

Product Cost Management Systems in Action



GE Aviation

Company Details

Industry

Aerospace & Defense

Number of Employees

48,000

Revenue

\$10.2 Billion

Website

<https://www.geaerospace.com/>

aPriori Products

aP Pro

The Problem

GE wanted to build a business culture where everyone was focused on product cost and had the tools to be able to do so

The Solution

They used aPriori to build product cost models for more than half of their products to automate product costing

GE Aviation set a company-wide vision to advance state-of-the-art product cost management technologies. One of the key areas of focus was to make data available to their team of engineers so that they could act on information and drive the right business outcomes. aPriori enables GE to build and maintain a solid product cost management framework.

Building a Solid Product Cost Management Framework

GE Aviation had a lot of challenges around cost data. Historically, cost data had been restricted in access. It was available, but it was hidden among disparate and discrete systems. So a single user had to pull various reports from various systems of record, and then sort through the bits and pieces for the right information.

Consolidating and streamlining cost data was a key area of focus for their product cost management strategy.

The first step was to create a data lake which brought all the disparate information together, making it accessible to the entire team.

Then, they looked at how to stitch the data together and publish data sets so that the data is usable in the lake.

Of course, a data lake is only as quality as the data sources which feed it. So data cleanup and sourcing was another critical element to their process.

It was important for GE to have access to the right cost estimation tools as they progressed through the different phases of the product life cycle. And they needed to have the right tools and methodology to look at the data and prioritize it.

“aPriori was chosen as GE’s product cost solution as it enabled us to **build and maintain a solid product cost management framework.**”

Together with aPriori, they came up with a strategy which could be adopted enterprise-wide. Scaling was a critical piece to their product cost management initiatives.

Like many large businesses, one of GE’s biggest challenges was departmental and organizational silos. There were a number of connected handoffs and interdependencies which cost valuable time and money.

“As part of our product cost management initiatives, a secondary goal was to **break down organizational silos** and streamline internal processes to innovate faster.”

How GE Set Their Product Cost Management Initiatives

Setting the enterprise vision for GE involved three core facets.



The Executive Leadership Team

Was responsible for setting a clear vision to follow including clearly defined goals and the right prioritization of capital and resources.



Associates and Teams

Who were responsible for aligning the narrative within departments and silos and create a strong partnership bond between executives and the product itself. This was crucial for GE because their manufacturing and engineering teams depend highly on domain expertise – so having the right tool set and culture focus was key for success.



Business Process

Encompassed applying that culture focus to the contemporary toolset to achieve the vision set forth by the executive team

GE Uses aPriori to Drive Physics Based Should Cost Models Across the Business

GE also does a lot of variability analysis with aPriori, which is particularly important when comparing the cost of similar parts – whether it be based on their design intent or parameters or manufacturing processes. And importantly, they needed to compare costs across different product lines to identify the best product cost savings opportunities out there.

aPriori also enables GE to run cost analysis for their older product lines.

Breaking Silos That Prevent Product Cost Management

The first step to breaking silos is to define the framework of your product cost data access and ownership. Identify:

- Who is the owner of cost? This is a critical question to ask, as many times departments believe cost is owned by every department but their own. Creating a culture of cost means refocusing ownership so that everyone becomes the owner of cost.
- Which data sources shall I trust? When data comes from disparate sources and systems, efforts need to be made to create a single source of truth from which to draw the most accurate cost models from
- Who can see the data and access it? Access isn't just important for compliance, but also streamlines communications and collaboration across teams.

In order to break department silos, GE created a culture around product cost management which included representatives from design engineering, commodity buyers, manufacturing engineers, and cost analysts in order to create:

1. Shared goals across each division and department
2. Data analytics to drive insights for execution
3. Cross-functional domain expertise
4. A continuous cycle of “learn, do, learn”

How to Amplify Your Product Cost Management Capabilities



GE added materials and machines which were specific to aviation and aerospace to their libraries.

aPriori makes it easy to expand your materials library to align with your specific industry.



Incorporate special manufacturing processes to meet aerospace specifications and approval processes.

GE has a number of joining processes, surface treatment processes and non traditional machining processes which needed to be accounted for in their product cost models. So it was important for them to add those to their digital factories to get the most accurate quote.



Implement an automated approval process which enabled their domain experts to pass their stamp of approval on designs, data, and costs before they moved forward.



Security. It was critical, given the global userbase that they have, to make sure their defense and commercial programs were completely secure. Export control, sharing control, and data access were important elements for GE's security protocols.

Once your framework is set, it's time to expand – which is exactly what GE did.

When they started their journey, only about one quarter of their parts were able to effectively show cost using aPriori.

By adding key components, they were able to expand their product cost initiatives to other facets of the business.

First up was adding materials and machines which were specific to aviation and aerospace to their libraries. aPriori makes it easy to expand your materials library to align with your specific industry.

They also needed to add larger machines to solve for certain component which measure several feet in diameter.

Next, they were able to incorporate special manufacturing processes to meet aerospace specifications and approval processes. GE has a number of joining processes, surface treatment processes and non-traditional machining processes which needed to be accounted for in their product cost models. So it was important for them to add those to their digital factories to get the most accurate quote.

In addition, they needed to implement an automated approval process which enabled their domain experts to pass their stamp of approval on designs, data, and costs before they moved forward.

And of course, security was a big concern for GE. It was critical, given the global userbase that they have, to make sure their defense and commercial programs were completely secure. Export control, sharing control, and data access were important elements for GE's security protocols.

With these changes, GE is able to automate the product costing of more than half of their parts using aPriori.

How aPriori Benefits GE Aviation's Business Goals

"By focusing on dedicated product lines, GE is able to **track key product cost goals and metrics all in one place.**"

Since implementing aPriori, GE has been able to transform their business to one that's streamlined, engaged, and focused on product cost at every stage of the product's lifecycle.





WANT TO LEARN MORE?

[CLICK HERE](#) to learn more about aPriori manufacturing simulation software.

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