Why and How Rapid Learning Cycles Became My Area of Concentration

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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.
The Problem: Long Slow Learning Cycles

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

Missed Launch Dates
Long Time-to-Market
Disappointing ROI for New Products
Cost Overruns
Warranty Costs
Frustrated Customers
Disappointed Business Partners
Lack of Confidence in R & D’s Abilities
Happy Competitors
Root Causes of the Problems of Product Development

Definition
- Misunderstanding of Customer Needs and Business Value
- Missed Requirements
- Reinvention

Concept
- Unable to Kill Programs
- Delayed Resource Allocations

Design
- Late Supplier Selection & Validation
- Changing Requirements
- Late System Integration

Validation
- Late Changes for Production
- Costly Build-Test-Fix Loops

Launch
- Reinvention

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The Core Root Cause: One Slow Learning Cycle

Definition

Concept

Design

Validation

Launch
Why Is This a Problem?

Make decisions here based on incomplete knowledge.

Revisit those decisions here when detailed product/process design and verification testing uncovers problems with the decisions.
The Opportunity: Rapid Learning Cycles

- Pull Learning Forward
- Capture Extensible Knowledge
- Results Companies Achieve
The Solution: Pull Learning Forward and Push Decisions Later

Definition
Concept
Design
Validation
Launch

Pull Learning Forward to Identify and Remove Obstacles

Push Decisions Later to Preserve Flexibility
Break Up Long Slow Learning Cycles

Rapid Learning Cycles

Definition  Concept  Design  Validation  Launch

Pull Learning Forward to Identify and Remove Obstacles

Push Decisions Later to Preserve Flexibility
Why Rapid Learning Cycles Accelerate Development

Rapid Learning Cycles

Definition → Concept → Design → Validation → Launch

Learn as much as possible here to uncover problems early and make better decisions.

Maintain flexibility as long as possible here since there will always be some things that we still need to learn.
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.
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
The Rapid Learning Cycles Framework

- Synthesis of Lean + Agile
- Framework Elements
- Event Structure
The Roots of the Rapid Learning Cycles Framework

Agile Development’s Project Management System for Managing High Uncertainty

Insights from Lean Startup, Design Thinking and other effective Innovation Management practices

The Lean Product Development Practices That Are Proven to Deliver Results

Effective Platform and Product Family Strategy and Development Practices

Rapid Learning Cycles Framework
The Core Hypothesis

Core Hypothesis: The reason why your company believes in this product.

- Customer Need
- Business Value
- New Technology
Key Decisions

**Core Hypothesis:** The reason why your company believes in this product.

**Key Decisions:** Decisions that are High Impact and High Unknown – they must be made in order to complete the product or process design – but the team cannot make them with confidence yet.

Examples:
- Which motor are we going to use?
- What is the primary market segment for this product?
- Will the Midway feature be available on all versions of the product?
Knowledge Gaps

**Core Hypothesis:** The reason why your company believes in this product.

**Key Decisions:** Decisions that are High Impact and High Unknown – they must be made in order to complete the product or process design – but the team cannot make them with confidence yet.

**Knowledge Gaps:** Something that a team needs to know in order to make a Key Decision.

Examples include:
- What are the available motors and how closely do they meet our needs?
- What potential market segments could we target?
- What is the cost of adding the Midway feature?
Activities

**Core Hypothesis:** The reason why your company believes in this product.

**Key Decisions:** Decisions that are High Impact and High Unknown – they must be made in order to complete the product or process design – but the team cannot make them with confidence yet.

**Knowledge Gaps:** Something that a team needs to know in order to make a Key Decision.

**Activities:** The specific activities that will be done to close a Knowledge Gap – or perform some other task within the Product Development Process.
Deliverables in a Rapid Learning Cycles Program

Key Decisions

- Close Knowledge Gaps
- And Keep Open until Last Responsible Moment

Create Deliverable as an Activity

- Known Solutions
- Low Impact Decisions
- Standard Requirements

Placeholder or Provisional Decision
Learning Cycle and Integration Events

Regular Events to:
• Capture and Share Knowledge (Learning Cycle Events)
• Make Key Decisions (Integration Events)
• Update the Learning Cycles Plan (Both!)
The Role of Marketing in Rapid Learning Cycles

- Key Decisions
- Knowledge Gaps
- Deliverables
- The Last Responsible Moment
Key Customer Decisions

Customer Value

- Feature Set
- Performance
- Reliability
- Ease-of-Use
- Look-and-Feel
- Perceived Value
Potential Key Decisions from Marketing

Possible Key Marketing Decisions

- Promotions
- Market Segments
- Regions
- Market Size
- Channel Partners
- Pricing Strategy
- Adoption Rates
- Sales Strategy
- Market Positioning
- Sales Strategy
Marketing Deliverables in a Rapid Learning Cycles Program

Keep Some Decisions Open As Long as Possible to:
• Learn more about customers
• Get more customer feedback
• Learn more about competition
• Deliver best bundle of value

Write Reqmts Docs as Activity

Key Decisions

Placeholder or Provisional Decision

Known Solutions
Low Impact Decisions
Standard Requirements
The Last RESPONSIBLE Moment

The last point in time
When a decision must be made
To avoid major impacts
On downstream partners

Goal: As late as possible without increasing cost, causing delayed launch, or adding a lot of rework
Knowledge Gaps for Sales and Marketing

Your product development teams may need you to build knowledge around:

- Customer needs / preferences / value
- Market / regional differences for product variants
- Factors that influence buying decisions
- Price sensitivity vs. cost vs. feature richness
- Relative priority for the feature set
- Performance trade-offs
- Competitive analysis
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
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.