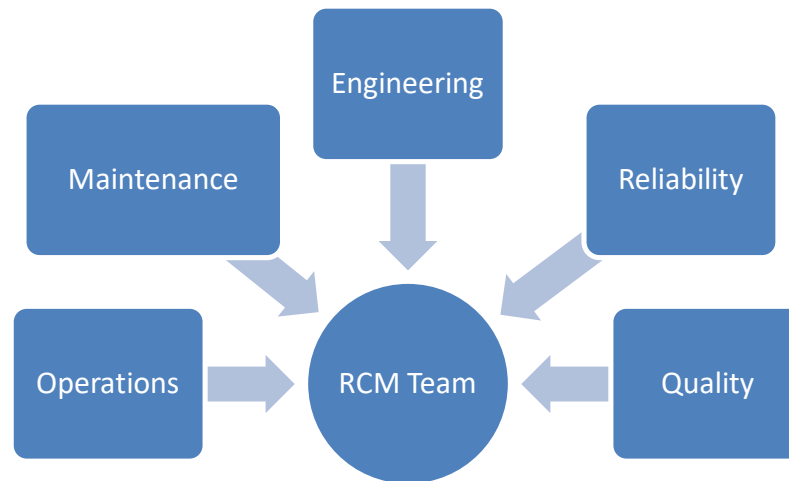


RCM Facilitator Role



Who is Involved in an RCM Project?

- Sponsor
- RCM Facilitator
- RCM Team Members
 - Cross functional team. At least one (1) representative from Maintenance, Operations, Quality, Engineering, Reliability Engineering
 - Team members have direct knowledge and/or experience of the asset being analyzed



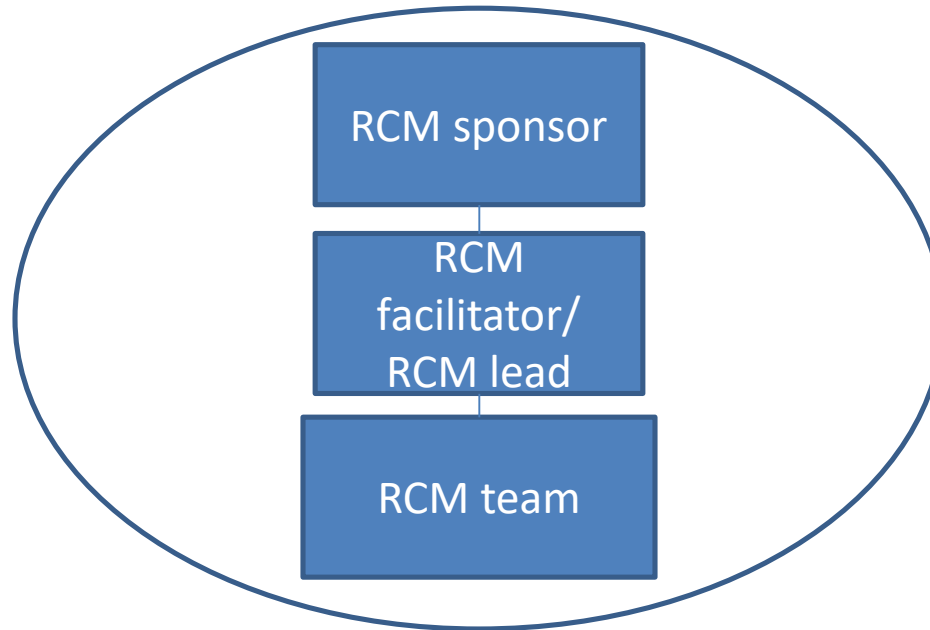
Facilitator Role

The success of the FMEA highly depends upon the facilitator. To ensure success, plan/execute/report according to the following principles:

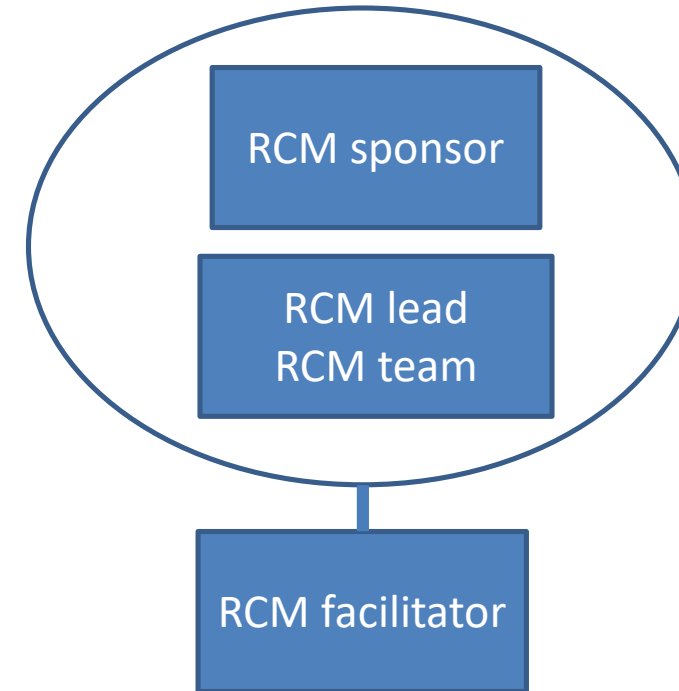
- Prepare: Preparation is key to the success of RCM facilitation. Ensure all prep work has been done prior to beginning the analysis. Understand the asset, its general operation and history.
- Control: You control the process from beginning to end including change management, planning and execution.
- Process: RCM has a defined process with a proven track record. Follow the process, including the FMEA worksheet and sound maintenance and reliability principles.
- Communicate: Communicate progress of the RCM project and results to all stakeholders.

RCM Team and Facilitator Models

Internal facilitator



External facilitator

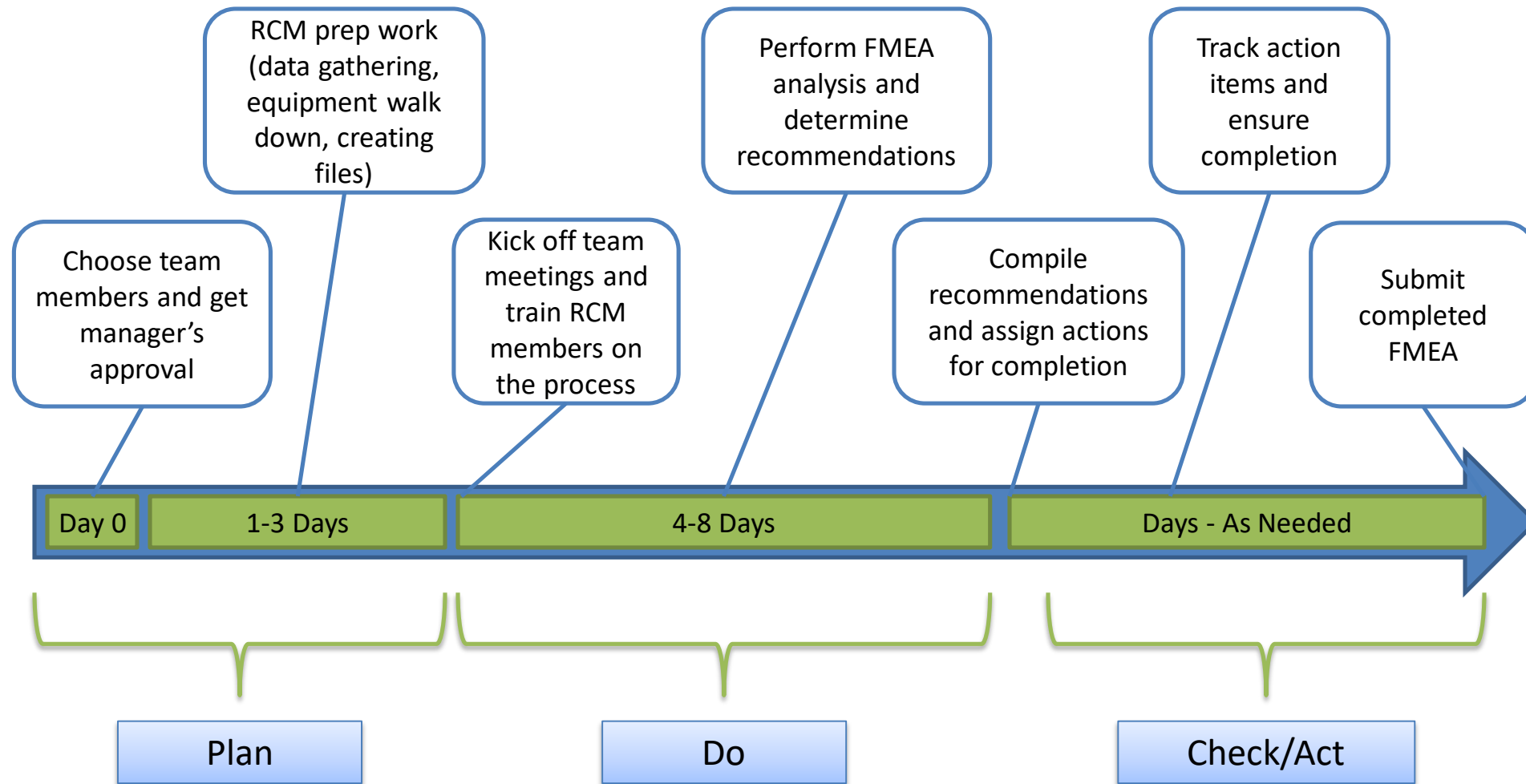


External, expert facilitators are frequently used to bring RCM process expertise and objectivity to the analysis.

RCM Project Phases and Facilitator Responsibilities



High-level View -- Facilitator Role and RCM Timeline



Preparation Checklist for RCM/FMEA

Use this checklist to gather documentation needed for an RCM study and FMEA completion

Checklist is included in FMEA tool

ITEM #	DESCRIPTION	COMPLETED?
1	Obtain assembly drawing showing major components and general arrangement	
2	Obtain Electrical / Instrument drawings	
3	Work order history for this unit and sibling units used in same service	
4	Obtain outage / downtime history or this unit and sibling units used in same service	
5	Select team personnel	
6	Assemble a list of all of the PMs and PdM performed on the equipment	
7	Copies of any previous failure analysis or major repair documents	
8	OEM manuals	
9	Obtain any equipment specific operator checklist items or SOPs	
10	A copy of the BOM or the equipment hierarchy from the CMMS	
11	Make provisions for a walk-through with a knowledgeable person	
12	If the severity, occurrence and detection scales are calibrated, print copies	

Responsibilities by Phase

	RCM Facilitator	RCM Team
Plan	<ul style="list-style-type: none"> Review RCM charter or create with sponsor. Identify RPN threshold Gather all asset information listed on prep checklist Choose cross-functional team members Write system description Build functional block diagram List the asset's functions & functional failures Schedule meetings with team for training and item review Train team on RCM fundamentals 	<ul style="list-style-type: none"> Attend training on RCM fundamentals Perform asset walk down to familiarize with asset Review system description for level-setting Review functional block diagram and functional failures
Do	<ul style="list-style-type: none"> Complete functional failure matrix Identify failure modes, causes, and effects, and current controls Facilitate RPN score decisions Sort the RPN scores from highest to lowest Lead team brainstorming activities to identify improvement actions for each failure above the RPN threshold Recommend maintenance strategies when appropriate Facilitate a new RPN calculation based on the improvement action to determine how much the risk level will be reduced 	<ul style="list-style-type: none"> Compile all results from FMEA, ensuring all "X"s on the Functional Failure Matrix have been analyzed Determine RPN using risk matrix definitions and review to ensure completeness If above the RPN threshold, brainstorm improvement actions to reduce the score Re-score RPN based on the new improvement action to determine how much the risk level will be reduced Compile all recommendations that came from FMEA, assign responsibilities for each
Check/Act	<ul style="list-style-type: none"> Follow-up to ensure action items have been completed and progress achieved 	<ul style="list-style-type: none"> Implement actions PM / maintenance task changes / additions will go through the PM Optimization process Track and report progress

Overall RCM Responsibilities

	Sponsor	Facilitator	RCM Lead	Team
Approve and commit resources	X			
Communicate results	X	X	X	X
Measure baselines and results			X	
Select RCM team	X	X	X	
Prepare documentation for study		X		
Facilitate FMEA analysis meetings		X		
Assign and document action items and deliver FMEA		X	X	
Assist with prep work			X	X
Participate in team analysis		X	X	X
Work on corrective actions			X	X

RCM Facilitator Tips



Facilitation Tips

Ensure there is enough time and data to prepare

Have the information readily available to keep meetings productive

Keep meetings on track, with minimal tangents

Use a “Parking Lot” to set-aside discussions about non-FMEA related issues

Encourage team member participation

Success depends on active participation

Provide breaks every hour to reduce mental fatigue

If SMEs aren't available, do not work on the FMEA that day

SMEs are needed for an effective analysis

Complete admin actions after meetings

Formatting changes or repetitive copy/pasting actions should occur outside of RCM team meetings

Tips for Organizing Data Collection

Asset walkdown	Document walkdown with pictures
Work order history	If failure codes are not used effectively, categorize the component, failure mode and failure cause (if available)
Spare parts usage	Mark if the spare parts were used as part of PM/PDM or for repairs. This will help determine the frequency of failure rates
Review PMs	Categorize each task by the component being maintained, the failure cause it's trying to mitigate, or the failure mode it's trying to identify
Risk priority number threshold	There should be no more than 15-20% of all scores above the threshold. Work with site management to determine an appropriate threshold