TEXTILES AND ELECTRONICS - PRODUCT LIFE STEPS & THE ENVIRONMENT

* ENVIRONMENTAL EFFECTS - ELECTRICAL/ELECTRONIC SYSTEMS
* PRODUCT LIFE STEPS
* ENVIRONMENTAL EFFECTS - FIBRES/TEXTILES

Some substances commonly used in the past in electrical and electronic equipment have been judged to be so dangerous to the environment that their use is now banned. These substances are

> Lead
> Cadmium
> Mercury
> Hexavalent Chromium
> Polybrominated biphenyls (PBB)
> Polybrominated diphenyl ethers (PDBE)

(last two used for fire retardants)
'(Prohibition of the use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2004') (UK Legislation based on EU Directive)

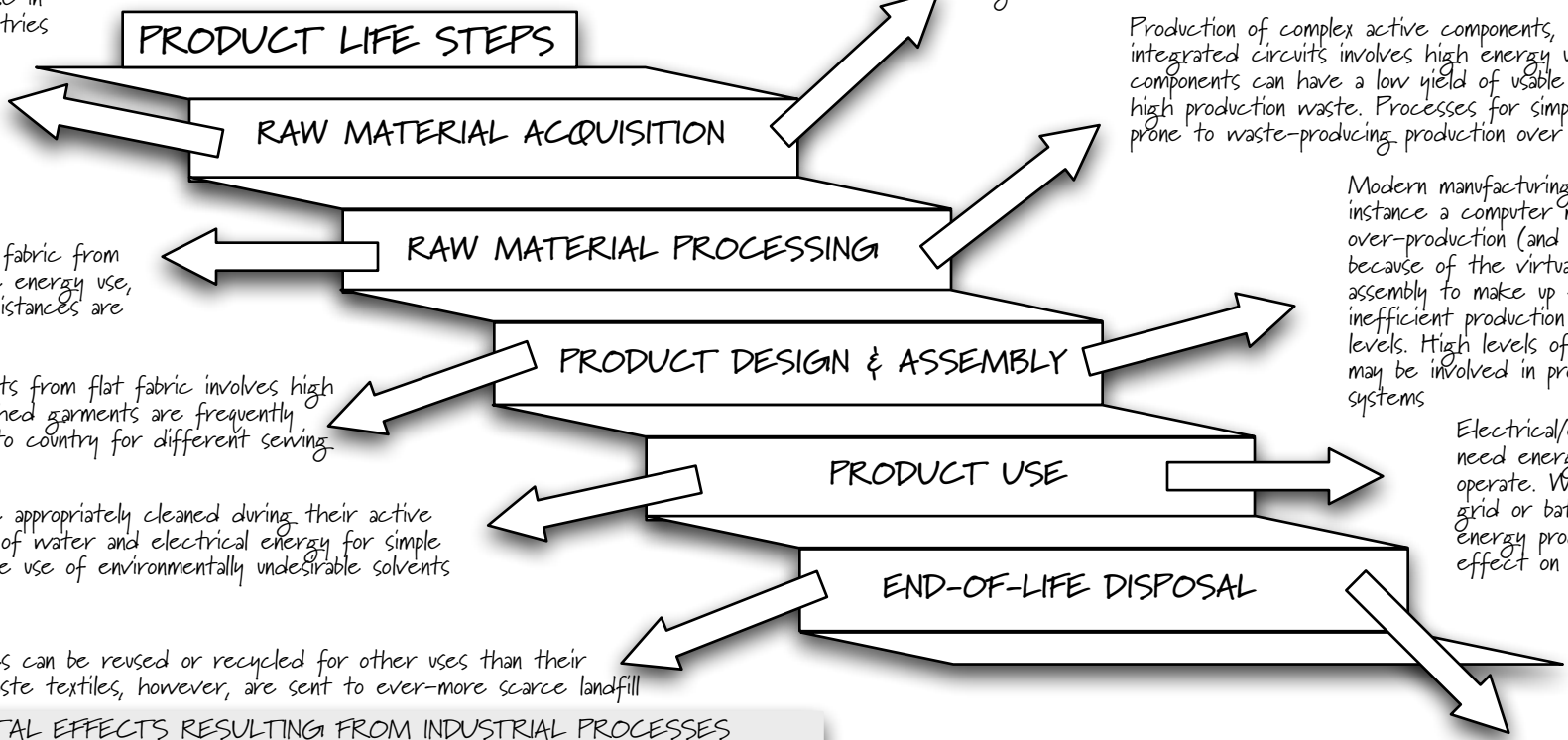
FIBRES/TEXTILES

1. PLANT-BASED FIBRES
May be associated with excessive use of pesticides & herbicides. High water use in some cotton growing countries

2. ARTIFICIAL FIBRES
Sourced from oil, the extraction of which often badly affects the environment. Oil is also a non-renewable resource

ELECTRICAL/ELECTRONIC

Produced mainly from mining, a process known for environmental degradation. Non-renewable oil is also a raw material



Production of complex active components, such as very large integrated circuits involves high energy use. Very complex components can have a low yield of usable items leading to high production waste. Processes for simpler components are prone to waste-producing production over runs

Formation of yarn and fabric from it involves considerable energy use, and often very long distances are needed for transport

Modern manufacturing processes (of, for instance a computer motherboard) encourage over-production (and hence high waste) because of the virtual impossibility of hand assembly to make up for shortages caused by inefficient production planning or high fault levels. High levels of international transport may be involved in production of complete systems

Cutting garment components from flat fabric involves high levels of waste. Part-finished garments are frequently transported from country to country for different sewing & finishing phases

Electrical/electronic systems need energy in order to operate. Whether national grid or battery based, energy production has a bad effect on the environment

Garments will need to be appropriately cleaned during their active life. This will include use of water and electrical energy for simple washing and drying, or the use of environmentally undesirable solvents for dry cleaning

Some end of life textiles can be reused or recycled for other uses than their original purpose. Most waste textiles, however, are sent to ever-more scarce landfill sites.

Some attempts are made to recover precious metals, steel & glass from end of life electrical/electronic equipment. Most waste electrical and electronic equipment is landfilled, (including use as ground-up ballast for roadbuilding) with the attendant risk of some of the exotic materials that are used being released into the environment.

ENVIRONMENTAL EFFECTS RESULTING FROM INDUSTRIAL PROCESSES

- Mining can destroy natural habitats and cause social disruption
- Energy production can result in using up non-renewable resources and cause air pollution
- Transport over long distances uses oil and is a major contributor to air pollution
- Waste disposal often uses long-distance transport, & waste frequently escapes and pollutes the environment