

Timely Portfolio Management for Efficient Resourcing

NEW PRODUCT INNOVATION
No. 2 IN A SERIES OF PAPERS

Global NP Solutions, LLC

Reference Paper

Teresa Jurgens-Kowal
PhD, PE, NPDP

Global NP Solutions, LLC
2323 Clear Lake City Blvd., #180
Suite 177
Houston, TX 77062

For More Information

Phone: 281-280-8717

Fax: 281-280-8986

e-mail: info@globalnpsolutions.com



Your Strategic Innovation Partner

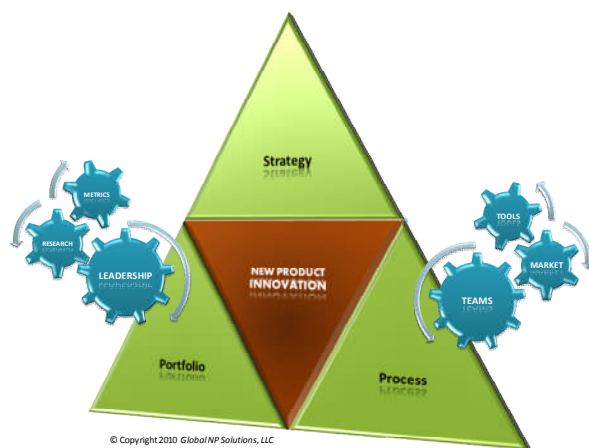
Timely Portfolio Management for Efficient Resourcing

GUIDING PRINCIPLES

Are your NPD project scorecards robust? Do new product projects advance on merit, or on politics? Is your new idea pipeline full? What is the balance of your NPD projects across market segments and technologies? Is your portfolio management process helping to move your organization to a strategically designed future state? Are you using all of your resources in the most effective way possible?

If you've answered "NO" to any of the above questions, *you are, unfortunately, not alone.* Despite the fact that Portfolio Management is one of the key underpinnings to a successful New Product Innovation program, many companies today continue to struggle with ensuring that the right projects are done at the right time with the right resources.

In this paper, we briefly explore the second of the three key foundational arenas in New Product Innovation — **Portfolio Management**. Lacking effective and timely Portfolio Management, many Companies and Business



Units find their resources spread too thin resulting in a lack of focus on the projects most critical to achieving strategic market success.

In their classic text, Wheelwright and Clark ⁽¹⁾ demonstrate that an engineer's effectiveness is maximized if he or she is assigned no more than two development projects concurrently. Yet, when most companies take a close look at their metrics, such as workforce-days-committed, the numbers of designated NPD project tasks far outweigh the number of available workers.

LET'S REVIEW THE GUIDING PRINCIPLES IN NEW PRODUCT INNOVATION

First, the Senior Leadership Team Provides Clear Strategic Direction for the NPD Team by defining the market, the technology, and the desired product.

Second, Timely Portfolio Management Reviews Focus Resources on the Right Projects by evaluating match with business strategy, financial and economic models, and/or other scoring methods.

Finally, Efficient Stream-Lined NPD Processes Enable and Empower the NPD Team by allowing effective and efficient research methods within the advantaged market and technology platforms.

TIMELY PORTFOLIO REVIEWS FOCUS RESOURCES ON THE RIGHT PROJECTS

Timely and efficient Portfolio Management reviews focus resources on the marketable projects by consideration of the Business and Innovation Strategies, potential for financial and economic success, and other scoring methods to align the NPD project with the company's vision. As a key tool in the Leadership Teams' toolbox, Portfolio Management (PM) pulls together project selection criteria and balances project types to ensure alignment with the Innovation Strategy under the always present

Timely Portfolio Management for Efficient Resourcing

constraint of scarce resources. Systematically evaluating project match with resource balancing renders strategic investment decisions delivering the highest economic gain for the company and the best use of technical skills of the research and marketing NPD teams.

Despite the fact that timely Portfolio Management allows the organization to balance speed to market, strategic impact, resource use efficiency, and provides the seeds for next generation product ideas, effective portfolio planning faces many challenges.

- *Lack of unified understanding* of Innovation and Business Strategies.
- *Unclear or unknown* decision **project selection criteria**.
- *Inadequate definition* of **optimal project mix** (portfolio balance).
- *Poor or no data/metrics* on individual project performance.
- *Unreliable historical data* and/or limited access to past project performance data.

In a previous paper ([Senior Management Sets the Tone for Your Innovation Culture](#)), we discussed the overarching importance of an Innovation Culture in aligning an organization with the Innovation Strategy. Herein, we will provide further insight on **how to develop project selection criteria and project mix** – building the PM process. Find more information on data and tools for PM implementation on our website (www.globalnpsolutions.com).

CAUTION: USING FINANCIAL FORECASTING MODELS IN PORTFOLIO MANAGEMENT



In addition to the factors listed above, poor financial forecasting is occasionally cited as a factor that hinders

effective portfolio management. Quite to the contrary, many companies use project screening and selection criteria exclusively determined by the “**numbers**”. Financial forecast models can be very detailed, *regardless of data inputs*. This is especially of concern when a project is first entering the portfolio in an early conceptual stage, at a time when unit sales price, manufacturing cost, and customer reactions may not be firmed up.

In fact, businesses that use financial models as the dominant portfolio management tool show the poorest level of success in their new product portfolios ⁽²⁾. Sophistication of the many available financial forecasting tools can quickly outstrip the pace of data gathering in an early stage new product project. With its emphasis on the time-value of money, Net Present Value (NPV), a popular financial forecasting method for capital and NPD projects, will place even less emphasis on new products expected



to be launched further in the future than those with impending market introduction. And, yet, management, rightfully, demands that PM deliver NPD products, services, and programs that will continuously deliver economic growth to the business over a long time period. Though the Innovation Strategy is likely to include statements like “*Business Unit ABC will increase revenue by 15% from new product releases in 2012,*” overzealous NPD project teams may produce inaccurate guesses of the market potential. Does your company have precise post-launch data from previous market introductions in order to accurately predict the economics of your next new product

Timely Portfolio Management for Efficient Resourcing

development? Does the NPD Team follow the product launch through commercialization to develop best practice learnings? Are workforce hours for each stage of development tracked precisely from idea generation to market launch?

So, be careful to not find your company's portfolio reviews paralyzed by the "numbers" – many relative ranking methods are available to examine project selection criteria and portfolio mix using semi-quantitative tools, such as scorecards. **Scorecard methodologies include risk-adjusted economic models**, as well as probabilities for technical and commercial success. Finally, some new product development efforts are purely strategic, where market entry may prevail over the financial success of the product launch – financial models are certainly not designed to include these leveraging types of projects in the new product portfolio!

PORTFOLIO MANAGEMENT – PROJECT SELECTION CRITERIA

Scorecards and scoring models are effective because they allow **timely decisions** on the multitude of Portfolio Management choices that must be made for the New Product Innovation projects. Early project decisions will allow resources to focus on the appropriate development efforts without distractions from lame duck projects.

Senior Management and the Portfolio Teams should ask these questions to develop criteria for scoring NPD projects in a timely fashion.

- What are the NPD boundaries?
- Which projects are included in the portfolio?
- Which projects are excluded from the NPD portfolio?

- What level of **resource investment** do we make?
- What projects do we need to build capabilities?
- Do we have NPD projects in the portfolio to extend our products life cycle?
- Which projects fit our **core competencies** and strengths?
- Do these projects meet the economic goals and objectives of our Innovation Strategy?

As the Senior Management Team addresses these questions, the criteria for selecting projects for development become obvious. Of course, resource allocation is also one of the key outcomes of PM, where resources include not just people, but also time, money, and equipment, as illustrated.



Portfolio Management and project selection need to be *transparent processes* with all criteria well established and well communicated throughout the organization. Unless Senior Management is intimately familiar with each project under review at the PM meeting, the Team Sponsor should attend the Portfolio Review meeting to address any questions, concerns, or data needs of the decision-makers. *Effective go/no-go/recycle decisions at individual project gate reviews* will lend valuable information in order to activate timely portfolio decisions within the resource constraints of the business. This means putting "bad" projects out

Timely Portfolio Management for Efficient Resourcing

of their misery so that resources are spent on the projects with the highest potential for gain.

Consistent application of project selection criteria enhances the overall NPD Portfolio by setting clear guidelines for projects to meet in accordance with the company's Innovation Strategy. *New ideas entering the NPD Process will be of higher quality* submitted knowing in advance that the product, service, or program will be judged fairly against a published set of standards.

Because of these criteria, the decision making process in PM is very dynamic – the team is dealing with future events, projects at different stages and different pace of advancement, resources shared with other BU and are limited.

OPTIMAL PROJECT MIX: PORTFOLIO BALANCE

Project scores look at key areas of Strategic Alignment, Probability of Success, and Financial Return – an example of specific areas that Senior Management teams will address during the Portfolio Meeting are indicated below.

All projects, including Breakthrough, Platform, Derivative, and Support, should be scored and evaluated for inclusion in the New Product Portfolio, thus ensuring a project balance in line with strategic deliverables for over a longer growth period.

Some items to consider in the Project Scorecard are shown in the figure below. However, each company and business unit should customize the project scorecard to fit their product line and Innovation Strategy.

Typically, Senior Management and the Portfolio Teams will re-evaluate the scoring criteria on an annual basis to ensure continued alignment with the Business Strategy.

Strategic Alignment

- Market Attractiveness
- Potential for Competitive Advantage

Probability of Success

- Technical Feasibility
- Supply Logistics
- Market Entry Options
- Regulatory Assessment

Financial Return

- Estimated Development Costs
- Capital Investment
- Profitability Estimates

© Copyright 2010 Global NP Solutions, LLC

PM Metrics: Portfolio Mix

Historically, one of the most popular tools to evaluate the Portfolio's Project Balance is the Boston Consulting Group's (BCG) risk-reward bubble diagram. Other PM tools, such as a bubble diagram and vintage market actualization, are also sometimes used in conjunction with product roadmapping. Here, the x-axis represents Reward, such as risk-adjusted NPV, relative market share, or strategic fit. The y-axis represents Risk, such as potential market growth, time to completion, or probability of technical success.



The PM team can use the Strategic Bucket approach to ensure the NPD portfolio is balanced consistent with the directives of the company's Innovation and Business Strategies.

Timely Portfolio Management for Efficient Resourcing

DIFFERENTIATING THE BEST FROM THE REST: PDMA BEST PRACTICES STUDY⁽³⁾

Since 1990, the PDMA has sponsored best practice research projects to identify trends in Innovation. Findings from the 2003 PDMA Best Practices Study show that only about 55% of respondents indicate that they have a well-defined, structured process for Portfolio Management. The study also found that of the portfolios in the Best Firms, 11% consisted of New-to-the-World projects while the rest had only 7.3% of their portfolio dedicated to New-to-the-World projects. Additionally, the Best Firms also have 5% more of their project portfolio invested in Next-Generation projects as compared to the rest.

Clearly, **a strong Portfolio Management process can help your company achieve successful market results** by focusing on timely project selection and strategic project mix.

ACTION PLAN FOR TIMELY PORTFOLIO MANAGEMENT

We return to the opening questions.

- Are your PM scorecards robust?
- Do new products projects advance on merit, or on politics?
- What is the new product project mortality rate?
- Is your new idea pipeline full?
- What is the balance of your NPD projects across market segments and technologies?
- What is the mix of NPD projects between breakthrough ideas, world-scale products, line extensions, and product or process improvements?
- Is your portfolio management process helping to move your organization to a strategically designed future state?

- Are you using all of your resources in the most effective way possible?

If not, what immediate steps from this article can you take to ensure that timely portfolio decisions are taken? Try **implementing an effective scorecard** for resource allocation in your Portfolio Management process. Also, look for additional resources and tools on our website to build a custom PM Scorecard for your company.

QUICK REFERENCE GLOSSARY

Check out our website for a quick and easy list of terms used in New Product Development. Some terms used in this article are shown here.

Project Team (or NPD Team) – A multifunctional group of individuals chartered to plan and execute a New Product Development project.

Portfolio Management – A business process by which a business unit decides on the mix of active projects, staffing and dollar budget allocated to each project currently being undertaken.

Sponsor – An informal role in a product development project, usually performed by a higher-ranking person in the firm who is not directly involved in the project but who is ready to extend a helping hand, if needed, or provide a barrier to interference by others.

Strategic Balance – Balancing the Portfolio of development projects along one or more of many dimensions such as focus vs. diversification, short vs. long term, high vs. low risk, extending platforms vs. development of new platforms.

WORKS CITED

1. **Wheelwright, Steven and Kim B. Clark.** *Revolutionizing Product Development*. New York : Free Press, 1992.
2. **Cooper, Robert G, Edgett, Scott J and Kleinschmidt, Elko J.** *Portfolio Management for New Products, 2nd Edition*. New York : Basic Books, 2001.
3. *Trends and Drivers of Success in NPD Practices: Results of the 2003 PDMA Best Practices Study.*
Barczak, Gloria, Griffin, Abbie and Kahn, Kenneth B. *Journal of Product Innovation Management*, 2009, Vol. 26, pp. 3-23.

Timely Portfolio Management for Efficient Resourcing

Global NP Solutions, LLC

About the Author



Teresa is President of Global NP Solutions, LLC, a strategic innovation provider. She is an accomplished visionary and results-oriented professional with extensive industry experience from creative research to effective portfolio management through stream-lined new product development processes.

Prior to founding Global NP Solutions, Dr. Jurgens-Kowal acquired over 12 years of experience in leadership and management positions with ExxonMobil Chemical Company and a total of 16 years as a practicing Chemical Engineer. Her corporate career encompassed various functions, including New Product Development, Portfolio Management, Licensing, Marketing, Logistics and Supply Chain, Manufacturing, Project Management and Research Technology.

Teresa has extensive experience leading successful teams, managing the product development life cycle, and defining the portfolio strategy. Her deep expertise in intellectual property management, product and process licensing, portfolio planning, customer service and various business processes make her an ideal teacher and trusted advisor who knows both the theory and practices of New Product Development.

Dr. Jurgens-Kowal earned a B.S. degree in Chemical Engineering from the University of Idaho in Moscow, Idaho and a Ph.D. in Chemical Engineering from the University of Washington in Seattle, Washington. She is a licensed Professional Engineer in the State of Louisiana since 1998. Teresa is a certified New Product Development Professional (NPDP) by the Product Development Management Association (PDMA) and Global NP Solutions, LLC, is a Registered Education Provider (REP) with PDMA.

Teresa holds chemical process and catalyst patents, and is published in the Journal of the American Chemical Society and Journal of Physical Chemistry.

Currently, Dr. Jurgens-Kowal is working on founding a Gulf Coast Chapter of the PDMA organization. She has an office in Houston, Texas.



FOR MORE INFORMATION:

Phone: 281-280-8717

Fax: 281-280-8986

e-mail: info@globalnpsolutions.com