

# VSM Change Point Description SQPS-930



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# Change Points

- For a good understanding of the impact of a change, we need to clearly identify all Change Points
- A Change Point occurs when conditions defined to ensure a predictable and stable situation are changing to new conditions
- The conditions can usually Change according to 6 dimensions; the so called 6 M:
  - ❖ MATERIAL (Product)
  - ❖ MACHINE (Process)
  - ❖ METHOD (Organizational)
  - ❖ MEASUREMENT (Control)
  - ❖ MAN (Human)
  - ❖ MOTHER NATURE (Environment)

# Change Points

- Any Change applied to one of these 6 Dimensions may have an effect on the current situation. This is a key to understanding the Change and controlling its potential consequences.
- Therefore, any Change shall be evaluated against these 6 dimensions to understand the impact prior to its implementation.
- All Change points in the table below are classified in these six major groups (6M). A new Change request can include multiple Change Points.

# Change Points – \*Suppliers and Sub-Suppliers

1. MATERIAL (Product)	2. MACHINE (Process)	3. METHOD (Organizational)
<ul style="list-style-type: none"> <li>a. Product Change (raw material)</li> <li>b. Product Change (add / modify / delete equivalent raw material / surface treatment)</li> <li>c. Product Change (surface treatment)</li> <li>d. Product Change (component)</li> <li>e. Product Change (Assembly)</li> <li>f. (Electronics): Software Part Design Change</li> <li>g. New Production Part / New Software Part</li> <li>h. Bill of Material updated (No product Change)</li> <li>i. Document update/correction</li> <li>j. Engineering Obsolete</li> </ul>	<ul style="list-style-type: none"> <li>a. Supplier Process Change – includes software &amp; machine parameter changes</li> <li>b. Supplier Tool Change (new, modification)</li> <li>c. Supplier Change (new, add, replace)</li> <li>d. Sub-supplier Change (Tier 2, 3,)</li> <li>e. In-sourcing (External to Internal)</li> <li>f. Outsourcing (Internal to External)</li> </ul>	<ul style="list-style-type: none"> <li>a. Local Implementation of existing sub-supplier</li> <li>b. Supplier Tool Relocation within same supplier group</li> <li>c. Supplier Line Transfer</li> <li>d. Supplier Process Layout Change</li> <li>e. Supplier Process Flow Change</li> <li>f. Sub-Supplier Phase Out</li> <li>g. Supplier Packaging Change</li> </ul>
4. MEASUREMENT (Control)	5. MAN (Human)	6. MOTHER NATURE (Environment)
<ul style="list-style-type: none"> <li>a. Gauge (new or modification)</li> <li>b. Checking / Detection gauge (new, Devices Adjustment)</li> </ul>	<ul style="list-style-type: none"> <li>a. New operator</li> <li>b. New but experienced operator</li> </ul>	<ul style="list-style-type: none"> <li>a. Change in Altitude</li> <li>b. Change in Humidity</li> </ul>

\* Supplier = Supplier to Veoneer; Sub-Supplier = sub-supplier to Veoneer (suppliers to you)

# 1M – Material Product

(Examples)

a. **Product Change (raw material) \***

- Change of material supplier

Example: New Steel A replacing Steel B for a bracket

b. **Product Change (add / modify / delete) equivalent raw material or surface treatment) \***

- Material supplier changed from external to internal (self supplied) or vice versa

Example: New Steel variant B2 added to this product equivalent to steel variant B1; both are qualified for this product

c. **Product Change (surface treatment) \***

- Change in material composition (including anti-rust oil or lubrication oil)

Example: New coating replacing an existing coating

d. **Product Change (component) \***

- New part design that affects the part

Example: New wire harness with extra length (20cm)

e. **Product Change (Assembly) \***

Example: New part assembly replacing current part assembly

f. **(Electronics): Software Part Design Change \***

Example: New software or replacing existing software

g. **New Production Part / New Software Part**

Example: Additional label added to a Driver Airbag

h. **Bill of Material Update (No product Change)**

i. **Document update/correction**

Example: Correction of a wrong spelling in the drawing

j. **Engineering Obsolete**

Example: Part number A being obsoleted due to end of production

\* - This change requires SREA submission from supplier

## 2M – Machine Process

(Examples)

### a. Supplier Process Change \*

- Change to the order of the process and/or adding or deleting process steps
- Change a temporary process to a permanent one (or vice versa)
- Equipment relocation within the same plant
- Changes to machine control logic
- Parameter changes if defined on drawing

Example: New hardening process replacing the existing one

### b. Supplier Tool Change (new or modification)\*

- New or renewed die or mold
- Revision or repair of the die or mold
- Change in machining master, camshaft or pistons
- Change in machining master for other parts
- New or modified jigs and tools
- Major modification or repair of a machine
- Minor modification or repair of a machine

Example: New tool launched at Supplier A

### c. Supplier Change (new, add or replace) \*

- New delivery location
- Change in factory location
- Initial use of a new machine

Example: New supplier A replacing supplier B

Example: New supplier A added to supplier B to deliver p/n A

### d. Sub-supplier Change (Tier 2, 3.)\*

- Change of a coating or heat treat sub-supplier

Example: New steel sub-supplier replacing current one

### e. In-sourcing (External to Internal) \*

- Example: Move production from Supplier A (external supplier) to Supplier B (internal supplier)

### f. Outsourcing (Internal to External)\*

- Equipment relocation outside plant or building

Example: Move production from Supplier A (internal supplier) to Supplier B (external supplier)

\* - This change requires SREA submission from supplier

## 3M – Method / Organization

(Examples)

### a. Local Implementation of existing supplier

- Current: Sub-Supplier A is supplying a P/N to Supplier B in Europe. Impacted customers: Veoneer Plant A & Veoneer Plant B
- New: Sub-Supplier A to start supplying this P/N (already qualified) to Supplier C in Asia. Impacted customer: Veoneer Plant C in Asia
- Conclusion: No supplier PPAP is needed. Copy of supplier PPAP might be requested by Veoneer Plant C in Asia

### b. Supplier Tool Relocation within same supplier group

- Move Tool 1 from Supplier A to Supplier A in a different location

### b. Supplier Line Transfer\*

- Move Line 1 from Supplier A in Europe to Supplier A North America (within the same supplier)

### d. Supplier Process layout Change

- Current: Crimping station next to screwing station
- New: Crimping station moved two meter away from screwing station to facilitate material handling

### e. Supplier Process Flow Change\*

#### 1. Manufacturing Method change

- Casting or forging method change
- Sintering condition change
- Heat treatment condition change
- Rubber or plastic molding condition change
- Welding condition change
- Plating or coating condition change
- Machining or cutting condition change
- Process or setting method change
- Current: Crimping station before screwing New: Screwing now before crimping station.

### f. Sub-Supplier Phase out

### g. Supplier Packaging Change

- – Change in delivery method, packaging materials or containers

\* - This change requires SREA submission from supplier

## 4M – Measurement

*(Examples)*

- **Gauge (new or modification)\***
  - New or modified inspection equipment
  - Measuring method change or type of measuring instrument changeExtra sensor added to the gauge to control weight
- **Checking / Detection Devices Adjustment**

Camera angle moved from 15° to 25° degrees

*\* - This change requires SREA submission from supplier*



## 5M – Man (Human)

*(Examples)*

- **New operator**

Due to new process lower capacity, new operator added to the assembly line.  
Operator is new to this process and needs to be trained.

- **New but experienced operator**

- Associate change on critical process

Due to new process lower capacity, new operator added to the assembly line.  
Operator is qualified to run this process. No additional training is required.

*\* - This change requires SREA submission from supplier*

## 6M – Mother Nature (Environment)

*(Examples )*

- **Change in Altitude**

We are moving production from North America (high altitude) to South America (low altitude). This new part will be used for the South America market. Validation of the product needs to consider the different spectrum of altitude where the product will be used.

- **Change in Humidity**

We are moving production from Europe to Asia. This new product will be used for the Asia market. Validation of the product needs to consider the new humidity conditions where the product will be used.

*\* - This change requires SREA submission from supplier*

# Thank You!

The Veoneer logo, consisting of the word "veoneer" in a white, lowercase, sans-serif font, is positioned in the bottom right corner of the slide. It is set against a dark blue background with a large, light teal curved shape behind it.