Canada

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Partners in the international alliance

CBA IPI with SW-CMM1.1 and SCAMPI with CMMI - SE / SW / IPPD / SS 1.1 back to back: were we crazy or what???

Presentation by Richard Basque

2nd Annual CMMI Technology Conference & User Group

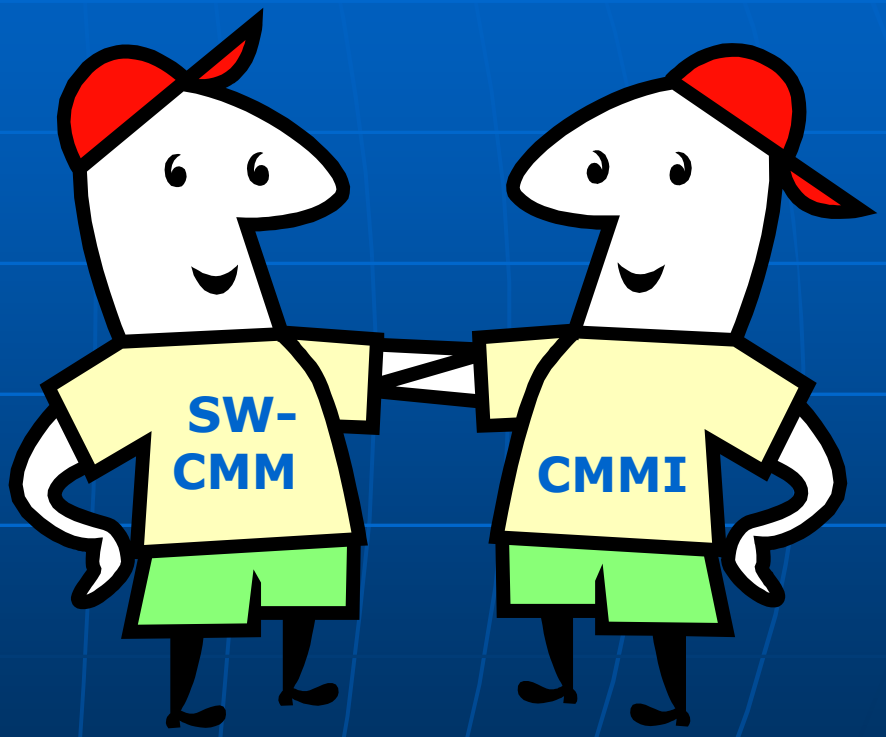
Denver, November 13, 2002

Important Authorization

- ALSTOM Technologies gave special permission to Alcyonix to disclose information related to the conduct and the results of the CBA IPI and the SCAMPI that took place at their site in Meudon-la-Forêt (France) in June / July 2002
- We thank them for their kind collaboration

What is this presentation about?

- Doing a dual assessment, up to maturity level 5, on the same SOFTWARE site
  - CBA IPI with SW-CMM 1.1
  - SCAMPI with CMMI 1.1 staged
- Lessons learned



CBA IPI was a MUST

- 3rd official assessment since 1994
  - and several interim mini assessments
- SW-CMM level 4 achievement confirmation was expected (… and needed!)

SCAMPI was a BONUS

- Prepare for transition
  - discover and feel the REAL differences
  - document the indicators
  - train the people

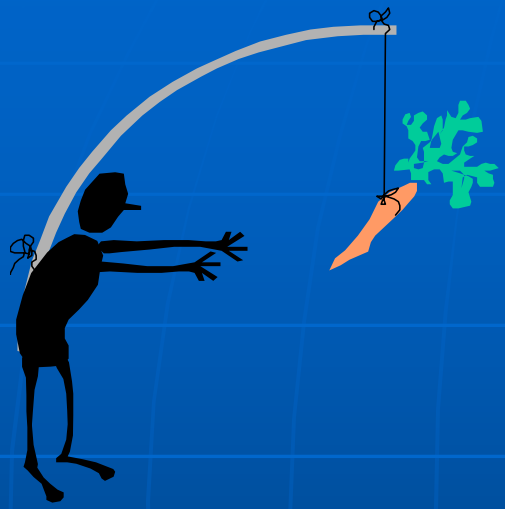
Favorable Conditions

- Seasoned experts on the team
- Well prepared and very motivated organization
- Committed sponsor
- Business need to expand to system

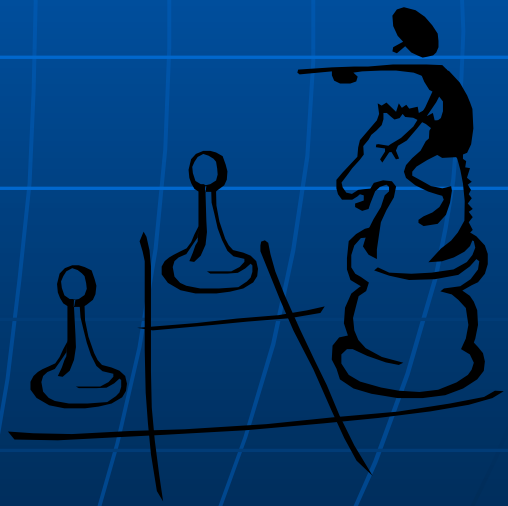
Managed Risks

- Endless?
- Confusion?
- Burn out?
- No double credits?
  - one for CBA IPI
  - one for SCAMPI
- No delivery… because of all the above!

The Bottom Line



- We were (probably) crazy but…
  REALLY determined and prepared!

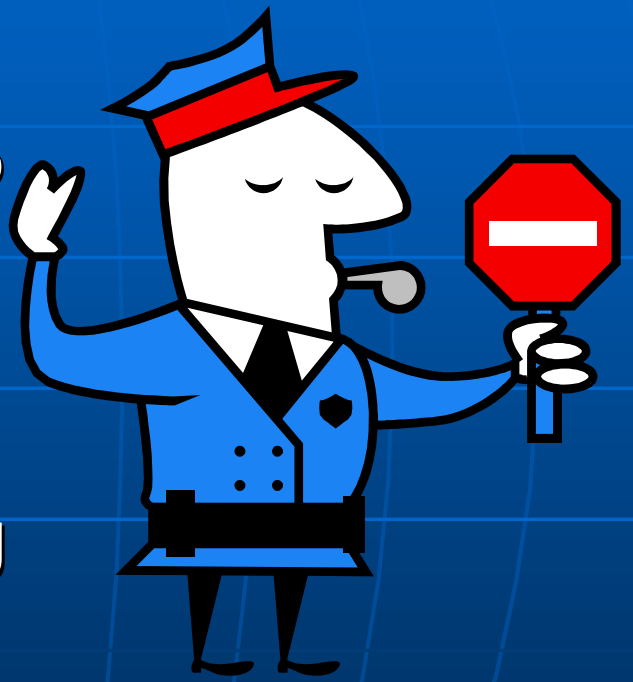


Intense Preparation

- CMMI training (of course!)
- Practice Implementation Indicators (PII's) identification BOTH for SW-CMM and CMMI
- Long elapsed time for filling the PII's table
- XREF between the two sets of PII's
- Specially intense team training
- Close coordination

Disciplined Onsite

- Shared data collection events
  - single series of interviews
  - single set of documents to review
- Mental split when tagging vs. models
- Rigor when consolidating observations in team plenary sessions



Separate Results

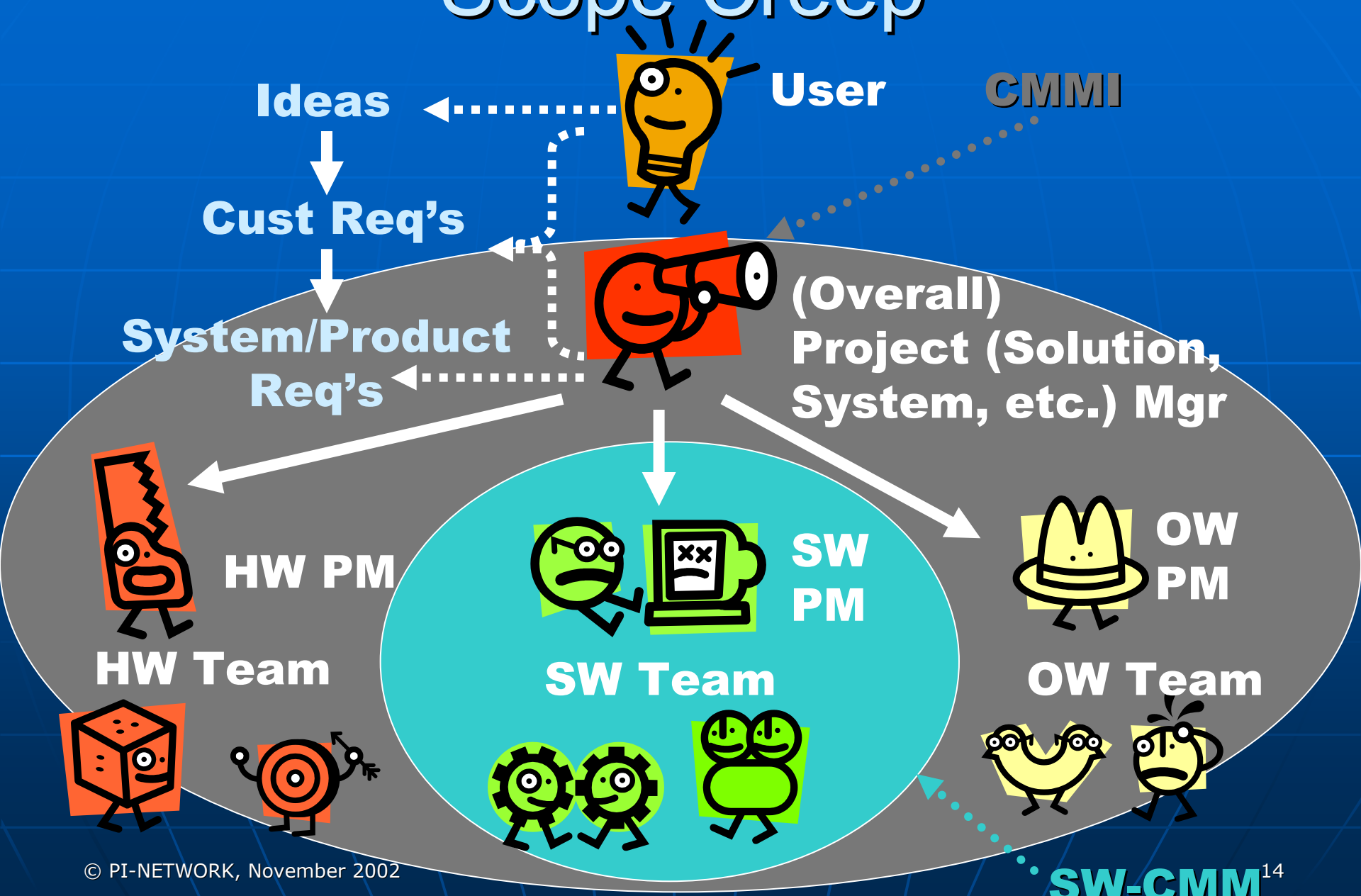
- Validation Slides
  - Observations
- Final Presentation Slides
  - Rating
  - Findings
- PAIS and feedback forms

So… What Were the Differences?

CMMI vs. SW-CMM - General

- Multiple disciplines, broader scope (next slide)
- More PAs
- 2 representations
- Consistent set of common practices
- More flexibility in terms of structure and roles
- More universal wording but amplifications by discipline

Scope Creep



CMMI vs. SW-CMM L2

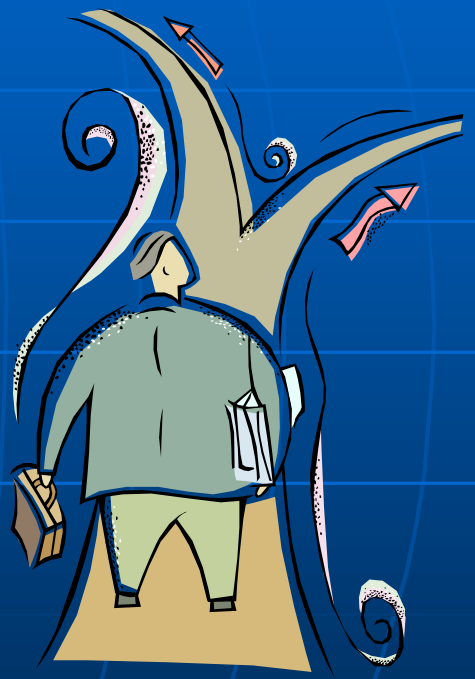
- Supplier Agreement Management (SAM) covers a broader scope than Subcontract Management (SM)
- Software Quality Assurance (SQA) is renamed with a more explicit name: Process and Product Quality Assurance (PPQA)
- Measurements & Analysis (MA): a full PA and need to align measurements on goals

CMMI vs. SW-CMM L3 (1 of 2)

- Software Product Engineering (SPE): exploded into several PAs
  - Requirements Development
  - Technical Solution
  - Product Integration
  - Verification (now includes PR)
  - Validation

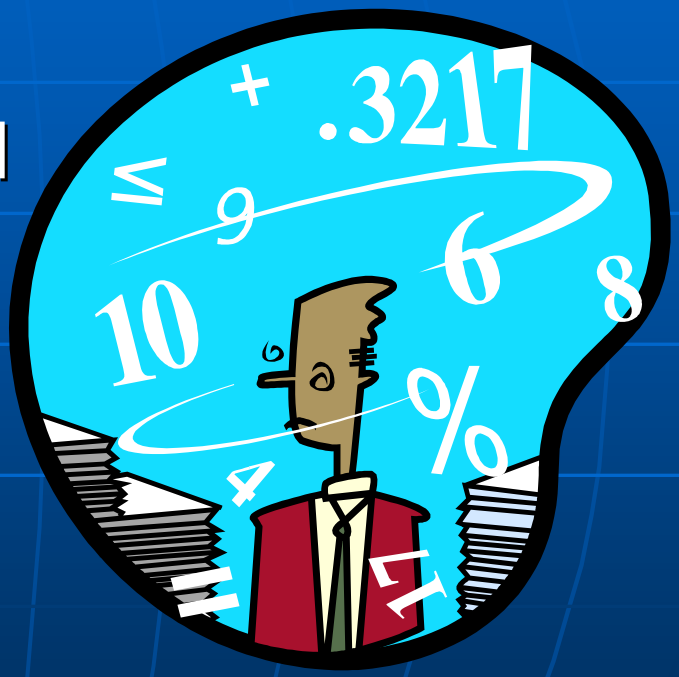
CMMI vs. SW-CMM L3 (2 of 2)

- Risk Management: a new PA
- Decision and Analysis: a new PA focusing on decision process
- Organization Environment for Integration (with IPPD): a new PA
- Integrated Teaming (with IPPD) : much more than Inter-group Coordination
- Integrated Supplier Management: a new PA (with SS)



CMMI vs. SW-CMM – L4

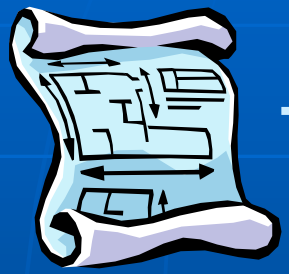
- Quantitative Process Management and Software Quality Management re-structured around Organization vs. Project: Quantitative Project Management (QPM) and Organizational Process Performance (OPP)



CMMI vs. SW-CMM – L5

- Organization Innovation and Deployment (OID) integrates both Technology Change Management (TCM) and Process Change Management (PCM)

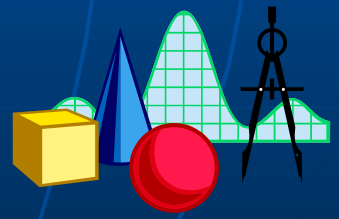
The « GENERIC » Practices: the NEW Aspects (1 of 2)



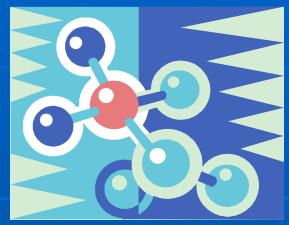
- Plan the process

instead of “according to a documented procedure”

- Establish a Defined Process

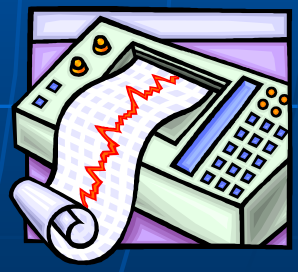


The « GENERIC » Practices: the NEW Aspects (2 of 2)



- Manage configurations

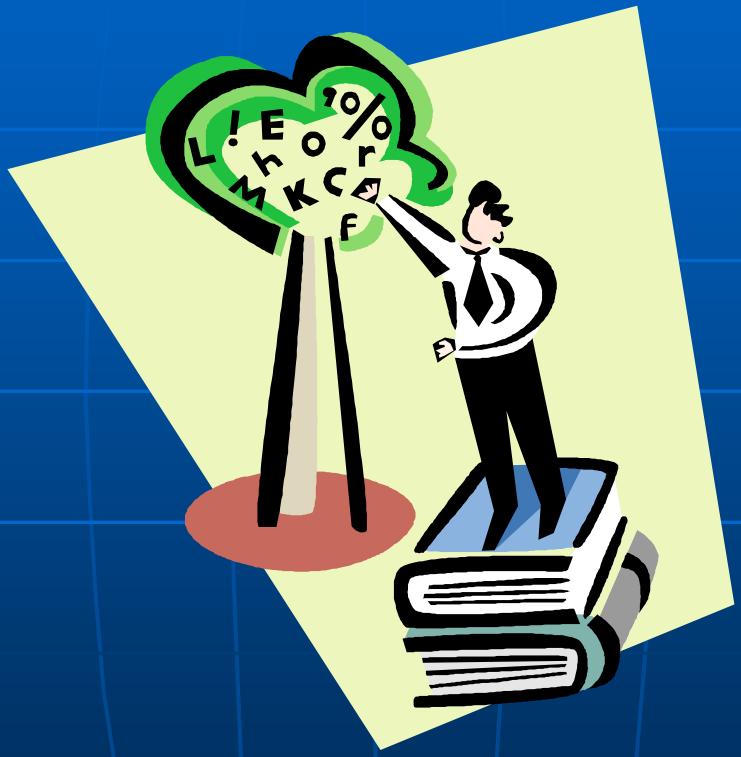
- Identify and Involve Relevant Stakeholders



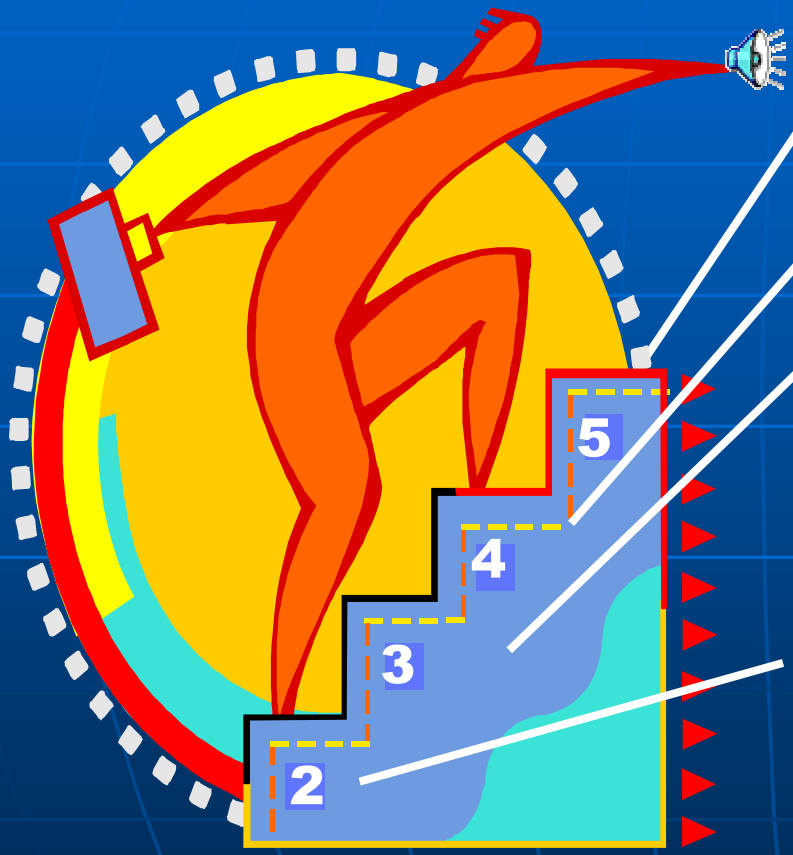
- Monitor & Control the Process

- Collect Improvement Information

Actual Results and Lessons Learned



The actual SW-CMM Level: 4



Defect Prevention
Technological Change Management

Process Change management

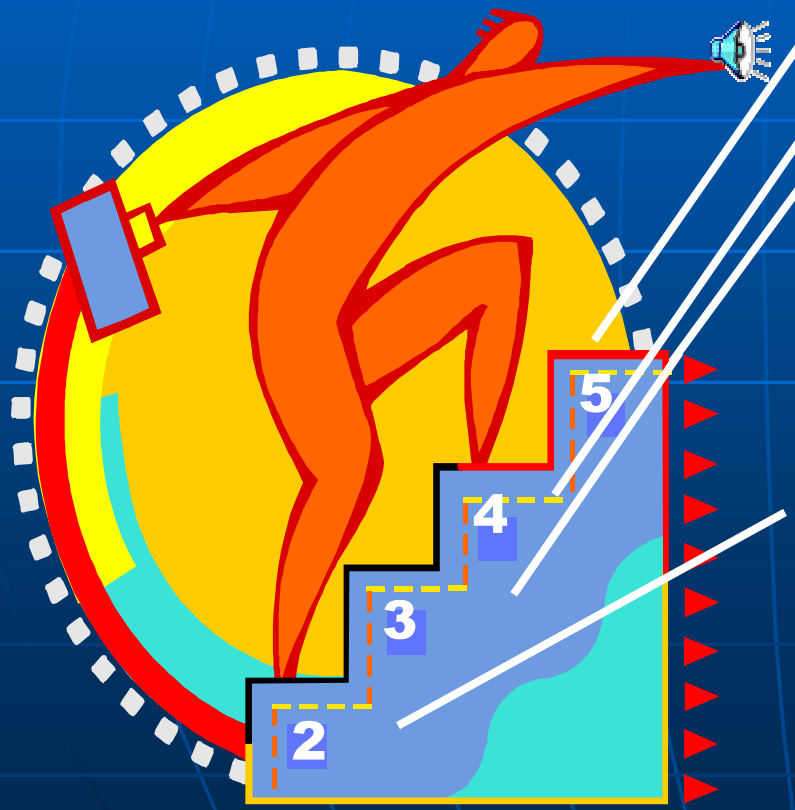
Quantitative Process Management
Software Quality Management

Organization Process Focus
Organization Process Definition
Training Program
Integrated Software Management
Software Product Engineering
Intergroup Coordination
Peer Reviews

Requirements Management
Software Project Planning
Software Project Monitoring and Control
Software Quality Management
Software Configuration Management

(Note: Software Subcontract Management was NOT applicable)

The actual CMMI Level: 2



Organizational Innovation and Deployment
Causal Analysis and Resolution

Organizational Process Performance
Quantitative Project Management

Requirements Development
Technical Solution
Product Integration
Verification Validation
Organizational Process Focus
Organizational Process Definition
Organizational Training
Risk Management
Decision Analysis and Resolution

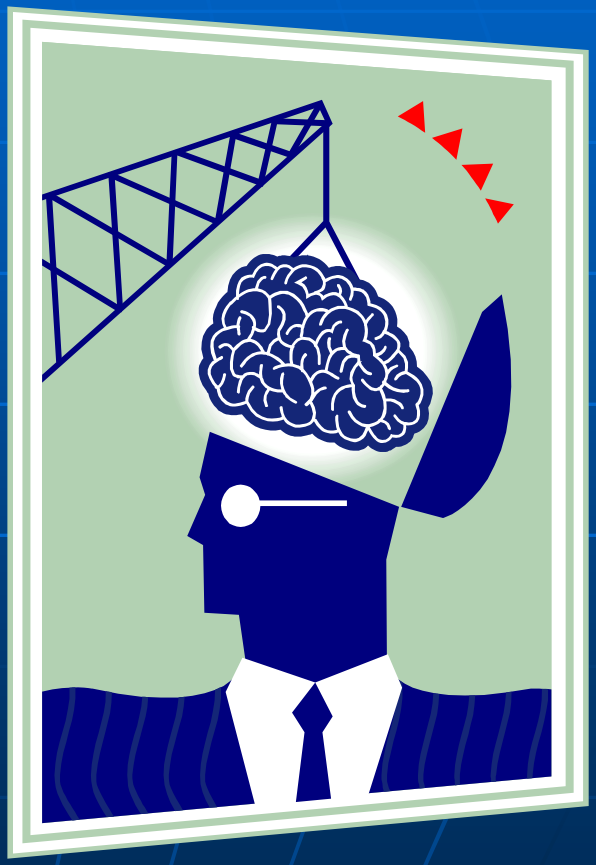
Requirements Management
Project Planning
Project Monitoring and Control
Supplier Agreement Management (COTS only.)
Measurement and analysis
Process and Product Quality Assurance
Configuration Management

Additional Preparation Effort - Statistics

- Transform model PII's into site PII's:
  - 5 men-days
- Establish hyperlinks in the PII's table for initial set of documents:
  - approx. 560 documents:
    4 men-days
- Fill hyperlinks in the PII's table for other projects' documents:
  - Approx. 2 men-days per project
    PLUS 3 men-days for comparison
    PLUS 2 men-days for verification
- For a total of about 22 men-days

Lessons Learned - 1

- Re-Scoping: the most important decision but N/A here (SW only)
- Transitioning: quite simple
- SW only and then SE/SW makes sense
- Good and objective information needed (and available!)
- Plan a lot of preparation



Lessons Learned - 2

- Use hyperlinks for documents references
- Verification paradigm emphasizes the audit look: if you want to create / increase momentum, counterbalance
  - awareness sessions
  - some time for interviewees to free-wheel
  - presentations of projects and of key function as a complement to interviewees
  - communicate, communicate, and communicate!

Almost… a Walk in the Park

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- And thanks again to ALSTOM Technologies!