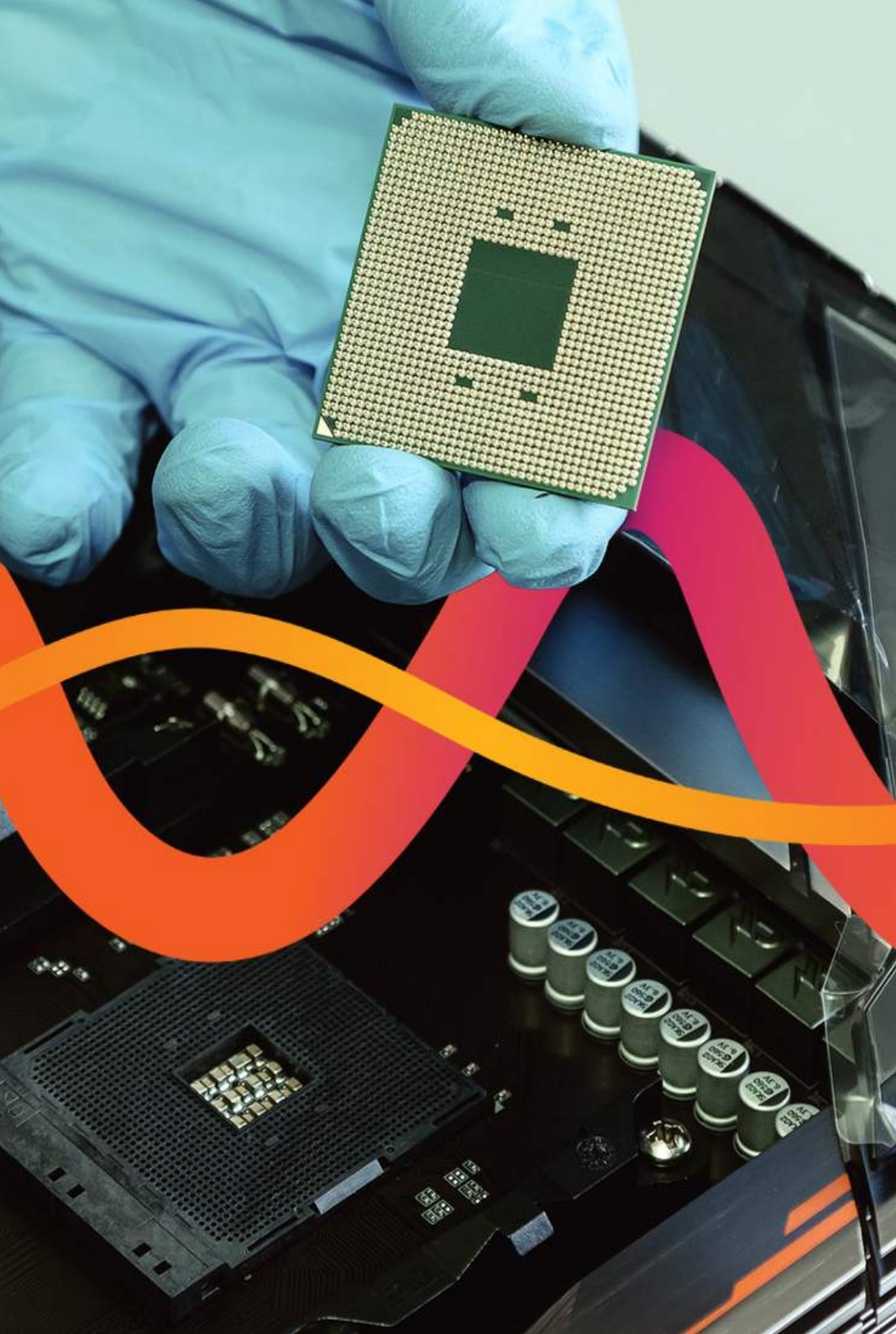# Configuration matters

Mastering Differentiated Products:
Enable Efficiency and Flexibility in The Age of The Customer

Lawrence Matusek

Do what matters

Configuration Matters

This book is about turning on the full power of configuration to hit the mark with your markets and customers every time and stand apart from your competitors with the right fit, price, and delivery.

What if you could do that without the historical disruptions, margin drag and complexities of 'customization'?

It's not only achievable, but in this era of ultra-competitive manufacturing, especially within technical and specialized products and services manufacturers, it is now essential. Commoditization is a market-share/margin killer in these industries. It leaves technically superior industry leaders vulnerable to be 'knocked-off' by copycat competitors for the more standard (commoditized) market and customer segments. It may leave you open to be 'cherry-picked' to handle only the most difficult customer needs while competitors gain the market share and margin of the easier to predict and pre-standardized needs. The ability to stand apart with core product, technical superiority and meet specific customer and market demands for specialized 'perfect fit' solutions slams the door on less agile and inefficient competitors.

This book explains **why Configuration Matters in your ability** to master differentiated products and meet your customer's demands.

Configuration in the consumer world

Configurable products are all around us. It is interesting how some people in the business world struggle with the definition of a configurable product, and yet nearly everyone regularly buys configurable products in everyday life. Common configurable products in the consumer world include automobiles, new houses, motorcycles, computers, and even food products like pizza. The so called "lot size of one" movement has gained a lot of popularity in recent years, and the

central theme is that operational efficiencies must improve to the point that a consumer can buy a customized product as easily as a commoditized one.

In general, consumers are demanding more choices, not fewer. Many products that have traditionally been commoditized are becoming available in customized forms. Examples include shoes, golf clubs, and headphones.

An example of configurable products for a well known brand are BOSE Headphones.

The configuration process itself has become much more self-service than in the past. For example, automobiles have always been configurable, but until this century the process of finding an available car or configuring a car required searching through inventory printouts or price books and then you still needed help from a dealer to get the car you wanted. That has all changed and the consumers have never been more empowered to shop for and get exactly the cars that they want.

Ford's customer facing "Build & Price" site is a perfect example of self-service configuration.

Configuration in the business world

In the business world, configurable products are even more pervasive than in the consumer world.

In general, the more complex the application requirement, the more configurable the product must be. In cases of complex requirements with relatively low volume, the more engineered (to order) the product must be. There is a simple test to determine if a given product is configurable or not. If the product has a UPC (Universal Product Code) or SKU (Stock Keeping Unit), then it is not likely to be a configurable material because such numbers don't provide a way to distinguish between two different configurations of the same product.

On the other hand, if a product has an intelligent part number like a VIN (Vehicle Identification Number), then it is almost certainly a configurable product.

SKU

Anatomy of a Barcode

**VIN**
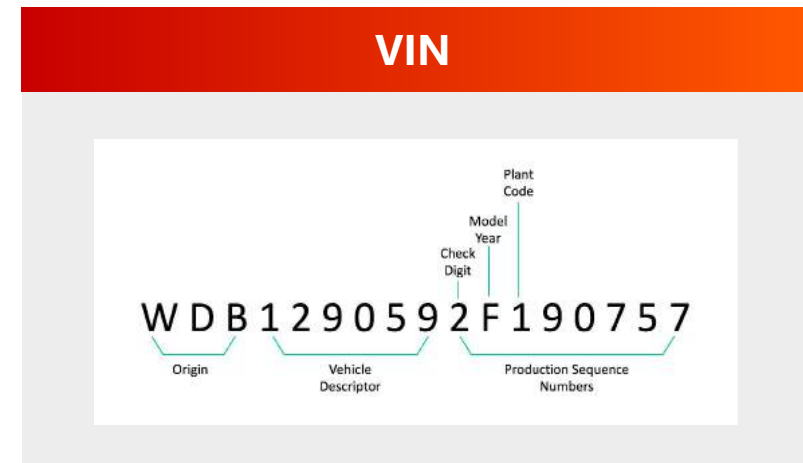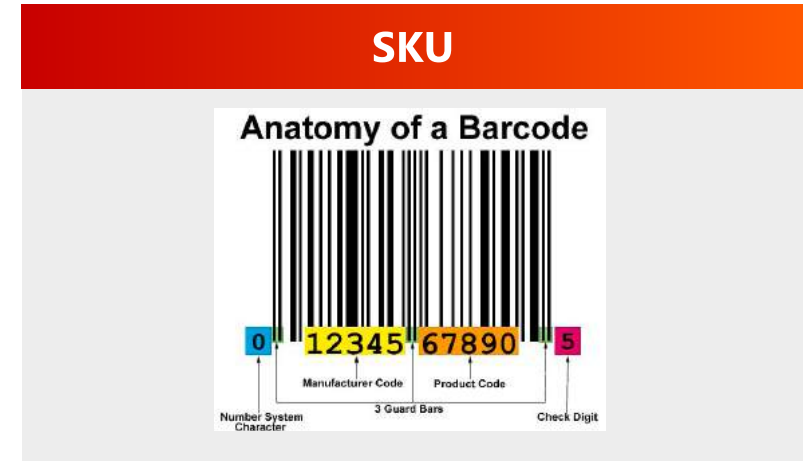
To configure or not to configure

That is the Question

Business leaders often ask whether their products should be configurable or not, and there is often an inclination to avoid configuration because of the perceived complexity that it entails. In fact, avoiding configuration for truly configurable products only moves the complexities elsewhere like product selection and master data maintenance. The true measure is what makes sense to the consumer and then which is easier and quicker to set up and maintain.

Although there is no hard and fast rule, there are reliable guidelines for making this decision. These guidelines are illustrated in the following examples. Consider these possible product variants (i.e. combinations) based on available options.

Note that "_illions" could be millions, billions, trillions, or more.
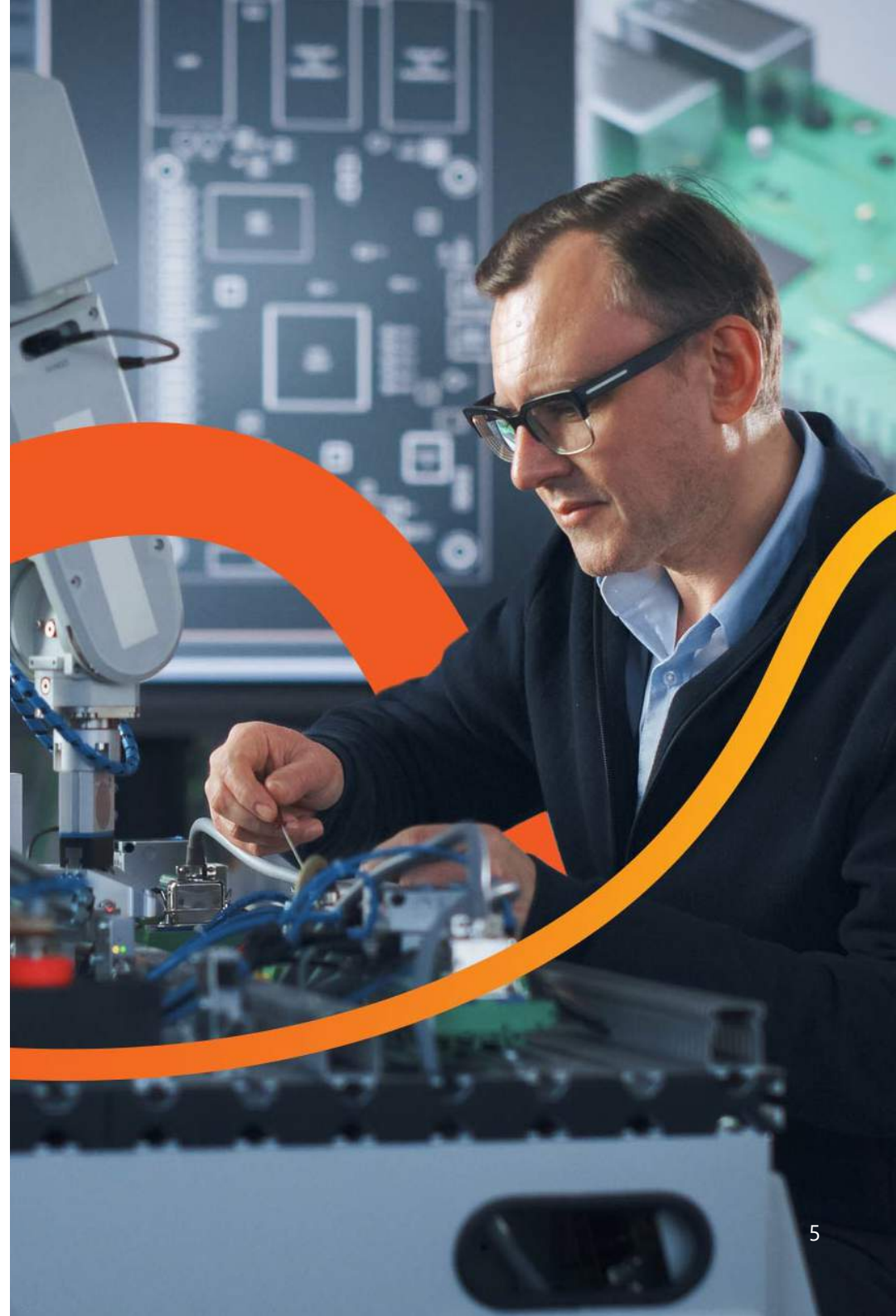
Consumer Examples

NFL Jersey

3 sizes **X** 2 genders = 6 variants per team

Consider (a guess at) the expected customer demand for each possible variant of a Jersey:

- Small Male: 100,000
- Small Female: 250,000
- Medium Male: 200,000
- Medium Female: 150,000
- Large Male: 300,000
- Large Female: 50,000

Automobile

12 exterior colors **X** 6 interior colors **X** 3 engines **X** 5 radios **X** etc. = _illions of variants

Now consider the expected customer demand for each possible variant of an Automobile:

- A few variants will have significant demand (i.e. the cars you find on dealer lots)
- Many variants are sold only ONE time (i.e. custom orders)
- Most variants are NEVER sold (i.e. because no customer wants that combination)

Based on these facts, we would recommend that the Jersey be non-configurable and the Automobile be configurable. The main reasons for making the Jersey non-configurable are shown below. By contrast, the reasons for making the Automobile configurable are the opposite of those shown below.

- **Few possible variants exist**
- **Large customer demand for each variant**
- **Most variants are manufactured in large quantities in advance of customer demand**

6

Why it matters

In summary, configuration does matter. More than ever.

Customers want more and more customization and are willing to pay a premium for products that are precisely tailored to their tastes. Manufacturers can differentiate themselves by offering more choices more easily than their competitors can offer. Configuration enables selling and making a variant almost as easily as a SKU by:

1 Pre-defining features and options, allowed combinations, pricing, etc.

2 Predefining configurable bills of material (BOMs), routings, and costing possible for any variant

3 Not needing predefined material masters, static BOMs, and routings for each variant

Next generation configuration technologies make it possible to provide a great experience across all sales and information channels. That allows customers to personalize products and services, and to order anytime, anywhere, on any device. However, it isn't just about "passive" data entry anymore. Now manufacturers can steer buyers to the most profitable configurations and upsell items that include complementary products, services, and spare parts. The end game will be to sell complete tailored solutions that include products, services, warranties, financing, etc.

Once you accept that configuration matters, your next decision is to understand the configurator technologies that will help you develop your strategic roadmap for providing the engaging configuration experience that your customers will demand. Much of the technology groundwork you will need has already been laid in order to reach your ideal future state of engaging, Omni channel, and configurable eCommerce buying experiences for your customers.

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About Avanade
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