth of detail brought increased confidence in the cost model, leading to even greater time savings
- aPriori is now supporting all areas of their business – quoting, sourcing, design, and internal manufacturing
- An internal test was run to compare the previous cost calculation method with aPriori for total time taken to cost thermoform parts

QUANTIFIED RESULTS

- 90% reduction in time to quote
- Internal test results concluded that the average time to cost the part was 22 minutes in aPriori vs 3.5 hours in Microsoft Excel

Applied Services

aPriori's Applied Services Team exists to teach customers how to use aPriori's Manufacturing Insights Platform with their own business process. Integration of aPriori's manufacturing insights into business processes allows for generation of increased savings, managed supply chain risk, and efficiency gains.

01

Applied Services

CHALLENGE

- Suppliers had shared cost details, but manufacturer had no benchmarks
- They needed a should cost technology for fact-based negotiations

SOLUTION

- Company used aPriori to cost 7 assemblies with $2M spend
- Compared supplier cost details to aPriori cost estimates

QUANTIFIED RESULTS

- $220k annual realized savings using aPriori to facilitate transparency with supplier
- Reviewing cost and cycle time benchmarks with supplier exposed savings opportunities - no design or supplier changes required

02

Applied Services

CHALLENGE

- Aerospace parts manufacturer quotes were inconsistent across a family of parts
- Lack of transparency about how parts were made by supplier

SOLUTION

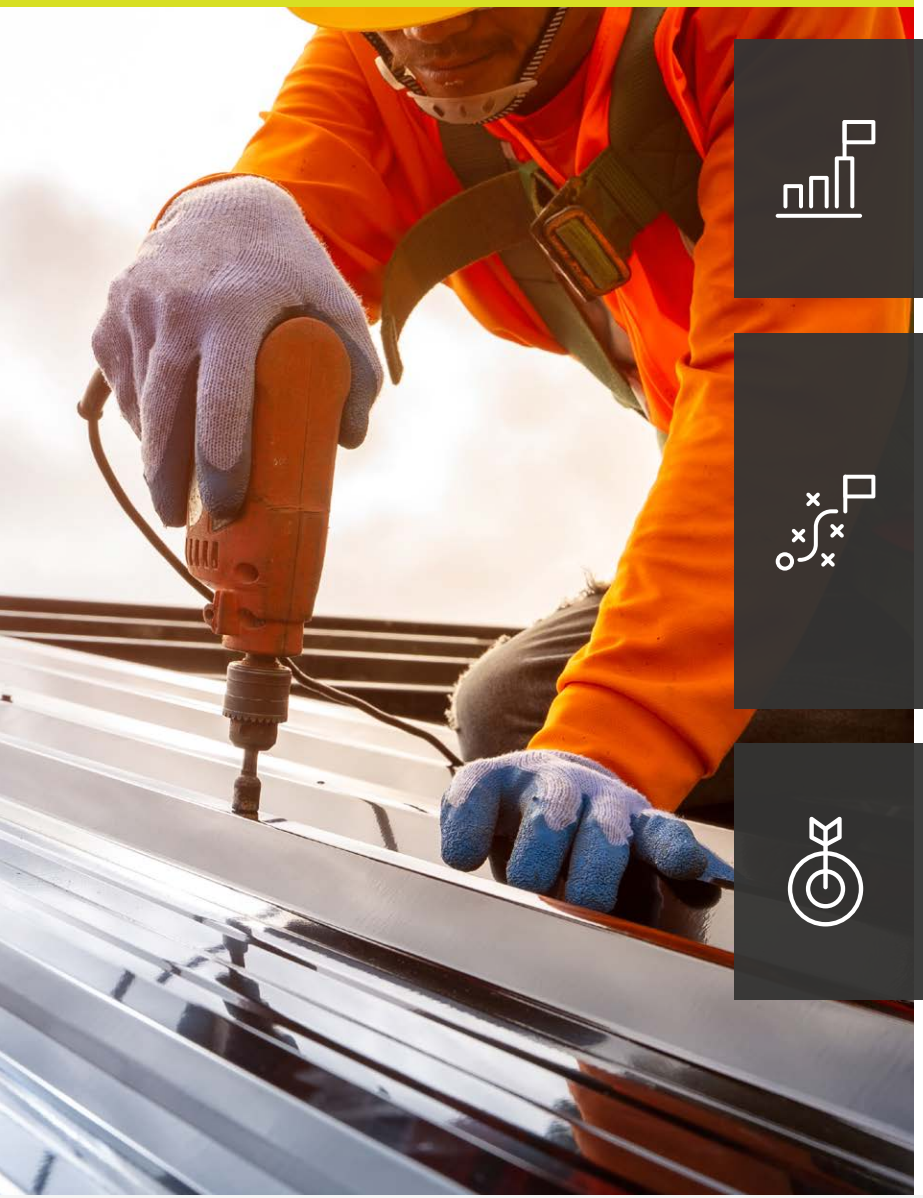
- Company used aPriori to cost 20 machined parts
- aPriori data determine that four parts with $100K spend are all made using similar machines

QUANTIFIED RESULTS

- $50k annual realized savings on the $100K annual spend
- Used aPriori to identify savings and negotiate for entire part family
- Reviewed cost inconsistencies with supplier to reduce the cost on three of four parts

03

Applied Services



CHALLENGE

- Company needed to identify cost outliers and address capacity constraints
- Analysis of 48 high volume machined parts in 6 regions showed out of the box aPriori estimates were actually higher than the supplier quotes

SOLUTION

- The costing and design engineering team worked with aPriori's Applied Services Team to compare supplier quotes & aPriori data for similar parts to identify cost outliers, which were not being processed on automated machines due to capacity constraints
- aPriori data was used to identify parts that could be made on the same high-volume equipment.

QUANTIFIED RESULTS

- Analyzed 48 machined parts in aPriori with $9.6M total spend. $116K realized through negotiation. $696K realized through equipment change
- $812K in achievable savings identified in less than 1 week

04

Applied Services

CHALLENGE

- Analysis of 40 high volume plastic parts purchased in one region
- Although the overhead had been reduced to assume 80% depreciated machines, the supply base had even lower overhead cost and many parts cost less than the estimate

SOLUTION

- The aPriori Applied Services Team analyzed supplier quotes & aPriori data for similar parts to identify for which the relative cost of manufacturing was high
- Compared quote details to aPriori details to identify where to focus the discussion

QUANTIFIED RESULTS

- $38k in achievable savings for just one part. Highlighted cost outliers for which the cost of making the parts was not in line with similar parts
- 40 Plastic parts purchased in high volumes from supplier. Identified saving opportunity on 7 parts

05

Applied Services

CHALLENGE

- Customer sourcing team was given a target of $500K savings during a 2 day aPriori workshop
- Analysis of 10 weldments that were part of a current negotiation were the focus

SOLUTION

- The aPriori Applied Services Team partnered with the customer in building a negotiation strategy and providing best practices for should-cost negotiation
- aPriori was used to identify parts manufactured via equivalent processes but with significantly different quoted prices

QUANTIFIED RESULTS

- Analyzed 5 assemblies in aPriori with $3.3M total spend and identified $500K in achievable savings in less than a week
- Identified achievable savings of 15% across total spend

06

Applied Services

CHALLENGE

- Customer sourcing team was given a target to realize savings on 12 parts and 13 assemblies in different regions before implementation was complete

SOLUTION

- Identified steel parts where material cost accounts for over 80% of the total cost but the quoted cost per part mass was inconsistent
- aPriori provided a conservative target cost to compare against actual supplier pricing

QUANTIFIED RESULTS

- $300K in achievable savings identified in less than a week
- Analyzed the 12 parts and 13 assemblies in aPriori with $3.7M total spend and identified achievable savings of 8% across total spend

07

Applied Services

CHALLENGE

- Customer sourcing team conducted an analysis of 10 PCBAs from a single supplier
- Team was tasked by management with a target of $250K savings from negotiations

SOLUTION

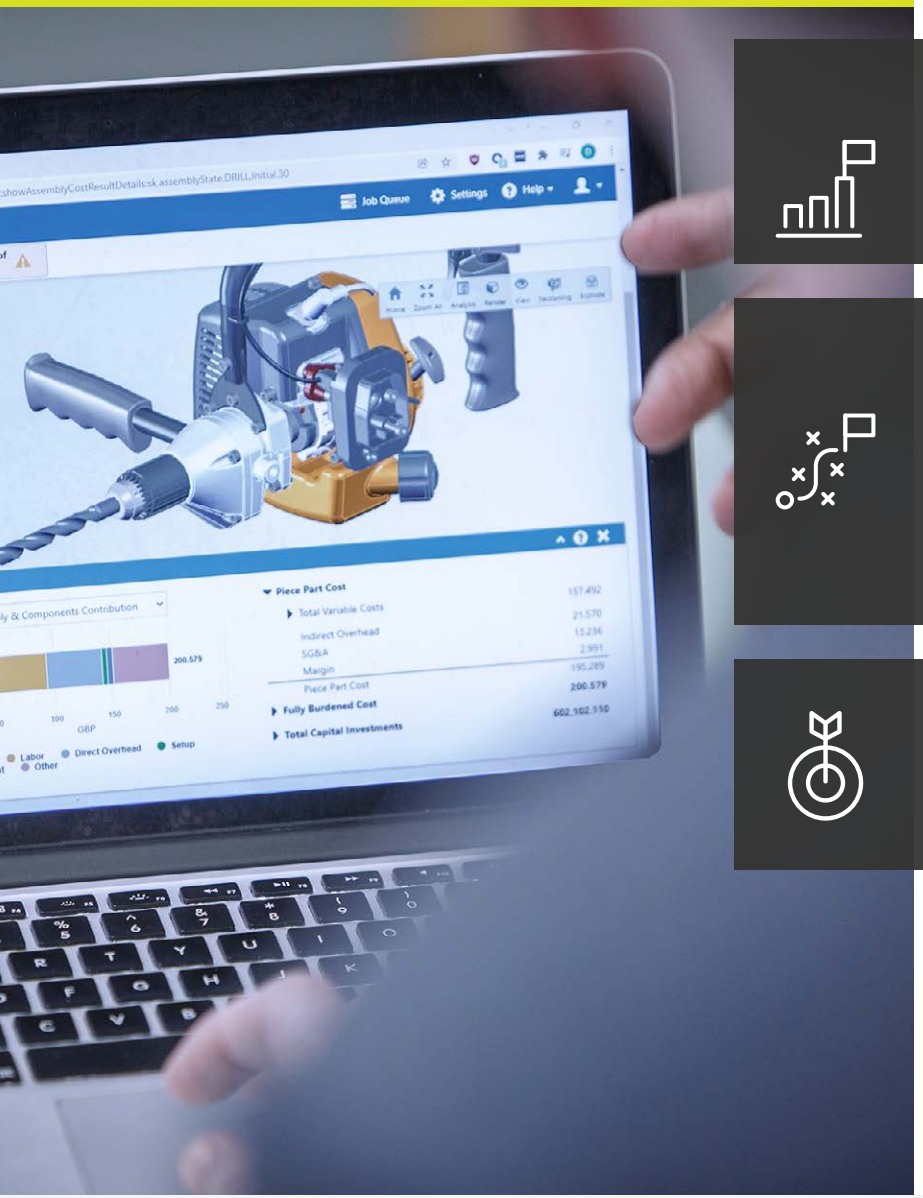
- aPriori demonstrated significant value by leveraging a fact-based negotiation with a supplier that historically was not open to negotiations
- With a breakdown of manufacturing costs and subcomponent pricing from aPriori's electronic data collection tool, the customer was able to extract critical negotiation detail from the supplier

QUANTIFIED RESULTS

- 450K+ in actual savings using aPriori in PCBA negotiations
- In less than three months:
  - › Customer negotiated 10 PCBA boards
- Realized 4-5% savings per PCBA utilizing aPriori's mechanistic digital factory

08

Applied Services



CHALLENGE

- Sourcing Team identified sets of parts that were targeted for cost reduction
- aPriori Applied Services consultant supported in costing of parts

SOLUTION

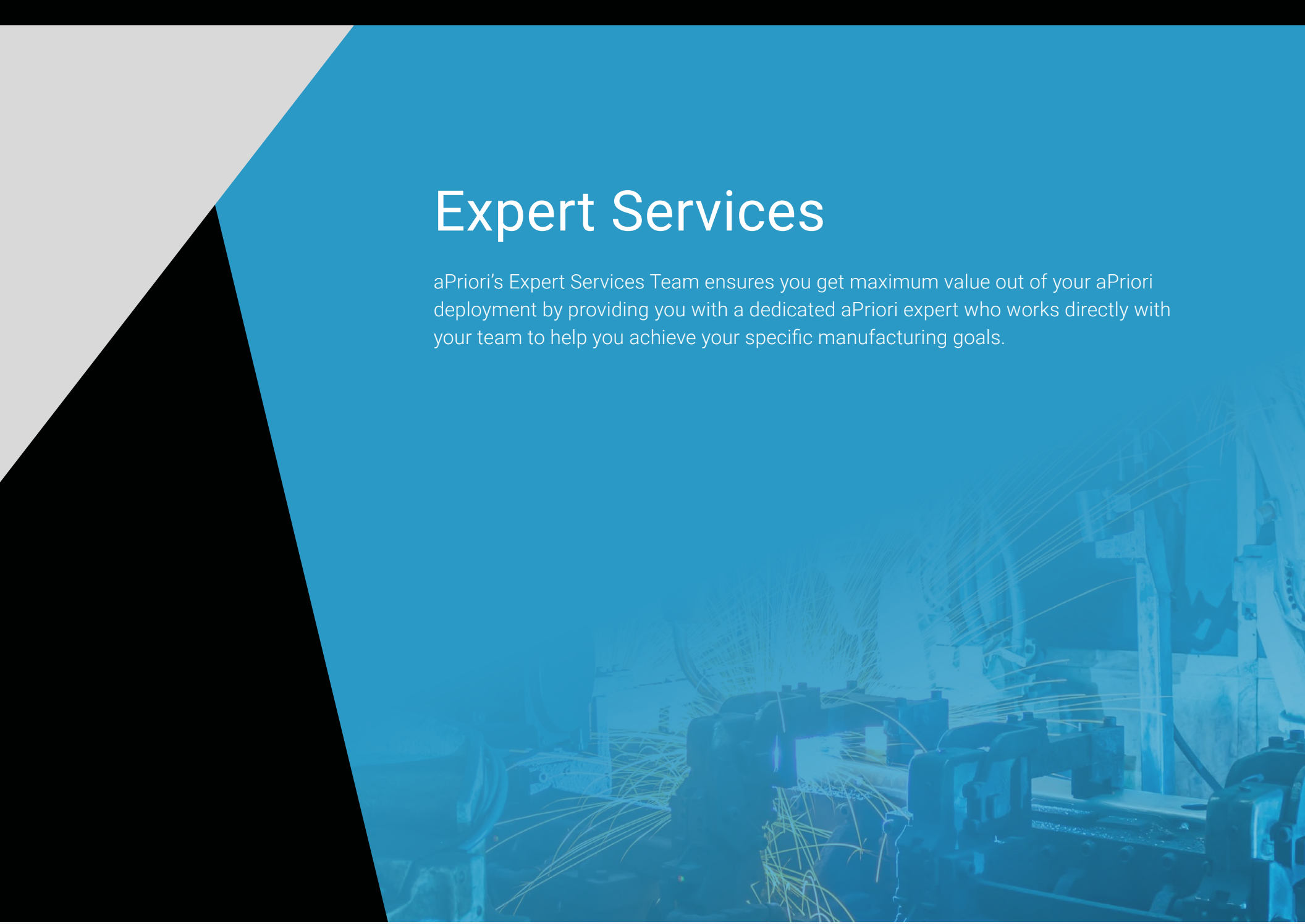
- aPriori generated cost estimates, (including manufacturing requirements), across regions, for 2 sets of castings
- Analysis of cost and manufacturing data together highlighted parts with similar manufacturing characteristics that could be purchased in other regions at significant savings

QUANTIFIED RESULTS

- Sourcing Team identified €150K in potential savings including expected cost reduction of 40% on each of two of the machined casting

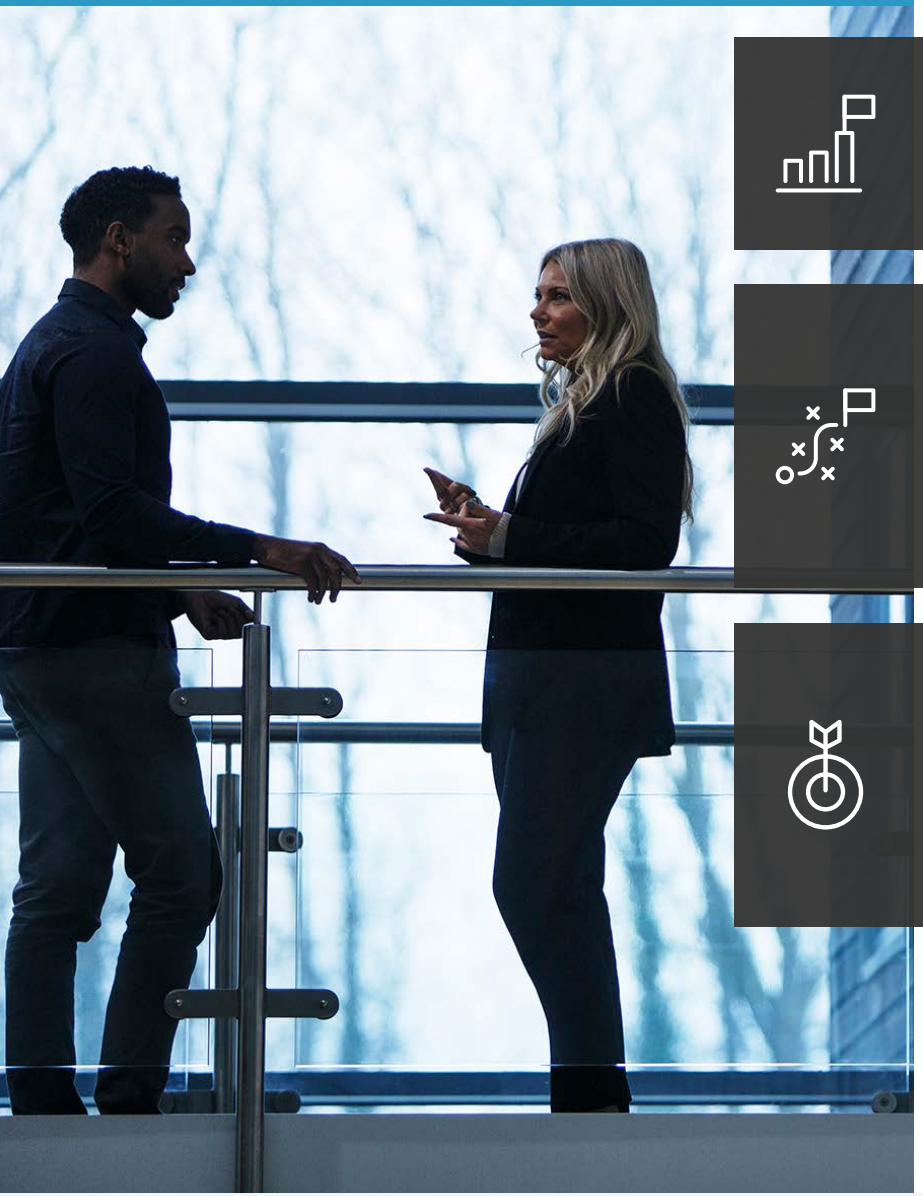
Expert Services

aPriori's Expert Services Team ensures you get maximum value out of your aPriori deployment by providing you with a dedicated aPriori expert who works directly with your team to help you achieve your specific manufacturing goals.



01

Expert Services



CHALLENGE

- VAVE team consulted with the aPriori Expert Services Team for deep-dive support on quoted costs and aPriori machine assumptions

SOLUTION

- aPriori should cost generated to determine the expected part cost
- aPriori highlighted machine requirements and expected rates
- Collaboration with engineering and sourcing on should cost uncovered savings opportunities

QUANTIFIED RESULTS

- $150K+ annualized savings by changing sourcing of components
- Identified vastly different costs as part length increased on a family of parts
- aPriori used to highlight disparity in machine costs. New supplier matched the aPriori should cost

02

Expert Services

CHALLENGE

- Company contracted model development for high spend machining and plastic parts

SOLUTION

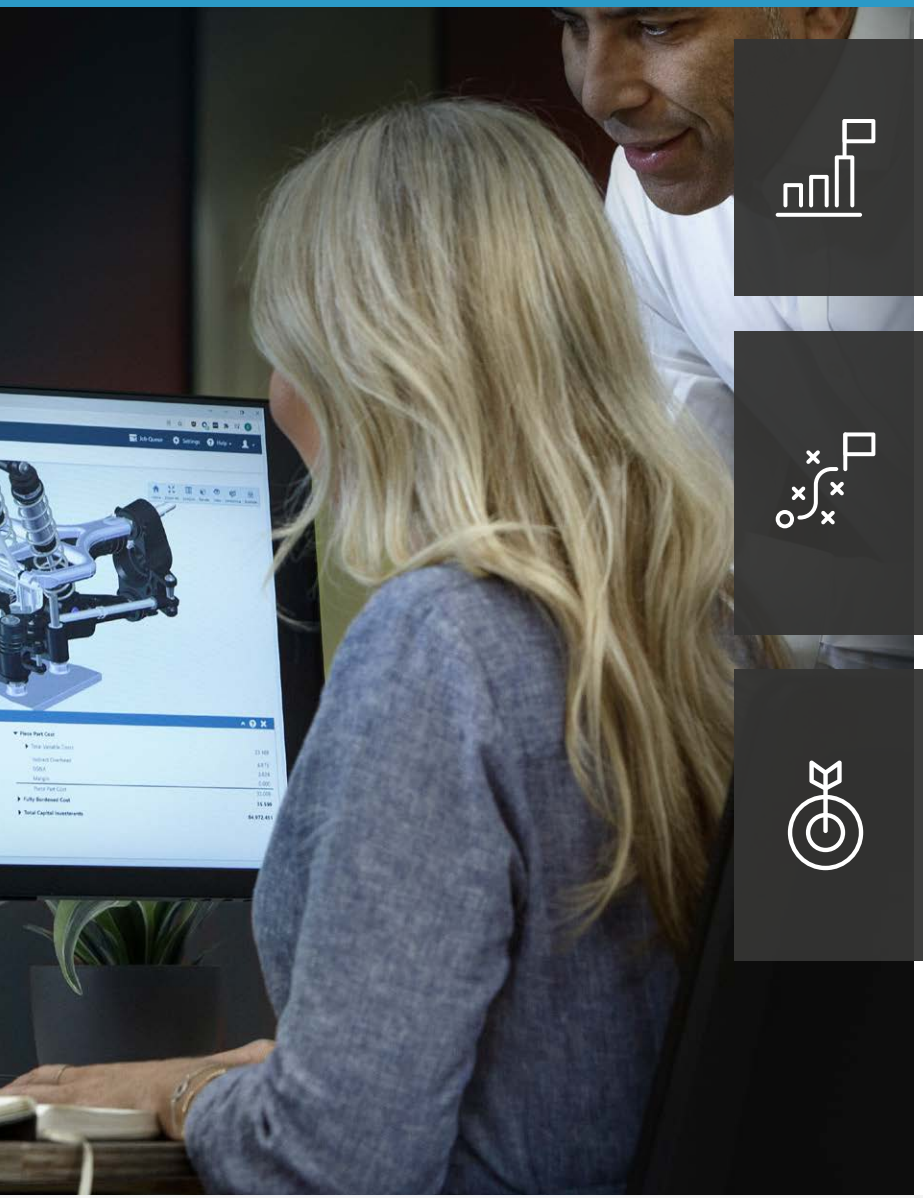
- Used initial aPriori models to gauge saving opportunities across part types
- Identified significant opportunities in plastics
- Focused project work on plastics commodity in short term to meeting goals
- Customer invested in contractors to develop 3D models per part (~$400/SKU) in both machining and plastic parts (100 SKUs)

QUANTIFIED RESULTS

- ~$2.5M in savings opportunity in year one tied directly to investment in modeling resource to increase throughput using aPriori Baseline Digital Factories
- Invested in full time 3D modeler & aPriori user to expedite process to increased throughput of parts
- Frequently realized 100% of opportunity using aPriori baseline models with increase in should cost understanding

03

Expert Services



CHALLENGE

- Cost Engineering team identified family of parts in a variety of process groups
- aPriori Expert Services supported Cost Engineering team in refinement of Digital Factories and costing of parts

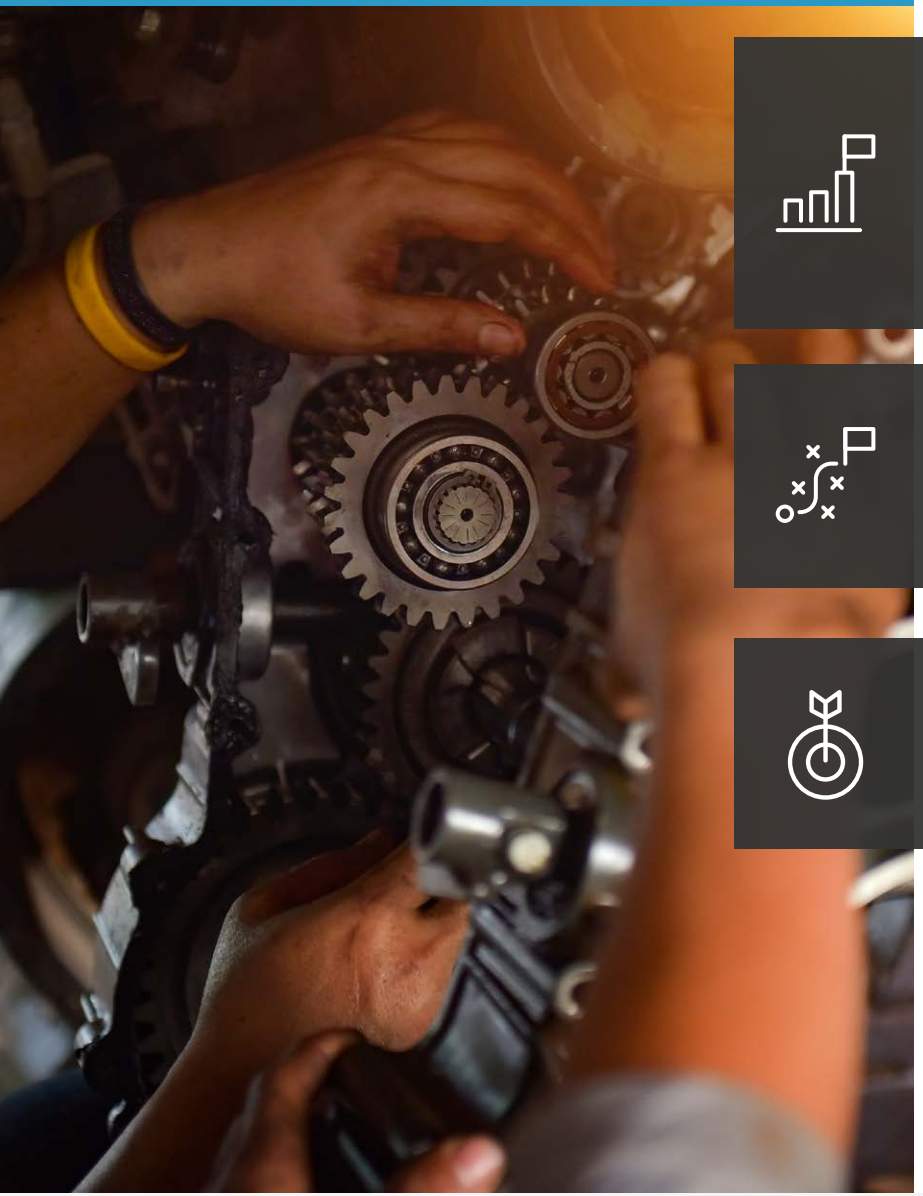
SOLUTION

- aPriori's refined digital factories increased range of potential parts
- aPriori should costs generated to determine the expected part cost
- aPriori Expert Services Team supported the customer's Cost Engineering team to enable discussions to review results with sourcing team

QUANTIFIED RESULTS

- Customer's sourcing team used aPriori in 12 supplier negotiations - resulting in annualized potential savings of ~$3M
- aPriori's Applied Services provided fact-based negotiation training to support on-going negotiations with 12 suppliers

04 Expert Services



CHALLENGE

- aPriori Expert Services worked with manufacturer to configure processes within their digital factory to best represent the manufacturing environment
- aPriori Expert Services Team conducted validation activities for the calibration and supported Cost Engineering team in costing of parts

SOLUTION

- aPriori provided instant should cost data to use for quotes
- aPriori integration reduced need for manual data entry

QUANTIFIED RESULTS

- Team was able to confidently quote over $1 million worth of parts in less than four days compared to weeks

aPriori Provides Actionable Insight for Better Manufacturing

aPriori generates insights for manufacturing companies for three major challenges they are facing: inflation, cash flow, and sustainability. We do this by connecting your CAD/digital twin to a digital factory. aPriori connects all your functional product teams across the enterprise and across the world using a secure cloud instance. Automation and integration to enterprise applications improve your productivity across the board.

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