

# Product Creation Best Practices

## “Goldilocks and the Three Bears”

- Guiding Principles
- Lightweight Processes
- Metrics
- Event Timelines



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June 4, 2009

# Literary Rule of Three

- The story makes extensive use of the literary rule of three, featuring three chairs, three bowls of porridge, three bears
- Christopher Booker characterizes this as "the first is wrong in one way, the second in another or opposite way, and only the third, in the middle, is just right"
- The Goldilocks Principle describes a situation which is just right in a manner akin to that portrayed in the tale
  - A Goldilocks planet is neither too close to nor too far from a star to rule out life
  - A Goldilocks economy describes one which is sustaining moderate growth and low inflation

# Case Studies

Company	Description	Challenge	Intervention	Results
Small (engineering in the 30-50 range)	Series A funded Consumer Startup – Software focused	No Process at all	Established Concept Review, MRDs and Schedules	<ul style="list-style-type: none"> <li>• First program under new system beat schedule by 30 days</li> <li>• 80% compliance in 90 days</li> </ul>
Medium (engineering in the hundreds range)	Privately held Consumer Electronics	Process inconsistent, long cycle times	Benchmarked, Implemented One Page Process Map, Concept Review, MRDs	<ul style="list-style-type: none"> <li>• Created consistent, followed product development process</li> <li>• Reduced slip rate to benchmark (15%)</li> </ul>
Large (engineering in the many thousands range)	One of largest companies in Silicon Valley – mix of hardware and software	Inconsistent processes, inability to scale	Implemented “Goldilocks and the Three Bears” including metrics and post mortems	<ul style="list-style-type: none"> <li>• Process thriving after 15 years</li> <li>• Making better decisions, faster</li> <li>• Benchmark cycle times</li> </ul>

- This presentation focuses on what was actually done for these companies
- All implemented with “Inch Wide, Mile Deep” philosophy

# How “Just Right” Best Practices Support Guiding Principles

Guiding Principles & Best Practices	Concept Review	MRD	Out of Bounds Review	Metrics	Project Histories
Data based decision making	√		√	√	√
Common vision of success (what does “done” look like)	√	√		√	
Total transparency	√		√	√	√
Integrity of communications	√		√		
Build capability within the project teams	√		√		√
Know when less is better: Mastering a few simple processes, fixing a few key things	√	√	√	√	√

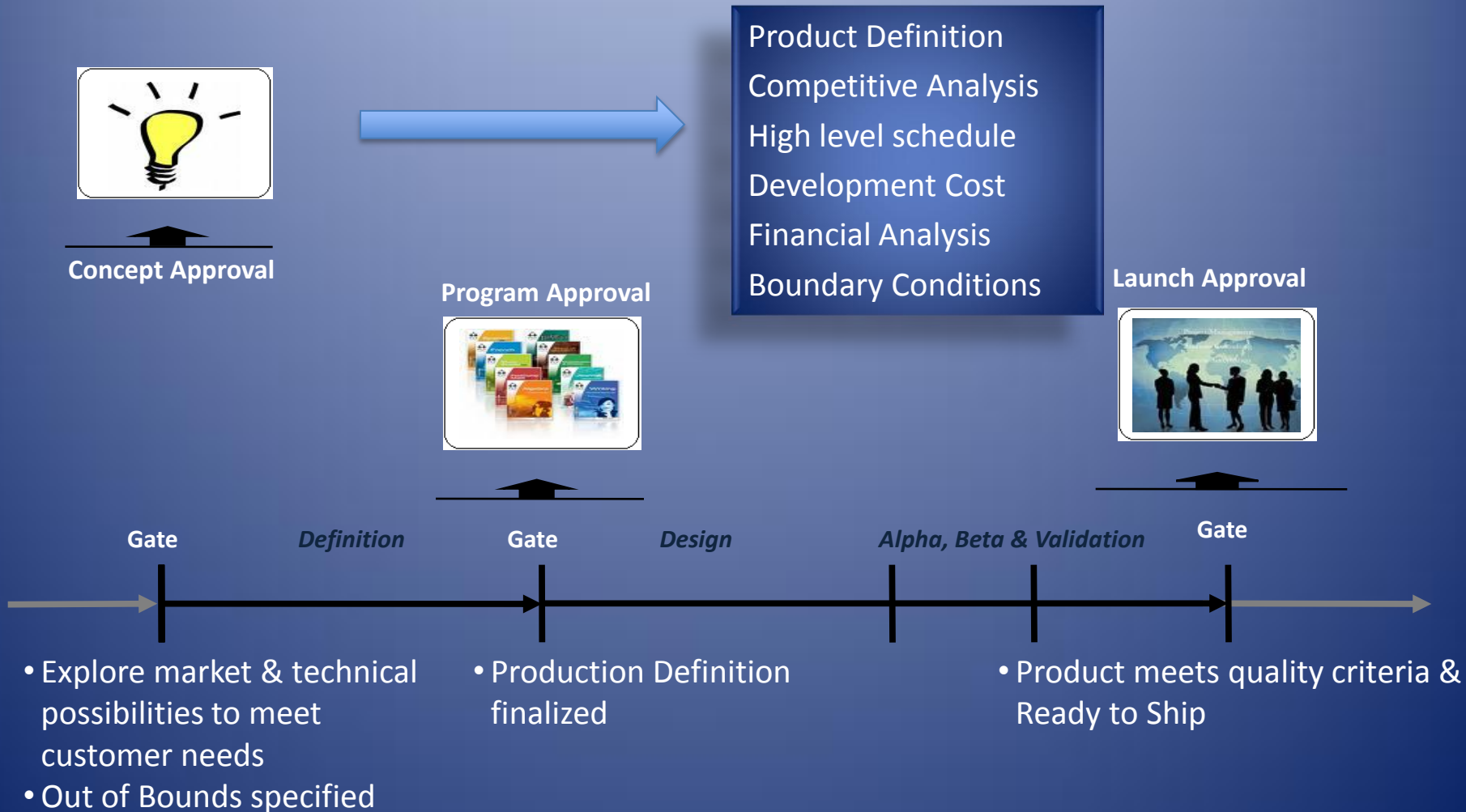
## Lightweight Processes

- Concept Review
- Out of Bounds Review
- MRD
- Schedule
- Metrics
  - Schedule Prediction Accuracy
  - Managing change by measuring behavior
- Post Mortem
  - Event Timelines & Project Histories



# Phase and Gate Definition

*Called Stage Gate or Phase Review System*



# Concept Review Example

### Product Description

Product Description

Product Description




Product Description

1

### Strategic Alignment with Product Use

Strategic Alignment with Product Use




Strategic Alignment with Product Use

2

### Schedule from Concept Review through major milestones

Schedule from Concept Review through major milestones



Schedule from Concept Review through major milestones

3

### Rough Product & Development Costs

Rough Product & Development Costs

Product Development	Development Costs
<ul style="list-style-type: none"> <li>Material</li> <li>Component Testing</li> <li>Finalize Model</li> <li>Test</li> <li>Capitalize/Tooling</li> </ul>	<ul style="list-style-type: none"> <li>Material</li> <li>Component Testing</li> <li>Finalize Model</li> <li>Test</li> <li>Capitalize/Tooling</li> </ul>

Rough Product & Development Costs

4

### Rough Financial Analysis

Rough Financial Analysis

Financial Projections

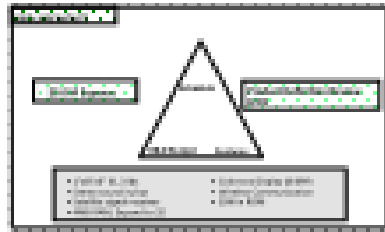


Rough Financial Analysis

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### Product Definition Phase-Boundary Conditions

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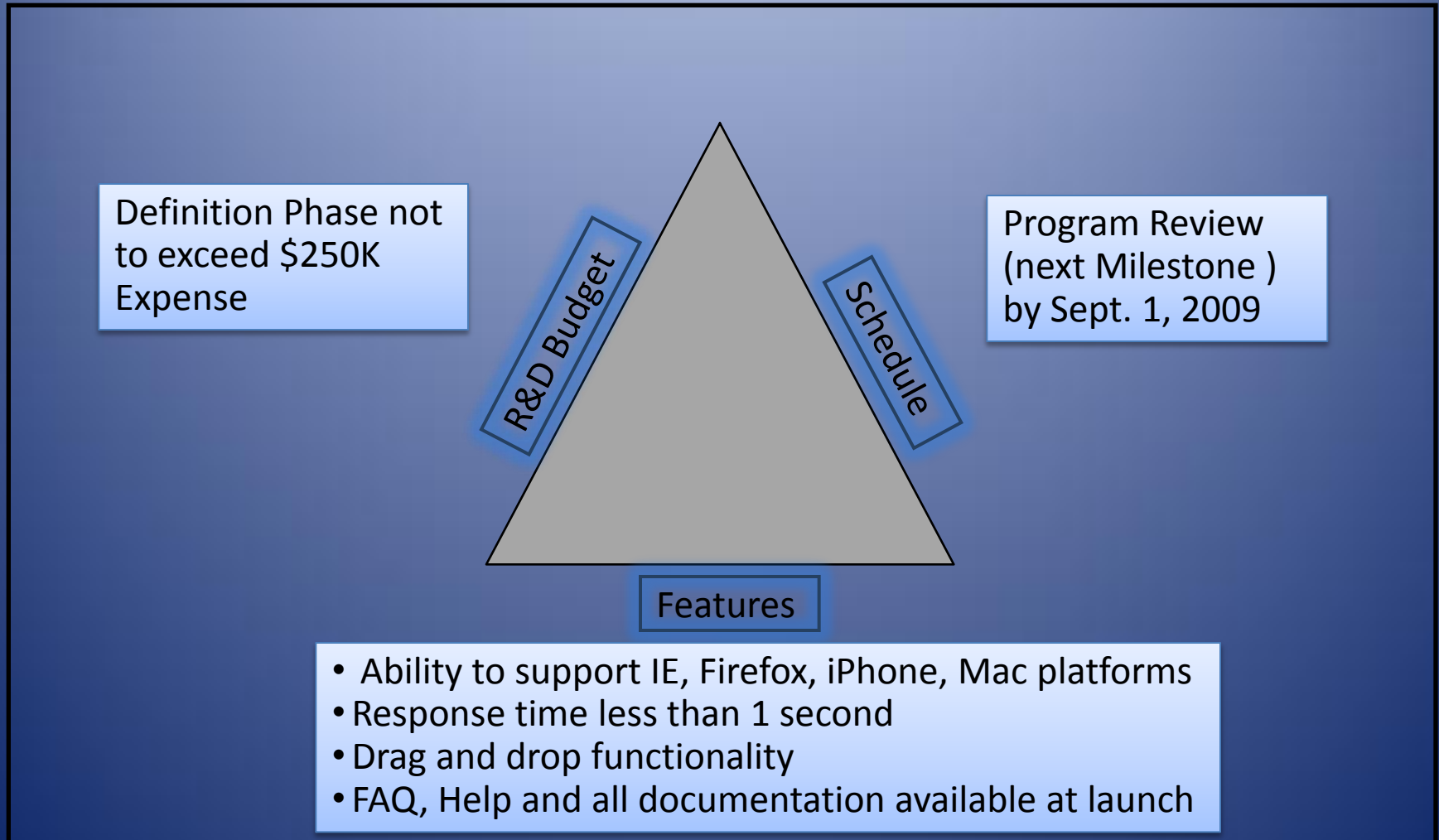


Product Definition Phase-Boundary Conditions

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*Concept Review is a Team on Team contract*

# OOB Boundary Conditions (at Concept Review)



# Out of Bounds Process

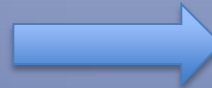
**Out of Bounds Condition  
Described by Team**

**It is reviewed by**

- **Functional Mgrs**
- **General Mgrs**

**Face to Face  
Meeting  
required?**

**OOB Meeting**



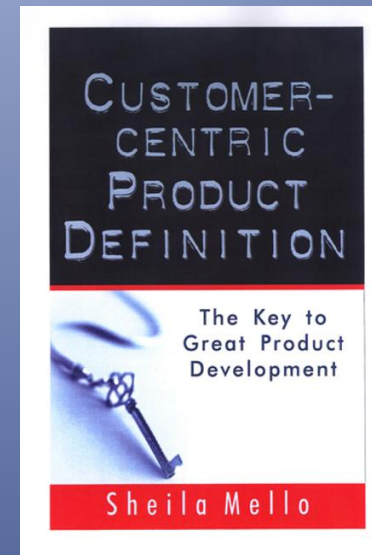
**Email**

- **Describe what broke & impact on program**
- **Describe alternatives**
- **Recommend path forward and agreement to proceed without meeting**

- In the Concept Review, the boundary conditions are described
- The team (typically the project manager) monitors the project relative to these conditions
- If the boundaries are “broken” then the project manager notifies management
- The management group reviews the recommendation and approves, modifies, or resets the program

# Marketing Requirements Document

- Problem Focus
- Market Potential
- The Solution
- Target Customers
- Product Profile
- Usage Scenarios
- Competitive Positioning
- Product Pricing
- Go To Market Strategy

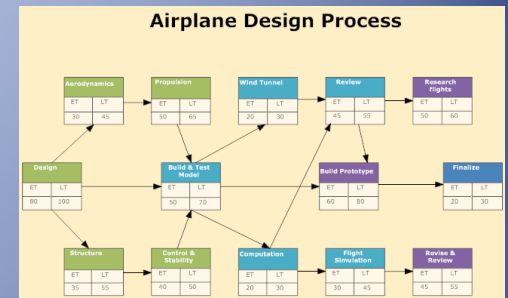


*“Define before you Design”*



# High Level Schedule

- Gantt – for displaying and managing
- PERT – for creating and understanding critical paths

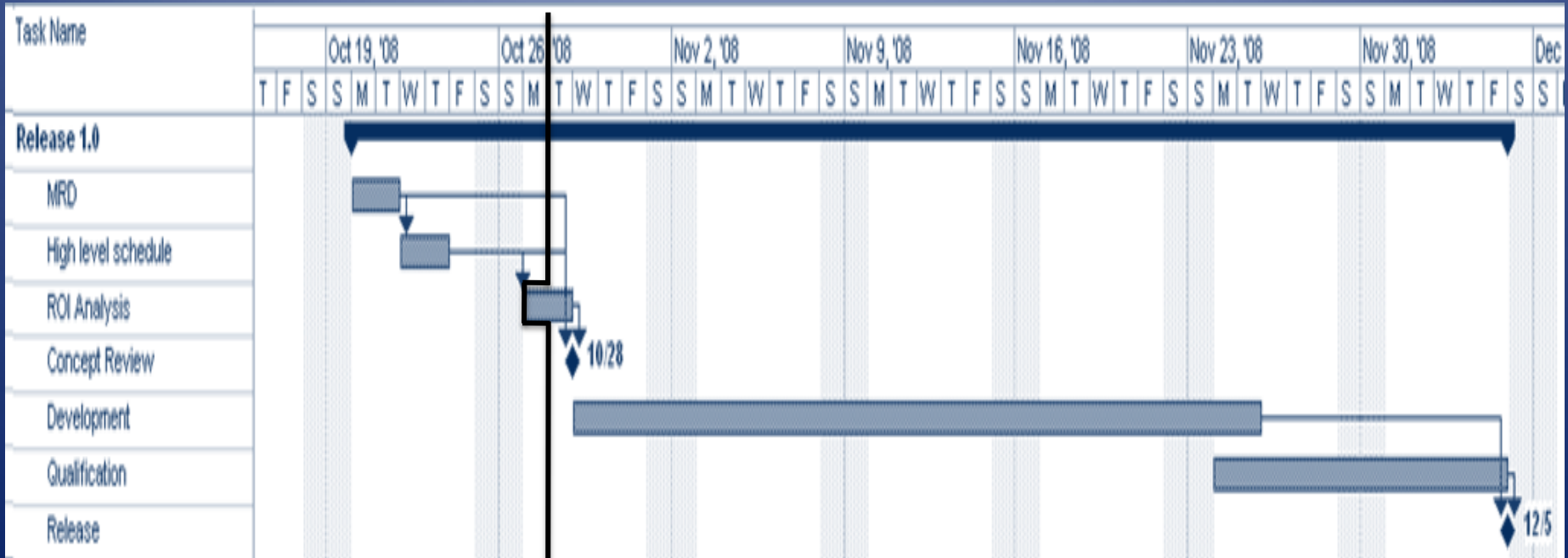


PERT

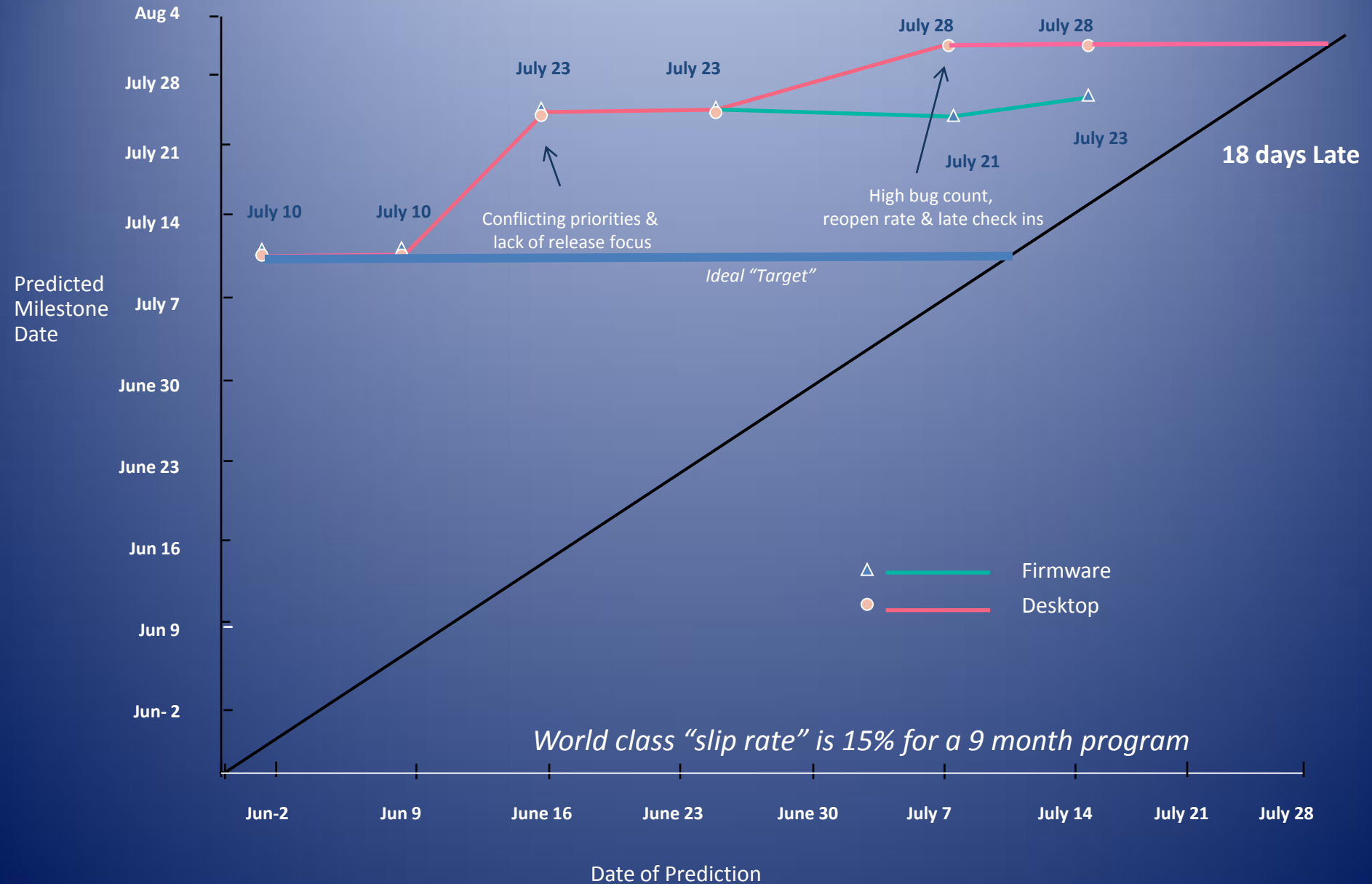
Gantt



*Real time analysis of performance to plan*

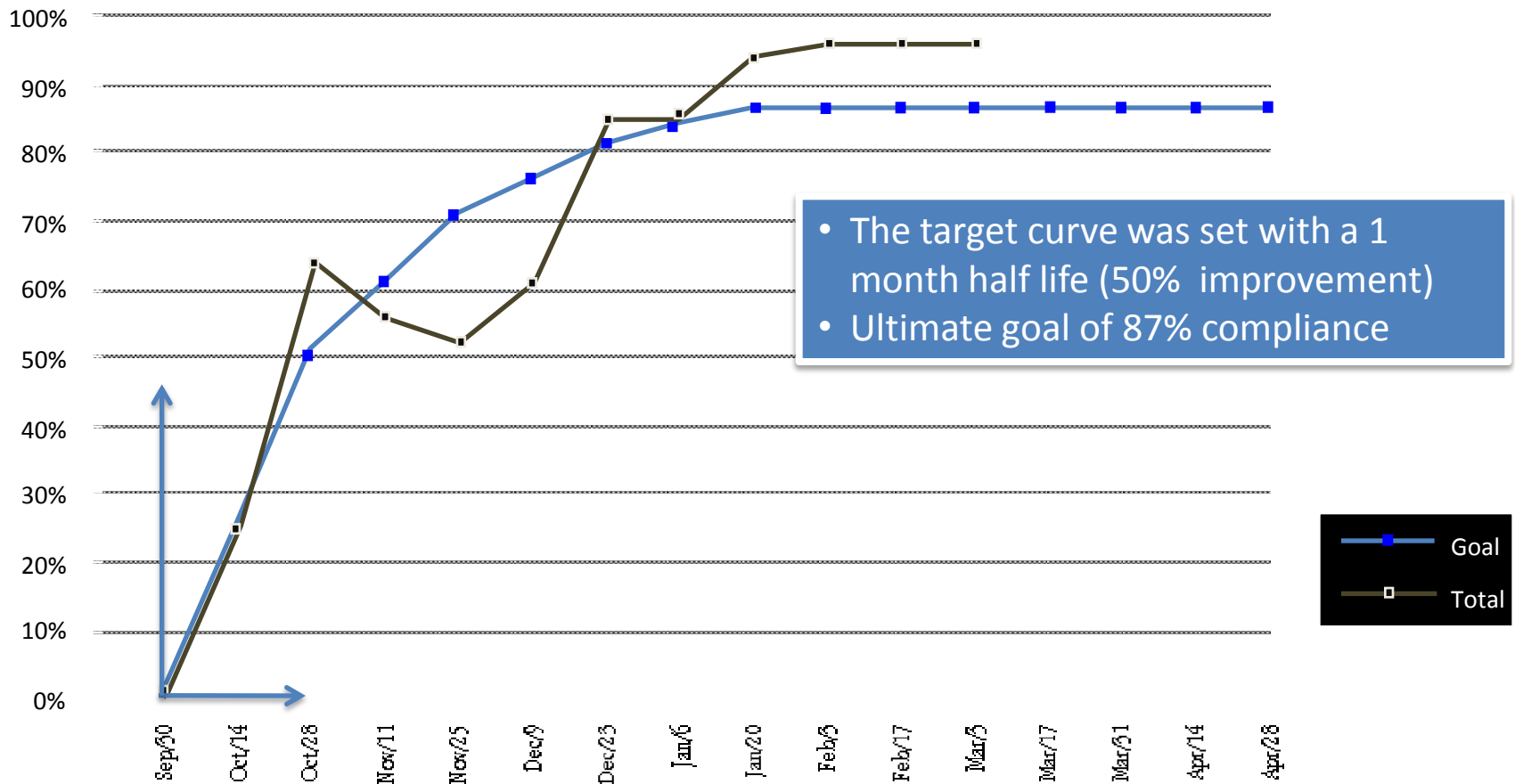


# Schedule Predictability Accuracy: Software Release



# Managing Change by Measuring Behavior

- Phase Review Implementation Over Time
- Percentage of schedules that used the new nomenclature and had the next phase review scheduled

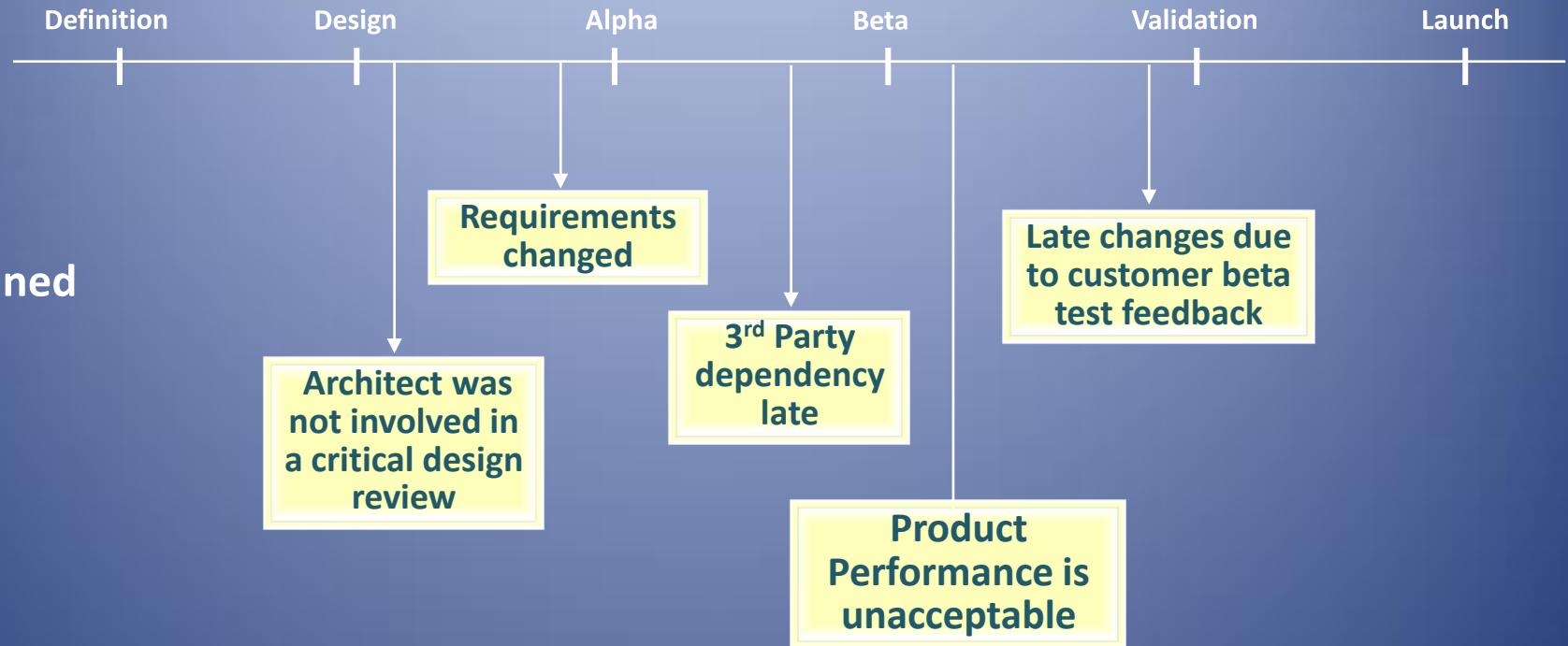


# Post Mortem Best Practice

## Event Time Line – Project History

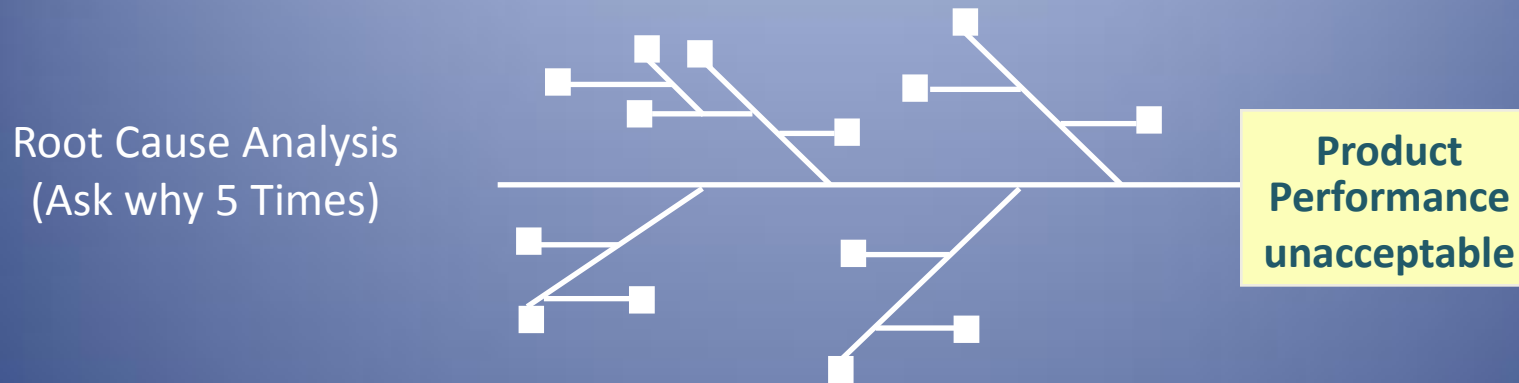
### Milestones

### Unplanned events



- Time line on a flip chart (1-3 pages, landscape mode) and fills in the standard milestones
- By referring to project files, they pre-populate unplanned events
- The team is invited with their project files
  - What were the events that had the greatest impact on time to market?

# Event Time Line Root Cause Analysis



- The biggest impact item is voted on by the team
- Root cause analysis is performed
- The top 3 root causes are identified and used to improve the process
- The next (singular) improvement initiative is selected
  - Goldilocks style – not too much or too little!

## Conclusion

- Questions?
- Comments?
- Take aways?
- Thank you!

