

# NPD Read Paper

where innovation begins

Prodex

Issue No. 9

# 2013Q4

## In this issue

### FEATURE ARTICLE

Resource Planning: The Key To Effective Portfolio Management

### PRODEX NEWS

Goodman Fielder Launches Accolade

### TRAINING EVENTS

Innovation Masterclass 2014: Presented by Dr. Robert Cooper

# NEWS

## Goodman Fielder Launches Accolade

We welcome Goodman Fielder to the growing list of Accolade users in ANZ.

Prodex commenced consulting work in 2012 to develop and deploy a single standardised Stage Gate process across all 3 categories of the Goodman Fielder business in ANZ.

This work was followed by a rapid deployment using Accolade as a hosted solution for Innovation and Portfolio Governance.

All 3 dimensions of Prodex Systems capability were utilised with our consulting services and software deployment being supported at the launch through an in-house workshop facilitated by the worlds #1 Innovation scholar and Stage-Gate® process creator – Dr Robert Cooper.

- ✓ New Ideation Process
- ✓ New Gate Meeting Structure
- ✓ New Stage-Gate Process
- ✓ Deployment of Accolade
- ✓ Bob Cooper In-house Workshop

*"Implementing a single global best practice approach to innovation management consistently across our matrix structure was a corporate priority.*

*Prodex lead every aspect of the project from strategy to execution in 3 months"*

John Chatterton // Marketing Director - Goodman Fielder



## Upcoming Events

Sopheon consulting partner, Mark Adkins, is leading a 2 day training workshop on Lean Product Innovation. Prodex have negotiated a **10% discount for Prodex clients** through the event managers, PROJECTON. To register for this offer or to enquire about group booking rates, please contact Projecton's sales team.

# LPI 2013 Lean Product Innovation

10%  
discount  
for Prodex  
clients

Melbourne // 18th - 19th November    Sydney // 20th - 21st November

PROJECTON GROUP PTY LTD

Level 3, 225 Clarence St,  
Sydney, NSW 2000

E [info@projecton.com.au](mailto:info@projecton.com.au)  
W [www.projecton.com.au](http://www.projecton.com.au)  
P +61 2 8299 7100  
F +61 2 9299 1688

PROJECTON   
EVENTS CONFERENCES TRAINING



# feature

## **Resource Planning: The Key to Effective Portfolio Management**

Approving projects without assessing their resource requirements is like driving without a fuel gauge. You know you'll run out of resource for your projects at some point in time...you just don't know when.

Alarming, MOST companies don't integrate Resource Planning with their Project Portfolio Planning cycle and are effectively driving blind!

## Three Goals of Effective Portfolio Management...

- 1** The primary goal of Portfolio Management is **Value Maximisation**.
- 2** The second goal is to achieve Portfolio Balance by having an appropriate selection of projects which will deliver both short term and long term **value**.
- 3** The third goal relates to having a strategically **aligned** portfolio which accommodates the requirement for non-economic factors to influence project selection.

(Reference 1)

Across all 3 goals there is an underlying requirement to quantify the VALUE of projects in the portfolio.

VALUE (or Relative Worth) is a productivity measure and is calculated as the ratio of \$ Inputs to \$ Outputs. For Innovation Projects, Input costs can include the costs of Market Research, Technical Development, Design, Development, Production Trials and Capital Expenditure. In addition to capital, Resource cost is a significant element of the total input cost for most development projects and is often the primary constraint.

“The productivity index provides a sound economic rationale for determining the optimal portfolio of innovation projects.”

Determining the output value of a project requires a measure of its benefit or return and is typically calculated as Net Present Value (NPV) over a defined time period such as 3 years.

By measuring the ratio of input to output costs, alternate opportunities within the innovation portfolio can be ranked. This ration is referred to as the Productivity Index and is used to assess the relative merit of possible investments or the “Bang for Buck” on alternate innovation projects. Given scarce resources and the opportunity cost of backing poor projects, the productivity index provides a sound economic rationale for determining the optimal portfolio of innovation projects for any business.

The challenge for most companies is that the cost of gathering the input costs is often perceived as out-weighing the benefits. There are several possible approaches which can lighten the load and reduce the cost of defining these inputs including the 3 methods outlined below.

## Three Methods For Resource Estimation...

### Approach One - Constraint Management:

The key objective in this approach is to find the constraint or bottleneck and manage the constrained resource pool rather than all resource pools. The 80:20 rule applies well in resource constraints and it is often the case that there are one or two resource pools which are the genuine constraint. For example, in many companies the constraints are most often in the R+D or technical team and/or in the Marketing teams.

In constraint management, traditional approaches to resource effort estimation are viable due to the smaller number of resources being managed. Good technical managers will often develop, (out of necessity), simple spread-sheets which provide an estimate of resource effort over time which is aggregated across projects. Despite good intent, these efforts are often frustrated by change. In the dynamic nature of the business world, projects are killed, put on hold, or accelerated while at the same time resources are redeployed or become unavailable for a variety of reasons. The key problem with this traditional transactional approach to resource management is that even when used intelligently across only the key resources, the effort to keep up to date in maintaining an accurate ‘spread-sheet’ system is unrelenting.

### Approach Two - Project Classification:

The key objective in this approach is to simplify the assessment of projects and their resource requirements using a high level classification system. This has sometimes been referred to as “Shirt-sizing” projects and typically uses the classifications such as ‘Small’, ‘Medium’, ‘Large’ and ‘Extra Large’ to quickly approximate resource effort per project and therefore the total project capacity.

While this is a valid and logical starting point for many companies seeking to do at least some

resource capacity estimation across projects, the classification is often too coarse and leads to the concern that portfolio prioritisation decisions based on this data may be inaccurate.

### Approach Three - Resource Profiling:

The key objective in this approach is to pre-define the resource requirements or resource profile for a project based upon a set of variables. A simple variant may be the process model the project is following, for example:

Process Model	Development Time
5 Stage Process - Full Development	9-12 months
4 Stage Process	3-6 months
Fast Track Process	2-3 months

In addition to the overall development time, the resource demand for any given function or resource pool (R&D, Marketing, Supply Chain etc.) will vary based upon a set of identifiable parameters, tailored to each business. Typical parameters include::

- Degree of Technical risk
- New technology development or
- Use of existing (proven) technology
- Degree of Market and Commercial risk
- New to market
- New to company
- New or existing Supply Chain
- Capital required or not required
- Testing & stability periods

For any project the different functions required to complete project deliverables are drawn from resource pools. The profile then defines the resource intensity over time for each resource pool. A simple example of a resource profile can be seen in Figure One (above right).



Figure One: Example of resource profiling for a 4 stage process.

In many companies the requirement for shelf life or extended product testing will impact the resource and elapsed time profile for new products. In regulated markets such as pharmaceuticals and nutraceuticals, different regulatory approval times in different target markets will impact the resource profile, making launch market a key determinate of the appropriate resource profile.

The key requirement in developing resource profiles is to understand which variables impact the resource demand across projects. Once defined, the selection of project attributes through key variables allows detailed resource definition based upon the minimum set of inputs.

Figure Two (below), shows the impact of the Productivity Index in changing the ranking of projects based on the Return on Investment rather than net sales or margin (contribution). In this example, the productivity rank is determined by the ratio of inputs (development cost) to outputs (3 year margin).

Project	3 Year Sales	NSV Rank	3 Year Margin	Contribution Rank	Development Cost	Productivity Rank
Project A	\$2,000,000	1	\$450,000	2	\$150,000	2
Project B	\$1,500,000	2	\$600,000	1	\$50,000	1
Project C	\$1,000,000	3	\$150,000	3	\$65,000	4
Project D	\$750,000	4	\$40,000	5	\$30,000	6
Project E	\$350,000	5	\$50,000	4	\$20,000	3
Project F	\$150,000	6	\$20,000	6	\$10,000	5

Below the table, three red arrows indicate the ranking criteria: RANK BY NET SALES VALUE (pointing to NSV Rank), RANK BY MARGIN CONT. (pointing to Contribution Rank), and RANK BY ROI (pointing to Productivity Rank).

Figure Two: An example of portfolio ranking using the Productivity Index (3 Year Margin / Development Cost)

## Portfolio Optimisation

The goal to achieve a strategically balanced portfolio of innovation projects requires the definition of 'Strategic Buckets' or discrete project portfolios. Strategic targets are set which define the proportion of the total development spend which will be allocated to each 'bucket' or portfolio.

Projects within each 'bucket' compete only against projects in the same bucket. The use of the Productivity Index (enabled by resource estimation) ensures that the ranking of projects within each bucket delivers the optimal return on the total investment in innovation.

In any business the optimisation of development productivity or return on investment is the truest measure of the relative financial value of any portfolio of projects. Financial measures should be used in conjunction with strategic measures to optimise the total innovation portfolio.



### About the Author:

Gerard Ryan is the founder and principal consultant at Prodex Systems.

[g.ryan@prodex.com.au](mailto:g.ryan@prodex.com.au)

**23%**  
NEW TO MARKET  
[NEW PRODUCTS]

Development Budget		\$1,000,000	
Project	3 Yr Margin	Dev Cost	PI Rank
Project N	\$1,500,000	\$195,000	1
Project P	\$3,300,000	\$500,000	2
Project M	\$1,700,000	\$300,000	3
Project O	\$900,000	\$450,000	4

\$995,000

**70%**  
NEW TO COMPANY  
[LINE/RANGE EXTENSIONS]

Development Budget		\$230,000	
Project	3 Yr Margin	Dev Cost	PI Rank
Project H	\$250,000	\$10,000	1
Project E	\$220,000	\$10,000	2
Project A	\$250,000	\$20,000	3
Project G	\$600,000	\$50,000	4
Project F	\$240,000	\$30,000	5
Project I	\$180,000	\$25,000	6
Project C	\$450,000	\$75,000	7
Project B	\$150,000	\$30,000	8
Project D	\$120,000	\$25,000	9

\$220,000

**7%**  
NEW TO WORLD  
[NEW TECHNOLOGIES]

Development Budget		\$600,000	
Project	3 Yr Margin	Dev Cost	PI Rank
Project J	\$1,800,000	\$300,000	1
Project I	\$2,500,000	\$250,000	2
Project L	\$1,500,000	\$500,000	3

\$550,000

**RESOURCE  
OPTIMISATION**

# Trainings 2014

## Innovation Masterclass

AUCKLAND // March 31 - April 1, 2014

### BREAKTHROUGH IDEAS & GREAT NEW PRODUCTS GETTING THE FRONT END OF INNOVATION RIGHT

**DAY 1** Creating Breakthrough New Product Ideas To Achieve Game-Changing Innovation

**DAY 2** Select & Develop Great New Product Winners

MELBOURNE // April 3 - April 4, 2014

### WINNING AT NEW PRODUCTS MANAGING THE PROCESS FROM IDEA TO LAUNCH

**DAY 1** Ten Best Practices That Distinguish Top Performing Companies

**DAY 2** Managing The Development Portfolio For Optimal Returns

BOB COOPER IN-HOUSE // April 2, April 7 - 9, 2014

These one day in-house events provide the inspiration and training to create enterprise wide buy in to Innovation Best Practice. For more information please contact us directly to discuss tailoring an in-house Bob Cooper workshop for your business.

*Dr. Robert Cooper is the definitive authority on Stage-Gate and Portfolio Management, two processes that drive product innovation. When I introduce new employees to these critical processes, I send them to Bob because I only want my people to be trained by the best.*

James Godsey // SVP R&D - Digene Corporation



[www.prodex.com.au](http://www.prodex.com.au)



+61 7 3844 3600



[marketing@prodex.com.au](mailto:marketing@prodex.com.au)

## Subscription

NPD Red Paper is a Prodex Systems quarterly publication, providing news and information on best practices in new product development.

If you would like to be included on our mailing list please email [redpaper@prodex.com.au](mailto:redpaper@prodex.com.au) with your contact details.

If you would prefer not to receive future issues of the NPD Red Paper, please also contact [redpaper@prodex.com.au](mailto:redpaper@prodex.com.au)

Accolade® is a registered trademark of Sopheon PLC.  
Stage-Gate® is a registered trademark of Product Development Institute Inc.  
Prodex® is a registered trademark of Prodex Systems.  
NPD Red Paper © 2013 Prodex Systems

Unit 13, Montague Corporate Park, 205 Montague Road, West End, **Q** 4101  
PO Box 1953, Toowong, **Q** 4066  
**T** +61 7 3844 3600  
**F** +61 7 3844 3610  
[prodex.com.au](http://prodex.com.au)

