INTEGRATED PRODUCT POLICY

Pilot on Mobile Phones

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Outline

- Nokia overview
- Structure of the pilot
- Program description
- Results
- Experiences

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Nokia is about Connecting People

Nokia is the world's largest manufacturer of mobile devices and a leader in mobile network equipment, solutions and services.

We also provide equipment, solutions and services for corporate customers.

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Nokia
at a Glance

	2005	2004	Change, %
Net sales (EUR million)	34 191	29 371	+16
Operating profit (EUR million)	4 639	4 326	+7
Operating margin, %	13.6	14.7	
Earnings per share, diluted, EUR	0.83	0.69	+20
Research and development (EUR million)	3 825	3 776	+1
Personnel (year-end)	58 874	55 505	+6

- Head office in Finland, operations around the world
- Sales in more than 130 countries
- Nokia sold its one billionth phone in 2005

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Global Reach

Countries with:

- production plants
- R&D centers
- sales & marketing

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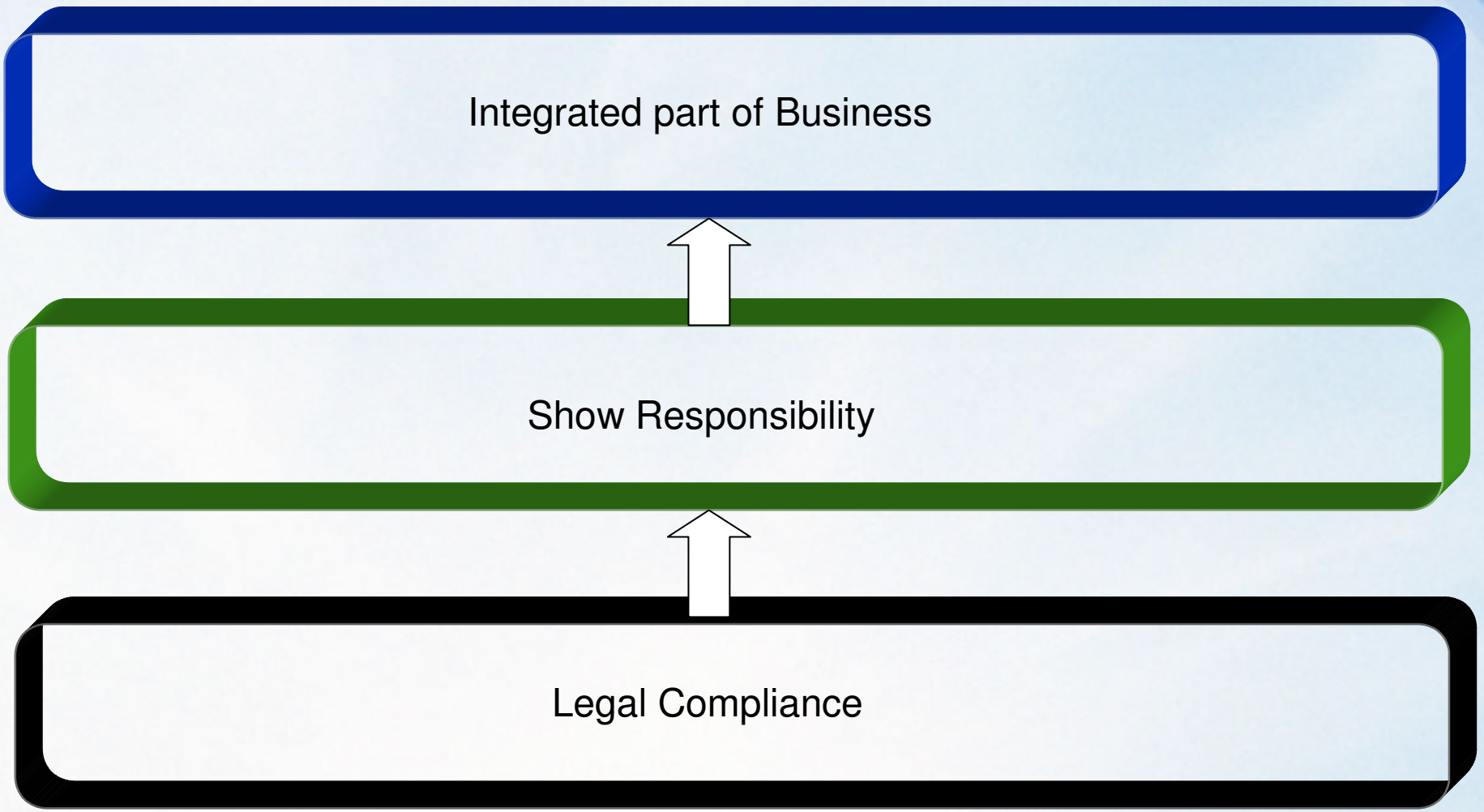
The Future of Environmental Management



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Life Cycle Thinking

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IPP Pilot

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Integrated Product Policy (IPP) Pilot in Nokia

EU Commission aims at

- Greening of consumption in EU
- Promoting life-cycle thinking while acknowledging the complexity of today's products
- Use the selected 2 pilots as showcases and benchmarks in environmental performance in their sectors

Nokia's targets

- Strengthen relationships with EU authorities
- Show how voluntary measures work instead of regulation
- Improve awareness of environmental issues and clarify responsibilities in the value cha
- Share experiences of using life-cycle thinking in practice
- Find a balance in regulatory requirements between healthy business and environmenta protection

Outcome

- Final report with a list of improvement proposals and learnings

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Short description of the Pilot

- Started December 2004 (first meeting in February)
- Final Meeting May 2006
- Final report and press releases 21.9.2006
- 4 formal and 1 informal stakeholder meetings
- The work related to identifying life cycle impacts was mainly done by Nokia
- The work with improvement options and final action plans was done by relevant groups and task forces
  - e.g. Network operators analysed network related improvement options
- Now the implementation phase has started
- Follow-up ca. mid 2007

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Stakeholders in addition to Nokia

- Network operators
  - Orange/France Telecom, TeliaSonera, Vodafone
- Component manufacturers
  - AMD, Epson, Intel
- Phone manufacturers
  - Motorola, Panasonic
- Recycler
  - Umicore
- NGOs
  - WWF, BEUC (European Consumers' Organisation)
- Governmental
  - DEFRA, Finnish Environmental Institute
  - The EU Commission

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Highlights

- Trends in Mobile Phone Industry (related to environment)
  - Dematerialisation (Size and weight)
  - Immaterialisation (Multiple functions, Software instead of hardware)
  - Energy Efficiency of Products (Talk time & Standby time)
- However further improvements can be made
- The stakeholder group has agreed on several new initiatives
  - Will reduce majority of life cycle environmental impacts
  - Will bring global benefits

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IPP Pilot Stages

- In stage I - Identified
  - Life cycle environmental issues of mobile phones
  - Focus areas: energy consumption, materials related issues, and environmental assessment methods/tools
- In Stage II - Identified
  - Numerous improvement options (over 50) in different life cycle phases
  - Key policy tools which can be used to steer them

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IPP Pilot Stages (cont.)

- In Stage III – Briefly analysed (with experience and judgments of the stakeholders as the basis)
  - 50 improvement options and categorised them as
    - Qualified, Ongoing and Disqualified based on environmental, social and economic impacts
    - High, Medium and Low priority based on the estimated life-cycle environmental benefits
      - 21: Qualified (16 high priority, 3 medium priority, 2 low priority)
      - 24: Ongoing (11 high priority, 10 medium priority, 3 low priority)
      - 5: Disqualified (0 high priority, 4 medium priority, 1 low priority)
  - Policy Measures for
    - Energy
    - Materials of Concern
    - End of Life
    - Information Flows
    - Environmental Assessment Methods/Tools
  - Policy Measures (Other Areas)
    - Green Public Procurement
    - Recognition/Acknowledgement of Front runners
    - Status of Voluntary Agreements

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Stage IV

- Using outputs of Stage III
  - Identified the roles of various stakeholders for implementing high priority options
- Initiated voluntary action to improve environmental performance in all high life cycle impact areas
- Set up six initiatives with task forces
  - Cover all qualified and high priority options
- Task forces have developed action plans with clear targets and timeline
- Final report contains:
  - Action plans
  - Experiences
  - Recommendations

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Six initiatives for eliminating majority of life-cycle Impacts

1. Information and Communication – Nokia & France Telecom Lead
   - Product Environmental Facts & Communications – Nokia Lead
   - Usage and Disposal Information & Communications - France Telecom Lead
     - Supports sustainable consumption
2. Reduce Energy Consumption (in Use Phase) – Nokia Lead
   - 30% life cycle impacts from no-load power consumption
3. Reduce/Eliminate Agreed Materials of Concern – Epson Lead
   - Majority of toxicity attributed to certain brominated flame retardants (after lead)
4. Take-back of Phones – Vodafone Lead
   - Recovery of precious metals offsets ~ 90% impacts from raw material acquisition phase
5. Environmental Assessment Methods /Tools – SYKE Lead
   - Supports eco-design in product development
6. Policy Tools – the European Commission Lead

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LCA and Mobile Phones - Experiences

- LCA is currently not useful for individual products
  - Results too late
  - Cannot be conducted within short product development cycles
  - Require significant time and data
  - Data gaps regarding materials and component suppliers' processes (technology evolves quickly)
  - Comparing products based on same technology does not give any new insights

LCA may be used in strategical purposes

  - Comparing different technologies, e.g. different generations

- Something more practical needed for product development purposes
  - KEPI (Key Environmental Performance Indicators) –type of approach
- More accurate LCA-data is also a continuous challenge for LCA-database development

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Experiences

- As a whole the pilot has gone well – this is better way than traditional “command and control” -approach
- The consultation process itself was constructive dialogue between the stakeholders
- Common understanding of mobile phone environmental impacts has increased
- IPP is a new type of approach – it requires new thinking
- Suggested actions will contribute to significant environmental improvements
- Products are different -> IPP type approach enables to define improvement potential and actions in a very effective way
- IPP approach requires win-win partnerships among the stakeholders
- The possibility for Voluntary Agreements is now better – this enables fast and efficient improvements
- IPP pilot initiatives will be open for participation by other organisations

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IPP as a development framework

- IPP may provide a fast and efficient way to improvements
  - Product orientation
  - Life cycle thinking
  - Stakeholder involvement
  - Continuous improvement
  - Mix of tools including legislation
- The IPP process was found to be resource intensive.
  - Around 2 person years from Nokia as the lead organisation were involved in addition to the time spent by participating stakeholders.
  - Conclusion for the European Commission is that this type of IPP exercise is a resource intensive task but the outcome can be rewarding. The Commission estimates that 1 person from the Commission side could run 2-3 IPP projects/year depending on the level of the Commission's involvement.
  - The Commission has yet to analyse whether this approach is to be continued in the future.

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Thank You!

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http://ec.europa.eu/environment/ipp/

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