



# Generic Practices – What Do They Really Mean?

Presented by:

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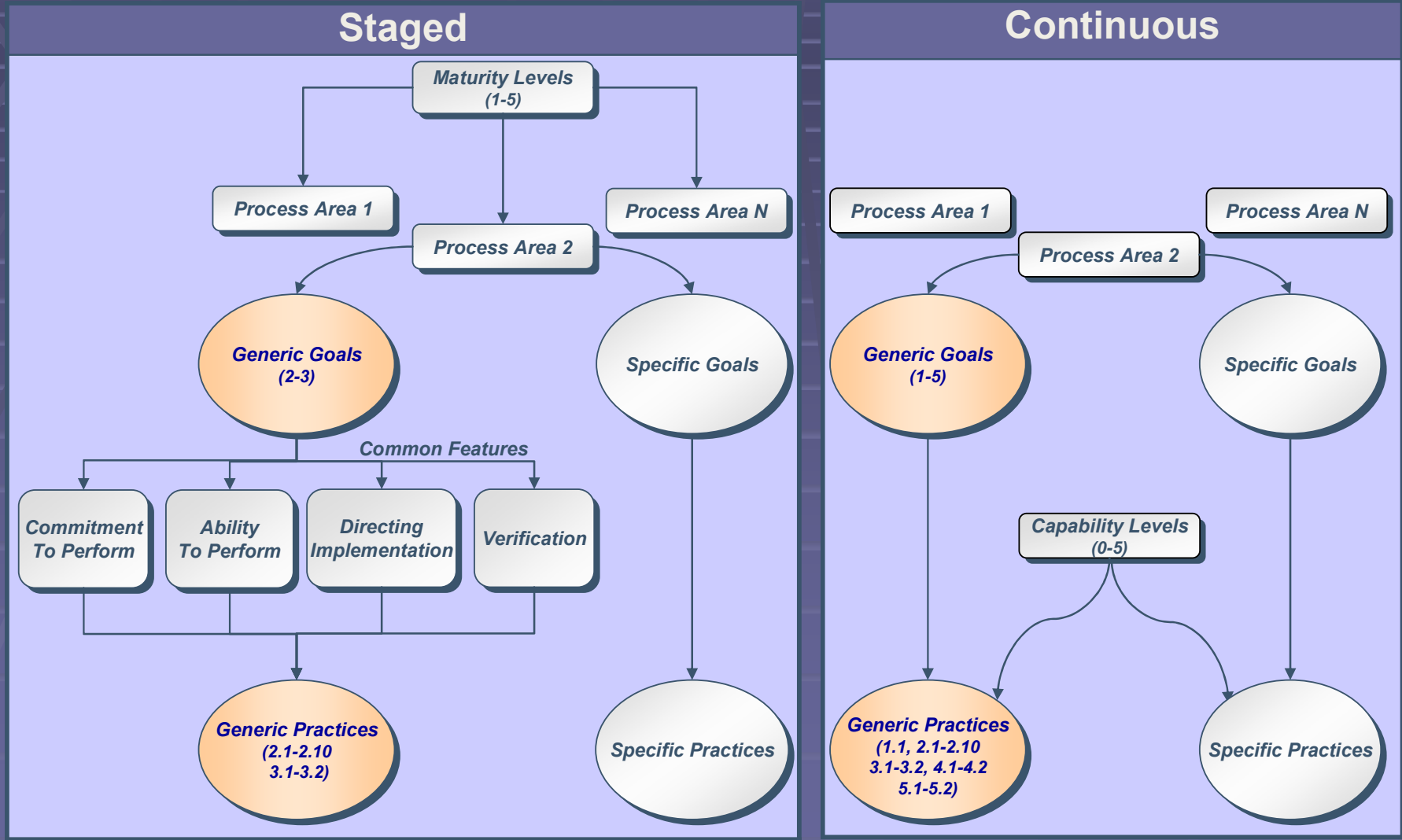
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- ❖ Overview Of Generic Practices
- ❖ Why Are GPs Difficult to Understand?
- ❖ GPs From a Project-Level Perspective
- ❖ GPs From an Organizational-Level Perspective
- ❖ Summary



- ❖ Institutionalization Involves Implementing Practices That
  - Ensure the processes based on the practices in the Process Areas Are Effective, Repeatable and Lasting
  - Provide Needed Infrastructure Support
  - Ensure Processes Are Defined, Documented, and Understood
  - Enable Organizational Learning to Improve the Process

### ❖ Without Institutionalization

- Processes Are Not Likely to Be Executed or Managed Consistently
- The Processes Are Not Likely to Survive Staff or Leadership Changes
- Process Improvement May Not Relate to Business Goals
- The Organization Will Most Likely Find Itself Continuously “Reinventing the Wheel”
- There May Not Be the Commitment to Provide Resources or Infrastructure to Support or Improve the Processes
- Historical Data Is Likely to Be Incomplete or Unreliable

## ❖ Continuous Representation

- The Basis for Institutionalization Is Established Via the Capability Level 2 Generic Practices
- This Basis Is Extended in the Capability Level 3, 4 and 5 Generic Practices

## ❖ Staged Representation

- Institutionalization Is the Primary Focus of the Common Features
  - The Common Features Correspond to the Capability Level 2 and 3 Generic Practices

- ❖ Generic Goals Are Called “Generic” Because They Can Be Applied to All Process Areas
- ❖ Achievement of a **Generic Goal** in a Process Area Signifies Improved Control in Planning and Implementing the Processes Associated With That Process Area



- ❖ **Generic Practices** Are Activities That Ensure That the Processes Associated With the Process Area Will Be Effective, Repeatable, and Lasting
- ❖ Generic Practices Contribute to the Achievement of the Generic Goal When Applied to a Particular Process Area



## Generic Goals And Practices

Capability Level	Generic Goals	Generic Practices	Common Features Mapping
CL 1	GG1: Achieve Specific Goals	GP 1.1: Perform Base Practices	
CL 2	GG2: Institutionalize a Managed Process	GP 2.1: Establish an Organizational Policy GP 2.2: Plan the Process GP 2.3: Provide Resources GP 2.4: Assign Responsibility GP 2.5: Train People GP 2.6: Manage Configurations GP 2.7: Identify and Involve Relevant Stakeholders GP 2.8: Monitor and Control the Process GP 2.9: Objectively Evaluate Adherence GP 2.10: Review Status with Higher Level Management	Commitment to Perform Ability to Perform Directing Implementation Verifying Implementation
CL 3	GG3: Institutionalize a Defined Process	GP 3.1: Establish a Defined Process GP 3.2: Collect Improvement Information	
CL 4	GG4: Institutionalize a Quantitatively Managed Process	GP 4.1: Establish Quantitative Objectives for the Process GP 4.2: Stabilize Subprocess Performance	
CL 5	GG5: Institutionalize an Optimizing Process	GP 5.1: Ensure Continuous Process Improvement GP 5.2: Correct Root Causes of Problems	

ML 3  
ML 4  
ML 5

ML 2

# *Why Are They Difficult To Understand?*

- ❖ There Is Overlap Between Some Generic Practices and Some Specific Practices
  - GP 2.3 Provide Resources
  - PP SP 2.4 Plan for Project Resources
  
- ❖ Application of Generic Practices Can Lead to Recursion
  - GP 2.2 “Plan the Process” Applied to the Project Planning Process Area
  - GP 2.9 “Objectively Verify Adherence” Applied to the Process and Product Quality Assurance Process Area
  
- ❖ Some Relationships Are Not Obvious
  - Pull -> Push as in GP 3.2 -> IPM SP 1.5
  - Between GP's and PA's



# GP And PA Relationships

GP	Enabling PA	SP
2.2 Plan the Process	Project Planning (PROJ)	
2.3 Provide Resources		PP 2.4 Plan for Project Resources (PROJ)
2.4 Assign Responsibility		PP 2.7 Establish the Project Plan (PROJ)
2.5 Train People	Organizational Training (ALL)	PP 2.5 Plan for Needed Knowledge and Skills (PROJ)
2.6 Manage Configurations	Configuration Management (ALL)	
2.7 Identify and Involve Relevant Stakeholders		PP 2.6 Plan Stakeholder Involvement (PROJ) PMC 1.5 Monitor Stakeholder Involvement (PROJ) IPM 2.1 Manage Stakeholder Involvement (PROJ)
2.8 Monitor and Control the Process	Project Monitoring and Control (PROJ) Measurement and Analysis (ALL)	
2.9 Objectively Evaluate Adherence	Process and Product Quality Assurance (ALL)	
3.1 Establish a Defined Process	Organizational Process Definition (ALL)	IPM 1.1 Establish and maintain the project's defined process (PROJ)
3.2 Collect Improvement Information	Organizational Process Definition (ALL)	IPM 1.5 Contribute work-products...to the organizational process assets (PROJ) OPF 2.4 Incorporate process-related work-products...organizational process assets (ALL)



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# *Project Level Perspective*

## GP 2.2 Interactions With Other GPs And SPs

### GP 2.2 Plan the Process

#### Typical Contents for the Plan for Performing the Process

##### ❖ Process Description

- Activities
- Characteristics
- Requirements

##### ❖ Other Contents

- Resources
- Responsibility and Authority
- Training for Process
- CM Requirements for Process
- Involvement of Identified Stakeholders
- Measurement Requirements
- Activities for Monitoring and Controlling the Process
- Objective Evaluation Activities
- Management Review Activities

SPs for the Process Area

**PLAN EXECUTION**

- ❖ *When the Plan for Performing the Process Is Executed, All SP's and CL2 GP's Are Implemented, for a Given Process Area*
- ❖ *Plan Includes Budget and Schedule*
- ❖ *The Process Description Can Include Most of the Plan Content*

- GP 2.3 Provide Resources
- GP 2.4 Assign Responsibility
- GP 2.5 Train People
- GP 2.6 Manage Configurations
- GP 2.7 Identify and Involve Relevant Stakeholders
- GP 2.8 Monitor and Control the Process
- GP 2.9 Objectively Evaluate Adherence
- GP 2.10 Review Status With Higher Level Management

## GP 3.1 Establish A Defined Process

### GP 2.2 Plan the Process

#### Typical Contents for the Plan for Performing the Process

##### ❖ Process Description

- Inputs
- Outputs
- Activities
- Entry/Exit Criteria

##### ❖ Other Contents

- Resources
- Responsibility and Authority
- Training for Process
- CM Requirements for Process
- Involvement of Identified Stakeholders
- Measurement Requirements
- Activities for Monitoring and Controlling the Process
- Objective Evaluation Activities
- Management Review Activities

- GP 2.3 Provide Resources
- GP 2.4 Assign Responsibility
- GP 2.5 Train People
- GP 2.6 Manage Configurations
- GP 2.7 Identify and Involve Relevant Stakeholders
- GP 2.8 Monitor and Control the Process
- GP 2.9 Objectively Evaluate Adherence
- GP 2.10 Review Status With Higher Level Management

Defined Process

Tailoring

Set of Standard Processes

OPD

### GP 3.1

PLAN EXECUTION

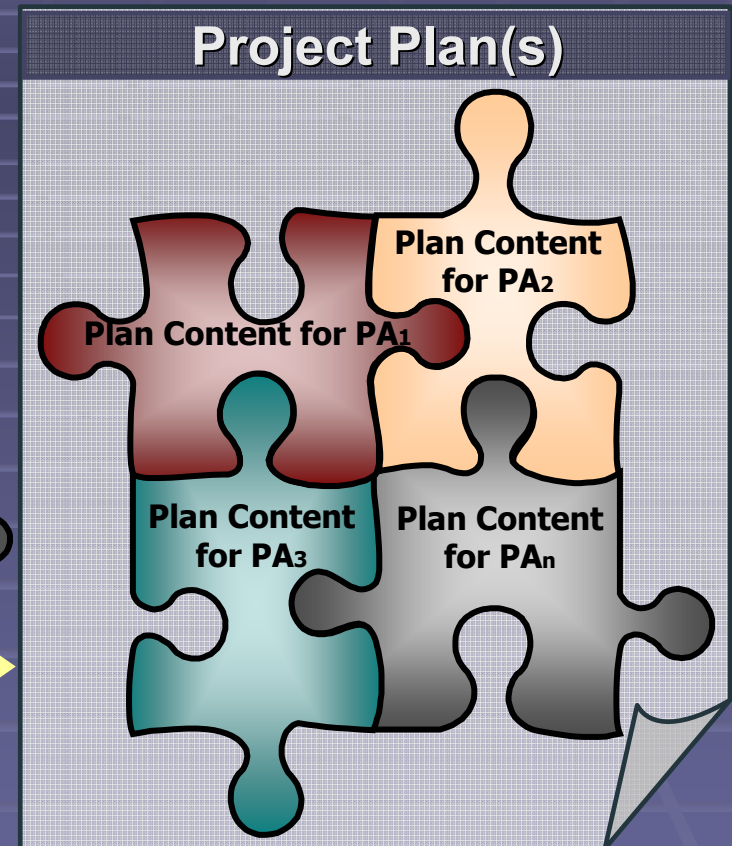
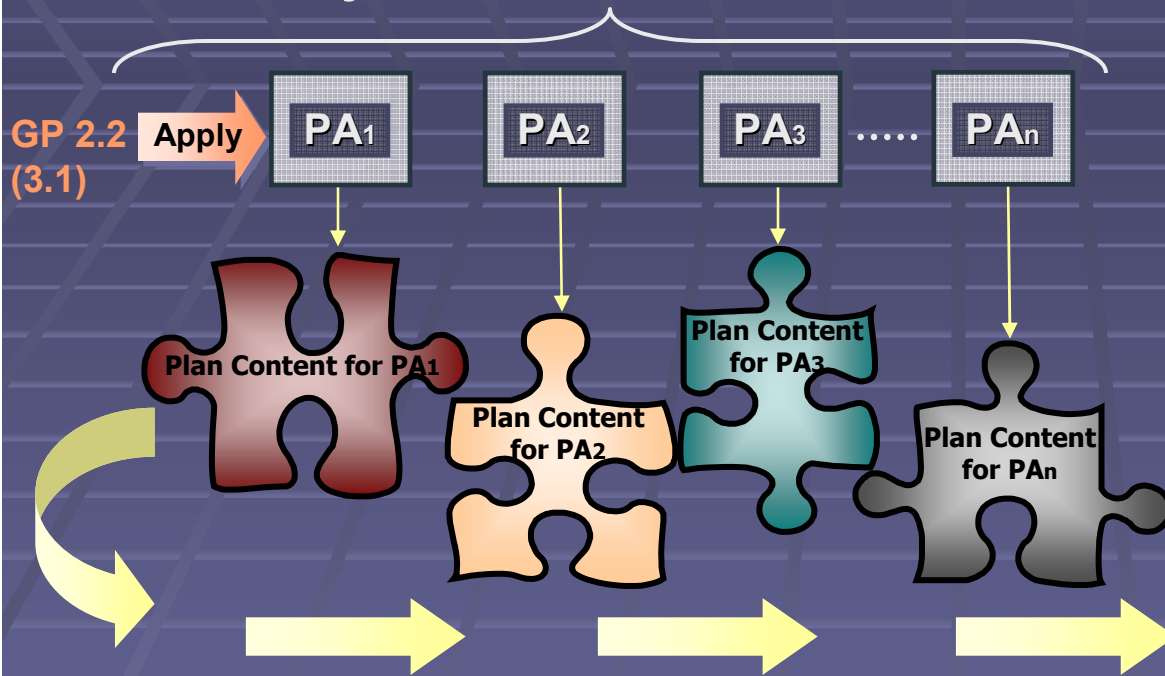
❖ The Process Description in the Plan for Performing the Process Is Now a Defined Process Tailored From the Organizations Set of Standard Processes

❖ When the Plan for Performing the Process Is Executed, All SP's, GP's 2.2 - 2.10, and GP 3.1 Are Implemented for a Given Process Area

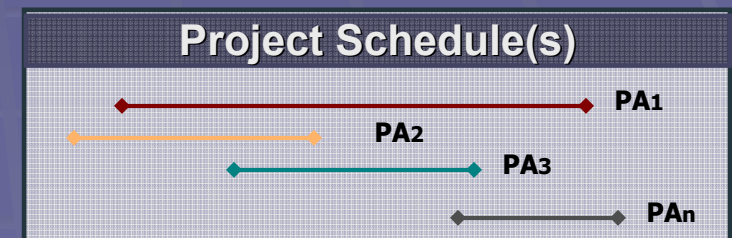


## GP 2.2 Plan The Process And Project Plan(s)

### Project-Level Process Areas



- ❖ The Project Plan(s) Should Have the “Plan the Process” Content for All Project-Level PA’s (Except for the Project Planning PA)
- ❖ When the Project Is Executed According to the Project Plan(s) and Schedule(s), Compliance With All Project-Level SP’s and GP’s Is Achieved (Will Address the Project Planning PA Later)





# *Ensuring That Generic Practices Are Implemented At The Project Level*

## ❖ Examples of Approaches:

- Include the Generic Practices in the Process Descriptions
  - Since the Process Descriptions Are a Component of the Project Plan(s) (by Reference or Explicitly), the Generic Practices Can Be Planned During the Project Planning Phase and Implemented During the Project Execution Phase
  - In the Continuous Representation, There May Not Be a Project Plan - the Process Plan (containing the Process Description) can be used instead
- Define a Project Plan Template That Includes All the Generics Across All Project-Level Process Areas (Will Work for the Continuous Representation, Only if PP Is Being Implemented)
  - What Resources Are Needed for Project Management, Engineering, and Support activities (i.e. across all Project-Level PA's)?
  - What Training Is Needed to Perform These Activities Effectively and Efficiently?
  - Who Needs to Be Involved in These Activities Throughout the Life Cycle?
  - What Work Products Should Be Controlled? Objectively Evaluated?
  - **Tables/Matrices Are Useful to Capture Generic Practice Requirements**

## *Don't Forget About "Plan The Plan"*

- ❖ Typically, the Plan Resulting From Applying GP 2.2 (Plan the Process) to the Project Planning Process Area Is Not Included in the Project Plan
- ❖ This Plan Is Used by the Project Manager to Plan the Activities of the Project Planning Process Area
  - Establishing Estimates
  - Developing the Project Plan
  - Obtaining Commitment to the Plan
- ❖ A Simple Checklist and/or "Plan the Plan" Template Can Be Used to Guide the Project Manager and Meet the Intent of This Practice

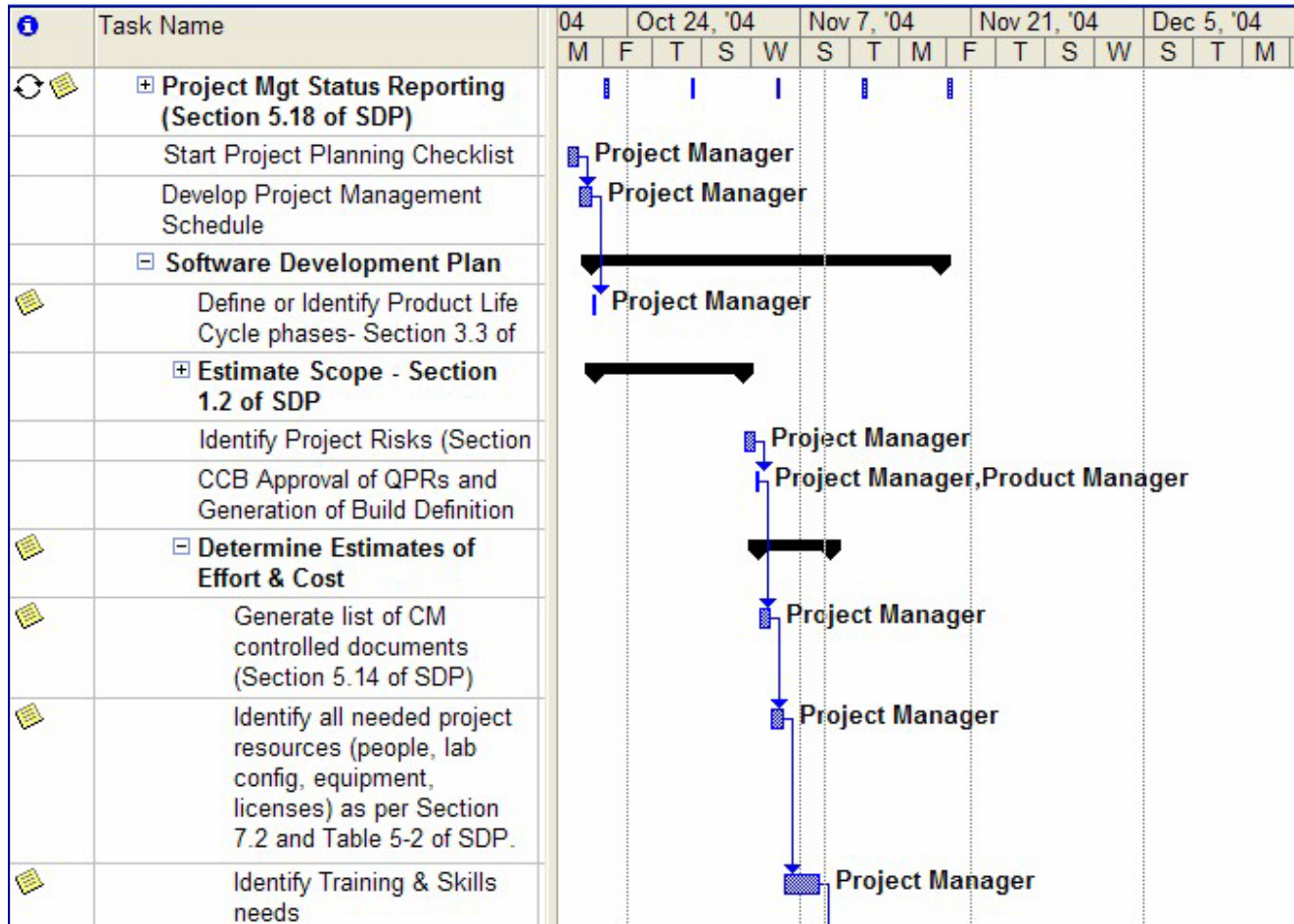


# Sample “Plan the Plan” Checklist Template (Excerpt)

Activities	Planned	Actuals
Configuration Managed Products generated by Project Planning	<p>The following items will be placed under QCM control after the project schedule is baselined.</p> <ol style="list-style-type: none"> <li>This checklist.</li> <li>Project Management Planning Schedule</li> <li>[Name of this project] Project schedule</li> <li>The [Name of this project] Software Development plan (SDP)</li> </ol>	<input type="checkbox"/> This completed checklist. <input type="checkbox"/> Completed & Controlled Project Management Planning Schedule <input type="checkbox"/> Completed & Controlled [Name of Project] Software Development Plan <input type="checkbox"/> Controlled [Name of Project] Project schedule. <input type="checkbox"/> Controlled Project Planning Meeting Minutes <input type="checkbox"/> Controlled Project Planning Status Reports
Objectivity of Project Planning	<p>SQA audit of Project Planning artifacts (project management planning schedule, project schedule, SDP and this checklist) on date of completed checklist.</p> <p>Planned date of Audit: MM/DD/YY</p>	<input type="checkbox"/> SQA Audit of this completed checklist occurred on MM/DD/YY
Project Planning Reviews with Product Management	<p>Populated Project planning status reports.</p> <p>Minutes from the reporting meeting.</p> <p>Action items from the reporting meeting.</p> <p>status meetings anticipated with Product Management</p>	<input type="checkbox"/> Controlled Project Planning Status Report <input type="checkbox"/> Controlled Meeting Minutes of review <input type="checkbox"/> Controlled Action Items from Review <p>status meetings actually held with Product Management</p>



# Sample "Plan the Plan" Schedule Template (Excerpt)

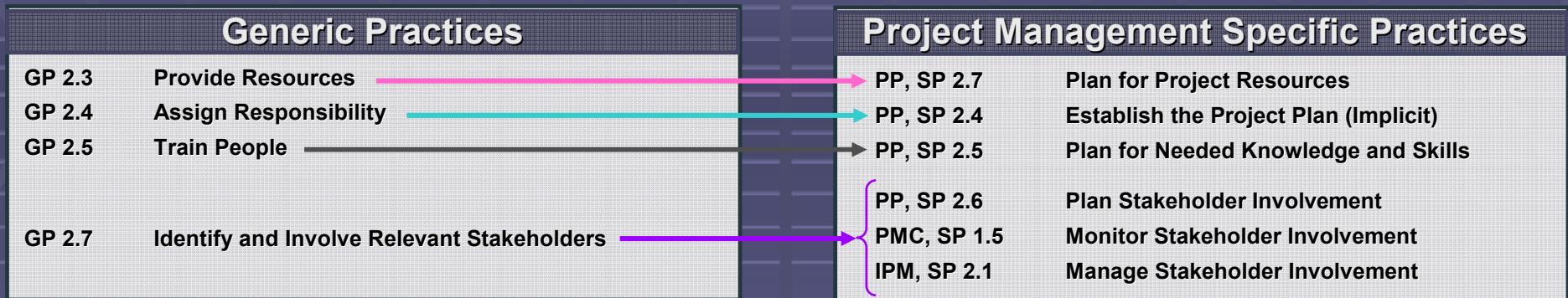




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*Model Overlaps One More Time...*

## Overlap Between GP's And Project Management SP's



- ❖ Scope Here Is for an Individual PA
  - Subset of Project Management PA's Content

- ❖ Scope Here Is for the Entire Project
  - All Project-Level PA's Are Included

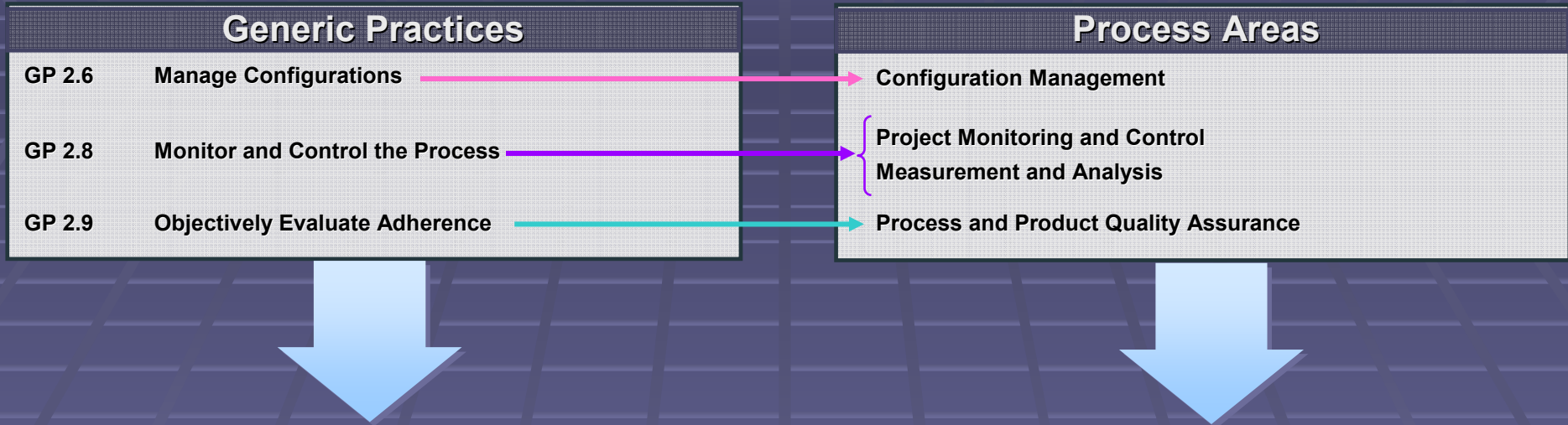
❖ **The GP's Serve as "Reminders" to the Project Management PA's to Include Activities Across All Project-Level PA's**

❖ **If the Scope of the Project Management Processes Includes All Project-Level PA's, GP's 2.3, 2.4, 2.5\* and 2.7 Will Be Satisfied for Each of the Project-Level PA's**

*\* Also Requires OT*



# Other PA → GP Relationships For Project Level PAs



- ❖ Scope Here Is for an Individual PA
  - Subset of CM, PMC, M&A, and PPQA Content

- ❖ Scope Here Is for the Entire Project
  - Activities and Work Products From All Project-Level PA's Are Included in the scope of these PA's

❖ *CM, M&A, PMC, PPQA Can Implement in Full GP's 2.6, 2.8 and 2.9 for All Project-Level PA's*

❖ *Perceived Redundancy*

- *Ensures That Key Institutionalization Activities Take Place in the Continuous Representation*
- *Serves as a Reminder in the Staged Representation*





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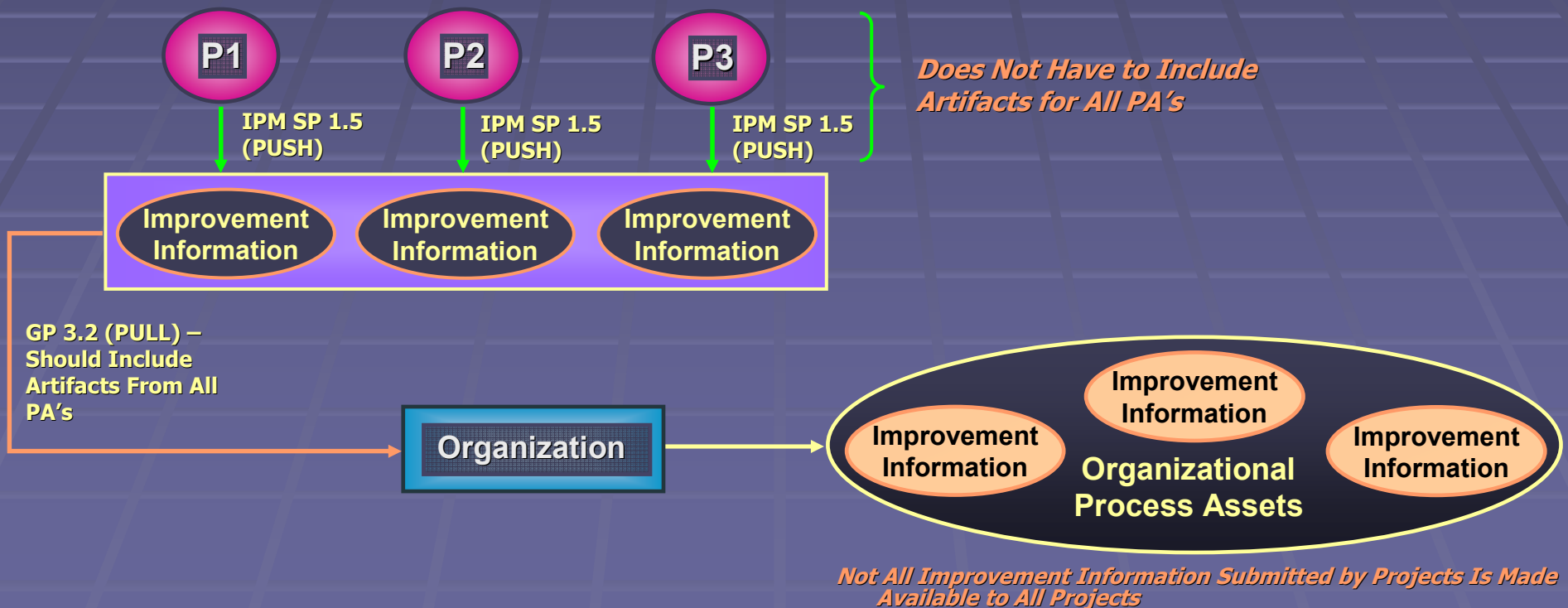
# *Organizational Level Perspective*

## *GP 2.1 Establish An Organizational Policy*

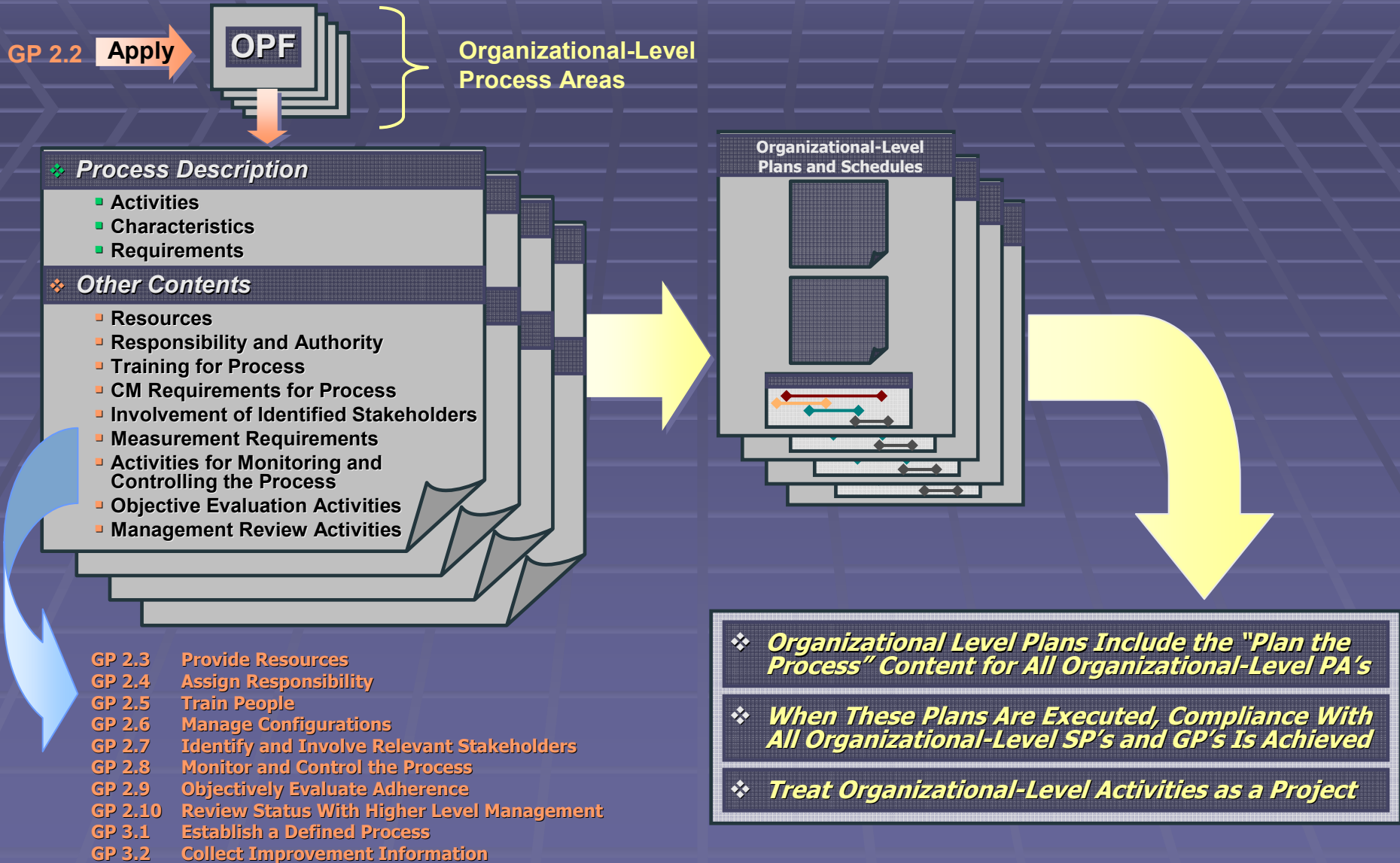
- ❖ Direction From Senior Management About Organizational Expectations for the Process
- ❖ Organizational Level Responsibility
- ❖ Does Not Imply That There Must Be a Policy in Place for Each Process Area, but All Process Areas Must Be Covered
- ❖ Remember “Establish and Maintain” Means Define, Document, Use, and Update

## GP 3.2 – Collect Improvement Information – “Pull” vs. “Push”

- ❖ **This GP Resides at the Organizational Level – the Organization Collects Information From All the Project-Level and Organizational Activities (PULL)**
- ❖ **For Project-Level PA’s, IPM SP 1.5, “Contribute Work Products, Measures, and Documented Experiences to the Organizational Process Assets”, Can Implement GP 3.2 in Full (PUSH)**



## GP's Applied To Organizational Level Process Areas



- ❖ Generic Practices Are Critical for Institutionalization
- ❖ Understanding the Relationships Among Model Components Is Important
  - For Correct and Useful Application of Generic Practices
  - To Simplify Model Implementation
  - To Prevent Duplication of Effort
- ❖ Think and Analyze How the Generic Practices Apply to Your Business Environment
  - Tailor the GP's to Suit Your Business Context and Needs
  - Allow for Professional Judgment

*Use the CMMI as a Guide, Not a Dictate*