

CASE STUDY

Leading Appliance Manufacturer – Nearly \$800M in Costs Avoided Through 3D Part Intelligence

A global appliance leader eliminated hundreds of millions in redundant procurement costs by deploying Physna's geometric intelligence across their parts catalog.

INDUSTRY

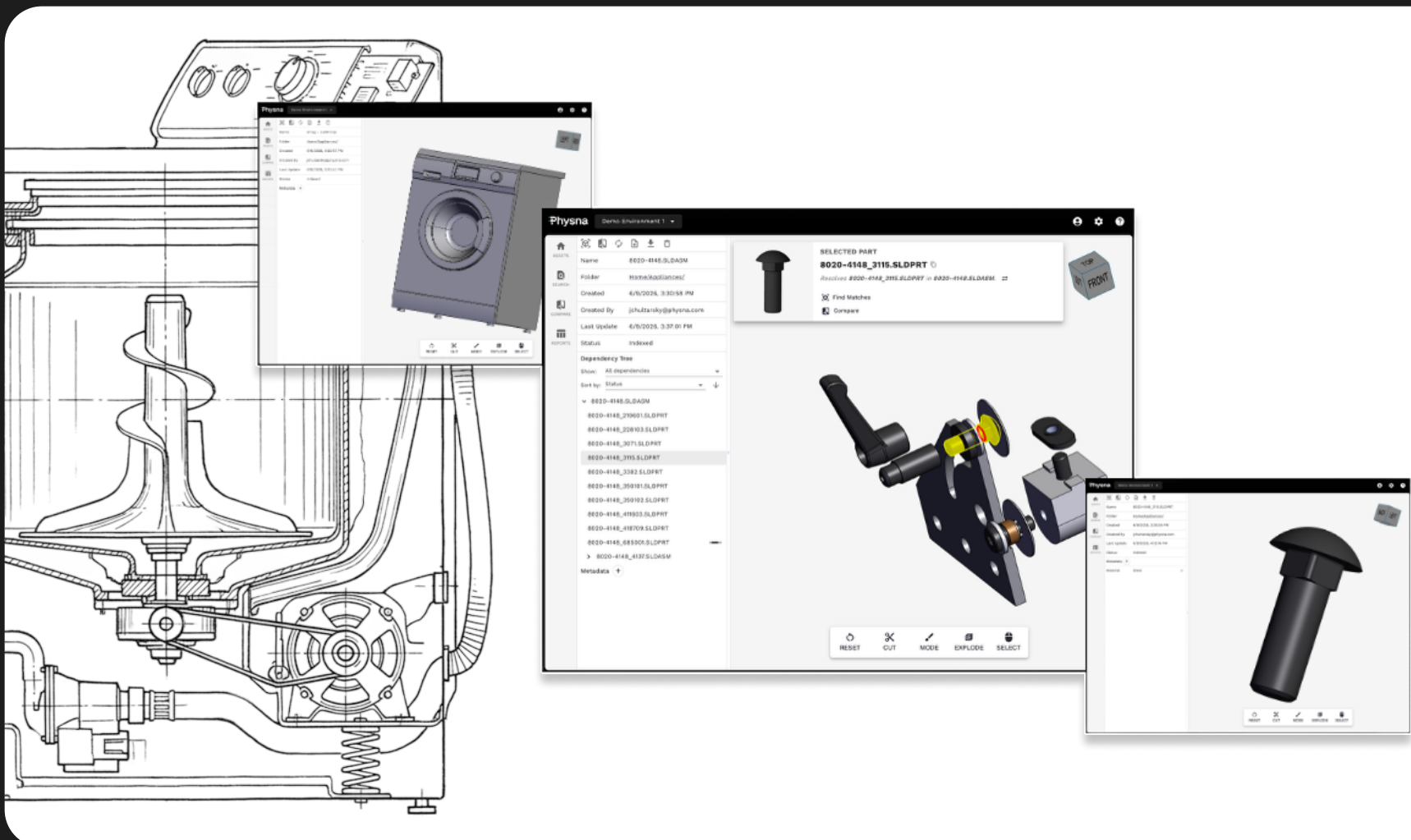
Consumer Appliances

TIMELINE

Weeks (vs. years)

KEY RESULT

~\$800M costs avoided



More about the Company

A household-name global appliance manufacturer with products sold across markets worldwide. With decades of engineering and procurement expertise spanning dishwashers, washing machines, refrigerators, and a wide range of consumer appliances, the company had built one of the most complex parts ecosystems in consumer manufacturing.

Operating across multiple continents with hundreds of SKUs and deep supplier relationships, the company's challenge was not a lack of data — it was a lack of visibility into what that data meant in the physical world.

Fortune 500

COMPANY SIZE

Global

SCALE

Consumer Goods

SECTOR

THE CHALLENGE

What problem were they facing?

The company managed its parts catalog through ERP and PLM systems that understood part numbers and descriptions — but could not understand the geometry of the parts themselves. The same physical component had accumulated under different part numbers, supplier names, and line items with no way to detect the duplication.

Engineers recreated parts that already existed. Procurement teams missed alternative suppliers. Single-source dependencies went undetected. The result: hundreds of millions in avoidable cost accumulating each year through redundant parts, over-ordering, and under-leveraged inventory.

"Computers don't understand 3D at its core. They don't normalize 3D data — which means there's no way for your digital systems to recognize that two parts are the same unless someone tells them so, manually."

— Paul Powers, Founder & CEO, Physna

How Physna solved it

01

Catalog Ingestion & Physical DNA Extraction

Physna integrated with the company's existing PLM and ERP systems via API — no replacement required. Every 3D part was ingested and assigned a Physical DNA: a multidimensional geometric fingerprint describing its shape, topology, and features independent of file format, name, or supplier.

02

Geometric Matching at Scale

Physna ran match analysis across the full parts catalog — surfacing 100% identical parts, near-matches within functional tolerance, and subset matches across product lines. Duplicates hidden under different names and supplier records were identified automatically across dishwashers, washing machines, refrigerators, and more.

03

Standardization & Sourcing Insight

With matches identified, the company consolidated redundant SKUs, renegotiated supplier relationships, and discovered that parts believed to be single-source were widely available from multiple vendors — often domestically. Analysis that would have taken years manually was complete in weeks.

THE RESULTS

Measurable outcomes

~\$800M

In costs avoided through part standardization

40%+

Average procurement savings per part

Weeks

To complete analysis that previously took years

100%

Geometric match accuracy — no hallucinations

The savings reflected not a one-time cleanup but a structural shift in how the company understood its own catalog. Parts that had been invisible to each other across product lines became connected — and the compounding value of that visibility was nearly \$800 million.

“

Physna didn't just find parts — it found money we didn't know we were leaving on the table. The difference between 40% of your procurement costs is not the difference between slightly profitable and slightly more profitable. It's the difference between surviving and thriving.

— Paul Powers, Founder & CEO, Physna

Physna

Ready to see results like these?

Let's talk about what's hiding in your supply chain.

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physna.com | sales@physna.com