# Where Does *Digital Manufacturing* Fit in Your Product Life Cycle?

PROTOLABS
Manufacturing. Accelerated.

## 1 Ideation & Concepting

### Design Decisions

**Design for X (DfX)**
- Manufacturability
- Cost
- Quality + Compliance
- Life Cycle

**Material Selection**
- Plastic
- Metal
- Elastomer

**Process**
- Molding
- Machining
- 3D Printing
- Sheet Metal Fabrication

## 2 Product Development

### Rapid Prototyping

**Early Stage**
Form, Fit, and Function Testing for Iterative Part Design

**Late Stage**
Pilot Runs and Market Testing to Validate Product Design

Consultative design on molded parts

*Product Launch*

## 3 Introduction & Growth

### On-demand Production

**Digital Factories**
- No Minimum Order Quantity
- Virtual Inventory with No Fees
- Short Lead Times
- Reduce financial risk with bridge tooling
- Reduce supply chain risks with onshore manufacturing
- Ideal for Volatile Demand

## 4 Maturity

### On-demand Production

**Digital Manufacturing Network**
- Lower Piece-part Price at Higher Quantities
- Steel Tooling Options for High-volume Production
- Advanced Manufacturing Capabilities for Larger, More Complex Parts
- Onshore and Offshore Partners
- Ideal for Steady Demand

## 5a End of Product Life

### On-demand Production

Avoid Unneeded Parts and Products

Reduce Cost with Parts On Demand

## 5b New Product Introduction

### Rapid Prototyping

Continuous Improvement (1.0)

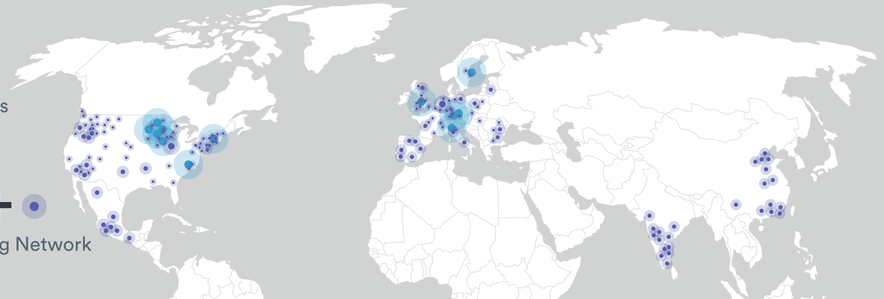
Product Extension (2.0)

**55k+**
Product Developers Served*
= 1k

**4.6 Million**
Manufactured Parts per Month*
= 50k

**12**
Digital Factories

**200+**
Suppliers in Mfg Network



**1 Million**
Sq. Ft. Manufactured Space*
= 20k

*Numbers based on in-house manufacturing at Protolabs