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1 PURPOSE

- 1.1 The purpose of **Product Stabilization** is to ensure that new products are actively monitored and managed during introduction so that any market requirements, design, and quality issues are resolved quickly.
 - 1.1.1 The purpose of **Proactive Support** is to proactively monitor the product during the initial selling, production, and installation phases so that known trouble areas are monitored and if needed corrected quickly.
 - 1.1.2 The purpose of **Reactive Support** is to actively monitor all channels of communication of possible product issues so that they can be understood and resolved quickly.

2 SCOPE – APPLIES TO WHERE & WHEN THE PROCEDURE IS USED

- 2.1 This applies to all new products developed in the MTS Test Hardware Development group.
- 2.2 This applies to all current standards products at MTS.
 - 2.2.1 Note this will not apply to all products initially and will be phased in over a period of time. See the Sustaining Engineering Manager for a current list of products covered by this process.


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3 DEFINITIONS AND ACRONYMS

- 3.1 Definitions
 - 3.1.1 Product – A design that is sold to more than one specific customer.
 - 3.1.2 Proactive Product Support – Support done with the intension of finding areas for continuous improvement.
 - 3.1.3 Reactive Product Support – Support done after a problem or issue has been identified.
 - 3.1.4 Product Report Card – A reporting tool used to illustrate product health
 - 3.1.5 Sustaining Engineering – An engineering disciple with the goal of maintaining product health in an efficient and effective way
 - 3.1.6 FSE Field Report – A report generated by a Field Service Engineer documenting any issues during the installation and commissioning of a product.
 - 3.1.7 Demo Equipment – MTS owned equipment that is used to demonstrate the features or performance of a product
 - 3.1.8 FAR Restricted Labor – See MTS Procedure FIN-006.01 (Labor Charging Procedure), Section 5.12 (Labor Cost Accounting) for a definition

- 3.2 Acronyms
 - 3.2.1 CE – Continuation Engineering
 - 3.2.2 R&D – Research and Development
 - 3.2.3 CA – Corrective Action
 - 3.2.4 ECN – Engineering Change Notice
 - 3.2.5 IPT – Integrated Product Team
 - 3.2.6 DPI – Defects Per Installation

4 GRAPHIC (IF NEEDED)


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No Proactive graphic

No Reactive graphic

5 RESPONSIBILITIES

- 5.1 Program Leader – Responsible for executing Stage 5 if this is part of a new development. If a product transitions from Stage 6 to Stage 5 then the Sustaining Engineer is responsible.
- 5.2 Sustaining Engineer – Responsible for executing this process if a product is moved from Stage 6 to Stage 5.
- 5.3 Product Manager – Responsible for attending meeting, securing CE (Continuation Engineering) funding, and serving as the voice of the customer
- 5.4 FSE – Documenting field issues and opportunities for improvement with the product
- 5.5 PSE – Following the PSE process
- 5.6 IPT – Meets to view all issues and opportunities, discusses solutions with a cross functional and systems view, acts on selected items.
- 5.7 Tech Support – Feeds back product issues and opportunities to the IPT
- 5.8 Assembly Technician - Feeds back product issues and opportunities to the IPT using the QN process
- 5.9 Checkout Technician - Feeds back product issues and opportunities to the IPT using the QN process
- 5.10 Manufacturing Engineer – If assigned is a member of the IPT
- 5.11 Buyer / Sourcing Category Leader - If assigned is a member of the IPT
- 5.12 Supplier – Feedback opportunities and issues through the Buyer / Sourcing Category Leader
- 5.13 Customer - Feedback opportunities and issues through the Product Manager
- 5.14 Application Engineer - Feedback opportunities and issues through the Product Manager

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5.15 FAM - Feedback opportunities and issues through the Product Manager

6 PROCEDURE

6.1 Product Score Card (Quality Record)

- 6.1.1 A Product Score Card shall be established at the beginning of stage 5.
- 6.1.2 More than one score card may be needed for product families or multiple platforms within each family.
- 6.1.3 The product score shall be kept up to date by the IPT or the Program Leader, Product Manager, and Sustaining Engineer if an IPT has not been established
- 6.1.4 The product score card shall be reported out on a monthly basis.
- 6.1.5 The product score card shall be available internally

6.2 Proactive Support Report (Quality Record)

- 6.2.1 The proactive support report shall be kept up to date by the IPT or the Program Leader, Product Manager, and Sustaining Engineer if an IPT has not been established
- 6.2.2 The proactive support shall list brief notes on all findings and identify all issues and opportunities that are moved to the reactive support RAIL
- 6.2.3 The proactive support report shall be complete at the end of stage five.


6.3 Proactive Support

6.3.1 Selling

- 6.3.1.1 Application Engineer Support
- 6.3.1.2 FAM Support
- 6.3.1.3 Direct Customer Support
 - 6.3.1.3.1 Key Customer

6.3.2 Marketing (*FAR Restricted Labor Flag*)

- 6.3.2.1 Demo Support

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6.3.2.2 Trade Show Support

6.3.2.3 Trade or Industry Presentation Support

6.3.2.4 Sales Volume

6.3.2.4.1 Is the product meeting forecasted sales targets?

6.3.2.4.2 If not can any changes be made to the product to increase sales?

6.3.2.5 Market Acceptance

6.3.2.5.1 Is the product being accepted by the targeted market?

6.3.2.5.2 If not are there any changes that can be made to the product to increase market acceptance?

6.3.2.5.3 Is their interest in other markets that were not targeted?

6.3.2.5.4 If so are their changes that can be made to the product to sell or increase sales in that market?

6.3.3 Supply Chain

6.3.3.1 Review inspection reports

6.3.3.2 Product parts cost Review

6.3.3.2.1 Are parts coming in at the targeted cost?

6.3.3.2.2 If not what is the mitigation plan

6.3.3.3 Audit key vendors


6.3.3.3.1 Are parts / assemblies meeting cost and quality

6.3.3.3.2 Are there any changes that can be done to significantly reduce cost or increase build quality

6.3.3.4 Ensure correct unit volume costs are loaded into SAP

6.3.4 Manufacturing

6.3.4.1 Interviews with manufacturing staff

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- 6.3.4.1.1 Is the product able to be built within routed time?
- 6.3.4.1.2 Is the variance on the route time at an acceptable level
- 6.3.4.1.3 Are there any changes in the product design, assembly tools or fixtures, or build area that could significantly reduce build time.

6.3.4.1.4

- 6.3.4.2 Audit of build area and product in process
- 6.3.4.3 Ensure any updated times are loaded into the route

6.3.5 Checkout

- 6.3.5.1 Interviews with Checkout staff
- 6.3.5.2 Audit of checkout area and product in process

6.3.6 Shipping


- 6.3.6.1 Interview with shipping staff
- 6.3.6.2 Audit of packaging and shipping

6.3.7 Installation

- 6.3.7.1 Review of packaging and shipping status – Did equipment arrive in desired condition?
- 6.3.7.2 Accompany FSE during initial installation(s) – Are any changes needed to support designed installation process or time?
- 6.3.7.3 Are there any changes in the design that could significantly reduce installation time?
- 6.3.7.4 Continue to monitor all installations for issues and opportunities
- 6.3.7.5 Monitor FSE Installation reports for DPI reports

6.3.8 Acceptance

- 6.3.8.1 Interview customer – Does the customer feel the products

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meets what they were expecting?

6.3.8.2 Are there any issues that are preventing the customer from accepting the product?

6.3.8.3 Does the customer feel any changes would significantly increase their satisfaction?

6.3.9 Customer Follow-Up

6.3.9.1 Interview customer – After (1, 3, 6, 12 months) does the product still meet your needs

6.3.9.2 Does the customer feel any changes would significantly increase their satisfaction?

6.4 Reactive Support RAIL (Quality Record)

6.4.1 A RAIL will be created at the beginning of stage 5 to track all reactive product support issues and opportunities. The Reactive Support RAIL template shall be used and maintained through the duration of stage 5.

6.4.2 All issues and opportunities that come in through the reactive support channel shall be placed on the RAIL.

6.4.3 All issues and opportunities that come in through the proactive support channel shall be placed on the RAIL.

6.4.4 The stage 5 team shall meet with regular frequency in order to ensure issues on the RAIL are being address in a timely manor

6.4.4.1 Meeting frequency shall be determined based on the newness of the product and the number and severity of open issues.

6.4.5 The RAIL shall be kept up to date and posted within MTS Test.


6.5 Reactive Support – These are some of the know channels and instances of reactive support. These are the channels to monitor. Others may be present.

6.5.1 Selling

6.5.1.1 Application Engineer support request

6.5.1.2 FAM Support request

6.5.1.3 Direct customer support request

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6.5.2 Marketing (*FAR Restricted Labor Flag*)

6.5.2.1 Unplanned Demo (In house or outside)

6.5.2.2 Unplanned Tradeshow

6.5.2.3 Response to competitive response

6.5.3 Supply Chain

6.5.3.1 Deviation requests

6.5.3.2 Change Requests

6.5.4 Manufacturing

6.5.4.1 Deviation Request

6.5.4.2 Change Requests

6.5.4.3 System not able to be assembled correctly

6.5.5 Checkout

6.5.5.1 System not performing to specification

6.5.6 Shipping

6.5.6.1 Shipping damage

6.5.7 Installation


6.5.7.1 Significant issues preventing system from being installed correctly

6.5.8 Customer

6.5.8.1 Unwilling to accept system

6.5.8.2 Product not meeting expectations

6.5.9 Quality

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6.5.9.1 Corrective Action

6.5.9.2 Internal or External Audit observation

6.5.10 Intellectual Property

6.5.10.1 Response to patent violation from competitor

6.6 Determination of Product Stability

6.6.1 Criteria for a Stable Product

6.6.1.1 Quality – Meets target

6.6.1.2 Cost – Meets target

6.6.1.3 Lead Time – Meets target

6.6.1.4 DPI - Meets target

6.6.1.5 ECN Activity – Meets target

6.6.1.6 Sales Volume – Meets target

6.6.1.7 Customer Satisfaction – Meets target


6.7 Product Handoff

6.7.1 Complete the product handoff checklist

6.8 Stage 6 – Product Maintenance Gate Request

7 ASSOCIATED QUALITY RECORDS – AS STATED IN THE QUALITY RECORDS LIST

Required Record
Stage 5 Approval
Product Score Card
Proactive Support Report
Reactive RAIL
Product Handoff Checklist

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Stage 6 Gate Request

8 REFERENCE FORMS / TEMPLATES / DOCUMENTS

Form / Template / Document Title	Location
Product Score Card	
Reactive RAIL	
Product Handoff Checklist	

9 CURRENT REVISION'S TRAINING REQUIREMENTS


Training requirements are determined by the document owner.

1. Select Awareness **and/or** Formal training requirements.
2. List (below) the functions or groups that require the training.

Select (mark X)	Training Type	Training Definition
	Awareness	Awareness training is conducted by communication, which is sent/delivered by the approver/author/owner of the document to the affected employees/groups.
X	Formal – For Sustaining Engineers	Formal training requires the approver/author/owner to collect/store evidence that the affected employees/groups were trained.

Functions/Groups that require Awareness to this procedure:

- Awareness: List here the function(s) or group(s) that require Awareness training.
- Formal: All members of the Hardware Development staff

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10 REVISION HISTORY & APPROVAL

Revision History			
Rev	Description of Change	Author	Effective Date
A	Initial Release	Scott Firman	11/12/2014

Approval of Current Revision		
Name / Function	Signature	Date
Scott Firman, Director of Solutions Engineering		11-20-2015