CENTRE ™ (Common Enterprise Resource)

Systems and Software Engineering Platform designed for CMMI compliance

Capability Maturity Model Integration (CMMI) is a process improvement approach that provides organizations with the essential elements of effective processes. **CMMI** helps integrate traditionally separate organizational functions, set process improvement goals and priorities, provide guidance for quality processes, and provide a point of reference for appraising current processes. (Software Engineering Institute, **SEI** web-site, www.sei.cmu.edu/cmmi/general/)

CENTRE is a software product designed, authored and produced by **Integration Technologies Group Inc. CENTRE** is composed of configurable modules intended to provide compliance with **CMMI** process areas and **ISO** clauses while increasing organizational efficiency, effectiveness and continual improvement.

Integration Technologies Group Inc. (ITG), www.itgonline.com, is a systems and software engineering company founded in 1984 and headquartered in Falls Church, Virginia, USA. ITG is ISO 20000-1:2005, ISO 9001:2008 and ISO 27001:2005 registered. As well, the company is an SEI member and partner and has been externally appraised twice at CMMI Level 3.

This document contains brief descriptions of **CENTRE CMMI** Software features which cover specific and generic evidence of compliance for practices required by **CMMI for Development Version 1.2** process areas. As with all process improvement methodologies and industry best practices, management commitment, quality record collection, analysis and processing are required to achieve improvement objectives and successful appraisals and registrations.

CENTRE was developed to facilitate today's Best Practices Certifications and process improvement methodologies. By using **CENTRE**, businesses can increase efficiencies across key business processes and satisfy many of the requirements stipulated by the **SEI** and international standards boards. Some of the benefits that may be derived by implementing compliance with **CMMI** process areas are:

- Improved Quality of Output
- Increased Accuracy of Estimates
- Earlier Identification of Defects
- Accurate Measurements of Processes
- Higher Operational Efficiency
- Cost Reduction and Integration with Industry Standards

As a result, an organization using **CENTRE** will be recognized as delivering successful service to its clients and constituents with dependably high-quality and consistent methods and practices. The **CENTRE CMMI** Software 1.2 implementation includes 'CENTRE ISO 9001:2008' Quality Management System elements which are:

> **CENTRE - Document Control System (DCS)**
> **CENTRE - Records Control System (RCS)**
> **CENTRE - Human Resources**
> **CENTRE - Meeting Management**
> **CENTRE - Customer Satisfaction Surveys**
> **CENTRE - Supply Chain Management**
> **CENTRE - Ad-Hoc Report Writer**

These elements are described in more detail in the **CENTRE ISO 9001:2008** Compliance Package - White Paper.

Disclaimer

Use of CENTRE modules or similar software alone does not result in organizational CMMI conformance. Documented procedures, defined processes and work instructions, staff training and internal audits of Process Areas compliance are needed to prepare an organization for a CMMI appraisal. The ITG CENTRE Document Control System (DCS) contains documentation that describes the ITG Quality Management System and consists principally of the following documents:

> • Business Quality Manual (BQM) in conformance with ISO 9001:2008,
> • Information Technology Services Management manual (ITSM) in conformance with ISO 20000-1:2005,
> • Information Security Management System manual (ISMS) in conformance with ISO 27001:2005,
> • Corporate process workflow, Quality Procedures and Quality Work Instructions.

CENTRE CMMI 1.2 Artifacts for Process Improvement

CENTRE CMMI Specific & Generic Evidence Elements:

CENTRE Project Monitoring and Control

SP 1.1 *Monitor the actual values of the project planning parameters against the project plan.*

CENTRE Evidence: The direct evidence for actual Project values are contained in CENTRE data (SLA compliance, project daily status reports, etc.), Project Financials Module, Project scorecard, and Management Meeting minutes. Inherent to CMMI compliance is the Document Control System (DCS), which contains the CENTRE ISO document depository. A component of compliance with this process area is Quality Procedure 11, which outlines the operation and mission of Management Review Boards and Quality Work Instruction 21, Project Monitoring and Control:

Search for Documents:

Listing:

Document Elements:

Document Displayed
…… Next Page ……

CENTRE CMMI Version 1.2 Compliance Project Monitoring and Control - White Paper
Author: Michael P. Angelakis   DCS #997   Version: 4.0   Date: 04/13/10   Page 3 of 13

ITG-QWI-21   'Project Monitoring Work Instruction'

As well, direct evidence for compliance with this Specific Practice includes components of the Measurement & Analysis facility:

MEASUREMENT & ANALYSIS
Reports marked with a (Y) will only retrieve data from year 2008 and beyond. You may change this to access data prior to the current year.

Project Reporting

Project   ○ Find Tasks Exceeding Planned Period of Performance   ○ Find Project Cost Categories Exceeding Year To Date Budget
○ Project Financial Performance

Contract Performance

○ SLA Performance For Each Contract
○ Average Costs per Item Type For Each Contract
○ Project Financials

CENTRE CMMI 1.2 Artifacts for Process Improvement
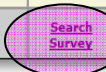
Quality Assurance Reports

QA	
○ Contract QA Summary Results	○ QA Summary Results For Each Contract
○ Contract QA Summary Results By TAM	○ Contract QA Summary Results By City
○ Contract QA Summary Results By SME	○ Contract QA Summary Results By BDM
○ Contract QA Summary Results By Local FE	○ Contract QA Summary Results By Subcontractor
○ Contract QA Summary Results For a specified Score and Specified User Category	○ Contract QA Less than Mean and Parameter

SP 1.2 *Monitor commitments against those identified in the project plan.*

CENTRE Evidence: Direct evidence for Project Monitoring related commitments is found in the budget, SLA, QA, estimating and earned value reporting facilities throughout **CENTRE Projects** and **Contracts** modules.

Projects:

Project Name		Contract Number	Status	Priority	Plan Start Date	Actual Start Date	Planned End Date	Actual End Date	POC	DAR	View Project Summary	View Tasks	View Hours
CLIN V Desktop Refresh	Search Survey	8068-005	Active	1	7/1/2008 9:00:00 AM	7/1/2008 8:00:00 AM	12/18/2008 6:00:00 PM		Sheri Mendez	NO	SUMMARY	TASKS	

QA/Customer Satisfaction

SELECT CUSTOMER SURVEY FORM

All Surveys
Organizational Innovation and Deployment
Professional Services
Software Development
Software Hardware Survey
Software Hardware Installation and Migration
Training

Budget Monitoring

Cost Category Name	Estimated Current month	Budgeted Current month	Actual Current month
MATERIAL HANDLING COST	3,083.00	3,083.00	6,019.59
MAINTENANCE LABOR COST	79,583.00	79,583.00	78,737.15
DIRECT LABOR COST	71,599.00	71,599.00	51,087.60
MAINTENANCE PARTS COST	37,571.00	37,571.00	29,537.53
CONTRACT REVENUE	400,000.00	400,000.00	364,629.47
NET MARGIN	119,115.00	119,115.00	35,568.43
FREIGHT COST	6,720.00	6,720.00	7,551.77
TRAVEL COST	4,600.00	4,600.00	83.00
COMMISSIONS	2,990.00	2,990.00	0.00
OTHER DIRECT COST	2,362.00	2,362.00	1,313.44
NATIONAL SUPPORT CENTER COST	59,055.00	59,055.00	68,210.21

SLA Attainment

SLA PERFORMANCE FOR EACH CONTRACT
Selected Date Range: 09/01/2008 - 09/30/2008

Contract	Repair SLA met	Response SLA met	Total Service Records	Total Service Records with Responses	% Repair SLA met	% Response SLA met
4333-000	30	18	30	18	100.00%	100.00%
5263-000	49	1	50	1	98.00%	100.00%
7451-999	0	4	4	4	NA	100.00%
7647-222	0	1	1	1	NA	100.00%
8001-000	5	6	6	6	83.33%	100.00%
8001-003	6	6	6	6	100.00%	100.00%
8010-000	0	3	3	3	NA	100.00%
8032-000	56	56	56	56	100.00%	100.00%
8042-000	11	11	11	11	100.00%	100.00%
8044-001	1	1	1	1	100.00%	100.00%
8045-111	138	143	143	143	96.50%	100.00%

SP 1.3 *Monitor risks against those identified in the project plan.*

CENTRE Evidence: As in the Project Planning process area, **CENTRE** provides direct evidence for the recordation of anticipated risks, risk mitigation plans, level and intensity of risk among other recorded data. Notwithstanding the human factor of monitoring risk, the CENTRE Potential Problem Management subsystem of the Problem Management module permits a staff member with adequate access rights to set up risk scenarios that if materialized would generate alerts.

CENTRE generated alerts may be communicated to a designated recipient via email or SMS messages.

Alert Creation

Alert Condition Selection

Select Applicable Contracts and Assign Alert Recipients

The alerts can be scheduled for "Potential Problems/Risks:"
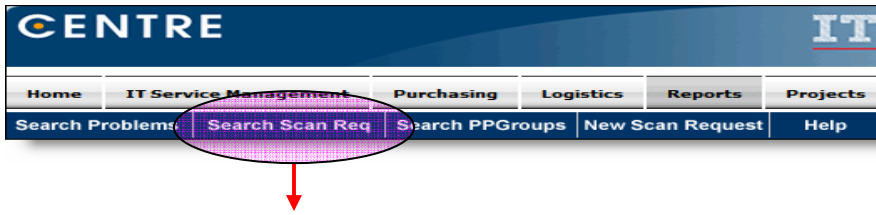
PPMS Scan Request Listing

CENTRE CMMI 1.2 Artifacts for Process Improvement

In the example above the user has defined as a potential problem/risk, the presence of new incidents for devices where the historical total cost of parts exceeds $2,000.00. The prescribed mitigation in the task segment of the Project would be to replace such devices.

The potential Problem/Risk could be the change of the status in any field in **CENTRE** thereby generating an alert notifying the relevant stakeholder(s).

SP 1.4 *Monitor the management of project data against the project plan.*

CENTRE Evidence: All Project data is managed by **CENTRE** modules.

SP 1.5 *Monitor stakeholder involvement against the project plan.*

CENTRE Evidence: As seen in previous Process Areas stakeholders are identified at the planning stage:

At the Contract level

At the Project Level

At the Task Level

Stakeholder monitoring is accomplished at the Task Level as resources:

EDIT RESOURCE HOURS FOR TASK [Albuquerque]			
	Total Task Estimated Hours	Total Budgeted Resource Hours	Total Actual Resource Hours
	22.00	0	42.00
Resource Name	Work Hours Per Day	Budgeted Resource Hours Reset All Values To 0 Reset All Values To [ ]	Actual Hours
Bardwell, Charlene	8	0	21.00
Bronson, Curtis	8	0	0
Destefani, Robert	8	0	21.00

As well as at the Timesheet Level:

SEARCH TIME SHEET IN [CLIN V Desktop Refresh]

Resource: Ceely, George B.
Period: 09/16/2008 to 09/30/2008
Status: Select All

EDIT TIME SHEET FOR [Ceely, George B. - 1579]

Period: 9/16/2008 to 9/30/2008

Project	Labor Code	Task	Tue 9/16	Wed 9/17	Thu 9/18	Fri 9/19	Sat 9/20	Sun 9/21	Mon 9/22	Tue 9/23	Wed 9/24	Thu 9/25	Fri 9/26	Sat 9/27	Sun 9/28	Mon 9/29	Tue 9/30	Task Hours
CLIN V Desktop Refresh - 8068-005		Project implementation (Admin Hours)	3.5	1	1.5	1			1.5	1	0.5	1.25	0.5				1.5	13.25
		*Project stoppage time (HHQ EOY Processing)																0
		*HUD HQ 7th & 8th																0
		Total Hours Worked:	3.5	1	1.5	1	0	0	1.5	1	0.5	1.25	0.5	0	0	0	1.5	13.25

And at the Action Item Level:

SELECT ACTION ITEM FOR [ADMC-2 Program Meetings]							
ID	Start Date	Issue	Suggestions	Action Items	Owner	Outcome	Due Dat
○ 160	4/24/2006 1:14:19 PM	Establish formal subcontract with: GovConnection, Prism Pointe, LGB, Bethune-Cookman, Four Points	DaveW and BillH will work with Dave Cohen to complete this task	2: This task has been broken into a separate Action Item for each subcontractor agreement. Progress will be tracked on the Action page of the Project Workbook located at \\Itg_central\common\Team Halladay\Contracts\8103-999 ADMC-2\Project Workbook ...GG 1: 06/14/06 - Glenn to call Prism Pointe and get them to send their version of subcontract agreement to us. BillH says when we have that,	Wilson, David M.	2: This task has been broken into a separate Action Item for each subcontractor agreement. Progress will be tracked on the Action page of the Project Workbook located at \\Itg_central\common\Team Halladay\Contracts\8103-999 ADMC-2\Project Workbook. This Action Item will be closed when all subcontracts are in place. ...GG 06/14/06: Candidate College is Johnson C. Smith Univ. Dave is talking w	6/30/2 1:14:1
○ 180	6/14/2006 3:42:45 PM	Establish process for live transfer of service sales calls from GovC to ITG.	.	1: 06/14/06 - Dave to set up meeting with GovC to define situations requiring live transfer to a sales person at ITG, and establish the flow of activity when such situations arise ...GG	Wilson, David M.	08/31/06: This issue was not addressed at the lunch&learn on Aug 29. The process has not been determined at this time. Bill, Dave and Mike are discussing and will let me know how they want it set up...GG 07/13/06: Dave adding to training a clear explanation for GovC sale... ...rspr ...oncerning ho... ...ice	6/30/20u 4:09:34

SP 1.6 *Periodically review the project's progress, performance, and issues.*

CENTRE Evidence: Direct evidence provided by **CENTRE** for project reviews can be found in the Meeting Management module:

SEARCH MEETING

Meeting Name: %ADMC2%

Meeting Listing

SELECT MEETING

Meeting Name	Number of Sessions	Open Action Items	Closed Action Items	Action Items On Hold	Cancelled Action Items
○ ADMC-2 Program Meetings	3	3	23	1	1

Meeting Minutes Date List

SELECT MEETING MINUTES FOR [ADMC-2 Program Meetings]

Meeting Date	Issued By	Status	Approved By
○ 7/13/2006 11:00:00 AM	Gardner, Murray G.	Approved	Gardner, Murray G.
○ 6/14/2006 10:30:00 AM	Rexin, Judy (K)	Approved	Gardner, Murray G.
○ 5/19/2006 10:00:00 AM	Gardner, Murray G.	Approved	Gardner, Murray G.

Meeting Minutes

VIEW MEETING MINUTES FOR [ADMC-2 Program Meetings]

*The mandatory editing fields are indicated with an asterisk ***

*Meeting Date and Time: 7/13/2006 11:00:00 AM

*Meeting Minutes:

Date: Thursday, July 13, 2006

Time: 11:00 AM

Attendees: Glenn, James, Catrina, Dave, Bill, Judy

Items Discussed

Due to re-protest by Gateway, task due dates can slip until notice to proceed has been delivered from the Army but continue with forward momentum

Telephone Set-Up – T-1 line has been installed at ITG. Determine where in- house phones will be placed, at salesmen desk, call operators, TAM, Glenn's desk?

Incorporate into GovConnect training session, scripts for transfer of service calls from GovConnect to ITG w/ the Army customer on the line with emphasis on the need to inform call participants as to

*Issued By: Gardner, Murray G.

Approved By: Gardner, Murray G.

SP 1.7 *Review the accomplishments and results of the project at selected project milestones.*

CENTRE Evidence: Project reviews contained in meeting minutes as seen above and Task completion records are the direct evidence provided for this Specific Practice.

Task Results data:

SP 2.1 *Collect and analyze the issues and determine the corrective actions necessary to address the issues.*

CENTRE Evidence: Corrective action related records are collected at the Change Management Level and are provided as direct evidence for this Specific Practice.

Corrective Action Search:

Corrective Action Change Request Records

Change Request

The resultant approved Change Request designated as "Corrective Action" is the direct evidence provided for compliance with this specific Practice:

SP 2.2 *Take corrective action on identified issues.*

CENTRE Evidence: Please see evidence presented in SP 2.1.

SP 2.3 *Manage corrective actions to closure.*

CENTRE Evidence: Please see evidence presented in SP 2.1.