

GLOBAL PROCEDURE

TITLE: Critical Risk Suppliers Escalation and Improvement Process	NUMBER: CHI-SDE20-0001	REVISION: C
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1. Purpose

- 1.1. This procedure defines a methodology to identify the risk in the supplier base and determine the actions needed based on priorities. Using tools such as Continuous Improvement Programs, Business Continuity Plan and others, the Supplier Development team efforts ensure that identified suppliers are capable of delivering product that meets LF requirements and expectations.

2. Scope

- 2.1. This global document is applicable to all Littelfuse approved production part and direct material suppliers.

3. Responsibilities / Authorities

- 3.1. Supplier Development Engineering is responsible for:
- 3.1.1. Performing the Critical Risk Suppliers analysis score ranking based on Vendor A category, critical or poor performance suppliers. CRS evaluation criteria and scoring are defined in form CHI-SDE45-0001.
 - 3.1.2. Leads and coordinates a meeting with Procurement and Operations Teams to review CRS assessment to agree on suppliers selected and a first overview of the strategy to follow.
 - 3.1.3. Kicks off and coordinates a meeting with the selected suppliers, as necessary, to review the CRS assessment and determine an action plan to follow.
 - 3.1.4. The Supplier Development Engineer will schedule and maintain the necessary meetings with selected CRS based on their score performance review and if needed will include the core team members (procurement and operations) to review and share the effectiveness of the action plan activities defined to improve the risk score.
- 3.2. Procurement Team is responsible for:
- 3.2.1. Providing the necessary inputs for Supplier Ranking Score calculation from commercial/business standpoint.
 - 3.2.2. Providing the inputs for the suppliers who are not in vendor A but need to be included as part of the CRS criteria evaluation list from the commercial/business standpoint.
 - 3.2.3. Is an active team member and participates in follow up CRS performance review meetings lead by the SDE.

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APPROVED BY: Chung Yeow Lee	TITLE: Supplier Development Director	DATE: Dec 22, 2016

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- 3.2.4. When required, and as a result of the CRS score analysis, coordinates, validates, leads and executes the activities related to placing a supplier on New Business Hold (NBH). Procurement team is responsible to initiate the process and review it with Littelfuse upper management to seek approval.
- 3.2.5. Leads and determines the resourcing plan if supplier fails to take the necessary actions to reduce risk and/or fails to execute an NBH exit strategy.
- 3.3. Operations Team is responsible for:
 - 3.3.1. Providing the necessary inputs for Supplier Ranking Score criteria evaluation from operations standpoint.
 - 3.3.2. With the support of Supply Chain provides the inputs for the suppliers who are not in vendor A but need to be included as part of the CRS criteria evaluation list from the operations standpoint.
 - 3.3.3. Supports in the validation of the actions taken by the supplier to reduce the risk.

4. Definitions / Terminology

- 4.1. **CIP:** Continuous Improvement Program
- 4.2. **CRS:** Critical Risk Supplier
- 4.3. **Critical Risk Supplier Score List:** It is a risk model calculation tool that uses an algorithm to determine a CRS score level (CHI-SDE45-001)
- 4.4. **Critical Supplier:** A supplier of a product or service capable of providing and delivering a product or service that meets Littelfuse requirements and expectations.
- 4.5. **Poor Performance Supplier:** A Supplier that has shown a detrimental quality/delivery performance through the time.
- 4.6. **NBH:** New Business Hold
- 4.7. **SDE:** Supplier Development Engineer
- 4.8. **SQE:** Supplier Quality Engineer
- 4.9. **SQI:** Supplier Quality Incident
- 4.10. **Vendor A:**
 - 4.10.1. Annual Spending is \$100,000 USD or greater.
 - 4.10.2. New or emerging supplier to Littelfuse where annual spend may eventually become \$100,000 USD or greater.
 - 4.10.3. Critical supplier to Littelfuse even though the annual spend will not reach \$100,000 USD.

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5. Reference / Supporting Documents

- 5.1. CHI-SDE45-0001 Critical Risk Supplier Score List
- 5.2. CHI-SDE10-0001 Littelfuse Supplier Quality Manual
- 5.3. CHI-SDE40-0004 Littelfuse CRS Entry Notification Letter Form
- 5.4. CHI-SDE40-0005 Supplier Scorecard Report
- 5.5. CHI-SDE20-0003 Supplier Scorecard System

6. Procedure / Process

- 6.1. Vendor A, critical or poor performance suppliers shall be evaluated through the Critical Risk Supplier List CHI-SDE45-0001 at least once per calendar year.
 - 6.1.1. Suppliers who exceed the defined threshold are identified as CRS. The threshold or baseline is defined by the Supplier Development team based on the results of the risk assessment
 - 6.1.2. In this risk model calculation, suppliers selected are evaluated in three main categories:
 - A. Business risk and impact
 - B. Performance Measurement
 - C. Quality Management System assessment
- 6.2. Littelfuse Operation team proposal for CRS process.
 - 6.2.1. When escalated by Operations, suppliers can be entered into the CRS assessment analysis when there is impact such as: associated costs as a result of poor quality performance, a high impact incident due to quality or delivery events, unable to comply with Business Continuity Plan and/or other critical situations experienced in Operations.
 - 6.2.2. For escalated suppliers, SDE confirms if supplier is already in scorecard system or add as necessary.
 - 6.2.3. Supplier performance data provided by Operations, Supply Chain, Procurement and SQE/SDE Teams, including the supplier's financial score, may be considered also to determine if any supplier shall enter to the CRS analysis criteria and determine if an action plan must be taken against the selected supplier.
- 6.3. Proactive Containment.

For suppliers that exceed threshold CRS criteria, the SDE will determine if a Proactive Containment (also: "Firewall", GP-12, controlled shipping, material certification process, ...) is applicable and if so will follow up with selected suppliers.

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- 6.3.1. Through the Littelfuse CRS Entry Notification Form (Ref. CHI-SDE40-0004), the SDE will communicate with the selected suppliers and request a Proactive Containment Plan.
- 6.3.2. When a Proactive Containment Plan is requested, the supplier is expected to implement 100% product inspections to contain specific failure modes or defects. Such defects may include: Failure modes identified in the PFMEA, historical data on internal and external defects (SQL's, Caweb's, NC notifications, ...), and potential high-impact customer issues.
- 6.3.3. Containment actions to be implemented must be verified and approved by the responsible Littelfuse SDE.
- 6.3.4. The supplier is required to absorb all costs related to these containment actions and provide the inspection status report results to LF as frequent as necessary.
- 6.3.5. Parts, material and containers are to be marked/identified, as agreed with LF, to keep proper traceability of certification level.
- 6.4. Proactive Containment Exit Criteria Requirements:
 - 6.4.1. Preventive and corrective actions implemented with their effectiveness verified/validated to Littelfuse expectations.
 - 6.4.2. Zero defects reported and/or customer returns for a minimum period of 30 consecutive days or 5 consecutive lots (whichever is greater).
 - 6.4.3. Improvement plan and timing implementation was achieved and verified by the Littelfuse SDE. If necessary, an on-site audit verification will be conducted.
 - 6.4.4. Exit approval is granted by the SDE organization in writing.
 - 6.4.5. Failure to meet these requirements may cause the request of additional actions such as: a third-party containment, Six Sigma projects and/or other additional activities as necessary. Supplier is expected to cover the expenses associated as a result of these additional tasks.
- 6.5. Supplier Continuous Improvement Program.
 - 6.5.1. Supplier is expected to assign a Continuous Improvement Program cross-functional team for Littelfuse products to improve the overall expected performance. The CIP must coordinate and document a detailed plan which includes objectives, specific actions and responsible owners and target dates.
 - 6.5.2. Littelfuse SDE will initiate, lead and coordinate the CIP kick off meeting with the assigned Supplier CIP team through the end of the program. The CIP supplier selection criteria include:
 - 6.5.2.1. Suppliers already identified above the CRS threshold criteria.
 - 6.5.2.2. Suppliers not in the CRS but as requested by the Operations Team.
- 6.6. Depending on the risk associated with the specific supplier assessment, either from a Business, Performance and/or Quality Management System perspective, the

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Supplier Development team can use other tools and strategies in order to eliminate or mitigate the risks identified, such as: Built In / Zero Defects guidelines, on-site assessment, development of a Business Continuity plan with the supplier, Lean Six Sigma initiatives among others.

- 6.6.1. A strategic review performed by the SDE may also result on “No Immediate Action Needed” if based on prioritization and/or uniqueness of the case with the supplier it is determined as such.

6.7. New Business Hold.

- 6.7.1. Failure to comply with effectively implementing a Proactive Containment, a Continuous Improvement Program, and/or other actions as necessary to reduce the risks, Littelfuse reserves the right to place the supplier on NBH. In this period, the supplier will not be eligible to quote any new programs. An action plan will need to be developed by the supplier and approved by Littelfuse to determine exit NBH status.
- 6.7.2. Supplier NBH notification and coordination of activities related to this process will be managed by the Littelfuse Procurement Team.
- 6.7.3. SDE will support the verification of actions taken by the supplier to exit from the NBH status. An on-site supplier audit may be necessary. In addition, the CRS list score assessment properly reflects a reduced risk score after a reevaluation.

7. Records / Attachment

- 7.1. CHI-SDE45-0001 Critical Risk Supplier Assessment Tool Form
- 7.2. CHI-SDE40-0004 Littelfuse CRS Entry Notification Letter Form

8. Changes / Document History

Revision	Originator	Changes / Description	Date
A	Sam Peng	Initial Release	May 20, 2015
B	Alfredo Heredia	Revised main content and wording. CS1 and CS2 are used as a supplier management tool	Dec, 2016
C	Alfredo Heredia	Revised and simplified wording for LF requirements. Removed Flow Diagrams to reduce complexity.	June, 2020