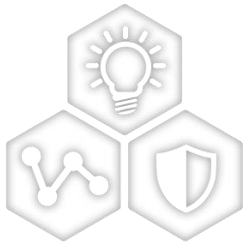


2024 Engineering Roles Responsibilities



A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

Greg Fisher

July 2024

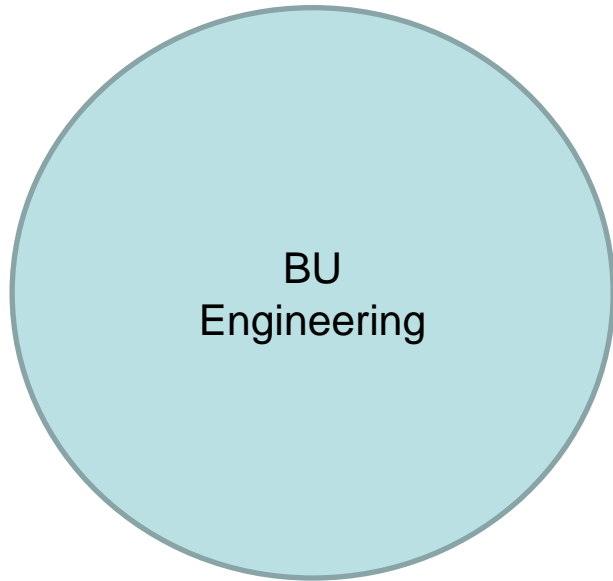
Objective

To delineate the roles and responsibilities within the Test / Product Engineering community required to provide the optimal support for both internal and external test.

Definitions

- **BU Engineer (BUE) - Product Ownership:** Creates Test software and hardware solutions and works with Test Product Engineering to qualify and release new products into the Manufacturing environment.
- **Test Product Engineer (TPE) - Product Responsibility:** Responsible to release new products into the Manufacturing environment, to maintain a portfolio of products, and to interface between TSE and BU Engineering.
(TPE)
- **Test Supplier Engineer (TSE) - Factory-based Responsibility:** Usually a former Test Product Engineer assigned as a resident to support a product line within a subcon factory, or group of factories. Interfaces between Test Product Engineering and the engineers working for the Subcon. They support probe / test externally at the subcons.

BU Engineering



BU Engineering

1. Responsible for NPI process and working with factory Test PE to meet RTP requirements
2. Product Ownership
3. Trains Test PE to support products in manufacturing
4. Level-3 disposition

Test Product Engineering



Test Product
Engineering

Test PE

1. Responsible to work with BU Engineering to release new products into manufacturing (internal and external)
2. Product responsibility
3. Trains Test SE to support products at subcon manufacturing sites
4. Level-2 disposition
5. Yield analysis, improvement, and Control Yield maintenance
6. Electrical QC PPB

Test Supplier Engineering



Test Supplier
Engineering

Test SE

1. Responsible to work with Test PE to release existing products into subcon manufacturing or to internalize
2. Product responsibility and management of Subcon support engineering
3. Level-1 disposition

Engineering Roles

BU Engineering

1. Responsible for NPI process and working with factory Test PE to meet RTP requirements
2. Product Ownership
3. Trains Test PE to support products in manufacturing
4. Level-3 disposition (the last stop for dispositions)

Test PE

1. Responsible to work with BU Engineering to release new products into internal manufacturing
2. Product responsibility
3. Trains Test SE to support products at subcon manufacturing sites
4. Trains Test product Technician to support products internally
5. Yield analysis, improvement, and Control Yield maintenance
6. Electrical QC PPB
7. Level-2 disposition

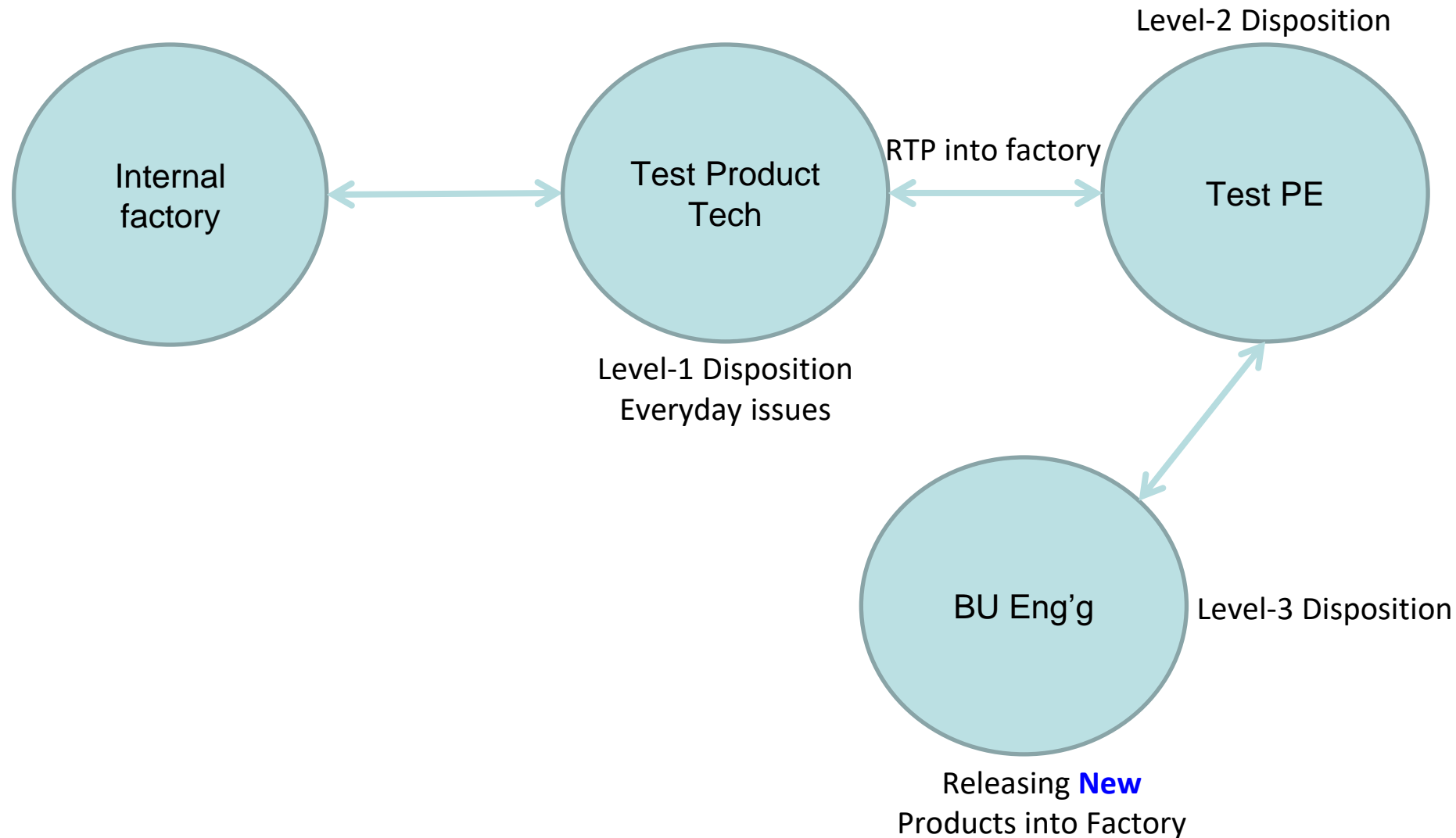
Test SE

1. Responsible to work with Test PE to release existing products into subcon manufacturing or to internalize
2. Product responsibility and management of Subcon support engineering
3. Level-1 disposition

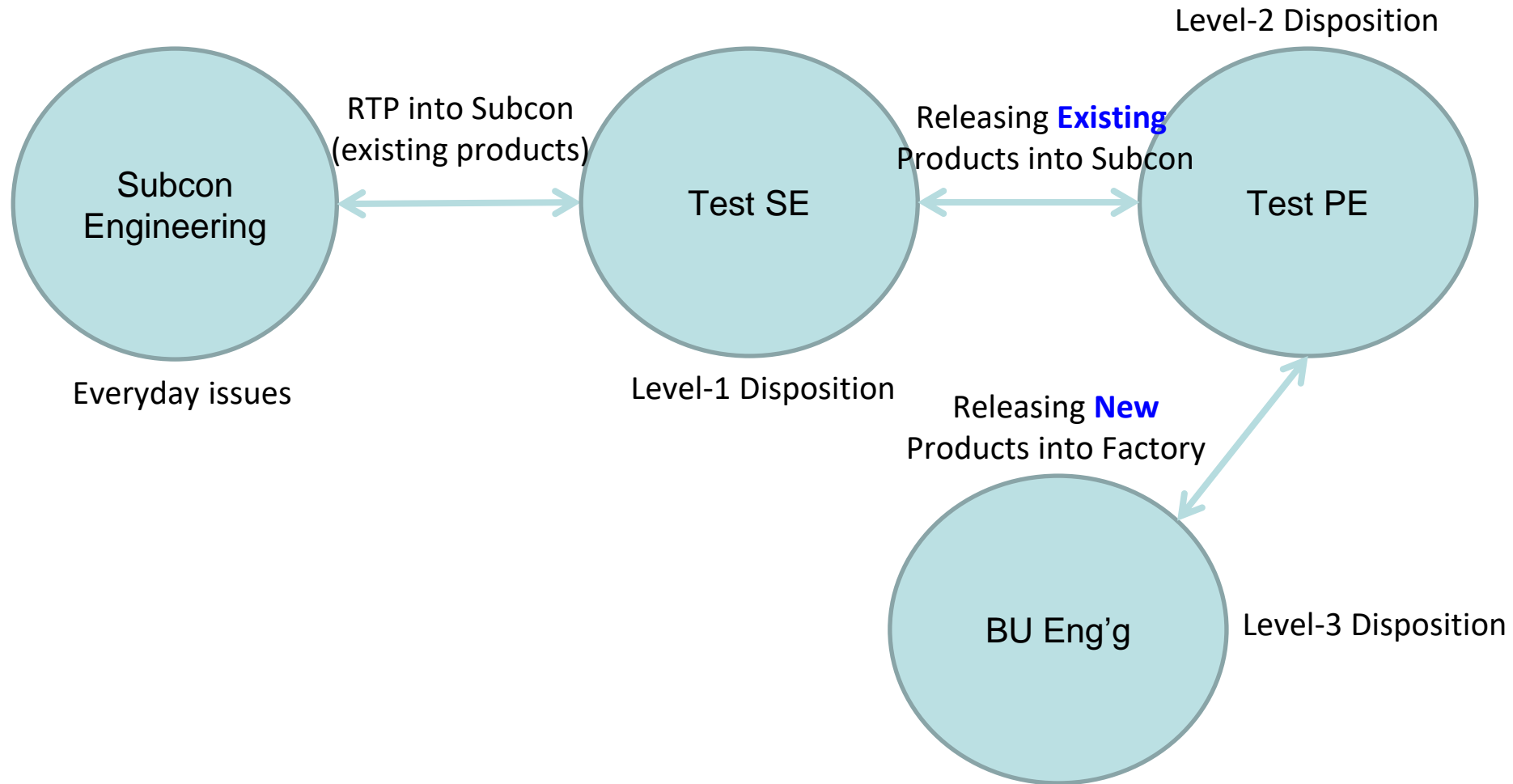
Test Product Technician

1. Responsible to work with Test PE to release existing products into internal manufacturing
2. Product responsibility in everyday production (low yield reject verification, QC failure verification, etc.)
3. Level-1 disposition

Engineering Engagement for Internal Manufacturing



Engineering Engagement with Subcons



Scenarios

Here are the rules to define our Engineering engagement:

All new products get released in either MPHIL or MTHAI. No direct NPI releases to Subcon unless it's already in progress.

- 1. From internal factory to Subcon:** If the product is transferring to Subcon, then the Test PE at the SOURCE will work with the resident Operations Mgr and Test SE to get the qualification done.
 - Test PE is Project Manager and would present the pre-CCB and final CCB
 - The resident Test SE is the interface with the Subcon's Engineering support team
- 2. Between internal factories:** The Test PE at the SOURCE location manages the project, while the DESTINATION location supports it
 - The SOURCE Test PE is Project Manager and would present the pre-CCB and final CCB

Scenarios

3. Subcon to internal factory

- Test SE is Project Manager and would present the pre-CCB and final CCB
- Factory Test PE interfaces with Test SE to release into factory

4. Internal NPI

- BU Engineering is Project Manager
- Factory Test PE interfaces with BU Engineering to release into factory