

# THE ART AND SCIENCE OF SUPPLY CHAIN PLANNING

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# PRODUCT DESIGN

- What is good design?
- A case study with a new smartphone
- Sales consideration

What does good product design mean? Generally, we think of shape, colour, user-friendliness, or branding features. But is that enough? Imagine a great product, highly approved by focus groups, that recognised your great innovation.

But you must think about the sustainability of that production, as well as how that product is designed. Product design varies by organisation. Sales are looking for products that they can sell. Supply chain wants to make sure they can plan for that product and effectively manage the supply chain network, and also efficiently hold inventory.

Finance, are concerned about the cost of producing that product and the ability to support a positive bottom line. And then there's manufacturing - can they efficiently produce the product in order to meet the design?

**“...too expensive to hold inventory and it takes too long to get the product, so we can't keep up with the market demand.”**

Think of this fantastic smartphone that we're about to launch - with the latest technological advancements and features and functions, highly anticipated by the market. But the production of components takes a long time. Assembly is very complicated and personalization, to finished goods, occurs very early - meaning the minute we start that in production, it can only go to that one product and we have no flexibility.

The result? It becomes too expensive to hold inventory and it takes too long to get the product, so we can't keep up with the market demand. With a well-designed product we can learn from that example.



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Although it is not bleeding-edge technology, we need to look at whether there is market demand to support it. Can the sales margins overcome the cost of that production? And can I stage production and hold subassemblies in inventory to reduce those perceived long lead times? Can I leverage components from other existing products for this new one? Most companies strive for this, but they don't always succeed.

We also need to think about this practise when we consider just minor revisions in existing products. We don't need to reinvent and develop new components to produce that product. Procurement lead time and manufacturing time can be very long, and it can't be avoided. Our next section looks at some ways in which we can deal with that.

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# BRING A STEP CHANGE TO YOUR SUPPLY CHAIN WITH CHAINSEQUENCE

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