

MANAGEMENT ROUNDTABLE'S TENTH ANNUAL CONFERENCE ON
**Product Development Metrics:
Achieving the Full Value of R&D**

**Strategies, benchmarks, and breakthrough methods to
maximize return on investment and boost corporate growth**

> November 7–9, 2005 > Chicago

*Featuring important new insights and advice
from the foremost experts:*



Dr. Robert G. Cooper, world-renowned author
(*Winning at New Products*) and creator of the Stage-
Gate® model, *on how to inspire game-changing
innovation and long-term profitability*



Don Reinertsen, respected expert and author
(*Managing the Design Factory, Developing Products in
Half the Time*), *on applying “lean logic” to achieve peak
economic performance*



Bradford L. Goldense, Founder and CEO,
Goldense Group, Inc., and leading metrics authority,
*on emerging trends and measures for advanced
development and research*



Watts S. Humphrey, Founder, Software Process
Program, Software Engineering Institute (SEI),
*on methods and metrics for outsourced projects, software
development, and distributed teams in India*



Robert L. Schur, Senior Vice President, STATS, Inc.,
*on making quick accurate evaluations to satisfy the “win
now” appetite of fans and ownership*



CONFERENCE CHAIR: **Wayne Mackey**,
Principal, Product Development Consulting, Inc.,
who *will synthesize leading-edge practices into clear,
doable action steps*

**10 Years of
R&D Metrics
Leadership!**

Real-world “how-to’s” from:

WHIRLPOOL

HEWLETT-PACKARD

BRITISH TELECOM

MEDRAD

TELEDYNE ISCO

NOKIA NETWORKS

JOHNSON & JOHNSON

and more

ANNOUNCING THE FIRST
Annual Metrics MVP Awards

to recognize and honor industry
practitioners who have advanced the
state of the art and led by example
(see page 14).

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Product Development Metrics: Achieving the Full Value of R&D

> November 7–9, 2005 > Chicago

“CEOs are asking tough questions about their once-cloistered R&D operations: Why are so few hit products making it out of the labs into the market? How many of those pricey engineers are really creating game-changing products or technology breakthroughs?” – Business Week, 3/21/05

THESE QUESTIONS ARE INDEED TOUGH, BUT THE ANSWERS may be even tougher. Obsessed with time-to-market and short-term profits, companies have sacrificed key opportunities to innovate and develop true game-changers.

The heat is now on R&D to deliver, and performance measures must change with corporate priorities. Clearly we must go beyond cycle time, cost, and “percent of sales from new products” to a whole new understanding of innovation, capacity, productivity — and, most of all, R&D value.

This issue is so pivotal that Management Roundtable has made it the focus of its **Tenth Annual Conference on Product Development Metrics**, to be held **November 7-9, 2005** in **Chicago**.

Drawing on a decade’s worth of experience and shared learning, we are bringing together the best-of-the-best to explore the critical challenge confronting all of us: *how to achieve the full value of R&D — both now and for the long term.*

The purpose of this conference is to define, measure, and achieve return on R&D investment. By participating, you will come away with methods, metrics and guidelines to:

- Inspire innovation and encourage risk-taking (to create “game-changers”)
- Screen for opportunities and make smarter funding decisions
- Manage and allocate resources on the highest value activities
- Determine the true economic impact of outsourcing R&D
- Focus in on fewer, unified goals that achieve key corporate goals
- Measure and demonstrate R&D value-add

Most importantly, MRT’s **Tenth Annual Conference on Product Development Metrics: Achieving the Full Value of R&D** will provide direct answers to *your* CEO’s questions — along with solid plans to go forward.

6 key deliverables

Specifically you will receive:

Metrics and practices to align corporate and project level goals

Proven approaches to manage change and motivate staff – despite pressures, resistance and constraints

Specific measures used by industry to assess the value of R&D, evaluate business opportunities, weigh project funding and resource allocation decisions

Comparative practices and R&D metrics used by other companies

Opportunity for one-on-one discussion with leading experts and peers

A realistic, step-by-step action plan to apply and integrate new metrics and practices

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who should attend

This conference is highly recommended for VPs, directors and managers of:

- Product Development
- R&D
- Engineering
- Process Improvement
- Technology Development
- Advanced Concept Development
- New Business Development
- Strategy
- Finance

To jump-start joint planning and organizational alignment, it is strongly suggested that at least two members of your organization attend together; ideally at both the senior and project management level.

Special rates are offered for groups (see page 15).

distinguished faculty



Conference Chair: Wayne Mackey,
Principal, Product Development Consulting, Inc.

Wayne Mackey served as chair for the first two MRT Product Development Metrics Conferences and has advised and spoken at all of them. His expertise is grounded in over twenty years of hands-on management of large engineering, manufacturing, and procurement organizations. His management consulting is focused on product / service development, and he is especially effective in metrics, collaborative design, supply chain management and business strategy implementation.

Mr. Mackey has been a principal with Product Development Consulting, Inc., since 1997. Prior to joining PDC, he worked in industry for 20 years in high tech, aerospace and automotive fields. He is a natural change agent and leader, having counseled Fortune 500 companies, major universities (Stanford, MIT) and government agencies in product development, supply chain management, and rapidly implementing enterprise-wide change. Mr. Mackey earned a Bachelor of Science in electrical engineering and economics from Carnegie Mellon University in Pittsburgh, Pennsylvania and a Master of Science in engineering, from Loyola Marymount University in Los Angeles, California.

KEYNOTE SPEAKERS

Dr. Robert G. Cooper, author of *Winning at New Products*

Don Reinertsen, author of *Managing the Design Factory* and *Developing Products in Half the Time*

Bradford L. Goldense, Founder and CEO, Goldense Group, Inc.

Watts S. Humphrey, Founder, Software Process Program, Software Engineering Institute (SEI)

Robert L. Schur, Senior Vice President, STATS, Inc.

CASE STUDY PRESENTERS

Dr. Henry O. Marcy, Vice President, Corporate Innovation and Technology, Whirlpool

Donald M. DeLauder, Director Product Innovation and Advanced Development, MEDRAD, Inc.

Bill Foster, Director of Engineering, Teledyne Isco, Inc.

Bret Dodd, R&D Section Manager, Hewlett-Packard

Sterling Mortensen, R&D Section Manager, Hewlett-Packard

Hannu Kokko, Head of Product and Service Quality, Nokia Networks

Phil H. Davies, Head of Organization Design, British Telecomm

Anthony Lemus, Executive Director, Business Process Development, Medical Devices and Diagnostics Business Group, Six Sigma Master Black Belt, Johnson & Johnson

conference agenda

MANAGEMENT ROUNDTABLE'S TENTH ANNUAL CONFERENCE ON Product Development Metrics: Achieving the Full Value of R&D

Monday, November 7, 2005 / PRE-CONFERENCE WORKSHOPS

- 7:30 – 8:30 Registration and Continental Breakfast
- 8:30 – 4:30 *Strategic Enterprise Metrics for PD Transformation*, Mark Thut and Alex Blanter, PRTM
- 8:30 – 4:30 *Product Development Metrics Portfolios*, Bradford L. Goldense, Goldense Group, Inc.

Tuesday, November 8, 2005 / CONFERENCE DAY 1

- 7:00 – 8:00 Registration and Continental Breakfast
- 8:00 – 8:15 **OPENING REMARKS:** Wayne Mackey, Product Development Consulting, Inc., Conference Chair
- 8:15 – 9:30 **KEYNOTE:** *New Metrics for Productivity and Portfolio Profitability—Why Time and Cost Reduction Don't Work*,
Dr. Robert G. Cooper, Product Development Institute & McMaster University
- 9:30 – 10:15 **CASE STUDY:** Dr. Henry O. Marcy, **Whirlpool**
- 10:15 – 10:30 Refreshment Break
- 10:30 – 11:15 **CASE STUDY:** Donald M. DeLauder, **MEDRAD, Inc.**
- 11:15 – 12:15 **KEYNOTE:** *Team Software Process (TSP)—Successful Strategies and Metrics for Distributed Software Development*, **Watts S. Humphrey**, Software Engineering Institute, Carnegie Mellon University
- 12:15 – 1:30 MVP Awards Luncheon
- 1:30 – 2:30 **KEYNOTE:** *The Explosion of Metrics and Quantitative Analysis in Professional Sports*,
Robert L. Schur, STATS, Inc.
- 2:30 – 3:15 **TRACK 1. CASE STUDY:** Bill Foster, **Teledyne Isco, Inc.**
TRACK 2. CASE STUDY: Bret Dodd and Sterling Mortensen, **Hewlett-Packard**
- 3:15 – 3:30 Refreshment Break
- 3:30 – 4:15 **TRACK 1. CASE STUDY:** Phil H. Davies, **British Telecom**
TRACK 2. CASE STUDY: **Rohm & Haas** (invited)
- 4:15 – 5:30 **Application & Integration Session:** Facilitator: Wayne Mackey, Conference Chair
- 5:45 – 7:00 Networking Reception — Meet the MVPs

Wednesday, November 9, 2005 / CONFERENCE DAY 2

- 7:00 – 8:00 **BREAKFAST BUFFET:** *From R&D to Product Success: The Need for an NPDI Process*, Bill Boswell, UGS Corp.
- 8:00 – 8:15 **OPENING REMARKS:** Wayne Mackey, Product Development Consulting, Inc., Conference Chair
- 8:15 – 9:30 **KEYNOTE:** *The Future of Product Development Metrics*, **Bradford L. Goldense**, Goldense Group, Inc.
- 9:30 – 10:15 **CASE STUDY:** Hannu Kokko, **Nokia Networks**
- 10:15 – 10:30 Refreshment Break
- 10:30 – 12:00 **KEYNOTE:** *Applying Lean Logic to Product Development Metrics*, **Don Reinertsen**, Reinertsen & Associates
- 12:00 – 1:15 Lunch
- 1:15 – 2:00 **CASE STUDY:** Anthony Lemus, **Johnson & Johnson**
- 2:00 – 3:00 **Application & Integration Session:** Facilitator: Wayne Mackey, Conference Chair
- 3:00 – 3:15 **CONFERENCE WRAP-UP:** Wayne Mackey, Product Development Consulting, Inc., Conference Chair
- 3:15 Conference concludes

summary of benefits

The past decade has taught us much — for example, that project, product and portfolio metrics must be linked to corporate metrics, that you get what you measure, and that various tools, dashboards and scorecards can help. We have also learned what doesn't work, especially in terms of the long range. This tenth annual conference will weave together knowledge gained from experience with new insights for the future.

By participating in this landmark event, you will learn:

- **How to identify opportunities early and measure the impact on growth of ongoing businesses**
- **How to determine which opportunities to pursue**
- **How to deliver against focused objectives; to achieve both shareholder value and long-term competitive advantage**
- **How to realign your organizational structure and resource management system**
- **How to manage change, how to deal with resistance and inertia**
- **Financial models and cost structures to enable the rapid creation of value from new opportunities**
- **Which performance metrics best capture the long-term potential for growth**
- **How to develop metrics that drive innovation and overall R&D performance**
- **Effective approaches for implementing a top-down *and* bottom-up strategy**
- **How to maintain the delicate balance between innovation and cost control**
- **How to measure resource capacity and resource utilization to make sure key resources are available when needed**
- **How to determine whether and when it makes economic sense to outsource or not**
- **How to evolve your metrics over time**
- **How your colleagues at other companies measure and justify R&D value-added**

You will also learn about companies' experience over time with the Balanced Scorecard, R&D Effectiveness Index, Technology Value Program (TVP), and more. Which approaches have stood the test of time? Which have *not* achieved the best results? What homegrown methods have emerged instead? Whether you have years of metrics experience under your belt or are just starting, you will have the opportunity to discuss your own metrics challenges with other practitioners from a cross-section of industries, from different corporate cultures and company sizes.

“Every session generated one or two ideas to bring back to my organization.”

Nick Casella, Group Marketing Manager, Thomas & Betts

New Metrics for Productivity and Portfolio Profitability: Why Time and Cost Reduction Don't Work



Dr. Robert G. Cooper
President, Product Development Institute and Professor of Marketing, McMaster University

Recent studies into new product performance contain a number of surprises. Most shocking is that the impact of NPD on companies' sales and profits is down! And many companies are struggling to achieve their annual NPD sales and profit goals. How has this happened and why?

In his keynote address, Dr. Robert Cooper looks at the hard facts revealing why NPD performance is off. While companies have successfully reduced time-to-market and gained short-term profitability, they have also done severe damage to their development portfolios and portfolio profitability. Cooper will outline several solutions to remedy underperforming NPD efforts, solutions that are right for many companies.

The key is to focus on productivity in NPD, not simply on cutting time and costs. These recommendations include:

- Develop a product innovation strategy for your business and let that strategy guide resource allocation decisions
- Change performance metrics—focus less on short-term financial metrics and more on metrics that capture the long-term potential for growth of the business
- Implement a portfolio management system—and incorporate the use of strategic buckets to rebalance your development portfolio
- Emphasize speed less and profitability more
- Feed the pipeline with more game-changer ideas

Dr. Robert G. Cooper, author of best-selling books *Winning at New Products* and *Portfolio Management for New Products*, has published more than 95 articles on new products, R&D and innovation management. Cooper is Professor of Industrial Marketing and Technology Management at McMaster University (Ontario, Canada) as well as founder and president of the Product Development Institute. Recognized as a world expert in the field of new product development, and founder of the Stage-Gate® process, Cooper's methods have been introduced globally by many companies including P&G, 3M, ABB, AT&T, Carlsberg, Caterpillar, Dow Chemical, Dupont, Exxon Chemicals, HP, ITT, Kraft Foods, Kennametal, Lego, Pfizer, VISA, and many others.

The Future of Product Development Metrics: Corporations, Projects and Functions



Bradford L. Goldense
Founder and CEO, Goldense Group, Inc.

There are some clear trends emerging in the evolution of metrics for product development: project metrics lead the maturity curve; there are evidences of common standardized sets of metrics; corporation metrics and functional metrics are lagging in maturity, but will start to catch up in the next few years; metrics experimentation is increasing; the search is on for the few metrics with the highest correlation to successful outcomes, and for those that may create competitive advantage; metrics expansion is starting. The range of metrics that companies are attempting to master now clearly includes advanced development, research, and important supporting processes such as product portfolio, project portfolio, technology portfolio and risk assessment. Over the last ten years, the evolution of this body of knowledge appears to be tracking closely to the way industry metrics for logistics and operations evolved. Mr. Goldense will share his insights and projections on expected industry activities in these areas for the next five years, and for long term maturity.

Bradford L. Goldense, founder and CEO of Goldense Group, Inc., has been assisting engineering and manufacturing companies for the past twenty years in assessing, developing, and implementing competitive business changes. Mr. Goldense has consulted to over 75 Fortune 1000 companies and has done work in well over 250 manufacturing plants. He specializes in several areas including: strategic planning, reengineering, product development, manufacturing management, and engineering/manufacturing design/information systems. For the past five years, Mr. Goldense has concentrated his efforts in the concurrent engineering and engineering automation areas to reduce cycle times product development and manufacturing functions.

“[A] tremendous conference... excellent speakers and a lot of valuable information and contacts.”

James Snyder, Medtronic, Inc.

Team Software Process (TSP): Successful Strategies and Metrics for Distributed Software Development



Watts S. Humphrey
*Founder, The Software Engineering
Institute, Carnegie Mellon University*

This talk addresses an increasingly common problem for U.S. industry: managing off-shore software development. Since the requirements, design, and final testing work for these projects must often be done in the U.S., these projects often cross multiple time zones and involve widely distributed development groups. Successful strategies for managing these challenges must address distributed team communication, project coordination, project control, and multi-cultural team-working. Since off-shore development groups have many of the same software management problems that are common to U.S. software and hardware groups, subcontracting entire projects is rarely successful. A newer and more promising approach uses the Team Software Process (TSP) method developed by the Software Engineering Institute.

KEY TAKE-AWAYS:

- Key strategies and metrics to effectively manage distributed development efforts
- Methods for applying the Team Software Process—how to get started, what to watch out for and practical tips for successful implementation and execution
- An overview of the typical results being achieved by U.S. and Indian software groups

Watts S. Humphrey founded the Software Process Program of the Software Engineering Institute (SEI) at Carnegie Mellon University. He is a Fellow of the Institute and is a research scientist on its staff. From 1959 to 1986 he was associated with IBM Corporation where he was director of programming. His publications include numerous technical papers and nine books. His two most recent books are *PSP: A Self-Improvement Process for Software Engineers* (2005) and *Winning with Software: An Executive Strategy* (2001). Mr. Humphrey holds five U.S. Patents. He received a bachelor's degree in physics from the University of Chicago, a master's degree in physics from the Illinois Institute of Technology, and a master's degree in business administration from the University of Chicago.

The Explosion of Metrics and Quantitative Analysis in Professional Sports



Robert L. Schur
*Senior Vice President,
STATS, Inc.*

The innovative use of statistics and data analysis is rapidly becoming standard operating procedure within the strategic arsenal of professional sports teams. In the face of million dollar salaries, long-term contracts, salary caps and a “win now” appetite from fans and ownership—it is more important than ever for professional sports executives to be on target in their decision making. STATS, Inc. provides teams with the information needed to make quick, accurate evaluations about both their own players and opponents alike.

While statistical analysis dates back many decades in the pro ranks, the trend is rapidly advancing in Major League Baseball, with National Football League and National Basketball Association franchises not far behind. More and more, objective information is used by general managers, scouts, coaches and players to determine the most direct path to victory. Player and team trends, tendencies and match ups as well game plans and in-game decisions are all rooted in the thorough dissection of data and statistics. Mr. Schur will discuss the unique, esoteric data collected and disseminated by STATS, Inc. and the various ways this in-depth information is used in professional sports today.

Robert L. Schur has been with STATS, Inc., since 2000 and currently serves as senior vice president of the company, in charge of STATS's Commercial Unit and the Data Collection Business Unit as well as legal oversight for the company. Under Mr. Schur's direction, STATS has consistently increased profitability and efficiency throughout the company, and he has helped build and maximize the equity value of the organization. Instrumental in the launch of the STATS PASS™ research tool and the expansion of STATS X-INFO™, Mr. Schur has guided his teams to maximize technology in serving and providing cutting edge products to the STATS customer base. Schur's focus on expanding customer relationships has rounded out his successful tenure at STATS.

Applying Lean Logic to Product Development Metrics



Don Reinertsen

Reinertsen & Associates,
Author of *Managing the Design Factory* and Co-author of *Developing Products in Half the Time*

When manufacturing shifted to lean methods its metrics underwent a striking transformation. It discovered the danger of high capacity utilization, the true cost of queues, and the damage caused by large batch sizes. It substituted the agility of “pull” for the minutely detailed schedules of MRP systems. Product development has yet to make this transition.

This presentation will explain:

- Why queue size is a more effective metric than cycle time.
- How focusing on conformance to plan undermines economic performance.
- How to measure capacity utilization when neither capacity nor demand can be estimated accurately.
- Why simple decentralized controls outperform centralized metrics.
- Why eliminating all variability eliminates value-added.

Don Reinertsen is president of Reinertsen & Associates, specializing in the management of the product development process. Before forming his own firm, he consulted at McKinsey & Co., an international management consulting firm, and was senior vice president of operations at Zimmerman Holdings, a private diversified manufacturing company. His contributions in the field of product development have been recognized internationally. His latest book, *Managing the Design Factory*, is recognized as a powerful and thoughtful application of manufacturing thinking to product development. Don is also co-author of *Developing Products in Half the Time*. He is particularly noted for bringing fresh perspectives and quantitative rigor to development process management.

“I have set up three meetings at work to share this information — it’s tangible and actionable.”

Leslie Kulis, Armstrong World Industries

top 6 metrics practices

The following six practices, excerpted from Knowledge Roundtable’s (www.knowledgeroundtable.com) research and interviews with top industry practitioners, exemplify approaches learned from Management Roundtable conferences over the years. These practices will be discussed at Metrics ‘05 in light of new and emerging findings.

LEADING PRACTICE #1 – Metrics are created to drive changes in behavior; focus on behavior not on metrics.

LEADING PRACTICE #2 – No single set of metrics fits every business. Tailor project metrics strategy to the project at hand and the business sponsoring it. A custom metrics strategy defines objectives, measures and targets; it establishes criteria for metrics selection; and then it focuses on the most effective implementation.

LEADING PRACTICE #3 – Those who do the measuring should analyze and act on the data; a metrics dashboard, created by the team and tested with senior management for alignment to corporate goals and cross-team learning, can help.

LEADING PRACTICE #4 – To measure the linkage between overall corporate strategy and R&D check the following metric: “Percent of R&D Metrics in Corporate Set.”

LEADING PRACTICE #5 – Tying compensation to key metrics can help link functional work with corporate goals and lead to continuous improvement. Use with caution — you will get what you measure.

LEADING PRACTICE #6 – Metrics may be used to clarify market requirements by converting subjective language into objective data.

For more information on Knowledge Roundtable or to receive a FREE copy of the “The Guide to Metrics Leading Practices,” complete with discussion and examples, check the box on page 15, sign up at www.MANAGEMENTROUNDTABLE.com, or contact Jackie Cooper at jackie@roundtable.com.

case studies

Embedding Innovation as a Core Competency at Whirlpool

Dr. Henry O. Marcy, *Vice President, Corporate Innovation and Technology*, **Whirlpool Corporation**

In 2000, Whirlpool Corporation began a journey to embed innovation as one of its primary core competencies. Today, its innovation strategy is both a top-down and bottom-up initiative; innovation is an operational requirement with executive compensation explicitly tied to innovation revenue and earnings. Comprehensive innovation training programs have resulted in certified “I-Mentors” and “I-Consultants” whose roles are to make innovation a part of every employee’s job. The innovation pipeline from early opportunity identification through the stage-gate development process and into the growth of ongoing businesses is explicitly tracked and reported on from both product and brand perspectives in terms of projected value and actual results.

Specifically, Whirlpool defines innovation as how a new product or concept measures up against the following three criteria:

1. Is it a new and compelling solution from the consumer’s point of view? (Measured in terms of rate of growth.)
2. Can it be sustained in the competitive environment? (Measured in terms of sustainable presence and pricing in the market.)
3. Can it deliver differentiated financial results that are substantially better than average?

Dr. Marcy will discuss the actions and key metrics around these tenets that Whirlpool developed to determine which new business opportunities to pursue and increase overall returns on R&D. He will also examine current challenges to developing behaviors and tools that will drive higher value solutions around the financial models and cost structures that shape existing businesses as well as enable the rapid creation of value from new business opportunities.

KEY TAKE-AWAYS:

- Effective strategies and approaches for implementing a top-down and bottom-up innovation strategy
- Process and metrics for early opportunity identification and how to measure the impact on the growth of ongoing businesses
- How to create your own organizations’ definition of innovation and develop metrics to drive overall R&D performance

Metrics to Drive Successful Innovation Portfolio Decisions

Donald M. DeLauder, *Director, Product Innovation and Advanced Development*, **MEDRAD, Inc.**

MEDRAD is a global leader in the field of diagnostic image enhancement, having grown at a compound annual rate of over 15% for almost 20 years. Its success has led to a market leadership position in each of the clinical modalities in which it operates (CT, MR, angiography). How can the company continue to grow given that it already commands significant market share in most or all of its business areas? What decisions should shape the portfolio of innovative opportunities? What mechanism should be used to help decide between investing in current business areas versus the exploration of opportunities which are new to the company?

Mr. DeLauder will explore these questions in a case study format. In particular, he’ll review what MEDRAD is doing now to maintain and grow its market leadership position. Along the way, Mr. DeLauder will share many of MEDRAD’s insights into the issues associated with building a portfolio of new opportunities, structuring for innovation, and establishing methods that lead to creative new ideas that connect with the strategic requirements of the business.

“I left with knowledge that I can use immediately”

Michael Nichols,
University of Missouri

“The conference provided a good overview of metrics used in the commercialization process and fortified the need for a gated process”

Tom Rizzo,
Lord Corporation

case studies

Implementing New Product Development Metrics to Drive Growth and Profitability — A Small Company's Perspective

Bill Foster, *Director of Engineering,*
Teledyne Isco, Inc.

Teledyne Isco Inc. (formally Isco Inc. of Lincoln, NE-USA and founded in 1958) was plagued by stagnated growth in its two divisions in 1995. The company decided to merge the two divisions and overhaul its product development process. The result of this effort was a company that now had the vigor of a start-up organization combined with senior management check points within each major product line of the company. An economic feasibility tool was developed and used to select new projects from the product pipeline. Product development metrics were developed and implemented to measure the new product's value and the product development process's effectiveness over time. Mr. Foster will present the impact of the last eight years of product development metrics including key successes and lessons learned.

KEY TAKE-AWAYS:

- Effective strategies to engage more than Engineering in your product development process
- Multiple approaches for building excitement and ownership for NPD throughout the organization
- Action steps for implementing product development process audits for continuous improvements

Focusing on the Right Things—Efforts, Resources and Rewards

Phil H. Davies, *Head of Organization Design,*
British Telecom

In this session you will learn how BT's IT Development and Operations division has undergone a major transformation in the year leading up to this conference. According to Phil Davies, "we have re-oriented the organisation to facilitate a much tighter focus on the things most important to BT's future and concurrently released people to work on the new business we're winning in the Digital Networked Economy. Organisationally we've brought our delivery programmes much closer to our customer facing businesses. We have changed rhythm to drive for a more

regular impartation of value into BT and its customers, installed a review system to measure that value, and aligned performance and reward systems. For us this is a time of driving for growth without losing sight of cost control. It means distilling, concentrating, focusing our efforts and resources on the right things."

Although their scorecard has not changed significantly, it is now concentrated on delivery against fewer but more focused objectives. During this session, Phil will discuss aspects of the organizational re-alignment, the measurement system that supports it, and the new approach to resource management they are using.

Key Metrics to Foster an Iterative, Risk-Taking R&D Environment

Bret Dodd, *R&D Section Manager, and*
Sterling Mortensen, *R&D Section Manager,*
Hewlett-Packard

Increasing innovation requires approaches that help you and your employees think outside the box that you are trapped in. Corporations are systems and systems hide problems, bottlenecks, and inefficiencies. Brett and Sterling will examine some practical examples of metrics that can make the invisible visible. Specifically, they will discuss:

- Metrics that identify bottlenecks
- Metrics that can help locate and eliminate sources of waste
- Metrics that HP is using to create an R&D environment that allows for the iteration and risk-taking necessary for new product development

R&D Metrics Across Projects: A Portfolio Approach

Hannu Kokko, *Head of Product and Service Quality,*
Nokia Networks

At Nokia, an R&D metrics portfolio is used to align corporate and project level goals. Resource allocation, quality, financial performance and productivity are measured across projects and then rolled up to the product and business level. At the project level, the metrics portfolio accommodates different project life-cycle models, working modes and project phases to give visibility and reduce uncertainty.

In this presentation Mr. Kokko will discuss which specific metrics have proven most effective over time, what gathering approaches work best, and how to cascade metrics throughout the organization. He will discuss critical success factors as well as pitfalls to avoid.

KEY TAKE-AWAYS:

- How to develop and implement metrics for better resource utilization, financial performance and R&D productivity
- How to build metrics at different levels (project, program, corporate) to align with strategy
- How metrics can provide visibility and reduce uncertainty at the project level

New Product Development (NPD) with Change Management Metrics

Anthony Lemus, *Executive Director, Business Process Development, Medical Devices & Diagnostics Business Group, Six Sigma Master Black Belt, Johnson & Johnson*

Change management is often underestimated when creating and improving a product development process. Creating a long-term benefit vision of the change and additionally having it accepted by the business organization requires short-term feedback metrics to the skeptics that change is better. Unfortunately, new product development life cycle time frames sometimes do not provide immediate metric outcomes quickly enough to satisfy the people barriers and to eliminate disruptions in organizational alignment. Not addressing this challenge can create deployment confusion, impact product approval committee (PAC) decisions, create failures in product development software integration, and disrupt product team communication effectiveness.

In this presentation, key metrics will be presented which facilitate NPD change management and the overcoming of execution barriers. Metrics used in NPD change management will be discussed from three perspectives: commonality, process improvement psychology, and “lessons learned” monitoring. Some techniques optimizing the use of metrics will also be discussed which include Malcolm Gladwells’ theories on epidemics, and competency models enabling metric execution. Actual business examples will be provided to demonstrate typical issues, and to high-light solution results using the presented techniques.

about MRT



The Management Roundtable is the leading knowledge and networking resource for product developers. Practitioner-oriented and unbiased, our focus is on providing actionable information about new innovations, processes, tools, and technologies that enable faster time to market, increased profitability, and overall competitive advantage.

Founded in 1980, Management Roundtable publishes newsletters, hosts a variety of specialized conferences, workshops, and audio-sessions and conducts onsite training. Its online knowledge and networking service, Knowledge Roundtable, was launched in 2004 to advance product development, innovation and collaboration. This service offers continuous, unlimited access to competitive insights and facilitates introductions among industry practitioners for benchmarking and partnering.

about Knowledge Roundtable

Management Roundtable's online knowledge and networking service



Would you like to know what others are doing in product development and what's working? Looking for help with a specific challenge? Seeking to expand and share learning within your group—or compare notes with peers at other

companies? To find out how Knowledge Roundtable (www.knowledgeroundtable.com) can benefit you and your organization, contact Jackie Cooper at 781-891-8080, ext 211, or email jackie@roundtable.com.

PARTIAL LIST OF PAST PARTICIPANTS

| | | |
|--------------------------------|--------------------------------|-------------------------------|
| 3M Company | Genentech | Nissan Research & Development |
| Abbott Laboratories | General Dynamics | Nokia Corporation |
| Adobe | General Mills | Northrup Grumman |
| Air Products & Chemicals, Inc. | General Motors Defense | Novo Nordisk |
| Alcoa Automotive Engineering | GlaxoSmithKline | Owens Corning |
| AlliedSignal | GM Powertrain | Parker Hannifin GESD |
| Allstate Insurance | Gojo Industries, Inc. | Pfizer |
| ALZA Corporation | Goodrich Corporation | Pharmacia |
| American Power Conversion | Griffith Labs | Physio-Control Corporation |
| Amgen | H.J. Heinz Company | Pitney Bowes, Inc. |
| Applied Materials | Halliburton Energy Services | Procter and Gamble |
| AstraZeneca R&D Lund | Hamilton Sundstrand | Qualcomm |
| Avery Dennison | Harley-Davidson Motor Company | Radio Shack Corporation |
| BAE Systems, IEWS | Hewlett-Packard | Raytheon Electronic Systems |
| Bank of America | Hill-Rom | Reichhold Chemicals |
| Baxter Healthcare Corporation | Honeywell, Inc. | Rheem Manufacturing Company |
| Bayer Pharmaceuticals | IBM Corporation | Roche Diagnostics GMBH |
| Beckman Coulter, Inc. | Intel | Rockwell Automation |
| Becton Dickinson | John Deere & Company | Rohm and Haas Company |
| Boeing | Johnson & Johnson | S.C. Johnson Polymer |
| Bose Corporation | Johnson Polymer | Schlumberger |
| Boston Scientific | Keithley Instruments | Shell Oil Company |
| Bristol Myers Squibb | Kellogg Company | Shure Inc |
| Cargill | Kimberly Clark Corporation | Siemens |
| Caterpillar, Inc. | Kohler Co | Sprint |
| Chrysler Corporation | Kraft Foods | State Farm Insurance |
| Cisco Systems | Kyocera Wireless | Steelcase |
| Coca-Cola Corporation | Lexis-Nexis | Stryker Medical |
| Corning, Inc. | Lockheed Martin, Inc. | Sun Microsystems |
| Dade Behring | LSI Logic | Sundstrand |
| Daimler Chrysler | Lucent Technologies | Texas Instruments |
| Delphi Automotive | Marvin Windows & Doors | The Scotts Company |
| Department of Defense (OSD) | Master Lock | The Wiremold Company |
| Dow Chemical | MCI WorldCom Advanced Networks | ThermoElectron |
| Draeger Medical Systems | MeadWestvaco | Timken Corporation |
| Dupont | Medrad, Inc. | Unisys Corporation |
| Eastman Kodak Company | Medtronic, Inc. | United Defense LP |
| Eli Lilly & Company | Mercury Computer Systems, Inc. | United Parcel Service |
| EMC Corporation | Moen Incorporated | Visteon |
| Ethicon Endo-Surgery, Inc. | Motorola, Inc. | Warner-Lambert |
| ExxonMobil | Nabisco | Westinghouse |
| Ford Motor Company | National Semiconductor | Westvaco |
| GE Aircraft Engines | Nestle Frozen Foods Co. | Whirlpool Corporation |
| GELcore LLC | New Balance Athletic Shoe | Zoll Medical Corporation |

Strategic Enterprise Metrics for PD Transformation

Mark Thut, Director, and **Alex Blanter**, Principal, PRTM

Pre-conference workshops provide an excellent in-depth foundation for the rest of the conference. While optional, these sessions are strongly recommended. Both are full-day sessions; taught by experts with deep NPD knowledge, and suitable for all levels of experience. Workshop A examines R&D and innovation metrics across the extended global enterprise; Workshop B provides you with a top-to-bottom portfolio of metrics.

The pace of globalization continues to accelerate, and it is transforming the way companies manage their product development operations. Product development is no longer confined to centrally located staffs in R&D or design centers. Product development now routinely involves outsourcing, collaboration, alliances and cross-business unit integration, across distributed groups, often times in distance places like India and China. The winners of tomorrow won't be defined by their own innovation productivity, but by the innovation productivity of their entire development chain. Similarly, the new paradigm for measuring PD success has expanded from a business unit-centric model to include the entire development enterprise.

This workshop lays out a top-down approach to measuring and managing product development and innovation performance across the development chain. We start from the CEO's perspective and build a framework for valuing and aligning development investment (including investment in process improvement) with global business priorities.

This workshop is divided into six modules:

1. **Extended Enterprise Innovation Metrics:** What CEOs want to see measured
2. **Getting Your Own House in Order First:** Cross BU commonality to drive corporate synergy
3. **Metrics for the Globally Distributed Development Chain:** Harmonizing metrics across development partners
4. **Driving Shareholder Value:** Strategies for improving innovation productivity across the development chain
5. **Implementation Strategies to Achieve Transformation:** Aligning metrics with corporate priorities
6. **Example from Industry:** Example from global consumer products company

The workshop will entail a high degree of interaction including group exercises, roundtable discussions, and individual participation. Workshop participants will have an opportunity to use a capability maturity self-assessment and metric scorecard that can be used to benchmark performance and gauge maturity of their own businesses.

Mark Thut, Atlantic region director, and **Alex Blanter**, principal, are leading practitioners at PRTM's Product And Cycle-time Excellence® (PACE®) practice. Mr. Thut has over 20 years of experience in operations and business management with expertise in the design and implementation of innovative management practices and capabilities. Mr. Blanter's expertise lies in working with companies to better understand the needs of their customers and translate those needs into winning product designs.

Product Development Metrics Portfolios

Bradford L. Goldense, CEO and Founder, Goldense Group, Inc.

Product development metrics are now numerous. Spending, revenue, profit, return on innovation, launch rate, productivity, and others measure overall corporate-level results. Projects measure time-to-market, time-to-profit, BET, slip rate, target unit cost and price and profit accuracy, volume accuracy, and other parameters. Products in development get measured on requirements and/or specification changes, first-pass success, number of builds, change orders, tests failed, and a host of lower level measures. Functions measure training levels, competency, output, budget accuracy, and more. And there is an emerging set of portfolio measures for products, projects, and technologies and their related intellectual property measures.

If you are knee-deep in metrics complexity, or searching for the right metrics for your organization, this “everything-on-the-table” workshop offers a method to sort through all the chaos and determine a “right set of metrics” for R&D for your organization. This set of metrics will be suitable for measuring R&D as a whole by the company CEO and VP of R&D and will resonate throughout the organization. The Linked Metrics Portfolio method creates a scorecard of twenty something metrics that provide for measurement of: the R&D investment as a whole, the individual project investments (and their resultant new products), functional expertise and contribution, and improvement projects undertaken by the organization.

By participating you will:

- Learn to distinguish basic categories of metrics
- Learn how to select lower level metrics that make the most sense to roll-up to the top of R&D
- Learn how to construct a portfolio of metrics that links above to corporate and below to operations
- Understand why it takes more than 2-5 metrics to measure R&D
- Observe how R&D organizations with different strategies will select different metrics
- Complete the workshop with a draft set of metrics in hand to take back to your company

“One of the most knowledgeable on engineering metrics/measurement systems that I have come across. A visionary in this important field.”

Joe Kashuba,
Manager Business Planning,
GM Powertrain

Through lecture, facilitated Q&A and workgroup sessions, attendees will walk away from this sessions with the ability to create a set of metrics measuring corporate-level overall results, projects and products, functions, and improvement projects in a way that spans top to bottom of their R&D organization when it makes sense to do so.

Brad Goldense is founder and CEO of Goldense Group, Inc. (GGI) and has consulted to over 150 of the Fortune 1000 and has worked on productivity improvement and automation projects in over 400 manufacturing locations. Brad holds a BS in civil engineering from Brown University and an MBA in cost accounting and operations from Cornell University. He is a certified New Product Development Professional by the PDMA, a certified manufacturing engineer by the SME, a certified computer professional by the ICCP, is certified in production and inventory management by the APICS, and is worldwide president of the Society of Concurrent Product Development (SCPD).

BREAKFAST SESSION

WEDNESDAY
7:00 – 8:00 AM

From R&D to Product Success: The Need for an NPDI Process

Bill Boswell, Senior Director,
UGS Corp.

The future value of any company is dependant on the successful launch of new innovative products and services. History indicates that by 2010 products that represent almost 75% of revenues today will be obsolete. Research shows that 86% of new product ideas and R&D results never make it to market, and of those that do 50–70% fail. Generating ideas is not the only issue. Executing on them is.

R&D is a key element of the NPDI process. Capturing ideas and forging them into the right products and services brought to market sounds simple enough, but the business alignment needed to achieve this is a significant challenge. From in-bound marketing business development, through R&D, design and manufacture, on to sales and marketing and back again, the different groups involved in turning an idea into a successful product must work as a synchronized team.

This session will discuss the challenges faced by companies in their efforts to bring innovative products and services to market and illustrate where companies have increased product success rates through NPDI processes.

SPONSORED BY:



First Annual Product Development and R&D Metrics MVP Awards

In keeping with our focus on achieving R&D value, Management Roundtable believes it is more crucial than ever to recognize the value already contributed by practitioners. While this conference will provide methods, metrics and models, the greatest impact ultimately comes from the people who implement them.

We therefore are proud to establish the First Annual **Product Development and R&D Metrics MVP Awards** to recognize those who have demonstrated leadership and contributed to the state of the art. The awards are expressly for industry practitioners who have implemented new methods, improved processes, achieved results and then openly shared their knowledge with others. Winners come from all industries, at all levels of the organization—not necessarily super-stars, but clearly MVPs.

Winners are selected by Management Roundtable based on recommendations from peers, industry experts and our own observation of performance over the years. We are pleased to honor these dedicated and talented individuals at a special luncheon ceremony and networking reception. Their contribution will also be acknowledged to the winners' senior management and the national press to underscore the importance and value of R&D and product development.

Nominations accepted through August 5, 2005.
Winners to be announced August 31, 2005. For more details on the awards, please visit www.PDMetrics.com.

PRACTICAL, 10-YEAR KNOWLEDGE BASE

Management Roundtable's history of first-class conferences, benchmark studies, and practitioner-based research offers a unique synthesis of both proven and new metrics practices—squarely focused on implementation, not theory.

APPLICATION & INTEGRATION SESSIONS

Each day will conclude with a facilitated session to integrate conference learnings. You will come away with a set of action-oriented, realistic project plans (including a range of execution estimates by industry) to help you directly apply the methods discussed by presenters.

FREE INFORMATION PRIOR TO EVENT

A dedicated website, www.PDMETRICS.com, provides ongoing insights to get you up to speed before the conference. Whether you attend or not, read interviews with practitioners and experts, see which metrics are most commonly used by companies, and receive other updates and highlights.

FREE "GUIDE TO METRICS LEADING PRACTICES"

Sign up at www.PDMETRICS.com or on the following registration page to receive a complimentary copy of this special report by the editors of Knowledge Roundtable, Management Roundtable's online knowledge and networking service. (See "Top 6 Metrics Practices" on page 8.) This guide is yours to keep whether you attend or not.

ACCESS TO THE WORLD'S FOREMOST METRICS EXPERTS

The conference includes numerous informal idea-exchange opportunities with leaders in the field and your colleagues from other firms. Compare notes, benchmark, and get expert advice.

EARLY-BIRD AND TEAM DISCOUNTS

Register by August 31 and save \$200; teams save even more! (See page 15.)

MVP LUNCHEON AWARDS CEREMONY & NETWORKING RECEPTION

Meet the winners of these important awards; hear their stories, learn how they achieved major breakthroughs.

SATISFACTION GUARANTEE

If you are not satisfied with this conference for any reason, let us know and we will refund 100% of your fee or provide full credit to a future Management Roundtable event.

REFERENCE BINDER

Complete reference binder with new case examples, templates, and implementation tips on measuring critical aspects of R&D and NPD for higher returns and competitive advantage—includes Web-downloadable materials and follow-up.

"Metrics should highlight a company's prospects for maintaining and improving its rate of growth and return on capital over one to five years." *McKinsey Quarterly*

registration

DATES

Product Development Metrics: Achieving the Full Value of R&D will be held November 7–9, 2005. The 2-day conference registration and continental breakfast begin at 7:00 am, November 8, 2005, and the program adjourns at 3:15 pm on November 9, 2005. Optional pre-conference workshops are offered on Monday, November 7, 8:30 am to 4:30 pm. Registration and continental breakfast begin at 7:30 am.

LOCATION & HOTEL ACCOMMODATIONS

The conference will be held at the Chicago Marriott Downtown, 540 North Michigan Avenue, Chicago, IL 60611. For room reservations, please call 800-228-9290 and mention that you will be attending “Management Roundtable’s Product Development Metrics Conference.” A limited block of rooms is available (please reserve early) at our group rate of \$189/night.

PROGRAM FEES

Fee for the 2-day conference is \$1895 per person. The 2-day conference combined with a full-day workshop is \$2895 per person. Fees include full set of program materials, luncheons, wine/beer-and-cheese reception, continental breakfasts, and refreshment breaks. Pre-conference full-day workshops are \$1000 with full conference registration, or \$1395 as a stand-alone. Workshops include materials, breakfast, and luncheon.

EARLY BIRD DISCOUNT

Register with payment by August 31 and save 200! Fee is only \$1695 per person for 2-day conference, or \$2695 for conference plus full-day workshop.

TEAM DISCOUNT

Groups of 3 or more may deduct an additional \$100 per person. Groups of 6 or more, please call 800-338-2223.

NO-RISK GUARANTEE

Your satisfaction is 100% guaranteed—money-back or credit.

CANCELLATION/SUBSTITUTIONS

You may send a substitute attendee in your place at any time with no penalty (please inform us in advance, if possible). Cancellations made within 5 business days are subject to a \$200 administration fee or the full fee can be credited towards a future purchase. No-shows are liable for the full fee.

CONFERENCE ATTIRE

Business casual

4 WAYS TO REGISTER

Call: 1-800-338-2223 or 781-891-8080
(weekdays, 9:00am–5:30pm EST)

Fax to: 781-398-1889

Internet: www.managementroundtable.com

Mail to: 2005 Metrics Conference
c/o Management Roundtable, 92 Crescent Street, Waltham MA 02453

PLEASE ACCEPT THE FOLLOWING REGISTRATION(S)

Please use photocopies for additional people.

Name (Mr / Ms) _____
Title _____
Company _____
Address _____
Mail Stop _____
City/State _____
Zip _____ Country _____
Phone _____
Fax _____
Email _____

- Please send me updates via email on the program, including information about the MVP awards (provide email address above).
- Please send me a complimentary copy of “The Guide to Metrics Leading Practices” from Knowledge Roundtable. I understand this is mine to keep whether I attend the conference or not.
- I cannot attend; please send me conference coursebook which includes hardcopy of slides, data, handouts, and more at \$395 each (to be shipped within 3 weeks after the event).

Please select your conference/workshop package:

| | Before 8/31 | After 8/31 |
|--|-------------|------------|
| <input type="checkbox"/> 2-day conference only | \$1695 | \$1895 |
| <input type="checkbox"/> 2-day conference + 1 full-day workshop (<i>best deal</i>) | \$2695 | \$2895 |
| <input type="checkbox"/> Full-day pre-conference workshop (<i>standalone</i>) | \$1395 | \$1395 |

Please select the pre-conference workshop you plan to attend (optional):

- A. *Strategic Enterprise Metrics for PD Transformation*
- B. *Product Development Metrics Portfolios*

PAYMENT: Amount: \$ _____

- Check enclosed; payable in US funds to *Management Roundtable*.
- Please bill my credit card: VISA MasterCard
 American Express Diners’ Club

Card No. _____ Exp. Date: _____

Signature: _____

Registration Code: _____

- Please bill my company. PO# _____

Registration Code: Web Download

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Product Development Metrics: Achieving the Full Value of R&D

**Strategies, benchmarks, and breakthrough methods to
maximize return on investment and boost corporate growth**

> November 7–9, 2005 > Chicago

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