Integrating CMMI & ITIL:
An Outsourcing Success Story

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Overview

- This presentation describes our success story implementing both CMMI and ITIL at an IT outsourcing account, with a staff evenly split between applications developers and infrastructure support personnel.

- With CMMI describing our process framework (the "what") and ITIL as the basis of our best practices (the "how"), we were able to:
  - Achieve CMMI Maturity Level 2 just nine months after the initiation of the improvement program
  - Address the needs of developers, support staff, and managers within the same broad lifecycle framework
  - Lay the groundwork for accelerated future process improvement and service delivery optimization
Agenda

- Background
- Improvement Objectives
- Planning
- ITIL
  - Overview
  - Mapping Approach
  - Coverage of CMMI
- Blended Improvement
- Schedule Completion
- Returns and Lessons Learned
We are Recognized as a Global Leader in Outsourcing Services

Outsourcing Revenue by Region
as of December 31, 2004

- UK 37%
- North America 25%
- Other Europe 36%
- Asia-Pacific 2%

"Gartner notes that [Capgemini]'s outsourcing deal with The UK Inland Revenue [now part of HM Revenue & Customs] (worth more than US$5 billion over 10 years) was the largest outsourcing deal worldwide in 2003."
(Gartner, 2004)

"Capgemini has joined the league of serious contenders in outsourcing with two large contracts signed in 2004."
(Ovum, 2005)

OS Revenue 2004
- € 2,081 million

Global Coverage
- 15,000 outsourcing professionals
- 20 countries

Recent Major Contracts
- ABB (Sweden)
- HM Revenue & Customs (formerly Inland Revenue) (UK)
- TXU (US)
- Schneider Electric (France)
- Lucent (US)
We Have a Single Business Philosophy and Approach – The Collaborative Business Experience

The Collaborative Business Experience Enables Capgemini To Help Our Clients Achieve Better, Faster And More Sustainable Results

**Targeting Value**
Identifying project benefits and ensuring that the right resources at the right level and right times are applied to the project in order to create and capture project value

**Aligning Organization**
Keeping the project teams aligned and ensuring that cross-functional and inter-organizational needs and implementation issues are dealt with effectively

**Mitigating Risks**
Understanding the stakes and the level of project risk perceived by the client and managing those risks

**Optimizing Capabilities**
Stimulating the two-way transfer of knowledge during the project and ensuring that the know-how and support necessary to sustain the value of the project is in place at completion
We use our DELIVER framework and methodology to discover and blend our clients’ best-practices with our own to make a stronger whole.

– We take the time to analyze and evaluate the best practices our clients have in place.

– We perform a gap analysis in order to develop a plan for applying our DELIVER methodology to your business.

– We develop detailed action plans and schedules to implement process changes in a focused and controlled manner.

– Cross-functional and cross-organizational teams implement the changes to your IT and business processes.

– Industry assessment and regulatory auditing validate that the process changes are right for your business.

– DELIVER is our answer to the numerous regulatory and industry models relevant to our clients’ businesses.
Improvement Objectives

- Targeted implementation of a consistent process infrastructure for providing services to a major outsourcing client
  - Increase cost efficiency across the outsourcing center
  - Utilize consistent processes to reduce costs and increase efficiencies across IM and AM teams

- Utilize CMMI and ITIL industry standards
  - Address growing client and market requirements
  - ITIL Service Support
  - CMMI Level 2
Plan of Attack for Improvement

Getting to CMMI L2

- Obtain sponsorship
- Perform cost and CMMI gap analysis
- Map CMMI to ITIL
- Develop improvement plan for QMS
- Implement and monitor plan
- Assess QMS

“Begging and pleading” to finalize plan

Get process group participants from each area

Address Service tickets as “projects”

Aim for CMMI L2 SE/SW keeping CMMI L3 in mind

Agreement on executive Key Performance Indicators

Identify single QMS for infrastructure & applications

Complete workflow & QMS training, conduct PPQA reviews
**Introduction to ITIL**

ITIL, the Information Technology Infrastructure Library, is a set of industry best practices that is fast emerging as a global standard for IT service management.

### Service Delivery Processes
- The services customers need to support their businesses, and what is needed to provide those services
  - Service Level Management
  - Financial Management
  - Capacity Management
  - IT Service Continuity Management
  - Availability Management

### Service Support Processes
- How services are supported for customers & users to access to support their business
  - Service Desk
  - Incident Management
  - Problem Management
  - Configuration Management
  - Change Management
  - Release Management
Mapping Approach

- ITIL to CMMI for SW/SE/IPPD/SS mapping
- ITIL Service Support best practices were divided into sections for use as “requirements”
- Focused on mapping CMMI
  - Specific practices for each process area within CMMI
  - Generic practices across all process areas at CMMI
- Utilized, where appropriate, appendix sections within ITIL to ensure coverage
  - For example, PRINCE2 Project Management processes
## ITIL Coverage of Process Areas

<table>
<thead>
<tr>
<th>Process Areas Level 2</th>
<th>Number CMMI Specific Practices</th>
<th>Number ITIL References Mapped</th>
<th>Percent Coverage</th>
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</thead>
<tbody>
<tr>
<td>REQM</td>
<td>5</td>
<td>5</td>
<td>100%</td>
</tr>
<tr>
<td>PP</td>
<td>14</td>
<td>3</td>
<td>21%</td>
</tr>
<tr>
<td>PMC</td>
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<td>1</td>
<td>10%</td>
</tr>
<tr>
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<td>7</td>
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<tr>
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<td>13%</td>
</tr>
<tr>
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<tr>
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<td>5</td>
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<tr>
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<td>1</td>
<td>14%</td>
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<tr>
<td>OPD</td>
<td>5</td>
<td>2</td>
<td>40%</td>
</tr>
<tr>
<td>OT</td>
<td>7</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>CAR</td>
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</table>

Higher percentage of Service Support activities are related to the Managed Maturity level.
## ITIL Coverage of Generic Practices

<table>
<thead>
<tr>
<th>Generic Practice Goals</th>
<th>Number of CMMI Generic Practices</th>
<th>Number ITIL References Mapped</th>
<th>Percent Coverage</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>GG3</td>
<td>2</td>
<td>2</td>
<td>100%</td>
</tr>
</tbody>
</table>

Majority of the institutionalization factors in CMMI are addressed in ITIL role, skill and management specifics.
## ITIL Coverage by Maturity Levels

<table>
<thead>
<tr>
<th>Maturity Level</th>
<th>Number Process Areas</th>
<th>Percent Coverage of ITIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7</td>
<td>40%</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td>29%</td>
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<td>4</td>
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<td>27%</td>
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<tr>
<td>5</td>
<td>25</td>
<td>26%</td>
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</table>

ITIL supplies the best practices for service support and is balanced out by the process improvement activities provided within CMMI.
Blend of CMMI and ITIL for QMS Improvements

- Service Desk and Incident Management
  - Improved timeliness of service ticket handling
  - Improved problem model definitions for appropriate reporting of incidents
  - Concise identification of requirements within documented tickets
  - Agreement of requirements with end-user within tickets

- Problem Management
  - Clear definition of process activities and roles
  - Formalized training on Root Cause Analysis process
Blend of CMMI and ITIL for QMS Improvements (cont’d)

- Release Management, Configuration and Change Management
  - Defined boundaries across environments to further refine configuration items (CIs)
  - Integrated configuration management practices across disciplines through defined CM planning

- Project Management
  - Alignment of service management activities within formalized planning
  - Increased understanding of service project budget activities
  - Service project and client project planning tightly linked with overall resource utilization
Accelerating the Schedule…

- Continued management support through weekly reviews
- PPQA activities conducted across each domain, monthly
  - Measured coverage of process and work product activities across the QMS
  - Reported status towards goal to management, weekly
- Conducted SCAMPI-C type health checks to monitor readiness
  - Scheduled reviews at month 4 and 7 of implementation
  - Utilized same Lead Appraiser for all SCAMPI reviews
- Planned SCAMPI-A starting in month 7
Return on Investment

- Decreased rejected Change Requests from more than 10% to less than 3%
- Reduced the number of rejected Root Cause Analysis reports by 30%
- Reduction in number of aging tickets by 37%
Lessons Learned

- ITIL and CMMI models helped convince the technical staff of the benefits of process improvement, facilitating cultural change
  - By treating services as projects, we introduced the service delivery planning aspects of ITIL
- We trained the organization on our CMMI-compliant Quality Management System (QMS), not the CMMI model; we had a small number of CMMI experts and trained the entire staff on the QMS
  - Focused on “the way to do business,” not compliance with model
- Availability of Configuration Management plans helped the teams better understand what was being managed and tied in to Asset Management activities
Best Practices

- It was sometimes difficult—but very necessary—to ensure adequate resources from teams to help implement plans and QA audit activities
- Use one process across IM and AM activities to reduce resource requirements
- Establish document and measurement repositories early (eases transition to L3)
- Schedule scope of SCAMPI-A assessments early in the QMS rollout
  - Interviews covered 30% of organization
  - Project sampling covered 100% of project types across organization
References

- **Books**
  - *IT Service Management: An Introduction Based on ITIL* (van Bon, Jan; ISBN 9077212280)
  - *ITIL Service Support* (OGC; ISBN 0113300158)
  - *ITIL Service Delivery* (OGC; ISBN 0113300174)
  - *CMMI: Guidelines for Process Integration and Process Improvement* (Chrissis, Mary Beth et al; ISBN 0321154967)

- **Web sites**
  - ITIL: [http://www.itil.co.uk](http://www.itil.co.uk)
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