

## CENTRE CMMI 1.2 Artifacts for Process Improvement

# 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/](http://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](http://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 CMMI Version 1.2 Compliance, Risk Management - White Paper

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## **CENTRE CMMI 1.2 Artifacts for Process Improvement**

**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 – Risk Management

#### SP 1.1 *Determine risk sources and categories.*

**CENTRE Evidence:** Risk management records and methodologies are present in the Project and Contract Management modules. As well, within Projects, subordinate Tasks contain a Risk Management component.

#### Contract Record:

The screenshot shows the 'VIEW CONTRACT' interface with various fields for contract details, SLA settings, and contact information. The 'Risk Management' tab is circled in red.

#### Risk Management Records:

SELECT RISK UNDER CONTRACT [ 5263-000 ]							
Contract Risk ID	Risk Name	Risk Assessment	Risk Level	Risk Mitigation	Risk Materialized	Date Created	Created By
27	Contract Risk	Procedural	2	Adherence to internal policies and procedures.	NO	12/15/2007 7:30:29 PM	Admin

The screenshot shows the 'VIEW RISK FOR CONTRACT' interface for contract 5263-000. The 'Risk Assessment' dropdown is circled in red.

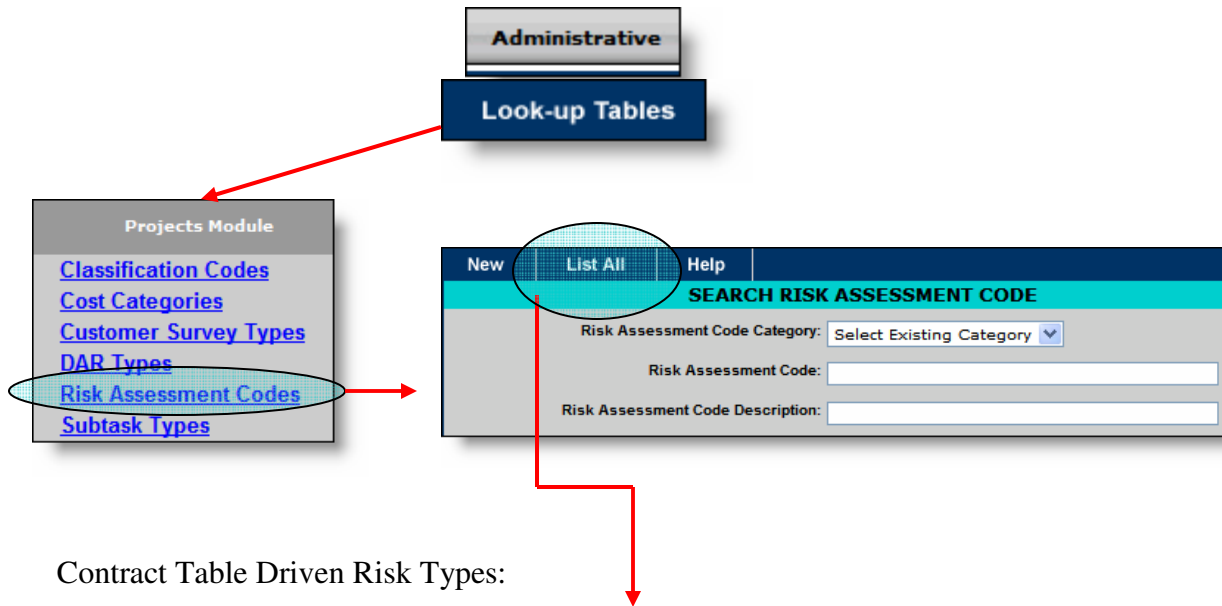
#### Risk Types

- Commercial Acquisition
- Competition from OEM
- Competitive pricing
- Financial
- Human Resource
- Inventory Availability
- Inventory End of Life
- None
- OEM
- Procedural

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*SP 1.2 Define the parameters used to analyze and categorize risks, and the parameters used to control the risk management effort.*

**CENTRE Evidence:** The Risk Management records seen above as well as the ability to create Risk Categories as user definable entries, provide the direct evidence for this Specific Practice.



Contract Table Driven Risk Types:

SELECT RISK ASSESSMENT CODE		
Category	Risk Assessment Code	Risk Assessment Code Description
<input type="radio"/> Contract	Commerical Acquisition	Acquisition of commercial entity
<input type="radio"/> Contract	Competition from OEM	OEM offers full service support with hardware acquisition
<input type="radio"/> Contract	Competitive pricing	Pricing on long term contracts not competitive with current pricing over time
<input type="radio"/> Contract	Financial	Risk resulting from contract terms and conditions.
<input type="radio"/> Contract	Human Resource	Availability of Skilled Resources
<input type="radio"/> Contract	Inventory Availability	Lack of availability of parts for older equipment
<input type="radio"/> Contract	Inventory End of Life	End of Product lifecycle
<input type="radio"/> Contract	None	No Risk Identified
<input type="radio"/> Contract	OEM	OEM Pressure
<input type="radio"/> Contract	Procedural	Risk associated with current ITG procedures

*SP 1.3 Establish and maintain the strategy to be used for risk management.*

**CENTRE Evidence:** In the context of automated data collection, the CENTRE evidence provided for meeting the requirements of this Specific Practice is displayed above. The establishment of Risk Management strategy is subject to the particulars of any given Project. Once the Risks and relevant mitigations have been identified, CENTRE can be used to enumerate them, integrate them within the Contract, Project and Task management subsystems and track them accordingly.

## CENTRE CMMI 1.2 Artifacts for Process Improvement

### SP 2.1 Identify *and document the risks*.

**CENTRE Evidence:** Risk identification is subject to project particulars. Risk Documentation is described in the CENTRE Evidence response to SP 1.2.

### SP 2.2 *Evaluate and categorize each identified risk using the defined risk categories and parameters, and determine its relative priority.*

**CENTRE Evidence:** As seen in the responses to SP 1.1, the CENTRE Risk Management subsystem allocates risk levels (priority), categories and other parameters such as Risk Mitigation and Risk Materialization.

### SP 3.1 *Develop a risk mitigation plan for the most important risks to the project as defined by the risk management strategy.*

**CENTRE Evidence:** Corresponding Risk Mitigation plans for identified Risks are available in the Risk Management subsystem. Further, as Risks and Mitigation plans are part of the CENTRE resource library, previous similar projects may be considered for risk analysis and mitigation.

### SP 3.2 *Monitor the status of each risk periodically and implement the risk mitigation plan as appropriate.*

**CENTRE Evidence:** Though the evidence for periodic monitoring may be Project specific, the CENTRE Potential Problem Management subsystem is a useful tool for automated alerts emerging from periodic scans of the data base containing Project related entries.

**SEARCH POTENTIAL PROBLEM SPECIFICATION SCAN REQUEST**

Scan Request Name:

Description:

Scan Request Query:

Severity Level:

Problem Status:

Scan Status:  (This scan request will only be executed if Active)

Scan Number of Days Prior to Current Date:

Scan on Date Column:  (Select the Date Column upon which)

Scan Frequency Type:  (Select Hours or Days)

Scan Frequency Value:

Number Of Matches:

Problem Assigned To User:

Alert Notification Email Address:

Enable Email Notification:

Created by User:

Date Created:

Last Modified by User:

Date Last Modified:

Potential Problems are defined for the purpose of collecting direct evidence for this Specific Practice as Potential Risks.

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In the Scan Request depicted below, the Scan Request is searching for Network Management devices whose support costs exceed a specified threshold, therefore posing financial risk to the project.

**VIEW POTENTIAL PROBLEM SPECIFICATION SCAN REQUEST**

Scan Request Name: 8136-000 Networking Devices > \$ 3000

Description: Scan to find NW devices that have cost ITG over \$3000

Scan Request Query: PPMS 8136-000 Networking Device > \$3000

Priority Level: 3

Problem Status: Unknown Issue

Scan Status: Active (This scan request will only be executed if Active)

Scan Number of Days Prior to Current Date: 365

Scan on Date Column: SNHistory.TimeStamp (Select the Date Column upon which to apply the Number of Days query)

Scan Frequency Type: Days (Select Hours or Days)

Scan Frequency Value: 7

Number of Matches: 1

Problem Assigned To User: Dion, James F.

Alert Notification Email Address: james.dion@itgonline.com

Enable Email Notification: Yes

Select Query: Select EquipmentType.EquipmentType as [ItemType],SNHistory.TotalLaborCost as [TotalLaborCost],SNHistory.TotalPartsCost as [TotalPartsCost],SNHistory.SerialNumber as [SerialNumber] from ContractEquipment ContractEquipment,EquipmentType EquipmentType,SNHistory SNHistory,Contract Contract where (EquipmentType.EquipmentTypeID=ContractEquipment.EquipTypeID) and

Comments:

Related Change Requests:

Created by User: Dion, James F.  
Date Created: 4/4/2008  
Last Modified by User: Dion, James F.  
Date Last Modified: 4/4/2008

Similar Scan Requests may be formulated to identify Project delays, growth in defect rates that may exceed predefined thresholds, etc.