I Built Products Backward for Years. This Radical Data-First Framework Changed Everything

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Key Takeaways

- Define success through data first, then engineer features as extensions of that reality model.
- Detach emotionally from features; build flexible systems designed for learning, not premature perfection.

Most founders build their products backwards. They start with wireframes, features, fancy UI and “something to show investors”. They spend tons of money developing those features separately and then wonder why nothing works together.

I’ve spent the last decade building platforms in fintech, healthcare and media — high regulated industries, where mistakes are expensive, and time-to-market is unforgiving. And I’ve walked this road many times myself, until I finally understood: starting by “building the product” is a lousy way to build a business.

A while ago, I began working with a finance-sector client who was already deep into production on a fancy AI application meant to automate internal processes. They had a promising idea, a beautiful interface and a surprisingly solid codebase when you looked at each feature in isolation. But when the

first assembled version of the application appeared, the whole thing simply didn't work together.

The engineering was good. The UI was good. But the product fell apart because everyone was building their own piece in a vacuum. The team was solving "local" problems and completely ignoring the global one, so half of the features contradicted the core logic. And the worst part, the founder was emotionally attached to every feature in this application (they were expensive enough), so removing them felt almost impossible.

I saw two core problems (and these are incredibly common):

1. There was no unifying idea aligning the team around actual value, and
2. The cost of pivoting (which every product *must* do) was unbearably high, hundreds of developer hours.

So I came up with my own methodology for every early-stage product: Data-First Development (DFD) Framework. It is a product methodology where you define the system's data model *before* you define features, screens or user flows. And the product is built as a direct extension of that model.

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How DFD works in practice

Every product, feature or internal function can be defined through three types of data:

1. **Baseline** data — your definition of success,
2. **Input** data — what the system receives,
3. And **output** data — what it must reliably generate.

Here's the practical sequence I use when I develop a new product:

1. **Decide what "good" looks like.** Before anything is built, define the outcome you want. It's your own definition of success that supports your traction.
2. **Understand what information the product can receive.** What does the system actually get from users or the outside world? What facts does it have to work with?
3. **Define what data the product must produce.** What result must it deliver every time: what decision, update, or state?
4. **Build the product as a flow from input to output.** Features exist only if they help the system move information toward that desired result.

I used this approach for my employers and my clients. I use it in my own company. It helps conceptualize early-stage startups, and build fast MVPs, keeping the highest level of agility. It also helps fix product development cycles that have gone wrong.

I've shared this methodology with several university professors, and from their feedback, I learned that at first, the students think it's easy to apply. But it is actually very counterintuitive because *humans tend to think about products first, not data first.*

But the highly regulated industries I specialize in – such as pharma, banking and streaming – have actually adopted this approach as a standard.

The product is not at the center; the data model is. The conceptual core defines traction, economics, and validation.

Make things disposable and focus on what matters

When you start with the data model, the structure of the product simplifies drastically. One of the most surprising

things we discovered is that once the data model becomes the filter, most features simply disappear.

If a feature is only there because it looks nice, stop overinvesting in it. Stop polishing “maybe-features” as if they were final. Build data flow instead and play with information. When the product is built around a data model, throwing away staff is expected, and pivots stop feeling like painful resets. They become an expected, logical part of the roadmap.

The psychology changes: The team is not breaking anything; they are learning. The approach helps you be less emotional about building products.

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Avoid sloppiness

Data-first thinking solves the core strategic problem — it aligns the team around the value the system must produce. When you start treating pivots as a natural part of product development, you begin investing far less into individual features.

This immediately creates a new problem: sloppiness. Early versions of products now fall apart visually, look rough and accumulate tech debt — a result of quick, shortcut decisions that create extra problems you’ll have to fix later.

Users should never feel like they’re given a raw prototype just because the founder is testing hypotheses. That feeling kills the vibe of a cool new application and destroys trust instantly. We need both flexibility and a high-quality product experience.

That’s why on the product level, I build UI constructors — a system of interchangeable components your engineers can

assemble “on the fly”. In my company, we call it the “Lego Interface”. That means that instead of monolithic screens, we create atomic pieces (both design atoms and code atoms) that can be reused, rearranged and combined in endless ways. This lets us pivot fast without sacrificing quality.

For example, while building a platform for a film and TV distributor, we invested the first weeks not into features but into constructing a robust UI Constructor. When it was ready, the client could generate ideas instantly, assembling flows from existing components, testing hypotheses rapidly, and playing with the data model without expensive rewrites.

Granted, this model does not eliminate uncertainty. Uncertainty becomes something to navigate. But, developing products no longer feels like we are fighting a battle. It feels like building a relationship with reality.

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