

6. SUBSTANCE OF CONCERN (SOC) ELIMINATION

In 2005-06, TKM under the guidance of TMC initiated an effort to explore the use of environmental burden substance in the products and elimination of those substances, thus facilitating green engineered products in India.

The problem of "risk" and "hazard" terminology has bedeviled discussions relating to the safe use of chemicals, because there have been different usages, although a consensus is emerging. We come into contact with many substances, unknowingly. Some may have the potential to cause adverse health effects, but how do we know if we are at risk of becoming ill from exposure to these substances?

Many chemicals are added to bring in the component of an automobile. Some of these chemical substances have metallic property and also toxic or poisonous in nature at lower concentrations also, Such type of substances is considered to be of concern as they have significant impact over the Environment and Human health. The elements such as lead (Pb), Cadmium (Cd), Mercury (Hg) and Hexavalent Chromium (Cr6+) are considered as SOC by the TKM. Battery, fuel tank, sealer, fuse, Nickel-Cadmium Battery, KID Lamps etc., are some of the automobile components wherein these SOC's can be trace out.

These SOC's can enter a water supply by industrial and consumer waste leading to dreadful effects over the ecosystem. TKM has an objective towards eliminating these substances of concern from the Toyota built product. We have been continuously working on reduction/elimination on the usage of substances of environmental

concern, which are used in automobile parts in order to obtain certain characteristics, which goes on/in the Toyota built vehicle that will reach to the customer

TKM has tracking through the supply chain upto the raw material suppliers of each parts and investigate which portion contains SOC. TKM works to meet this requirement by.

- Designing products that reduce or eliminate these substances
- Developing alternatives that may suit customer needs

The TKM has established the laboratory (Fig 10) for analyzing the presence of the Substances that are concerned to the environment in auto-components.



Fig 10: System Monitoring for SOC

The components used for automobile manufacturing is sent to the laboratory for analyzing the substances of environmental concern before they are impregnated and built as a complete unit.

Although their usage cannot be eliminated yet, TKM is working according to the plans with continual efforts to reduce their usage. The flow of information/decisions towards the elimination of SOC's at the supplier can be visualized as in below (Fig 11)

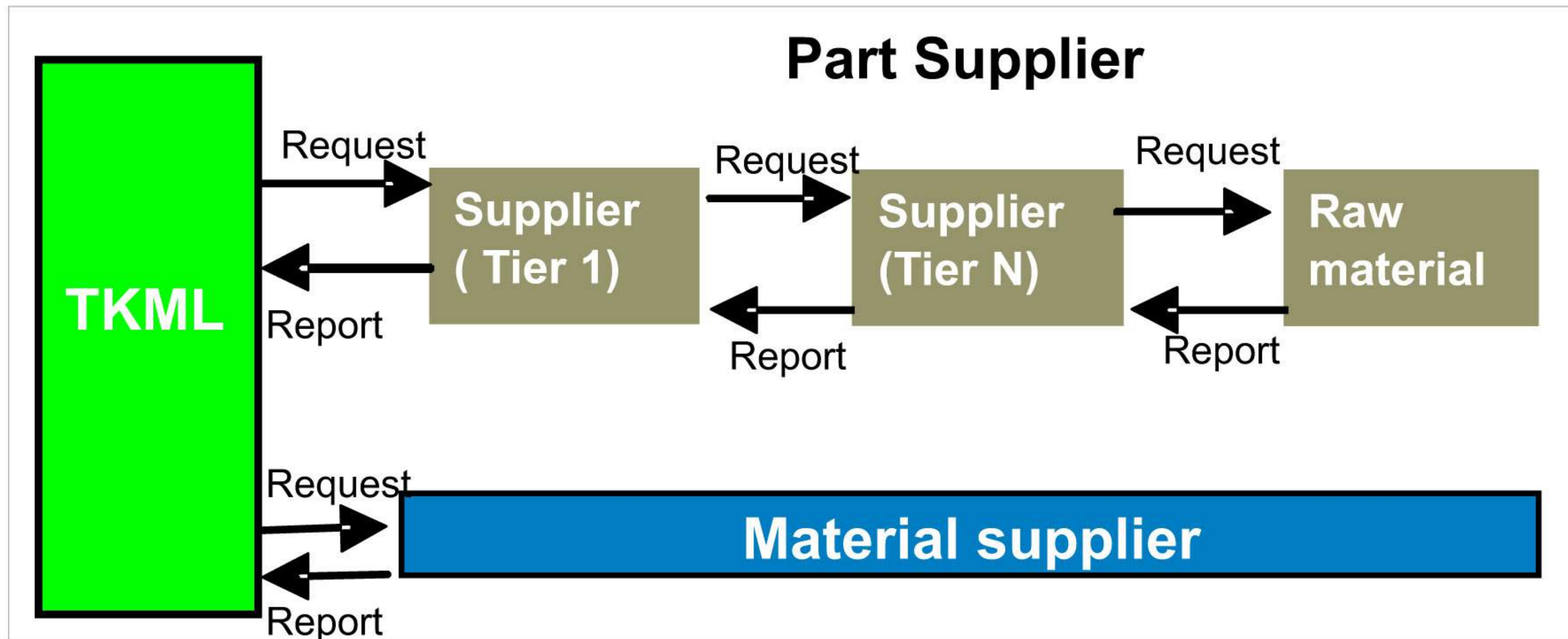


Fig:11 Information flow for SOC Elimination

The suppliers are requested to submit the material data per vehicle models. The received International Material Data system (IMDS) are consolidated and screened completely for existence of SOC's. In case, the SOC's are found in the component, the suppliers are requested to start the SOC elimination activity in their company and appoint exclusive personnel for SOC activity as per the guidelines and support from TKM

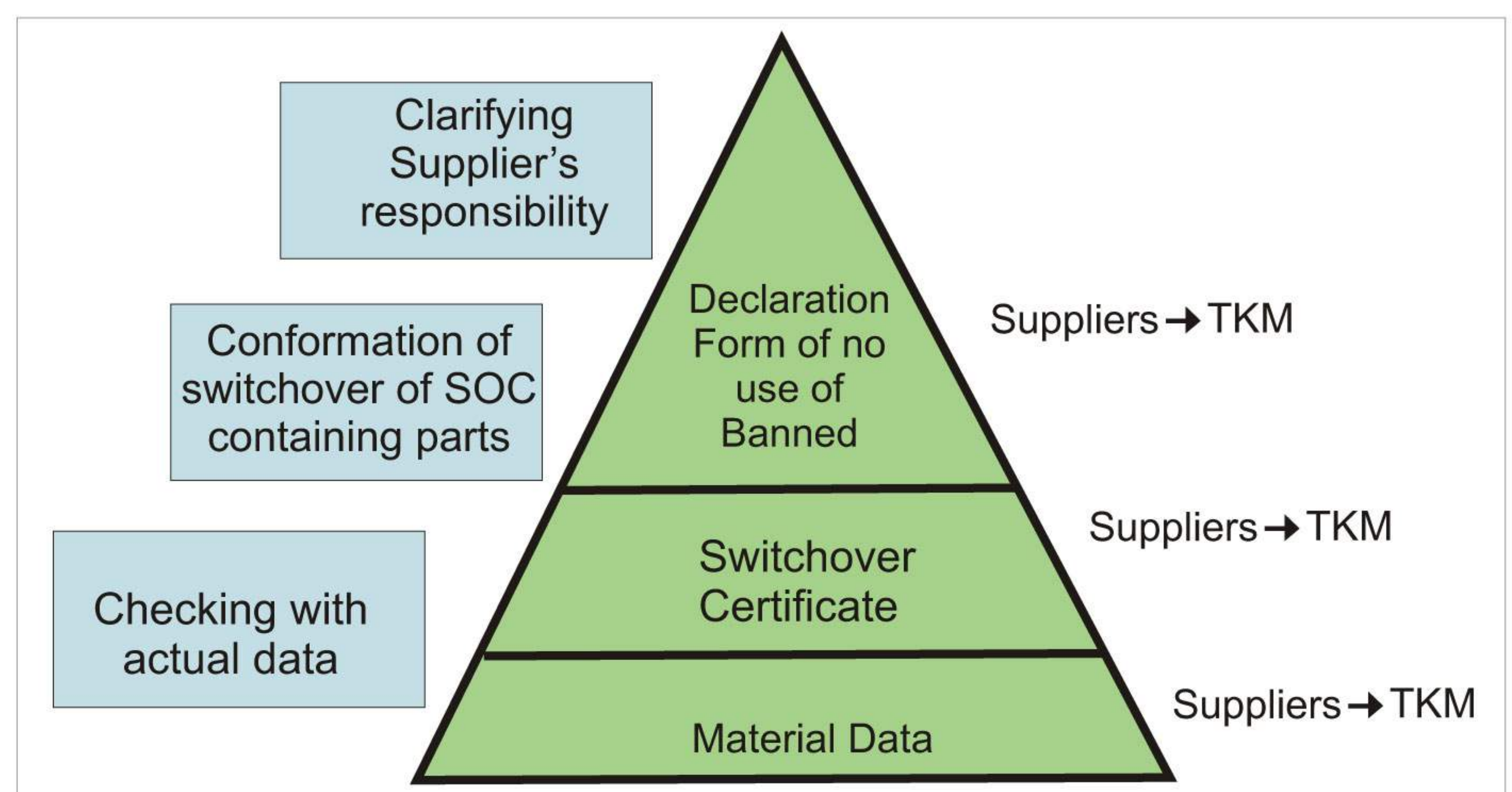


Fig:12 Activity flow for SOC Elimination

Compliance verification for SOC Management from TKML to Supplier.

Most of automobile components are manufactured at ex-situ, and a wide range of direct raw materials and indirect raw materials are procured for use in automobile parts, materials and plants.

Under these circumstances, suppliers being an apex source to manufacture products with concern for the environment in order to reduce the environmental impact of overall automobile manufacture and particularly to promote management of substances of environmental concern and recycling, TKM has Guidelines for suppliers. And hence, the suppliers are requested to submit a report on the composition of materials to be delivered as well as material safety data sheets.