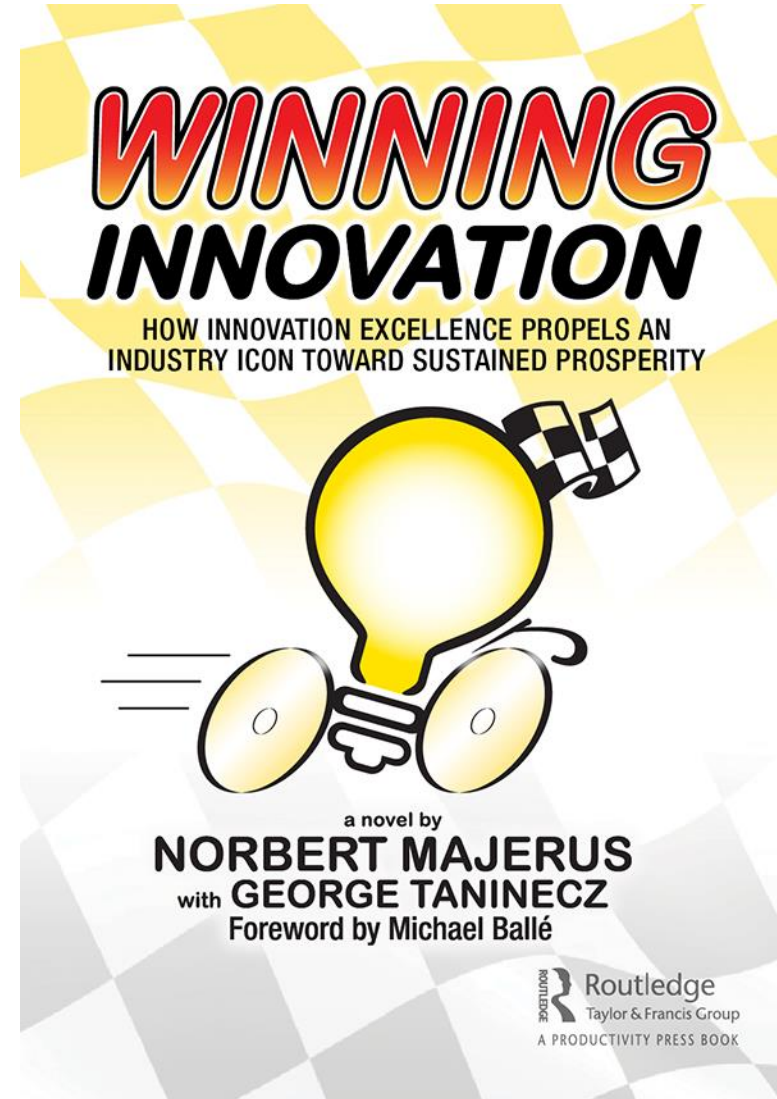


Building a Lean Culture of Innovation

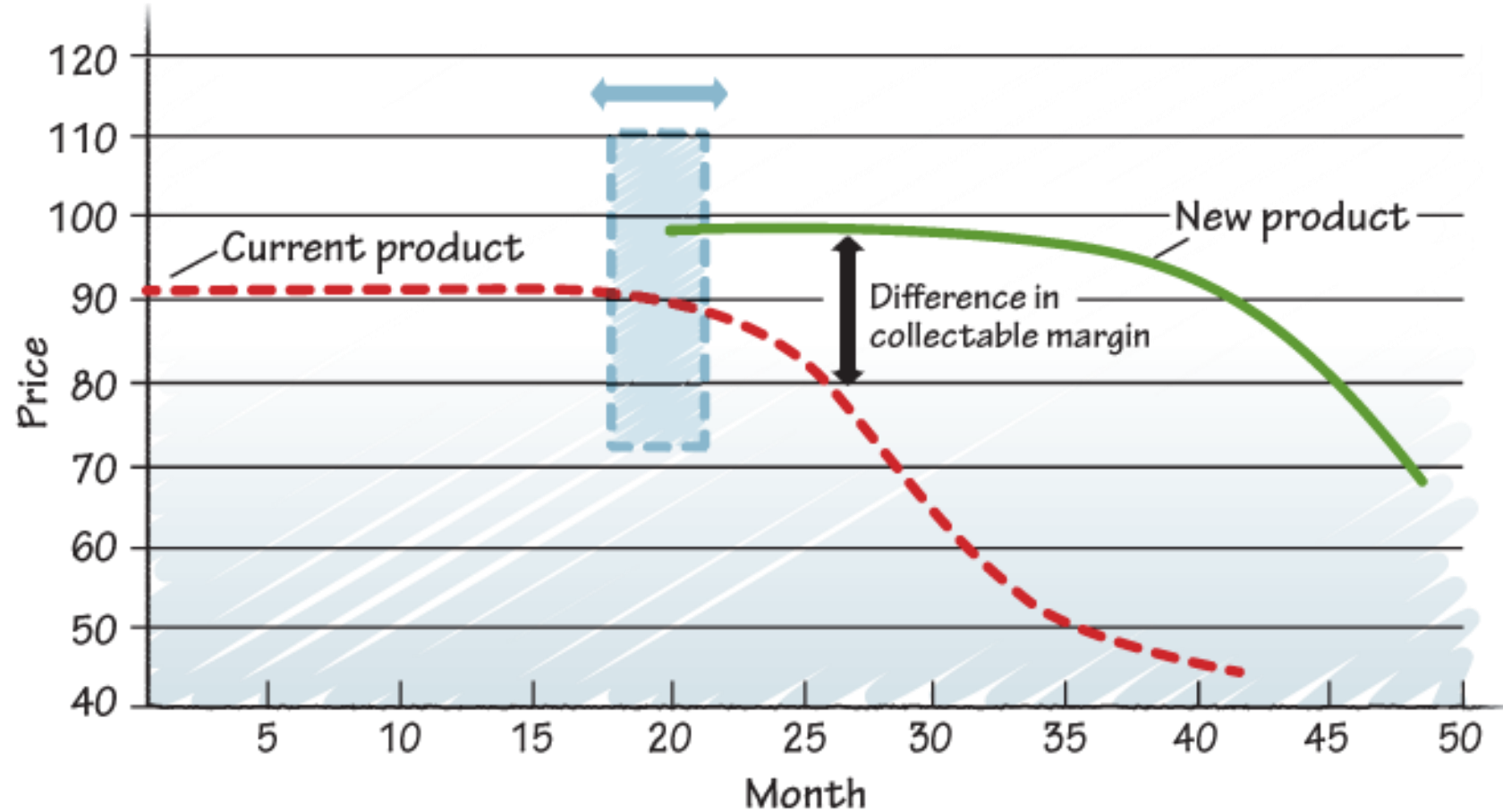
Norbert Majerus



From the Stories to the Principles

- Story – explains what happens and how it was done one time
- Principles = universal, timeless – work everywhere and always

Winning in Innovation



My Personal Experience

- **Is it harder to sell a new idea for a product or for a new process?**
- The “selling” is the same in both cases
 - Disruptive innovation is hard to sell
 - So are disruptive new processes
- My leadership would not wait for small kaizans and small innovation – (and I am glad) – try everything except pairing

My Personal Opinion

- If a company is successful with innovation or fails at it, always comes down to CULTURE
- Culture (**process and values**) is how we do things how we have always done things (how we all got to where we are) and how we set ourselves up to continue to do things (what we do to assure our [personal] future). >> Robustness – McKinsey - anybody can get assigned to anything
- Lean/opex is a great foundation for an innovation culture

Lean **and** Innovation Today

Broad sense

- GLOBAL Economy
- Higher complexity, shorter product life cycles, more opportunities, high connectivity, less resources
- Economic growth is largely a function of:
 - Population Growth
 - Market Growth
 - **Productivity/Efficiency >>> Lean Manufacturing**
 - **Innovation >>> Lean Innovation**

We innovate to create a better future for everybody

Lean Culture

The *Shingo Model*™ is not just another initiative; it is
a new way of thinking.

Click on the links below to learn more.

Principles

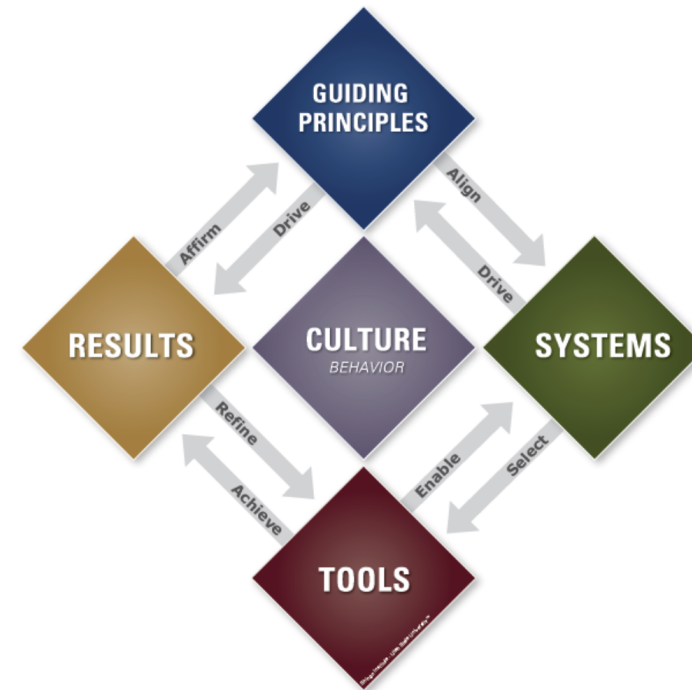
The *Shingo Guiding Principles* are the basis for building a sustainable culture of organizational excellence. In the Guiding Principles diamond, the principles are divided into three dimensions: Cultural Enablers, Continuous Improvement, and Enterprise Alignment. Each dimension and principle are presented in further detail below.

Tools

Systems

Results

Culture



Characteristics of a lean culture

- Built upon:
 - Respect for all people
 - Humble leadership
 - Engagement, empowerment, trust
 - Continuous improvement
 - Sustainability

Cultural Elements **Critical to Innovation**

- Education (about innovation)
- **Strategy/Metrics**
- Collaboration
- **Eliminate Fear**
- Agility and speed - Later
- Create the environment
- Talent Management

Real FEAR, not complacency, taking a chance.....



Fear

- Fear of personal career consequences
- Augmented by change, habits, little to gain – lot to lose, pressure to meet daily targets
- REMEDY
 - Fear can be managed by setting the right company goals, (including behaviors) and maybe rewards
 - Lean culture promotes respect, engagement, trust, all help reduce fear

Create the environment

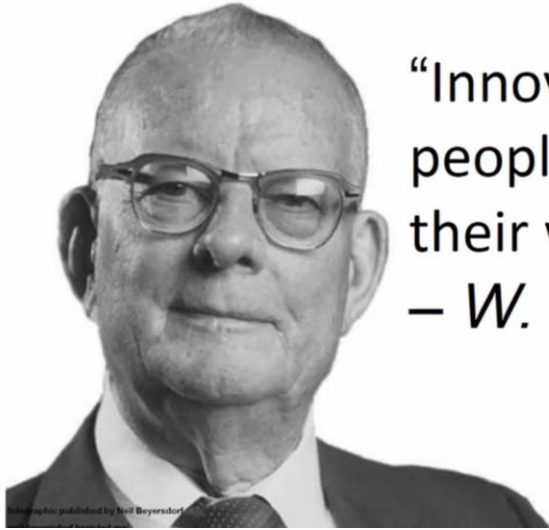
Offices – Goodyear vs google

The box in my book

Moonshine

Talent Management

- Education!!!
- **Motivation**
- Left/right brain
- The round peg in the square hole
- **Engagement**
- The corporate innovator
- Entrepreneurship/initiative
- Rewards/career
- Leadership Behaviors



“Innovation comes from people who take joy in their work.”
– *W. Edwards Deming*



INHERENT Motivation (at work)

- Autonomy
- Expertise
- Purpose

INNOVATION

Innovation Principles

- How innovation works
- The Innovator's dilemma
- Innovation Killers
- Interference with Lean
- Risk Management - later
- Accounting – skip
- The MOTHER of Innovation - later
- Principles of Industrial Creativity - later
- Opportunities - later
- Rethinking Customer Value – combine with dilemma

Innovation Grid

Project Uncertainty

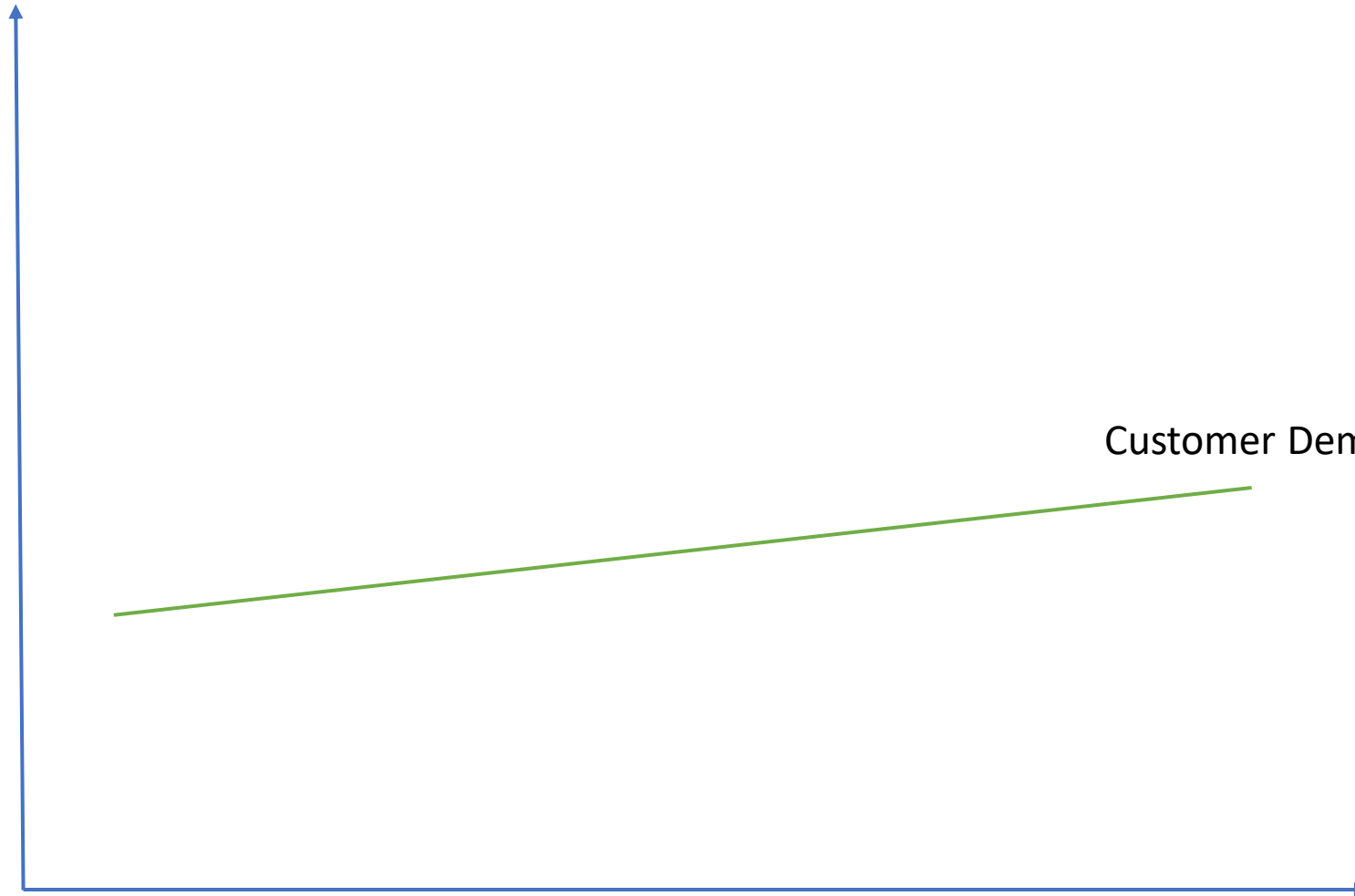


Innovator Dilemma

- Well researched/documented (Clayton Christenson)
- Successful companies least likely to succeed with disruptive innovation
 - They are comfortable with their current position and afraid to change
 - They invest in what their **current customers** want – even if they want faster horses
 - They rely on facts and data which are not available for disruptive innovation. Same for internal processes

Could this be the reason for the
Toyota/Tesla gap

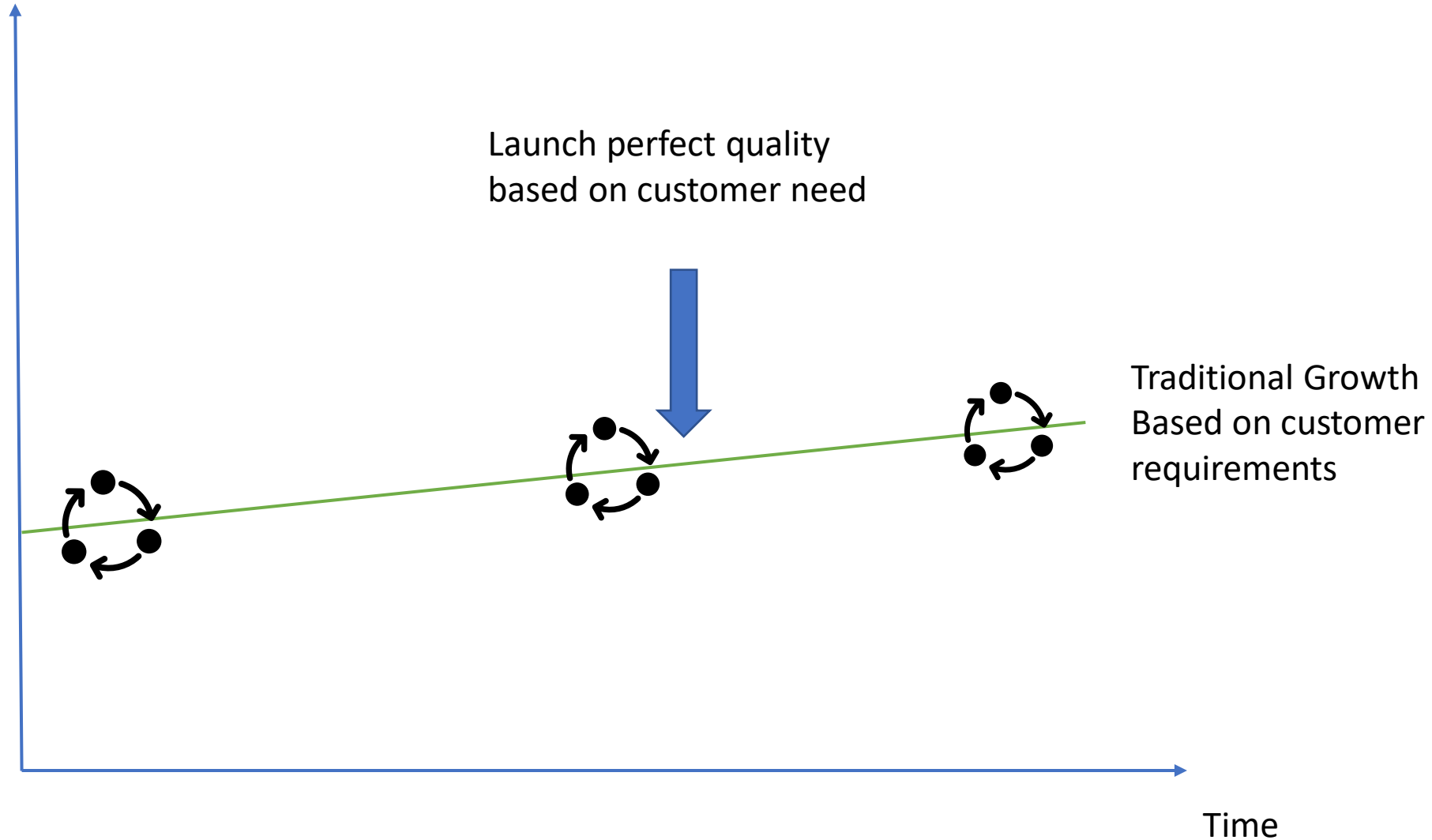
Innovation Potential



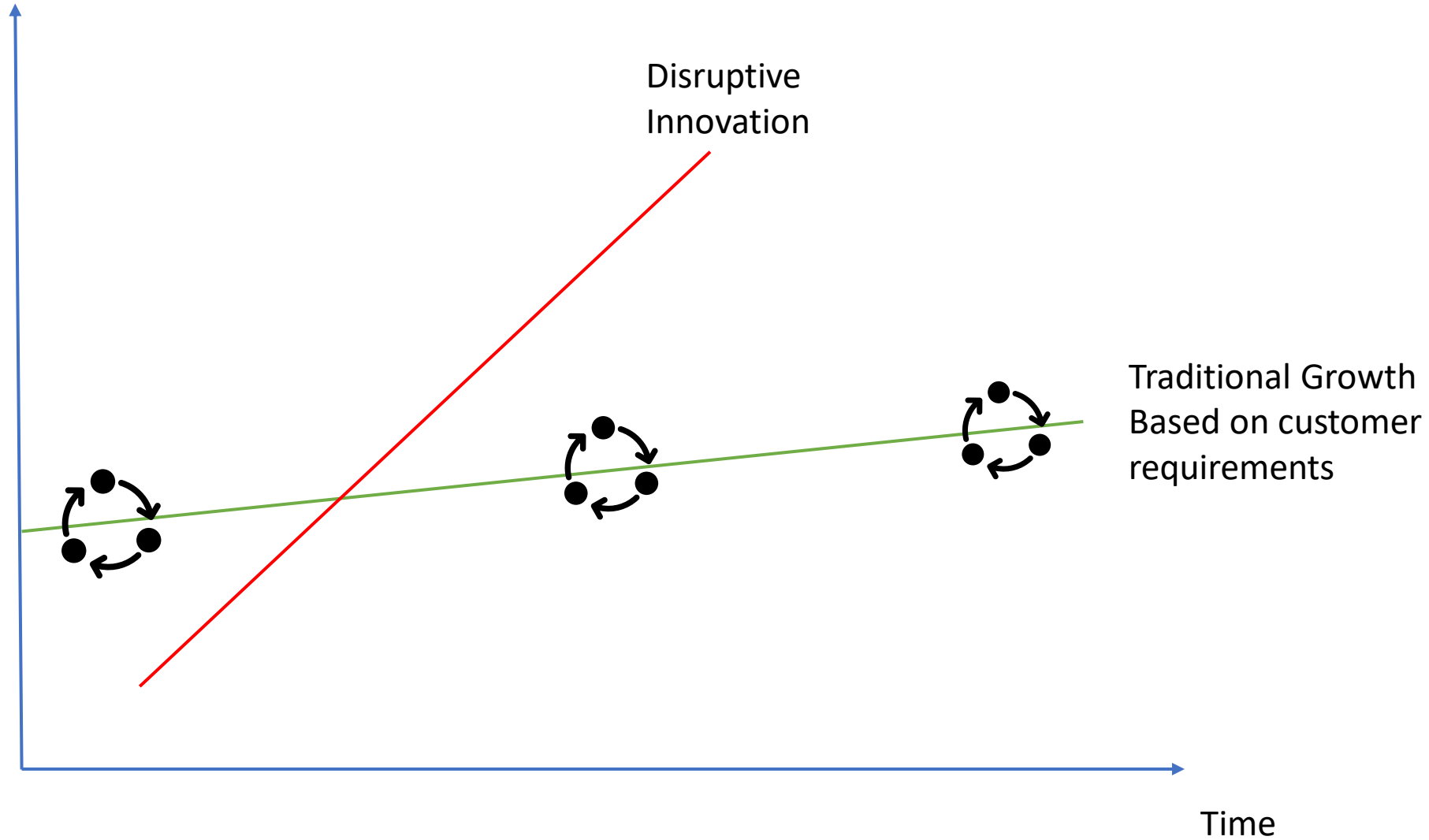
Customer Demand

Traditional Growth
Based on customer
requirements

Growth

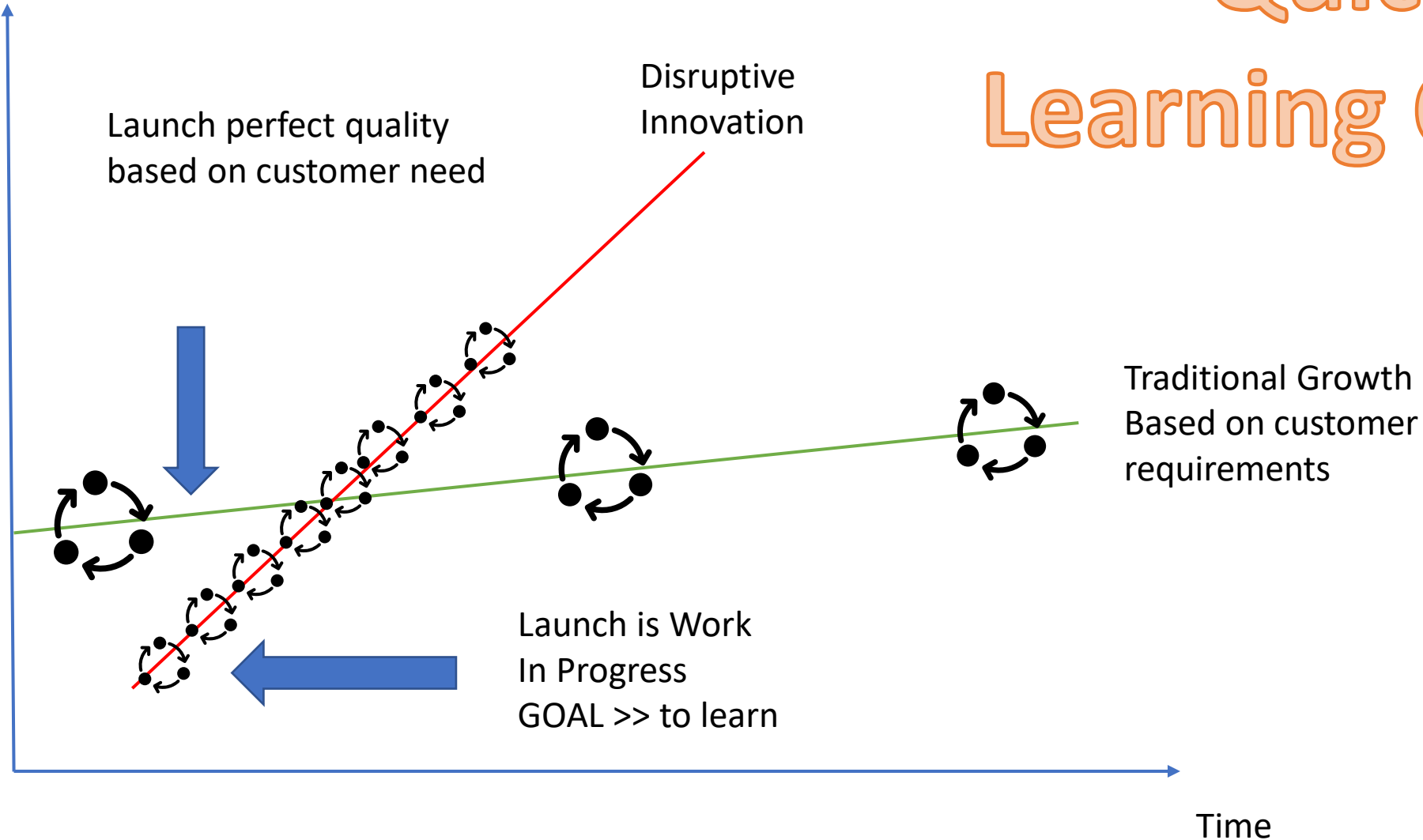


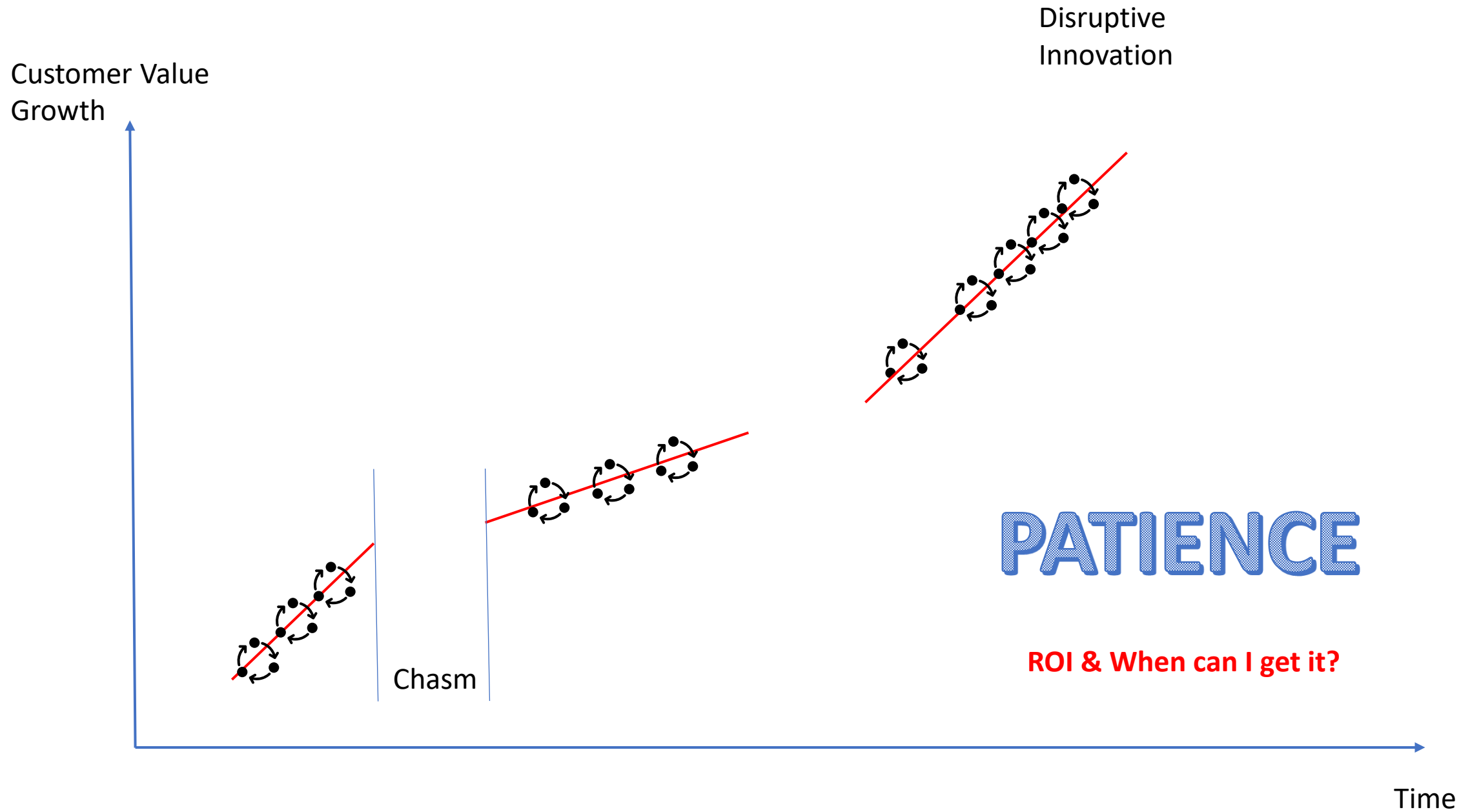
Growth



Growth

Quick Learning Cycles





The Disruptors

- Happy with the small market
 - Can afford low/no income for a while
 - Performance, reliability, convenience ... price
 - Move up the market
-
- Not only START-UPS

Root Cause and Remedy

- Lack of innovation culture
- Christensen: Managers worried about their OWN careers shy away from disruptive innovation and play the game in the culture that got them to their position.
- Remedies
 - Education – Could include patterns of how successful companies did it
 - Company strategy
 - Eliminate fear

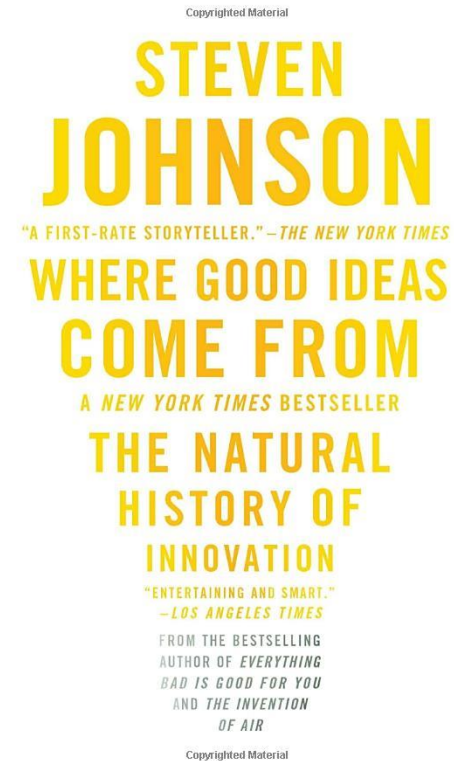
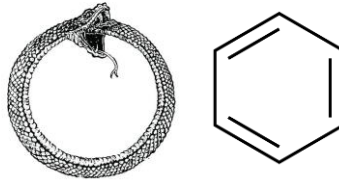
Create Value for the Customer

- Remains valid
- “value” may change but people do not
- Customers will leave in an instant for the better and cheaper product
- Even established companies do radical innovation if there is an explicit customer demand

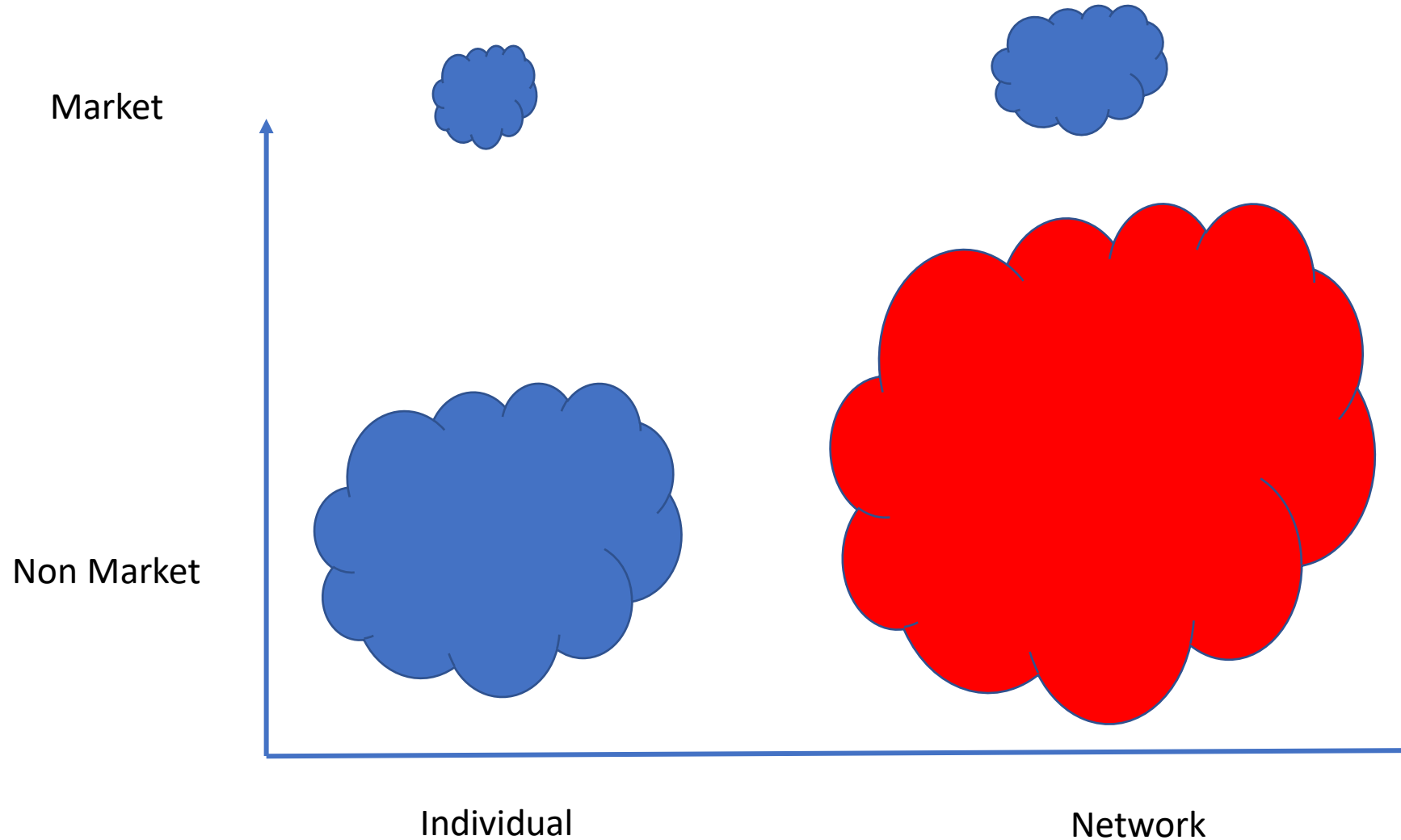
Focus on need AND opportunity

7 (Industrial) Creativity Principles

- The Adjacent Possible
- Liquid Networks
- The Slow Hunch
- Serendipity
- Error
- Exaptation
- Platforms



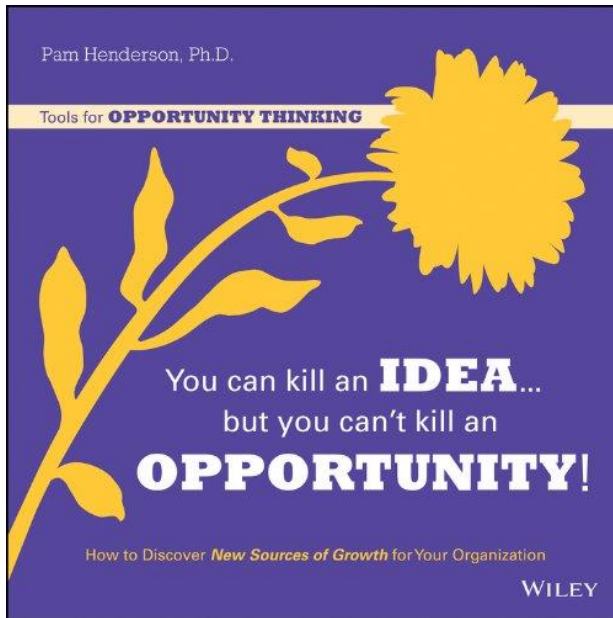
Innovation Evolution



Necessity is the mother of invention

Invention is the mother of necessity

Ideas must connect with **needs and opportunities**



Find

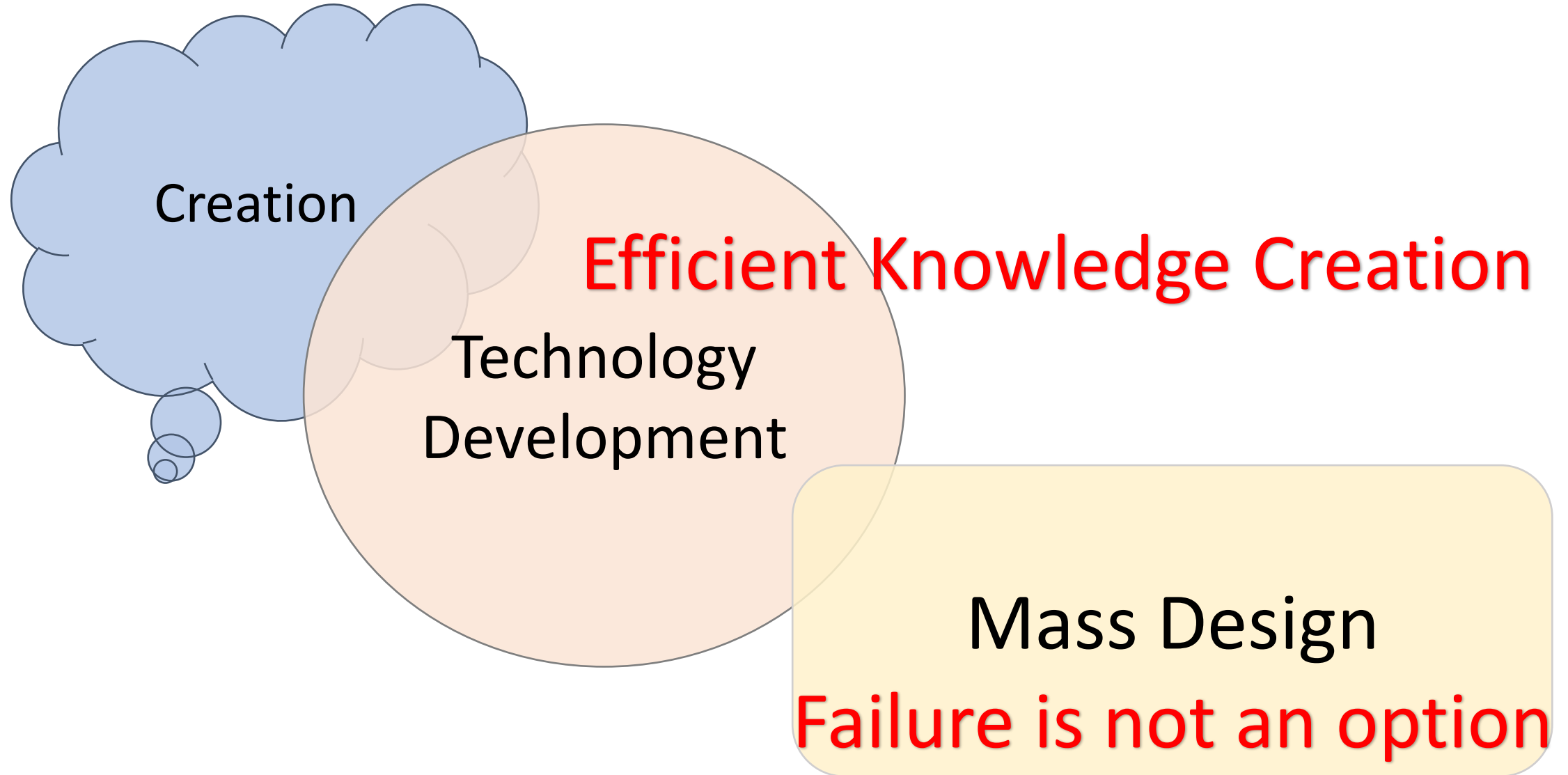
Create

Look For

- Changes in
 - Economy
 - Business
 - Culture
 - Fashion
 -
- NEEDS
 - Immediate customer
 - Industry
 - Environment
- Knowledge, know-how, technology
 - What you have
 - What you need
- Demographics
 - Change fast
- Perceptions
- Unexpected
- Incongruities
- Government/laws
-

Find
Jump
Capture
Change

Fail fast and often



My Dream Process

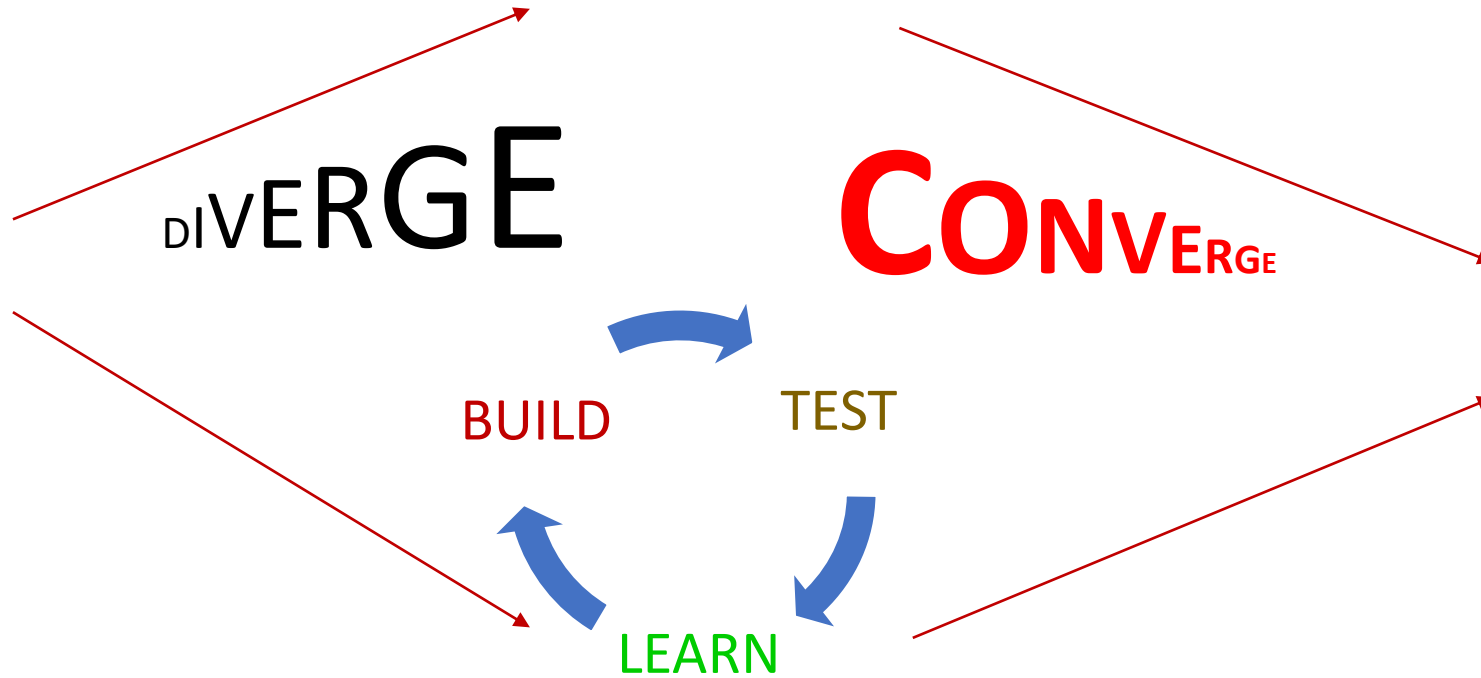


H&M

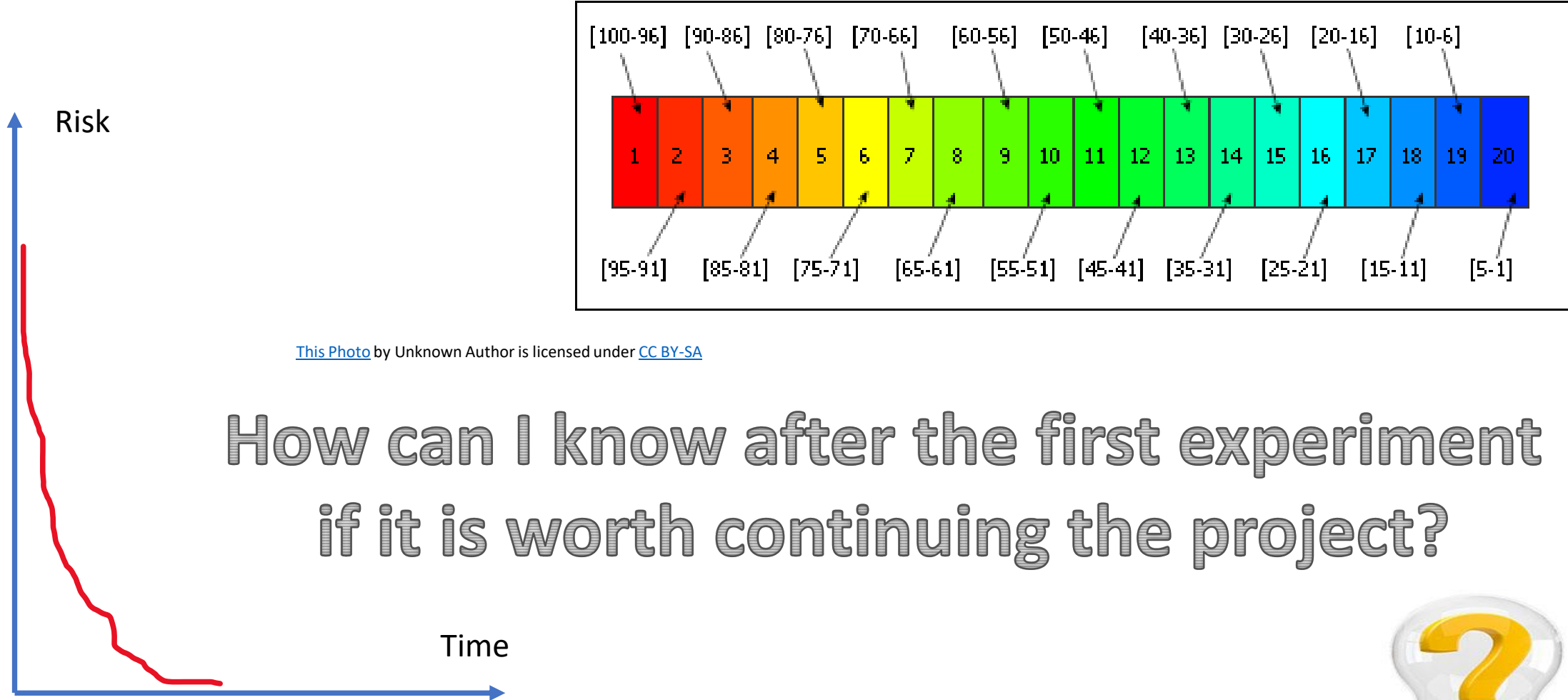


MY Innovation Cycle

CUSTOMER



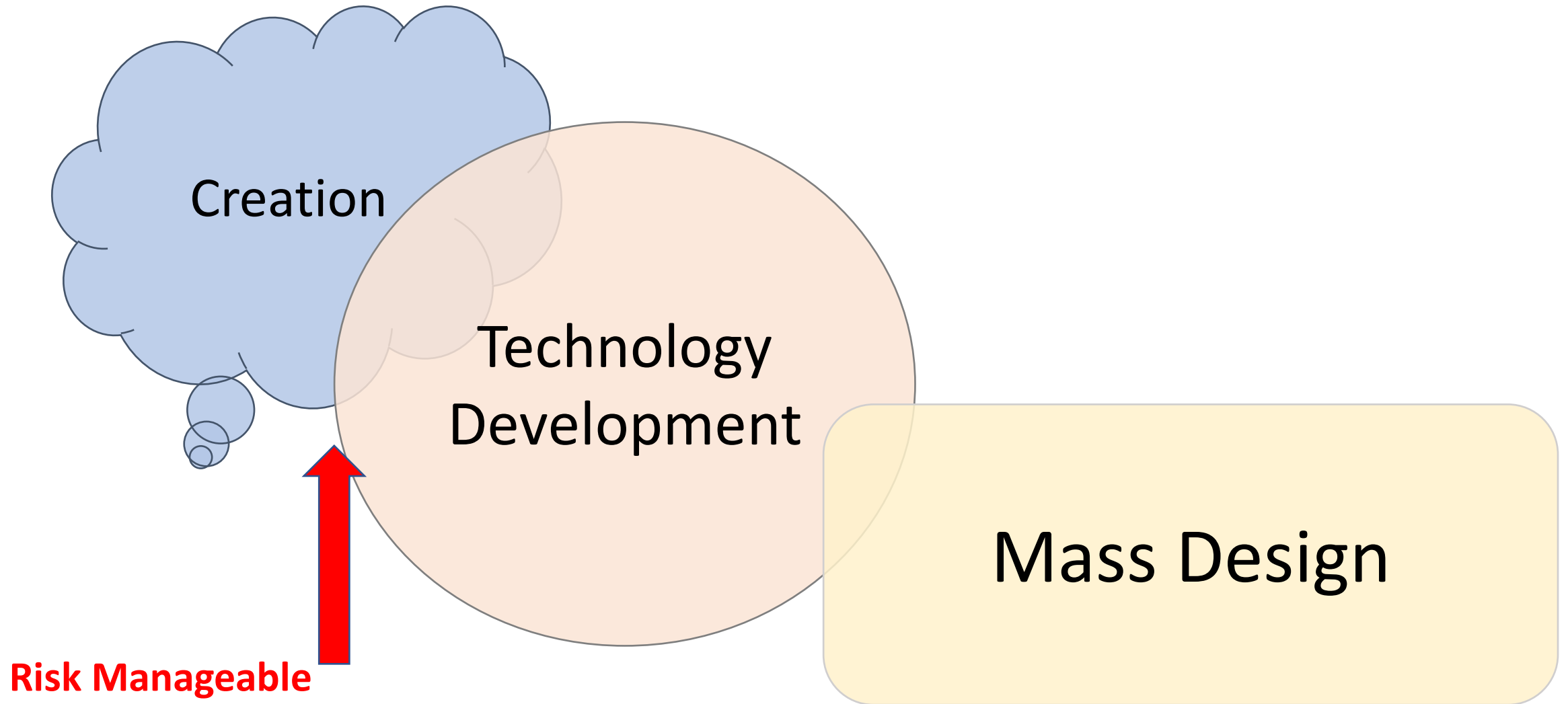
Follow the Risk Scale With Critical Questions

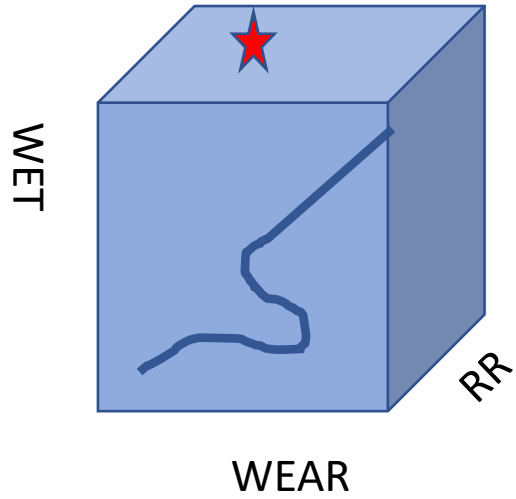


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How can I know after the first experiment
if it is worth continuing the project?





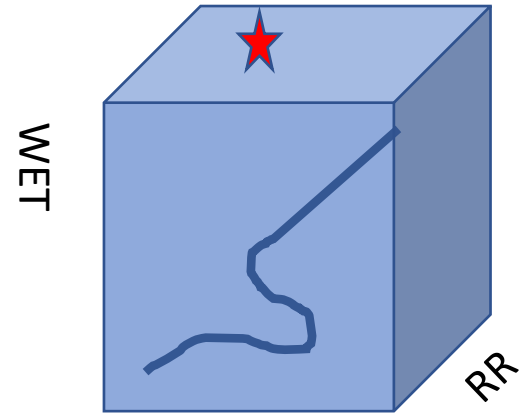


Set Based Concurrent

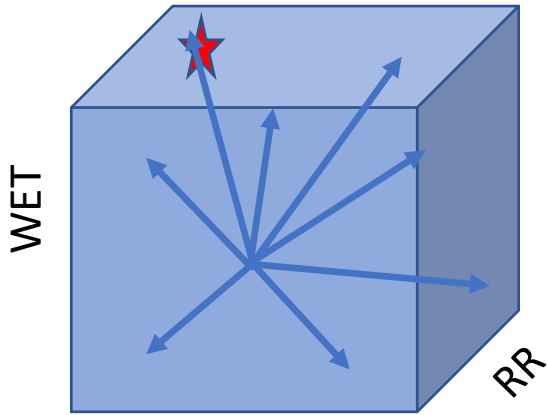


Scientific
Full Factorial

Set Based Concurrent



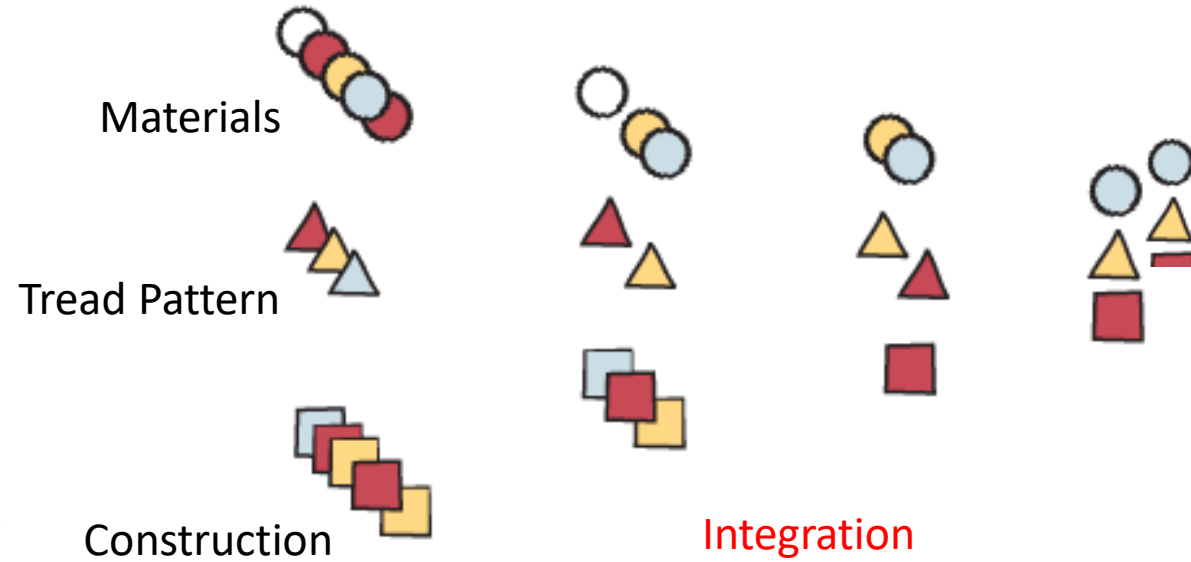
WEAR



WEAR



Product

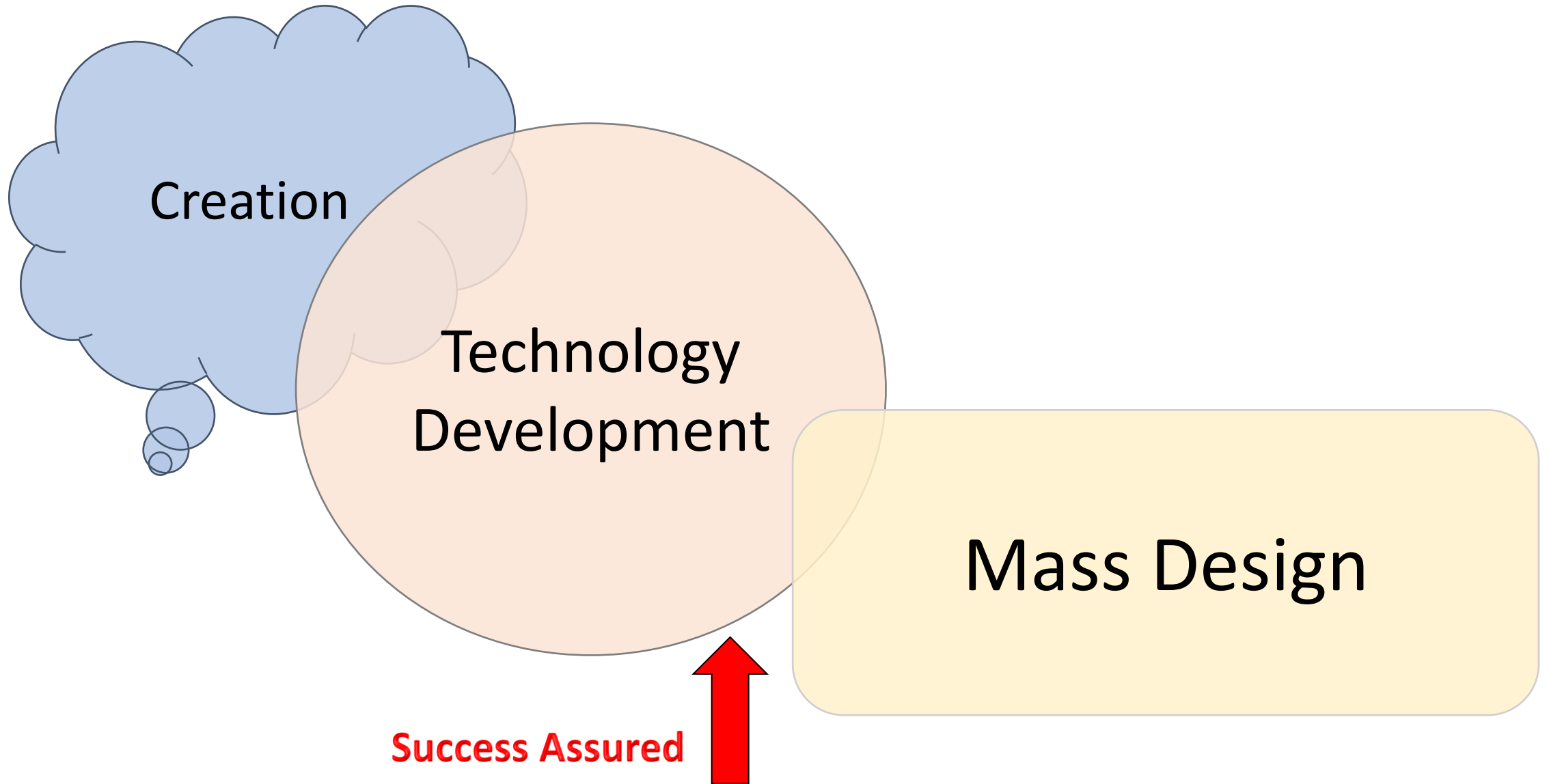


Concurrent
assessment

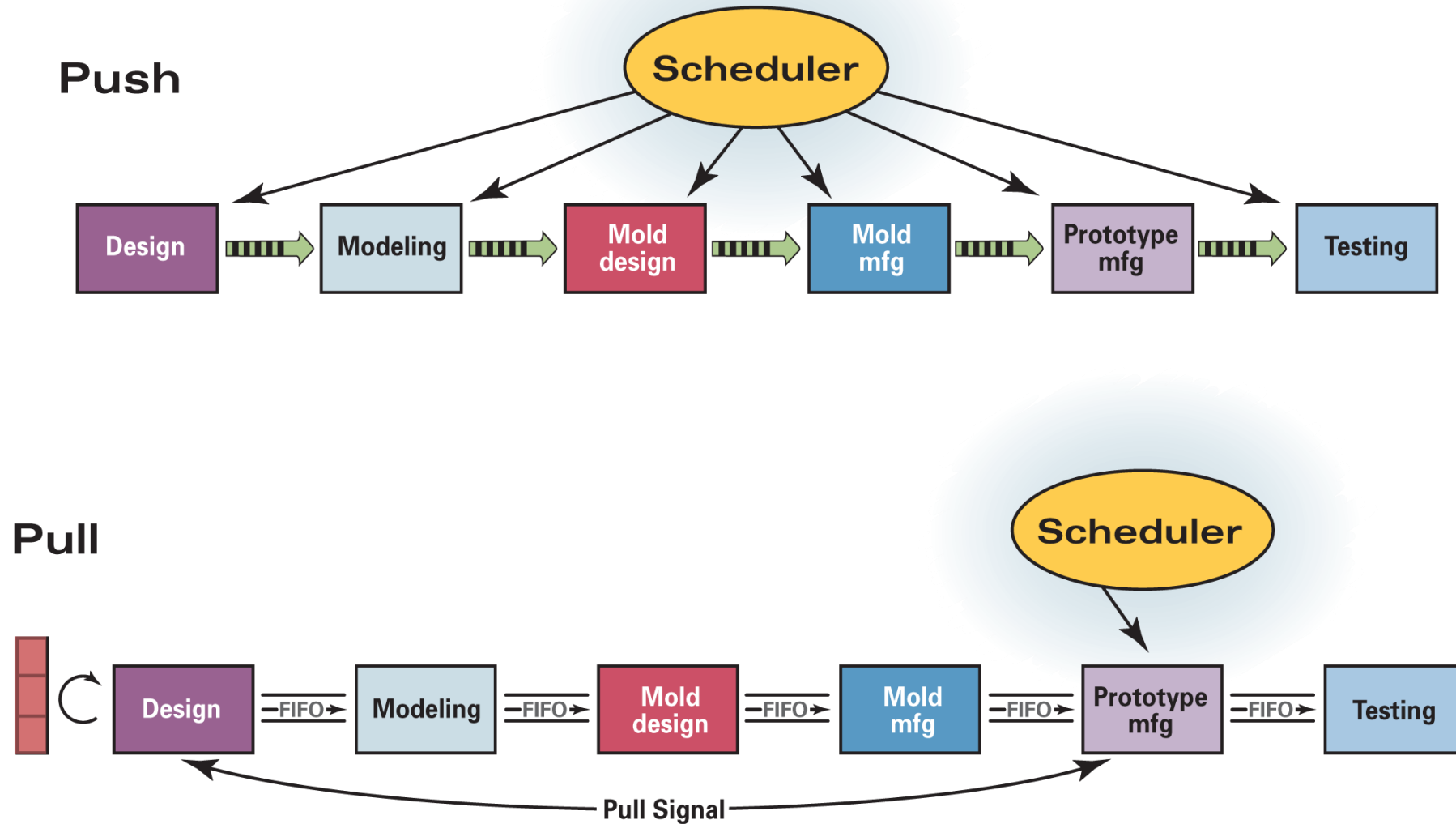
Integration
Event

Knowledge

Maybe Equation or use
of visible knowledge



Push and Pull



LEAN Goodyear Process

- 100% on time
- 75% faster
- 3x more efficient
- 100% financially successful

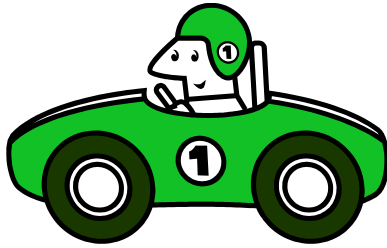
How to Create that Lean Culture of Innovation

- Add Innovation to lean or lean to innovation
- BEST – implement/improve simultaneously

My Personal Opinion

- For process innovation **AND** product innovation, the small stuff only goes so far
- There is a time when most companies/organizations flatten out or hit a wall both in process and product development
- Now it takes a little out of the box thinking
- It does not cost a lot of money to become more innovative AND it can have huge payback (I said the same thing about my first lean transformation)
- Lean/opex creates a lot of wealth – innovation does the same

Thanks



If everything seems under control, you're just not going fast enough.

-- Mario Andretti

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