

Excellence Framework for New Product Development



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Why Can I Talk About This?

- **25 years in R&D**
- **Project performance speed records with complex technologies**
 - In defense, 3 year project in 1 ½ years
 - In medical, 18 month project in 11 months
 - In consulting, exposed to stressed projects and help recovery
 - In teaching, 30 industry projects in 3 years with Sr. Design at University of St. Thomas
 - And I have had some bad projects too!
- **Worked on corporate NPD system improvement efforts**
- **Industry survey on NPD**

The Problem

- **Development schedule and budget failure at over 70%**
 - Twice the duration
 - Over budget by 50%
- **Marketing failure at over 90%**
- **Your executive team wants to see short ACTUAL project cycle time, not just planned**
 - Instead, they get countless replans and reshuffling of resources.

The Present Solution

- **Create a detailed process**
- **Develop specific/ clear deliverables**
- **Hire certified people to bring in professionalism**
- **Require tool usage**
- **Monitor everything very closely**
- **Re-organization**

More control

The Concern

- **We just institutionalized failure into our company**
 - And unnecessary complexity

Ghoshal, "Bad Management Theories are Destroying Good Management Practices", 2005

Fast Trends

- **We need to be faster**
 - So we compress things, take short cuts, and hope for the best
- **Lean – we need to take out waste from what we do**
 - But what we do is not working
- **Need integrated, shared learning**
 - Knowledge data base with massive documents
- **Remove prototypes**

Sometimes, fast is slow

Detail Trends

- **We need to be more disciplined**
 - Check every box in the checklist.
 - Use every conceivable tool in the Six Sigma toolbox
- **Need to control the project closely**
 - Add reviews
- **Sometimes, slow is just slow**
 - Does not mean we were more thorough

Danger in blindly using tools: “everyone else does”
“my mentor said I should” or “need to check the box”

General Solutions

- **Stage Gate (control)**
- **Design For Six Sigma (tools)**
- **Toyota Product Development System/ Fast Cycle Time (speed)**
- **Open Innovation (external resources)**
- **Outcome Based Development (big picture)**

The Reaction

- **These are not bad ideas, but they are being implemented with a lack of focus**
- **How can NPD be focused if the business is not focused?**

What known problems are actually being addressed?

What Is Needed

- **A framework for a NPD system**
 - **Guidance**
 - **Focus process in areas of importance for business/ market success ***
 - **Flexibility for the projects to be encountered**

The 50 page process is not helping create flexibility and creativity

*** In UST Senior Design course, industry emphasis on steps varied greatly**

The Solution Framework

- Understand what is important for your business and for your market
- Vision of the end state
- Understanding the right customers
- Risk management/ contingencies
- Decision making
- Increase the speed... of learning!
- Smart prototypes, maximize the learning from each one

How To Do It

- Start from where you are at
 - Understand your current process, since it got you to where you are at
- Do not try to be good at everything, be the best at what is critical for you
- Learn from your own internal, best project
- Talk to the people who worked on a similar project recently
 - Your experience will be special, so not all points will apply... but many will be helpful if you listen

Essential Tools

■ Requirements

- It is often cited that 70% of failures are caused by requirements
- This was the leading “key step” in our January 2011 industry survey
- This is an art, if done well... not just taking notes
- It is either a paragraph in a project management book or something appropriate only for NASA

■ Technology advancement

- Strategic planning and smart prototypes
- Design Of Experiments (DOE) techniques can be useful
 - Pareto, “DOE in New Product Development”, 2001

Determine the key, essential tools – not the entire list of possible tools

Essential Tools (cont.)

■ Risk assessment and management

- Big picture
- Take credit for work performed
- Pareto, “Is Risk Management Valuable for Me?”, 2010

Essential Tools (cont.)

■ Program and project management

- Planning*
 - Realistic and comprehensive
 - Takes 20% of schedule to estimate efficiency, and then it is only a lower bound**
- Execution*
 - To the end vision
 - Dedicated manager is best (from January 2011 Industry survey)
 - Options, decisions, hardware push

* Planning and execution were keys from our January 2011 survey

** Christensen, “The Costs and Benefits of the Earned Value Management Process”, 1998

Business Case

- Each idea should have it's own business plan... a detailed look at what is going on. If it fits within an existing plan, then explain how and why
 - Sometimes, new products will kill the existing business thus people avoid it
 - Sometimes, a new product is avoided because it is going to be too small
- If the idea does not fit you, then it could be done in another form

People

- **Motivation**
- **Involvement**
- **Communication**
- **Training**
- **Work and organizational structure**
 - Core team or full team
 - More people leads to significantly more communication*
- **Forming the team**
- **Culture**

* Harnish, "Creativity and Innovation", 1995

Conclusion

- **These elements can lead to shorter actual project cycle times and achievement of customer goals**
- **Allow experience to drive the process**
- **If you are interested to participate in a follow up, online survey – visit my website**
 - www.PerrysSolutions.com
 - Can also request our quarterly newsletter so you can know when the next survey is taking place