

**Ajuntament
de Molins de Rei**



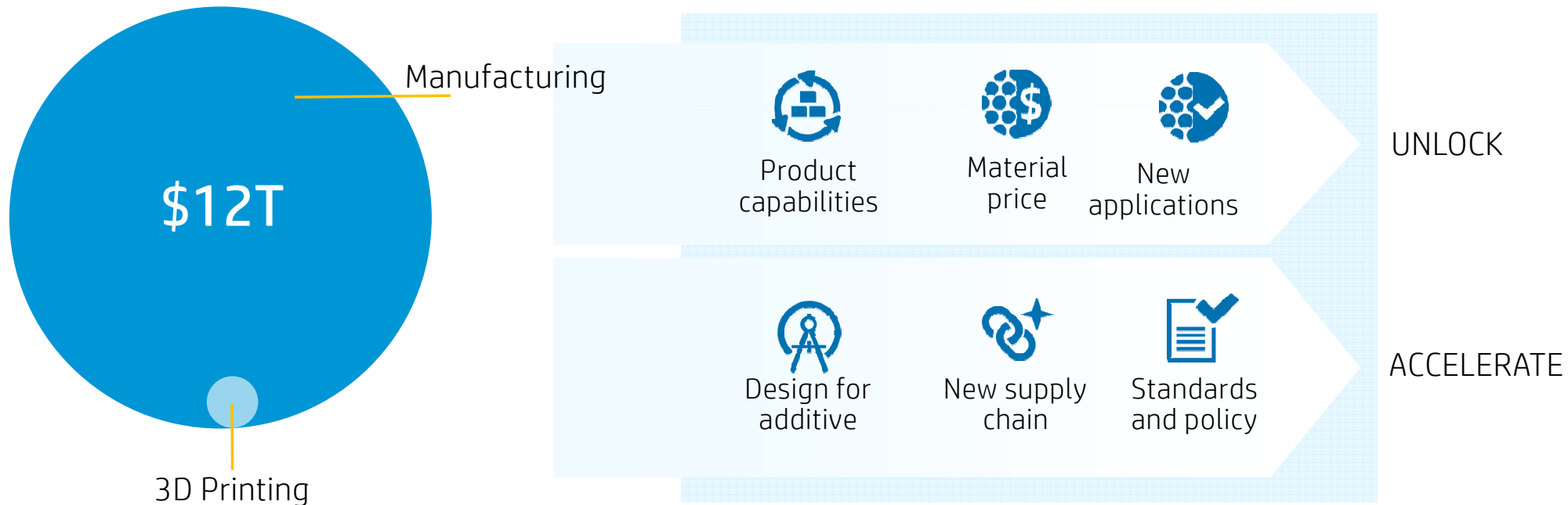
HP 3D Multi Jet Fusion Iberia

Jaume Homs – Sales Manager Iberia HP 3D Print – jaume@hp.com

Six levers to disrupt the \$12T manufacturing sector

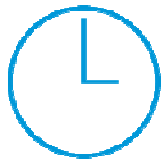
MANUFACTURING SECTOR OFFERS
GREAT POTENTIAL FOR 3D PRINTING

SIX KEYS TO TRANSFORM
THE \$12T MARKET



Why 3D?

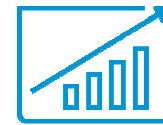
How to use: Pick & choose the right benefits for your application



Time



Economic
advantage



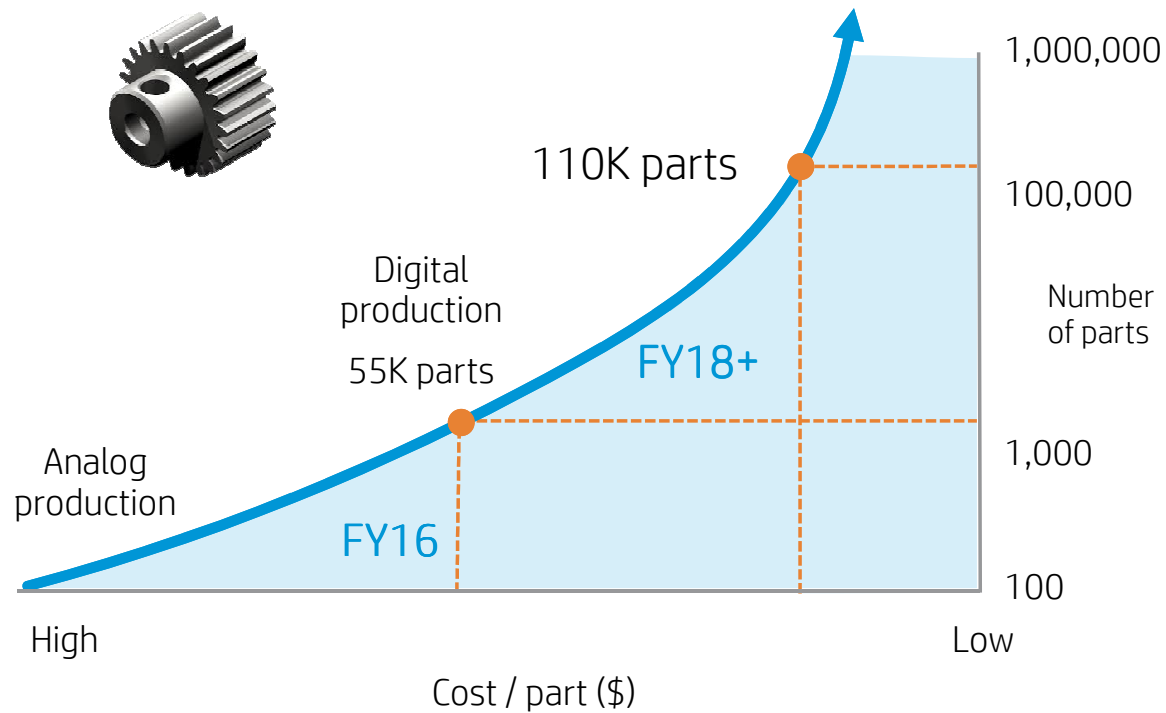
Performance
increase



Personalization

Significant momentum in the first year

Delivering breakthrough economics



Driving
material costs down

Reducing
cost-per-part (CPP)

Doubling
break-even to **110K**

HP JET FUSION 3D PORTFOLIO



300\500 SERIE

≤1,5 BUILDS/WEEK



4200 SOLUTION

2-3 BUILDS/WEEK



4210 SOLUTION

2,25-4 BUILDS/WEEK



4210B SOLUTION

>4 BUILDS/WEEK

Prototypes
Short run



Production

HP Open Platform



+7 materials planned
+50 partners in the pipeline



HP 3D High Reusability PA 12

Strong, functional, detailed complex parts at lowest cost

For customers looking to produce **strong, functional, watertight parts**, HP 3D HR PA 12 provides excellent chemical resistance and biocompatible certifications.



HP 3D High Reusability PA 12 Glass Beads

Ideal for producing stiff, low-cost, quality parts

For customers looking to produce **stiff, dimensionally stable functional parts**.

40% glass bead filled thermoplastic material with optimal mechanical properties.



HP 3D High Reusability PA 11

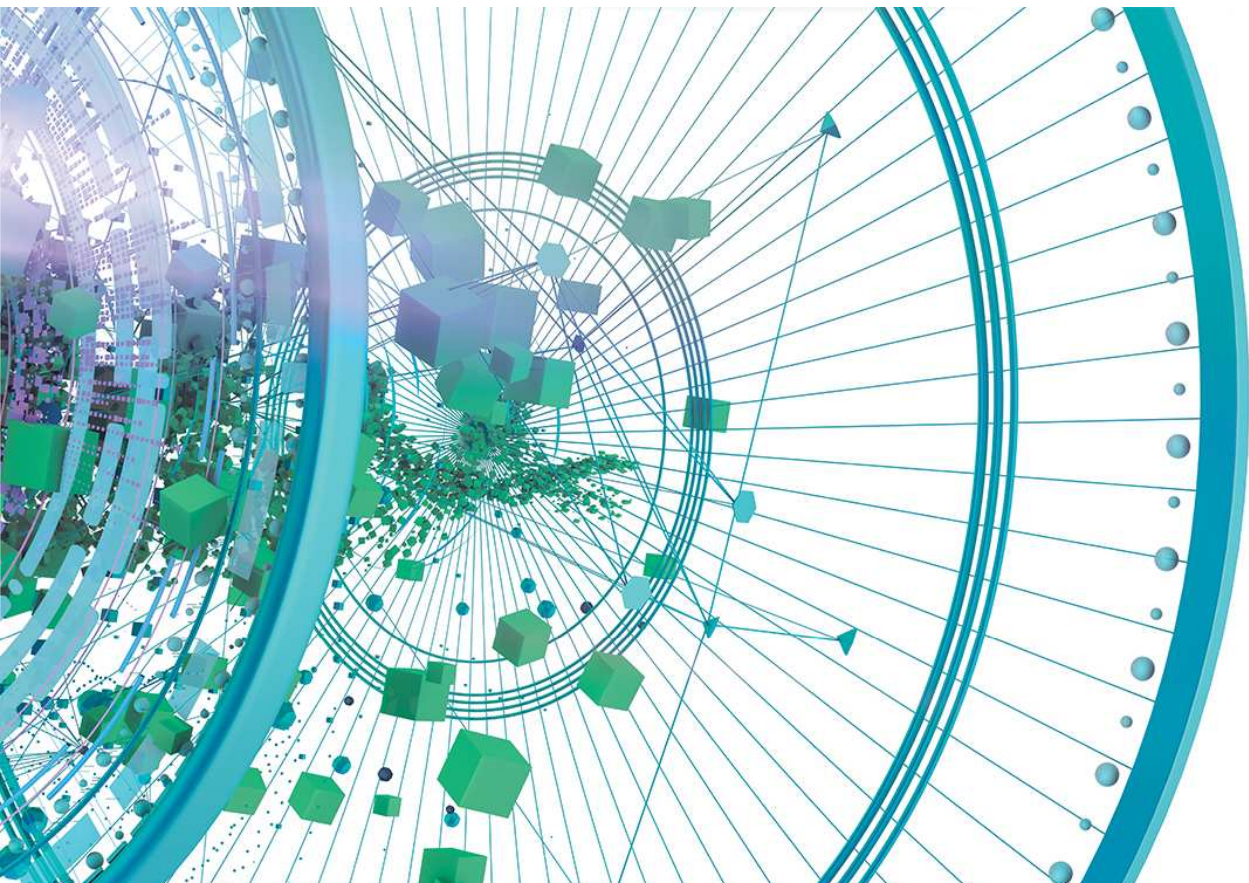
Ideal for producing ductile, quality parts at low cost

For customers looking to produce **strong, ductile, functional parts**, HP 3D HR PA 11 provides enhanced elongation at break and impact resistance.



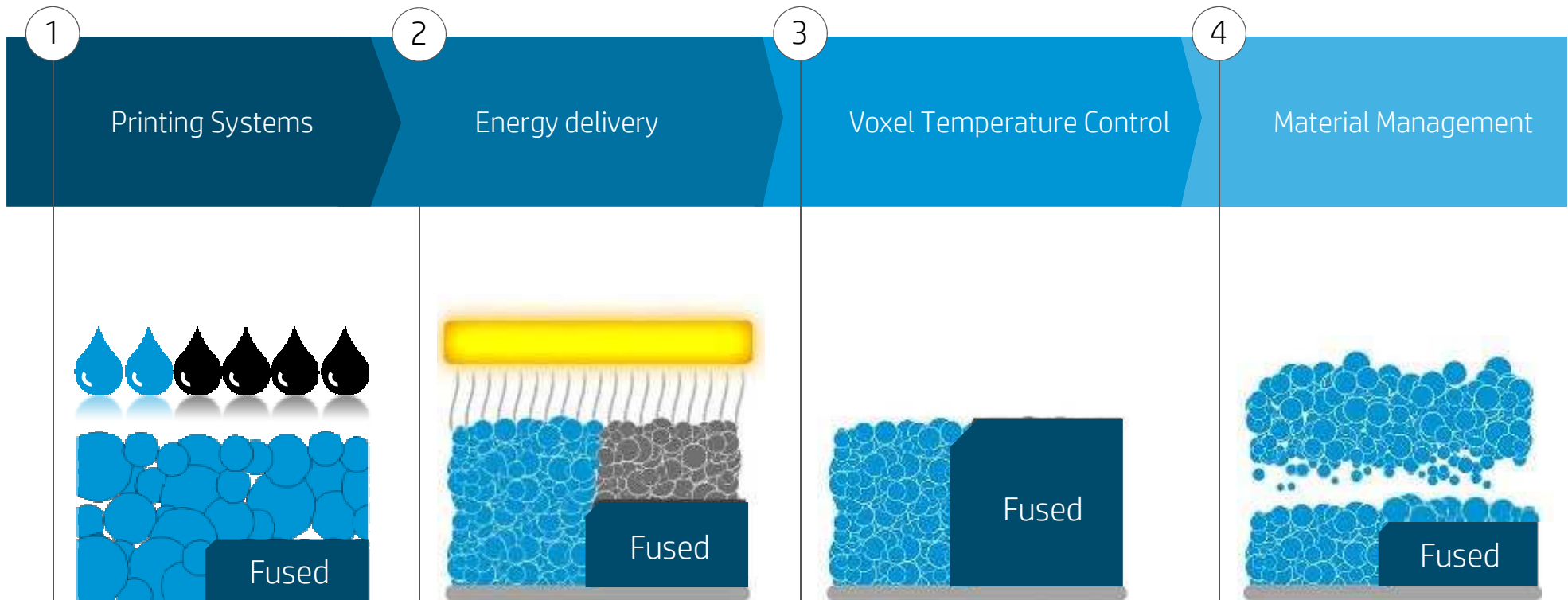
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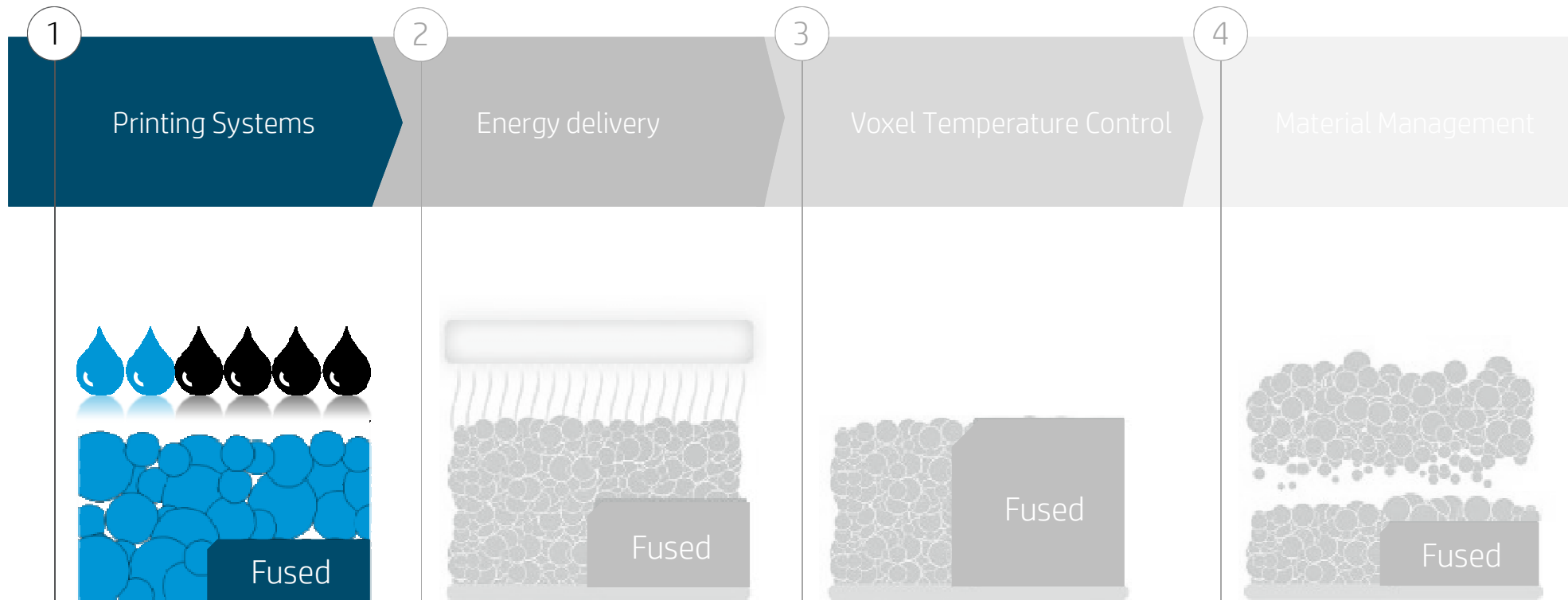


Introducing MJF Technology

HP Jet Fusion 3D Printing Process



HP Jet Fusion 3D Printing Process



Printing Systems

Printhead and Agents

Printhead



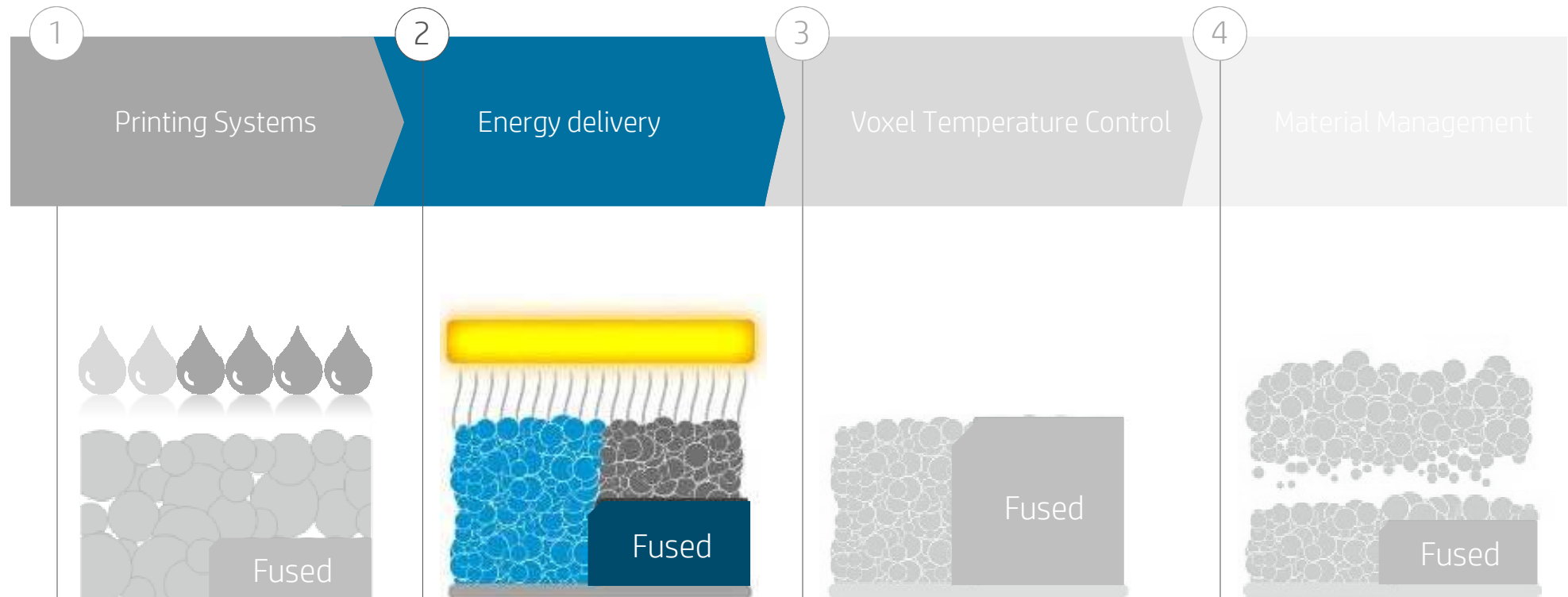
Agents



6TH FLOOR

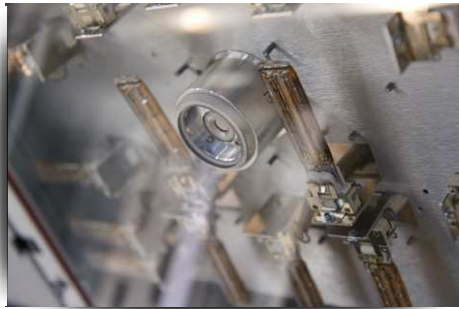


Energy delivery

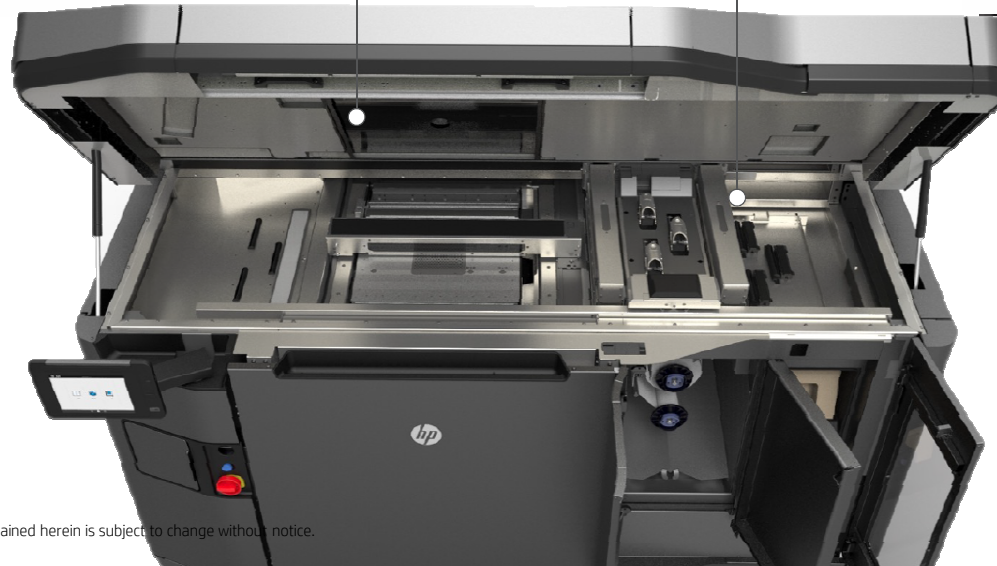


Energy Delivery

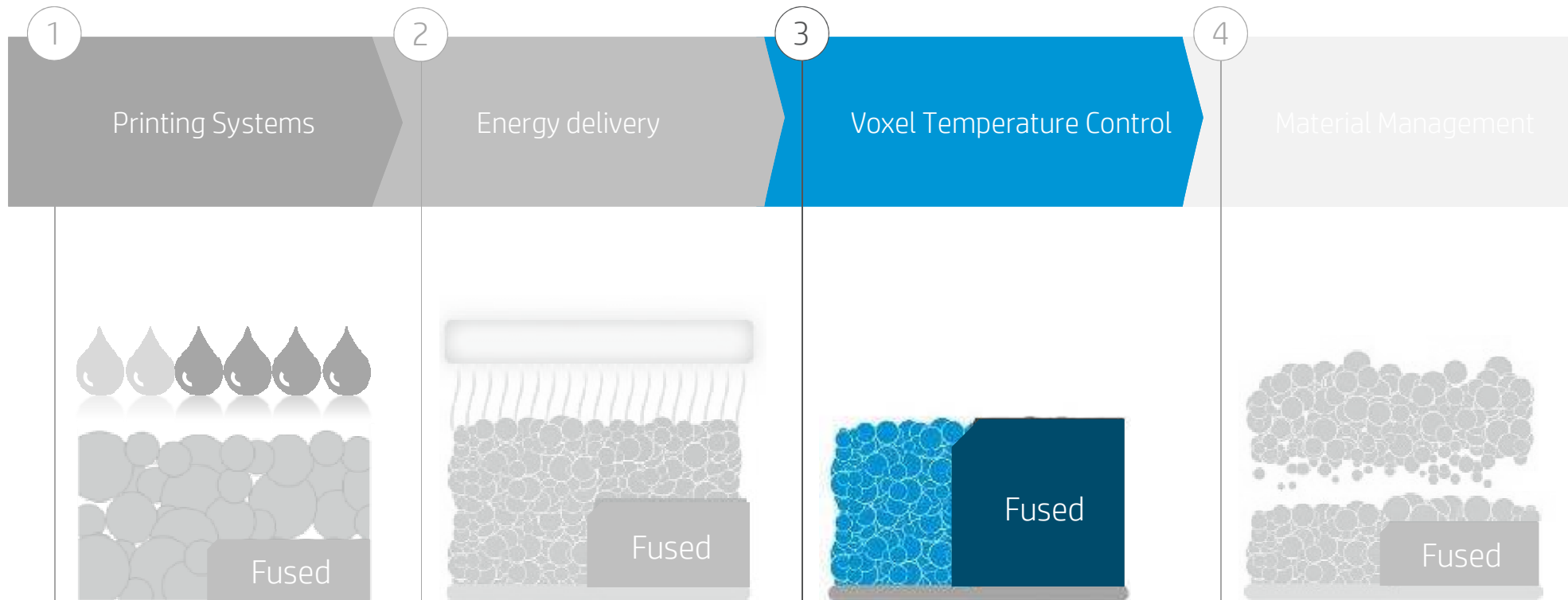
Top lamps



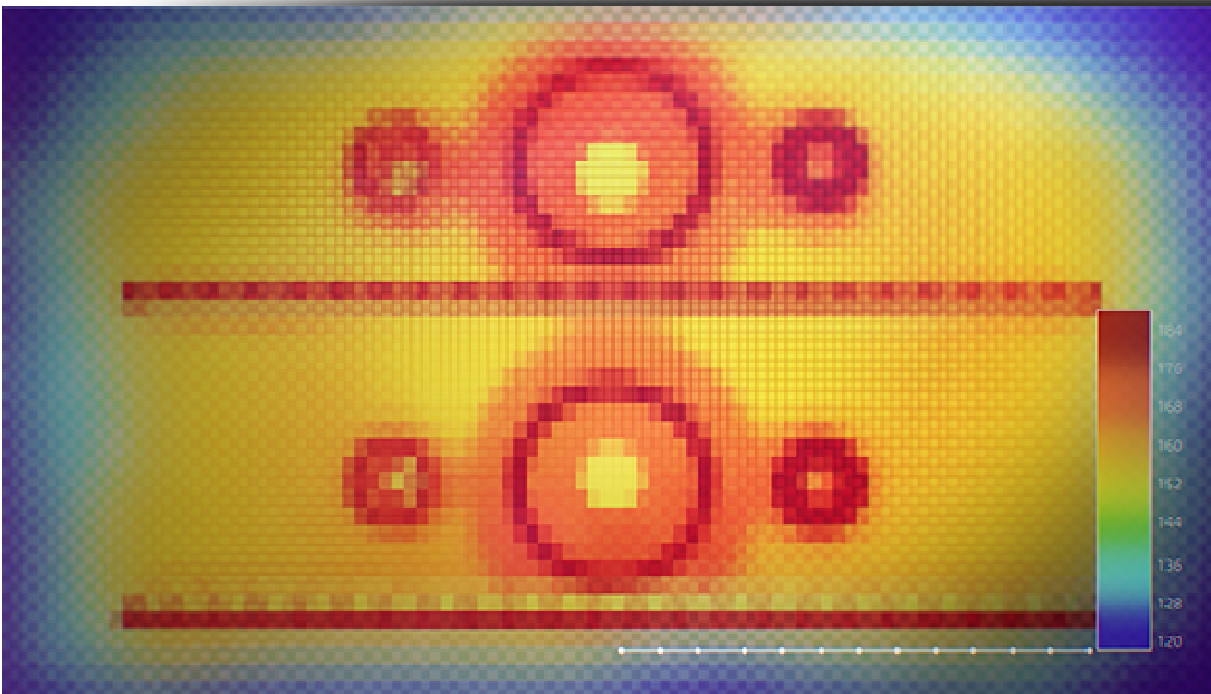
Fusing lamps



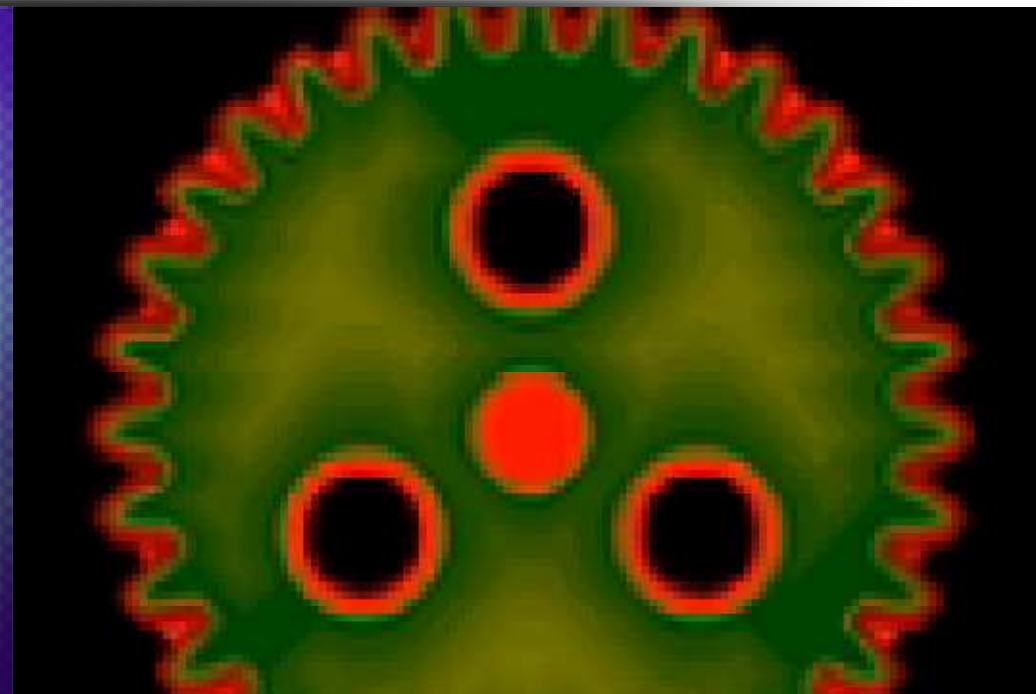
HP Jet Fusion 3D Printing Process



Voxel Temperature Control

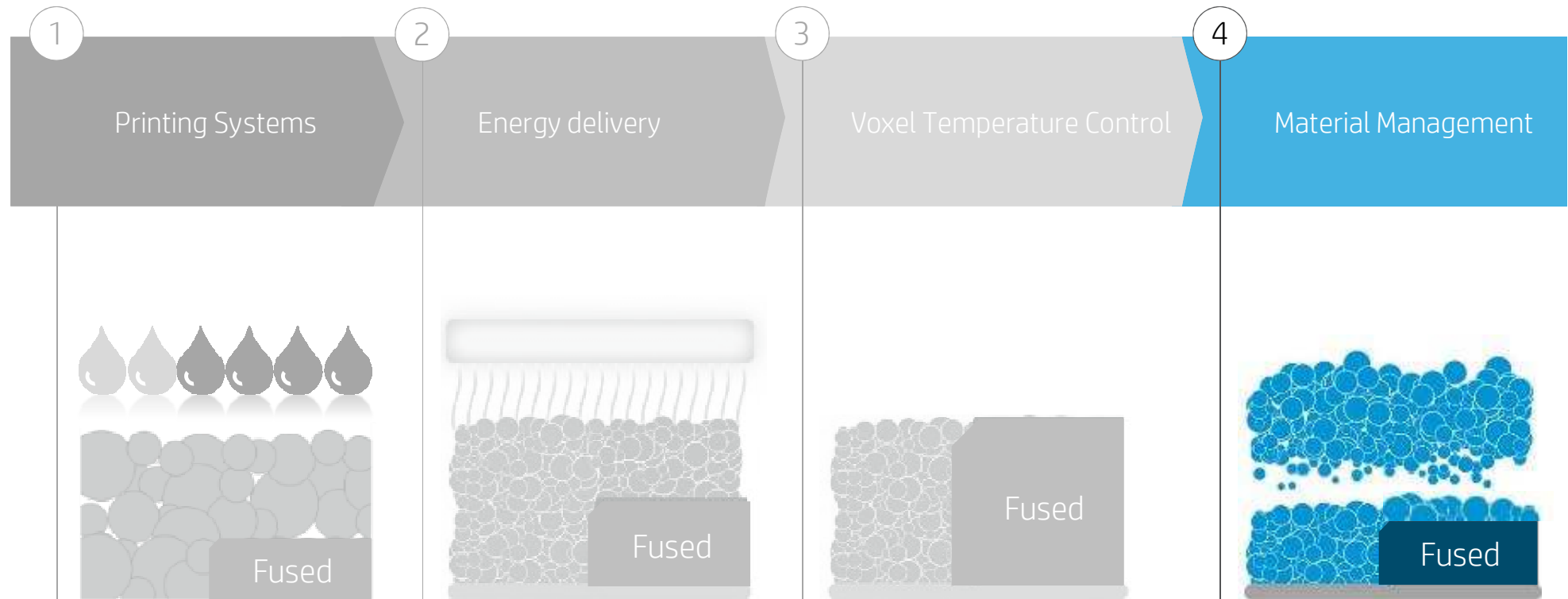


900 points (aprox 0.5 inches each)
by layer to ensure bed homogeneity

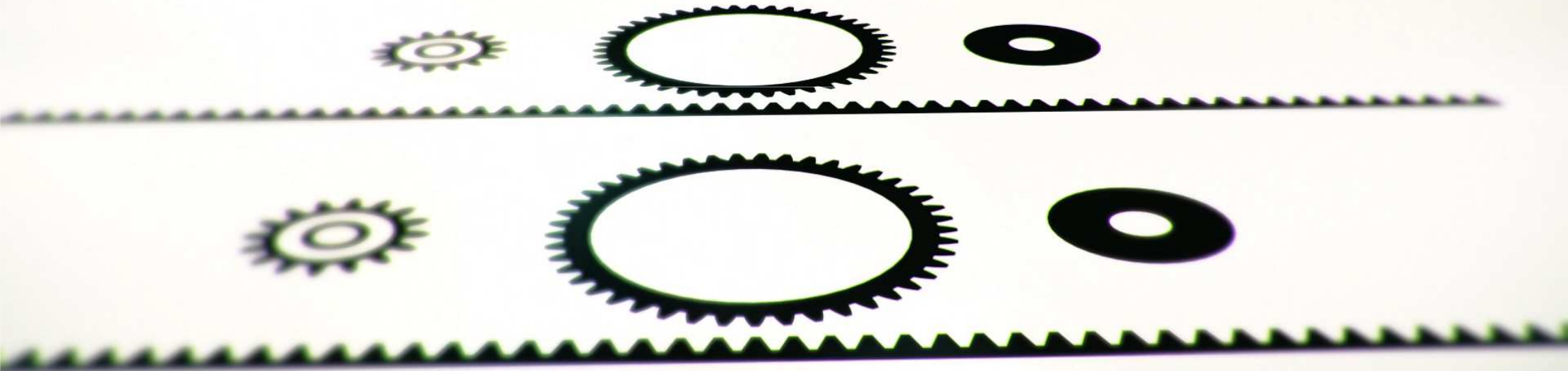


18.000 voxels (0.0016 inches) to control the inside part
temperature by image processing

HP Jet Fusion 3D Printing Process



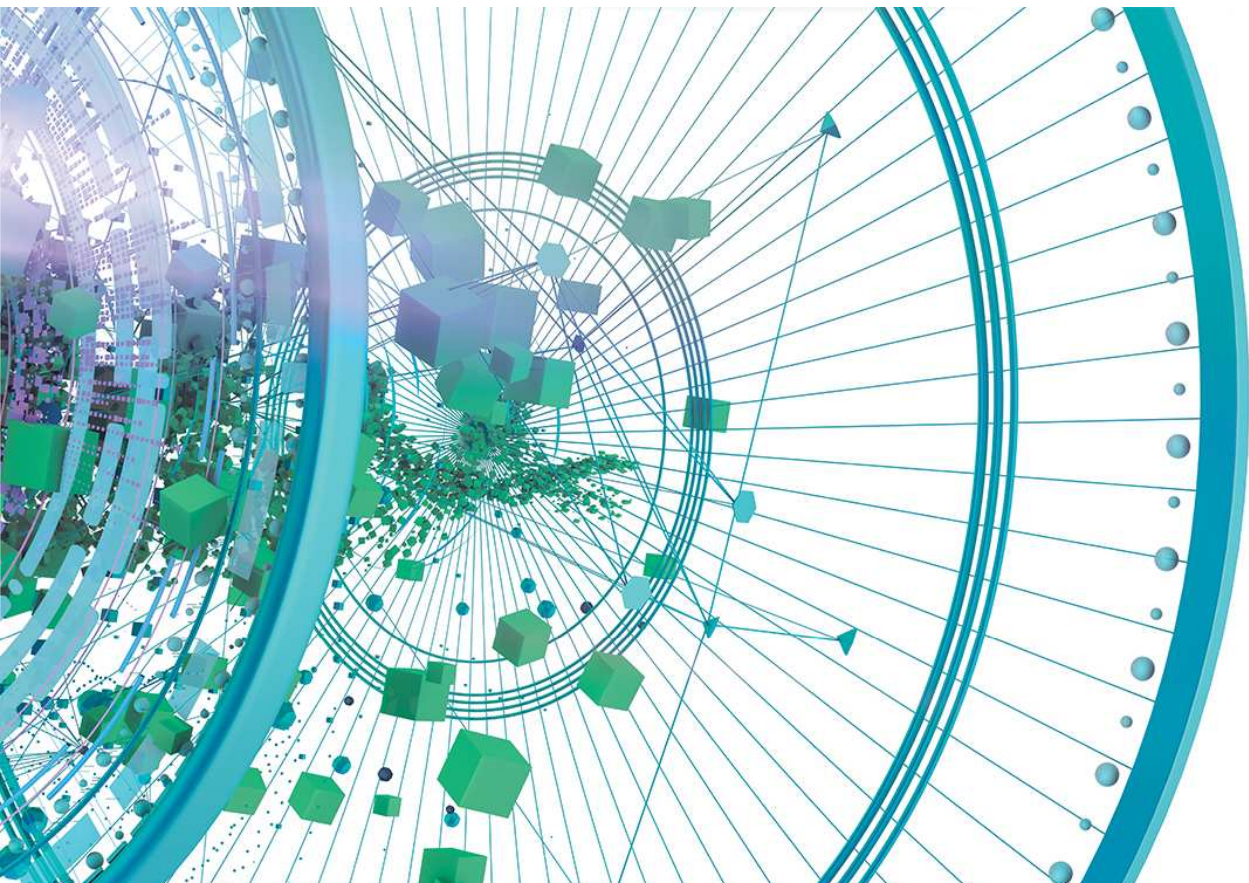
HP Proprietary Multi-Agents



HP Jet Fusion 3D Printer

3D Printing Process

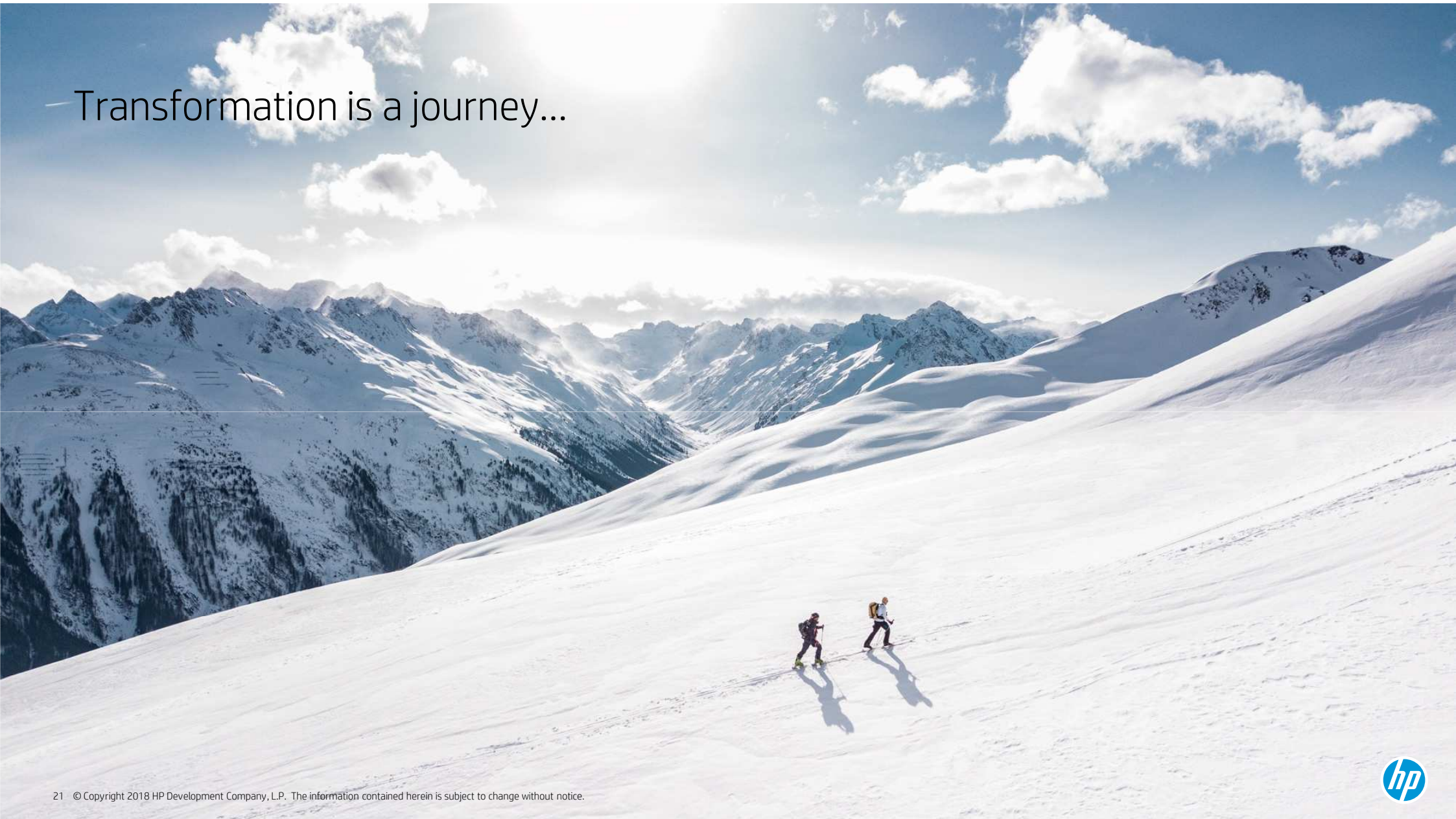




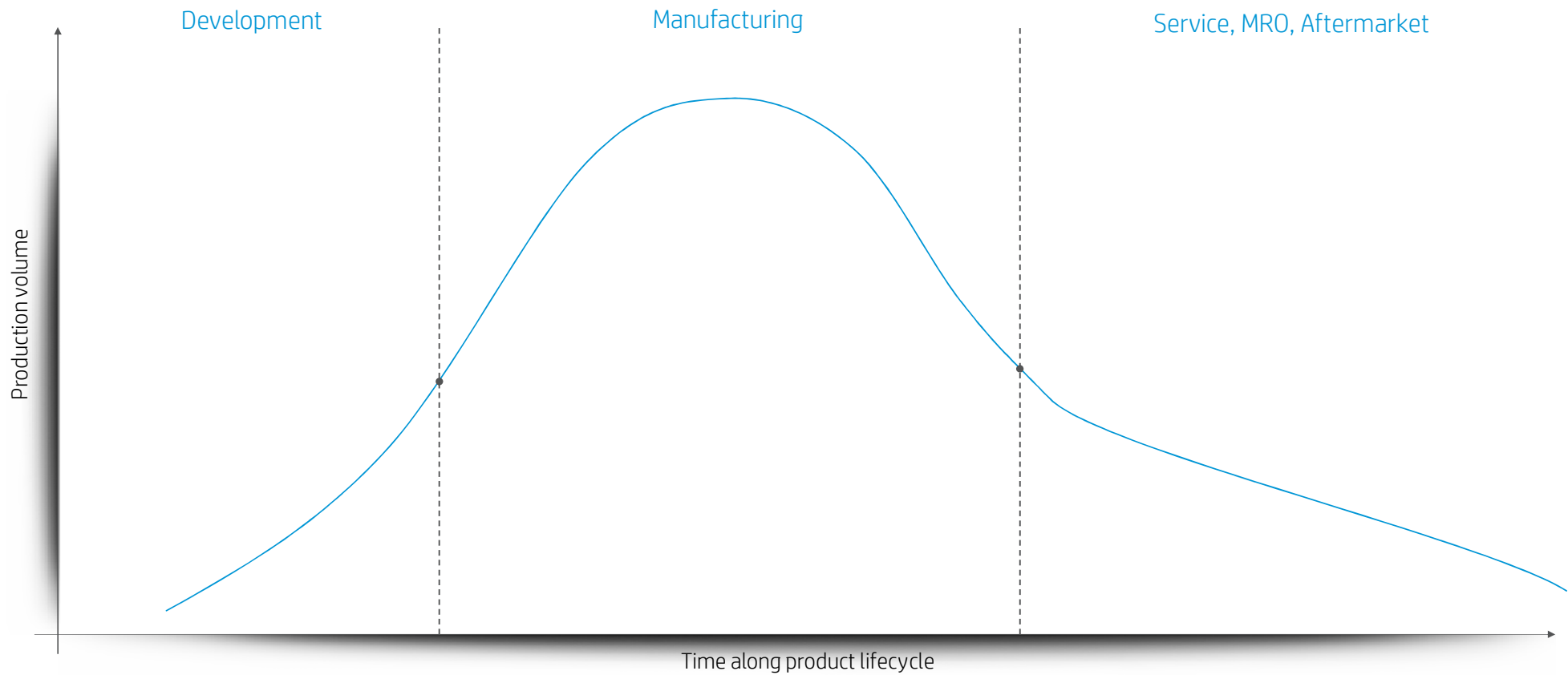
Aplicaciones

Jaume Homs – Sales Manager Iberia HP 3D Print – jaume@hp.com

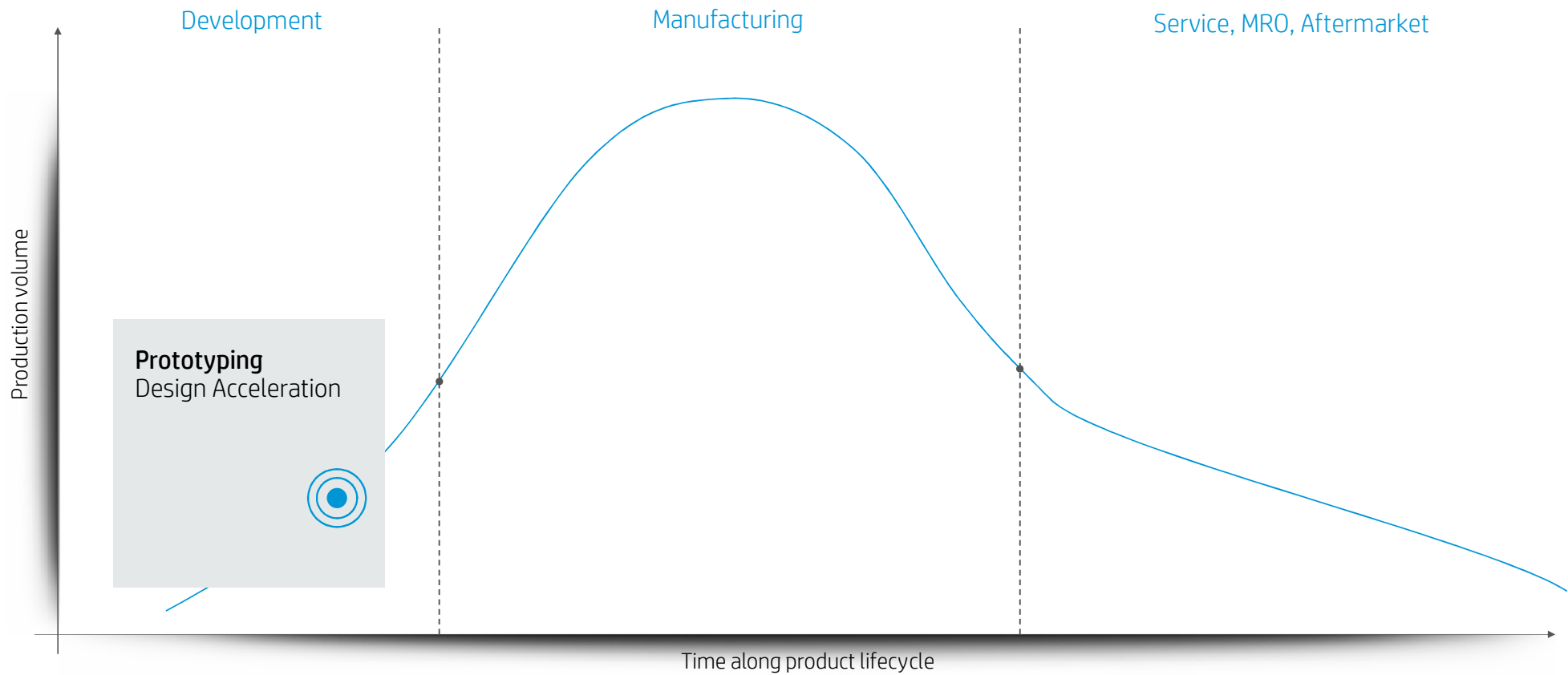
— Transformation is a journey...



To frame: the product lifecycle

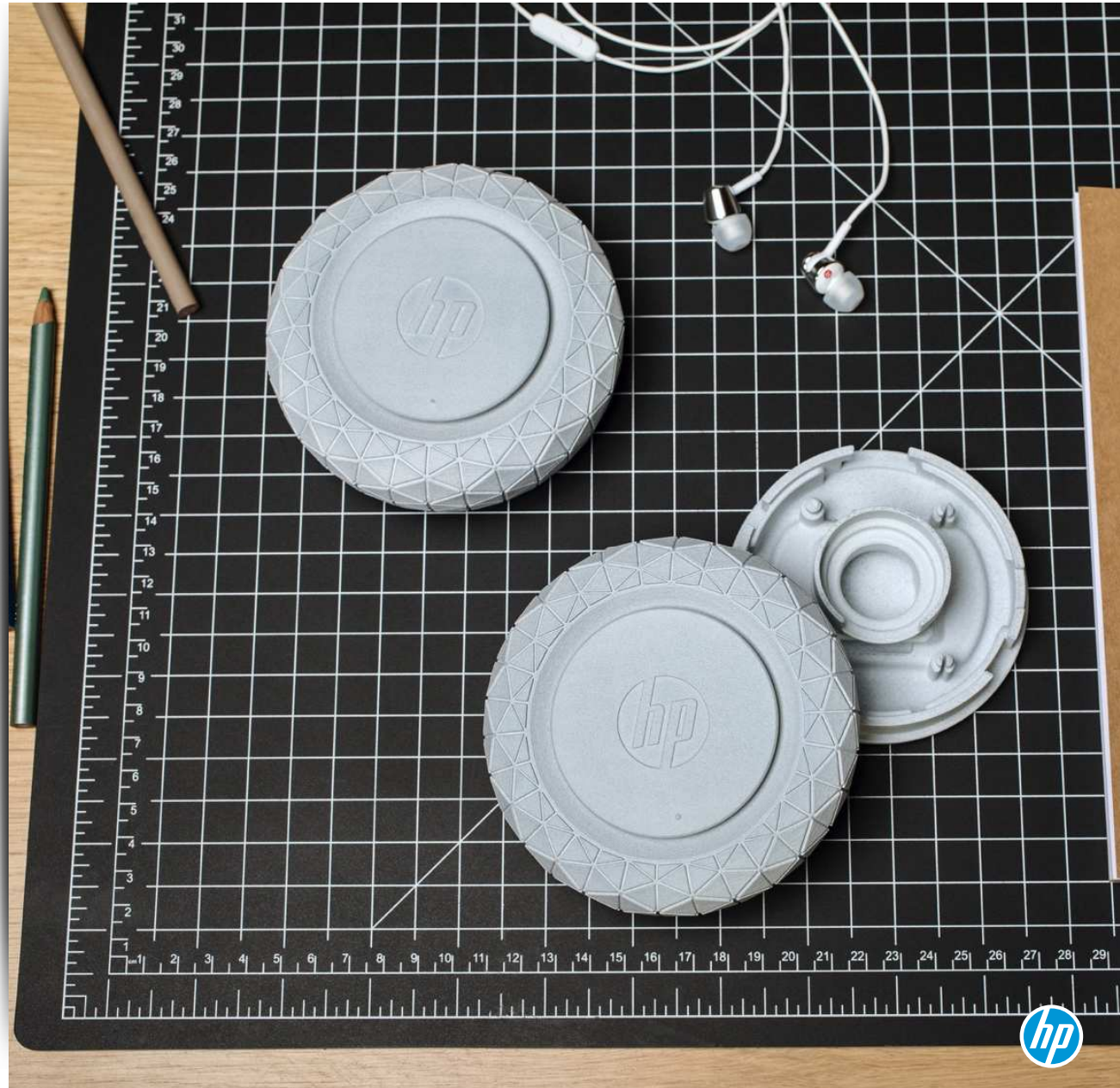


Product lifecycle applications

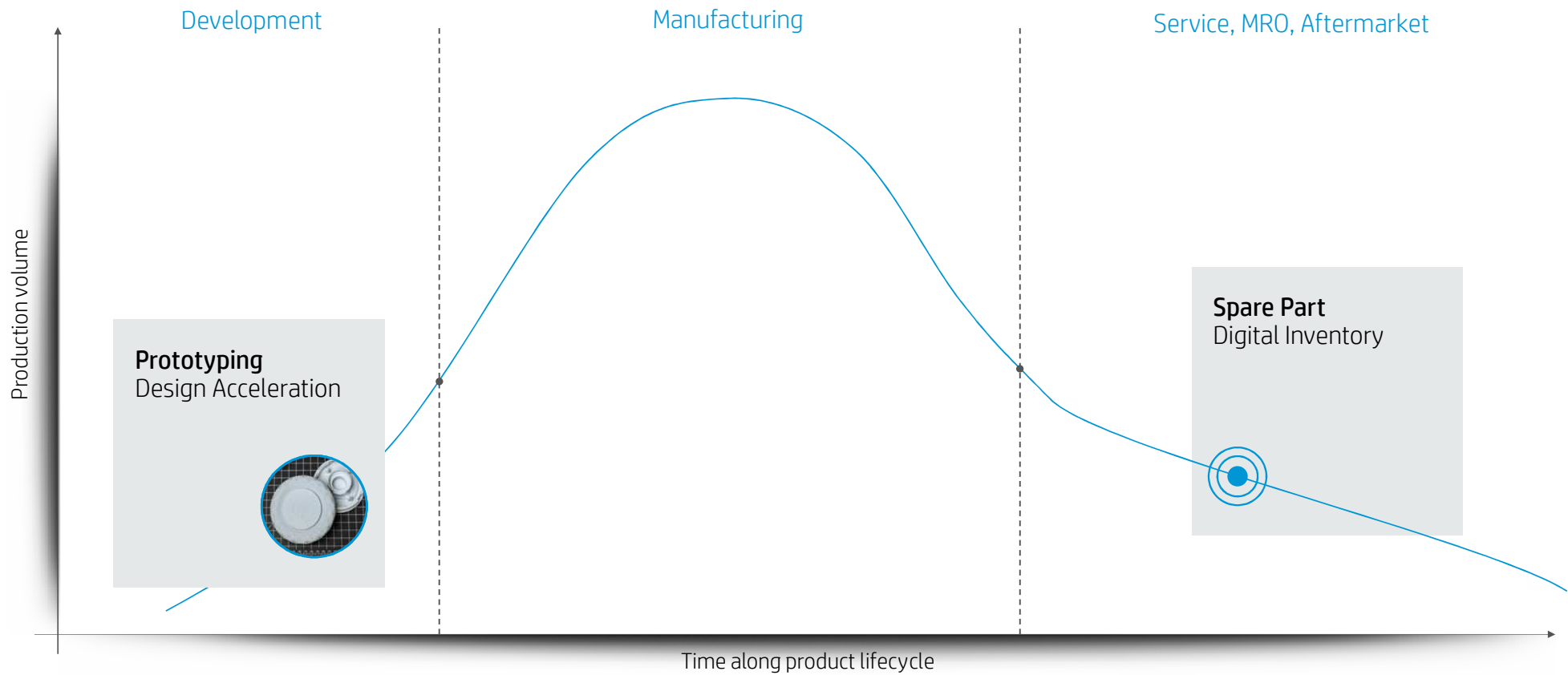


Prototyping

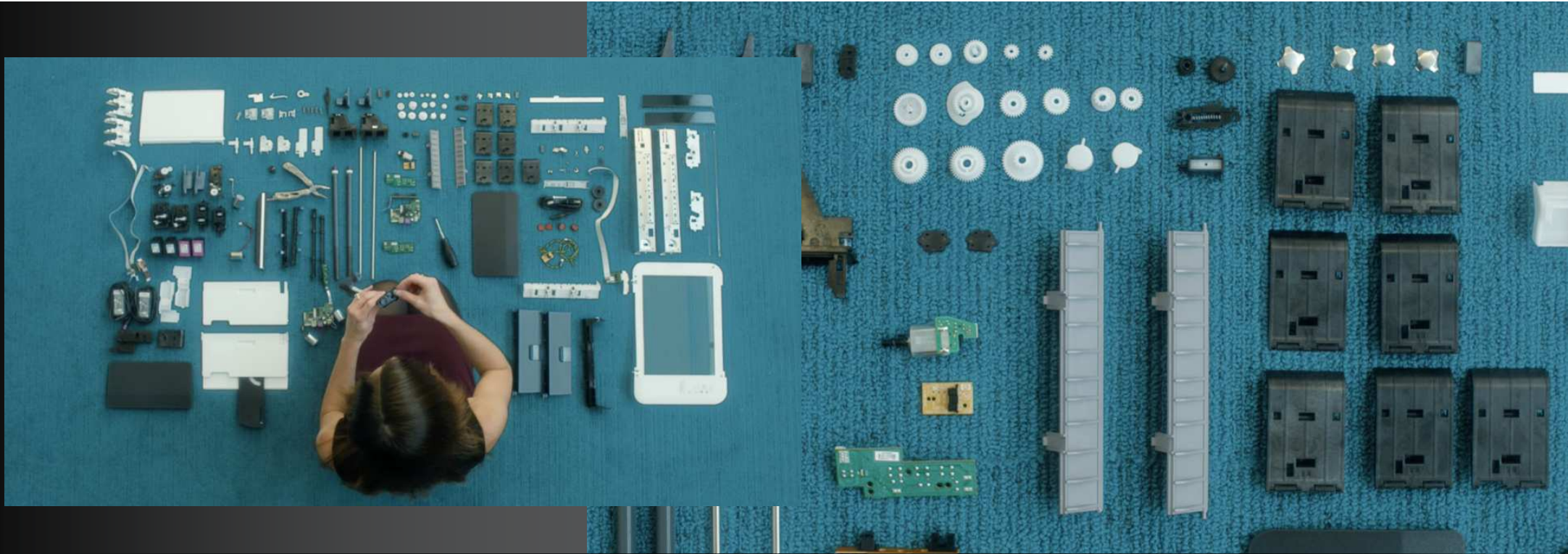
We immediately started incorporating it into our prototyping process, getting **more-representative** parts, faster and cheaper.



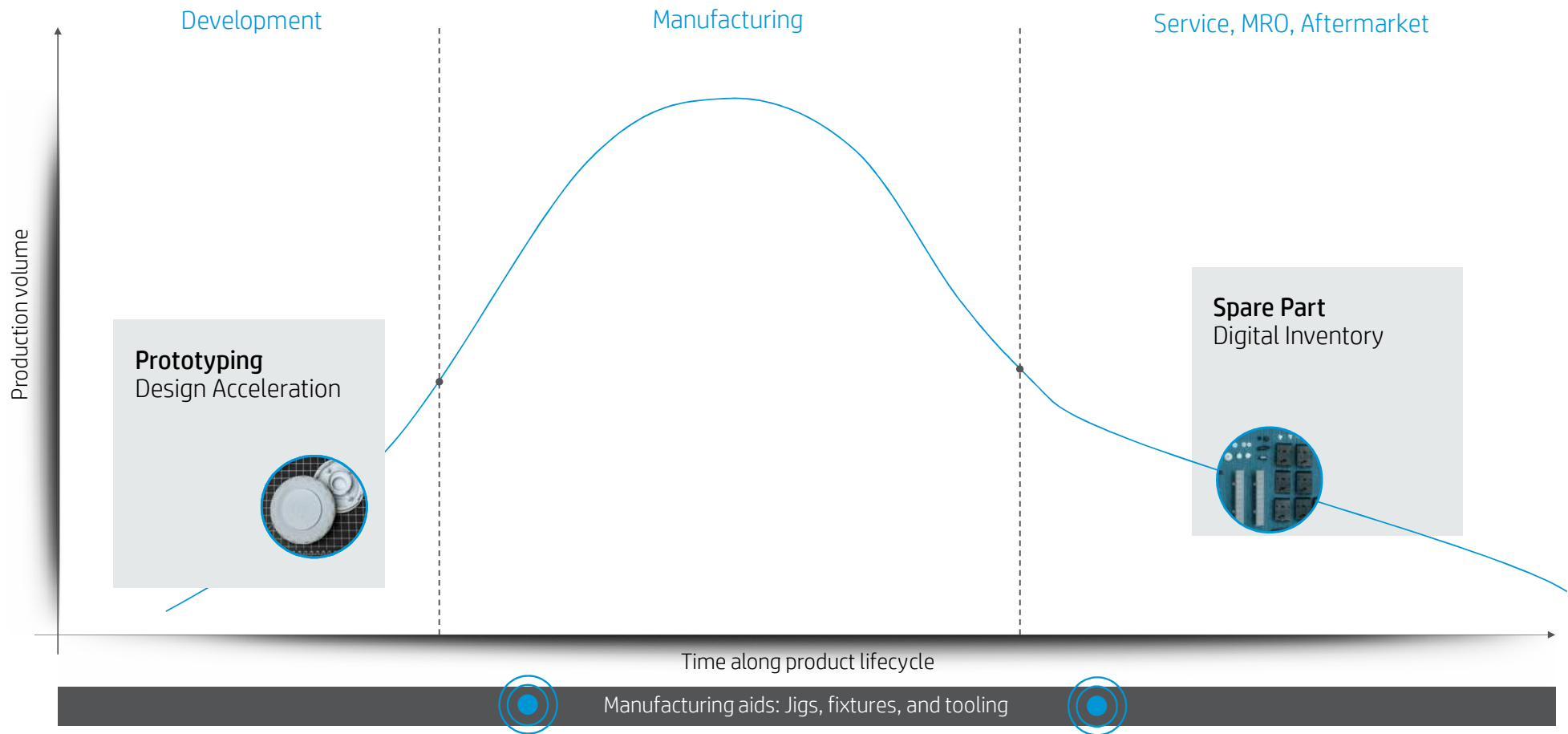
Product lifecycle applications



HP Large Format Printers: spare parts



Product lifecycle applications



HP Supplies packaging lines

- 2K parts for tooling
- Lead time reduction:
13 weeks to **2 weeks**
- **90%** cost reduction
- Reduce **changeover time**



Better performing, easier-to-build tools

HP printheads manufacturing line: drill extraction shoe

Consolidated **from 7 parts to 1**

95%
Cost reduction

90%
Weight
reduction

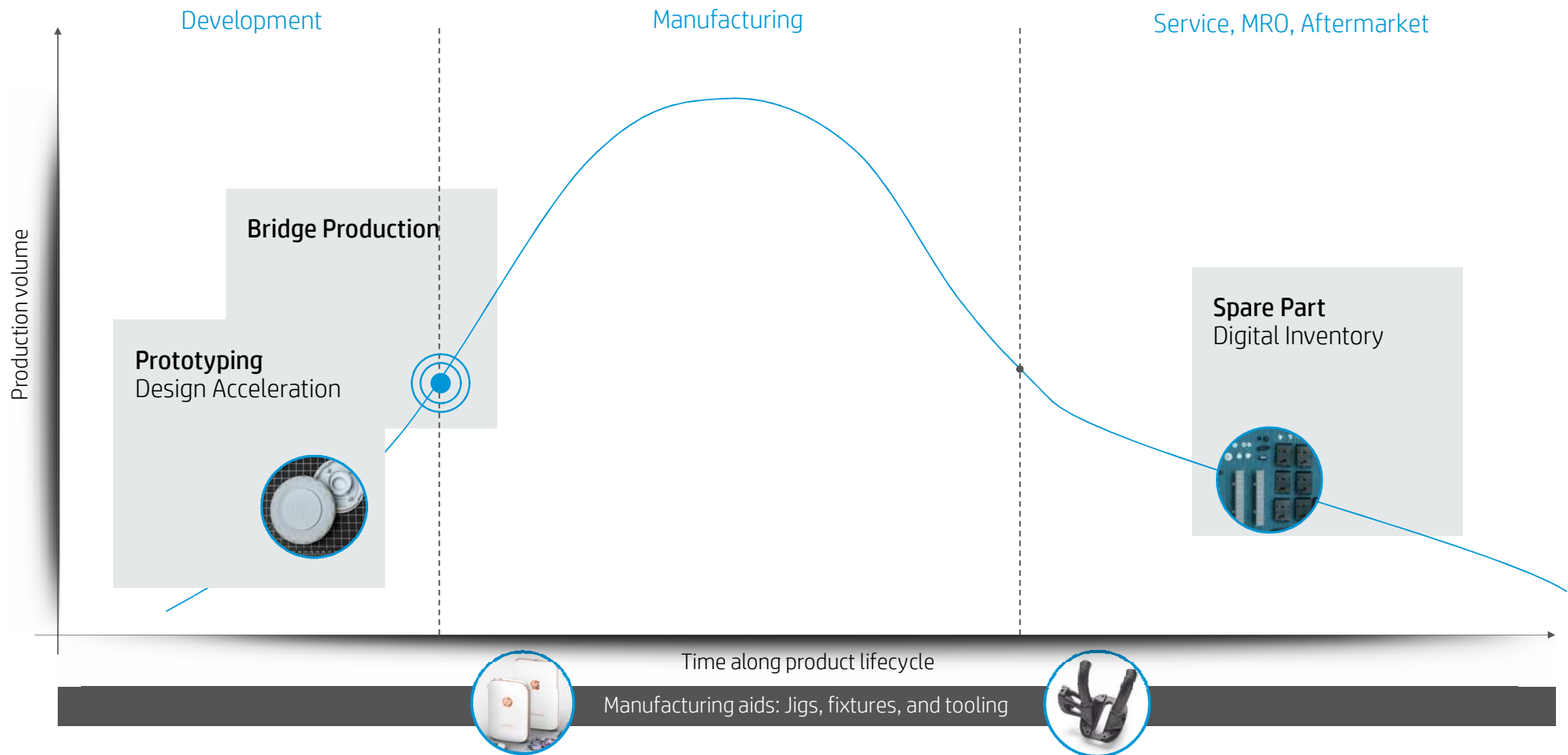


Manufacturing technology:	Machining
Material:	Aluminum
Weight:	575g
Cost:	450\$
MOQ:	13
TAT:	3-5 days

Manufacturing technology:	HP Multi Jet Fusion
Material:	HP 3D HR PA12
Weight:	52g
Cost:	18\$
MOQ:	1
TAT:	1-2 days

Insight: Saving in Ongoing Production Cost / Lightweight

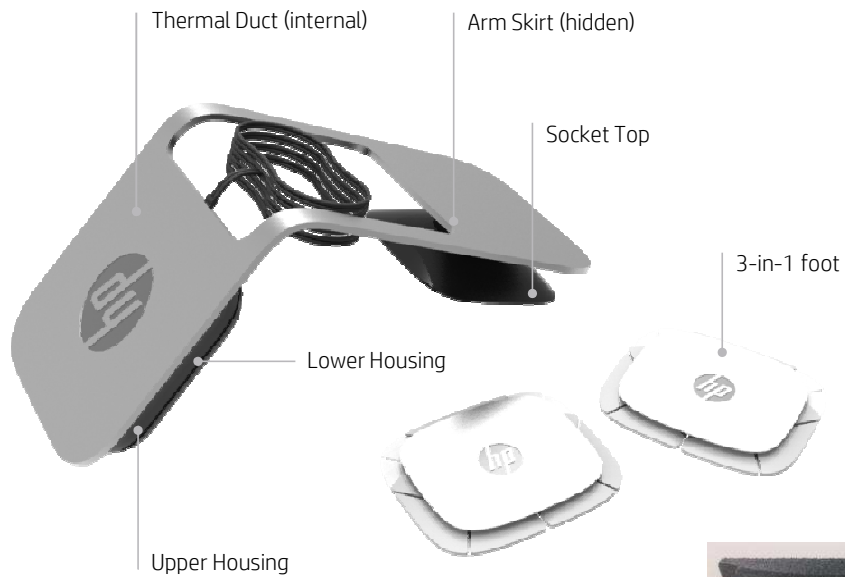
Product lifecycle applications



HP Z 3D Camera

Brand new **market space**

Priority on **speed** and **learning**



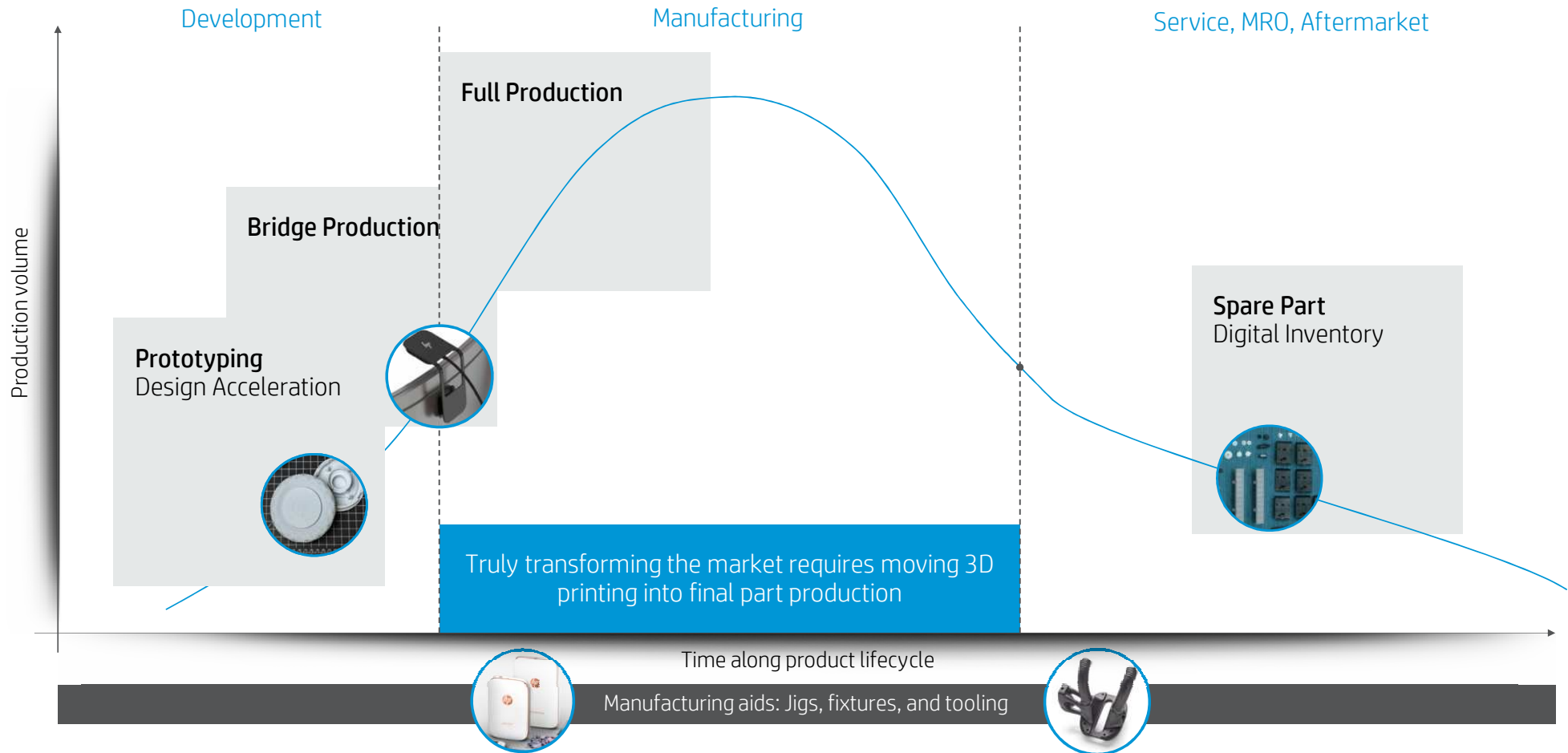
Intro **MJF parts**

Cost avoidance
Reduce design cycle
by 6 weeks

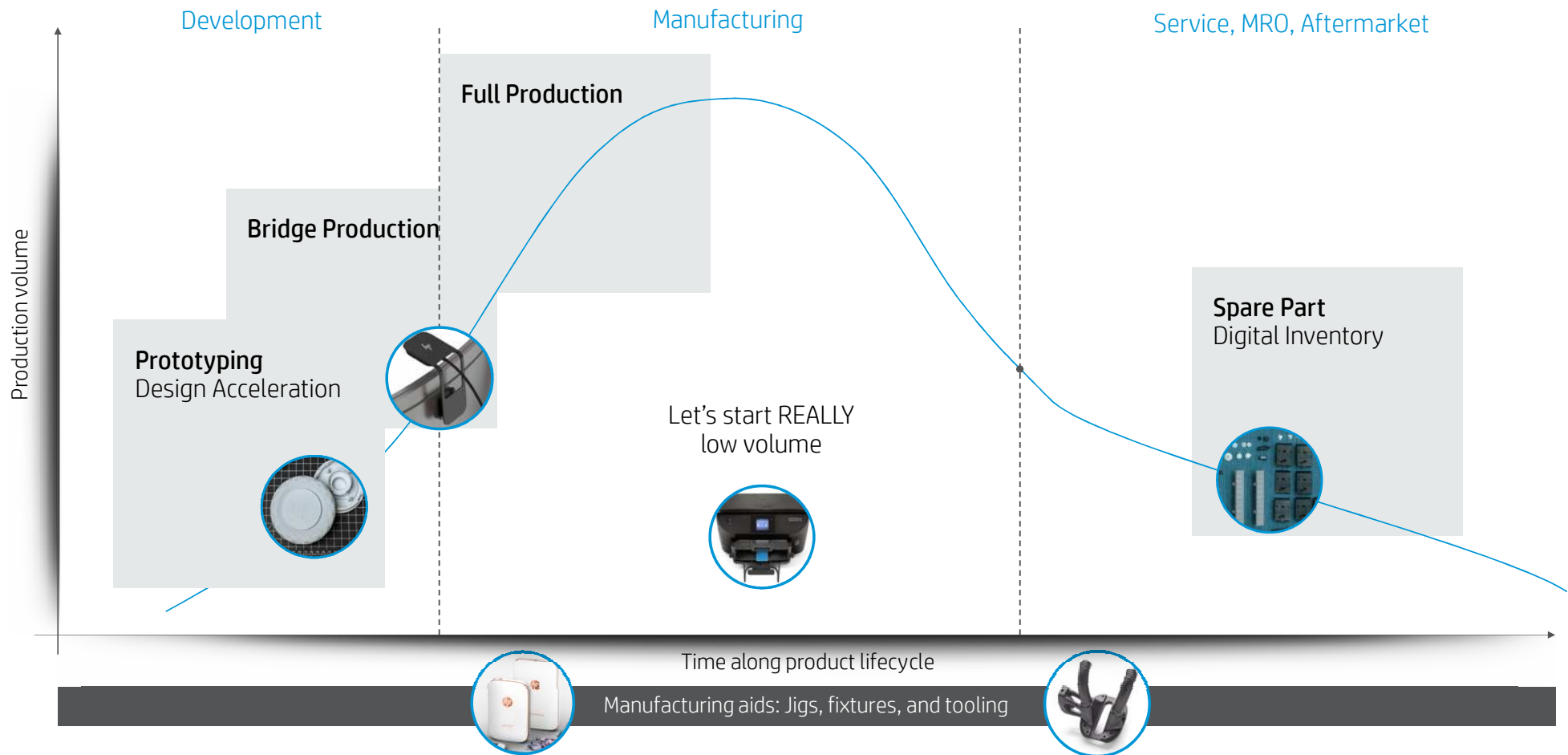


Thermal Duct

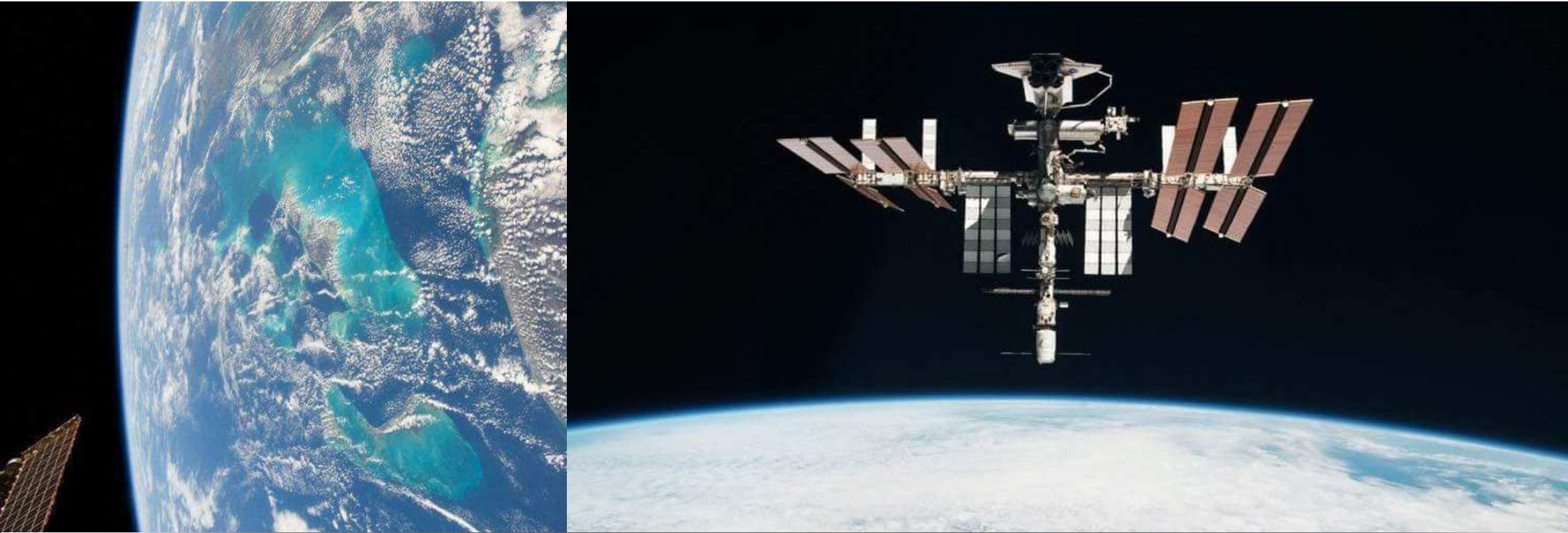
Product lifecycle applications



Product lifecycle applications



Nasa Launched SpaceX CRS-14 Rocket with HP Envy Iss Printer

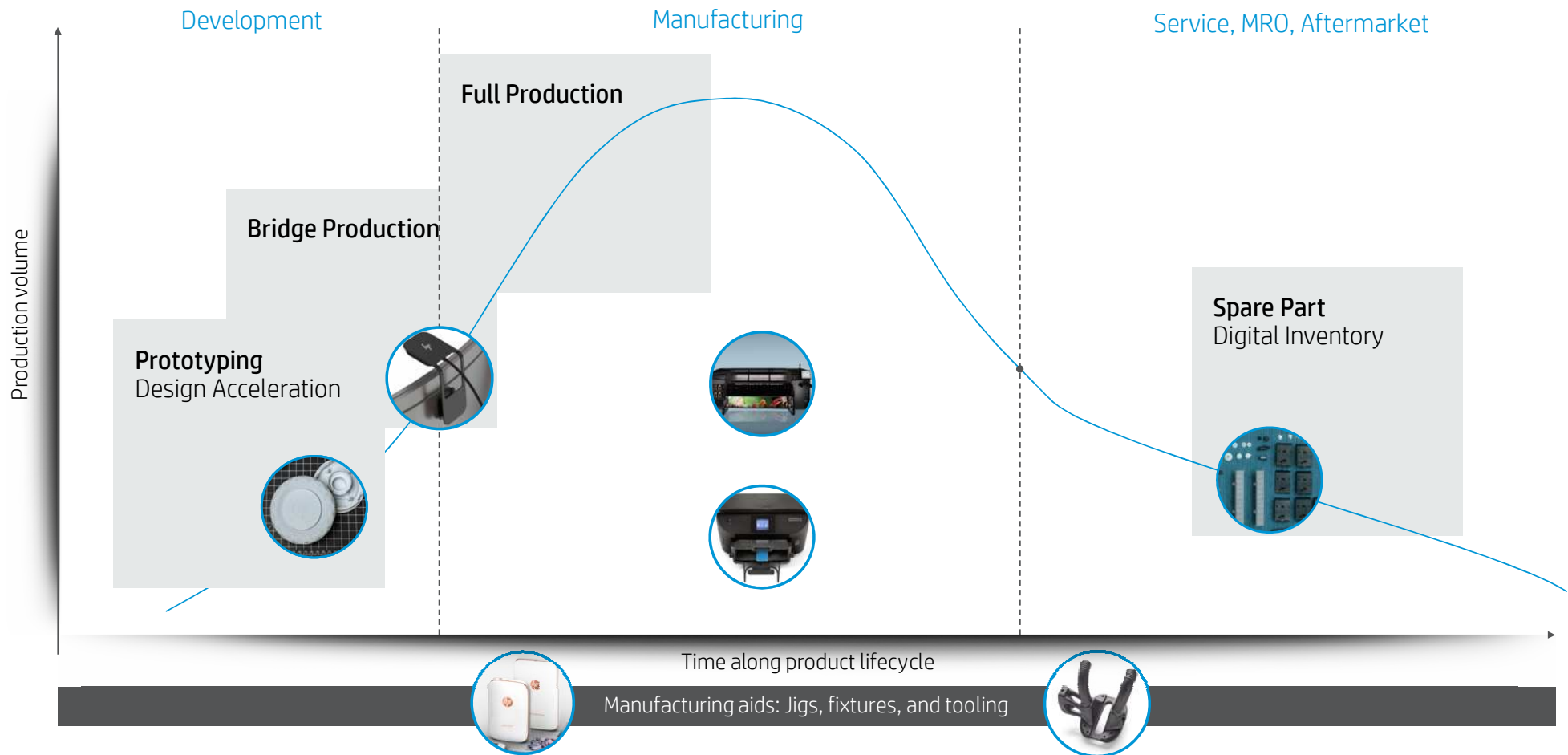


HP Envy ISS Printer

3D printed specially-designed output tray – lighter, flexible, reliable



Product lifecycle applications



HP Latex 1500 Large Format Printer

We found opportunities to replace machined aluminum and steel components



Design progression



Note: this example is from HP Latex Printer



▶ 355g

Aluminum machined
Traditional design



▶ 80g

Plastic 3D Printing
Block design



▶ 55g

Plastic 3D Printing
Light design

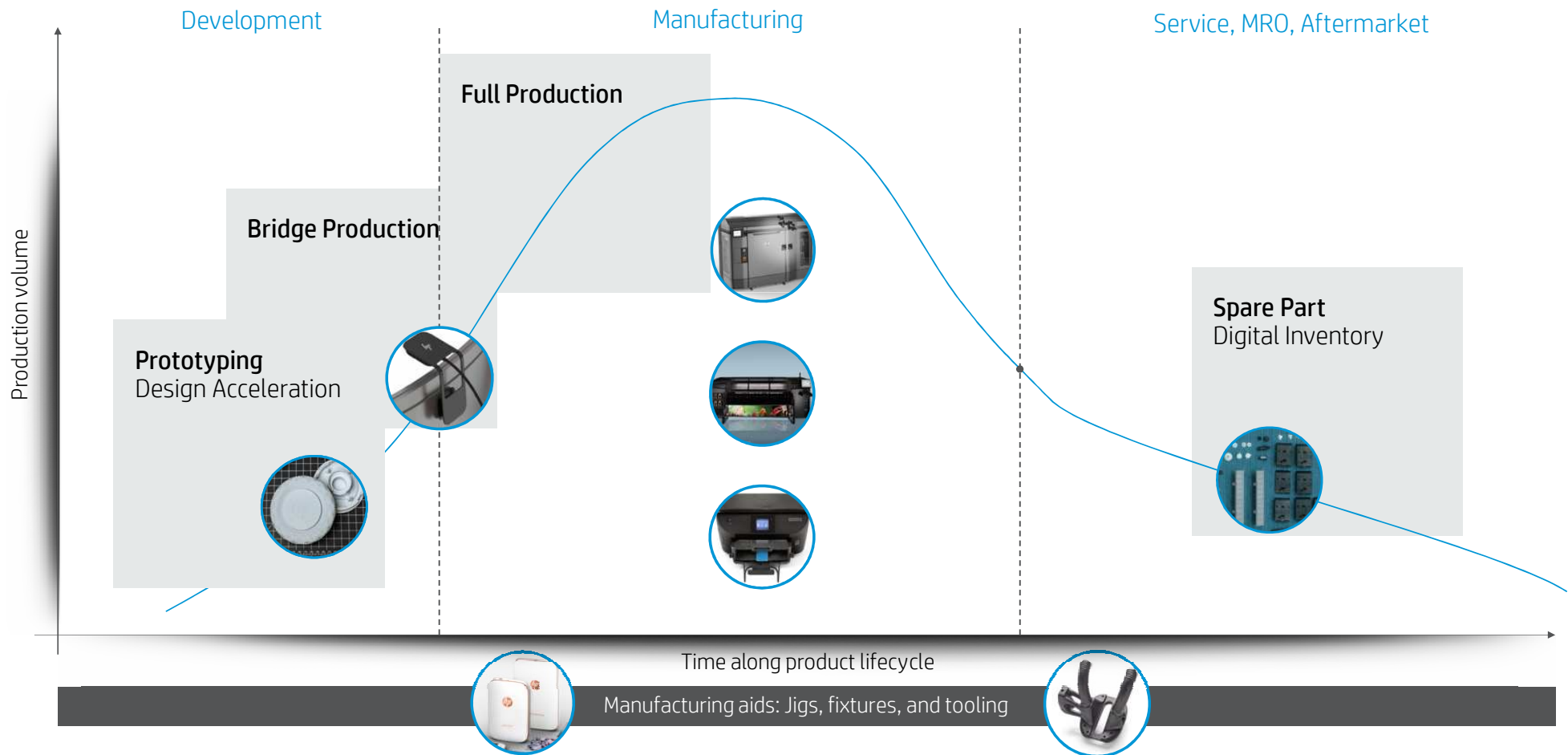


▶ 23g

Plastic 3D MJF Printing
Topological design

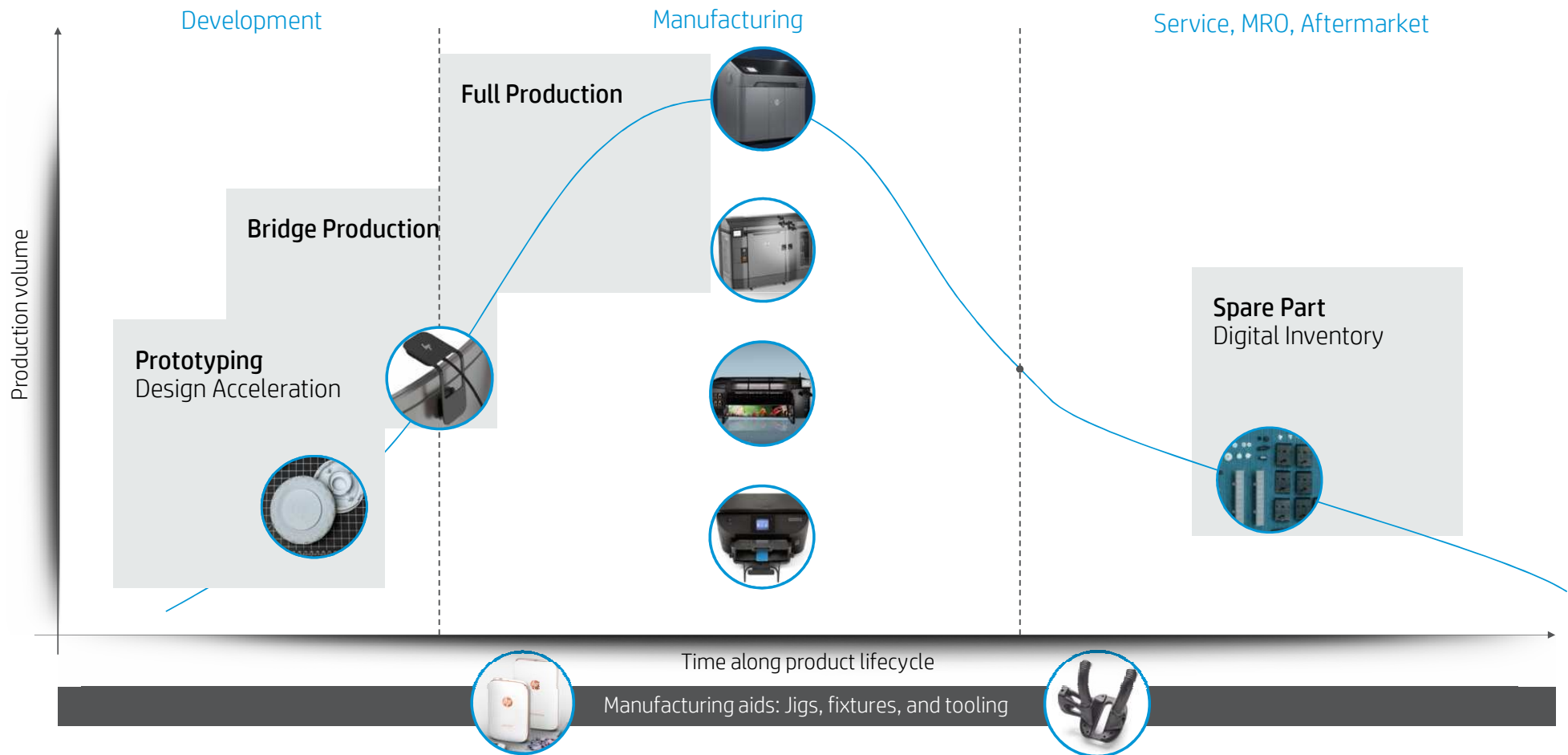


Product lifecycle applications





Product lifecycle applications

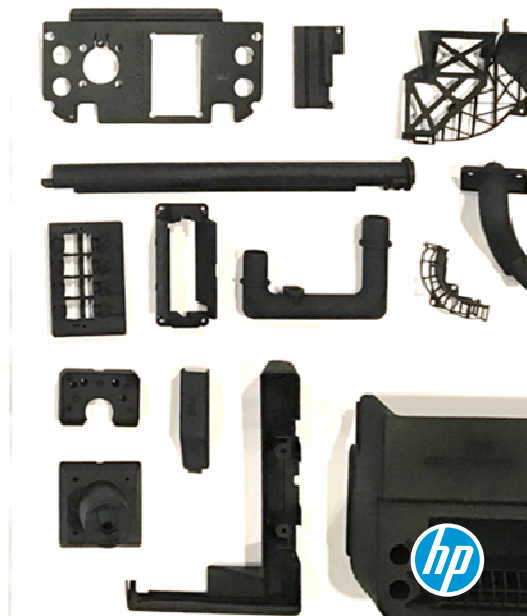
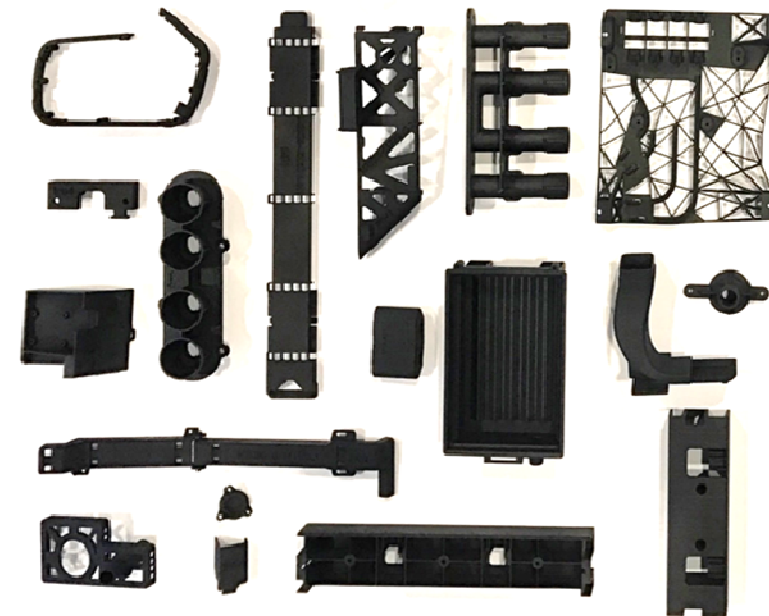
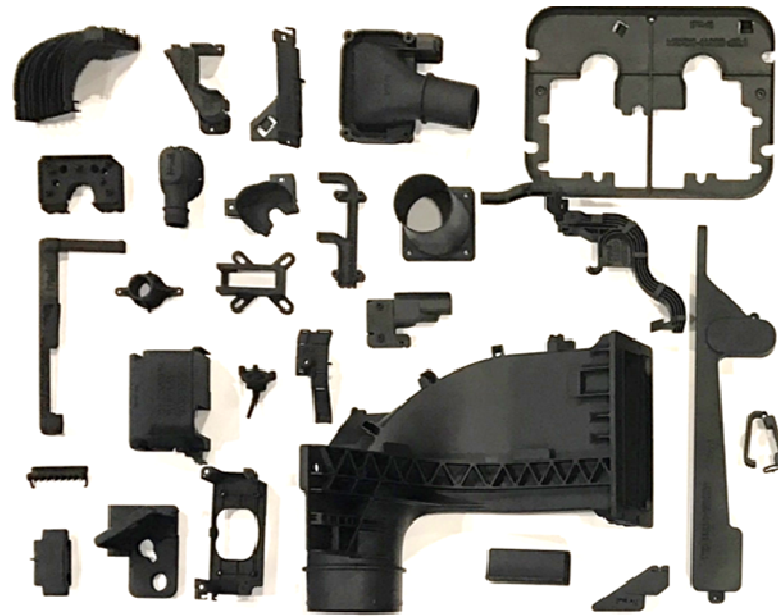


HP Jet Fusion 500/300 Series 3D Printers





Representative sample:
Multi Jet Fusion end-use parts.





¡Muchas gracias!

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