

# Managing risks

## Levels of obsolescence management (OM)

| Reactive OM:  | Proactive OM:   | Strategic OM:   |
|---|---|---|
| <p>Taking action on receiving an EOL* notification</p> <p>→ Increased risk</p>  | <p>Taking action before receiving an EOL* notification</p> <p>→ Early warning</p> <p>→ More time to respond</p>   | <p>Long-term strategy: Regular forecasting and cost analysis across entire life cycle right from the developmental stage</p> <p>→ Preventative action</p>   |
| Measures:   | Measures:   | Measures:   |
| <ul style="list-style-type: none"> <li>Last time buy</li> <li>Long-term storage</li> <li>Aftermarket supply</li> <li>Redesign</li> <li>...</li> </ul> | <ul style="list-style-type: none"> <li>Risk assessment of components</li> <li>Lifecycle analysis of bill of materials already in the developmental stage</li> <li>Partnerships and contracts with manufacturers and suppliers</li> <li>Electronic monitoring of key components</li> <li>Regular consultations with customers</li> <li>...</li> <li><b>+ Reactive OM</b></li> <li><b>+ Proactive OM</b></li> </ul> | <ul style="list-style-type: none"> <li>Second-source strategy</li> <li>Management of warehouse stocks</li> <li>Development of a sustainable design</li> <li>Early development of an alternative design</li> <li>...</li> <li><b>+ Reactive OM</b></li> <li><b>+ Proactive OM</b></li> </ul> |

\* End of Life

The selected EMS partner is able to satisfy the agreed OM requirements.

# The following ZVEI members ...

- offer services tailored to customers' requirements.
- are committed to quality and environment management.
- have the expertise required to perform the services.
- determine the desired results and performance indicators together with the customer.

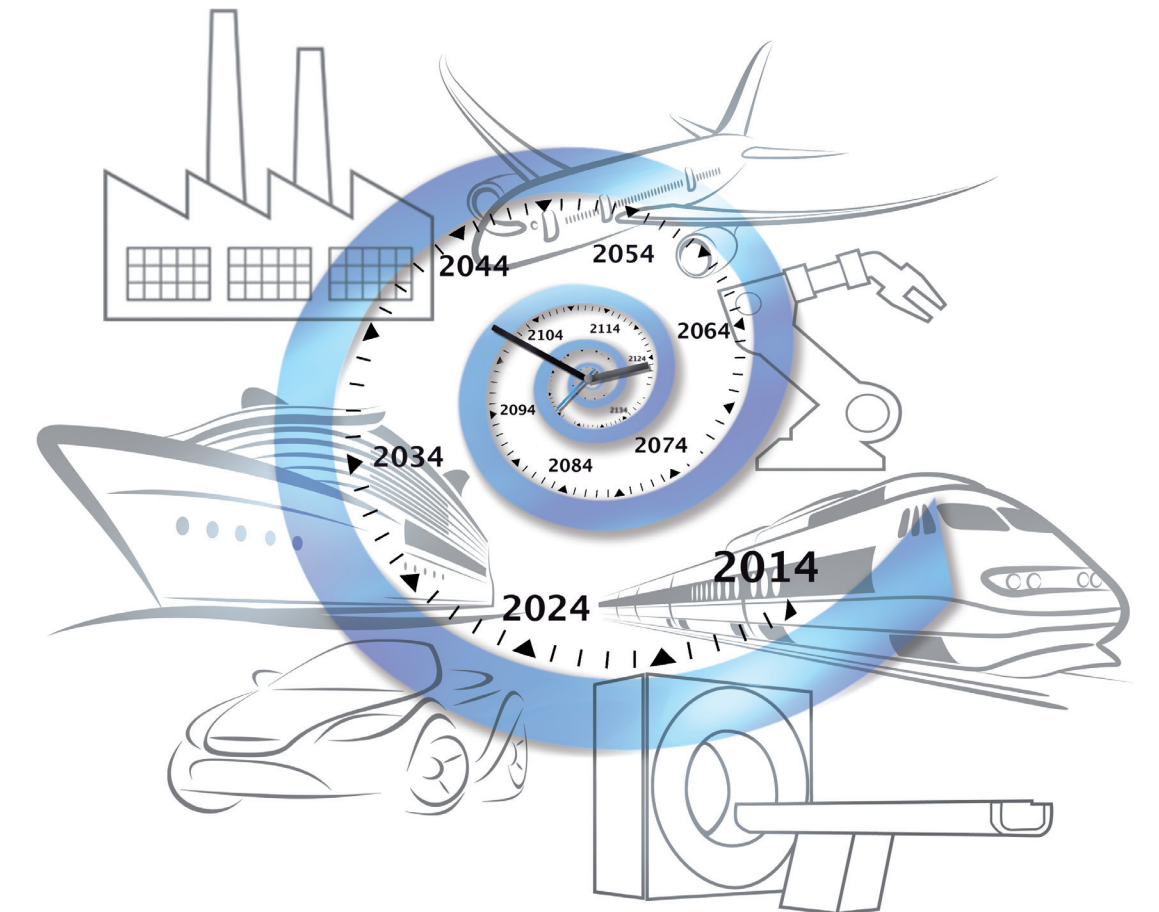


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# Obsolescence Management

## The key to the long-term availability of electronic systems



PCB and Electronic Systems Division

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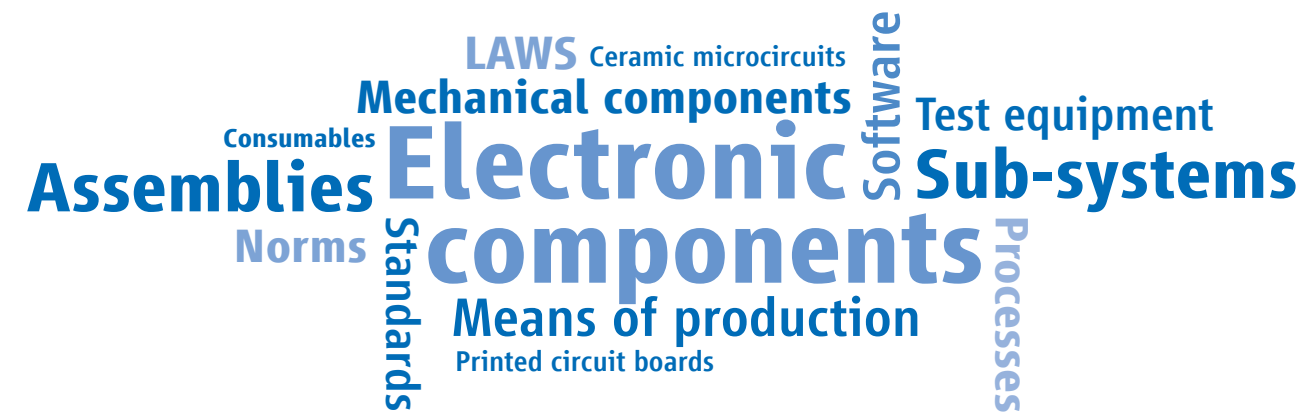
## What is obsolescence?

*Obsolescence describes the state which occurs when an item or process is no longer available.*

### Causes of obsolescence

- Innovation cycles – technological developments
- Market adjustments to meet customer requirements
- Environment: legislative requirements and standards (e.g. RoHS\* Directive, substance bans)
- Political demands and compliance (e.g. REACH\*\* regulations, Dodd Frank Act)
- Environmental disasters

### Obsolescence risk factors



*Obsolescence management is an implicit part of our service.*

## Obsolescence management in the supply chain

### Involving suppliers in OM

- Supplier contracts to include obligation to report scheduled discontinuations in good time in accordance with JEDEC\* standard as per JESD46d and JESD48c
- Prompt conclusion of contracts with as yet unregistered suppliers
- Preference given to suppliers bound by contract
- Establishing a basis of trust for a long-term relationship
- Auditing suppliers through reviews and visits
- Prompt notification of PCN/PDN\*\* (up to two years after the last order)
- Consignment warehouse



OM is essential for a professional materials management

### OM in customer relationships

- Risk rating for components
- Stipulate and use second-source manufacturers
- Customer contracts to specify stocking levels and deadlines
- Agreement stipulating prompt communication of PCN/PDN as per JEDEC standard
- Preference given to components with low risk of obsolescence
- Design for long-life cycle/anti-obsolescence
- Regular OM analysis of product components and obsolescence notifications
- Long-term storage of (key) components for semifinished and finished products
- Product care and modification
- Development of alternative solutions
- Suppliers and developers collaborate to find substitutes

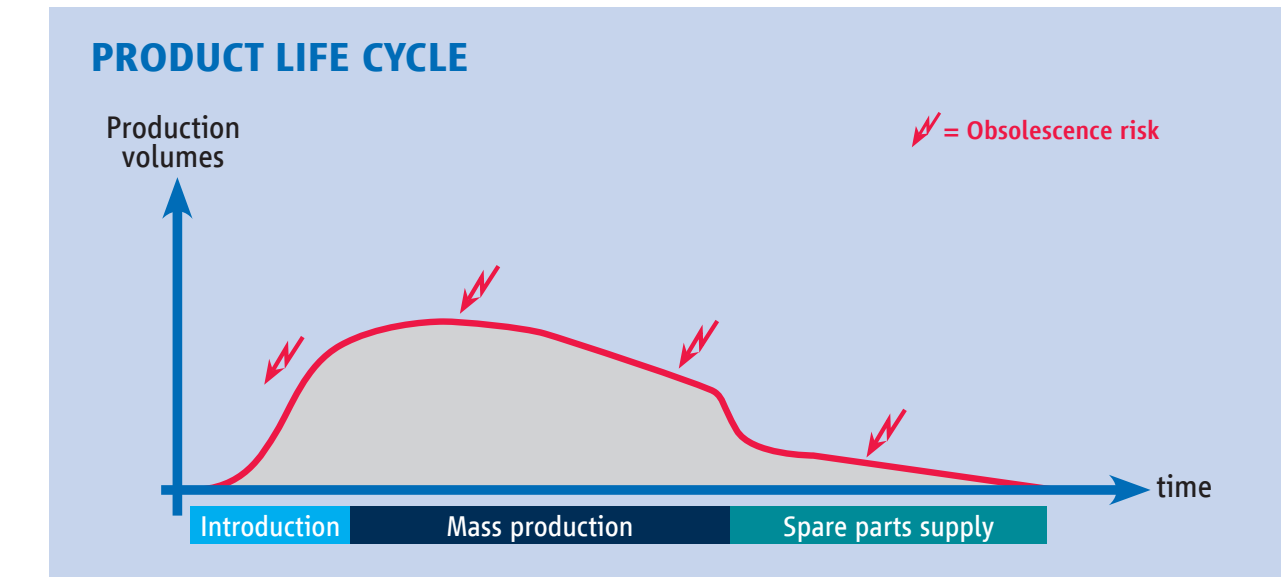
*Ongoing communication within the supply chain inspires confidence.*

## Obsolescence requires managing

**OM aims to identify items that are at risk in good time** (DIN 62402\*)

### Objectives:

- Long-term product availability
- Cost savings
  - Prompt information from customers regarding discontinued products
  - Sustainable design, selection of components and use of resources and raw materials
- Identifying obsolescence and minimizing its impact in the best possible way



OM is a worthwhile investment to ensure the long-term availability of electronic systems.

Active OM enables all stakeholders to benefit from the EMS partner's expertise.

Existing agreements between customer and supplier must be taken into account.

*OM enables EMS partners to guarantee the long-term availability of products in the required quantity at minimum costs.*

\* RoHS = Restriction of Hazardous Substances / \*\* REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals

\* JEDEC = Joint Electron Device Engineering Council / \*\* PCN = Product Change Notification and PDN = Product Discontinuance Notice

\* DIN = Deutsches Institut für Normung