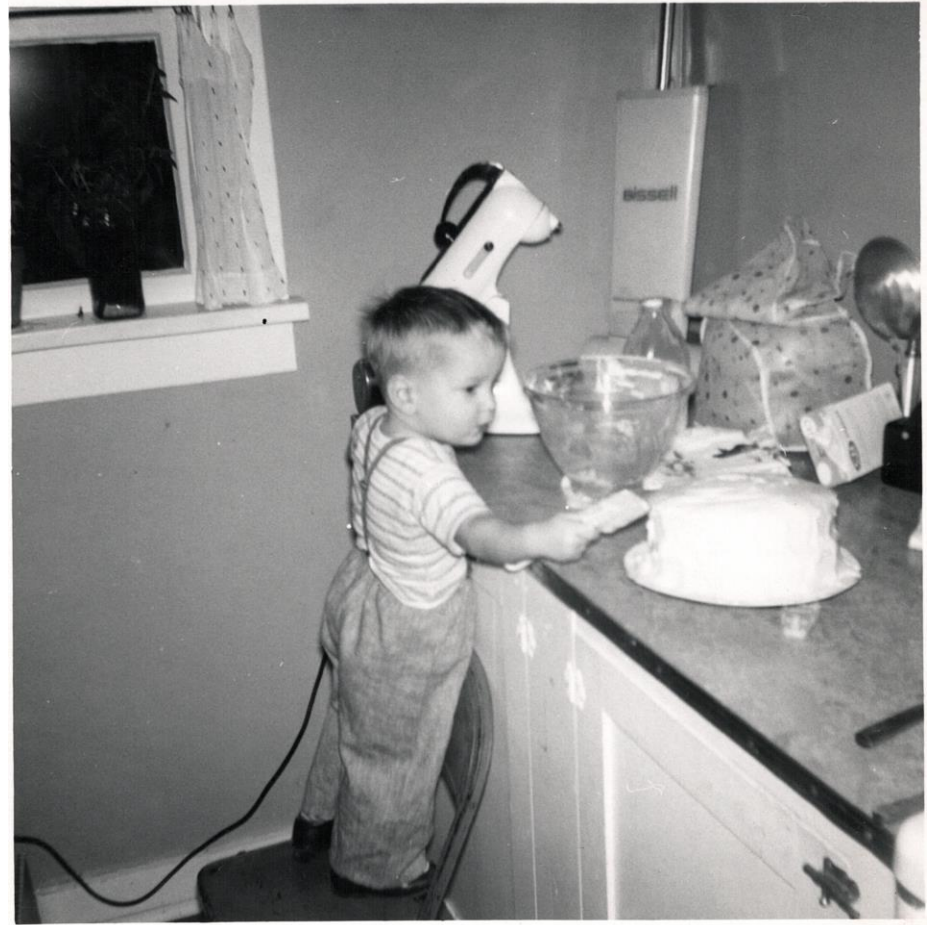


# It's in my DNA

The foundation for my consumer products  
passion started a long time ago in a  
different era

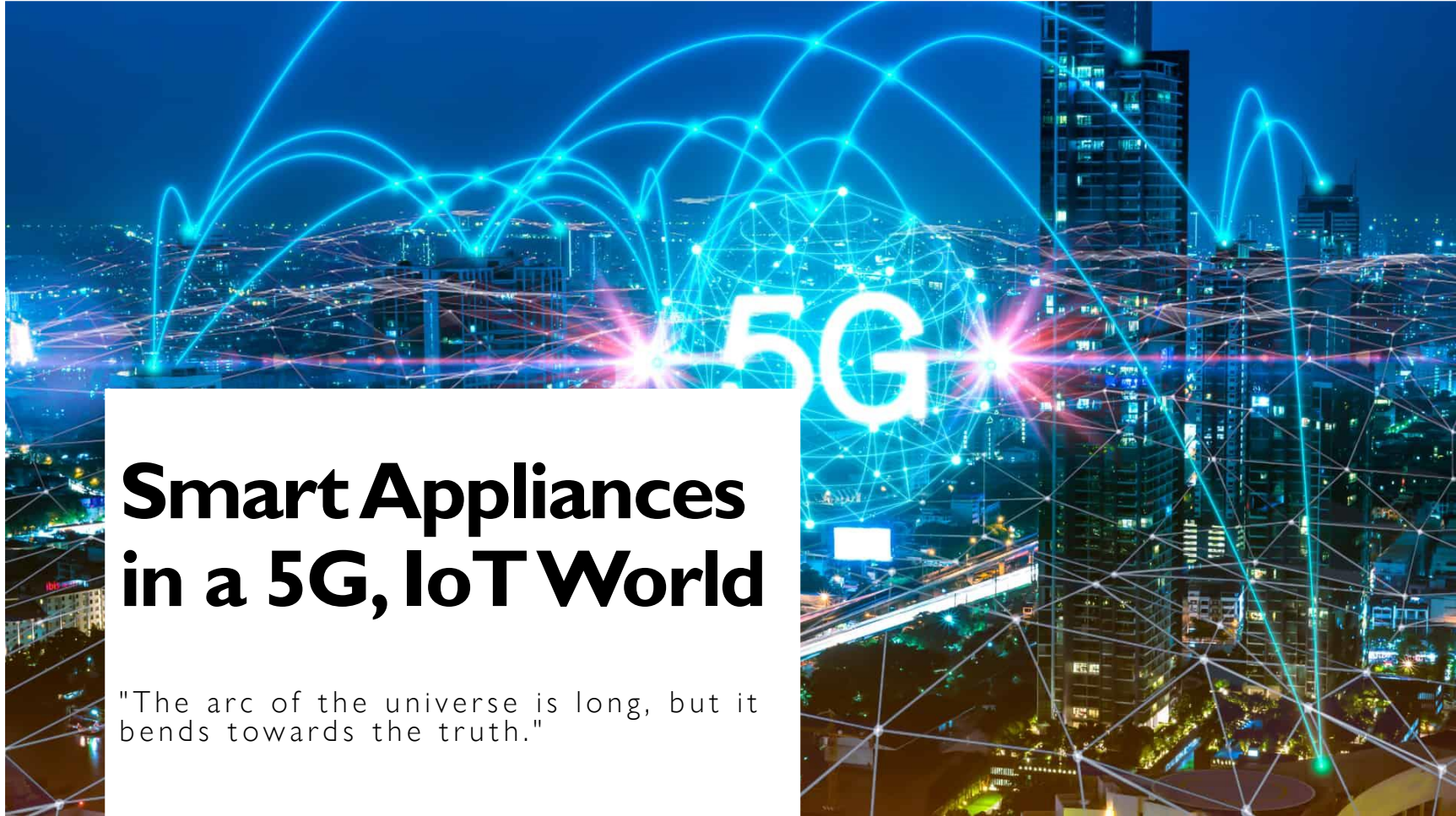




## A Passion for Products

When a customer accepts your product into their home, you are trusted enough to be in their home, around their family





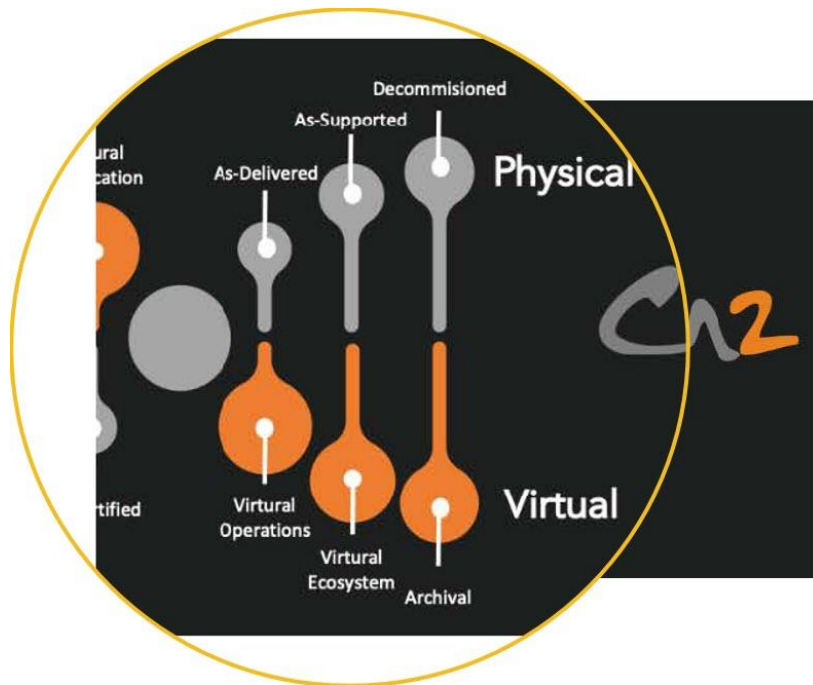


# The Question

The reason I am here today is because my sister asked me a simple question about human nature.

"Can you believe that people are not having them replaced?"

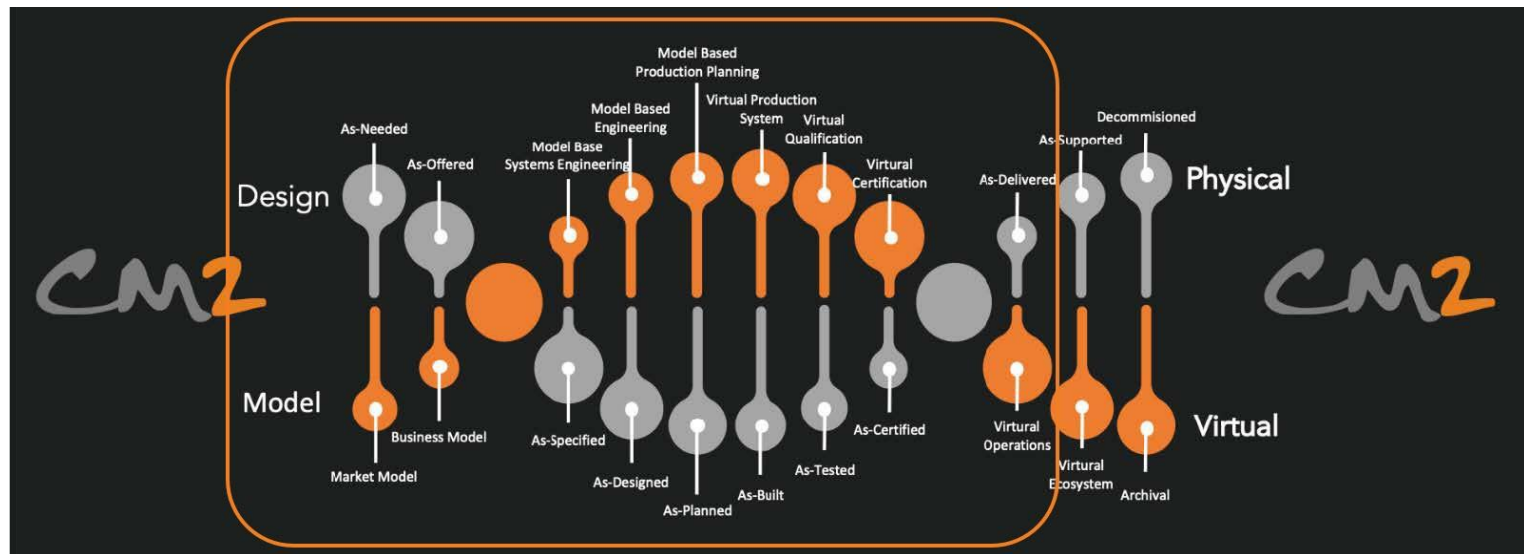
# The CM2 DNA



- 'As-Supported' and 'Virtual Ecosystem'.
- Where they live
- In their home
- The spot of highest expectation

# The CM2 DNA

- Everything that comes before are the customer's set of requirements
- We must meet all of their requirements
- Doing less is a failure



# The Real Fear of Connected Consumer Products

Undocumented and underreported changes to a product



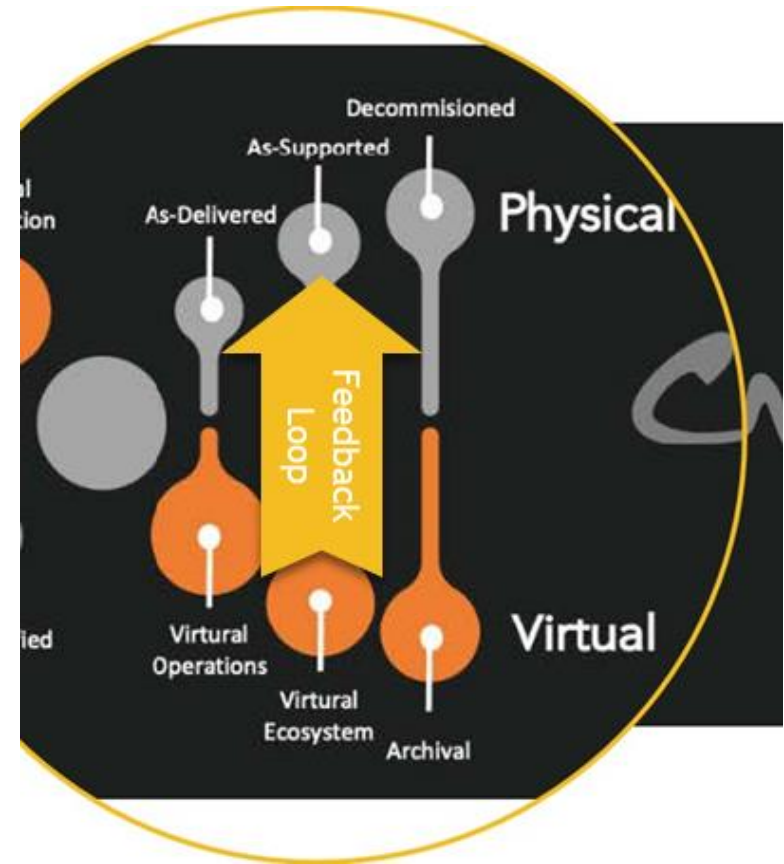
## Develop an Industry Standard

- A single company solution will fail
- We need to know when someone modifies a critical component
- As-Built part in controller memory
- Include manuals in the controller memory
- Critical component identification

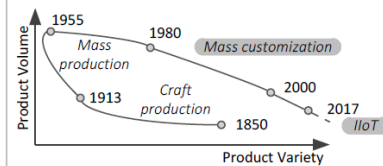


## Develop an Industry Standard

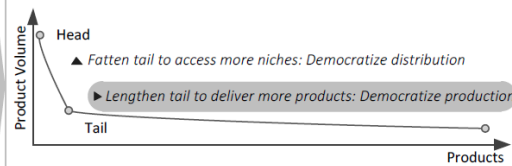
- Feedback Loop
  - Field Return Policy
  - Identification of shared suppliers



#### 1 Observe changing demand (adapted from [5])



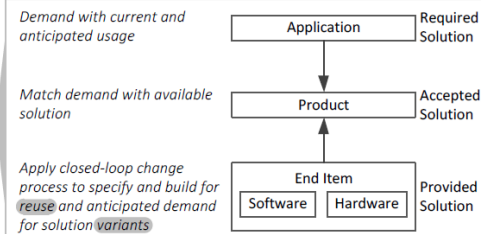
#### 2 Adapt business model to changing demand (adapted from [4])



#### 4 Manage variants in portfolio

Variant types	Optional Item	Can be included or not in the product
	Configurable Item	Can change behavior during use
Variant constraints	Domain Constraints	Allow selection within product, HW & SW
	Cross-domain Constraints	Allow selection across product, HW & SW
	Equivalent Item	Allow selection during build and maintenance
	Alternate Item	Allow selection during build and maintenance

#### 5 Reduce intervention resources (adapted from CMII)



## The CM2 and Variant Management

"Should Variant Management be a Core Business Process?"

2015 article by Arnaud Hubaux

- "Besides operating standards, Variant Management also requires tools to manage the set of variants, their constraints and valid combinations thereof. These tools are not only required for complex products. A simple product composed of only 20 YES/NO options already results in more than a million possible combinations if not constrained."
- Does it need to be a Core Business Process?
- It certainly needs to be part of the feedback loop



## What Difference Does a Simple Conversation Make

- The utopian future - NOPE
- Meeting our customer's requirements
  - To perpetuate, and maintain our company or brand reputation
- Service technicians and customers must know the requirements
  - Supports right to repair



# Thank You for Kind Attention

I am privileged to build  
consumer products for you

I am a consumer product's  
user

