Applying CMMI-SVC Process Areas to CMMI-DEV Projects

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TO INFINITY AND BEYOND
Topics for Discussion

• Why look Beyond Development?

• *Sampling* of Specific Service Process Areas that enhance the Engineering Process Areas

• Benefits of Service PAs to Development Projects
WHY????

• Expectations of the product being developed
  – Sustainment expected
  – Maintenance phase expected
  – Product Warranties
  – User Training
  – Technology Refresh

Product Development has evolved to a Service System
Process Areas to Choose

• ALA Carte Menu, Please
Service Process Areas

• Service System Transition (SST)
• Service Continuity (SCON)
• Capacity and Availability Management (CAM)

ONLY A SAMPLE – OTHERS MAY APPLY
ACQ PAs if product has a large amount of suppliers
Product Integration

• Goal coverage
  – Prepare / Ensure Interface Compatibility/ Assemble and Deliver

... Then WHAT?

• How can the components be modified/ added/ updating while maintaining the functionality of the whole?

... The Answer is
Service System Transition

• Goal coverage
  – Prepare/ Deploy

• Prepare for transition
  – Gives the development team guidance on methodically improving the product (above and beyond initial delivery) with new or improved functionality, while considering and managing the impact

• Planning of the transition coupled with product integration engineering provides both the producer and the ultimate customer with the confidence that a trusted system will CONTINUE to operate effectively as the context changes
Service Continuity

• Fills an obvious “gap” in product development
  — Continuity of “services” associated with sustainment
  — Additionally – continuity of the system itself – “System Continuity”

• Plan for system component failures while maintaining the critical functions of the overall system
Risk Management

• Core Process Area
  – In both Dev and SVC

What about system functionality – versus cost schedule – development?
What about sustainment/maintenance resources?

• Enhance to include minimizing a component failure
  – Mitigate the risk of losing critical functionality
Capacity and Availability

• Development Tool
  – Translate “resources” into component and system functionality
  – Test Engineers
    • Use to monitor that the functions/ components are present and operating when needed
    • Critical during Stress and Endurance Tests

• Management Tool
  – Use practices to make sure costs associated with component development and maintenance are within budget
Benefits, Benefits, Benefits...

• Product Integration coupled with Service System Transition
  – Internally – impact awareness for management/ configuration management/ test/ quality
  – Externally – confidence system will continue to operate
• Adding Service Continuity (a.k.a. System Continuity)
  – Customer and users MUST identify those requirements associated with critical functions
  – Test Engineers focus on system failure as well as individual component failures to test for continuous critical functionality
• Risk Management coupled with Capacity and Availability
  – Expands the focus from internal development to external operations
  – Bridges project evolution from production to sustainment
Moral of the story

• Encourage the use of CMMI – SVC as an extension to CMMI- DEV

• Proactively selecting process areas regardless of the constellation to meet customer needs
  – Multi-dimensional view of quality
  – Production and Operational life cycles supported
...And the Walls Come Tumbling Down