



Samsung SDS' Experience Performing SCAMPISM Class A with the People CMM[®]

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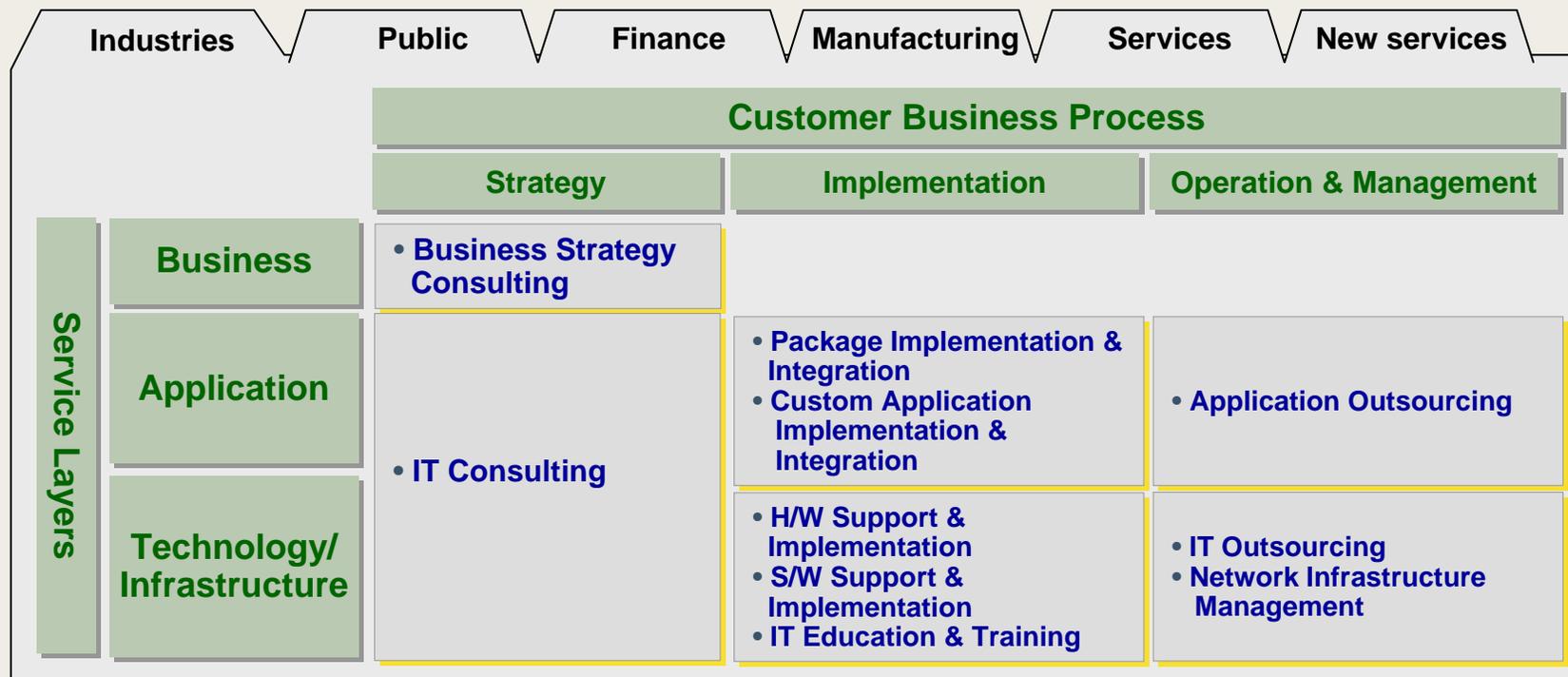
Topics

- Company Overview
- Why SAMSUNG SDS chose the P-CMM
- P-CMM suitability with SCAMPI
- P-CMM and CMMI[®] correlation
- SAMSUNG SDS CMM Timeline
- My ProWayII Introduction
- Pitfalls and Successes in SDS' 5 year journey to SW-CMM, CMMI and P-CMM
- Observations for other organizations with similar internal customer service requirements
- Lessons Learned Summary



Company Overview

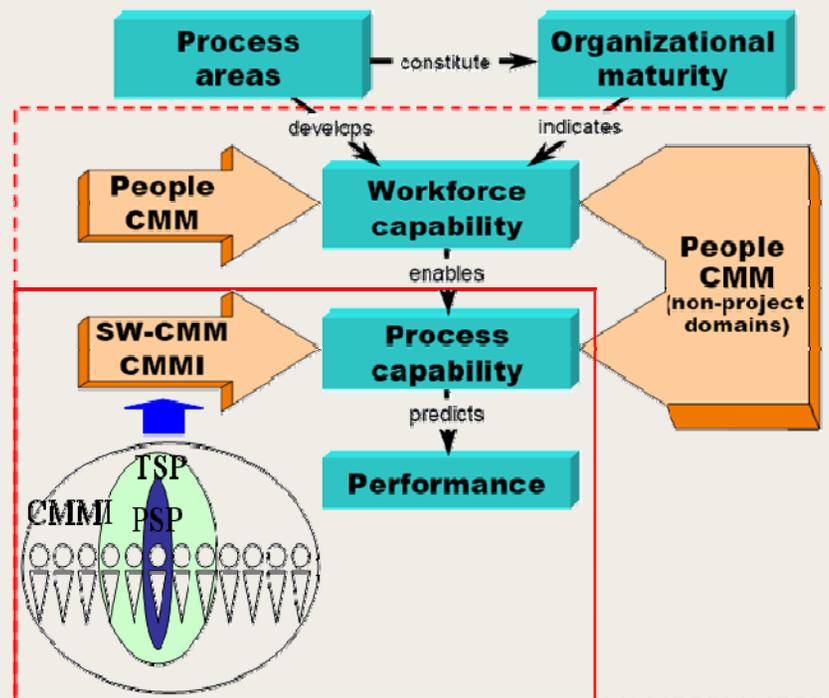
- **Revenue / Employee : \$1.54 Billion USD / 7,100 (Domestic), 620 (Overseas)**
- **Service Line Map:**
 - Segmenting the IT service sector based upon customer needs and concerns,
 - Classifying service areas into categories to provide appropriate SDS capacity and solutions.





Why SAMSUNG SDS chose the P-CMM

- IT Services business of Samsung SDS is “People Business” where competency-based delivery processes are critically important
- Combination of CMMI and P-CMM was recognized as the best reference model for SDS’ innovation and integration of IT service processes and HR practices
- “Lifetime” Employment paradigm eroding. Competency based career planning and training now a focus





P-CMM suitability with SCAMPI

- Staged Architecture of model
 - similar components (i.e. Process Areas, Common Features, Goals, Practices)
- SCAMPI requirements directly transferable e.g. Process Implementation Indicator (PII) structure, Direct and Indirect artifacts, verification versus discovery approach
- Essential ATM requirements the same e.g. application domain experience, Intro to P-CMM course, Team Training
- Organization preparation the same as for a CMMI SCAMPI (e.g. project selection, lifecycle considerations, management versus practitioners)
- Non-specific words in P-CMM caused some interpretation concerns e.g. “adequate”, “enough”, “fully”



P-CMM suitability with SCAMPI-2

- P-CMM common features practices very detailed— characterization can require “instances” outside of focus projects
- Interview question “threads” can require more preparation, coordination and consolidation for ATMs with basic knowledge of People CMM
- People CMM Maturity Questionnaire was not used due to language requirements and was not needed by SCAMPI due to PIID preparation.
However, organizations could lose some high level “insights” of People CMM progress and preparation that come naturally with its’ use.



P-CMM and CMMI correlation

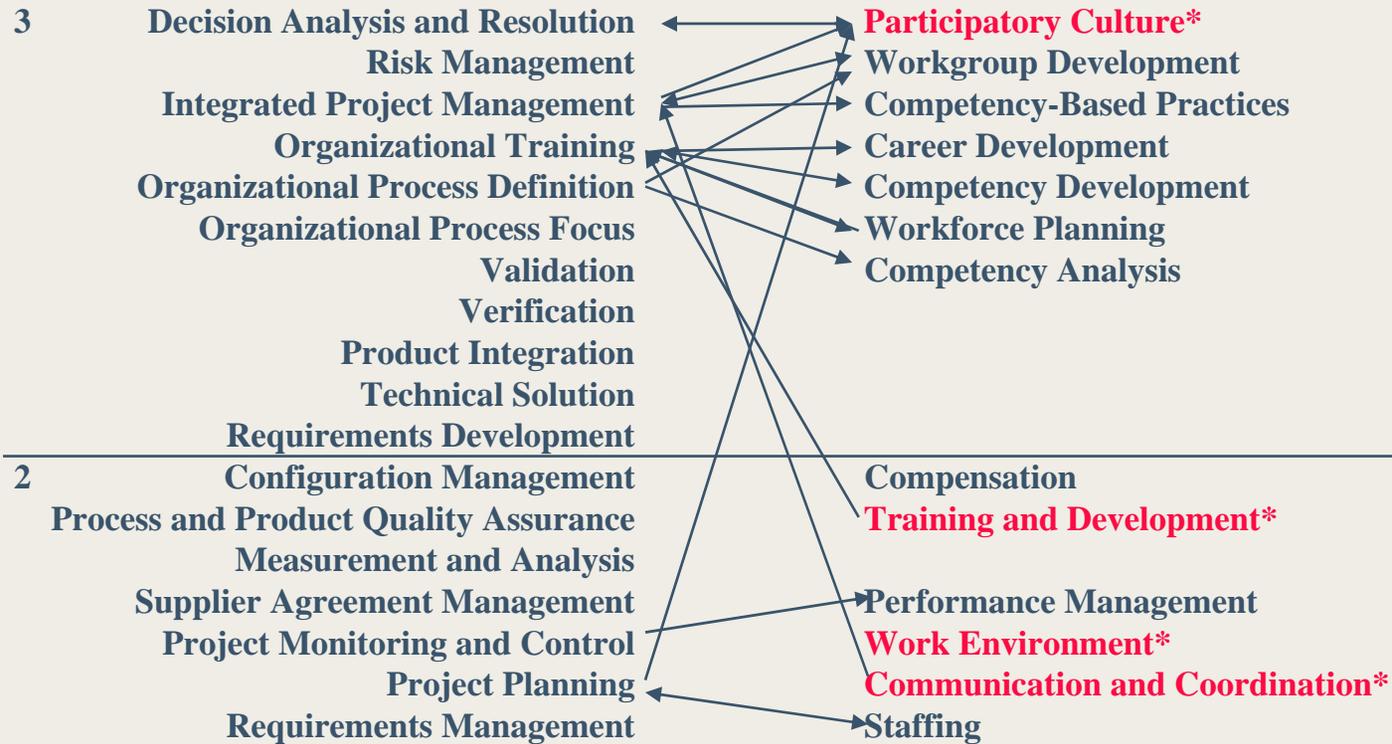
The following slides show the high level relationships between the two models.

CMMI SE/SW v1.1 to P-CMM v2 Relationships-1

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CMMI-SE/SW Process Areas

People CMM Process Areas



***Enablers for CMMI**

CMMI SE/SW v1.1 to P-CMM v2 Relationships-2

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CMMI-SE/SW Process Areas

People CMM Process Areas



***Enablers for CMMI**



IPPD Relationships

Because of its inherent subject matter, the People CMM presents a more detailed model for the evolutionary development of workgroups or teams than do SW-CMM or CMMI.

CMMI with its IPPD extensions and People CMM both focus on process-based workgroup development at Maturity Level 3, and this was one motivation for creating People CMM Version 2.

The IPPD extensions to CMMI are each supported by several process areas in People CMM Version 2 as shown on the next several slides.



IPPD Relationships - 2

Integrated Project Management (IPPD)	Workgroup Development (Level 3) Competency Analysis (Level 3)
Integrated Teaming	Communication and Coordination (Level 2) Workgroup Development (Level 3) Empowered Workgroups (Level 4)
Organizational Environment for Integration	Work Environment (Level 2) Communication and Coordination (Level 2) Performance Management (Level 2) Compensation (Level 2) Competency Analysis (Level 3) Workforce Planning (Level 3) Competency Development (Level 3) Competency-Based Practices (Level 3) Workgroup Development (Level 3) Participatory Culture (Level 3) Empowered Workgroups (Level 4)

CMMI IPPD v1.1 to P-CMM v2 Relationships IPPD

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CMMI-SE/SW Process Areas

People CMM Process Areas

4

Organizational Process Performance
Quantitative Project Management

Mentoring*

Organizational Capability Management
Quantitative Performance Management
Competency-Based Assets
Empowered Workgroups
Competency Integration

3

*Organizational Environment for
Integration*

Decision Analysis and Resolution

Integrated Teaming

Risk Management

Integrated Project Management **for IPPD**

Organizational Training

Organizational Process Definition

Organizational Process Focus

Validation

Verification

Product Integration

Technical Solution

Requirements Development

Participatory Culture*

Workgroup Development

Competency-Based Practices

Career Development

Competency Development

Workforce Planning

Competency Analysis

2

***Enablers for CMMI**

Communication and Coordination*

CMMI IPPD v1.1 to P-CMM v2 Relationships IPPD-2

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CMMI-SE/SW Process Areas

People CMM Process Areas

4

Organizational Process Performance
Quantitative Project Management

Mentoring*

Organizational Capability Management
Quantitative Performance Management
Competency-Based Assets
Empowered Workgroups
Competency Integration

3 ***Organizational Environment for Integration***

Decision Analysis and Resolution
Integrated Teaming
Risk Management
Integrated Project Management for IPPD
Organizational Training
Organizational Process Definition
Organizational Process Focus
Configuration Management
Process and Product Quality Assurance
Measurement and Analysis
Supplier Agreement Management
Project Monitoring and Control
Project Planning
Requirements Management

Participatory Culture*

Workgroup Development
Competency-Based Practices
Career Development
Competency Development
Workforce Planning
Competency Analysis

2

Compensation

Training and Development
Performance Management
Work Environment*
Communication and Coordination*
Staffing



SAMSUNG SDS CMM Timeline

2001- Center for Advanced SW Engineering (CASE) achieved SW-CMM Maturity Level 3

2002- CASE adopted PSP/TSP, and achieved SW-CMM ML 5

2003- HR team started P-CMM adoption and reformed the standard HR Process based on P-CMM

2004- CASE achieved CMMI ML 5
- New competency-based HR process went implementation

2005- Competency-based human resource development (HRD) system called My Proway² was put in operation
- CASE and the Architecture Center achieved P-CMM ML 3



My ProWay Introduction - 1

Human Resource Development System for employees and managers to manage career path, competency, education and mentoring

1 Information about Professions, Jobs, Ranks and Roles

2 Each employee's Career Path Design

3 Go to Next Page

4 Each employee's Education Plan and Registration

The screenshot shows the MyProWay II web application interface. It features a navigation menu at the top with items like '경력진단 및 교육계획' (Career Assessment and Education Plan) and '교육실행 및 변경' (Education Execution and Change). The main content area is divided into several sections:

- 1**: A 3D-style interface for 'Module 설명' (Module Description) showing various career paths like '컨설팅' (Consulting), 'IT관리' (IT Management), and 'IT 아키텍처' (IT Architecture).
- 2**: 'My Career Path' section with a butterfly metaphor, showing 'Current Job & Roles', 'Mid-term Plan on Job & Roles', and 'Long-term Plan on Job & Roles'.
- 3**: 'My ProWay II 현황' (My ProWay II Status) section with three tables: '교육이수 실적현황' (Education Completion Status), '필수교육 이수현황' (Mandatory Education Completion Status), and '외국어 자격현황' (Foreign Language Qualification Status).
- 4**: A sidebar with '예약중인 과정' (Reserved Courses) and '직무별 HIT' (Job-specific HIT) lists.



My Proway Introduction - 2

- 1 Select a job
- 2 Assess the level of competency for the selected job
- 3 Make education and certification plans
- 4 Submit for manager's approval and mentoring comments

The screenshot shows the MyProWay II web application interface. The browser title is "MyProWay II 에 오신것을 환영합니다. - Microsoft Internet Explorer". The address bar shows "http://70.2.199.170:9006/jsp/nsub2.jsp". The page header includes "Realizing Professionalism MyProWay II" and navigation links: "경력진단 및 교육계획", "교육실행 및 변경", "내 이력보기", "어학", and "자격".

The main content area is divided into four steps, each with a corresponding button and description:

- 1. 직무선택** (Job Selection): A button labeled "1. 직무선택" is highlighted. Below it, there are tabs for "개인", "현재직무", "중기직무", and "장기직무". Under "현재직무", there is a search box for "인사/교육" with a "찾기" button.
- 2. 역량진단실행** (Competency Assessment): A button labeled "2. 역량진단실행" is highlighted. Below it, there are three columns, each with a "역량" (Competency) and "추천과정" (Recommended Course) section. The "추천과정" sections are empty, displaying "• 역량진단 내용이 없습니다." (No competency assessment content).
- 3. 자기개발 계획수립** (Self-development Plan Formulation): A button labeled "3. 자기개발 계획수립" is highlighted. Below it, there are three steps: "Step1. 교육계획" (Education Plan), "Step2. 어학계획" (Language Plan), and "Step3. 자격계획" (Certification Plan). Under "Step1", there is a table:

• 집합교육	41H
• 집합외교육	84H
• 총 합	125H
- 4. 상신** (Submission): A button labeled "4. 상신" is highlighted.

On the left side of the interface, there are four menu items: "부서장" (Department Manager), "부서원 교육현황" (Department Member Education Status), "부서양성 기술등록" (Department Training Registration), and "자기개발 계획결재" (Self-development Plan Approval). Arrows from the numbered steps on the left point to these corresponding menu items.



Pitfalls and successes in SDS' 5 year journey to SW-CMM, CMMI and P-CMM

- Education and training of Human Resource staff and implementing projects staff were key factors (more project staff involved than anticipated)
- Cross-pollination from SAMSUNG CMMI efforts facilitated appraisal preparation
- Executive commitment to strategy and plan was crucial
- Information Systems enabling CMM/CMMI and P-CMM practices
 - CMM/CMMI : integration of OSSP, project management system and SW engineering methodologies
 - P-CMM : My Proway, HR inventory and workforce planning system
- Continuous improvement of standard services delivery processes and HR process through 6 Sigma DMAIC projects
- Organization of shared service roles (such as Architects, Process Engineers, Quality Assurors) into Centers of Competency helped achieving ML 3 of P-CMM



Observations for other organizations with similar internal customer service requirements

Ensure executive level commitment and funding

Enlist customer organizations in pilot efforts

Insist on disciplined, consistent training and education for all affected

Ensure motivation of selected “change agents” for consistent motivated implementation of processes/practices

Facilitate implementation with appropriate technology e.g. intranet, web-based applications, computer based training



Lessons Learned Summary - SDS

- Top management's commitment was a key success factor
- Phased roll-out of P-CMM based on a long-term plan
 - ML 3 achieved for 5 competencies in 2005
 - All 35 competencies by 2006
 - ML 3 achieved for 2 Centers of competency in 2005
 - Entire organization by 2006
 - ML 5 to achieve for selected units in 2007
 - Entire organization by 2008
- Consistency between CMMI-based delivery processes and P-CMM-based HR processes
 - OSSP and CBP (Competency Based Practices)
 - Process Roles and Competencies



Lessons Learned Summary - SEI

Model implementation takes longer and costs more than is typically estimated

People CMM Implementation involves significant parts of the entire organization

Human Resources welcomes the model as a facilitating tool for accomplishing their job

Appraisals must be planned just like projects. You cannot skimp on logistical aspects i.e. facilities, tools, time, experience of ATMs

Experience, training and education are invaluable to any PI effort with any model



For More Information...

For more information about CMMI or People CMM, see

<http://www.sei.cmu.edu/cmmi/>

<http://www.sei.cmu.edu/cmm-p/version2/>

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Level	Focus	Process Areas
5 Optimizing	Capability & performance are continually improved	Continuous Workforce Innovation Organizational Performance Alignment Continuous Capability Improvement
4 Predictable	Capability is managed quantitatively and the organization exploits opportunities in its competency framework	Mentoring Organizational Capability Management Quantitative Performance Management Empowered Workgroups Competency-Based Assets Competency Integration
3 Defined	Organization develops a framework of workforce competencies required to accomplish its business objectives	Participatory Culture Workgroup Development Competency-Based Practices Career Development Competency Development Workforce Planning Competency Analysis
2 Managed	Managers take responsibility for managing and developing their people	Compensation Training and Development Performance Management Work Environment Communication and Coordination Staffing
1 Initial		



CMMI Staged Representation

Level	Focus	Process Areas <i>Including IPPD</i>
5 Optimizing	<i>Continuous Process Improvement</i>	Organizational Innovation and Deployment Causal Analysis and Resolution
4 Quantitatively Managed	<i>Quantitative Management</i>	Organizational Process Performance Quantitative Project Management
3 Defined	<i>Process Standardization</i>	Requirements Development Technical Solution Product Integration Verification Validation Organizational Process Focus Organizational Process Definition Organizational Training Integrated Project Management (Not:2 IPPD Goals) Risk Management Decision Analysis and Resolution <i>Organizational Environment for Integration</i> <i>Integrated Teams</i>
2 Managed	<i>Basic Project Management</i>	Requirements Management Project Planning Project Monitoring and Control Supplier Agreement Management Measurement and Analysis Process and Product Quality Assurance Configuration Management
1 Initial		

Risk
Rework