Rapid Learning Cycles and Lean Product Development

Why and How Rapid Learning Cycles Became My Area of Concentration

Katherine Radeka

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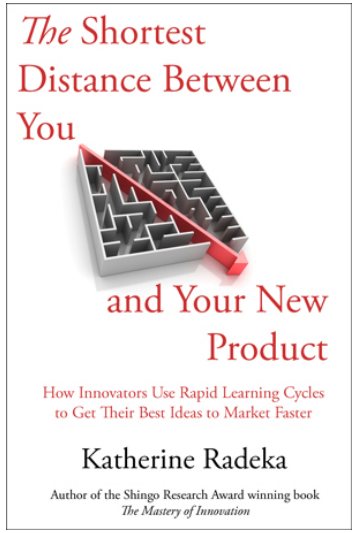
Katherine Radeka

Katherine Radeka has a rare combination of business acumen, scientific depth and ability to untangle the organizational knots to remove the barriers to innovation.

She has a global reach with clients in Europe, North and South America, Asia, and Australia/New Zealand.



She currently supports over 150 implementations of Rapid Learning Cycles through the Rapid Learning Cycles Certified™ Professionals Community.

Katherine has climbed seven of the tallest peaks in the Cascade Mountains and spent ten days alone on the Pacific Crest Trail until an encounter with a bear convinced her that she needed a change in strategic direction.

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The Problem:
Long Slow Learning Cycles

- Problems with Product Development
- Root Cause: Long, Slow Learning Cycles
- Root Cause: Inability to Capture Extensible Knowledge

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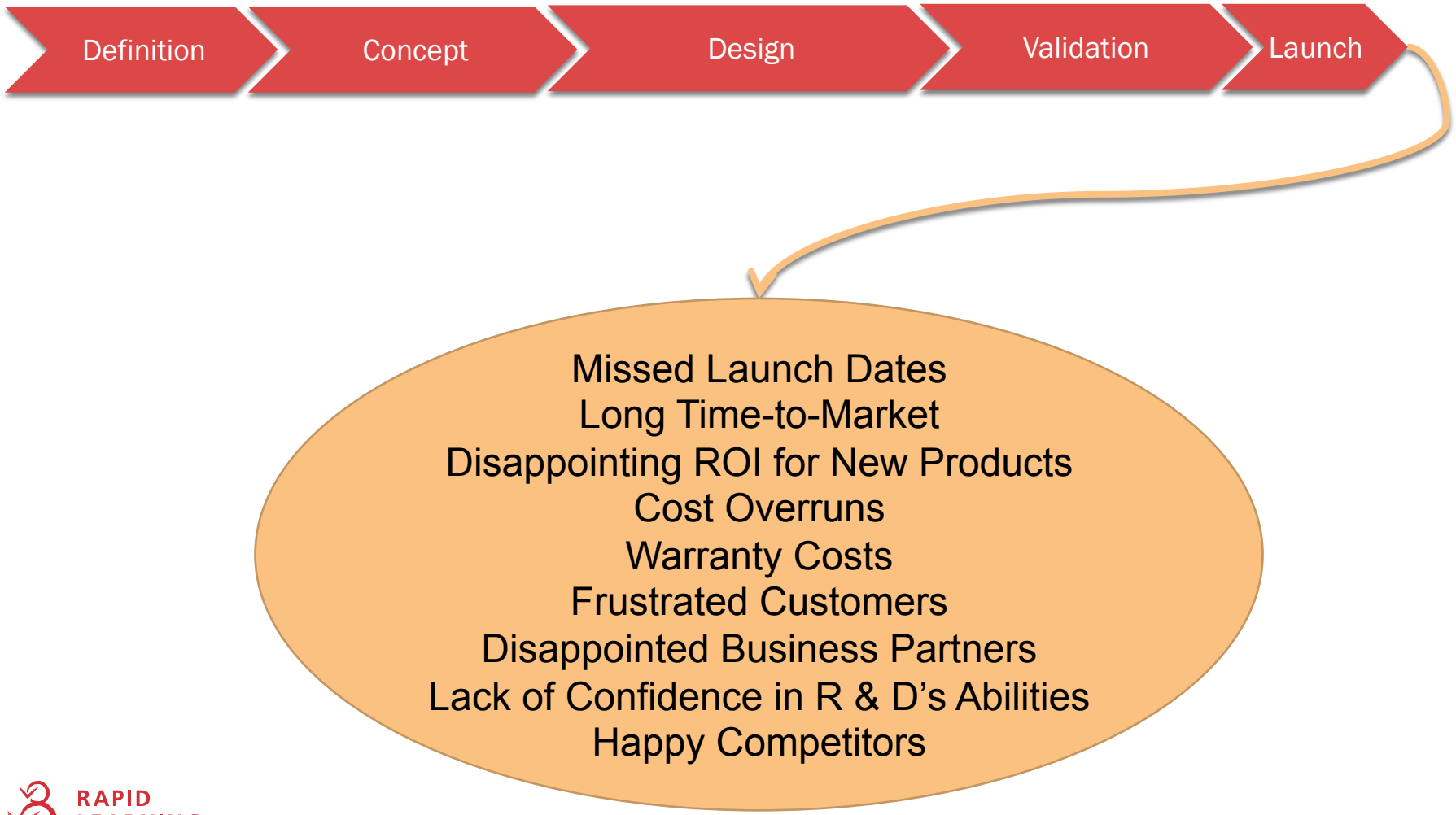
The Problems of Product Development



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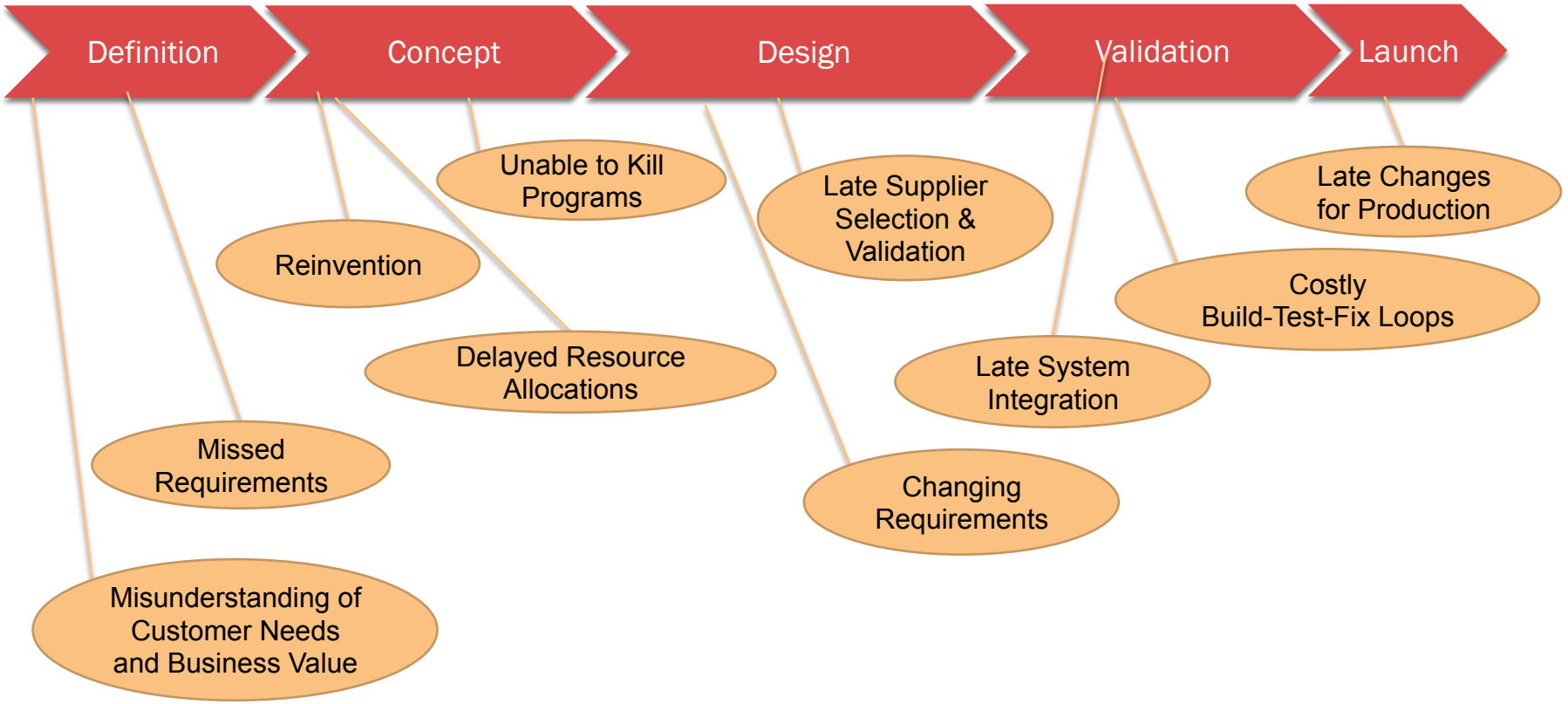
Root Causes of the Problems of Product Development



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The Core Root Cause:
One Slow Learning Cycle

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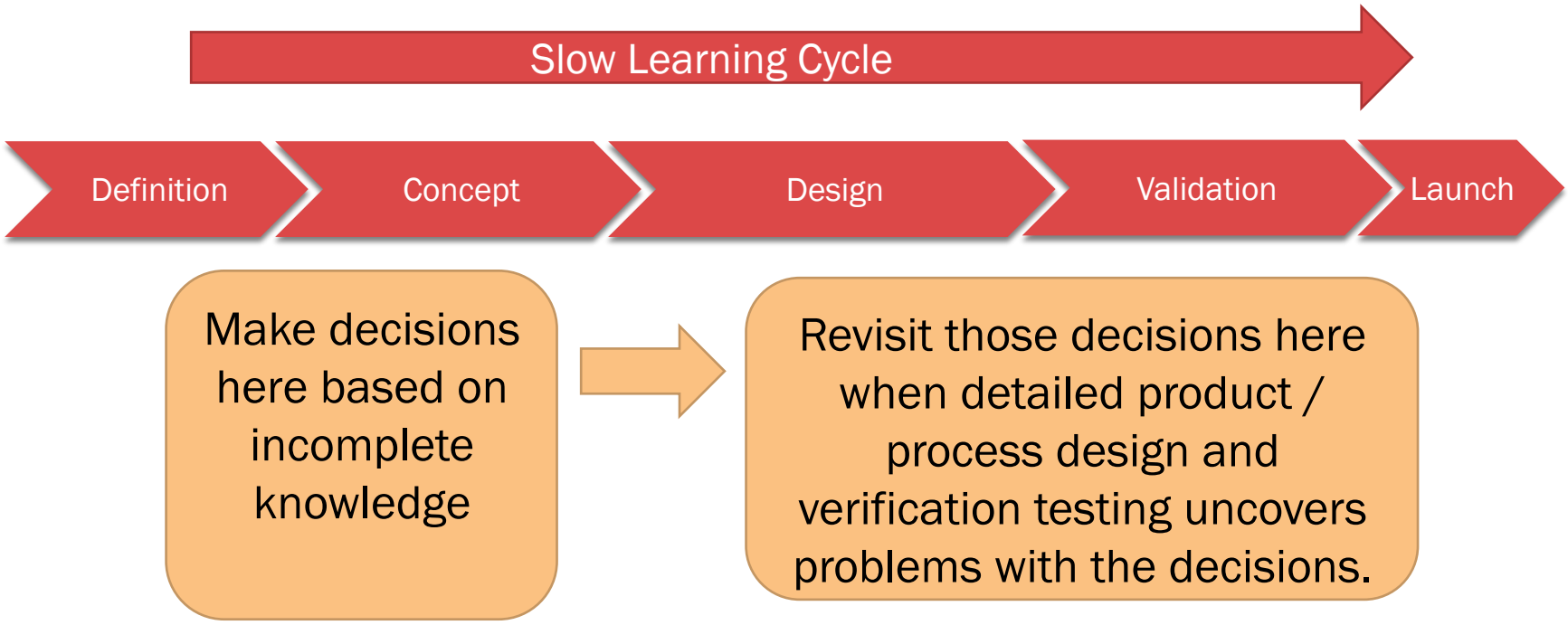
Why Is This a Problem?



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The Opportunity: Rapid Learning Cycles

- Pull Learning Forward
- Capture Extensible Knowledge
- Results Companies Achieve

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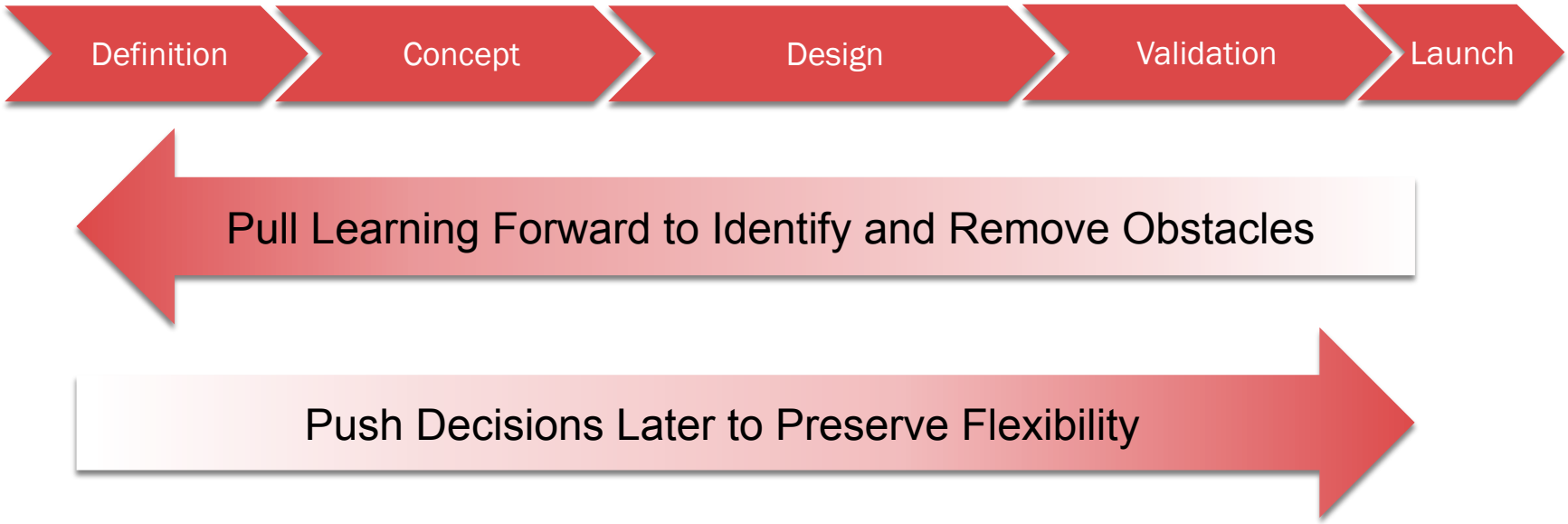
The Solution:
Pull Learning Forward and Push Decisions Later



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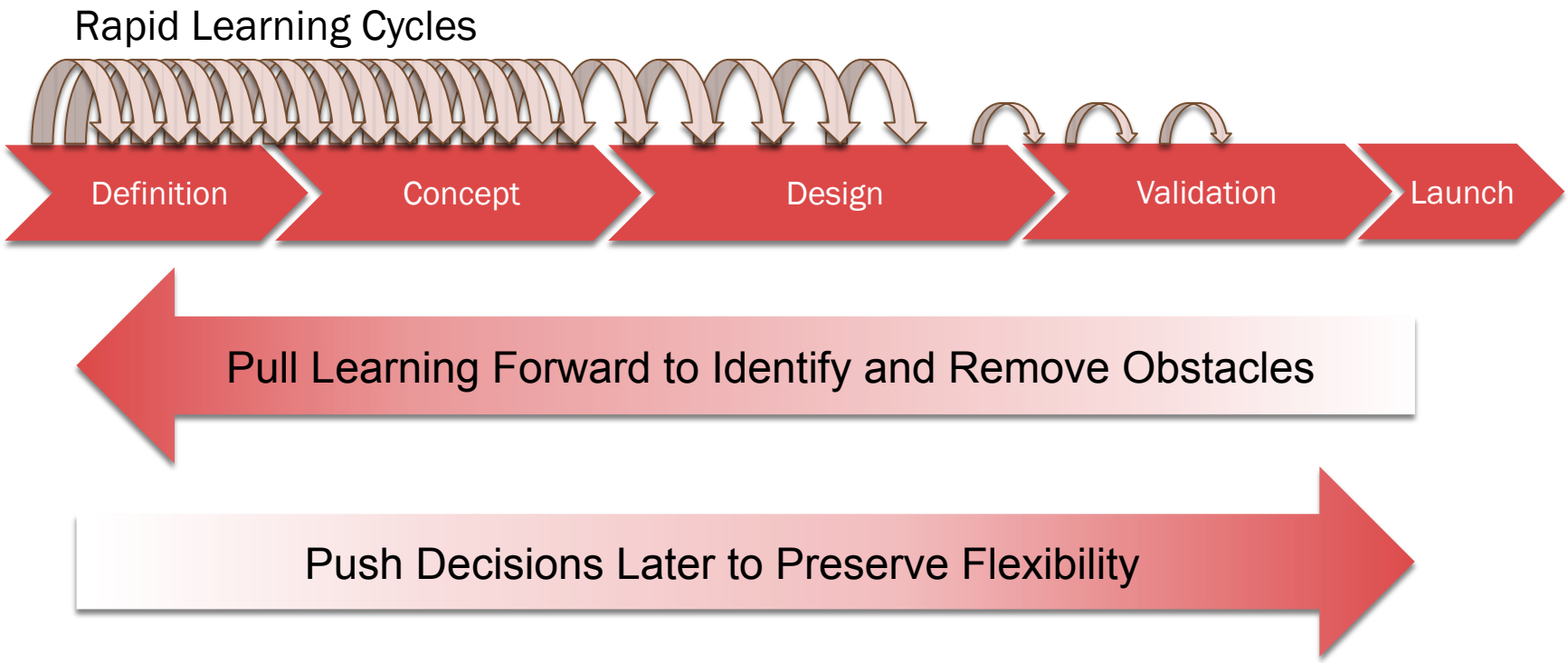
Break Up Long Slow Learning Cycles



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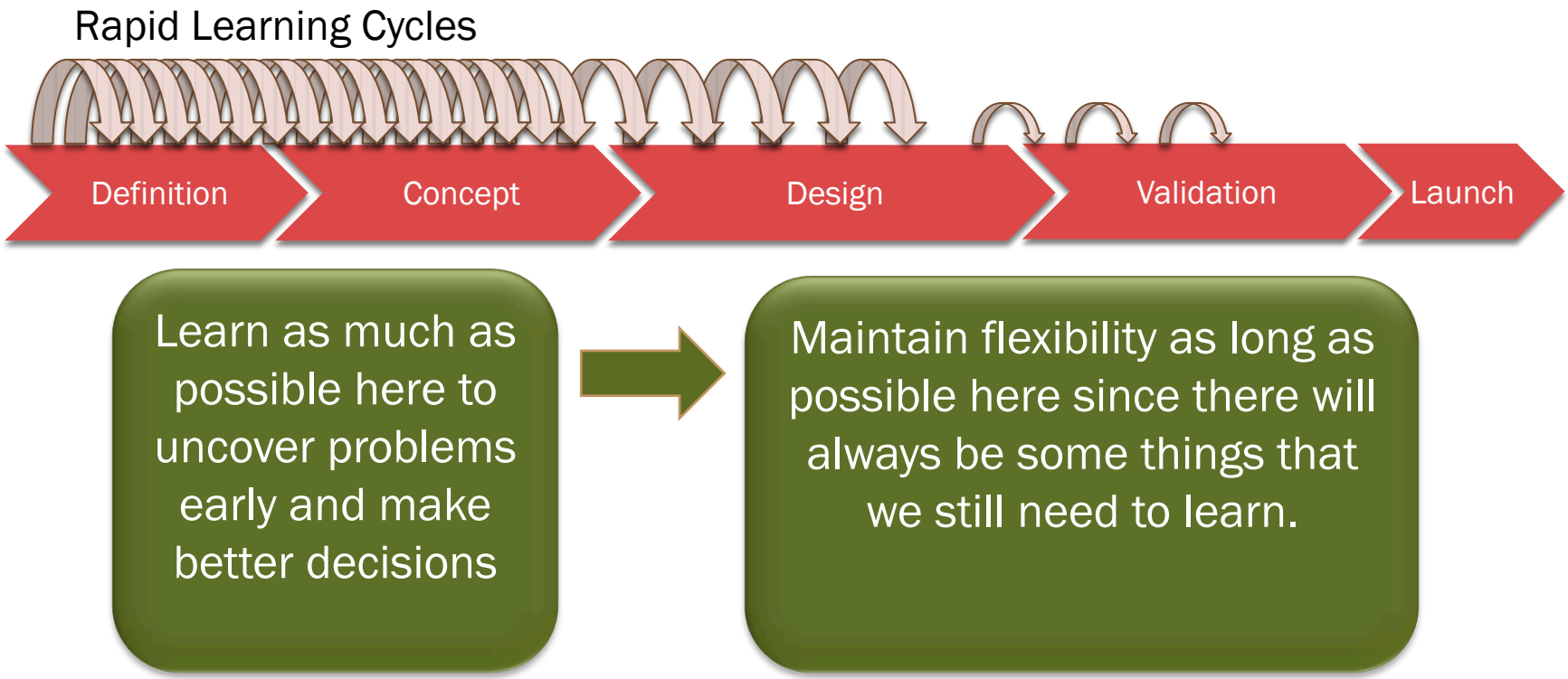
Why Rapid Learning Cycles Accelerate Development



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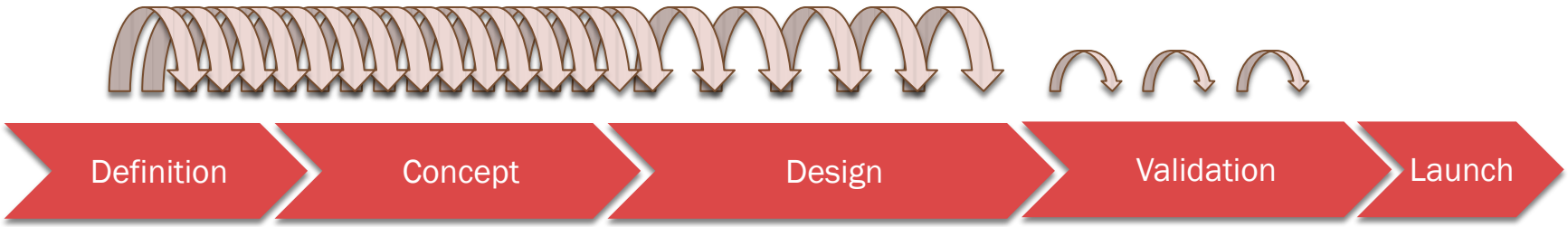
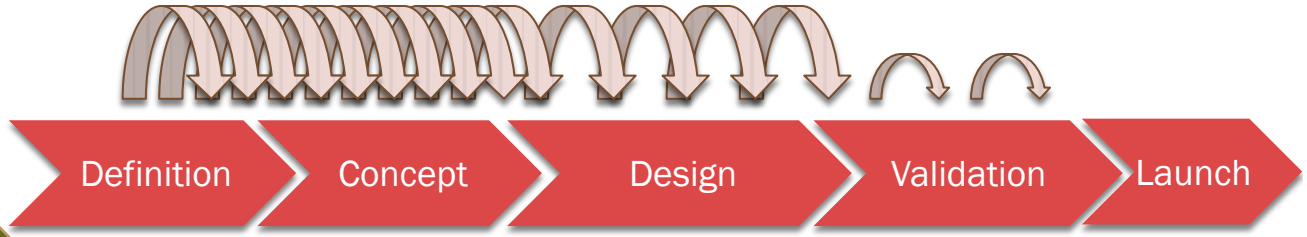
Build Extensible Knowledge to Go Even Faster

Rapid Learning Cycles Build Extensible Knowledge . . .



Capture extensible knowledge so that future program teams don't have to re-learn the same things

. . . To Accelerate Future Development Programs



Leverage extensible knowledge to focus a team's rapid learning cycles on new ideas and product-specific details.

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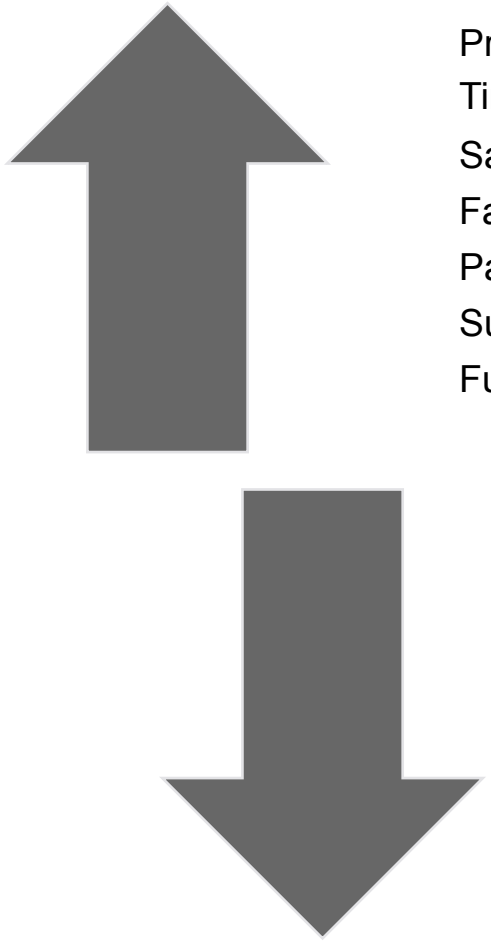
Demonstrated Results



Products Delivered On Time
Time for Innovation
Satisfied Customers
Faithful Execution of the Product Vision
Partner Confidence in R & D
Sustainable Competitive Advantage
Fun

Launch Delays
Time Wasted on Unproven Ideas
Disappointing Products
Late Found Defects & Firefighting
Warranty Costs and Product Recalls
Bad News to Stakeholders
Reinvention
Stress

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From Lean to Rapid Learning Cycles

My Journey

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My Recommended LPD Practices Ladder (circa 2008)

- Chief Engineer: Develop lean leadership in the product teams.
- Visible Rhythmic Processes: Create pull and flow in PD processes.
- Set-Based Design: Investigate sets of alternatives early in design.
- Value Driven Architecture: Design in value for the whole system.
- Management by Proposal: Use shared knowledge to make decisions.
- Visible Knowledge: Share knowledge with visual models.
- LAMDA: The cycle of knowledge creation – PDCA for Knowledge Workers.

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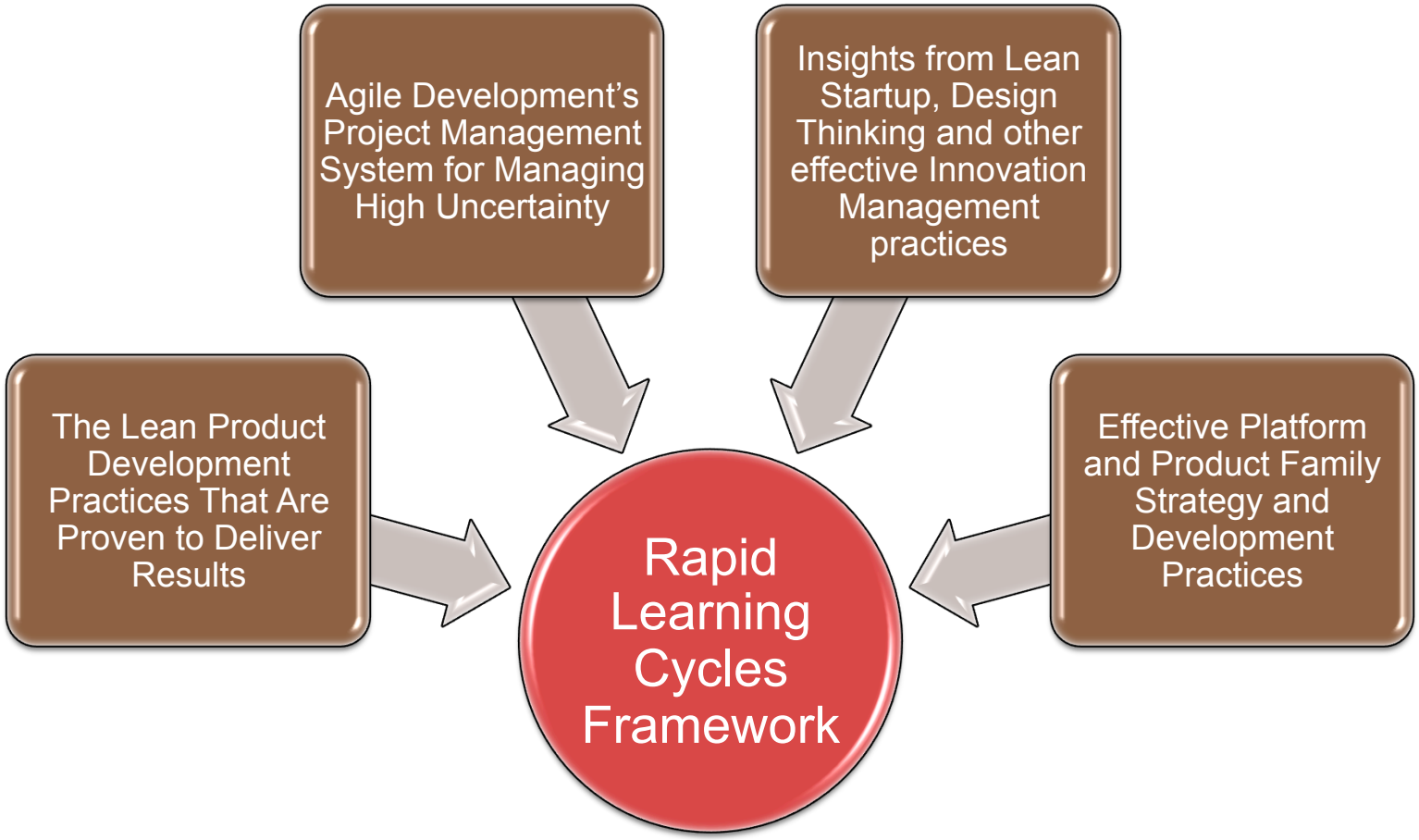
The Roots of the Rapid Learning Cycles Framework



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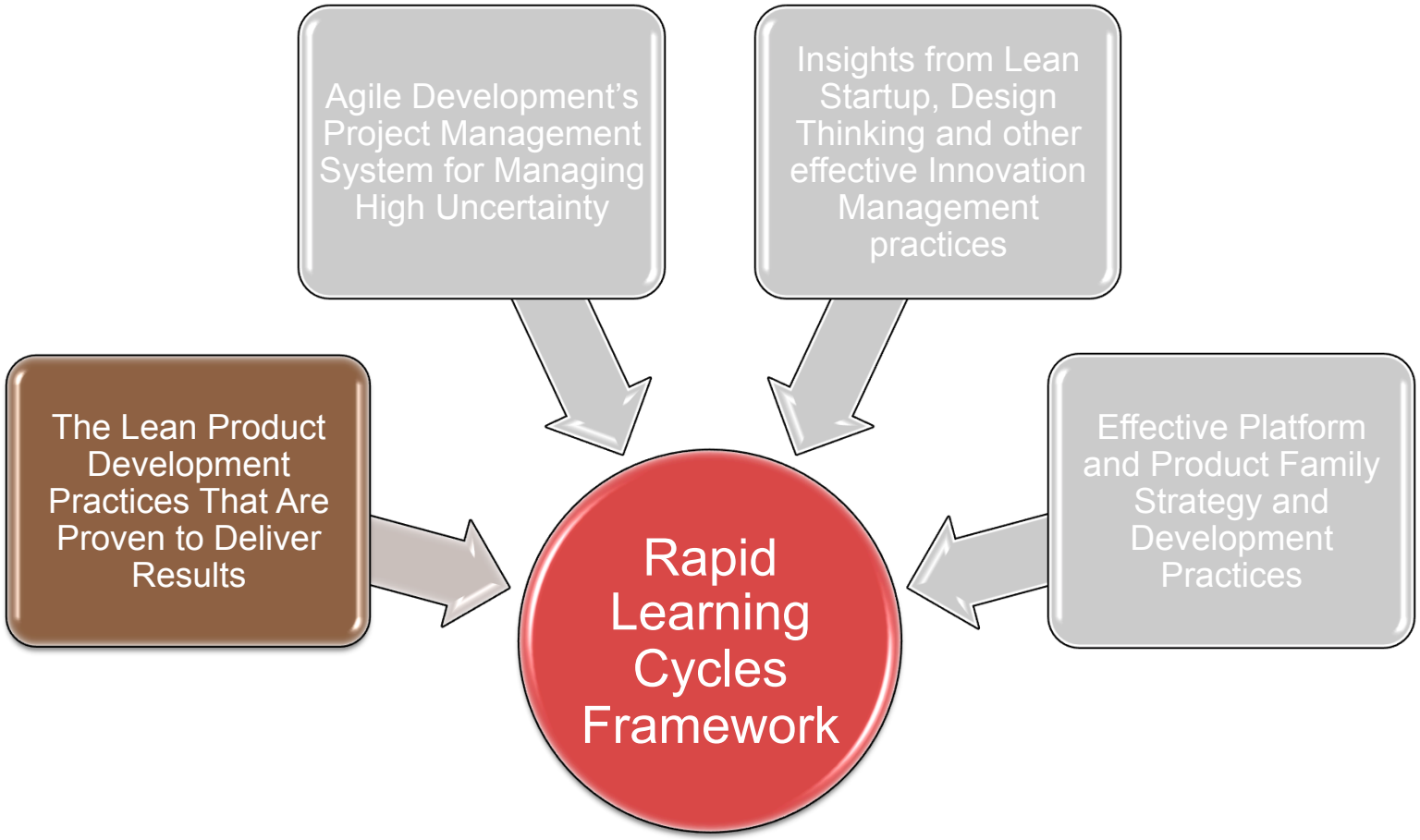

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Most Groups Never Went Beyond These Three – Then Stopped

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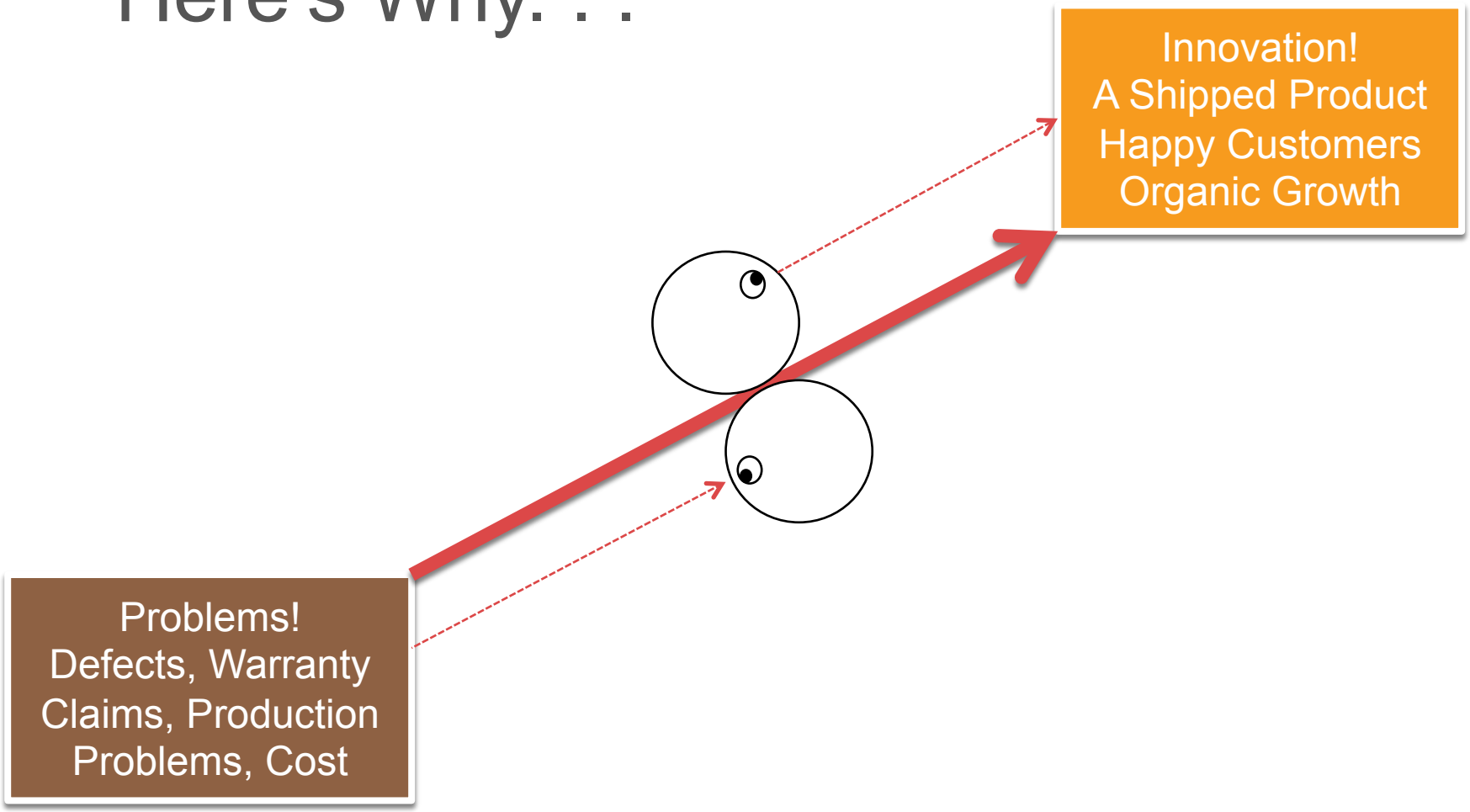
Lean Alone Isn't Sticky! Here's Why. . .



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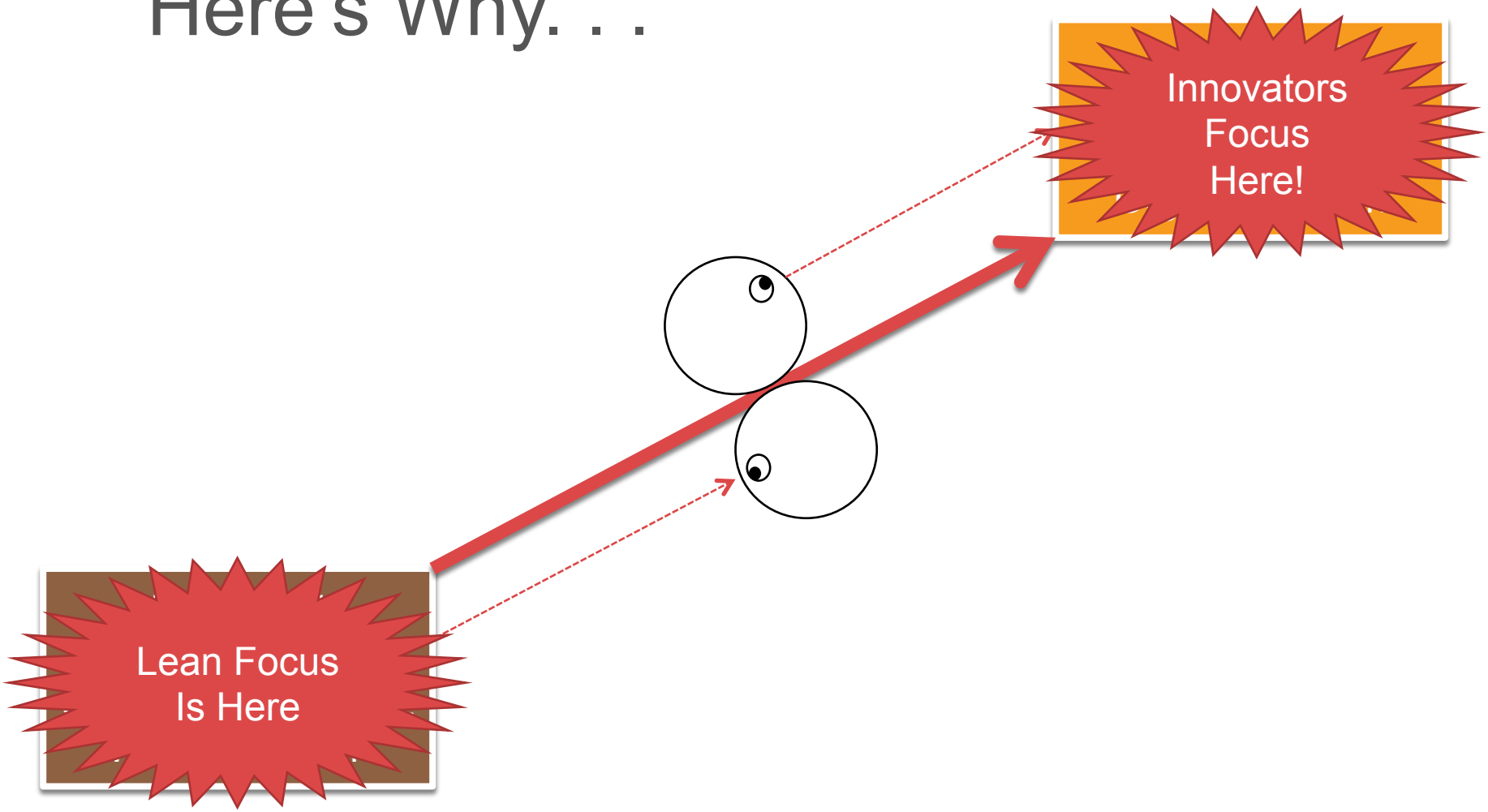
BUT – Lean Alone Isn't Sticky! Here's Why. . .



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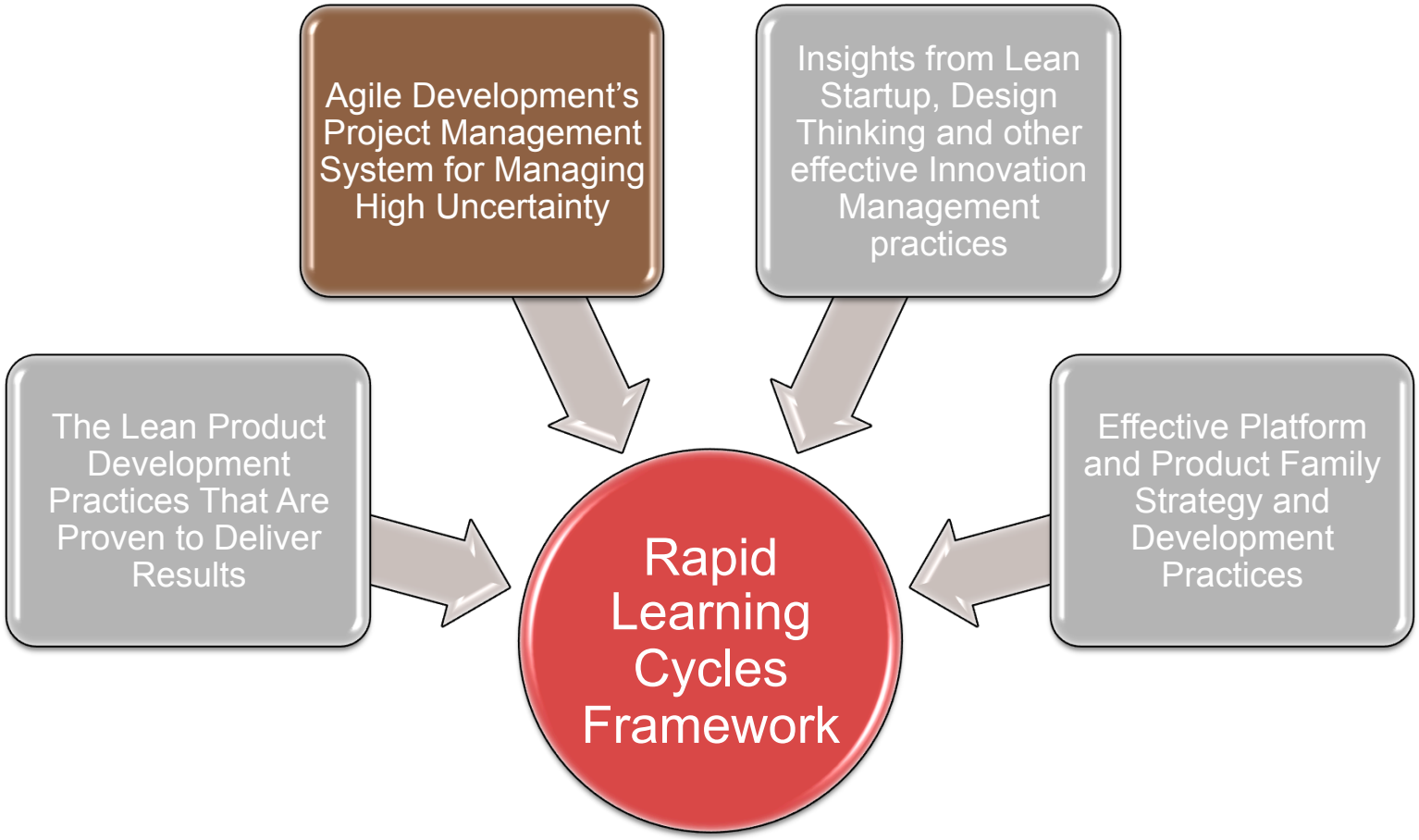
Agile Focuses on Getting Stuff Shipped



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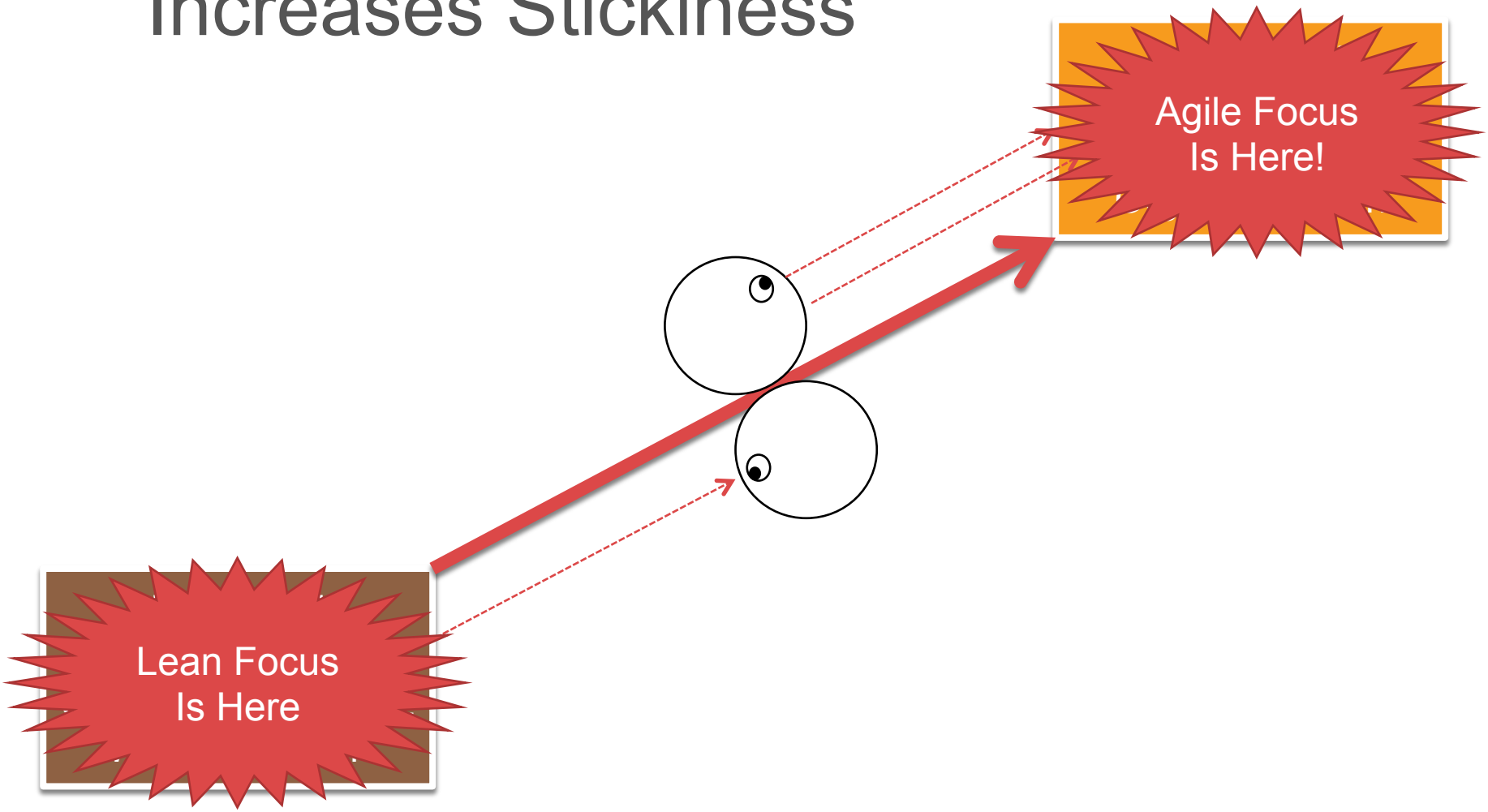
Agile Language Increases Stickiness



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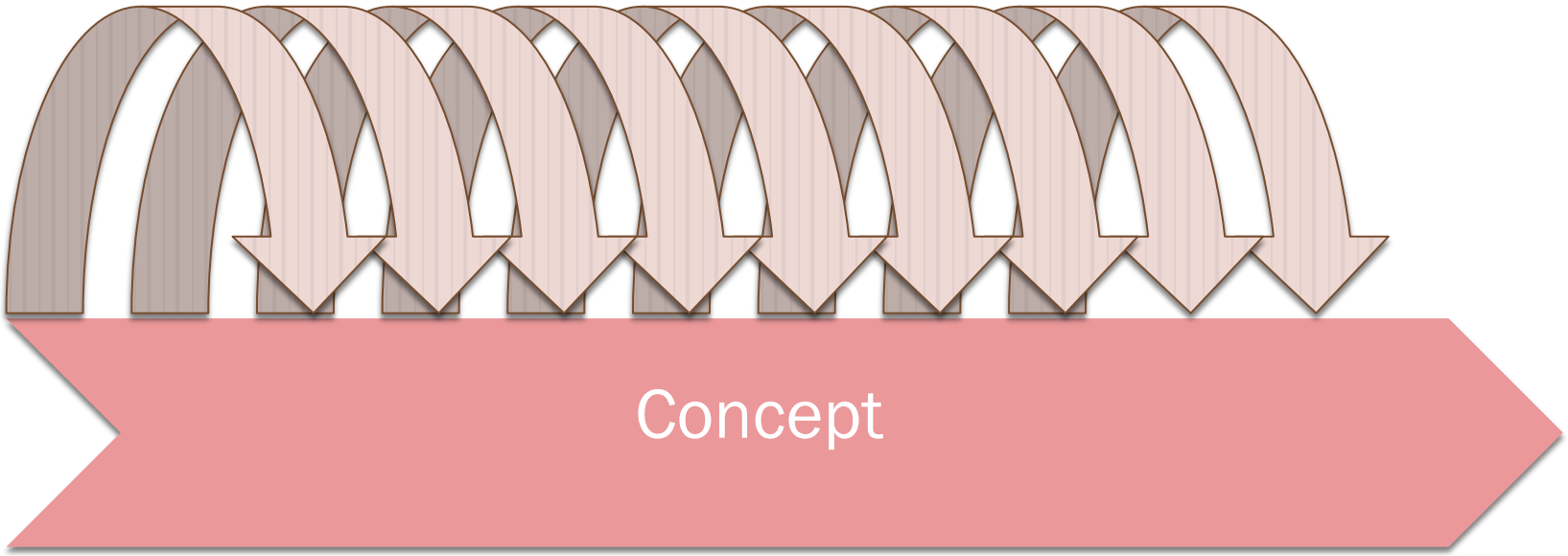
Agile Practice #1:
Develop Knowledge in Short, Continuous Cycles



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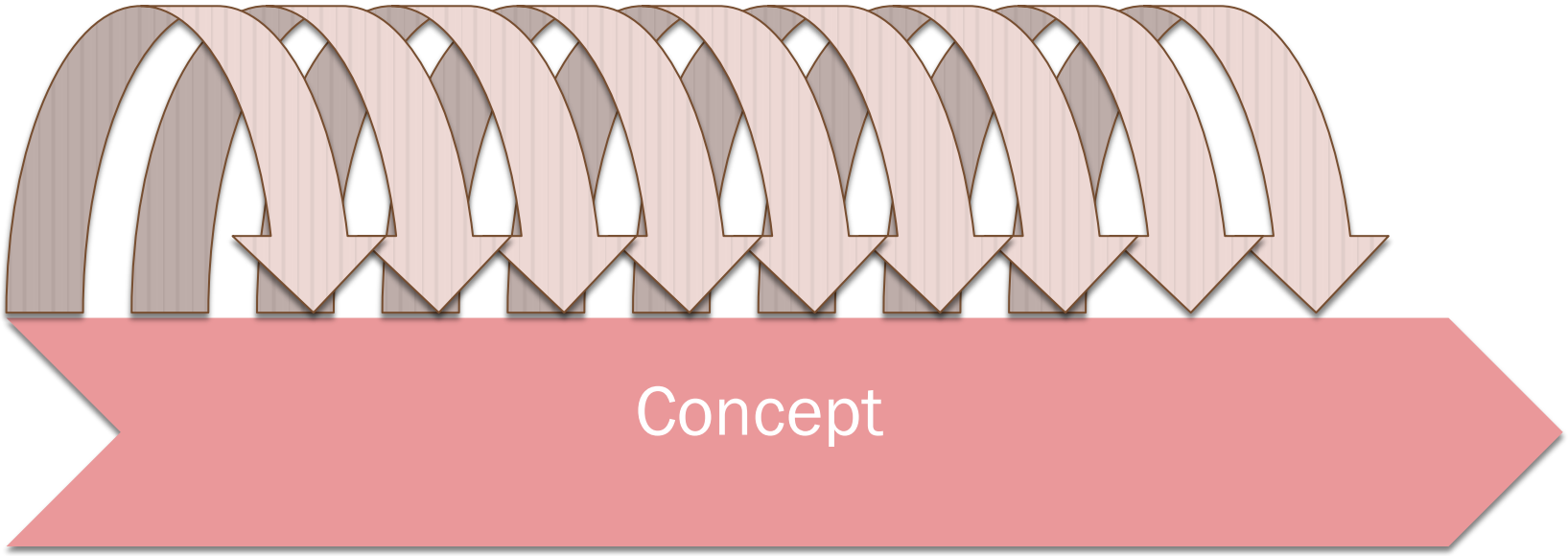
Agile Practice #2:
Maintain a Regular Cadence to Manage Irregular Work

The Learning Cycle is the heartbeat of the program



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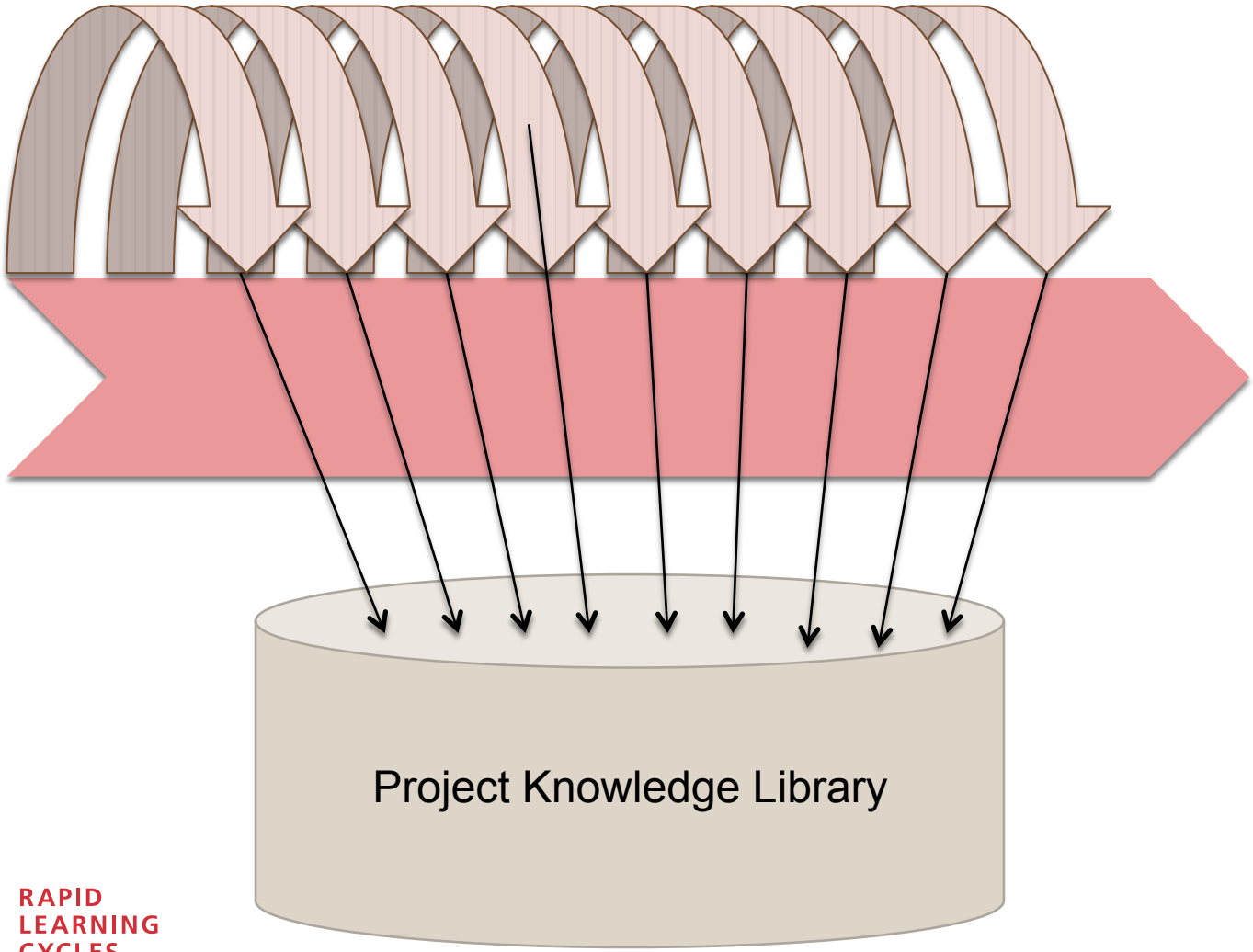
Agile Practice #3:
Capture Knowledge in Real Time



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Agile Pulls
Visible, Rhythmic Processes

Chief Engineer: Develop lean leadership in the product teams.

Visible Rhythmic Processes: Create pull and flow in PD processes.

Set-Based Design: Investigate sets of alternatives early in design.

Value Driven Architecture: Design in value for the whole system.

Management by Proposal: Use shared knowledge to make decisions.

Visible Knowledge: Share knowledge with visual models.

LAMDA: The cycle of knowledge creation – PDCA for Knowledge Workers.

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But Not All Assumptions of Agile Apply!

Software and IT Products

- Fully Modular Architecture
- Independent Modules
- Self-Documenting Code
- Rapid Automated Testing
- Continuous Refactoring
- Continuous Integration
- Release at any time – including after delivery – without penalty

Tangible Products

- Integrated Architecture
- Dependency Networks
- Physical Components
- Experiments Take Time
- Embedded Decisions
- Hierarchical Integration
- Late changes lead to increased production costs, and perhaps warranty costs and recalls

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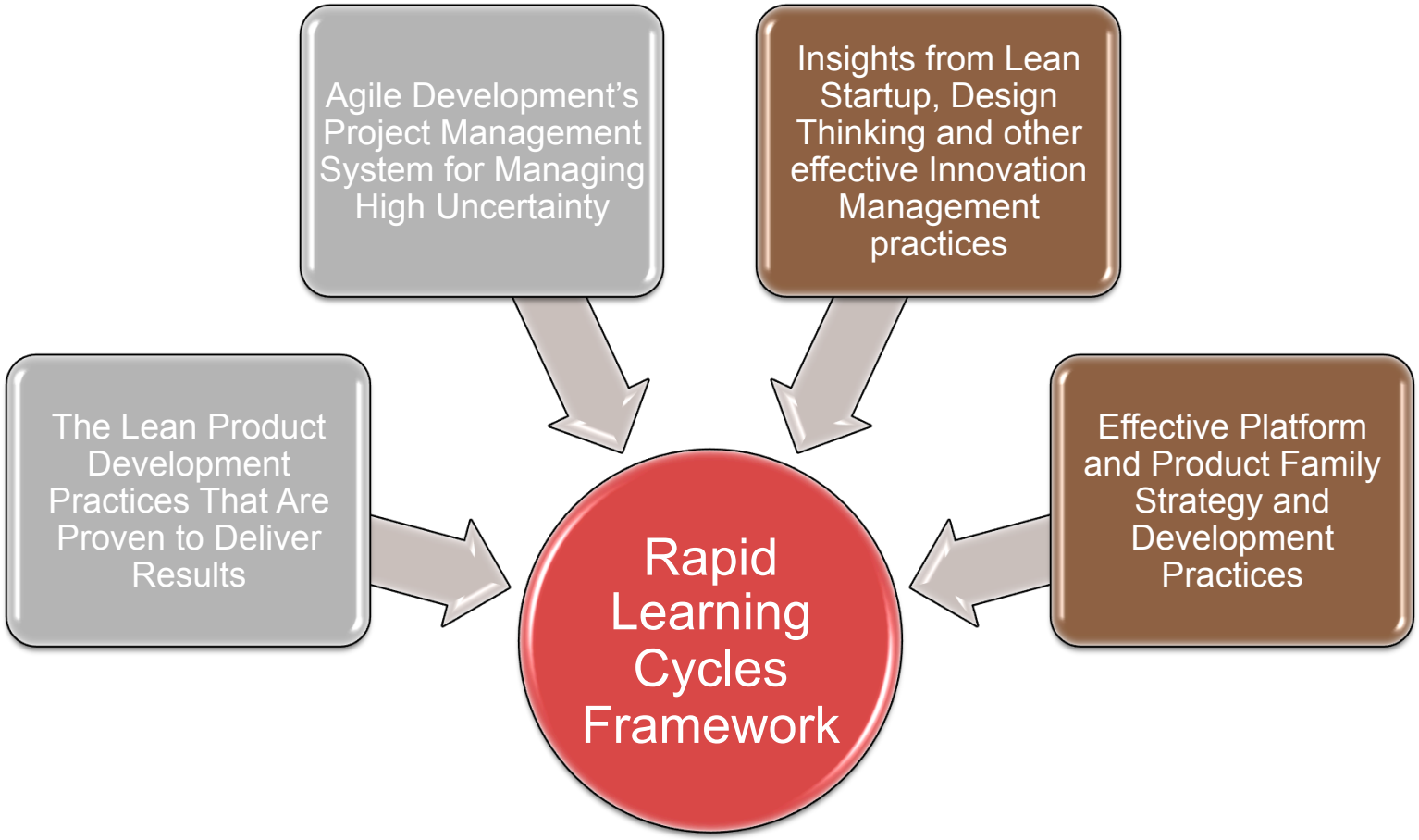
The Roots of the Rapid Learning Cycles Framework



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Good Design Practices Pull the Rest

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My Suggestions

- If Lean is important to your stakeholders and/or your organization – use RLC to drive LPD

- If your R & D teams are allergic to Lean – use RLC to drive LPD without using language that creates unnecessary resistance

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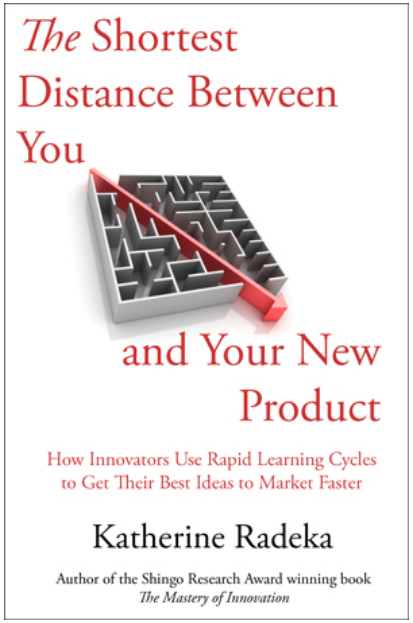
To Learn More

Purchase my book, sign up for an online or in-person workshop:

http://rapidlearningcycles.com

Join the Rapid Learning Cycles Framework's Resource Center:

http://community.rapidlearningcycles.com



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Questions?

We have answers.

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