Eco-Design Case Study

MicroPro Xpc
MicroPro Computers

- Multimedia Computer Systems Ltd, trading as MicroPro Computers
- Wholly Irish owned
- Based in Rathfarnham, Dublin
- 23 staff
- Small computer manufacturer, sales and repair centre
- ISO Certified company to ISO14001 and
- ISO 9001 quality standards
• Established in 1991

• MicroPro was always looking for universal parts for universal design

• Led to development of the MicroPro pc which was a green computer ahead of its time
• In 1999 Enterprise Ireland asked us to participate with their Environmentally Superior Products Programme (ESP) which concluded at that time that our computers compared favourably with the European Eco Label specification for PCs.

• By further greening our computers we developed our second generation the MicroPro XPC.
Problems with traditional PC design

- Physical size and weight
  - More transport costs and emissions

- Short life span
  - Built to last approx 3 years

- Lack of upgradeability
  - Apart from memory and hard drive on some models

- Loud noise level
  - Restrictions on where it can be located

- No thought given to Product Design
  - Design of computer case
    - Size, shape, style, life cycle
Advantages of Eco-design

- Eco-Styling
- Smaller footprint (space saving)
- Low noise (DB)
- Total upgradability
- Energy Efficiency
- Waste reduction
- Health
- Reusability
- Reduce environmental impacts
- Promoting sustainability
MicroPro Xpc

- Commercially viable
- Longer life span
- Modular components which are updatable, upgradeable, reusable, recyclable
- One third the size of a conventional PC
- Lightweight
- Wireless technology
“More is Less”

More

• Life
• Reuse
• Upgradeability
• Sustainability

Less

• Energy
• Noise
• Waste
• Electro-Magnetic Emissions
• Hazardous Substances
• Impact on the Environment
Eco-Design for Energy/Power

- Energy efficiency is a consideration in the overall design.
- Power supply units work off a switch mode PSU which gives us up to 80% efficiency.
- Software configured to turn off screens, hard drives and any unnecessary energy draws.
Eco-Design for Noise

- Noise
  - Ice technology coolant system reduces time the fan has to be on
  - Software configurations for varying thermostat settings dependant on average temperature where it's located
  - Standard PCs have fan on all the time and have more than one
  - Reduces energy required
Eco-Design for Materials

- **Materials**
  - Aluminum chassis
  - Less volume = transport, energy
  - Using environmentally preferable alternatives where possible such as wood from sustainable forests for casing, keyboards, mice etc.
  - Screen has no cathode ray tube – only using TFT monitors which are less hazardous and use less energy and produce no radiation
Other Eco-Design Elements

- Operating Systems
  - Can work off any operating system including Linux
  - Settings are at most energy efficient level that operating systems allow
Future directions

- Solar technology
- Inverter technology
- Enhance software design to improve eco-efficiency
- Reducing the hazardous materials in circuit boards and components
Exciting New Eco PC

- MicroPro Computers are delighted to announce the launch of our revolutionary new eco designed environmentally friendly computer under our new Eco trademark.
iameco™

• MicroPro Computers launches Ireland’s first
evironmentally-friendly PC

• New high-specification iameco are Ireland’s first fully upgradeable, updateable, reusable and recyclable environmentally friendly computers.
iameco™

iameco are free of many of the harmful materials, such as brominated flame retardants, PVCs and heavy metals like lead, cadmium and mercury that have been regularly used in computer manufacture for years.
iameco™

• iameco computers are housed in carefully designed, and beautifully finished cases, which come in several varieties of solid natural woods, including Ash, Maple, and Beech.

• iameco PCs also come with matching wood-finish keyboards, mice and flat-screen monitors which double as high-definition TVs.
• With iameco computers we have built beautiful, high-specification computers without any of the toxins that have traditionally been used in computer manufacture.
iameco™

- Not only has great care gone into the outside of these machines, we have put just as much effort into ensuring that iameco computers are powerful enough for everything from 3D gaming and design, to simple e-mail and word processing.
European Eco Label

• We aim to be the first in Europe to achieve the prestigious Eco-Label for iameco which will meet all green procurement requirements and move us to a higher greener level than our competitors.
iameco™

- We have strong environmental principles and we have founded this company to help make computer manufacture more sustainable and Ireland just a bit greener.

- For more information on iameco, visit www.Iameco.com.
Research & Development

- All our research and development has been carried out in-house by our own engineers in conjunction with the University of Limerick and the Kerp Research Institute in Vienna.
Acknowledgements

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- The Environmental Protection Agency under their Cleaner Greener Protection Programme and
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Are You ?