

A hand holding a magnifying glass over a circular dial. The dial has 'FUTURE' at the top, 'VISION' in the center, and 'PAST' at the bottom. The magnifying glass is focused on the 'VISION' label.

Industrial AM: Challenges, Opportunities and the Future

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EXECUTIVE VICE PRESIDENT

stratasys[®]



Exciting Journey Ahead

Established foothold
...poised for greatness

Realized in 3 years



AM Maturity



Strong adoption of tools
Strong adoption of parts



Strong adoption of tools
Adoption of parts (low-volume)

Why Progress?

Unique value

Awareness and appetite

Stealth development commercialize





Tools in Automotive



BMW

Use less

- 1kg reduction

Use smarter

- Far lighter
- More ergonomic

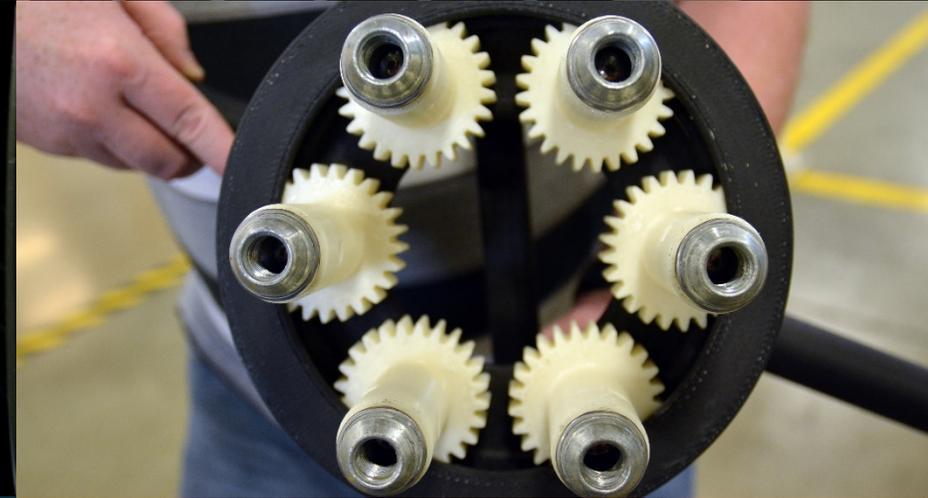


Tools in Automotive

Eckhart

Use smarter

- Provider of production line solutions to improve
 - Safety, reliability, efficiency
- Leverages design flexibility



Tools in Automotive

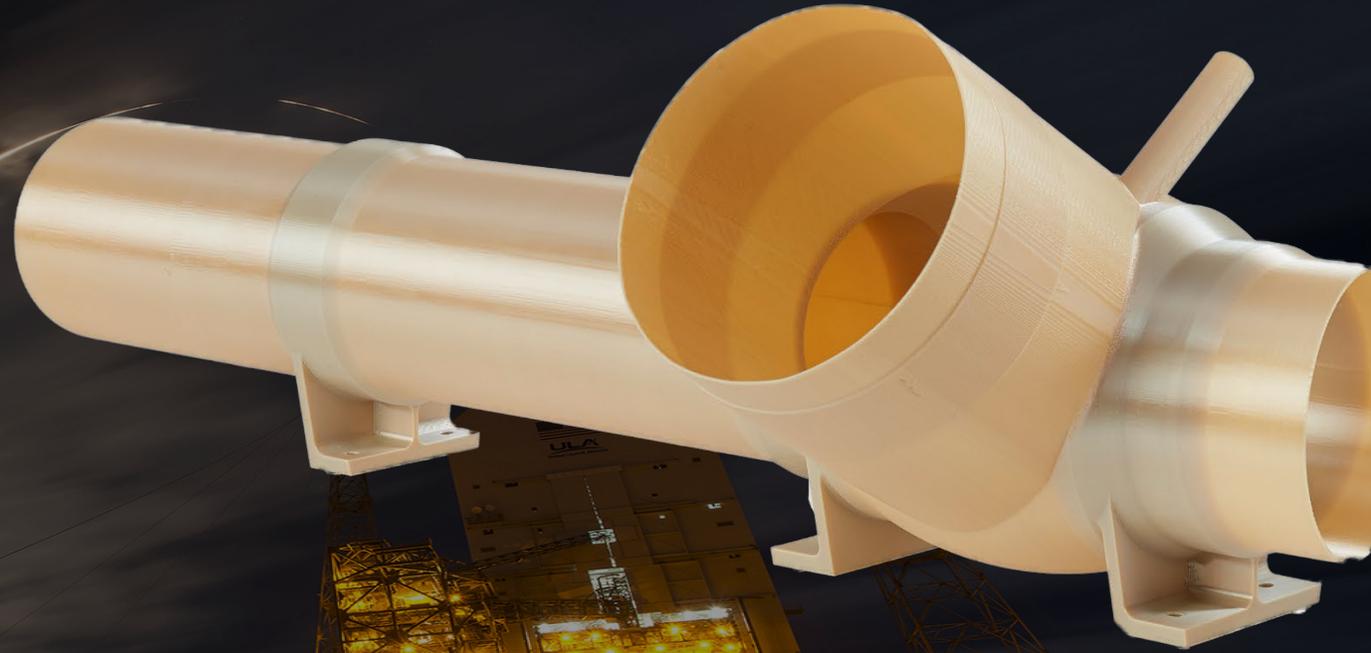


Courtesy of United Launch Alliance

Parts in Aerospace

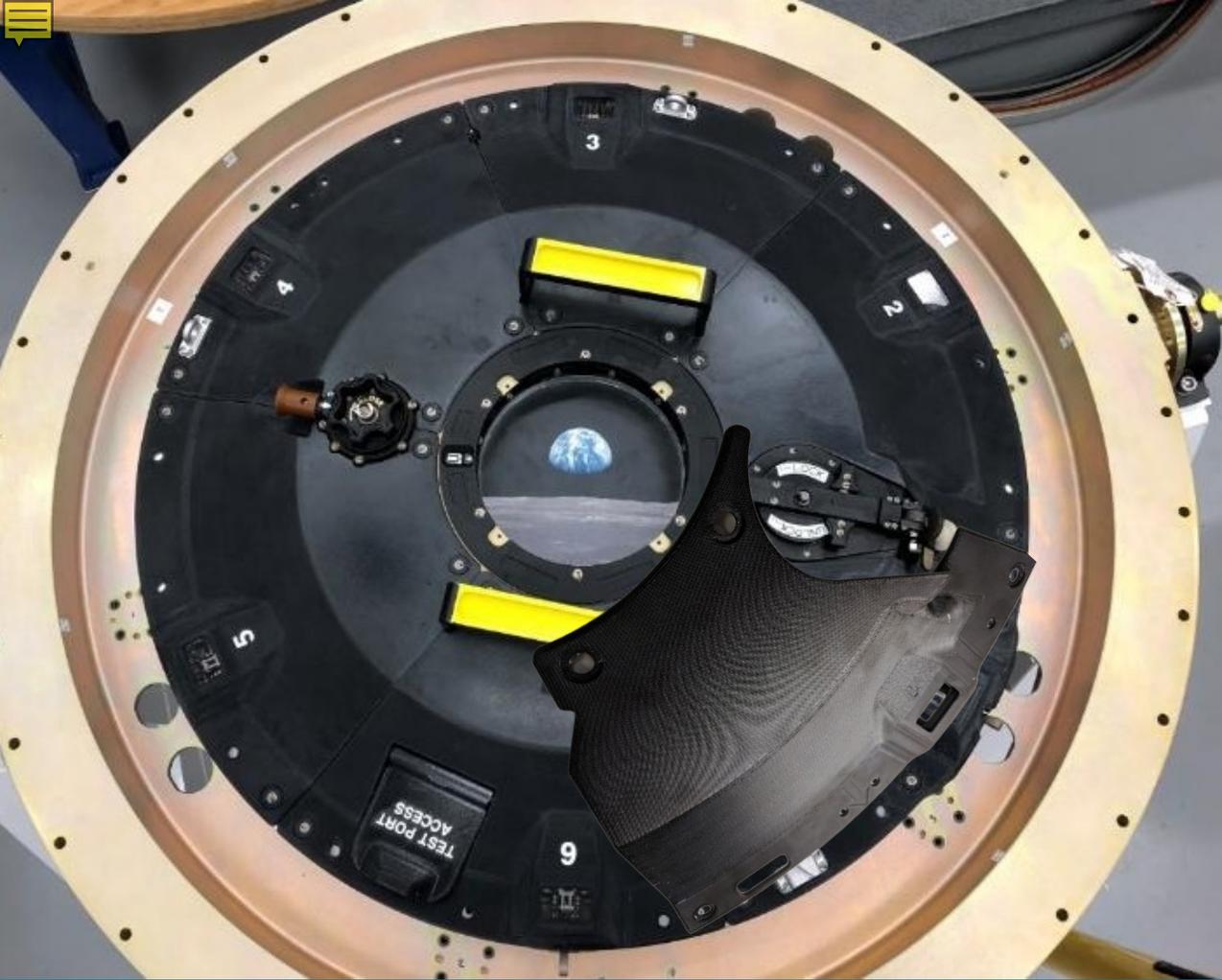
Use smarter

- Plastic vs. metal
- 16 parts vs. 140
- Easier installation



Courtesy of United Launch Alliance

Parts in Aerospace



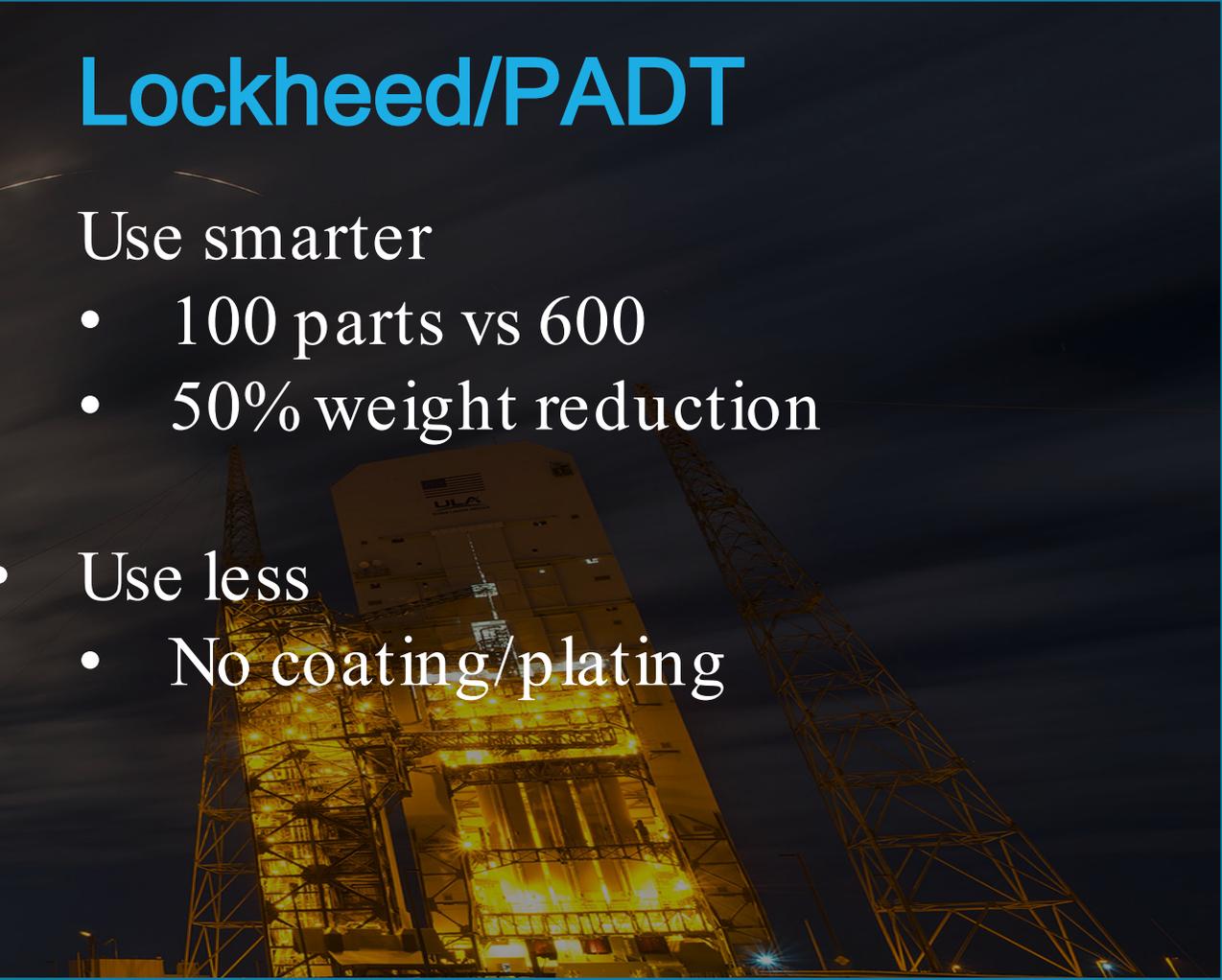
Lockheed/PADT

Use smarter

- 100 parts vs 600
- 50% weight reduction

Use less

- No coating/plating



Parts in Aerospace



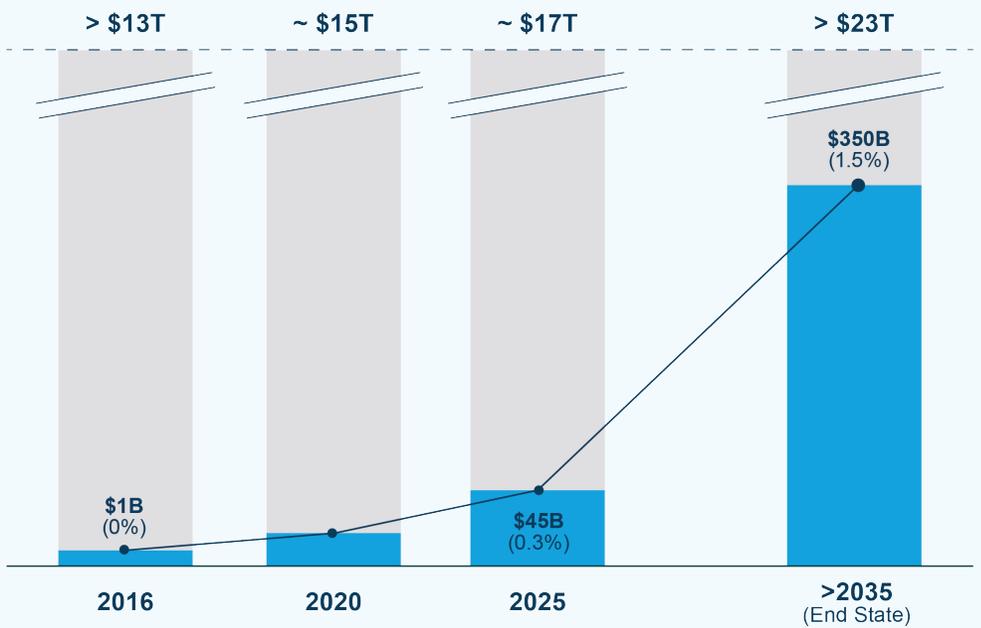
STATUUS
QUO

Big Challenge

Direct comparison
to established
processes

Additive's long term growth lies in Manufacturing, which brings new challenges to overcome.

AM take rate forecast of total addressable manufacturing market:



Total manufacturing
 Additive manufacturing

> \$350B



Applications & Materials Centric
 Specialized application know how and ability to adjust systems and materials to industry standards



Cost Competitiveness
 Provide real alternative to legacy production methods



High Throughput & Short time-to-part
 Timely produce high mix parts at volumes within the 1000's-100,000's per year



Strict Quality & Control
 Reliability and reproducibility to increase Availability, Performance, and Quality



24/7 Service & Connectivity
 High utilization and short downtimes accompanied by 24/7 service and data for predictive maintenance



Allure Quotient





Allure Quotient

Desire \times Quantity

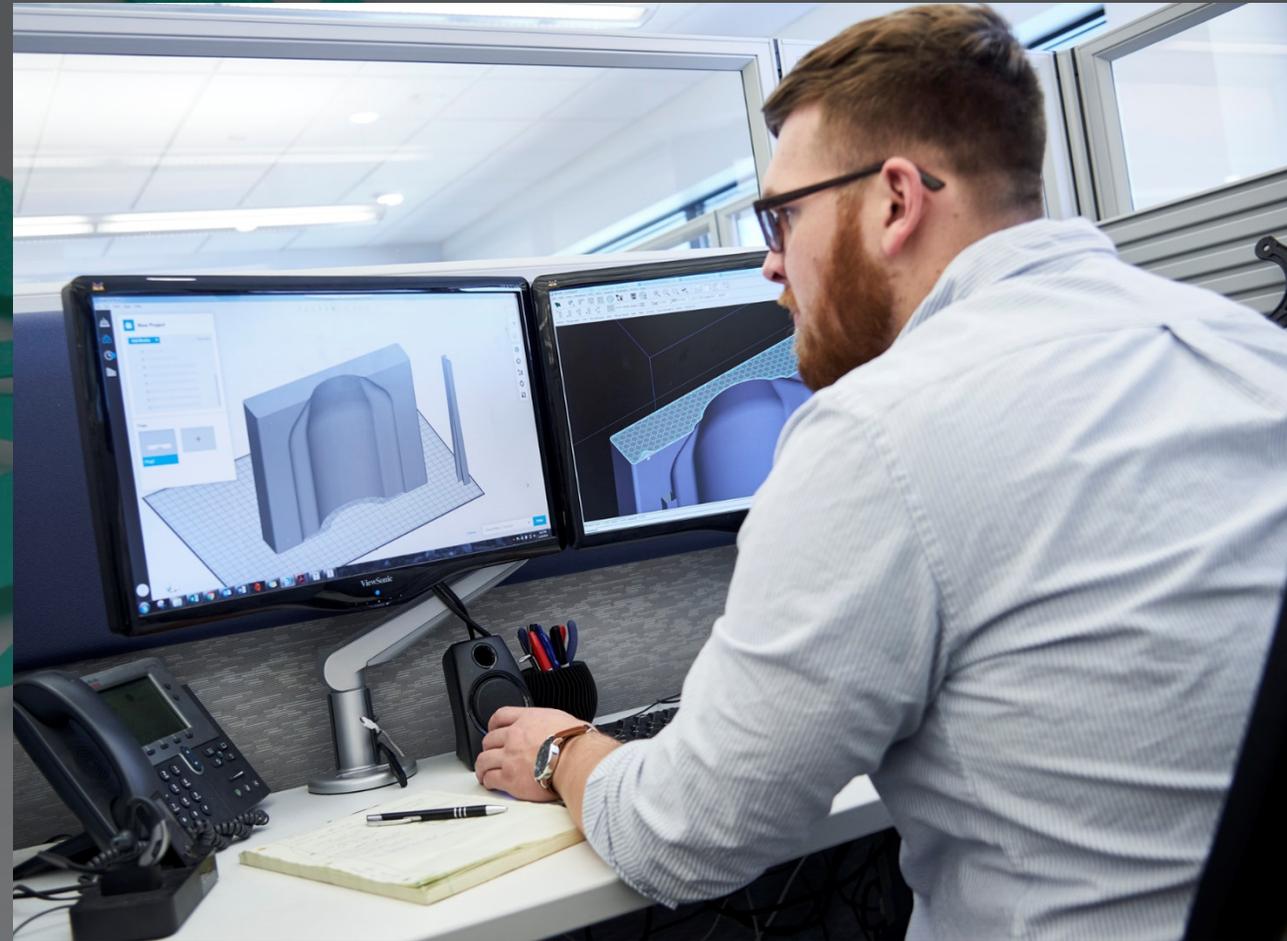
Uncertainty $+$ Effort

Allure Quotient

Jigs and Fixtures for GrabCAD Print

Desire \times Quantity

Uncertainty + Effort



Materials

Limited selection

Properties differ

Will improve < 5 years





Materials

Tightly coupled to
process & machine



H2000 Infinite Build

Materials

Carbon -filled (CF)
thermoplastics

“Use less”

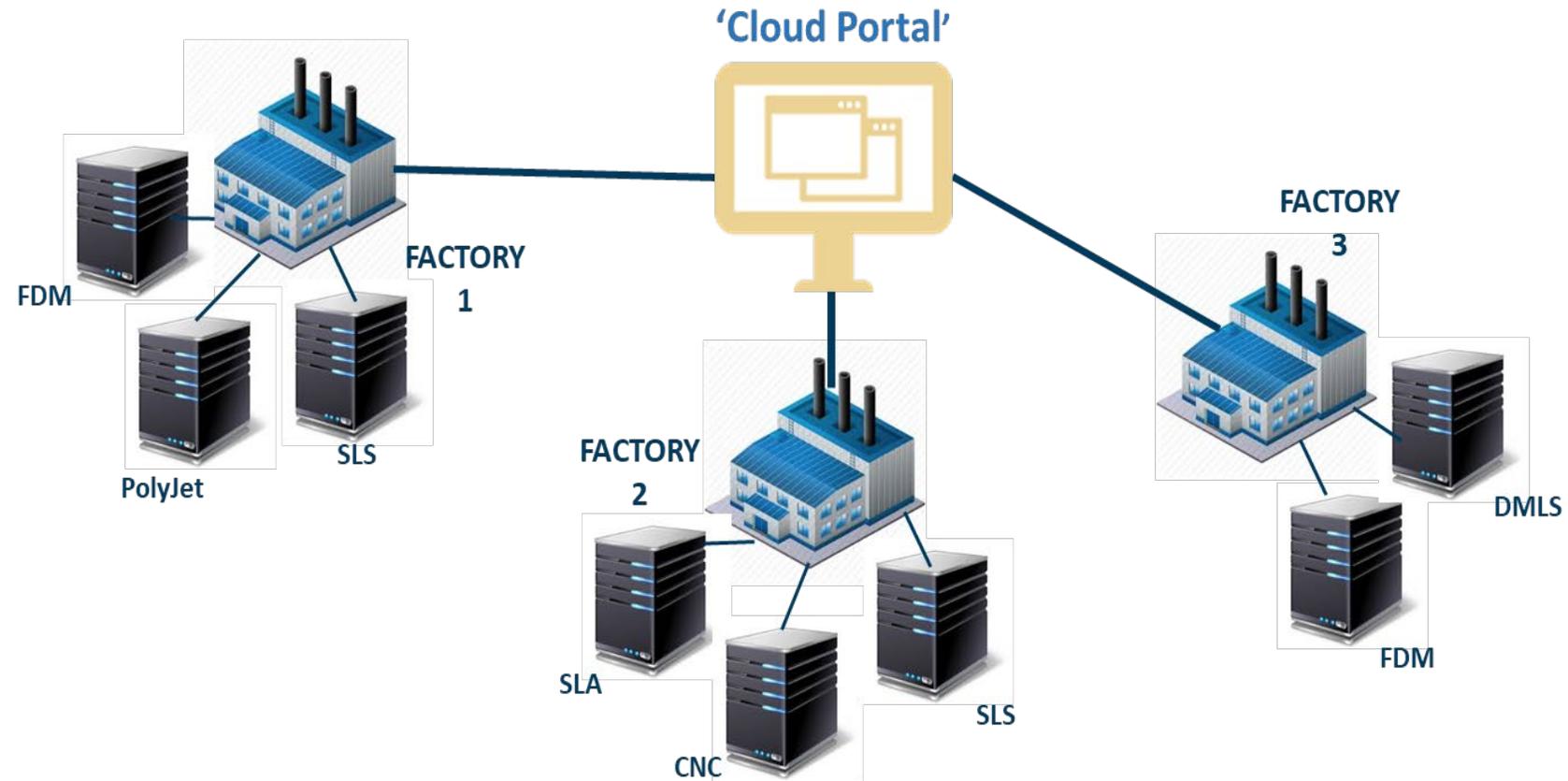
“Use smarter”



Cloud Solutions

Enterprise view
Centralized control
Integrated 3D assets

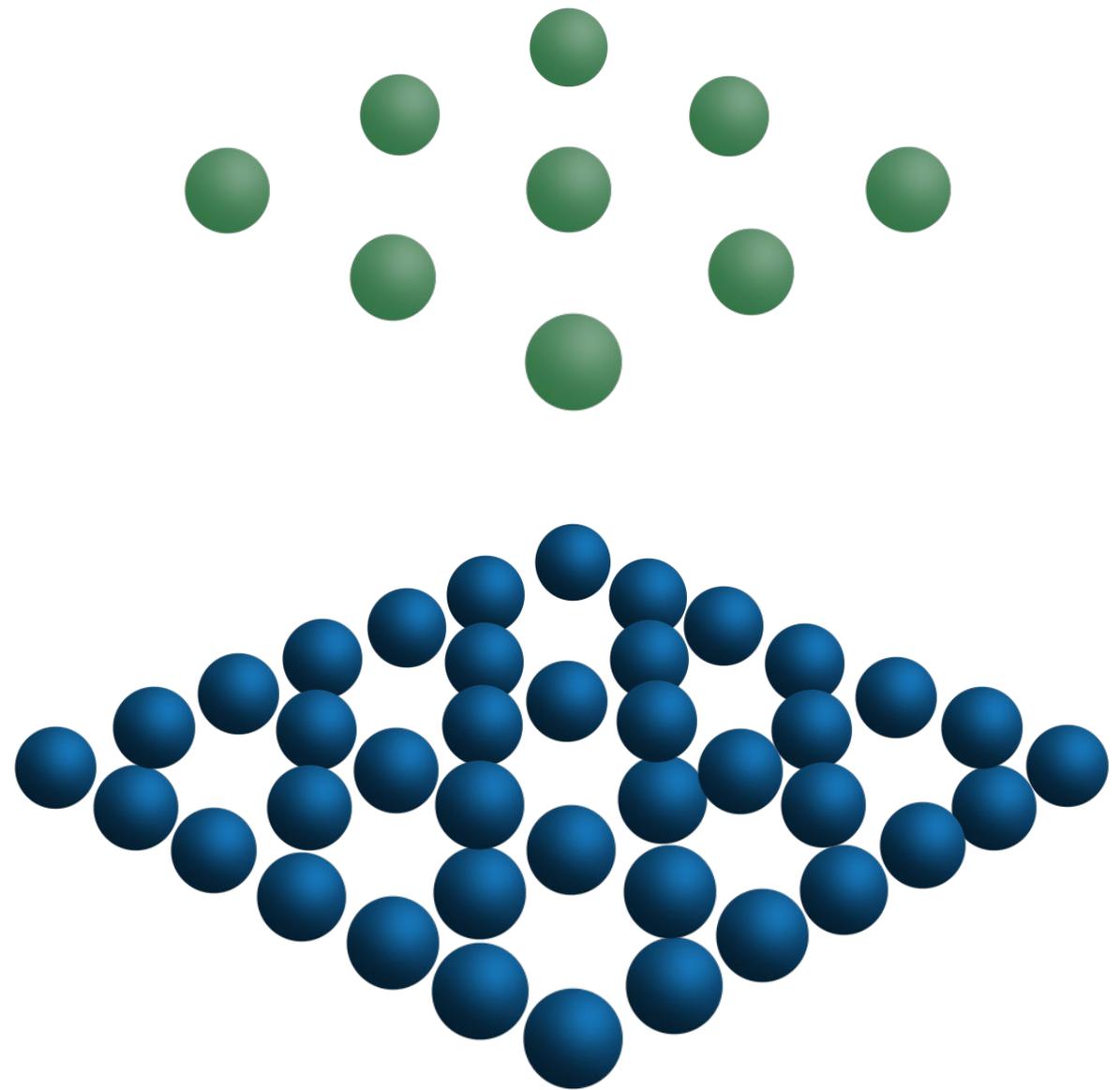
Industry 4.0





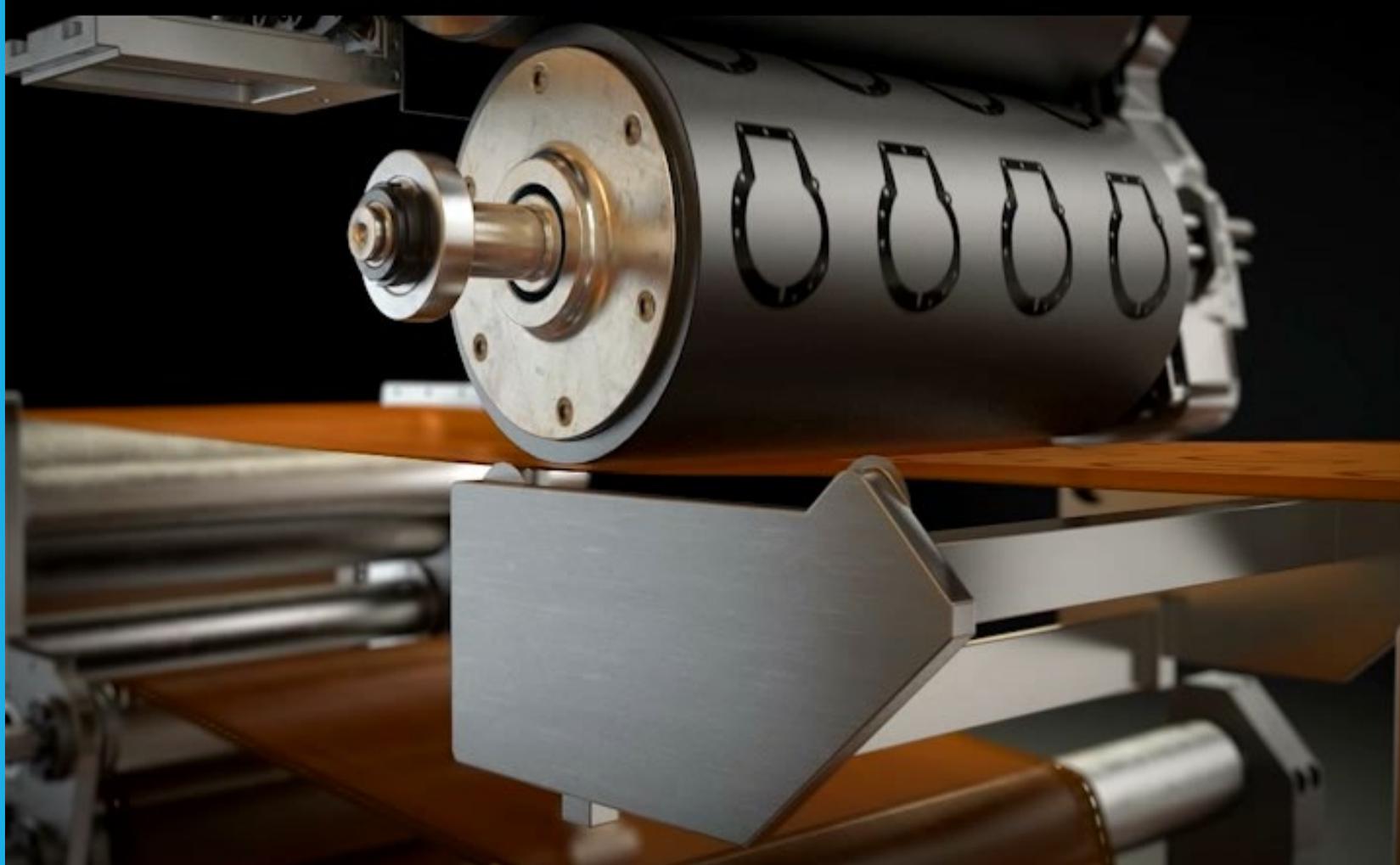
Matrix Printing

Formulate while
producing part





New TechnologySTEP



STEPProcess

STEP

Matrix printing

Comparable to
injection molding

Built for integration





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