

NDIA CMMI Technology
Conference & User Group

Denver, CO



CMMI Opens the Gate: The Practical Relationship between CMMI and Stage- Gate® Decision Models



Agenda

- ABB Overview
- Stage-Gate[®] Process
- CMMI
- How Stage-Gate[®] and CMMI Complement Each Other
- Summary

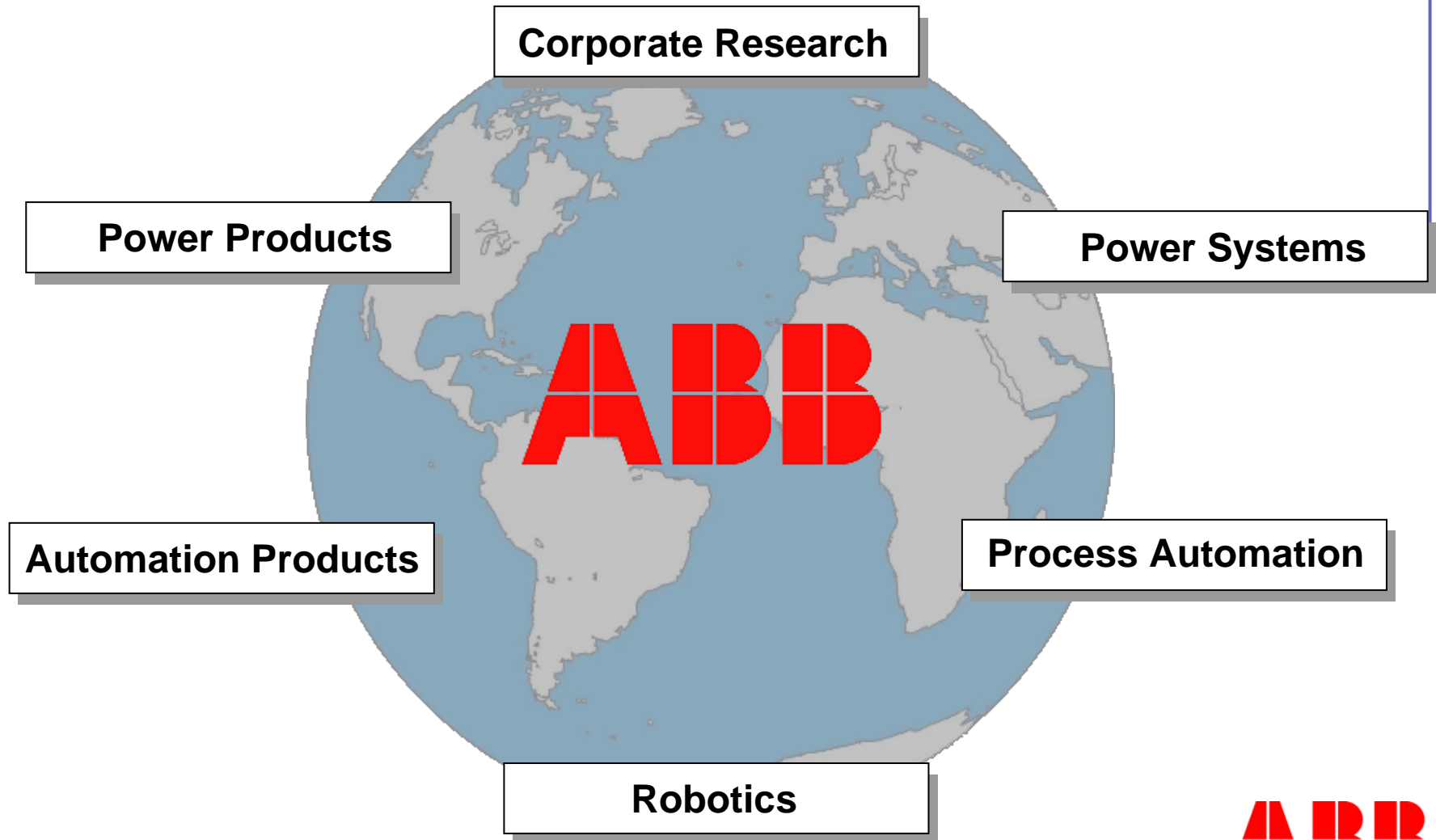


ABB Overview

- Leader in power and automation technologies
- Enable utility and industry customers to improve performance while lowering environmental impact
- The ABB Group of companies operates in more than 120 countries and employs approximately 110,000 people
- ABB became the first company in the world to sell 100,000 robots
- A vast majority of products at ABB have software and hardware components

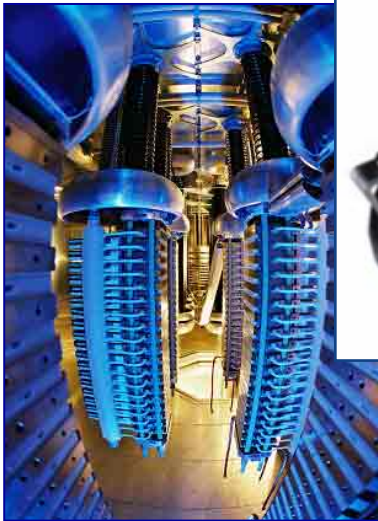
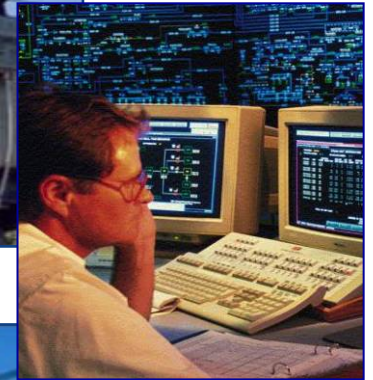
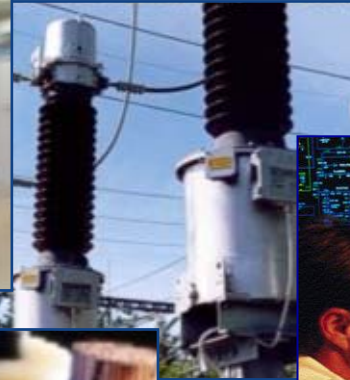


ABB's Organizational Structure



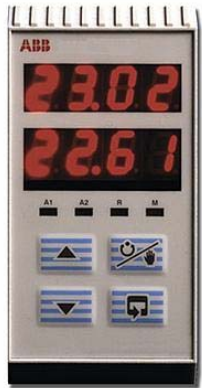
ABB's Products

- Power Products
- Power Systems



ABB's Products

- Automation Products
- Process Automation
- Robotics

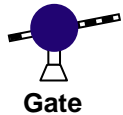


Stage-Gate® Process

- Conceptual and operational roadmap for moving a new-product project from idea to launch.
- The Stage-Gate® process is divided into a series of *Stages* (activities) and *Gates* (decision points).

Stage

- *Stages* consist of a set of cross-functional, parallel activities within a project. In order to proceed from one stage to the next, these activities must be successfully completed and confirmed by passing a gate.



- *Gates* are passed during *gate review meetings*
 - Decision is made to either continue or stop a project based on whether a set of predefined Gate criteria have been met
 - Gates serve as quality control checkpoints
 - Gates decide the path forward for a project, including resource commitments
 - Gate decisions are based on
 - the set of deliverables from the preceding stage
 - a set of criteria/questions/metrics used to evaluate the project and its deliverables
 - Gate decisions:
 - Continue to the next stage
 - “Kill” the project
 - Hold or “freeze” the project
 - Recycle the project (re-scope and restart)

Generic Stage-Gate® Process

Discovery



Idea Screen

Scoping



Second Screen

Build Business Case



Go To Development

Development



Go To Testing

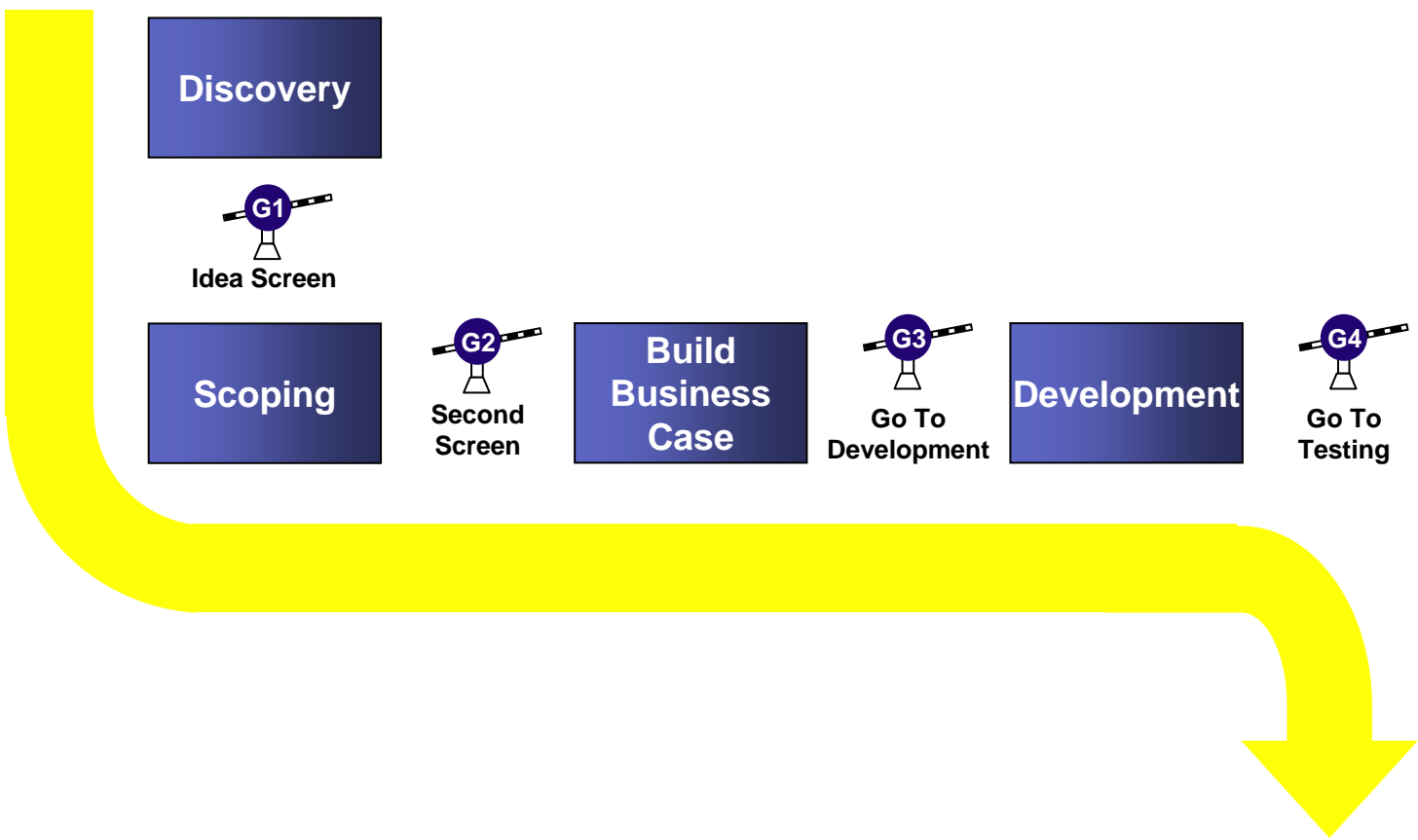
Testing & Validation



Go To Launch

Launch

Post-Launch Review

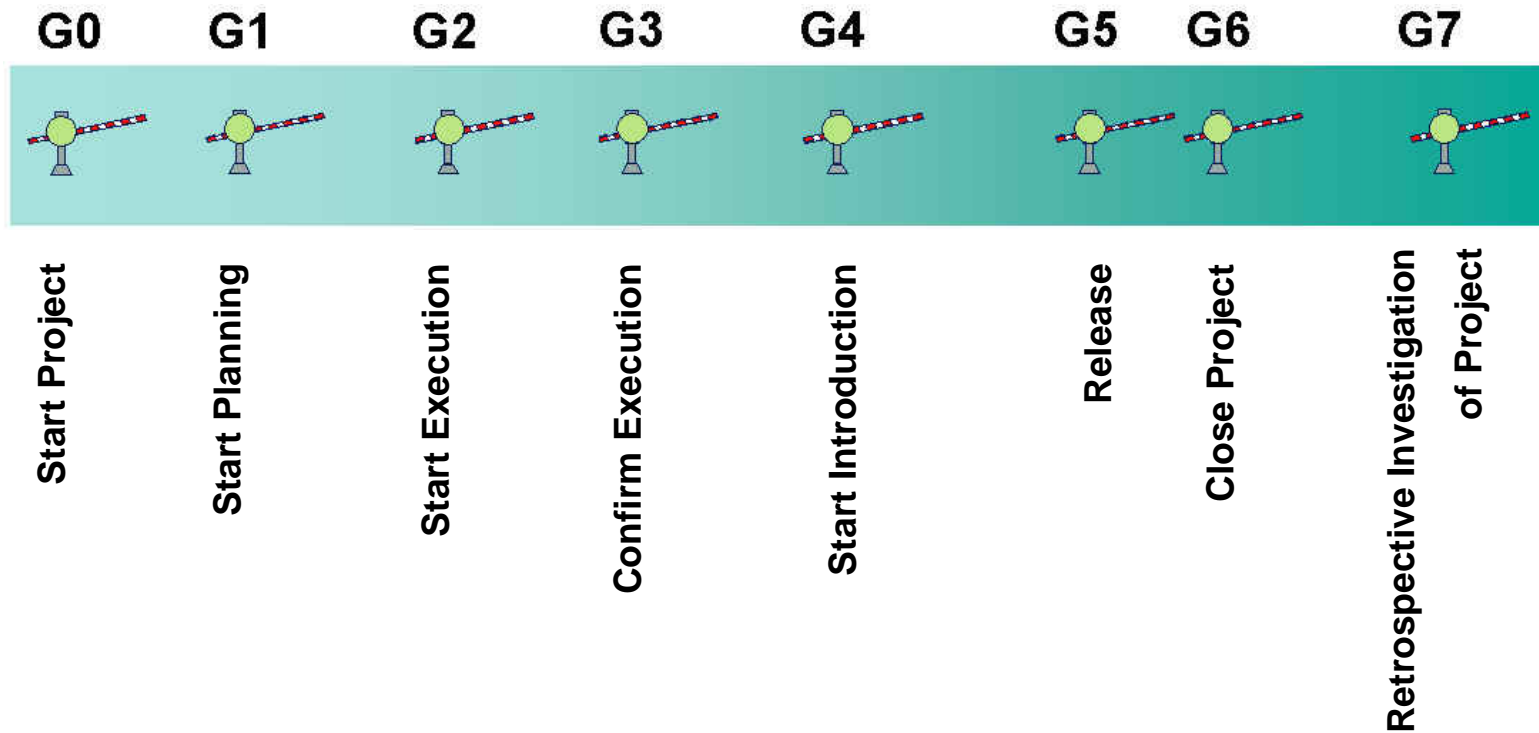


Stage-Gate[®] Process

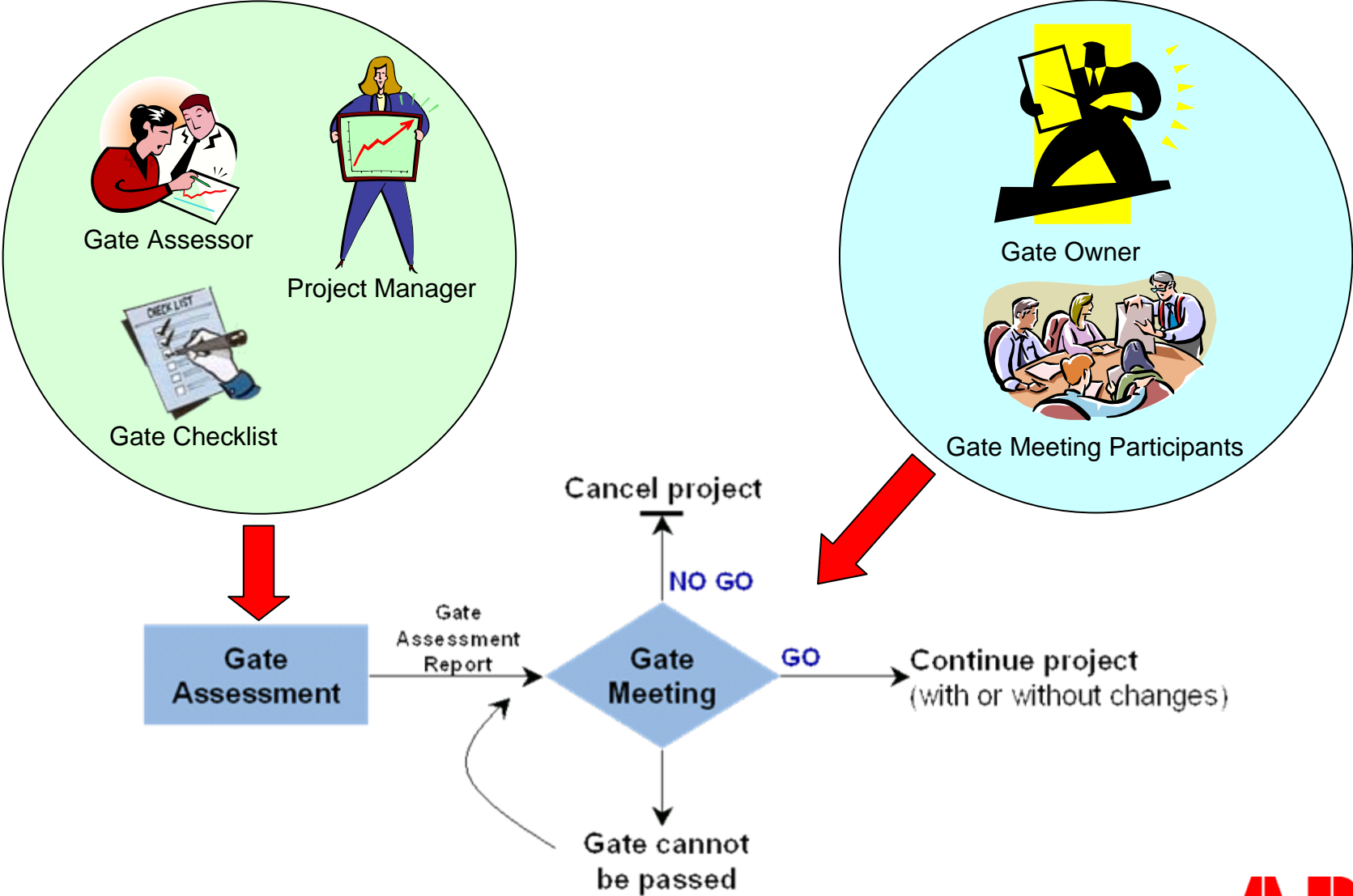
- Conceptual and operational roadmap for moving a new-product project from idea to launch.
- Provides a framework for better management of product development projects
- Provides correct and relevant information for business decisions.
- Ensures that the line organization is actively involved in the project and that the project status is made visible for all project stakeholders.
- Based on the experiences, suggestions and observations of a large number of managers and firms in over 60 cases as observed by Robert Cooper.

The ABB Gate Model

- The ABB Gate Model has eight defined gates for controlling a project from a business point of view, each with a certain purpose as shown below.



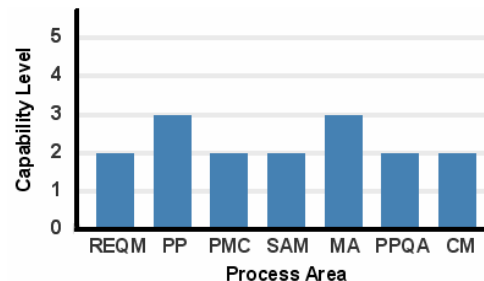
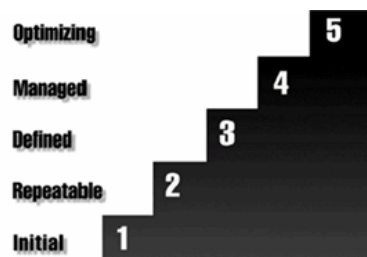
ABB's Gate Assessment Process



Benefits of the Stage-Gate[®] Process

- Accelerates speed-to-market
- Increases likelihood of product success
- Introduces discipline into an ordinarily chaotic process
- Reduces re-work and other forms of waste
- Improves focus via gates where poor projects are killed
- Fosters promotion of innovative ideas
- Achieves efficient and effective allocation of scarce resources
- Ensures a complete process – no critical steps are omitted

- “Consists of best practices that address development and maintenance activities that cover the product lifecycle from conception through delivery and maintenance.”
- Helps “organizations improve their development and maintenance processes for both products and services.”
- CMMI can help:
 - set process improvement goals and priorities
 - provide guidance for quality processes
 - provide a yardstick for appraising current practices
- Provide a framework for benchmarking among and across organizations

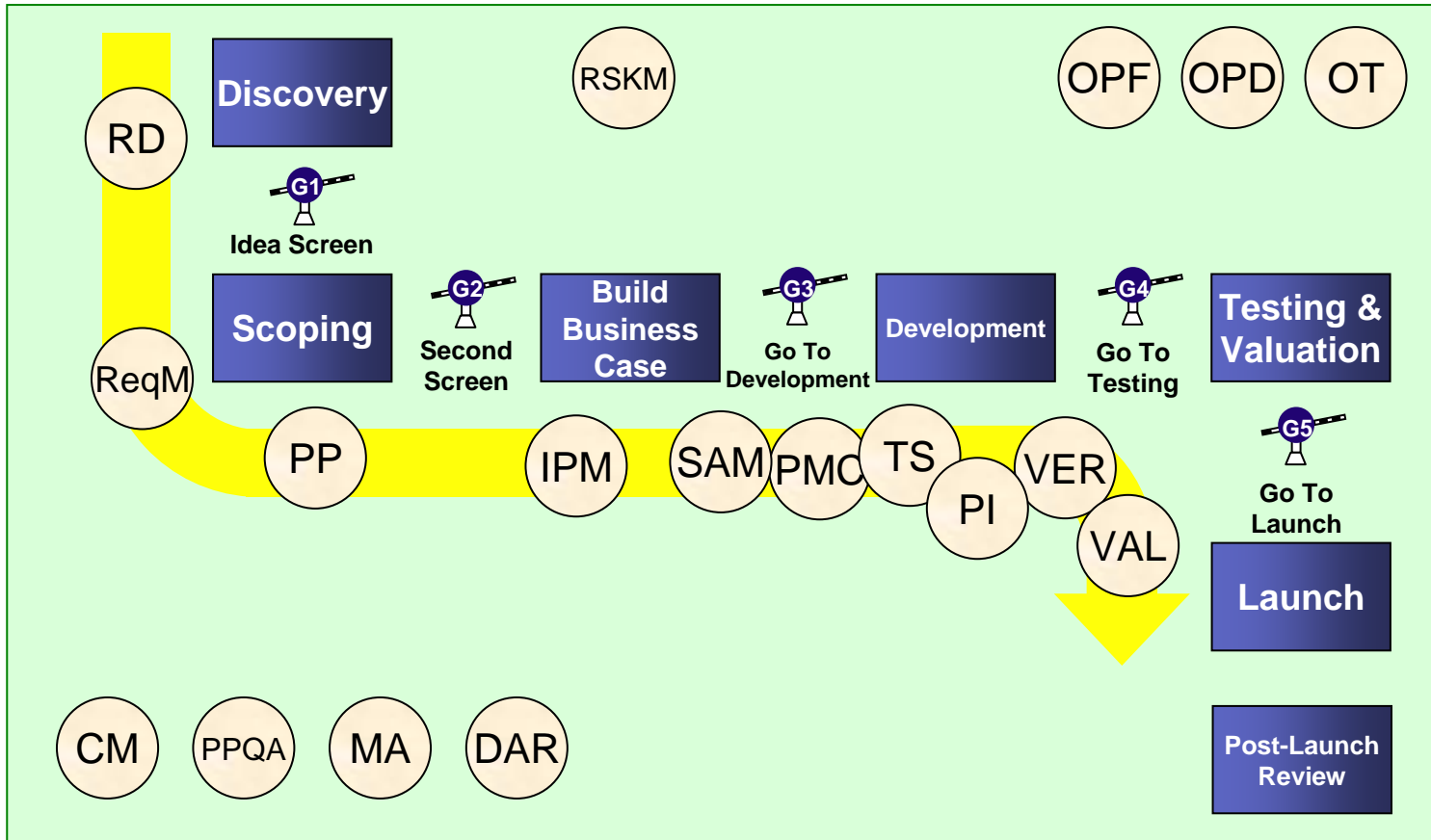


Benefits of CMMI

- Increases the likelihood of meeting cost, schedule, and performance goals
- Enhances collaboration with external stakeholders
- Helps organizations define common, integrated processes for system development
- Encourages proactive management techniques
- Establishes disciplined, repeatable processes rather than chaotic, ad-hoc product development cycles

How CMMI and Stage-Gate[®] Complement Each Other

- CMMI best practices support the activities occurring during the stages



How CMMI and Stage-Gate[®] Complement Each Other

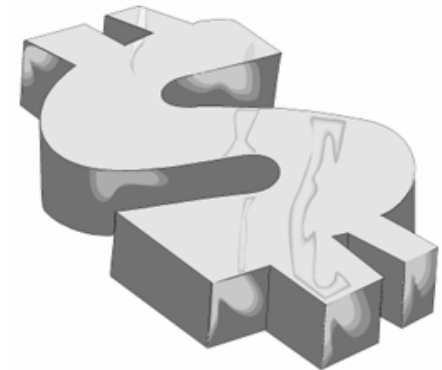
- Stage-Gate[®] provides a strong business decision and innovation focus not present in the CMMI

Market Analysis

Competitor Monitoring

Business Case Development

Intellectual Property Issues



How CMMI and Stage-Gate[®] Complement Each Other

- CMMI provides more detail on best practices – especially within the Process Management and Support process area categories

Stage-Gate models tend to be checklist based – focused on ensuring that criteria have been met



CMMI provides guidance on specific practices that help organizations successfully achieve the criteria



Summary

- Businesses combining the use of CMMI and Stage-Gate[®]
 - Products developed with repeatable, managed processes.
 - Products delivered on-time and within budget
 - Products meet market need
 - Products are profitable for the organization
 - Products represent the highest level of innovation



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Questions?



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