



Education

Best Practice For Innovation

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➤ **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.***”



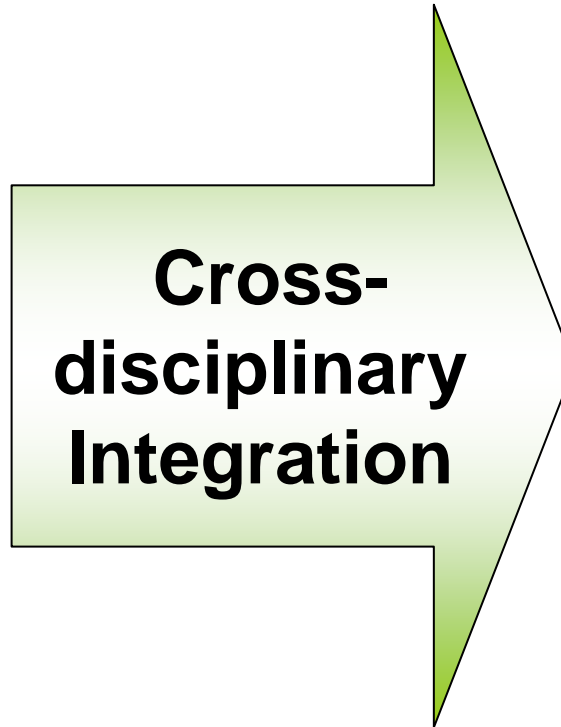
Innovation Success

**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
...



“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)

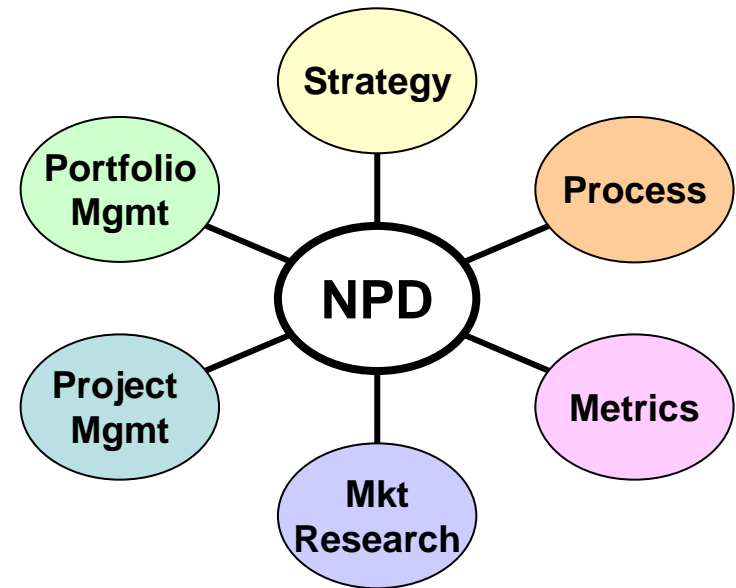
- > www.pdma.org
- > Whole product lifecycle
- > Scientific methodology is the foundation of the PDMA BoK
- ◆ Pragmatic Marketing
 - > www.pragmaticmarketing.com
 - > Marketing focused
- ◆ Association of International Product Marketing and Management (AIPMM)
 - > www.aipmm.org
 - > AIPMM BoK is a collection 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 (Strategy,
Portfolio Management,
Process,
Project Management,
Market Research,
Metrics)



Strategy Balances Creativity and Focus


➤ Four basic types of strategies*

- ◆ Prospector → profit
- ◆ Analyzer → business strategy
- ◆ Defender → ROI
- ◆ Reactor → failure avoidance

		Strategy	
		Flawed	Sound
Execution	Flawed	DOOM	BOTCH
	Sound	FLIRT	GOOD ★

➤ 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.**

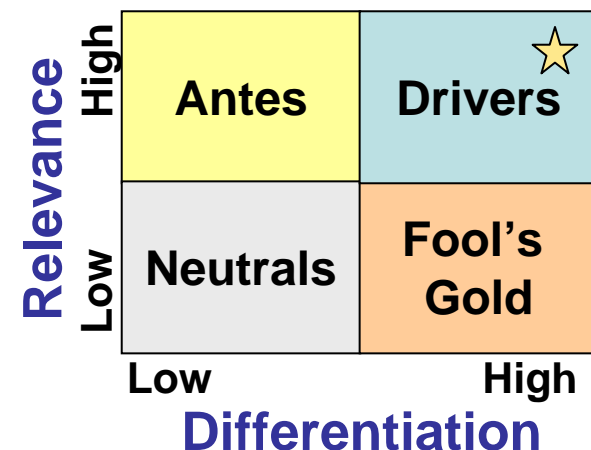
* Robert Cooper, *Winning at New Products*, Ch. 12

➤ 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



Portfolio management prevents the creative from trying to boil the ocean



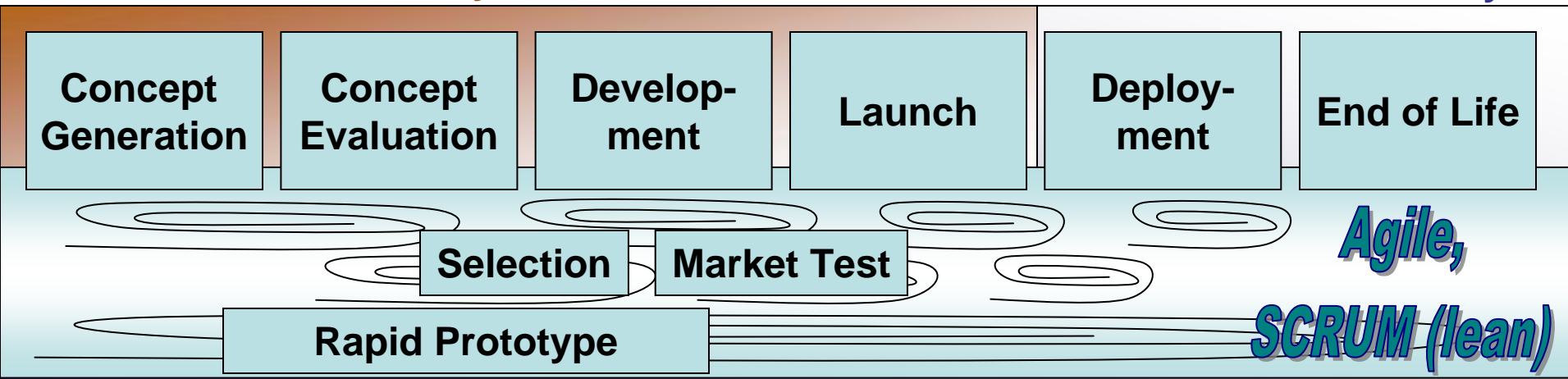
Process Balances Creativity and Focus


- Traditional innovation focused on bringing a product to market
 - ◆ “Thrown over the wall” to deployment (sales & support) after launch

Lean Product Development can improve cost and time to market

Traditional Innovation Cycle

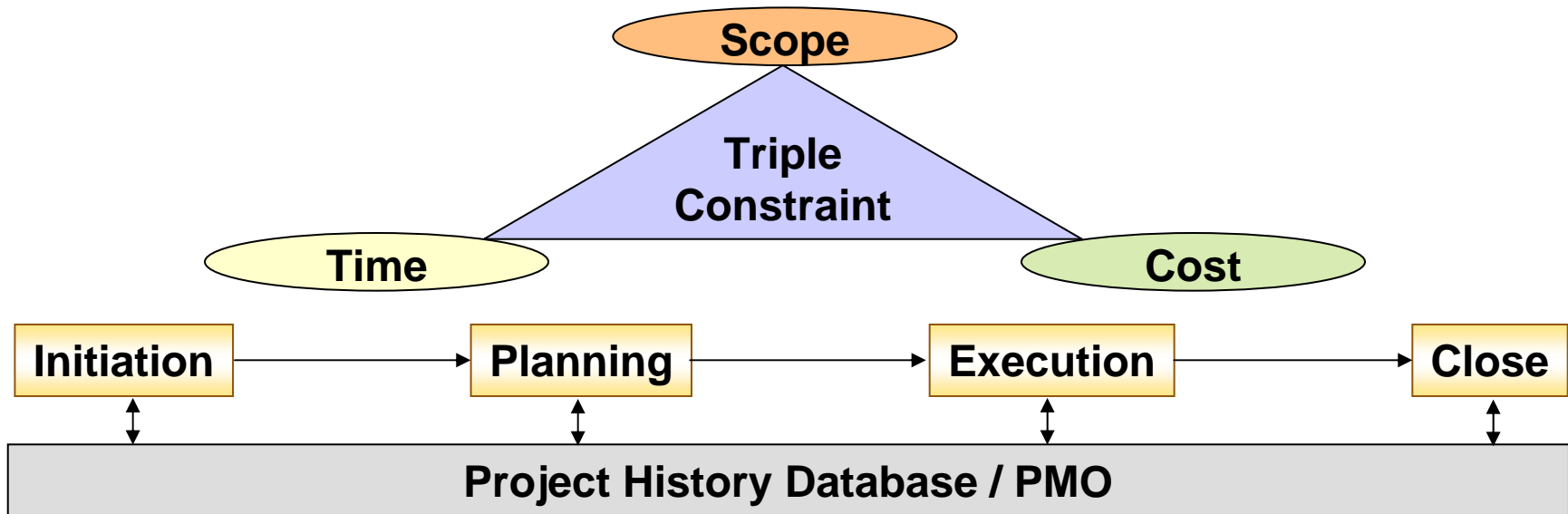
Modern Innovation Cycle



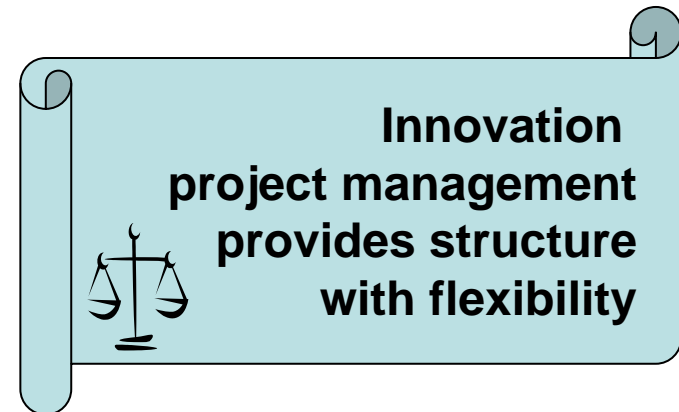
 **Process focuses the creative on value and facilitates cross-disciplinary integration**

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

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

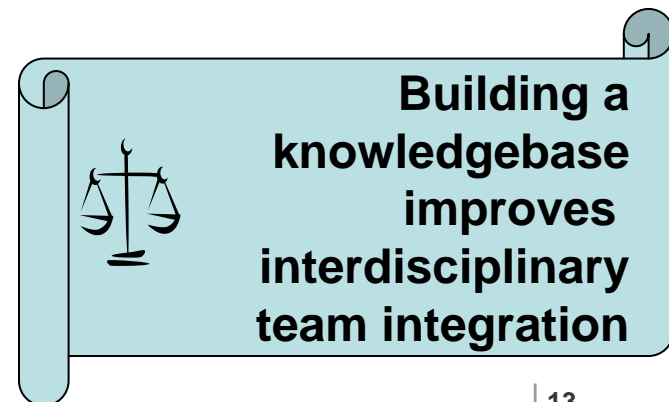


➤ Used throughout the product lifecycle

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

➤ Steps:

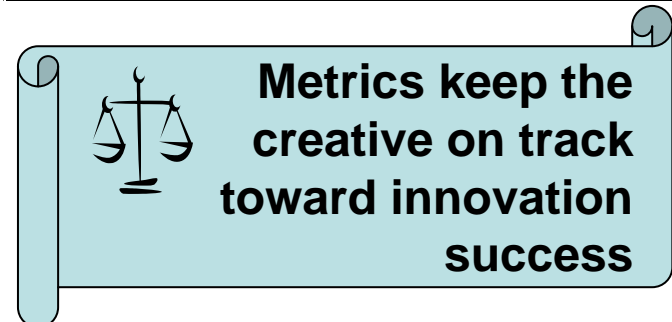
- ◆ Identify gaps
- ◆ Collect secondary research sources
 - › Internal and external data
- ◆ Identify remaining gaps
- ◆ Primary research



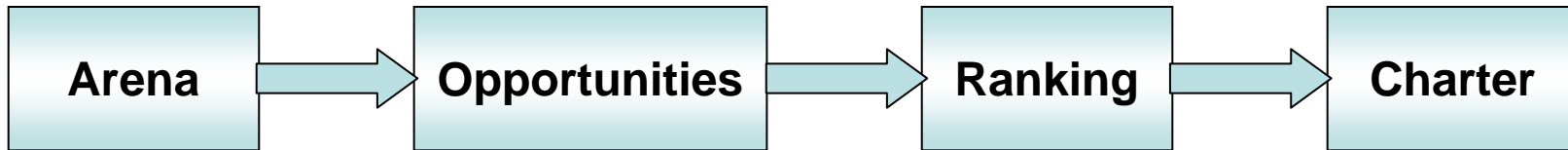
Metrics Balance Creativity and Focus

- **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

	Prospectors	Analyzers	Defenders	Reactors
Customer satisfaction	X			
Customer acceptance	X	X		
Revenue goals	X			
Customer number	X			
Product quality	X			
Perceived innovativeness	X			
Product performance	X			
Launch timeliness	X			
Product ROI	X	X		
Breakeven time	X	X		
Revenue growth		X	X	
Customer service		X	X	
Unit volume		X	X	
Market share			X	
Customer value		X	X	
Cost reduction		X	X	
Development time			X	
Resource cost			X	
Profit goals		X	X	
Margin goals		X	X	
Competitive advantage	X	X	X	X



Product Innovation Charter (PIC)



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

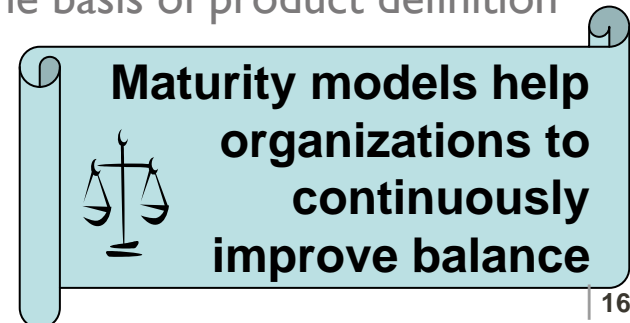
- Written agreement between functional units
- Critical elements: focus, goals, guidelines
 - ◆ Timing
 - ◆ Scope
 - ◆ Funding
 - ◆ Dated signatures



*Crawford, Merle C. and Anthony DiBenedetto. 2003. *New Products Management*, 7th Edition, Boston: Irwin/McGraw-Hill

Innovation Maturity Model

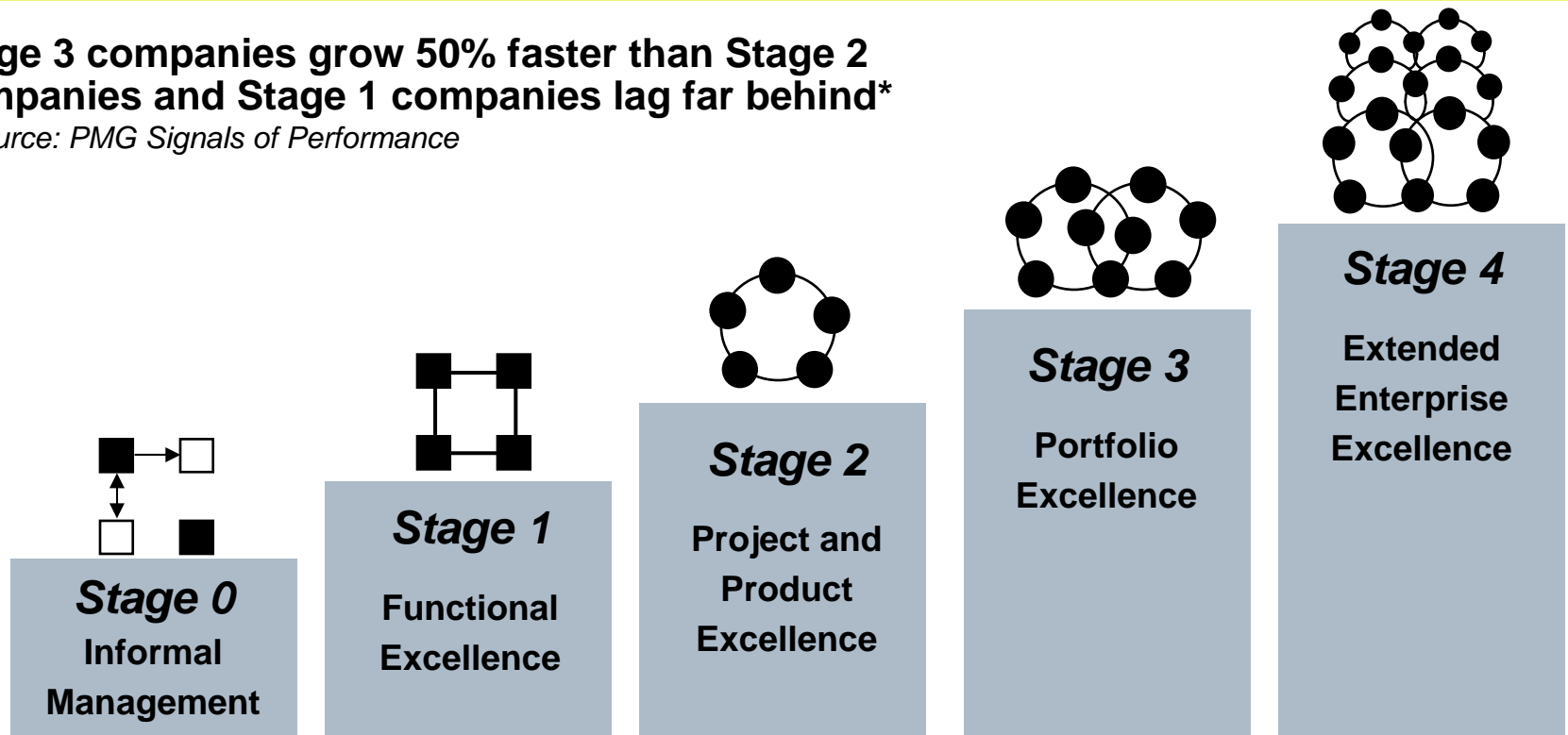
- **Strategy Maturity**
 - ◆ Mission & strategic plan define strategic arena for new opportunities, opportunity analysis drives strategic plan, and resources available in strategic buckets
- **Portfolio Management Maturity**
 - ◆ Formal, systematic process, with ranking, for balancing projects and resources 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



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*



Average Growth	8%	12%	19%	Insufficient data to quantify
Profit Advantage	35%	54%	67%	
TTM Index	2.0	1.0	0.8	

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Based on Performance Measurement Group Benchmarks



Best Practice for Innovation

PRTM Innovation Maturity Model | © 2007 PRTM Proprietary

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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

Creativity: Focus on the Customer

How can innovators balance creativity and discipline?

Focus on innovating to provide value to the customer!



- Please send any questions or comments on this presentation to SNIA: trackprodev@snia.org

**Many thanks to the following individuals
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- SNIA Education Committee

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