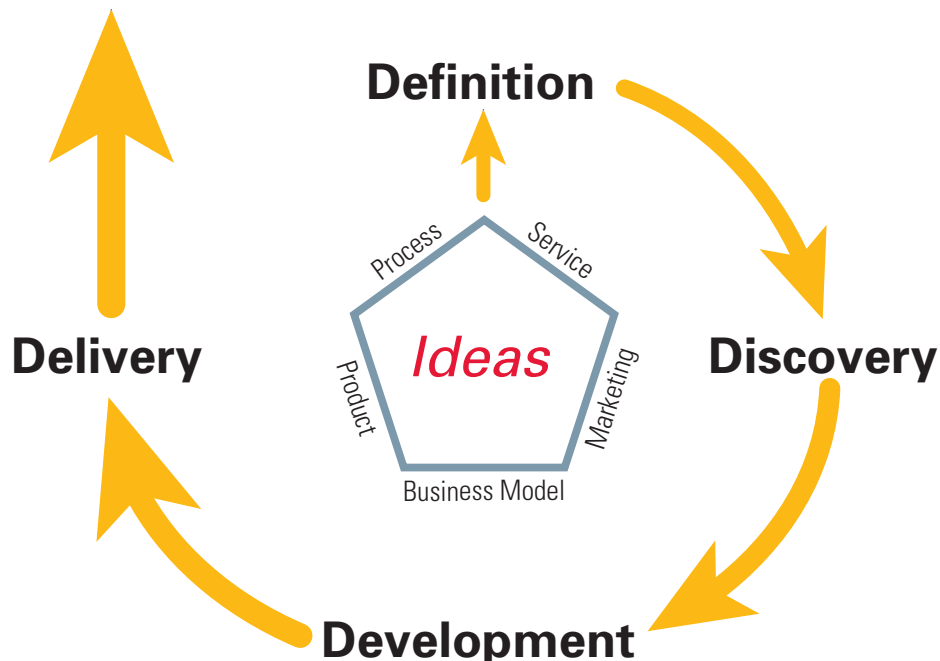


Why Invest in Innovation?

- It can lead to higher profits.
- Firms with innovation as a primary strategy realize 29% higher return on sales compared to those with other primary strategies (Georgia Manufacturing Survey 2012).
- The Innovation Cycle is a repeatable process that results in the creation of a novel process, product, service, or business model that has business value.

Learn more:
www.ciras.iastate.edu
[linkd.in/12tVLy1](https://www.linkedin.com/company/ciras-iastate)

The Innovation Cycle



THE INNOVATION CYCLE

PHASE 1

DEFINITION

- Create and Capture Ideas
- Develop Value Proposition
- Evaluate Opportunity and Strategic Fit
- Select and Refine Idea(s)

CONCEPT

PHASE 2

DISCOVERY

- Pilot Concept to Prove Value
- Estimate Financial Returns
- Evaluate Competitive Options
- Commit Resources

VALUED
CONCEPT

Symptoms of Breakdown

- Lack of clarity of real customer needs/problems
- Lack of ideas
- Innovation vs. innovation
- Low management or employee support

Potential Solutions

- Idea stimulation training
- Concept refinement training
- Customer and market research
- Technology research

Symptoms of Breakdown

- High percentage of new products/services fail to meet expectations
- Overloaded product development/under-resourced projects
- "Flavor of the Month"
- Unclear "why" we are considering concept

Potential Solutions

- Formal decision framework
- Customer and market research
- Technology research
- Financial analysis
- Competitive analysis

PHASE 3

DEVELOPMENT

- Develop a Plan
- Design a Solution
- Verify and Validate Processes
- Create Sales and Marketing Plan

READY
SOLUTION

Symptoms of Breakdown

- Delayed releases
- High costs
- Long development cycles
- Solutions don't satisfy market needs
- Poor team morale/motivation

Potential Solutions

- Project management / planning
- Development systems
- Prototyping
- Design for "X"
- Simulation and Modeling
- Failure mode analysis

PHASE 4

DELIVERY

- Refine Sales Literature
- Communicate to Team
- Integrate into Current Practices

INNOVATION

Symptoms of Breakdown

- Many engineering changes after commercialization
- High manufacturing costs
- Quality problems
- Solutions don't satisfy market needs
- Team confusion

Potential Solutions

- Improvements to Definition, Discovery, and Development
- Integrated product teams
- Postmortem analysis
- Collect customer feedback

How does your current process perform? *Grade each question 1 (Never) to 5 (Always)*

Innovation Mindset	New ideas and small failures are encouraged by leadership.	
	Team members are expected to spend time brainstorming new ideas.	
	Teams are actively looking for new problems to solve or technologies to develop or exploit.	
Concept Definition	A documented process is followed to develop new products, services, business models, etc.	
	An agreed-upon form is used to document new concepts.	
	New concepts are aligned with internal strategies and capabilities, including external market needs.	
Concept Discovery	Opportunity and markets are quantified with support data from various sources.	
	Market landscape is evaluated (barriers to entry, existing patents, regulatory requirements, customer willingness to pay, etc.).	
	New concepts are tested with customers via prototypes or pilots.	
	Competitive analysis of in-kind and out-of-kind options is performed (e.g., sprinklers versus rain to solve problem of dry land).	
	Financial analysis is performed (e.g., anticipated costs, selling price, return on investment, net present value).	
Solution Development	A planning session is used to prioritize resources and projects.	
	The project team consists of various functions (R&D, manufacturing, sales, marketing, etc.).	
	A project plan identifying critical path is documented, followed, and supported by top leadership.	
	Internal and external team members develop fitness for use requirements, specifications, and marketing claims.	
	Project team is committed to only one project at a time (includes daily production support).	
	Design, manufacturing, sales, and marketing activities are performed in parallel.	
Solution Delivery	Projects are completed on time and on budget.	
	New solutions meet market requirements and deliver claims.	
	New solutions meet internal expectations (sales forecasts, profits, etc.).	
	Market-ready solutions meet concept targets.	
	Sales channel is educated on value proposition(s) and price justification.	

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