



RMIT

Risk Management Implementation Tool

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History

- NASA Glenn Research Center Risk Management Office (RMO) maintained the Continuous Risk Management (CRM) tool, which was identified in the NASA CRM course material.
- This CRM tool was developed in Microsoft Access 97 and was only available as a stand-alone tool.
- After further study of current NASA and industry risk tools and noting their deficiencies, it was determined to enhance this CRM tool by making it web-based and incorporating additional features that would make it more efficient and effective for NASA Programs/Projects to use.

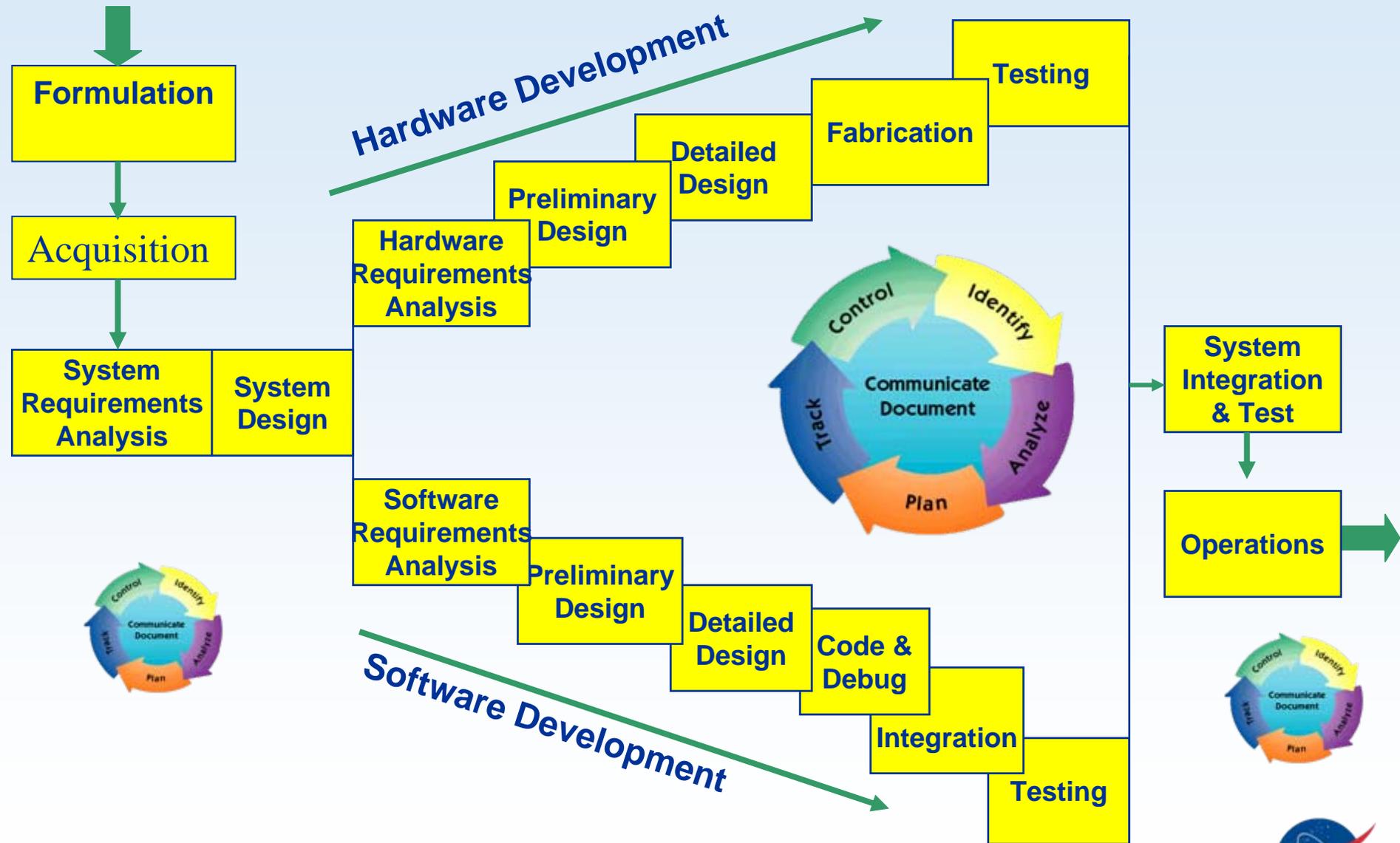


RMIT Overview

- Web-based tool that supports implementing the NASA Continuous Risk Management process.
- Allows a Program/Project to identify, analyze, plan, track, control, document, and communicate risks in an environment tailored to their project requirements.
- Programs/Projects can utilize RMIT as a basis for decisions on how to mitigate cost, schedule, technical, environmental, security, and safety risks.
- To ensure risk management begins early in the life cycle, the Programs/Projects can begin using RMIT during the formulation phase to identify initial risks and develop a Risk Management Plan, and then continue managing risks throughout the Program's/Project's life cycle.



RMIT Support in Life Cycle

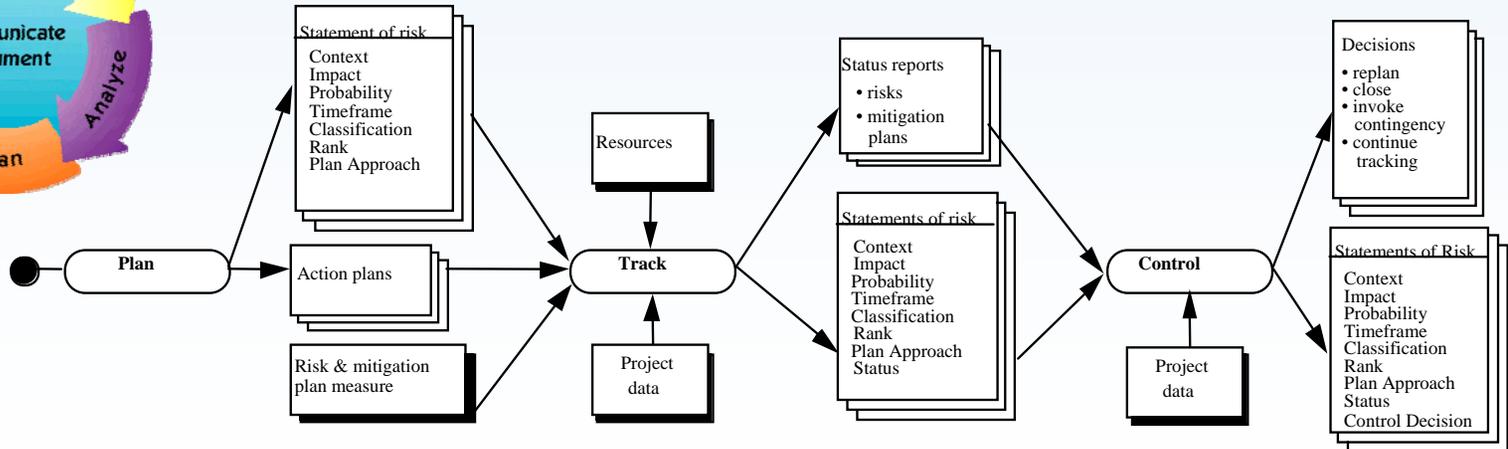
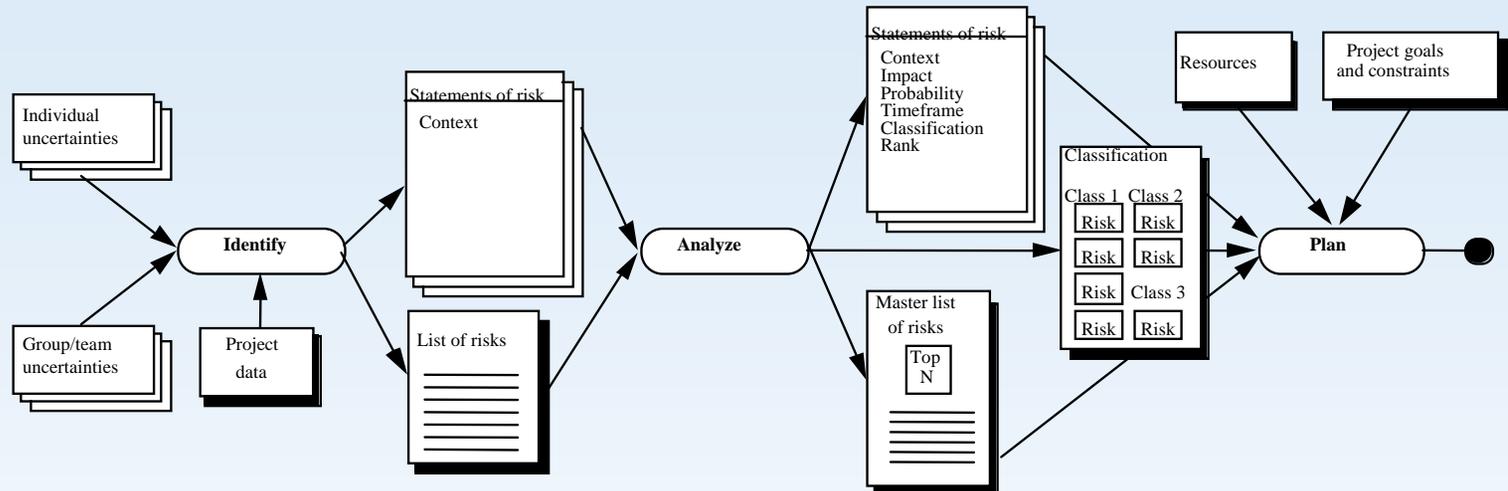


Key Features

- Centrally located for distributed project members to use
- Allows user to associate a risk with other risks
- Captures lessons learned
- Compliant with 508 requirements of the Rehabilitation Act
- Available to all NASA Programs/Projects
- Flexible reporting
 - 5 X 5 Risk Matrix & Focus Chart
 - Waterfall Chart
 - Milestone Readiness
 - Top “N” Risks
 - Subsystems Affected
 - Days in System
 - Last Modified
 - Risk Classification
 - Risk Information Sheet
 - Risks Summary [project risks listed along with their status: new, open, closed, disapproved, and red, yellow, or green])



CRM Process vs. RMIT Process



User Roles and Responsibilities

- **Project Requestor** - Registered user of the Assurance Technology Center (ATC) web site that requests a project be created in RMIT.
- **Project Manager (PM)** - Individual responsible for managing resources, cost, schedule, and technical activities in a project.
- **PM Alternate** - A designated alternate to the PM that can act on the PM's behalf for risk management related activities.
- **Project Member** - Any individual assigned to a project.
- **Risk Originator** - Project member that adds a risk.
- **Risk Owner** - Project member assigned to analyze and mitigate the risk.
- **Facilitator** - Individual appointed by the PM or PM Alternate to ensure continuous risk management for the project.



Capabilities

- Setting Up a Project
- Adding a Risk
- Selecting Risk Attributes
- Entering a Mitigation
- Associating Risks
- Prioritizing Risks
- Generating Reports
- Performing Searches
- Entering Lessons Learned



Setting Up a Project

Project Name:

Acronym:

Project Description:

Project Manager: [Select Project Manager] ▼

NASA Center: [Select NASA Center] ▼

Parent Project: [Select Parent Project] ▼

Request to Setup a Project



Setting Up a Project (cont.)

Project Name (Acronym)	Requestor (email)		
Risk Management Implementation Tool (RMIT)	Abernathy, Michael T (m.t.abernathy@nasa.gov)	<input type="radio"/> No action <input type="radio"/> Accept <input checked="" type="radio"/> Reject	View
Saturn Orbital Insertion (SOI)	Gamble, Kenneth A (k.a.gamble@nasa.gov)	<input checked="" type="radio"/> No action <input type="radio"/> Accept <input type="radio"/> Reject	View

Project Added to RMIT



Setting Up a Project (cont.)

Document		
SOI Project Management Plan	Delete	View
SOI Risk Management Plan	Delete	View

Upload a Document

Project Documentation Added to RMIT



Setting Up a Project (cont.)

	Probability	Impact	Timeframe
Very Low	<input type="text"/>	<input type="text"/>	<input type="text"/>
Low	<input type="text"/>	<input type="text"/>	<input type="text"/>
Medium	<input type="text"/>	<input type="text"/>	<input type="text"/>
High	<input type="text"/>	<input type="text"/>	<input type="text"/>
Very High	<input type="text"/>	<input type="text"/>	<input type="text"/>

Adding Risk Attributes



Adding a Risk

Risk Title

Risk Originator Davidson, Jonathan H **Risk ID**

Date Submitted 08/11/2004 **Last Modified** 08/11/2004
Current Status New **Risk Owner**

Suggested Resolution Date: (mm/dd/yyyy) 

Risk Statement

Risk Context

Classification:

Phase:
(When unmitigated risk will become a problem)

Subsystem:

Other Affected Subsystems
 Antenna IMU Solar Panels

Revision/Comments



Selecting Risk Attributes

Risk Title
Error in Antenna Drive Unit

Risk Originator Davidson, Jonathan H **Risk ID** SOI9827342-1
Date Submitted 08/11/2004 **Last Modified** 08/11/2004
Current Status Open **Risk Owner** Sparrow, Jack R

Suggested Resolution Date: (mm/dd/yyyy)

Risk Statement
Lorem ipsum dolor sit amet, consectetur adipiscing elit. In volutpat. Sed sem. Maecenas turpis. Duis in enim a lorem tincidunt aliquam. Suspendisse quis metus. Donec non purus et velit egestas adipiscing. Sed ut tortor eget odio pharetra bibendum. In hac habitasse platea dictumst. Curabitur posuere.

Risk Context

Risk Analysis

Probability: **Impact:**
Timeframe: **Priority:**

Classification:
Phase:
(When unmitigated risk will become a problem)
Subsystem:

Other Affected Subsystems
 Antenna IMU Solar Panels

Revision/Comments



Entering a Mitigation

Mitigation Task Title

Mitigation Task

Mitigation Task Status

Estimated			Actual		
Completion Date	Probability	Impact	Completion Date	Probability	Impact
<input type="text"/> 	Very Low 	Very Low 	<input type="text"/> 		



Associating Risks

ID	Risk ID	Risk Title	Risk Status	PxIxT	Associate
1	SOI123-A	Fusce pellentesque lectus	Open	4	<input type="checkbox"/>
2	SOI456-A	Maecenas nec nibh vitae urna	Open	12	<input checked="" type="checkbox"/>
3	SOI842-A	Ut blandit condimentum urna	New	20	<input type="checkbox"/>

Submit

Reset



Prioritizing Risks

ID	Risk ID	Risk Title	Risk Status	PxIxT		
<input checked="" type="checkbox"/>	1	SOI123-A	Fusce pellentesque lectus	Open	4	2 ▼
<input checked="" type="checkbox"/>	2	SOI456-A	Maecenas nec nibh vitae urna	Open	12	1 ▼
<input type="checkbox"/>	3	SOI842-A	Ut blandit condimentum urna	New	20	▼

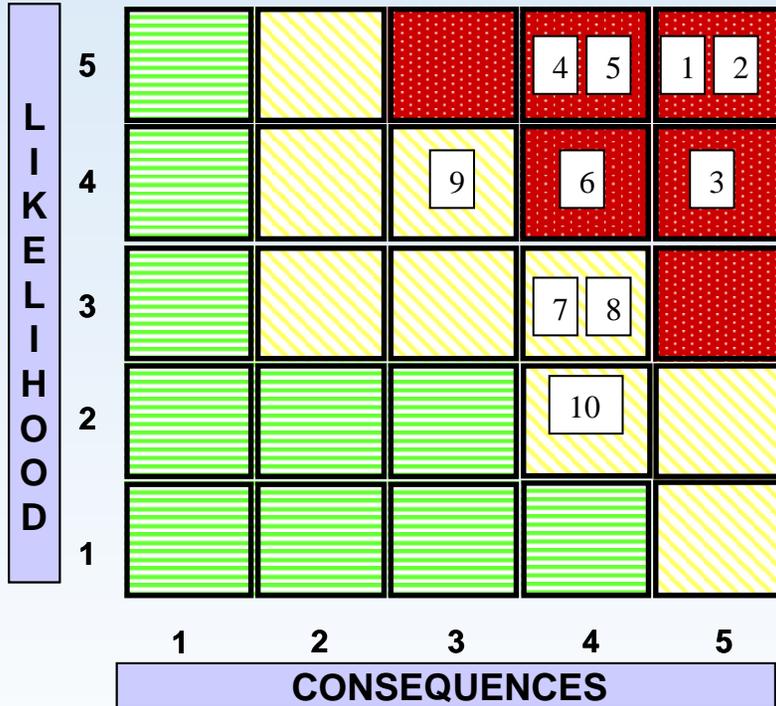


Generating Reports

- Displays the name of the project from which the risks belong.
- Display the date and time that the report was generated.
- Includes the capability to sort the information by individual columns if the data is displayed in a tabular manner and the column can be sorted.
- Provides the capability to display information concerning each risk displayed in the results, both graphical and tabular.
- Unless otherwise noted, displays only those risks with a status of new or open.



Sample Reports

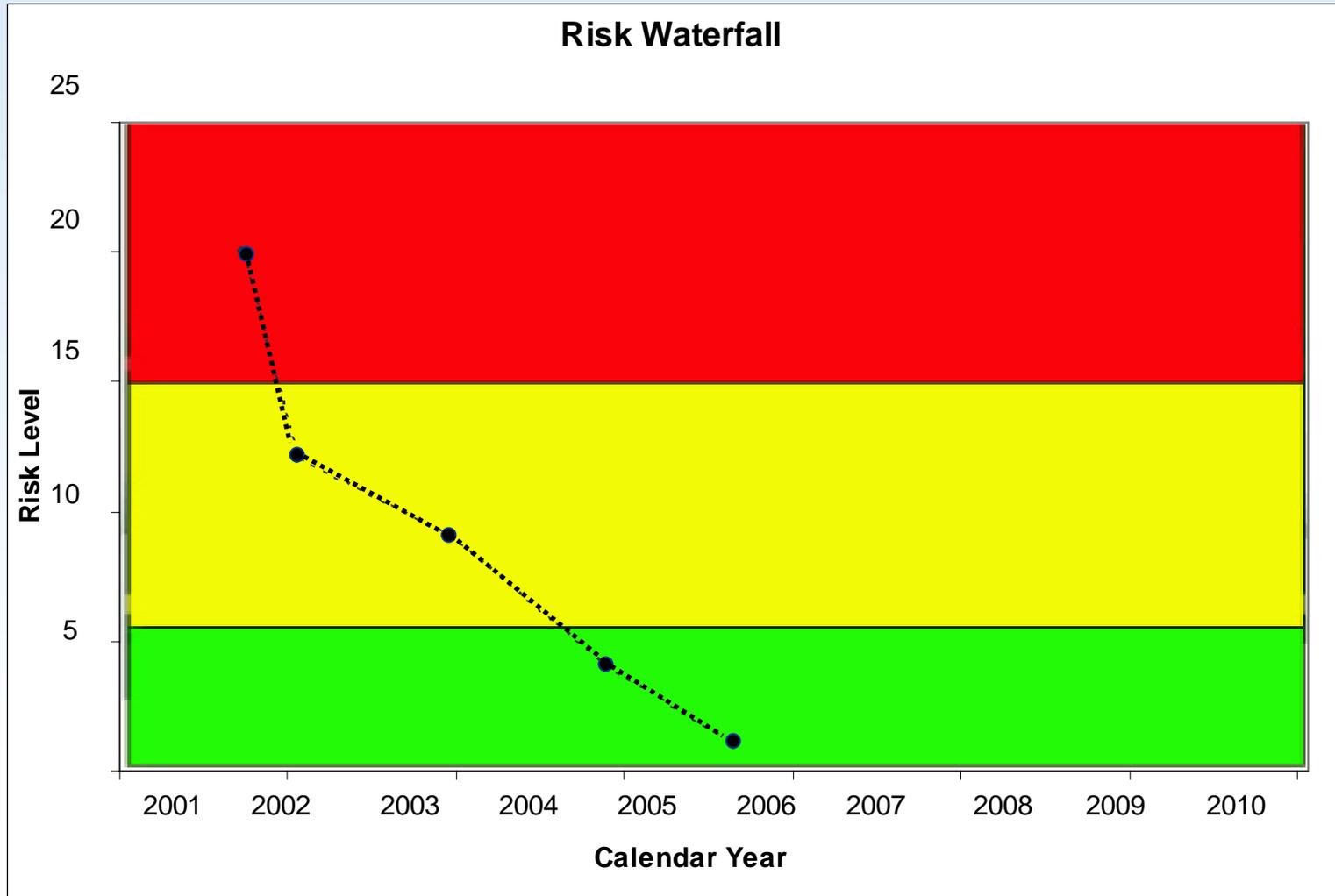


LxC Trend	Rank	Risk ID	Approach	Risk Title
↑	1	Engine-02	M	Thermal Vacuum/Acoustic Test
→	2	Engine-06	W	On-Orbit Propellant Transfer
↓	3	Engine-03	M	Aggressive Schedule
↑	4	Engine-08	M	Government Furnished Property (GFP)
New	5	Engine-05	M	Hot Fire Test Schedule Slip
→	6	Engine-01	M	Design Launch Weight Exceeds the Shuttle Capacity
↓	7	Engine-04	R	Returnability Requirement
↑	8	Engine-09	W	12 Year Life Certification
New	9	Engine-07	M	Reboost Engine/Thruster Lives
New	10	Engine-15	M	Unachievable Thruster Technology

Criticality	L x C Trend	Approach
High	↓ Decreasing (Improving)	M - Mitigate
Med	↑ Increasing (Worsening)	W - Watch
Low	→ Unchanged	A - Accept
New	New Since Last Period	R - Research



Sample Reports (cont.)



Performing Searches

Risk Title

Risk ID:

Risk Owner: [Select Risk Owner] ▼

Status: [Select Risk Status] ▼

Exposure: [Select a Risk Exposure] ▼

Approach: [Select an Approach] ▼

Subsystem: [Select Subsystem] ▼

Classification: [Select Classification] ▼

Phase: [Select a Phase] ▼

Resolution Date:  
Start Date End Date

Milestone: [Select a Milestone] ▼

Risk Originator: [Select a Risk Originator] ▼

Date Submitted:  
Start Date End Date

Date Modified:  
Start Date End Date

Top "N" Risks:

Order By: Risk Number ▼ Ascending ▼



Entering Lessons Learned

Lessons Learned	Submission Date	Submitted By	Author	Status		
Nullam consequat risus	10/01/2004	Nichols, Jason H	Nichols, Jason H	Approved		View
Aliquam erat volutpat etiam eleifend	8/15/2004	Simpson, Harold F	Paul, Karen D	Disapproved	Edit	View
Vestibulum ac tellus nec quam	3/19/2004	Grant, Grace P	Grant, Grace P	Approved		View
Praesent porttitor orci vitae diam	3/19/2004	Grant, Grace P	Grant, Grace P	New	Edit	View

[Add Lessons Learned](#)



Conclusion

- RMIT provides a simple means to manage risks.
- It be used by Program/Project managers throughout NASA.
- RMIT supports risk management from Phase A to Phase E (Concept to Operations) of the NASA Life Cycle and promotes further CRM efficiency at an Agency level.
- Through increased usage, RMIT can serve to enhance the probability of mission success across all NASA Programs/Projects.
- Next steps are to work closely with ATC and NASA Center's Safety and Mission Assurance Risk Management functional areas to identify CRM tool requirements and ensure an efficient roll-out of the RMIT at their Center.



Questions/Answers/Demonstration

