



DEFENCE AND SPACE

Digital Twin in the Context of Product Line Approach

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AIRBUS

Presenter

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With strong contribution of

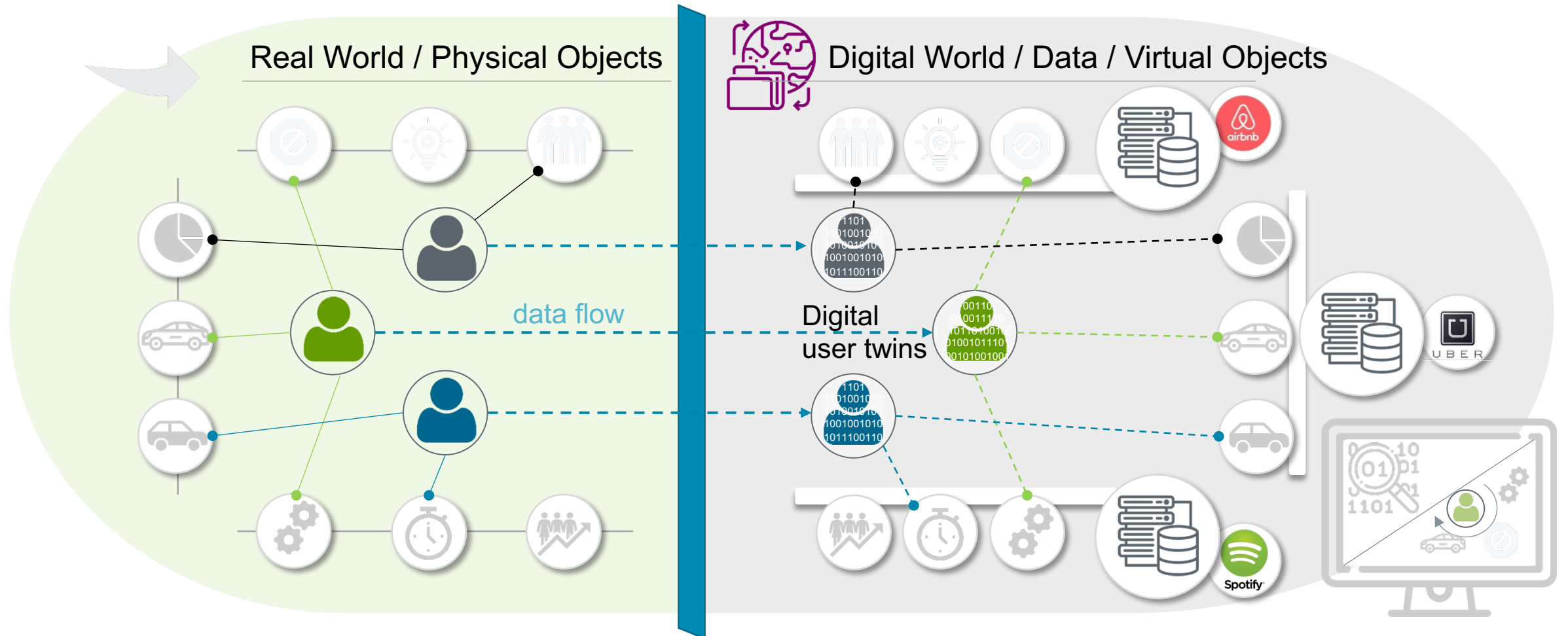
- *Loic Boussouf*
Expert AI
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Overview

- Digital Twin – a myth, the next hype ?
- Digital Twin Synthesis: Overall Concept to strategically address new data flows, technologies – supporting concrete use cases
- Digital Twin for product approach – a first sketch of ideas ?

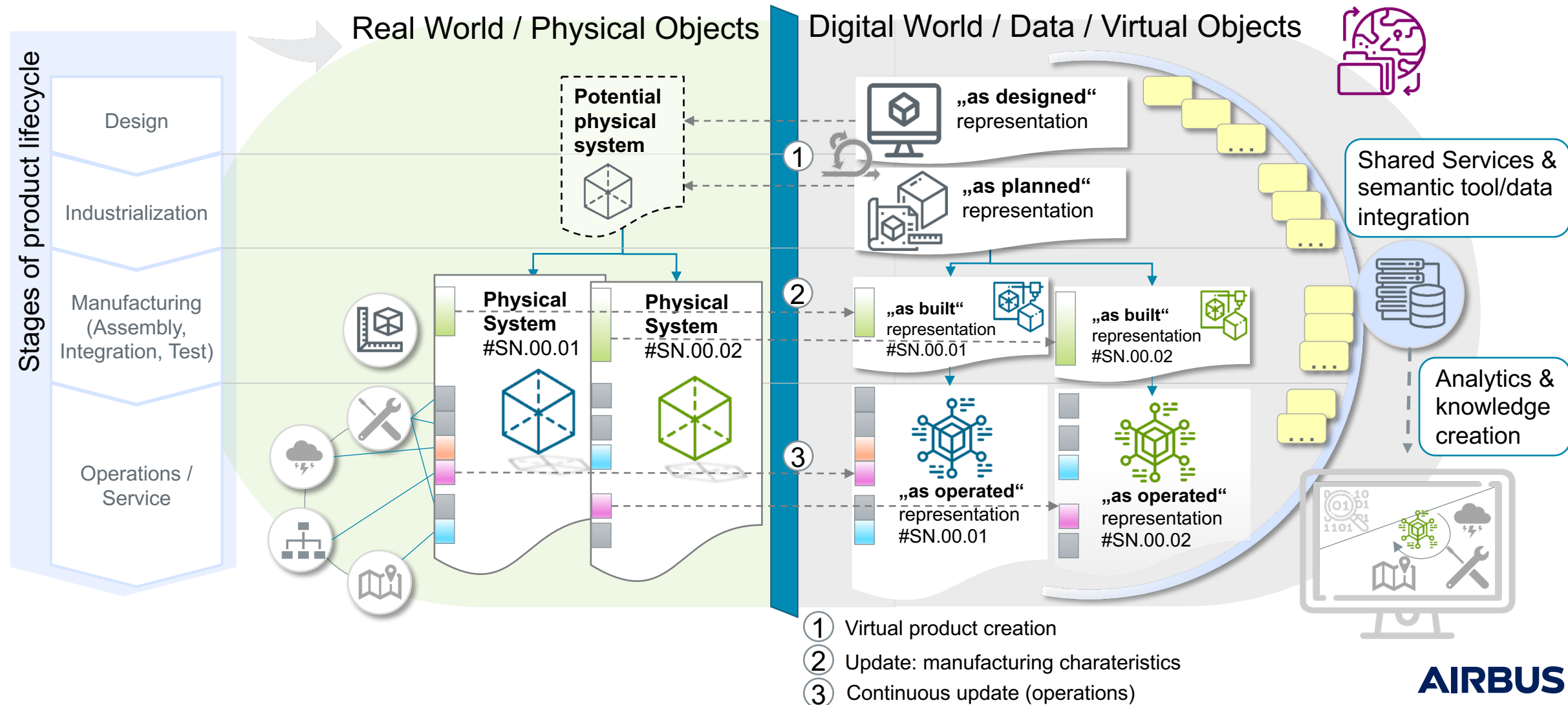
Digital Twin, what is it?

A digital reflection of something, or someone, or ...



What are the specifics of a Digital Twin of a System?

Various individual „instances“ needed to capture a system



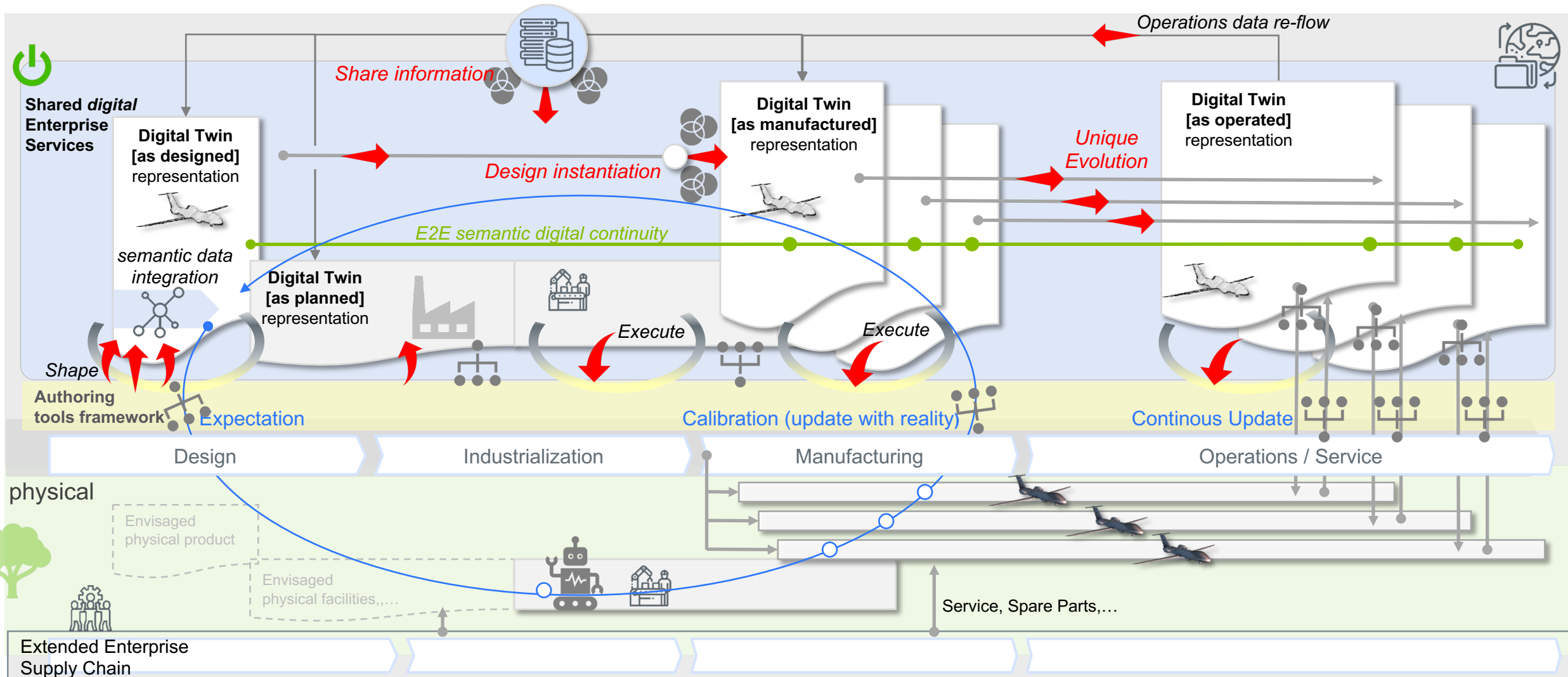
Core data —

Authoring capabilities

Digital Service Capabilities

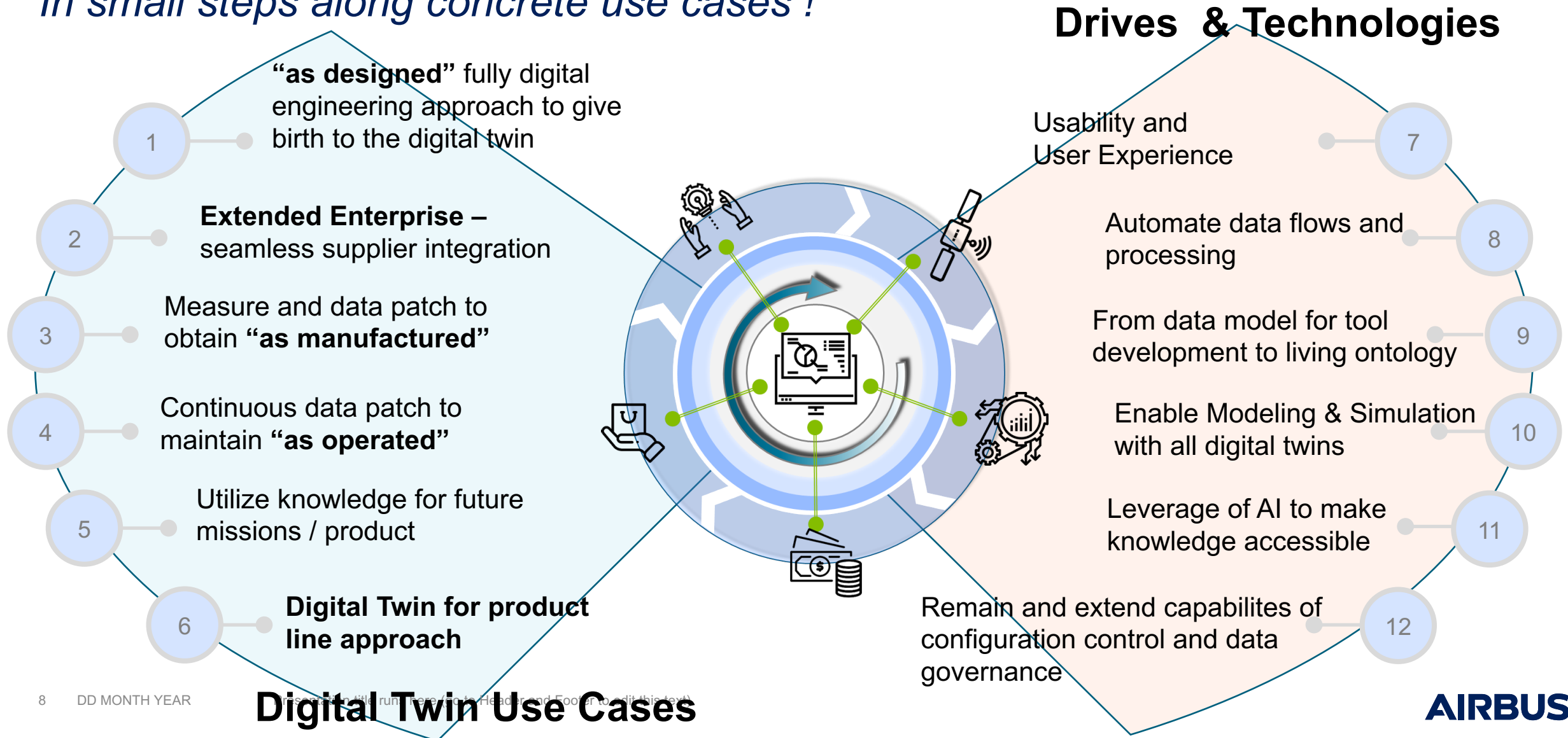


Use case elaboration of “Digital Twin” – along the life-cycle: Concept Synthesis

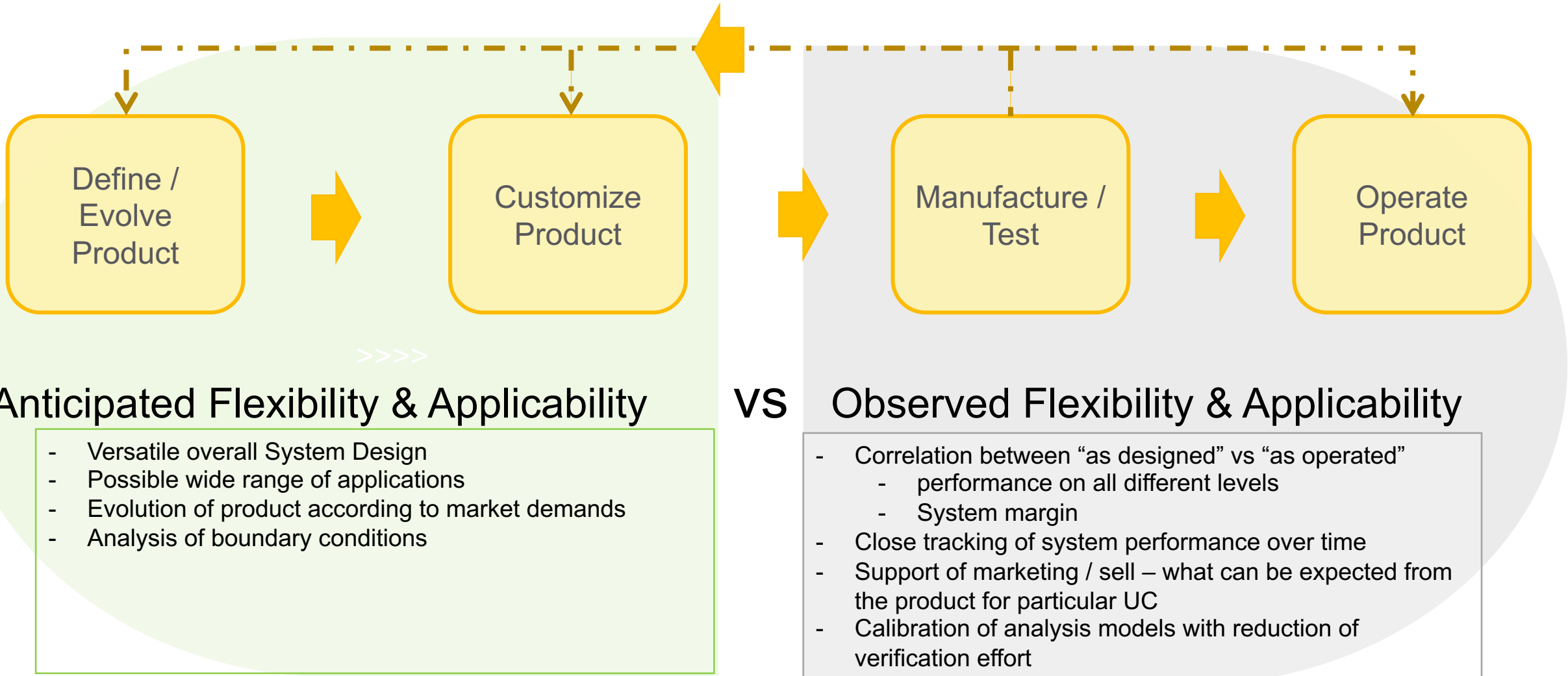


But how to realize Digital Twin?

In small steps along concrete use cases !



Complement Product line Engineering with “real world” Data



Conclusions

- Digital Twin is not entirely new - many capabilities required for digital twin do already exist
- Digital Twin Concept stresses / requires the
 - Completion of tool integration effort i.e. in Engineering (MBSE, digital continuity, ...)
 - Establishment of new data flows to capture data coming from the “real” world
 - Make the data / models forming the individual digital twins “accessible” (e.g. performance simulation of “as operated” S/C)
 - Consideration of usability aspects !!
- Digital Twin will benefit massively from AI technologies if it comes to
 - Analyze / process data coming from real world
 - Utilization of data for engineering
- Overall digital twin concept is needed to enable taking the right steps in the good overall direction