

Seven months of testing, reduced to zero

How decades of laboratory expertise inside a global packaging company became an AI product its customers now pay a subscription to use — and why that is a different exercise from automating a process.

By Fabio Di Memmo · Documented in a Gartner case study, December 2022

AptarGroup, Inc.
Packaging — beauty &
pharma

\$3.2bn revenue (2021)
13,000 employees

7 → 0 months
client compatibility testing

30–60%
faster client launches

Every packaging company that serves the cosmetics industry knows the same bottleneck. Before a new cream, serum or fragrance can reach the shelf, someone has to prove that the formulation and the package can live together — that the chemistry will not attack the plastic, that the dispenser will still work in eighteen months, that the product will not change colour or scent. That proof comes from physical and chemical compatibility testing, and testing takes time.

At AptarGroup, it took up to seven months. For a client launching a product, development ran up to fourteen months and testing added seven more on top — close to two years from concept to market. In beauty, where trends move in quarters, that is not an inconvenience. It is the difference between launching into a market that exists and launching into one that has already moved on.

THE INSTINCT WE RESISTED

The obvious response to a seven-month bottleneck is to make it faster: more lab capacity, better scheduling, tighter processes. We could have bought two or three months that way, and our competitors could have bought the same months the following year.

The question we asked instead was different. Aptar had spent decades running these tests. Every test produced data: formulations, materials, conditions, outcomes, failures. That accumulated understanding of how chemistry behaves against packaging was not a process — it was an asset, and it was ours alone. No competitor had it, and no competitor could buy it.

So the question became: what if the testing did not need to happen at all? What if the models could predict the outcome?

“Instead of scaling several AI models, we focused on a few that were easy to create and easy to use, and that solved the maximum number of pain points for our customers.”

FABIO DI MEMMO — THEN VP DIGITALIZATION & CHIEF DATA OFFICER, APTARGROUP

BUILDING FOR THE ENGINEER, NOT FOR THE DATA SCIENTIST

The technical work mattered, but it was not where the programme was won or lost. Most data science teams optimise for model performance and hand the result to an expert who does not think in probabilities. The model

then goes unused, and the value never arrives.

We designed the interface before we finished the models, around four constraints. It had to be **simple** — a handful of variables an engineer already reasons about, not a data schema. It had to be **instant** — change an input, see the consequence, build intuition. It had to be **suggestive** — not only judging a proposed combination, but proposing alternatives. And it had to feel like an **extension of expertise** rather than a replacement for it, because an expert who feels replaced will find reasons not to trust the output.

That last point is the one most programmes underestimate. Adoption is not a training problem; it is a design decision taken early.

WHAT CHANGED

Testing time for clients went from up to seven months to effectively zero — packaging validation now runs in parallel with product development instead of waiting behind it. Clients accelerated their product launches by 30% to 60%, and could run several launches at once, moving their specialists off testing and onto innovation. Risk and material waste fell, because failures surfaced in a model rather than in a lab.

For Aptar, the outcome was not a cost saving. It was a new line of business: an AI-backed laboratory subscription service that clients pay for, sold on the strength of an expertise the company already possessed. Gartner documented the work as a case study for chief data and analytics officers, and the internal effect was as significant as the commercial one — the data and analytics team stopped being a support function and became a source of revenue.

WHAT TRANSFERS

The specifics belong to packaging and cosmetics. The pattern does not.

Most organisations apply AI where the work is generic — reporting, admin, routine automation. The gains are real and entirely replicable by competitors. The compounding value sits somewhere else: in the process know-how, the accumulated parameters, the judgment held by a handful of long-serving experts. Modelled properly, that becomes a product, sometimes a patent, and almost always a barrier — because a competitor cannot copy what they never measured.

The uncomfortable part is that this work does not start in the IT function. It starts with an honest inventory of what your organisation knows that others do not, and that conversation belongs to the CEO and the board.

THREE QUESTIONS THIS RAISES FOR YOUR BUSINESS

What do we know that others don't?	Would a customer pay for it?	Who has to trust the output?
Proprietary process data, accumulated parameters, expertise held by a few long-serving people. Inventory it before choosing AI use cases.	The strongest AI cases remove a bottleneck the customer feels, not one the organisation chart feels. Start from their workflow.	If the expert who must act on the model was not designed for, the model will be built and quietly ignored.

Documented in the Gartner case study “*Create a Business Value Generating D&A Product (Aptar)*”, December 2022. The Gartner document is copyright Gartner, Inc. and available to Gartner clients; this account is written independently and is not endorsed by Gartner. Figures as reported at the time of publication.