Extreme Manufacturing, Explained

"Most companies optimize to reduce the unit cost of production. This makes them slow to respond and their products expensive to change."

Optimize for change.
Avoid high upfront costs that must be amortized.

Hardware Design Patterns
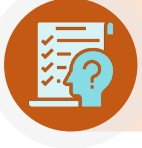Apply patterns that simplify design & enhance modularity.

Object-Oriented, Modular Architecture
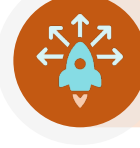Loosely-coupled designs reduce dependencies.

Continuous Integration Development
Frequent, automated tests ensure reliability

Test-Driven Development
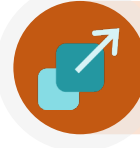Model, build, validate, repeat; until the model is the test.

Continuously Deployed Development
Create a new, deliverable product version every 7 days

Contract-First Design
Overengineer interfaces for growth and flexibility.

Scaling Patterns
Product architecture defines organizational structure. Replication scales production quickly and efficiently.
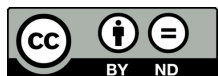
Product and Production are one.
Iterate on the product and the production line together.

Partner and Contracting Patterns
Protype in-house; start with off-the-shelf components. Contract for responsiveness.

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Based on *Extreme Manufacturing, Explained* by Peter B. Stevens with additional support from Joe Justice.

Book   Peter