Procure+ webinar, 29th October 2015

Revision of the EU GPP criteria for the 'Office IT equipment' product group

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Overview of the presentation

- Scope of the revised EU GPP criteria
- Evidence to support life cycle approach
- Criteria areas and proposals
  1. Energy consumption
  2. Product lifetime extension
  3. Hazardous substances
  4. End-of-life management

Revised scope definition

Stationary computers

- Desktop Computers (incl. Integrated Desktop Computers and Thin Clients)
- Small-scale servers
- Workstations

Display devices

- Computer monitors

Portable computers

- Notebook Computers (including subnotebooks)
- Two-In-One Notebook
- Tablet Computers
- Portable All-In-One Computer
- Mobile Thin Client

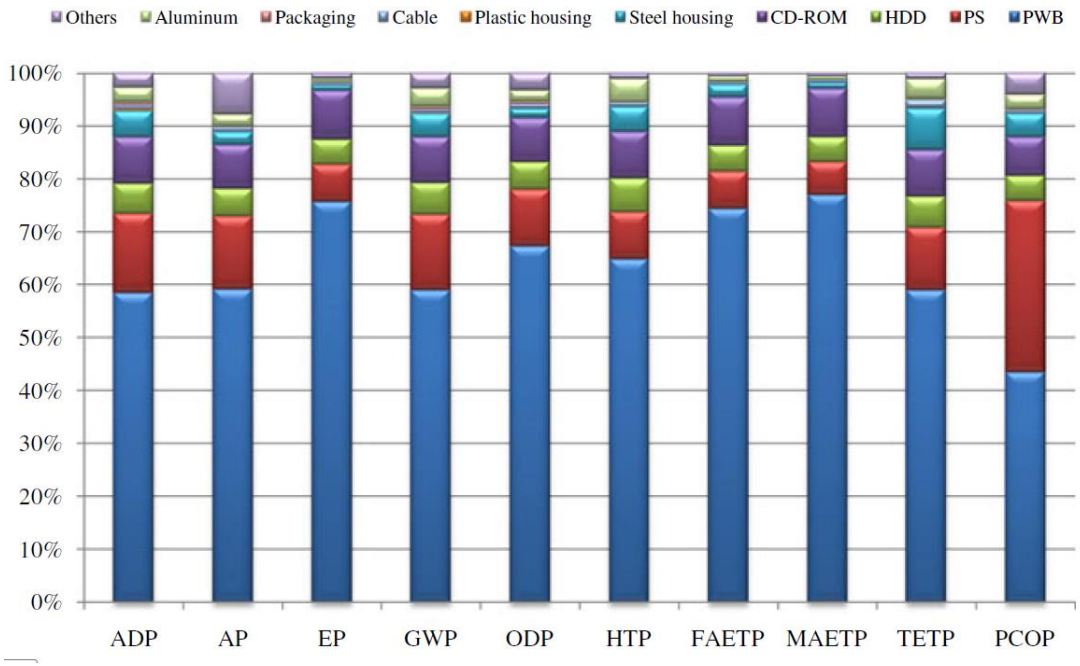
Key environmental impacts
Broad findings from LCA studies

- **For PC's servers and workstations, the use phase dominates** the total results with regard to GHG emissions, although with greater energy efficiency, the production phase is becoming more important
- For **products with a shorter lifespan and lower electricity use**, such as notebook PCs, the **production phase is associated with the most significant environmental impacts**
- Environmental impacts of manufacturing phase can be reduced by **sound EoL management** as secondary resources from recycling can avoid primary production.

*Existing criteria **do not directly improve manufacturing phase***

European Commission

LCA analysis
Main contributors at component level: Desktop PC

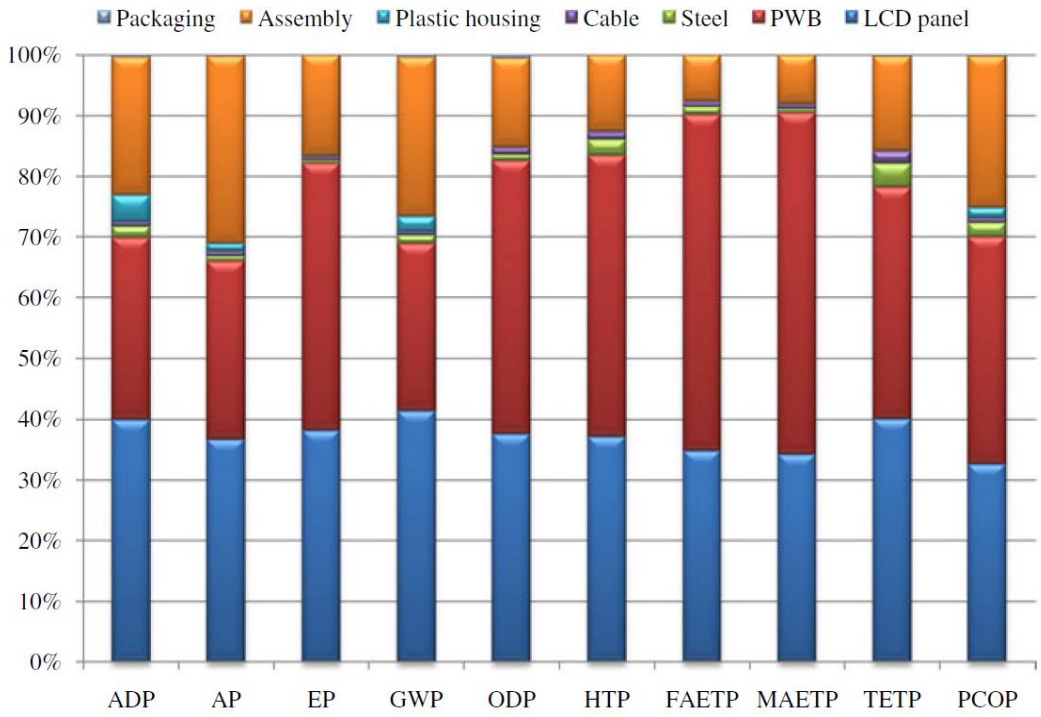


Environmental hot spots during manufacturing phase:
PWB, power supply unit, CD-ROM and **HDD**

Source: Duan et al (2009)

Joint Research Centre

LCA analysis
Main contributors at component level: LCD screen



Environmental hot spots during manufacturing phase:
PWB, LCD panel and **final assembly process**

Source: Duan et al (2009)

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LCA analysis
Main findings – Notebook computers

- **Manufacturing** of a notebook PC clearly dominates environmental impacts compared to use phase
- Environmental hot spots during manufacturing phase: **LCD display, motherboard** and **battery**
- Market surveys show that **lifespan in first 3 years is influenced by hardware failure (20.4%) and accident rates (10.6%)**
- Impacts can be reduced:
  - *directly* by improving design and production techniques, or
  - *indirectly* by extending notebooks' use life or by reusing parts

Improved life cycle focus
Product lifetime extension

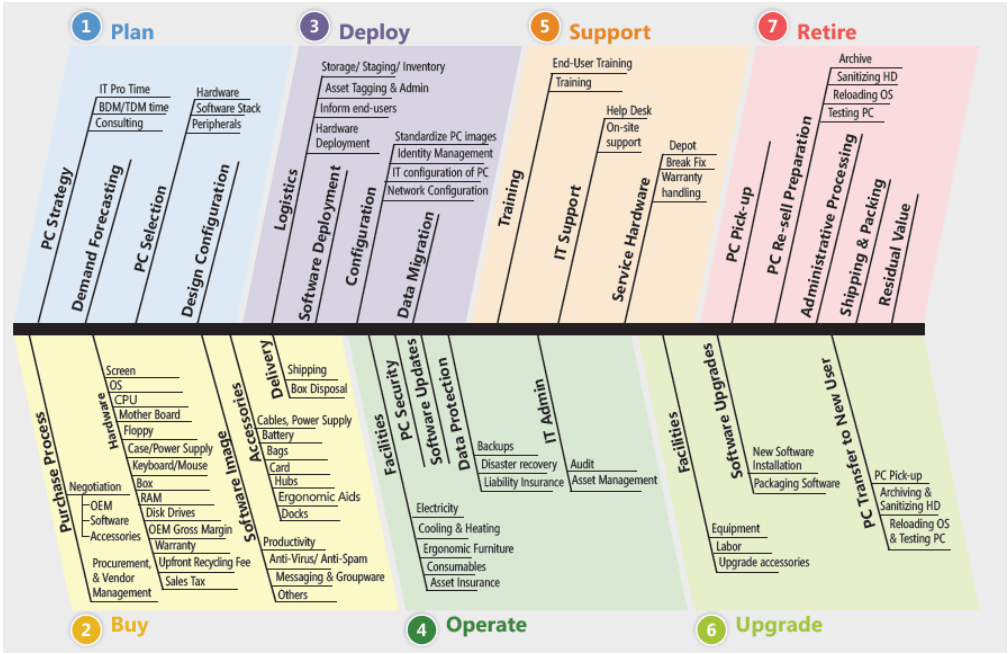
Improved durability, upgradeability and repairability

- Reasons for early failure or replacement
- Common hardware improvements and durability testing specifications

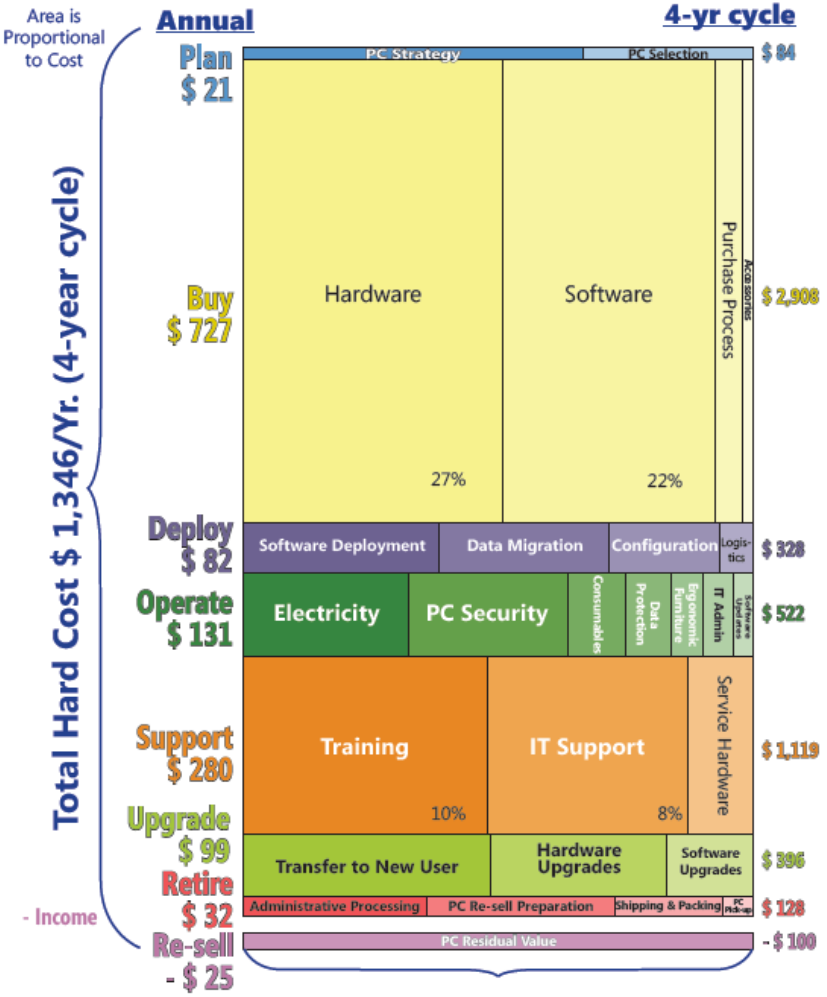
Product lifetime extension and ease of dismantling

- Extension of service life through re-use
- Enable easy extraction/recovery of 'hot spot' metals

Whole Life Cycle Costs
PC 'fleet management'



Source: Microsoft (2008)



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Revised criteria areas

Evidence base
Criteria with improved life cycle focus

Shared evidence base with the revision of EU Ecolabel criteria for computers and displays (ongoing)

- Alignment with standards and certifications that have a high uptake in the market *e.g. Energy Star, IEEE 1680.1 (EPEAT)*
- Public sector products/services supplied by leading manufacturers *e.g. spare parts, notebook durability, battery cycles*
- Best practices in private and social sector *e.g. chemical management systems, end of life management*
- New criteria based on collection of data and setting of performance thresholds *e.g. battery extraction, motherboard/cable fire tests*

A. Energy criteria

Aim: Purchase of energy efficient models

- **Core and Comprehensive technical specifications**
  - Latest version of Energy Star for computers/monitors
- **Award criteria**
  - Improvement in energy consumption upon Energy Star E_{TEC_MAX} or P_{ON_MAX}
  - *Alternative option to express in terms of life cycle electricity costs*

B. Hazardous substance criteria

Aim: Purchase products with restricted amount of hazardous constituents and with a reduced potential for hazardous emissions upon (improper) disposal

- **Selection criteria**
  - Supplier 'restricted substance control' system (IEC 62476 or equivalent)
- **Technical specifications**
  - Article 33(2) declaration for REACH Candidate List substances
  - Plasticisers in external cables (new RoHS requirements)
- **Award criteria**
  - Hazardous end of life dioxin, furan and PAHs emissions from printed circuit boards and power cords

C. Product lifetime extension (1)

Aim: Design for durability, upgradeability and repairability

- **Technical specifications**
  - Warranty and service agreements, including batteries (2 years and 3 years)
  - Continued availability of spare parts, with backward compatibility (3 years and 5 years)
  - Design for repairability of listed components with universal tools
  - Ease of replacement for rechargeable batteries
- **Award criteria**
  - Cost competitiveness of spare parts based on price list
  - Longer warranties and service agreements
  - Tablet/all-in-one-notebook memory and storage upgrades

C. Product lifetime extension (2)

Aim: Design for durability, upgradeability and repairability

- **Award criteria**
  - Rechargeable battery lifespan and endurance, with core and comprehensive variation of charging cycles
  - Notebook disc drive reliability and durability based on specification of one or more protection features
  - Durability testing of the whole notebook product for drop, screen resilience, shock and vibration. *May vary according to the conditions of use for the product.*

D. End of life management (1)

Aim: Product life extension, design for dismantling and end of life management to maximise resource recovery

- **Technical specifications**
  - Recyclability of plastic casings, enclosures and bezels, comprehensive requirements on metal inserts, paints, coatings
  - Marking of plastic casings, enclosures and bezels, core and comprehensive variation based on weight threshold (25g/100g)
- **Award criteria**
  - Computer and monitor dismantling potential, based on a time thresholds for 'extraction' of listed components

D. End of life management (2)

Aim: Combined/separate tender for end of life management services

- **Technical specifications**
  - Secure computer sanitisation, re-use and recycling, with confidential handling, testing/servicing, remarketing for re-use, recycling in accordance with WEEE Annex VII
- **Award criteria**
  - Inventory tracking system based on unique identifiers for items in the equipment inventory
  - Recycling and depollution with extraction of 'relevant' components for recycling (EN 50625-1 or equivalent)
- **Contract performance clauses**
  - Reporting on equipment status and re-use/recycling facilities

Next steps?
Progress towards final GPP proposal

- Stakeholder consultation process has concluded
- Preparation of final criteria underway
- Conclusion in parallel with EU Ecolabel computer criteria

Please visit the project website:

http://susproc.jrc.ec.europa.eu/computers/

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Thank you for your attention

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