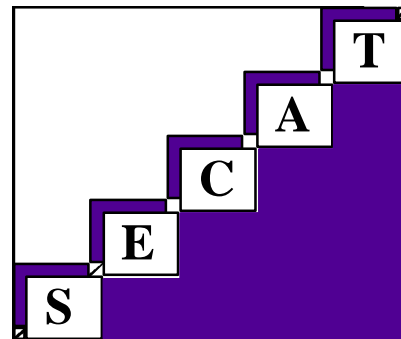


Top Level Mapping Between EIA I/S 731: SECM and its Two Source Documents, the EPIC SE-CMM and INCOSE SECAM



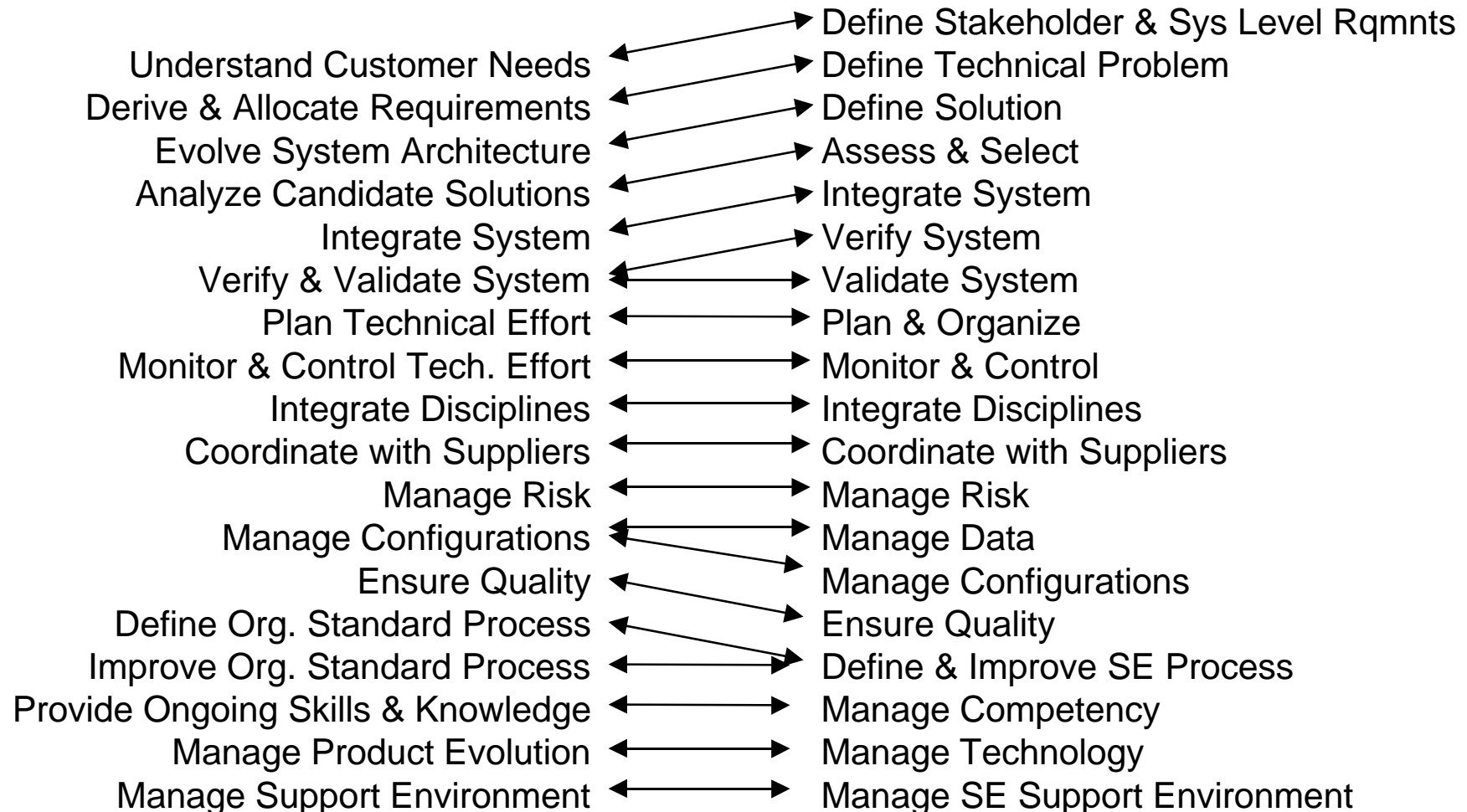
If You've Been Using Either the SE-CMM or SECAM

- Work done to comply with any one model is generally applicable to any other model, but there are differences between the models
- All 3 models generally include the same Process Areas / Key Focus Areas / Focus Areas
- All 3 models use the multi-number, rating profile architecture (called continuous architecture)
- SECAM and SECM include many more specific practices than the SE-CMM
- SECAM and SECM include specific measures of “value” and “effectiveness” separate from the Generic Practices

Top Level Process Area Overlap Between SE-CMM & SECM is 100%

SE-CMM Process Areas

SECM Focus Areas



Top Level Generic Practice Overlap Between SE-CMM & SECM is 100%

SE-CMM Generic Practices: Level 2

- Allocate Resources
- Assign Responsibilities
- Document the Process
- Provide Tools
- Ensure Training
- Plan the Process
- Use plans, standards, procedures
- Do configuration mgmt
- Verify process compliance
- Audit work products
- Track w/ measurement
- Take Corrective Action

SECM Generic Practices: Level 2

Follow recorded & approved plans & processes

Verify compliance w/ plans and take action if needed

Top Level Generic Practice Overlap Between SE-CMM & SECM is 100%

SE-CMM Generic Practices: Levels 3, 4, 5

- Standardize the process
- Tailor the standard process
- Use a well-defined process
 - Use well-defined data
 - Establish quality goals
- Determine process capability
 - Use process capability
- Establish process effectiveness goals
- Continuously improve the std process
 - Perform causal analysis
 - Eliminate defect causes
- Continuously improve the defined proc

SECM Generic Practices: Levels 3, 4, 5

- Standardize & record a well-defined process
- Tailor the standard process
- Implement & improve the FA activities
- Improve the standard process
- Collect & analyze metrics to determine performance
- Take action to align performance & expectations
- Ident activities appropriate for process repeatability
- Establish quantitative goals for proc effectiveness
- Improve the org standard process based on data
- Perform causal analysis & eliminate variations

SECM Includes Many More Specific Practices than the SE-CMM Base Practices

SECM: Coordinate with Suppliers

- 2.4-1-1 Ident components/services to be provided by other orgs
- 2.4.1-2 Perform trade studies to determine make/buy decisions
- 2.4-2-1 Choose suppliers using Assess & Select
- 2.4-2-2a Criteria are established to evaluate suppliers
- 2.4-2.2b Select supplier based on input from SE team lead
- 2.4-2-3 Select supplier based on supplier's ability to perform
- 2.4-3-1 Provide needs, expectation, MOEs to suppliers
- 2.4-3-2a Requirements are formally documented
- 2.4-3-2b Requirements changes are re-negotiated and documented
- 2.4-3-3 There is a clearly documented agreement

.....

(total of 22 SPs covering 4 levels)

SE-CMM: Coordinate with Suppliers

- 18.01 Ident components/services to be provided by other org.
- 18.02 Ident suppliers that have shown expertise in area
- 18.03 Choose suppliers using Analyze Solns
- 18.04 Provide needs, expectations, MOEs to suppliers
- 18.05 Maintain communication with suppliers

(all BPs required for level 1)

Level 1: SECM Specific Practices Compare to SE-CMM Base Practices

SECM: Coordinate with Suppliers

- 2.4-1-1 Ident components/services to be provided by other orgs
- 2.4-2-1 Choose suppliers using Assess & Select
- 2.4-3-1 Provide needs, expectation, MOEs to suppliers
- 2.4-4-1 Manage supplier's progress (schedule, cost, technical performance)

(4 SPs cover level 1)

SE-CMM: Coordinate with Suppliers

- 18.01 Ident components/services to be provided by other org.
- 18.02 Ident suppliers that have shown expertise in area
- 18.03 Choose suppliers using Analyze Solns
- 18.04 Provide needs, expectations, MOEs to suppliers
- 18.05 Maintain communication with suppliers

(all BPs required for level 1)

Levels 2-5: SECM Specific Practices & Generic Attributes Are Covered Indirectly in SE-CMM

Examples:

SECM: Coordinate with Suppliers

2.4-1-2 Org performs trade studies to determine make-buy decisions

2.4-2-2a Criteria are established to evaluate suppliers

2.4-3-2a Reqts for the work are documented

SE-CMM: Coordinate with Suppliers

=> covered in BP18.03 reference to Analyze Candidate Solutions

=> covered in BP01.01 Establish evaluation criteria

=> covered in GP 2.1.3 Document the process

Top Level KFA Overlap Between SECAM & SECM is 100%

SECAM Key Focus Areas

SECM Focus Areas

System Concept Definition	←→	Define Stakeholder & Sys Level Rqmnts
Requirements and Functional Analysis	←→	Define Technical Problem
System Design	←→	Define Solution
Integrated Engineering Analysis	←→	Assess & Select
System Integration	←→	Integrate System
System Verification	←→	Verify System
System Validation	←→	Validate System
Planning	←→	Plan & Organize
Tracking & Oversight	←→	Monitor & Control
Intergroup Coordination	←→	Integrate Disciplines
Subcontract Management	←→	Coordinate with Suppliers
Risk Management	←→	Manage Risk
Data Management	←→	Manage Data
Configuration Management	←→	Manage Configurations
Quality Management	←→	Ensure Quality
Process Management & Improvement	←→	Define & Improve SE Process
Competency Development	←→	Manage Competency
Technology Management	←→	Manage Technology
Environment & Tool Support	←→	Manage SE Support Environment

Top Level Generic Practice Overlap Between SECAM & SECM is 100%

SECAM Generic Practices: Level 2

- Activities planned
- Written policy
- Approved plan
- Responsibility assigned
- Resources provided
- Personnel trained
- Data collected
- Corrective action taken

SECM Generic Practices: Level 2

Follow recorded & approved plans & processes

Verify compliance w/ plans and take action if needed

Top Level Generic Practice Overlap Between SECAM & SECM is 100%

SECAM Generic Practices: Levels 3, 4, 5

- Formal procedure
- Metrics developed
- Standard process
- Tailoring guidelines
- Metrics used
- Analyses performed
- Corrective actions implemented
- Process effectiveness evaluated
- Actions taken
- Improve the standard process

SECM Generic Practices: Levels 3, 4, 5

- Standardize & record a well-defined process
- Tailor the standard process
- Implement & improve the FA activities
- Improve the standard process
- Collect & analyze metrics to determine performance
- Take action to align performance & expectations
- Ident activities appropriate for process repeatability
- Establish quantitative goals for proc effectiveness
- Improve the org standard process based on data
- Perform causal analysis & eliminate variations

SECM Themes Compare to SECAM Characteristics

SECM: Coordinate with Suppliers

- 2.4-1 Outsourced Work Product Identification
- 2.4-2 Supplier Selection
- 2.4-3 Work Product and Activity Definition
- 2.4-4 Supplier Management

SECAM: Subcontract Management

- 1.3-1 Subcontract mgmt activities are planned
- 1.3-2 Defn & flowdown of reqts are consistent
- 1.3-3 Technically qualified subcontractors are selected
- 1.3-4 Work products and performance are monitored

SECM Specific Practices + Generic Attributes Compare to SECAM Questions

SECM: Coordinate with Suppliers

- 2.4-1-1 Ident components/services to be provided by other orgs
- 2.4-2-1 Choose suppliers using Assess & Select
- 2.4-3-1 Provide needs, expectation, MOEs to suppliers
- 2.4-4-1 Manage supplier's progress (schedule, cost, technical performance)

(4 SPs cover level 1)

GA 1 : Marginal Effectiveness

GA 2 : Marginal Value

SECAM: Subcontract Management

- 1.3-1.1 Is subcontract mgmt being accomplished at least informally?
- 1.3-1.2 Are activities planned?
- 1.3-1.3 Are reqts documented?
- 1.3-1.4 Are changes negotiated and documented?
- 1.3-1.5 Are costs tracked and controlled?
- 1.3-1.6 Are the results of marginal value?
- 1.3-1.7 Are activities of marginal effectiveness?

(7 questions cover level 1)

SECAM covers GAs as additional questions

Conclusions

- CMMs in general help provide structure and guidance to your process development and process improvement work.
 - regardless of the model you've chosen
- All process development and process improvement work should be based on your organization's business goals.
 - so there's no such thing as "wasted improvements"
- Detailed mappings between existing models and SECM can easily be provided.
 - see <http://www.secat.com>