Best Practice For Innovation

Lynne VanArsdale, Seagate Technology, LLC, and the PDMA
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Abstract

Best Practices for Innovation

Three global organizations certify new product development professionals: Product Development and Management Association, Pragmatic Marketing and the Association of International Product Marketing and Management. Learn how the body of knowledge behind these certification programs offers a balance between creativity and focus. Evidence shown proves that the techniques, process and infrastructure offered in this body of knowledge yield significant improvements in product success at major companies and SMBs worldwide. Take-aways help high tech program, development and product managers get the most out of their innovation teams.

Learning Objectives:
Know where to go to obtain proven tools and techniques for innovation.
Understand the PDMA approach: basic structure and some key concepts and techniques.
“Innovation is a process that begins with new thinking and ends by creating new value.”


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Innovation Success

Strategic Objectives = Near-term Success

Product Effectiveness
- Financial
- Market share
- Branding
...

Corporate Learning = Long-term Success

Process Performance
- Time to Market
- Re-work reduction
- Resource efficiency
...

Cross-disciplinary Integration

Innovation Success
“Everyone Is a Product Manager”

Customers can be **internal** or **external**…

» **Products on the market**
  - Customers are the people who “buy” the products
    - Tangible products
    - Services
    - Non-profit

» **Products in enterprise IT**
  - Customers are the key beneficiary stakeholders of an IT solution or other work product
    - Applications
    - Infrastructures
    - Data – its storage and availability
    - Services / processes

Innovation success facilitates your customer’s ability to innovate…
Innovation: Bodies of Knowledge

- **Product Innovation**
  - **Product Development and Management Association (PDMA)**
    > www.pdma.org
    > Whole product lifecycle
    > Scientific methodology is the foundation of the PDMA BoK
  - **Pragmatic Marketing**
    > www.pragmaticmarketing.com
    > Marketing focused
  - **Association of International Product Marketing and Management (AIPMM)**
    > www.aipmm.org
    > AIPMM BoK is a collection of articles
  - **American Marketing Association (AMA)**
    > www.marketingpower.com
    > No BoK, per se, but many online materials and tools available

- **IT Management Innovation**
  - **INCOSE**
    > www.incose.org
  - **IEEE Engineering Management Society**
    > http://ewh.ieee.org/soc/ems/
  - **Systems Engineering Innovation Centre**
    > http://www.seic-loughborough.com
New Product Success = \( f(\text{Strategy, Portfolio Management, Process, Project Management, Market Research, Metrics}) \)
Four basic types of strategies:
- Prospector → profit
- Analyzer → business strategy
- Defender → ROI
- Reactor → failure avoidance

The best practice you develop should activate your corporate strategy aligned with your product approach.
- Market-oriented
- Resource-oriented

A sound strategy focuses creativity toward sound execution.

* Robert Cooper, Winning at New Products, Ch. 12
Characteristics of Portfolio Management

- Future events
- Very dynamic decisions
- Projects at various completion states
- Resources limited and shared

Winning Portfolios:

- Maximize value
  - Financial (e.g. ROI)
  - Non-financial (e.g. balanced scorecard)
- Multiple views and metrics required
- Balance:
  - Portfolio product types: breakthrough, platform, derivative, support
Modern Innovation Cycle

- Modern innovation looks at bringing value to the entire product lifecycle
  - Constant checks with portfolio view

Lean Product Development can improve cost and time to market
Project Management Balances Creativity and Focus

- NPD most often consists of multiple projects
- Rework vs. review – closed-loop w/ history database
- Keys to innovation success:
  - Project manager attributes
    - Strong technical, marketing and management skills
    - Participative style
    - Early and continuous support from senior management
  - Detailed plans with flexibility

Innovation project management provides structure with flexibility

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Market Research Balances Creativity and Focus

Used throughout the product lifecycle

- Divergent thinking (creativity) → collect and inspire ideas
- Convergent thinking (focus) → learn constraints and historical lessons

Steps:

- Identify gaps
- Collect secondary research sources
  - Internal and external data
- Identify remaining gaps
- Primary research

Building a knowledgebase improves interdisciplinary team integration
Metrics Balance Creativity and Focus

- **Strategy metrics**
  - Balanced scorecard
- **Portfolio metrics**
  - NPV of the portfolio
  - Efficiency
- **Process metrics**
  - Time to market
  - Cycle times
- **Project Management metrics**
  - Earned Value
- **Product success metrics**
  - Returns
  - Strategic objectives
  - Corporate learning

<table>
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<th>Metrics</th>
<th>Prospectors</th>
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<th>Defenders</th>
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Metrics keep the creative on track toward innovation success

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Product Innovation Charter (PIC)

“The PIC is a document that gives the conditions under which an organization will operate*”

- Written agreement between functional units
- Critical elements: focus, goals, guidelines
  - Timing
  - Scope
  - Funding
  - Dated signatures

Innovation Maturity Model

- **Strategy Maturity**
  - Mission & strategic plan define strategic arena for new opportunities, opportunity analysis drives strategic plan, and resources available in strategic buckets

- **Portfolio Management Maturity**
  - Formal, systematic process, with ranking, for balancing projects and resources aligned with strategic plan

- **Process Maturity**
  - Formal, disciplined, yet flexible/adaptable stage-gate process written, used, and visible, with clear go/no-go criteria

- **Project Management**
  - Interdisciplinary team excellence

- **Market Research**
  - Ongoing, customer-focused research forms the basis of product definition

- **Metrics**
  - Standard criteria for success -- tracked
  - Multiple reviews using criteria
  - History kept and used

Maturity models help organizations to continuously improve balance.
Companies Progress Through Distinct Stages of NPD Maturation

Stage 3 companies grow 50% faster than Stage 2 companies and Stage 1 companies lag far behind*

* Source: PMG Signals of Performance

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<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
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Based on Performance Measurement Group Benchmarks

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Prescription for Innovation Success

- Hire Project Managers to lead NPD
- Use interdisciplinary teams and train them in project management
- Choose process best practice based on innovation strategy
- Emphasize excellence in pre-development phases
- Iterative learning and knowledge capture
- Use an Innovation Maturity Model with visibility at every level of the organization
How can innovators balance creativity and discipline?

Focus on innovating to provide value to the customer!
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