TEXTRON Systems

Root Cause/Corrective Action (RCCA) Worksheet

	Date Issued	

1. Build the Team

Lead	
Team Members	

2. Define the Problem

(Describe the problem in a concise statement that provides a clear definition of the issue/concern)

3. Containment Action

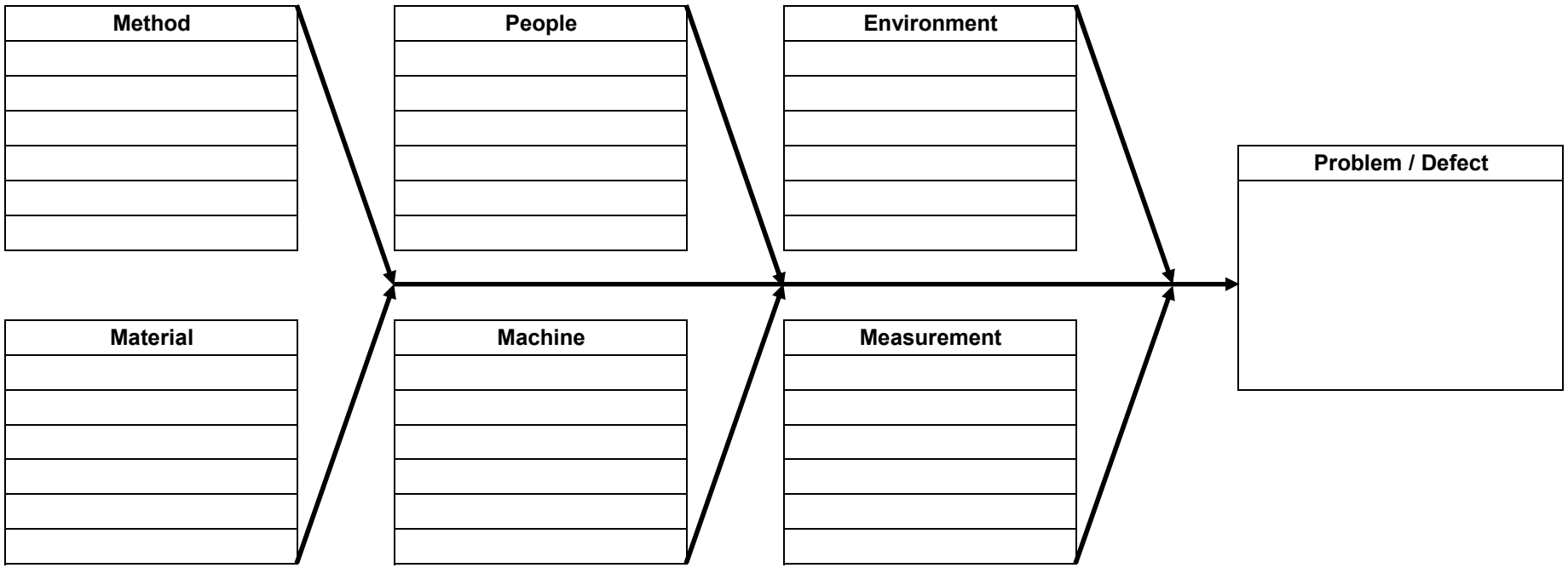
(What immediate action(s) need to be taken to isolate, contain, screen, and provide interim resolution to the problem? Insert additional rows as needed)

Action Items	Target Completion Date	Responsible Person(s)	Actual Completion Date

4. Identify Root Cause

4a. Fishbone Diagram

1) Define and list all contributing factors
2) Highlight in yellow the contributing factors that seem to have the biggest effect
3) Highlight in green the human factors that were considered in the analysis.



Fishbone Cause		4b. 3 x 5 Why

For each highlighted cause above, perform a 3x5 why analysis
If more than one cause is highlighted, duplicate sections 4b and 4c for each

Direct Cause (What immediate cause led to the nonconformance?)

Detection Cause (Why was the nonconformance not caught by inspection, test, or other process controls?)

Systemic Cause (What core processes, systems, procedures, etc. allowed the nonconformance to occur?)

4c. Identified Root Causes

Direct Root Cause	Detection Root Cause	Systemic Root Cause

5. Identify and Define Corrective Actions

(Generate permanent corrective action(s) for the identified root causes. Insert additional rows as needed)

Action Items	Target Completion Date	Responsible Person(s)	Actual Completion Date

6. Corrective Action Verification Plan

(What actions will be completed to ensure that the corrective action(s) are effective? Insert additional rows as needed)

Corrective Action	How will it be verified?	Target Completion Date	Responsible Person(s)	Acutal Completion Date

7. Distribution & Recognition

(Who will receive a copy of the completed form?) (Team and individuals should be formally recognized for the success of the corrective action.)

Distribution List :	Recognition of Team and Individual Efforts :

TEXTRON Systems

Root Cause/Corrective Action (RCCA) Worksheet

Date Issued

Input the date that the corrective action was initiated

1. Build the Team

Lead

Team Members

Assemble a cross functional team that will be working on the project.

2. Define the Problem

(Describe the problem in a concise statement that provides a clear definition of the issue/concern)

Thoroughly define the problem by stating when it was observed, what was observed, where, how much of an impact it has, the expectation not being met, and the desired state.

3. Containment Action

(What immediate action(s) need to be taken to isolate, contain, screen, and provide interim resolution to the problem? Insert additional rows as needed)

Action Items	Target Completion Date	Responsible Person(s)	Actual Completion Date

"Responsible Person(s)" are the people that will be responsible for task and its completion.

Define interim or short term corrective actions to prevent further escapes of defects until permanent corrective actions can be put into place.

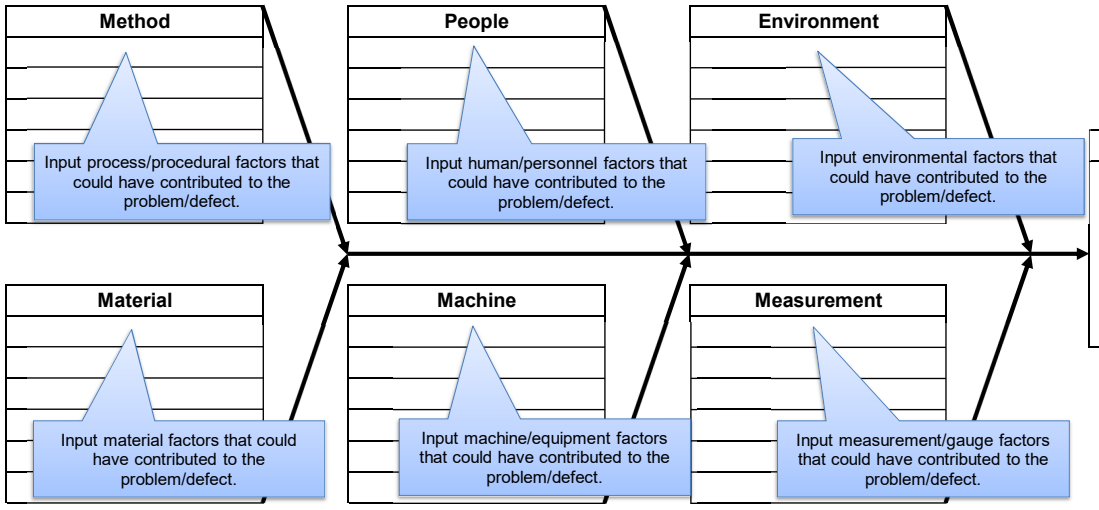
4. Identify Root Cause

4a. Fishbone Diagram

1) Define and list all contributing factors
2) Highlight in yellow the contributing factors that seem to have the biggest effect
3) Highlight in green the human factors that were considered in the analysis.

When all factors have been listed in th fields, highlight the factors that appear the most to the problem/defect oc

Highlight the human factors that were considered in the analysis. Utilize the Dirty Dozen listed in the procedure.



Input process/procedural factors that could have contributed to the problem/defect.

Input human/personnel factors that could have contributed to the problem/defect.

Input environmental factors that could have contributed to the problem/defect.

Input the problem / defect that was observed.

Input material factors that could have contributed to the problem/defect.

Input machine/equipment factors that could have contributed to the problem/defect.

Input measurement/gauge factors that could have contributed to the problem/defect.

Fishbone Cause		4b. 3 x 5 Why		For each highlighted cause above, perform a 3x5 why analysis If more than one cause is highlighted, duplicate sections 4b and 4c for each
Direct Cause (What immediate cause led to nonconformance?)				
Detection Cause (Why was the nonconformance not caught by inspection, test, or other process controls?)				
Systemic Cause (What core processes, systems, procedures, etc. allowed the nonconformance to occur?)				

Input the highlighted fishbone cause from 4a that is being analyzed in the 3 x 5 Why. If there are multiple highlighted causes in 4a, duplicate sections 4b and 4c, filling out the fishbone cause for each.

The principle behind the 5 Why is to ask "Why" until one cannot ask "why" anymore. The 3 legged 5 Why uses the 5 Why to find three root causes: Direct, Detection, and Systemic.

4c. Identified Root Causes	Direct Root Cause	Detection Root Cause	Systemic Root Cause

When "why" cannot be asked further for Direct, Detection, and Systemic causes, input the final answer in the respective root cause boxes.

5. Identify and Define Corrective Actions (Generate permanent corrective action(s) for the identified root causes. Insert additional rows as needed)

Action Items	Target Completion Date	Responsible Person(s)	Actual Completion Date

This section is used to help verify that the corrective actions are effective.

For root causes that were found from Sections 3 and 4, identify and define long term/permanent corrective actions such that the problem/defect will not occur again.

"Responsible Person(s)" are the people that will be responsible for task and its completion.

"Actual Completion Date" does not need to be filled out for each corrective action prior to submitting the form for review, if the corrective action will take longer to complete. It is recommended to follow up with Quality once the corrective action has been completed.

6. Corrective Action Verification Plan (What actions will be completed to ensure that the corrective action(s) are effective? Insert additional rows as needed)

Corrective Action	How will it be verified?	Target Completion Date	Responsible Person(s)	Acutal Completion Date

Copy corrective actions from Section 5.

Input method for verifying that each corrective action effectively addresses the respective root causes.

"Responsible Person(s)" are the people that will be responsible for task and its completion.

"Actual Completion Date" does not need to be filled out for each corrective action prior to submitting the form for review, if the corrective action will take longer to complete. It is recommended to follow up with Quality once the corrective action has been completed.

7. Distribution & Recognition (Who will receive a copy of the completed form?) (Team and individuals should be formally recognized for the success of the corrective action.)

Distribution List :	Recognition of Team and Individual Efforts :

List out who, internal and external, will receive a copy of the completed form.

Recognizing the team and individuals for the success of the corrective action will help motivate others to participate in other corrective actions.

TEXTRON Systems

Root Cause/Corrective Action (RCCA) Worksheet

	Date Issued	11/7/2017

1. Build the Team

Lead	Carl Hudson
Team Members	
James May, Cameron Nolan	

2. Define the Problem

(Describe the problem in a concise statement that provides a clear definition of the issue/concern)

Various ACME cases without assignment or status, product not identified for status/function, tubs of parts not identified for status, and boxes of parts not identified for status. In addition, a review of the COLTs print-out of material that is assigned there includes shelf life items that have been expired since 3/3/2013 qty1, 3/5/2013 qty 1, 7/12/2015 qty 3, 7/12/2015 qty 3 (different PN), and 8/31/2012 qty 1. The goal is to resolve the item identification and shelf life item issues within 2 months.

3. Containment Action

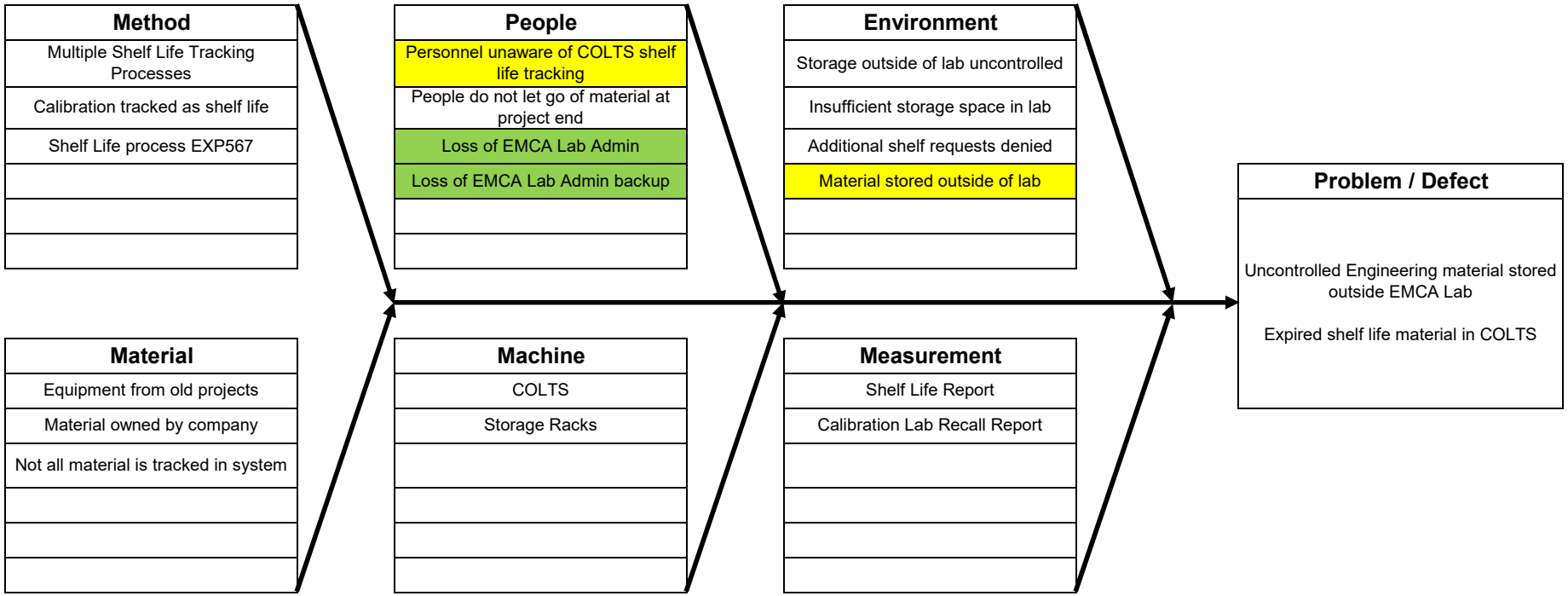
(What immediate action(s) need to be taken to isolate, contain, screen, and provide interim resolution to the problem? Insert additional rows as needed)

Action Items	Target Completion Date	Responsible Person(s)	Actual Completion Date
Correct COLTS shelf life information for the immediate calibrated equipement out of date.	11/22/2017	James May	11/22/2017
Label material on the racks outside of the lab.	11/22/2017	Carl Hudson	11/21/2017
Sort equipment and disposition old engineering equipment.	11/22/2017	Carl Hudson	11/21/2017

4. Identify Root Cause

4a. Fishbone Diagram

1) Define and list all contributing factors
2) Highlight the contributing factors that seem to have the biggest effect
3) Highlight in green the human factors that were considered in the analysis.



Fishbone Cause	Personnel unaware of COLTS shelf life tracking	4b. 3 x 5 Why	For each highlighted cause above, perform a 3x5 why analysis If more than one cause is highlighted, duplicate sections 4b and 4c for each	

Direct Cause (What immediate cause led to the nonconformance?)

COLTS showed exipred shelf life material.	EMCA Lab personnel were unaware of shelf life tracking in COLTS.	EMCA Lab shelf life material is tracked through in-house procedure PRDB0021 and Calibration Lab recall.	EXP567 and Calibration Lab recall are more comprehensive.	Several redundant processes exist for tracking shelf life and calibration information.

Detection Cause (Why was the nonconformance not caught by inspection, test, or other process controls?)

Lab personnel were not aware of notifications of expired material from COLTS.	Notifications were sent to EMCA Lab administrator and were not forwarded to lab personnel.	EMCA Lab administrator had left the company and no replacement or back-up was assigned.		

Systemic Cause (What core processes, systems, procedures, etc. allowed the nonconformace to occur?)

There are multiple processes / databases for tracking shelf life and calibration information.	The different EMCA sites use different processes for shelf life and calibration.	EMCA Lab uses the Sunset Valley process for calibration and a unique database for shelf life instead of COLTS.		

4c. Identified Root Causes

Direct Root Cause	Detection Root Cause	Systemic Root Cause
Several redundant processes / databases exist for tracking shelf life and calibration.	EMCA Lab administrator had left the company and no replacement or back-up was assigned.	EMCA Lab uses the Sunset Valley process for calibration and a unique database for shelf life instead of COLTS.

Fishbone Cause	Material stored outside of lab	4b. 3 x 5 Why	For each highlighted cause above, perform a 3x5 why analysis If more than one cause is highlighted, duplicate sections 4b and 4c for each	

Direct Cause (What immediate cause led to the nonconformance?)

Uncontrolled Engineering material is stored outside the EMCA Lab.	The lab does not have sufficient internal space store everything.	Too much old equipment is being stored from older projects.	Material is not dispositioned when a project ends.	People want to hold on to the material for future projects.

Detection Cause (Why was the nonconformance not caught by inspection, test, or other process controls?)

Material outside the lab is not controlled.	Majority of the material is found in COLTS.	Material is not labled.	Majority of the material is from IRAD projects.	IRAD materials are typically not labeled and controlled like demo or production material.

Systemic Cause (What core processes, systems, procedures, etc. allowed the nonconformance to occur?)

The lab does not have sufficient internal space to store all EMCA Lab materials.	There is not enough space on the shelves to store everything inside the lab.	The lab has not expanded to support expanded scope of work.	Requests for additional shelves / space have been denied.	

4c. Identified Root Causes

Direct Root Cause	Detection Root Cause	Systemic Root Cause
People want to hold on to the material for future projects.	IRAD materials are typically not labeled and controlled like demo or production material.	Requests for additional shelves / space have been denied.

5. Identify and Define Corrective Actions

(Generate permanent corrective action(s) for the identified root causes. Insert additional rows as needed)

Action Items	Target Completion Date	Responsible Person(s)	Actual Completion Date
Hire new administrator for SUAS Lab	11/27/2017	James May	1/8/2018
Include COLTS in monthly audit of shelf life material already being completed in accordance with EXP567.	1/2/2018	James May	1/5/2018
Disposition or reassign equipment at end of project. Limit storage of old equipment to 1 year.	2/23/2018	Carl Hudson	1/5/2018
Move all storage inside lab, relocate fence.	3/2/2018	James May	2/16/2018

6. Corrective Action Verification Plan

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Corrective Action	How will it be verified?	Target Completion Date	Responsible Person(s)	Acutal Completion Date
New Admin.	Follow up with new admin about roles and responsibilities	3/2/2018	James May	2/28/2018
COLTS in Monthly Audit	Quality to follow-up with lab personnel to go through Monthly Audit process	3/2/2018	Cameron Nolan	3/5/2018
Disposition of equipment	Review of the quantity of material being stored in the lab	3/30/2018	Carl Hudson	3/29/2018
Move all storage inside lab, relocate fence	Review of the lab area and verify that no SUAS material is being stored outside of the lab	4/16/2018	Cameron Nolan	4/19/2018

7. Distribution & Recognition

(Who will receive a copy of the completed form?) (Team and individuals should be formally recognized for the success of the corrective action.)

Distribution List :	Recognition of Team and Individual Efforts :
Carl Hudson, Cameron Nolan, James May, Kylie Springer, Luke Bower, Max Parr, Hannah Cornish, Kevin Pullman, Fiona Glover	The team did an outstanding job resolving the audit findings from the third party AS9100/ISO-9001 audit. All team members will be individually recognized through the Sunset Salutes employee recognition program for their hard work and effort working on the project.

Root Cause Corrective Action Flow Chart