

Panel: Digital-Physical Systems

Bill O'Neill, VP and Head of Digital Enterprise Center of Competence at Siemens in the Americas

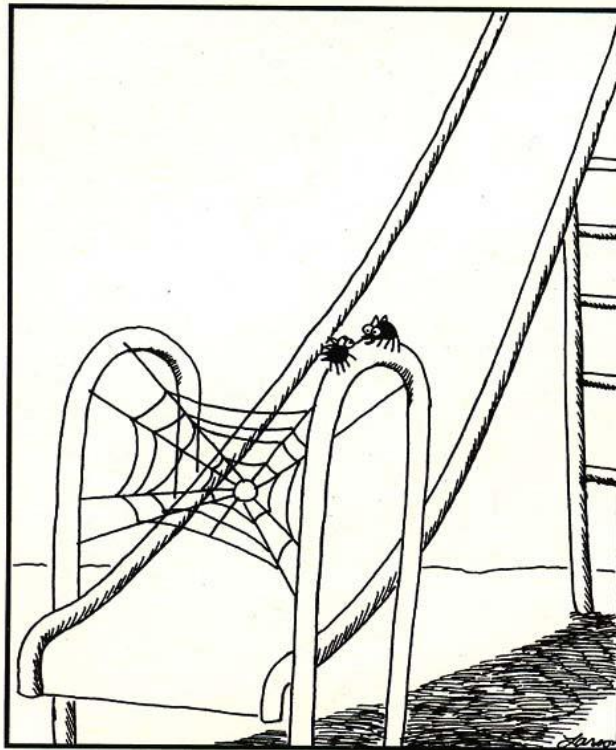
GUIRR Conference, October 26, 2016, Washington, D.C.

The Digital Enterprise opportunity for US manufacturing

By Gary Larson

SIEMENS

The opportunity for manufacturers
is unprecedented



"If we pull this off, we'll eat like kings."

The competition is getting smarter



"Drive, George, drive! This one's got a coat hanger!"

There's no time to waste



"Now just hold your horses, everyone. ... Let's let it run for a minute or so and see if it gets any colder."

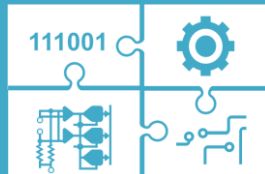
Technological forces are transforming industry

How are digital modeling tools changing manufacturing processes?

Changing the way products
come to life



GENERATIVE
DESIGN



INTELLIGENT
MODELS

Changing the way products
are realized



MACHINE
LEARNING



ADDITIVE
MANUFACTURING

Changing
the way products evolve



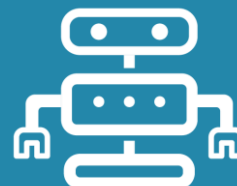
CLOUD
TECHNOLOGY



KNOWLEDGE
AUTOMATION



SYSTEMS OF
SYSTEMS



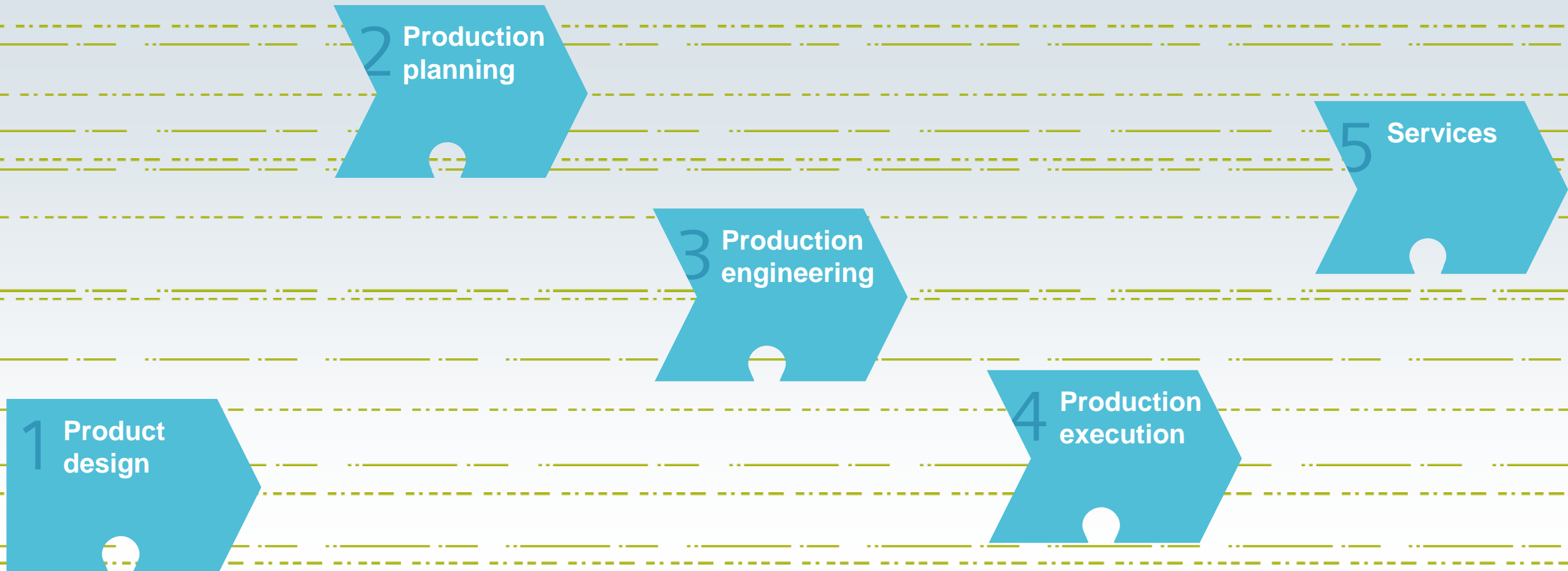
ADVANCED
ROBOTICS

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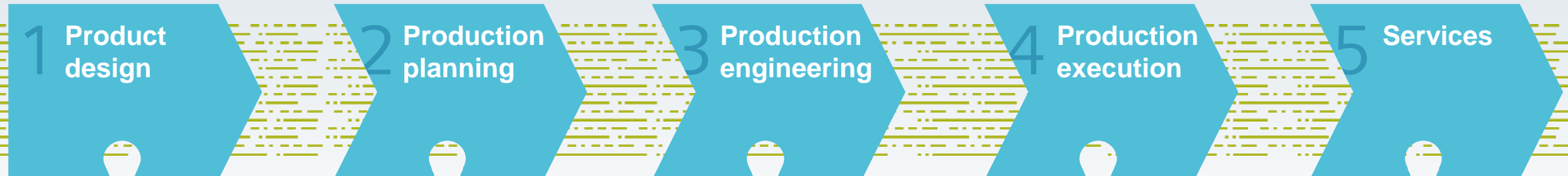


BIG DATA
ANALYTICS

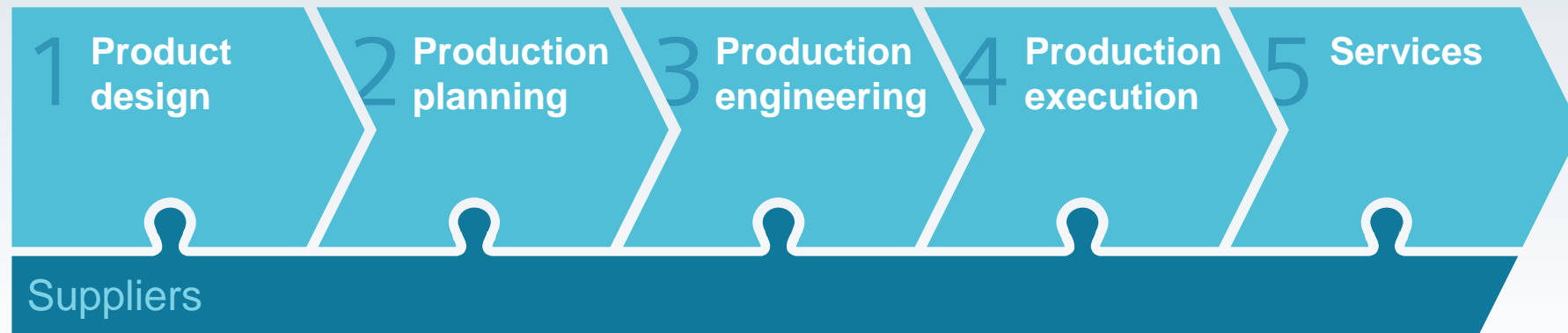
It is necessary to integrate and digitalize the entire value chain



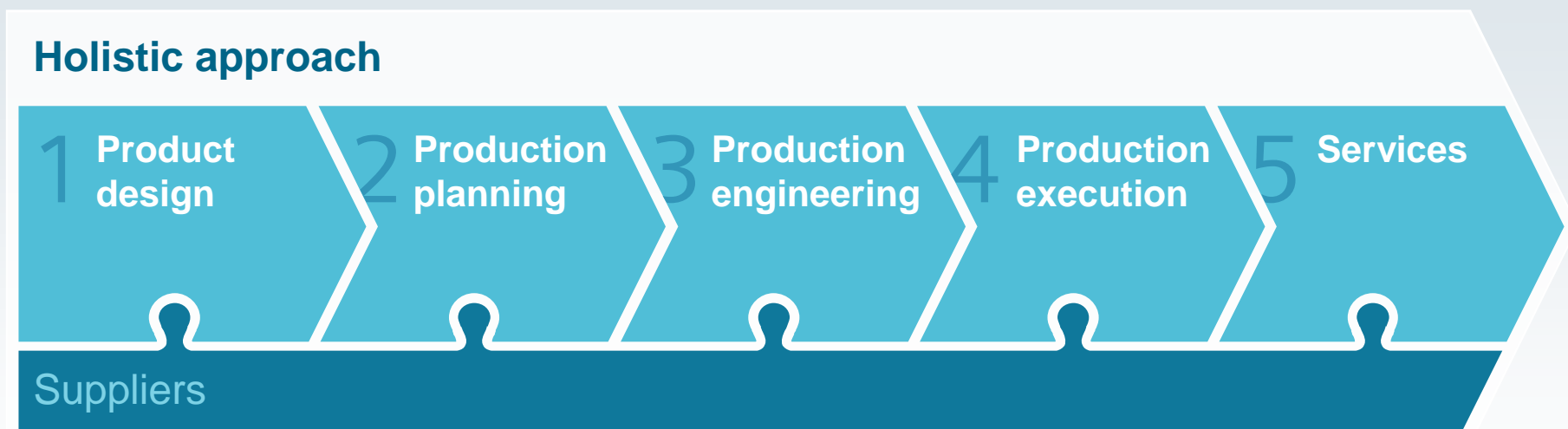
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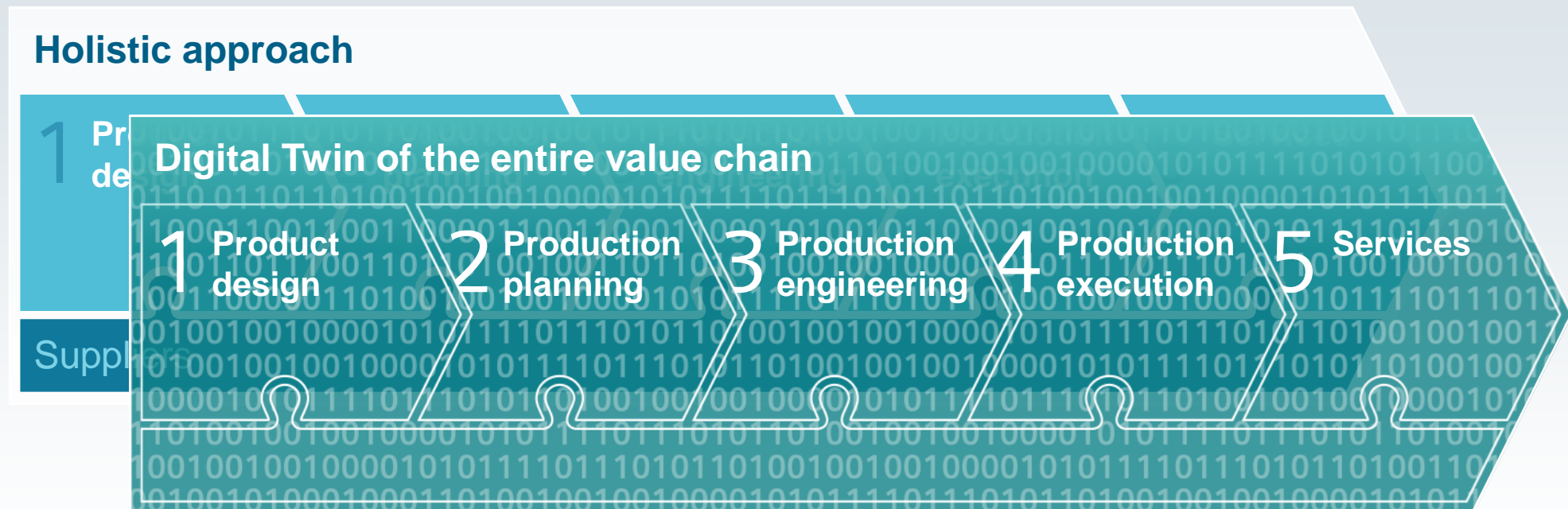
And take a holistic approach



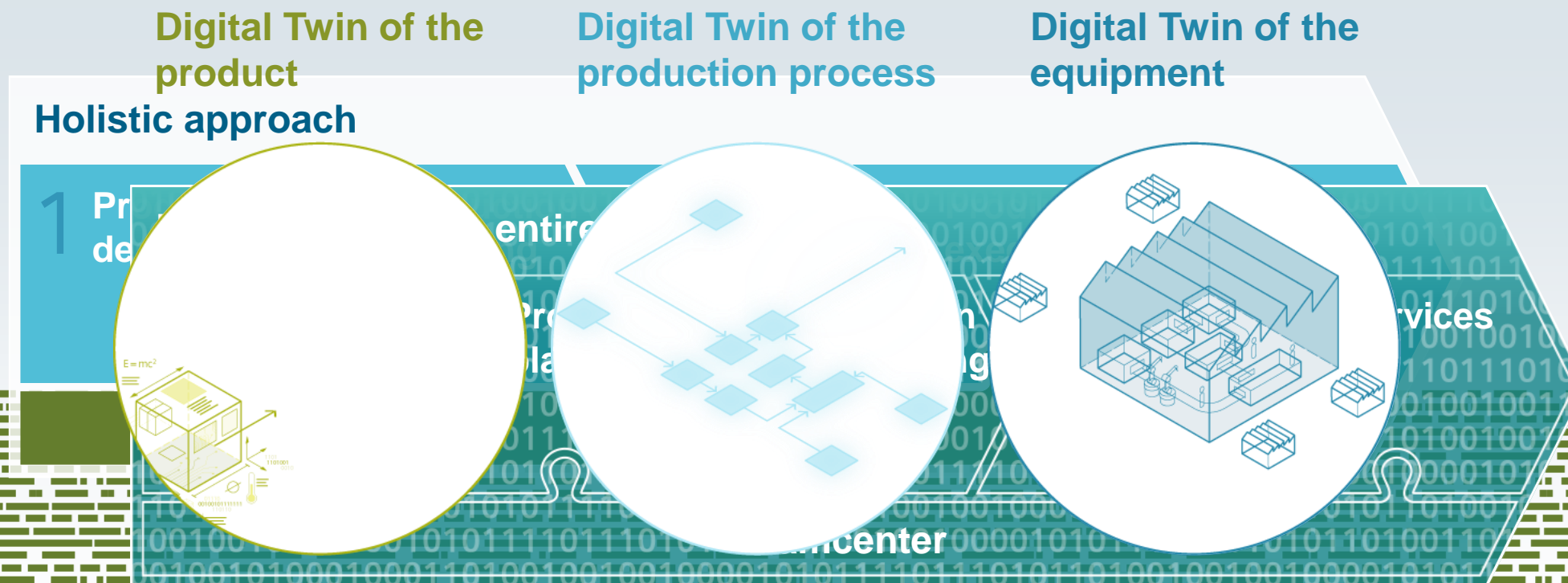
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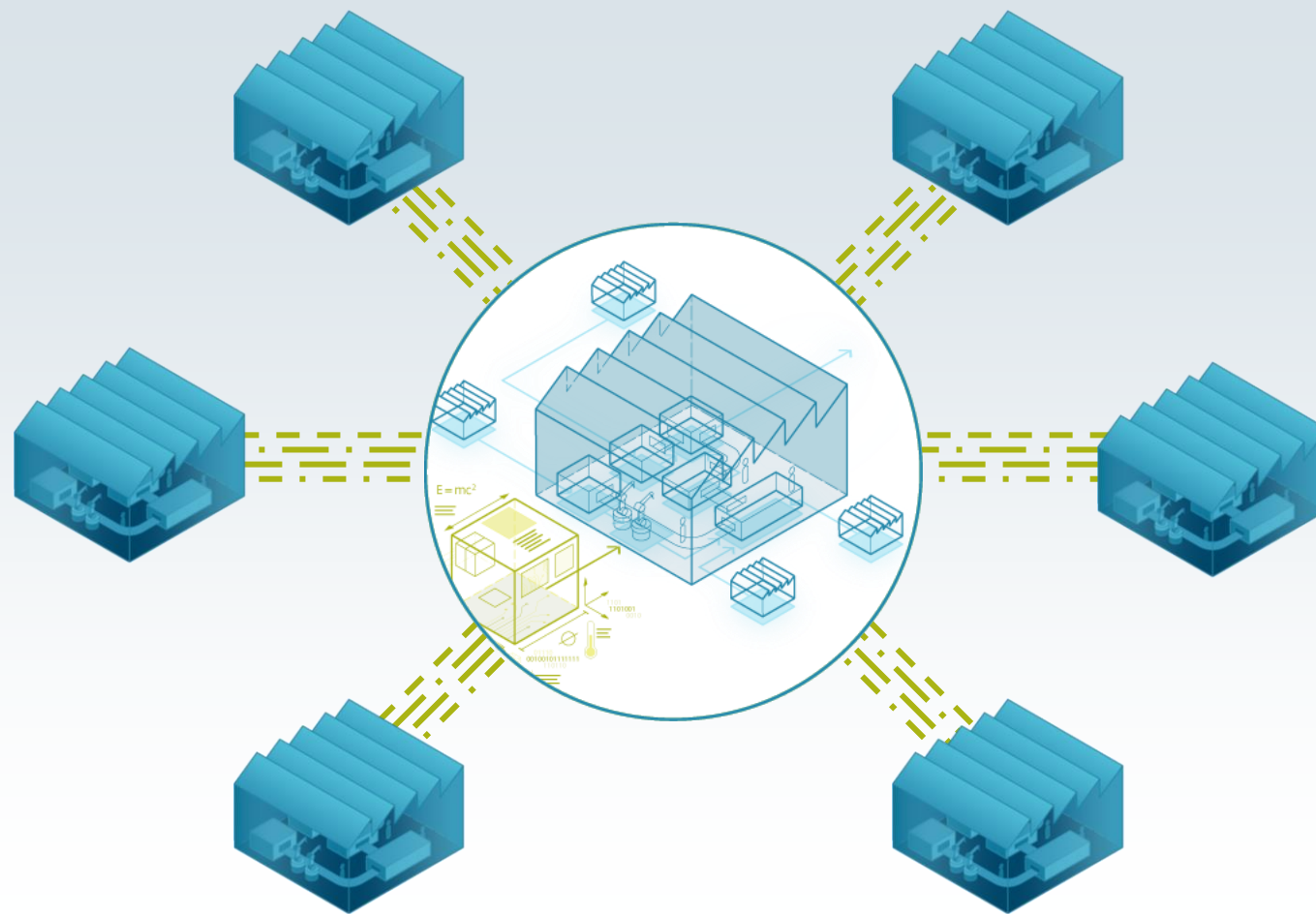
And take a holistic approach



Technical domains are integrated into ONE data model

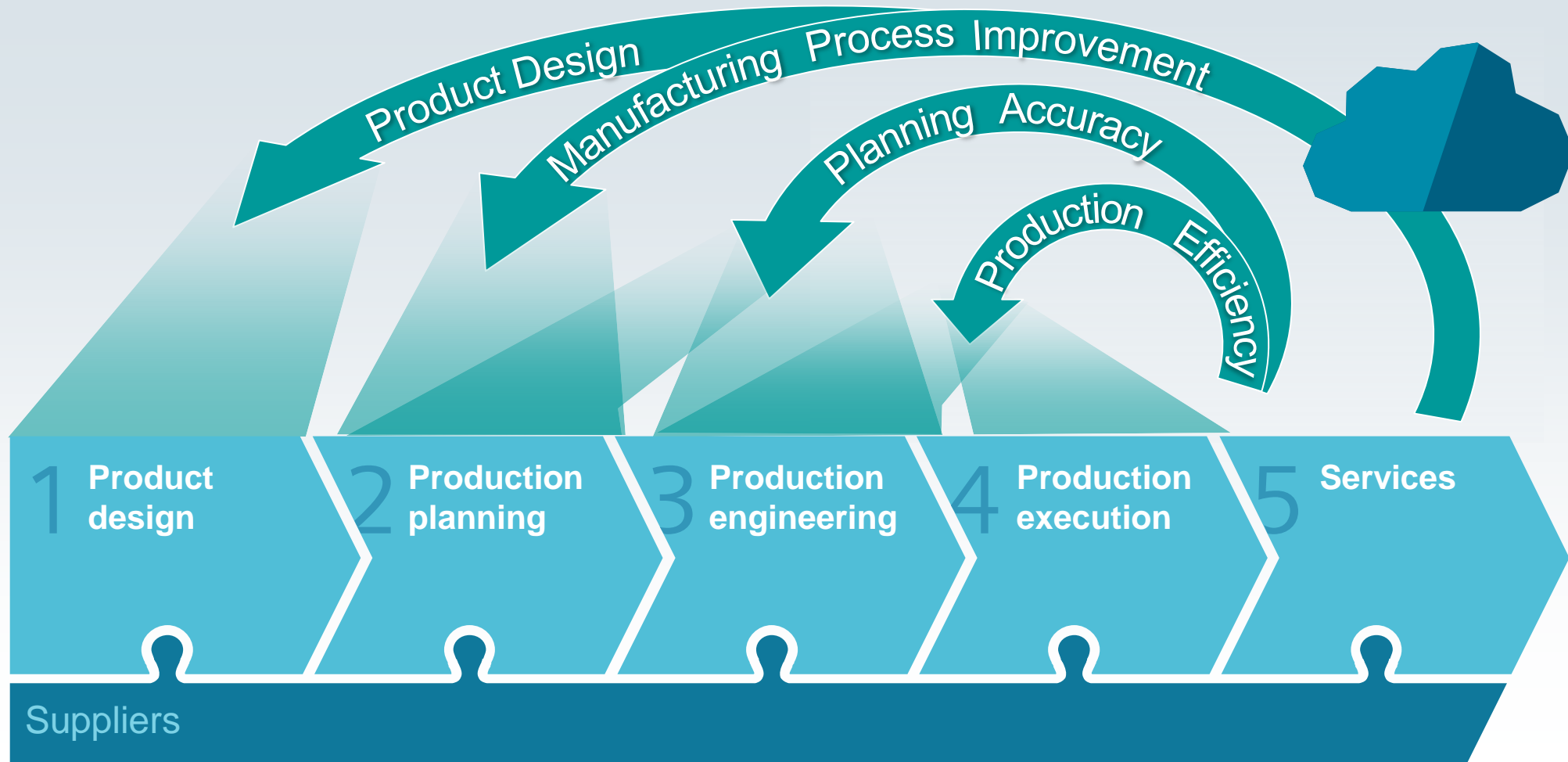


All stakeholders can contribute to and leverage the optimized model



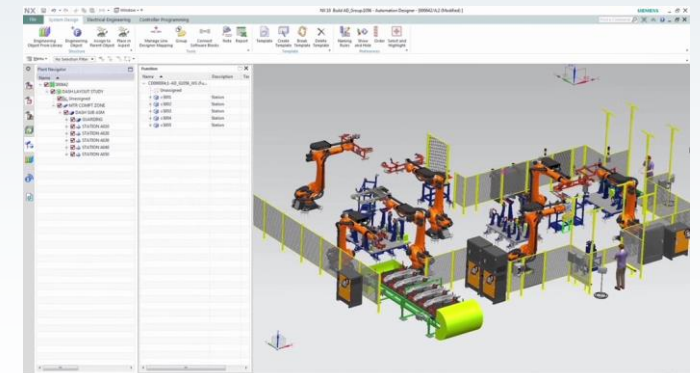
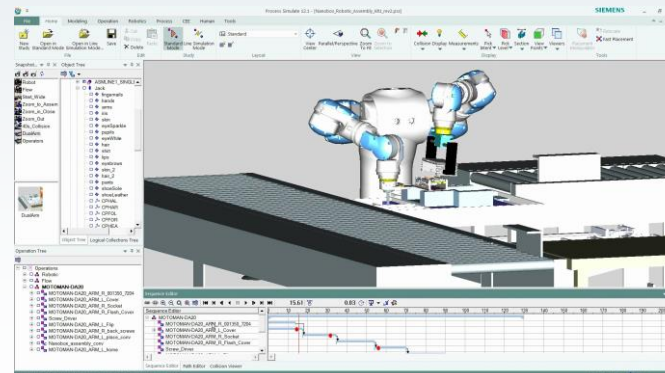
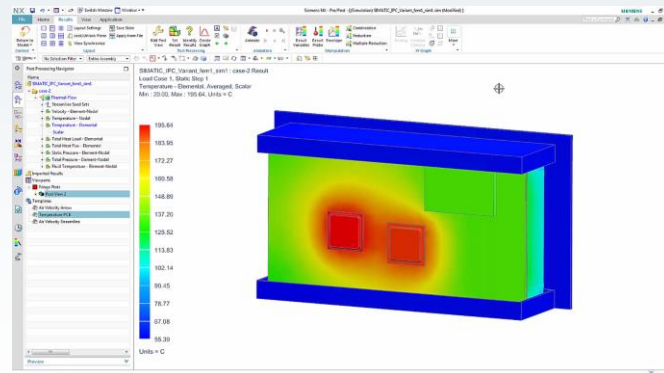
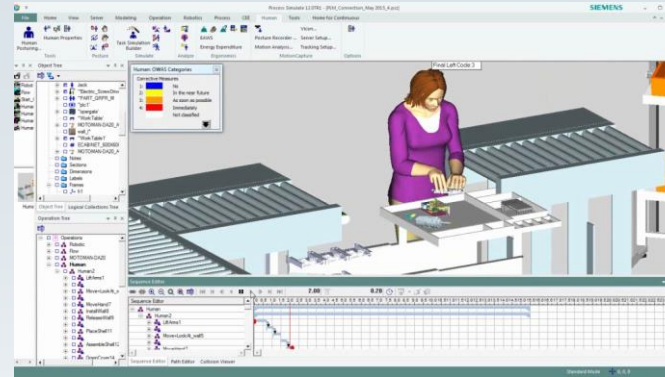
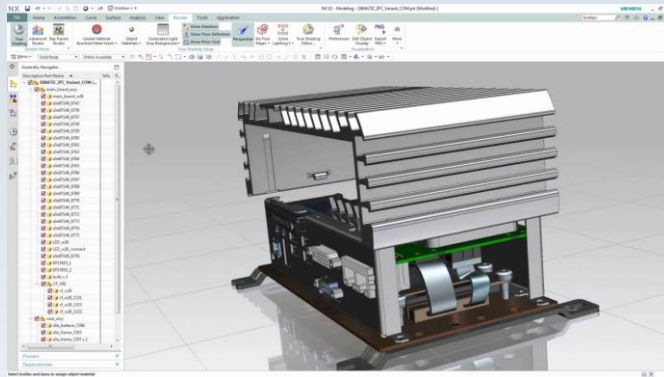
And data analytics close the loop,
feeding insights back into the value chain

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I'd really love to SHOW you how this comes together in practice but I only have ten minutes

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Maserati: Ghibli

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Time-to-market
reduced from
30 to 16 months.

Production tripled.



Local Motors: Strati

First 3D printed
structural car

Totally digital process
to connect design
and manufacture

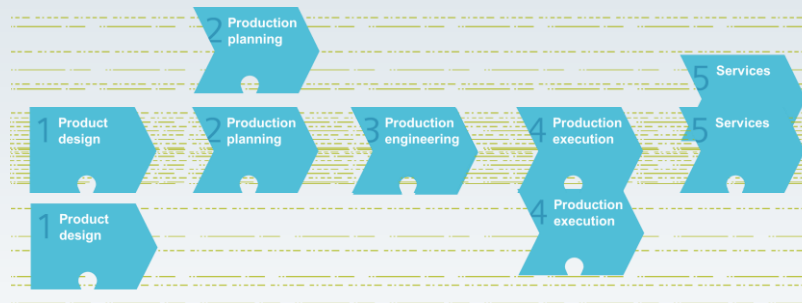
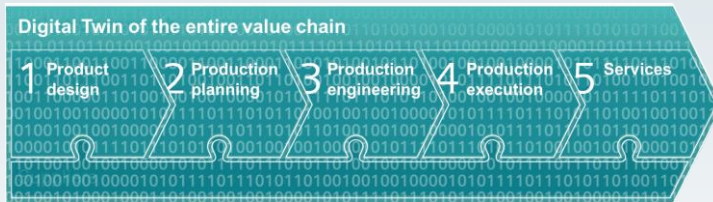


Digitalization Ingredients

A company needs these “digital companions” to transform into a digital enterprise

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Revolutionary Results with an Evolutionary Process



Intelligence of
Digital Twin

+

Connectivity of
Digital Thread

+

Insight from
Lifecycle Analytics

Moving industry from curiosity to commitment

Challenges along the path and how we can overcome them

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| | | |
|-------------------------|-----------------------------------|---|
| How do I get started | Organizational | How does this affect supplier relations |
| What is “our” end-state | How do I deal with legacy systems | Educational |
| How do I determine ROI | What are my competitors doing | Cultural |
| How long will this take | Technological | Who else can help |

Moving industry from curiosity to commitment

Challenges along the path and how we can overcome them

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How do I get started

Organizational

How does this affect
supplier relations

What is “our” end-
state

How do I deal with
legacy systems

Educational

How do I determine
ROI

What are my
competitors doing

Cultural

**Unique world class
showcases where
industry, academia,
and government
explore
digitalization**

DMDII, Chicago, IL

Technological

Who else can help

