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DEFINING THE FUTURE

Proposed Approach to Heterogeneous CMMI ® Appraisals

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- What is a heterogeneous appraisal
- What does “organization” mean - defining & refining the term
- Scoping the “organization”
- Scoping the appraisal
- Summary - Who gets to hang the “certificate” on the wall, who benefits, what are the risks

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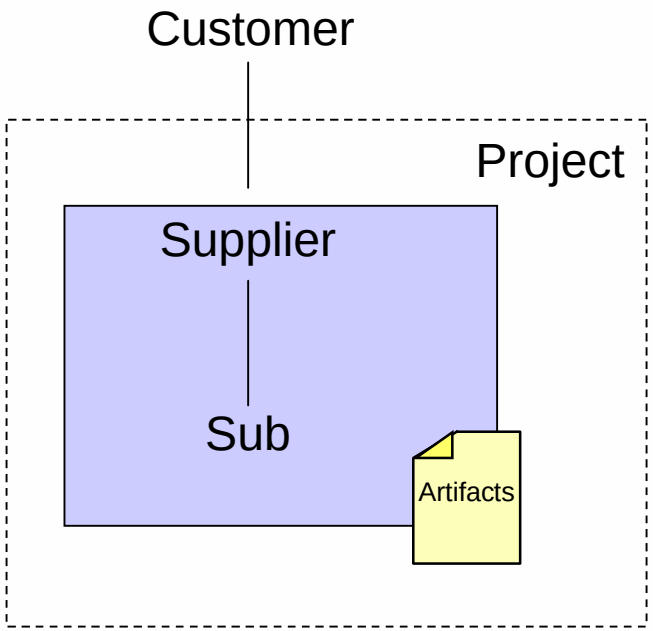
ous vs. Heterogeneous Projects

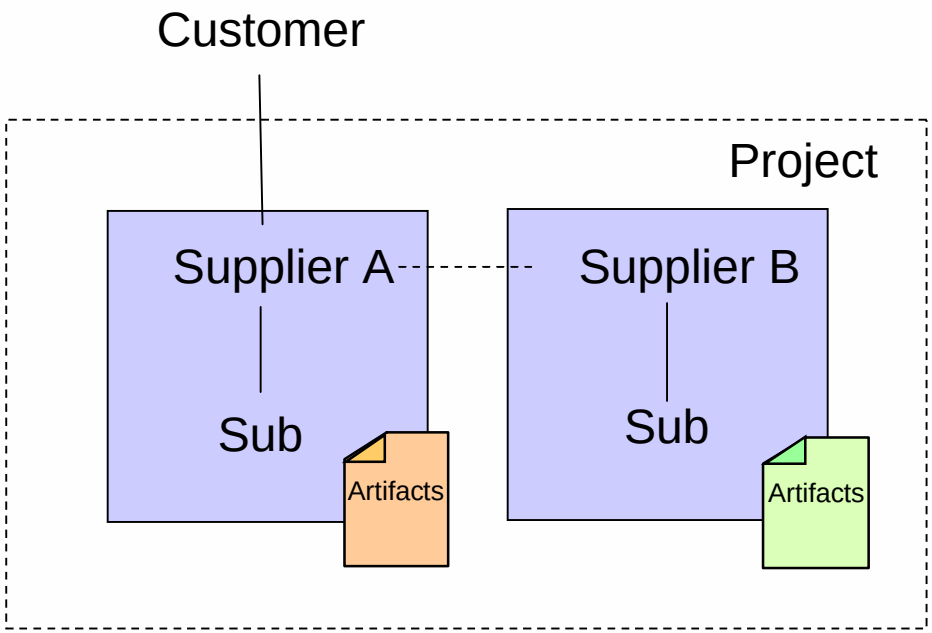
Homogeneous Project



Characteristics:
- Single supplier (prime contractor)
- Multiple subcontractors - managed by prime

We know how to appraise this

Heterogeneous Project



Characteristics:
- Multiple suppliers (contractor + partners)
- Multiple subcontractors - managed by multiple contractors

How do we appraise this ?

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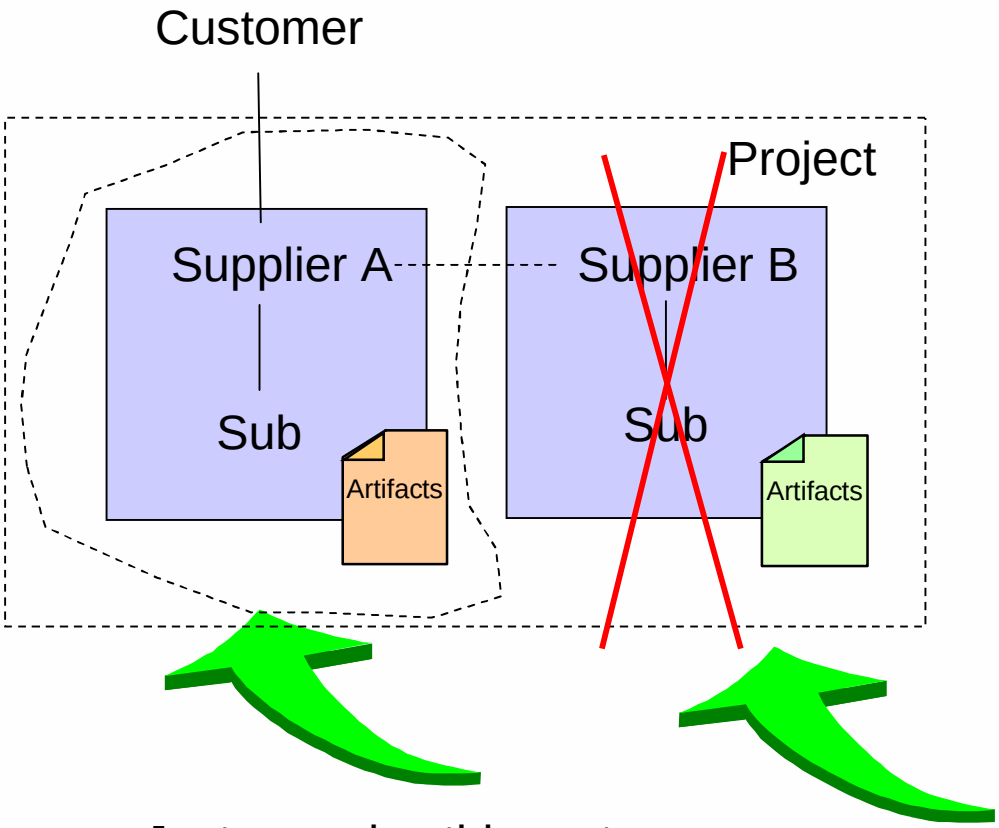
Approaches for Heterogeneous Option 1

Typical Approach



Everything we need to satisfy the CMMI process areas is covered

. . . BUT . . .

Are you giving the customer full value?

Are you ensuring project success?

Are you projecting true project integration?

Just appraise this part of the project

Ignore this part

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rganization"?

- "Today, a single company usually does not develop all the components that compose a product or service. More commonly, some components are built in-house and some are acquired; then all the components are integrated into the final product or service. Organizations must be able to manage and control this complex development and maintenance process."
- "The problems these organizations address today involve enterprise-wide solutions that require an integrated approach. Effective management of organizational assets is critical to business success. In essence, these organizations are product and service developers that need a way to manage an integrated approach to their development activities as part of achieving their business objectives."

From CMU/SEI-2006-TR-008, CMMI® for Development, Version 1.2, p. 3

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on vs. Project

- **Organization - An administrative structure in which people collectively manage one or more projects as a whole, and whose projects share a senior manager and operate under the same policies.**

The "persistent" part of the business

- **Project - A managed set of interrelated resources which delivers one or more products to a customer or end user.**

The "transitory" part of the business

"Supplier" = "Organization" + "Project(s)"

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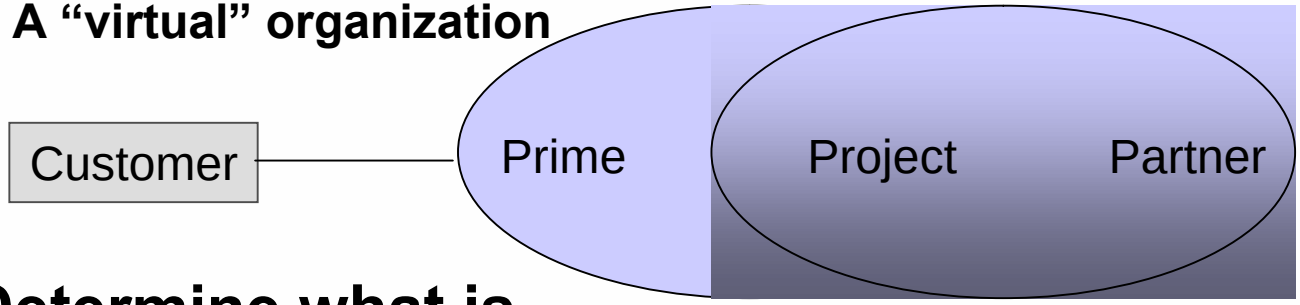
Appraisal Scope



- Determine what is “In-scope” and what is “Out-of-scope” for appraisal
- Treat each process area as either an “organizational” process area or a “project” process area - give the same consideration to the generic practices
- Get buy-in from your organization and the “partner” organization (the assumption is that your partner organization is at least CMMI Level 3)
- Get buy-in from your appraiser
- Write it down !

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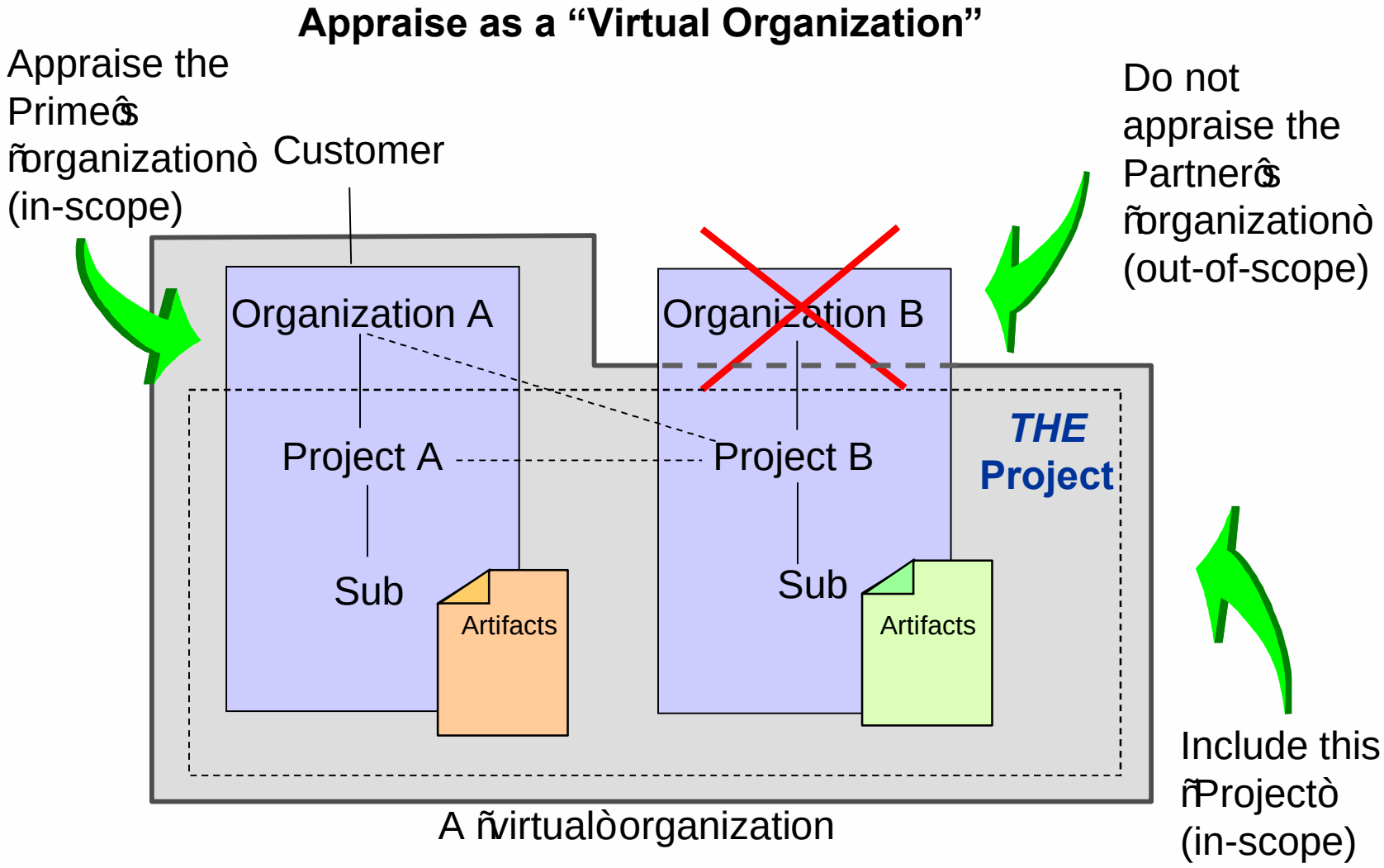
Approaches for Heterogeneous Option 2



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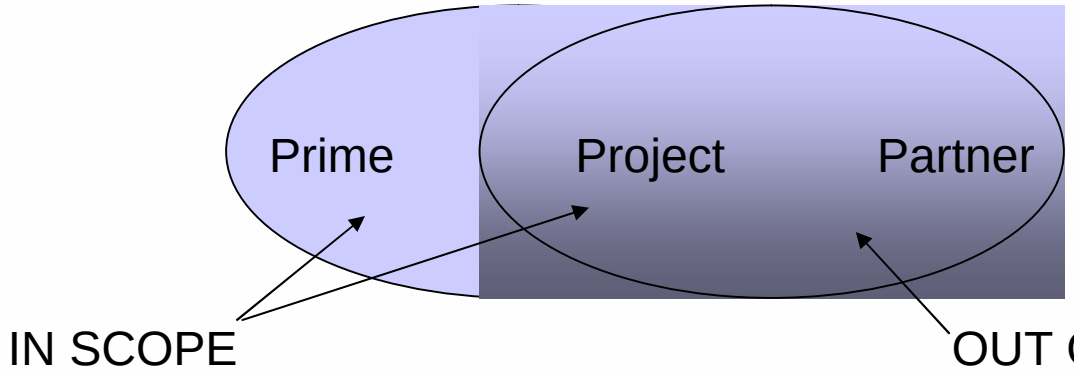
es of Thumb"

- If process activities primarily benefit the prime organization, then the prime organization is in-scope and the partner organization is out-of-scope. E.g. OPF process needs and improvements benefit the prime's processes, not the partners
- If the process area directly serves the project, then it is in-scope, regardless of which organization performs it. E.g., PP - project planning is for the benefit of the project, regardless of which organization does it



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Scope - Engineering

- The Engineering process areas are executed on the project
- Partner follows the Prime's processes - if not, then the Partner can be treated as a subcontractor
- Evaluate the processes as executed on the Project, the produced artifacts, and interview both Prime and Partner staff

Requirements Development
Requirements Management
Technical Solution
Verification
Validation
Product Integration

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Scope - Process Management

- Process Management process areas are executed in the “home room” part of the organization
- Process improvement activities primarily benefit the Prime, so evaluate the Prime and not the Partner
- Organizational Training & Organizational Innovation and Deployment address the Prime’s strategic needs and business objectives, so evaluate the Prime only

Organizational Process Focus
Organizational Process Definition +IPPD
Organizational Training
Organizational Process Performance
Organizational Innovation and Deployment

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Scope - Support

- Causal Analysis & Resolution is tied to OPP and OID, so it may be primarily the Prime's responsibility and not in-scope for the Partner
- Configuration Management, Decision Analysis, and Measurement when used as part of Project activities are in-scope for both organizations, otherwise they are just in-scope for the Prime
- PPQA may be handled primarily by the Prime or by both, and scoped accordingly

Causal Analysis and Resolution
Configuration Management
Decision Analysis and Resolution
Measurement and Analysis
Process and Product Quality Assurance

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Scope - Project Management

- Integrated Project Management has a strong organizational component, so it may be primarily the Prime's responsibility
- Project Planning, Project Monitoring and Control, Quantitative Project Management, Risk Management, Supplier Agreement Management are executed in the Project environment, so are in-scope for both organizations

Project Planning
Project Monitoring and Control
Risk Management
Supplier Agreement Management
Integrated Project Management +IPPD
Quantitative Project Management

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t the Generic Practices?

- **These GPs are "organizational" in nature and are the responsibility of the Prime**
  - GP 2.1 Establish an Organizational Policy
  - GP 3.1 Establish a Defined Process
  - GP 3.2 Collect Improvement Information
- **These GPs are the responsibility of both the Prime and Partner for "project process areas" and for just the Prime for "organizational process areas"**
  - 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

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- The heterogeneous organization is a “virtual organization” made up of components of different companies which do not follow the traditional supplier-subcontractor relationship
- Such an organization can be appraised by careful scoping of the appraisal - and with concurrence of the organizations involved and the appraiser
- It is the Prime organization who gets the CMMI rating
- The customer benefits by having a more complete appraisal of the project
- There is a risk that another company can cause you to fail your appraisal - which in itself may be a valid indication of your ability to manage a project

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