

## CMMI – a real experience

**Bill Martin**

- Interactive
- Questions at any time
- OSCA discussion

### CMMI ML3 world wide - why

- **Global company** (blended model –on/near/offshore)
- **One business model**
- **One set of processes**
- **Competitors have CMMI** (not just India)
- **Loss of confidence in ISO9001** – no longer a differentiator
- **Customers are more aware** (want capability checked)
  - Mod – ISO suppliers not performing, Gov – similar (SCoBP)
- **Increase project performance** (margin erosion, realistic bids)

# Appraisal Model Scope : SE/SW V1.1



Maturity Level	Focus	Process Areas	Quality and Efficiency are Increased
5 Optimizing	<i>Continuous Process Improvement</i>	Organizational Innovation and Deployment Causal Analysis and Resolution	<p>Risk and Rework are Reduced</p>
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 Risk Management Decision Analysis and Resolution	
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			

Decide on scope

SOLUTIONS THAT MATTER

## Continuous

- Measures your capability level for each PA
- Can pick those PA you want first – then mature them

## Don't use Continuous

- If your starting out to improve an existing model
  - you will need guidance on which process areas to improve
- If you want to communicate your level to a customer
  - maturity level are easier to communicate than maturity profiles

# Staged Representation



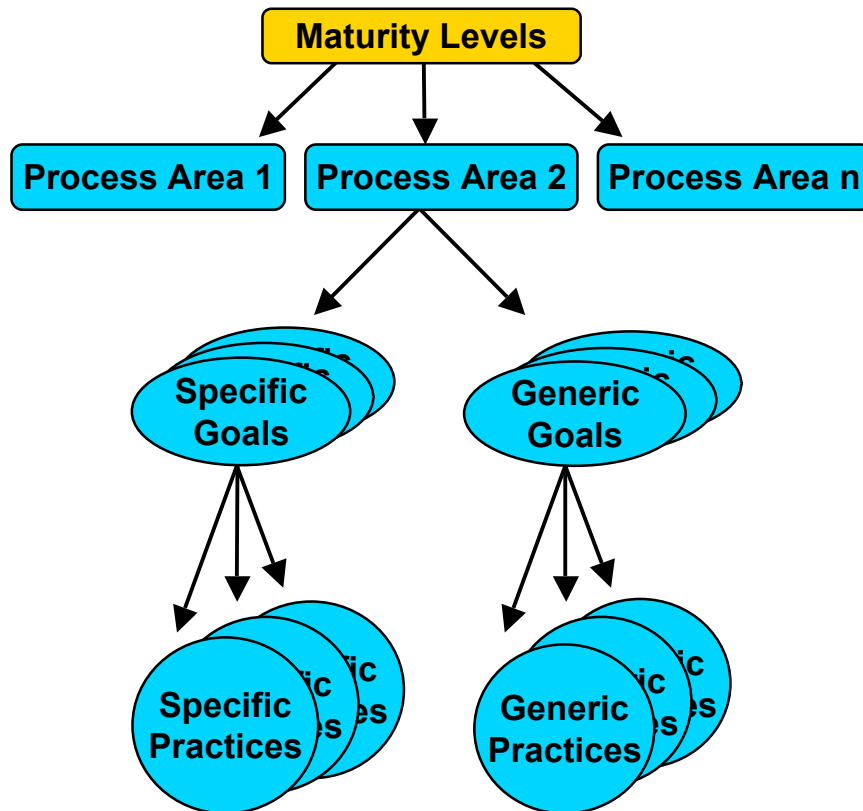
## Staged Representation

- Provides a defined roadmap for organizational improvement
  - Lower level processes are more critical to repeatable success
  - Higher level processes build on the lower level processes



SOLUTIONS THAT MATTER

## Staged – ML3



## Start with

1. **Training** (Introduction)
2. **Get CMMI support** (Int/Ext)  
Est for SCAMPI (C/B)
3. **SCAMPI Benchmark**

- **Determine the Organisational unit**
- **Determine the scope (for us SE/SW)**
- **Determine Appraisal Team**
- **Select the projects** - how many, type, status (not the best)
- **Central Functions** - Procurement, Supplier management, QA etc.
- **Decide on staff to be interviewed**
  - **Line Management** (Organisational issues)
  - **Project Staff** - Management, Quality, Team Leaders, Developers, Programmers etc.

**USE your CMMI consultants**

## Space and Defence goals

- To benchmark the business against CMMI ML2 & 3 (18PAs)
- To determine the level of compliance against Cortex (QMS)
- To provide a gap analysis with specific weaknesses

## Outputs

- A Process improvement plan
- Cost estimates and timescales for ML3 implementation
- A view of what tailoring is required

# Appraisal Process



Determine **power** sponsor - Operations Director (owns the results)

Determine Team members – **mix of skills**

- Valerie Cole – Team Leader, Lamri
- Bill Martin – Team Member, LogicaCMG
- Dennis Smith – Team Member, LogicaCMG
- Steve Chowne – Team Member, LogicaCMG
- Paul Southgate – Team Member, LogicaCMG
- Henk Westerink – Team Member, LogicaCMG

Site Co-ordinator:

- (Pre-appraisal) Bill Martin, QA Consultant, LogicaCMG
- (On-site) Graham Bachtold, QA Consultant, LogicaCMG

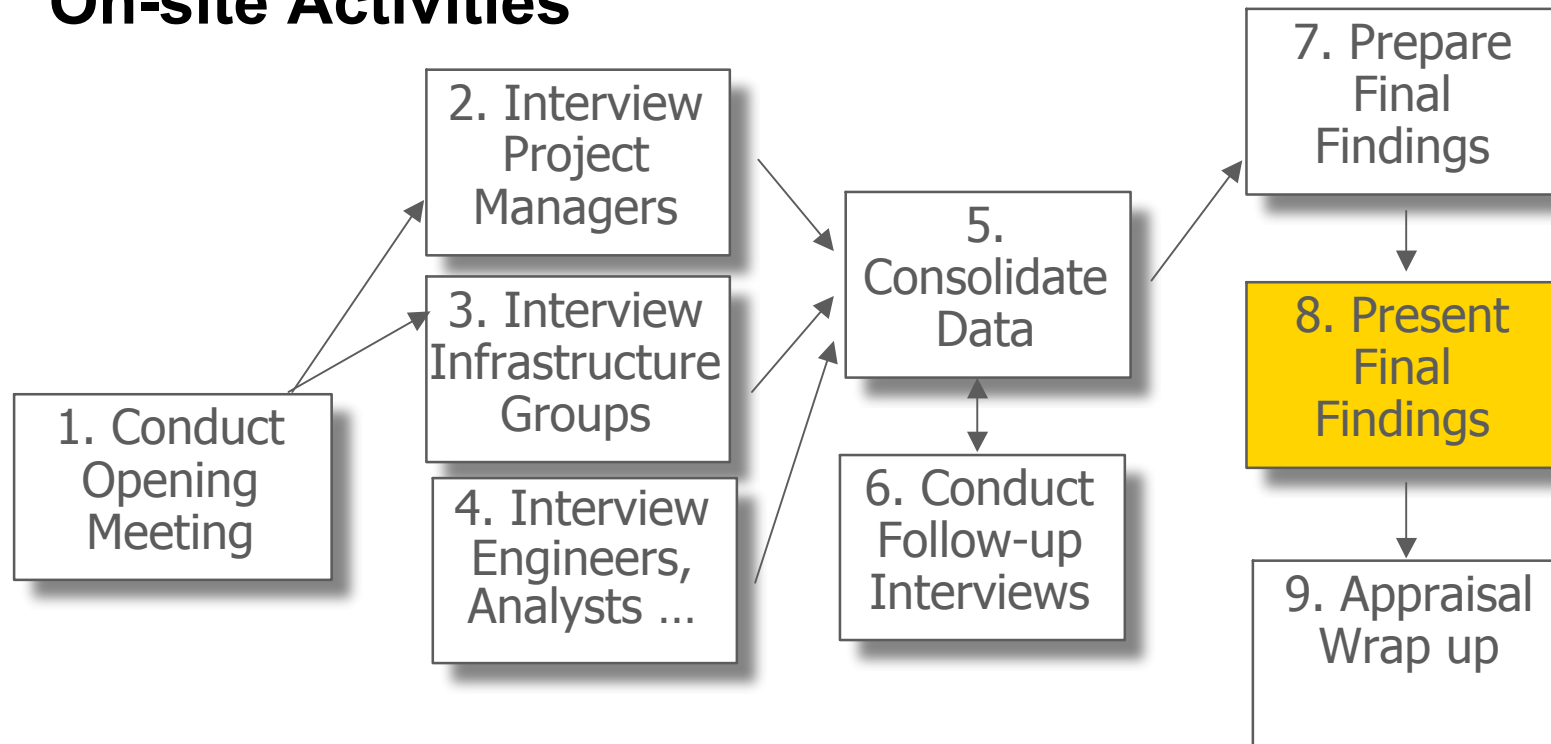
**Recommend CMMI Training - Introduction and Appraisal**

SOLUTIONS THAT MATTER

# The Appraisal Process



## On-site Activities



**Parallel Activities:**  
Perform objective evidence/documentation Review  
Request additional documentation




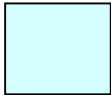

SOLUTIONS THAT MATTER

# Schedule

	05-Sep	06-Sep	07-Sep	08-Sep	09-Sep	#####	#####	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep
08:45		Check-in	Check-in	Check-in	Check-in			Check-in	Check-in	Check-in	Check-in	Check-in
09:00				Prepare ivroom	Prepare ivroom			Prepare ivroom	Prepare ivroom	Prepare ivroom		
09:15		Opening Meeting		Interview PM 1	Interview Eng 1			Interview	Interview Support 1	Follow-up Interview 1		Review
09:30				(REQM)	(REQM, RD)			Interview Org Process	(MA, PPQA)	Follow-up Interview 2		Final Findings
09:45			Document	(PP, PMC, IPM)				(OPF, OPD, OT)		Follow-up Interview 3	Consolidation	Presentation
10:00		Organisation Overview	Review									
10:15		Project 1		Interview PM 2	Interview Eng 2			Interview PM 3	Interview Support 2	Interview MM		
10:30		Project 2		(SAM/RSKM)	(TS, PI, VER, VAL)			(FUP 1)	(CM, DAR)	(GPs)	Lunch	Lunch
10:45		Project 3										
11:00		Project 4		Lunch	Lunch			Lunch	Lunch	Lunch	Lunch	Lunch
11:15		Project 5										
11:30				Tag Notes	Tag Notes			Tag Notes	Tag Notes	Tag Notes		
11:45				Craft Observations	Craft Observations			Craft Observations	Craft Observations	Craft Observations		Final Findings Presentation
12:00				Documentation Review	Prepare Interview Questions Prepare			Documentation Review	Documentation Review		Consolidation	
12:15					Consolidatopn						Consolidation	
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# Benchmark key



-  **Document/process review**
-  **Preparing Questions**
-  **Preparing findings**
-  **Consolidating results**
-  **Interviews**

SOLUTIONS THAT MATTER

## CMMI Appraisal

- Duration 9 days
  - Team size 6 + 1 co-ordinator
    - Team leader from Lamri
    - 2 staff from UKQA
    - 2 Staff from S&D
    - 1 member from LogicaCMG NL
- Total effort – 84 M/days (preparation time not included)

- **On-site time – 76.5 hours x 6**
- **Formal Interviews (9) – 12.5 hours**
- **Follow-up Interviews – none**
- **23 interviewees**
- **Full team consensus on findings – 22 hours**
- **Build and review Final Findings – 4 hours**
- **Interview notes – 375 pages**

# Aggregation of Practice Characterizations: SCAMPI B



Resulting OU Characterization	Instance Characterizations
<b>Red</b>	At least 25% of instances characterized Red
<b>Amber</b>	Fewer than 25% of instances characterized Red, and Fewer than 75% of instances characterized Green
<b>Green</b>	At least 75% of instances characterized Green None of the instances characterized as Red

SOLUTIONS THAT MATTER

## Process Areas - Level 2

- **REQM** – Requirements Management
- **PP** – Project Planning
- **PMC** – Process Monitoring and Control
- **SAM** – Supplier Agreement Management
- **MA** – Measurement and Analysis
- **PPQA** – Process and Product Quality Assurance
- **CM** – Configuration Management

## Process Areas - Level 3

- **RD** – Requirements Development
- **TS** – Technical Solution
- **PI** – Product Integration
- **VER** – Verification
- **VAL** – Validation
- **OPF** – Organisational Process Focus
- **OPF** – Organisational Process Definition
- **OT** – Organisational Training
- **IPM** – Integrated Project Management
- **RSKM** – Risk Management
- **DAR** – Decision Analysis and Resolution

# LogicaCMG Scampi B Maturity Level 3 Appraisal



MATURITY LEVEL	PROCESS AREAS													
5- OPTIMISING	Organisational Innovation & Deployment	Causal Analysis & Resolution												
4- QUANTITATIVELY MANAGED	Organisational Process Performance	Quantitative Project Management												
3- DEFINED	Organisational Process Focus	Organisation Process Definition	Organisational Training	Organisational Environment For Integration	Integrated Teaming	Decision Analysis & Resolution	Integrated Supplier Management	Technical Solution	Requirements Development	Product Integration	Validation	Verification	Risk Management	Integrated Project Management
	Requirements Management	Project Planning	Project Monitoring & Control	Supplier Agreement Management	Measurement & Analysis	Process & Product Quality Assurance	Configuration Management							

SOLUTIONS THAT MATTER

# Key Recommendations



- Objectives
  - Establish clear business objectives and responsibilities for process improvement
- Measurement
  - Establish measurement objectives linked to business and process improvement objectives
- Co-ordinate
  - Ensure all process improvement initiatives are working in harmony with each other to meet business objectives
- Learn from experience
  - Capture and share good practice and lessons learned

SOLUTIONS THAT MATTER

- **Lack of time to prepare caused problems**
  - More time preparing - more accurate result
  - Suggest two weeks preparation for one week appraisal
- **Train the team** - allow time to refresh material
- **No CMMI jargon Questions during interviews**
- **Don't underestimate the Project Librarian role**
  - (Lining up interviewees, gathering documentation, follow-ups etc.etc.)
- **Long hours, intense working**
  - (do something relaxing after, leave sufficient gap between appraisals)

Questions?



SOLUTIONS THAT MATTER

## Next Steps (LogicaCMG)



- Review findings agree detailed action plan (priorities)
- Agree owners for improvements
- **Prepare strategy with costs and timescales (+ risks)**
- Identify CMMI champions (world wide if needed)
- Get external support even if you have internal expertise (independent view, will save you money and time)
- Roll out changes to the troops (6k+ in the UK)
- Train staff to be lead appraisers (how many?)
  - Note: we leave ISO audits to the agencies should we do the same for CMMI?

SOLUTIONS THAT MATTER

- Strategy document produced based on Benchmark
  - 3 options
- Option 3 chosen – business by business (5 off)
  - Less risky
  - Timescales extended
  - Less disruption
- Vertical business only (horizontal areas via project)
- Separate benchmark being done for each vertical business
  - then detailed plan and costs to be produced

## **Discussion**

# **OSCA**

**One Stated Capability Assessment**

SOLUTIONS THAT MATTER

Questions?



SOLUTIONS THAT MATTER