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IPP PILOT TASK FORCES

Final progress report

06.02. 2008

Disclaimer: The views expressed in this document reflect the discussion among the pilot project participants. The report must not be regarded as stating an official position of the European Commission services or any of the participating organisations separately.

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1. SUMMARY

The initial time period of one year of the follow-up on the IPP pilot project on mobile phones has now passed and the task forces have finalized the projects. The six task forces representing the key improvement areas that were set up in the fourth stage of the IPP pilot project on mobile phones are:

- Information and Communication – Product environmental facts
- Information and Communication – Usage and Disposal Information
- Reduce Energy Consumption (in Use Phase)
- Reduce/Eliminate Agreed Materials of Concern
- Take-back of Phones
- Environmental Assessment Methods/Tools

The task forces have been led by organizations that have significant influence in the area and the members in the teams are from organizations that play a role in the mobile phone life cycle. The task forces focusing on products were thus led by Nokia, the ones focusing on usage and disposal by two operators Vodafone and France Telecom/Orange, the task force looking to reduce materials of concern by component manufacturer Epson and the working group focusing on developing new assessment methods by a research institute, the Finnish Environmental Institute SYKE.

Two of the task forces deal with improving sharing information to consumers and other stakeholders, as consumer behaviour can have a significant influence on the environmental impact caused in the mobile phone life cycle and they need to be aware of their role in minimizing the environmental impacts. The two task forces worked closely together and are getting ready for piloting the outcome.

The task force working on developing environmental assessment methods and led by Finnish Environmental Institute SYKE was not able to find funding that would enable conducting reliable and independent research, which means that this task force was not able to deliver results within the agreed time frame, but new possibilities for funding have been identified and this will be continued also after the pilot is finished.

The other task forces have been able to proceed with their tasks and some have been able to deliver concrete results, most notably the suggested voluntary code of conduct for including charger reminders in mobile phones and another one for eliminating certain substances.

All key stakeholders were represented in the task forces to begin with, but also new members joined in during the follow-up year. This was welcomed by the task forces and shows that they were able to deliver useful content. While all task forces have dealt with difficulties caused by changes in personnel and limited resources, most have been able to deliver what they had committed to. It seems that some of the initial goals were very demanding, especially keeping in mind the short timeframe and limited resources. All in all it can be stated that while this type of approach can be time consuming and demanding, it is also very rewarding when different stakeholders can voluntarily work together and achieve a goal that brings benefits for all. These experiences should be taken into account when developing new environmental regulatory initiatives.

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2. SUMMARY OF TASK FORCE OUTCOMES

Task force 1: Product environmental facts

The task force is proposing an Index - to be made available for the consumer in the point of sale, in product documentation and on internet - with environmental information on the mobile phones. Using the index consumers can easily compare products and key facts are presented using common criteria. The idea is that the environmental index is very similar to the one used for illustrating the energy efficiency of white goods, so the framework is familiar to the consumers as well. The Index will in first instance give info on the energy consumption on the no-load mode of the charger. The index could be extended later with other kind of environmental info. In addition, the task force team is proposing a target date by which the manufacturers would have adopted the index to use, by October 31st 2008. The commitment will take the form of a voluntary agreement signed by LG, Motorola, Nokia, Samsung Electronics and SonyEricsson. It will be reviewed every 3 years.

Task force 2: Usage and disposal information

The task force has developed and tested information that could be used to encourage consumers to adopt more sustainable habits and based on the tests, the taskforce agreed on the following:

- Implementation of the messaging related to unplug phone charger, end of life disposal for all task force companies plus paperless billing for mobile operators
- By using at least one of the 4 communication tools : leaflet, sticker, advert, website

In order to relay the messages to the customers/consumers, companies can use the framework that complies with their branding policies. It is not mandatory to use the concepts developed during the task force.

The task force team is proposing a target date by which the messaging should be used in the communication material mentioned above from companies who participated in the task force by October 31st 2008.

Task force 3: Reduce energy consumption in use phase

The producers joining this initiative agree to add a visual reminder on the screen of their phone to unplug the charger when the phone is loaded as stated in the voluntary agreement. Participating producers also agree to meet the EU Commission Code of Conduct for External Power Supplies –requirements.

The producers joining this voluntary agreement (LG, Motorola, Nokia, Samsung Electronics, SonyEricsson and Swisscom) will commit to add or require this reminder in their whole product portfolio starting with first products 2008. All new product lines/families shall have this reminder in 2009. However, the first implementations have already happened faster, already during 2007.

Task force 4: Reduce/Eliminate Agreed Materials of Concern

This task force has decided to take joint actions in the form of a voluntary agreement. The companies joining this agreement have signed a voluntary agreement aimed at further improving the management of materials/chemicals of concern. The signatories have individually committed to the actions on flame retardants, PVC and phthalates. These commitments form in practise a cognate set of list of substances to be phased out from mobile phones. The companies joining this agreement are LG, Motorola, Nokia Samsung Electronics and SonyEricsson. This agreement will be reviewed once a year.

Task force 5: Take-back of Phones

The task force has brought together individuals from organisations involved in every step of the phone recycling process. An understanding has been developed of the factors involved in encouraging the

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return of phones and it has highlighted the challenges that are raised by differing markets, cultures and expectations.

Task force 6: Environmental Assessment Methods/Tools

The task force was not able find funding that would enable conducting reliable and independent research, and therefore this task force was not be able to deliver results within the agreed time frame. The importance of the initiative has not diminished and new possibilities for funding have been identified and the target is to get this project up and running after the IPP pilot is finished.

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3. INTRODUCTION

Nokia's Integrated Product Policy (IPP) pilot project was initiated as a part of European Commission's (EC) effort to work together with stakeholders to further develop the IPP approach. The objective of the IPP approach is to "reduce the environmental impacts from products throughout their life-cycle, harnessing, where possible, a market-driven approach, within which competitiveness concerns are integrated"¹.

Stage V of the pilot project on mobile phones is now finalized. The task forces that were set up to work on the improvement options that were chosen to be the most important ones based on the work done in the other four stages of the pilot have now either finished their tasks, in final stages or in the case of the environmental assessment methods, seeking further funding. The outcome of the task forces can be found in the following pages of this progress report, as delivered by the task force leaders.

3.1 Task forces

The six task forces that are reporting their progress were:

- Information and Communication – Product environmental facts (lead by Nokia)
- Information and Communication – Usage and Disposal Information (lead by France Telecom/Orange)
- Reduce Energy Consumption (in Use Phase) (lead by Nokia)
- Reduce/Eliminate Agreed Materials of Concern (lead by Epson)
- Take-back of Phones (lead by Vodafone)
- Environmental Assessment Methods/Tools (lead by Finnish Environmental Institute SYKE)

More information on the task forces can be found in the previous progress reports on the Commission web pages on the IPP pilot on mobile phones: <http://ec.europa.eu/environment/ipp/mobile.htm>

3.2 Progress and final reports

This report contains the current state reports of the task forces, as well the draft text for the voluntary agreements. Progress reports were published regularly.

- First report: by 12.1. 2007
- Second report: by 2.4. 2007
- Third report: by 2.7. 2007
- Final progress report 8.2.2008

¹ See EC's IPP at: <http://europa.eu.int/comm/environment/ipp/home.htm>

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4. TASK FORCE 1: PRODUCT ENVIRONMENTAL FACTS

4.1 Introduction of the task force

This task force has been set up as an outcome of the stage III of the IPP pilot project on mobile phones. The target of this task force is to develop a Product Environmental Facts scheme relevant for mobile phones.

The task force group includes members from other mobile phone manufacturers, other electronics companies, telecommunications operator companies, the Finnish Environment Institute and WWF. The group's task has been to study the existing product environmental information, select the ways for presenting the information, try out the selected way in practice in the companies of the working group's members, get feedback, create a format for marketing the selected way of communication to mobile phone manufacturers and finally report the actions and results to the EC.

This task force consists of the following members:

- Mrs. Sonia Metzger (France Telecom / Orange)
- Mr. Siegfried Pongratz (Motorola)
- Mr. Julian Lageard (Intel)
- Ms. Minna Lindholm (Nokia)
- Mr. Jyri Seppälä (SYKE - Finnish Environment Institute)
- Mr. Matthew Wilkinson (WWF)
- Ms. Beatrix Pichl (TI)
- Mr. Michael Guggisberg (Swisscom)
- Mr. Pontus Alexandersson & Katsumi Ichiba (SonyEricsson)
- Mrs. Anthea Carter (Samsung)
- Mr Volker Hombach & Jürgen-Georg Schmitt (T-mobile)

Mrs. Minna Lindholm from Nokia was the leader of the task force.

4.2 Overview of the progress and results achieved

The working group's members have gathered the information presented by their organizations and from official projects. The goal of this project was to go through that data and select the best practices from it. Another task has been to find a way and format for presenting the data.

During the IPP process, the task force has been able to identify three important factors in environmental perspective related to the product: Materials used in product, energy efficiency and recycling & disassembly. The aim of this project was to check the best practices to present this information.

The task force was started by going through the eco declarations of those companies that had them on the internet site. Those companies were Nokia, Alcatel, IBM, HP, Ericsson and Sony Ericsson. The material information on the eco declarations was mainly based on the legal requirements of the RoHS Directive and other regulatory initiatives concerning azo compounds and flame retardants, ISO standards concerning plastic parts and cover materials and Montreal protocol. The material information is presented in two ways: The first option used is stating that the product does not contain the following materials or substances and then listing the materials. The other possibility is to list the material requirements, legislative and non-legislative, for the product more specifically and then checking if the requirements are met or not. Further material information includes information of packaging and accessories.

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4.3 Proposal for presenting product environmental facts

The proposals for presenting product environmental facts were created and they were based both on the eco declarations of electronics manufacturers and on the information gathered by the working group of the pilot. The proposals were named Product Eco Facts (PEF) as it was earlier agreed by the working group.

Two proposals were created for the materials of concern part. The first one was a list of the materials and substances that are phased out from the product. The second proposal was a set of material requirements with a box after each requirement to check if the requirement is met or not. For the Use of materials part, the best proposal was the list of the substances that are phased out in the product. It was also decided that an explanation is needed about why those specific substances were chosen for the document. To give this explanation references were added after each substance to give information of the regulatory initiatives that restrict the use of the substances. Also the impurity definitions and measurement verification methods would be needed to be presented. During the document preparation process some important issues were identified: no common guidelines for impurity definitions e.g. for brominated flame retardants exist, nor do methods on how to verify that a product does not contain certain substances e.g. product is lead-free. Due to these shortages and lack of verification methods, Use of materials part was agreed to be left out from the final proposal, even if it was identified as an important part.

A proposal was made for the charger energy consumption part of the Product Eco Facts document. The only figures that seemed to be relevant in this section were the charger's energy consumption in no load mode and while loading the battery. Also the charging time of the battery was presented in the proposal. But due to the varying measurement ways in different operating system, the charging time was left out of the task force outcome document. Charger energy consumption was identified during the IPP process as a key parameter, contributing strongly to the whole life cycle impact of a mobile phone and therefore was chosen as the final task force outcome.

The proposal for the recycling and disassembly section was done by naming the ways by which the product has been designed for disassembly. These ways were gathered from eco declarations of different electronics companies and they apply to most mobile phones that are designed for easy disassembly. It became clear, however, that partly these issues are mandatory in the EU due to legislation or they are currently lacking common verification criteria. Also, recycling is organized country specifically, not product specifically. In addition, the task force saw some overlapping elements here with another task force and hence the recycling & disassembly part was agreed to be left out from the task force outcome document.

Also a proposal of the instructions for the user was created. This part was created by the task force. The input for this was collected from consumer studies. The list included guidelines on how to use mobile phones in the most environmentally sound manner. Also some instructions were picked from companies' eco declarations. In addition, a list of environmental labels used in the product was created. Although these provided good-to-know information, the relevancy criteria was not completely met and also, maybe even more critically, the outcome document was at a risk of becoming too extensive and not serving the original purpose of providing information in a clear and structured format. It was agreed that companies should be able to communicate these instructions in some other way, e.g. in company Internet pages.

When the key parameters were identified for the final proposal, the format evolution was started. The Nokia eco declaration was chosen as a starting point and selected parameters were added to the eco declaration template. The proposal was reviewed after each document revision by the task force and by the task force members' companies and some changes were made according to the comments received.

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The task force team developed a proposal of an information sheet on Product environmental facts. This fact sheet was focusing on presenting key parameters on:

- 1) Company Environmental Footprint
- 2) Use of Materials
- 3) Energy
- 4) Waste reduction

Product Eco Facts document was still considered needed to be more consumer-oriented and easier to read and understand. Then the task force invented the Index. The elements of the Index are key parameters of environmental performance (as presented above 1-4). When the key parameters are presented in a format of an index, consumers can easily compare the products and key facts are presented against common criteria. In addition, the idea is that the environmental index is very similar to the one used for illustrating the energy efficiency of white goods, so the framework is familiar to the consumers as well.

Following with the Index definitions, it links also to the EU Code of Conduct on Efficiency of External Power Supplies, by utilizing the same measurement criteria for charger no-load power consumption. Due to the fact that charger no-load power consumption plays a major role in the whole life cycle energy consumption of mobile phones, the task force is proposing to launch the Index by focusing on charger energy efficiency in "No-load". However, other elements, e.g. materials used in product, can be added later on once detailed verification methods and definitions are available. This means that continuous improvement is also encouraged when applying the Index. To begin with, the Index will be based on energy efficiency criteria (charger energy efficiency) as an interim solution for piloting, leaving the option for continuous development by allowing the possibility to add other parameters.

The task force is proposing the Index as a project outcome. The index is presented in the IPP Voluntary agreements –document. In addition, the task force team is proposing a target date by which the manufacturers would have adopted the index to use, by October 31st 2008. The committed companies are LG, Motorola, Nokia, Samsung Electronics and SonyEricsson

Another target was to identify key communication channels. Task force has identified following channels to deliver the information. In addition, a proposal has been made which company could deliver the message in these channels.

- American Chamber of Commerce Germany (AmCham): Mr. Siegfried Pongratz (Motorola)
- Bitkom: Mr. Siegfried Pongratz (Motorola)
- EICTA: Nokia
- AeA: Mr. Siegfried Pongratz (Motorola)
- ZVEI Germany: Mr. Siegfried Pongratz (Motorola)
- Orgalime: Mr. Siegfried Pongratz (Motorola)
- European Semiconductor Industry Association (ESIA): Mr. Julian Lageard (Intel)

The industry has shown that individual companies are able to work together, set common goals and targets and mechanisms to monitor the progress. This task force offers an example that industry can develop practices to improve environmental issues and commit to commonly agreed goals.

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5. TASK FORCE 2: USAGE AND DISPOSAL INFORMATION

5.1 Introduction of the task force

This task force has been set up as an outcome of the stage III of the IPP pilot project on mobile phones. **The target of this task force is to develop customer information that will help the customers in adopting environmentally responsible behaviour during the use and End of Life phases of mobile phones and identify the most effective channels for communicating this.**

This task force consists of representatives from the following organizations:

- Ms. Beatrix Pichl (TI)
- Mr. Matthew Wilkinson (WWF)
- Mr. Olli Väänänen (AMD)
- Mr. Julian Lageard (Intel)
- Mr. Siegfried Pongratz (Motorola)
- Mr. Jyri Seppälä (SYKE - Finnish Environmental Institute)
- Ms. Outi Mikkonen (Nokia)
- Ms. Minna Lindholm (Nokia)
- Ms. Sonia Metzger (Orange)
- Mr Michael.Guggisberg (Swisscom)
- Mr Pontus Alexandersson (Sony- Ericsson)
- Ms Anthea Carter (Samsung)
- Mr Volker Hombach (T-Mobile)
- Mr Jurgen Schmitt (T-Mobile)

Mrs. Sonia Metzger from France Telecom – Orange is leading the task force

5.2 Overview of the progress and results achieved

The goal for the task force is to identify the most relevant behaviour habits that a mobile user could change in order to lower the environmental footprint and also the best ways to communicate these recommendations to the customer/consumer.

The piloting was done in the following stages:

1. Defining the key environmental focus areas linked to desirable customer/consumer behaviour
2. Gathering knowledge about existing customer/consumer needs with respect to environmental information
3. Seeking output from other stakeholders and trade associations about good practices for communicating environmental information
4. Establishing suitable communication channels to target customers/consumers
5. Preparing proposed content and messages for customers/consumers

The taskforce group includes members from telecommunications operator companies, mobile phone manufacturers, other electronics companies, the Finnish Environment Institute (SYKE) and WWF.

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After the analysis of different types of communications around environmentally friendly behaviour habits, the task force decided which messaging would be the most appropriate in order to help the customers to reduce the environmental footprint during the use phase of their mobile phones.

The **end of life** phase has been only briefly addressed for the following reasons:

- Another work stream was working on phone return initiative and we were waiting for their conclusions and recommendations.
- WEEE legislation is already targeting this issue across Europe
- The organization for collecting phones is different in different countries.

Nevertheless, the task force members agreed that messaging that would invite a customer/consumer to use a special disposal offered either by his mobile phone operator, by his retail store or by his mobile manufacturer to recycle his mobile phone would be relevant. Customer needs to be informed that he should not throw his mobile phone in his usual wastebasket.

For the **use phase**, the task force identified messaging that would:

- Contribute to lower energy consumption : two initiatives could be proposed to the customer
 - Unplug the charger when the phone is completely charged in order to reduce energy consumption. In fact, most of the customers don't unplug the charger and they are not aware of the fact that the charger is consuming energy when it stays plugged after the charging is completed.
 - Turn off the phone during charging period or at night.
- Contribute to lower the paper consumption by signing up for paperless billing. This service is offered by all major mobile phone operators.

Proposal for messaging and presenting information to customers:

The task force identified that in order to be taken into account by the customers, the messaging needs to be attractive and show a benefit for them. The task force commissioned a creative agency specialized in the field of sustainable development to draw proposals. Two concepts of messaging have been proposed:

- "Save your money and save the planet"
- "Love your phone, change your life"



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Different ways for communicating these messages have been proposed:

- Leaflet inside the phone
- Sticker on the charger
- Advert
- Page on websites of the different stakeholders

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The content of the messaging has been tested in workshops in the companies of the different taskforce members. The preferred concept is “Save your money and save the planet” although some felt that proposition “Save the planet and save your money” would be more relevant.

Testing also showed that the messaging is relevant and people feel that the actions they are invited to take will help them to adopt environmentally responsible behaviour.

Following this testing, the taskforce agreed on the following:

- Implementation of the messaging related to unplug phone charger, end of life disposal for all taskforce companies plus paperless billing for mobile operators
- By using at least one of the 4 communication tools : leaflet, sticker, advert, website

In order to relay the messages to the customers/consumers, companies can use the framework that complies with their branding policies. It is not mandatory to use the concepts shown above.

The taskforce team is proposing a target date by which the messaging should in the communication material mentioned above: October 31st 2008.

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6. TASK FORCE 3: REDUCE ENERGY CONSUMPTION IN USE PHASE

6.1 Introduction of the task force

This initiative aims at reducing the energy consumption of mobile phones during the use phase, especially minimizing charger no-load energy consumption.

The goal is to agree to add a visual reminder in the phone to inform consumers to unplug the charger from the wall after the phone is fully charged.

Members of the task force:

- Mr. Olli-Pekka Mäkirintala (Nokia) – Task force leader
- Ms. Sonia Metzger (France Telecom / Orange)
- Mr. Chris Read / Ms. Lucy Connell (Vodafone)
- Mr. Siegfried Pongratz (Motorola)
- Ms. Yu-Mi Mun (LG)
- Mr. Pontus Alexandersson (SonyEricsson)
- Mr. Sungjin Kim / Ms. Anthea Carter (Samsung)
- Mr. Michael Guggisberg (Swisscom).

6.2 Overview of the progress and results achieved

1. Task force has reached the result (Voluntary Agreement), which is included in IPP Voluntary Agreements –document.
2. Companies who have stated their commitment are:
 - LG
 - Motorola
 - Nokia
 - Samsung Electronics
 - Sony Ericsson
 - Swisscom

It is possible to include more companies in the agreement, if we get inquiries.

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7. TASK FORCE 4: REDUCE/ELIMINATE AGREED MATERIALS OF CONCERN

7.1 Introduction of the task force

This task force has been set up as an outcome of the stage III of this project with an aim to reduce and eliminate the use of certain flame retardants, heavy metals and phthalates in plastics from mobile phones. This will be done by the phone manufacturers in close cooperation with the component manufacturers as they have control over the design and the manufacturing phase.

7.2 Overview of the progress and results achieved

In February 2007 the task force met in Brussels and decided to review flame retardants that are used in mobile phones. The goal of this exercise was to come up with a list of possible flame retardants that could be used in mobile phones. During the exercise it was found to be very difficult to set overall requirements that the flame retardants should meet for specific parts. The decision to use a type of flame retardant depends on many factors and it proved that creating an extensive list of flame retardants would be too complex to complete within a reasonable time frame. Next to the complexity of this analysis there are many mobile phone producers that have already introduced individual substance bans based on scientific evidence, stakeholder concerns and the precautionary principle.

Based on the above reasoning, the task force decided to investigate a new format of a voluntary agreement that would aim to phase out a list of flame retardants. The task force had now agreed on the format of this voluntary agreement and the flame retardants covered.

Secondly it has been decided that as all companies are involved/monitoring the IEC and IPC Material Declaration standard developments, this tool shows most potential to be used as the material declaration standard for the mobile phone industry.

Companies who have stated their commitment are:

- LG
- Motorola
- Nokia
- Samsung Electronics
- Sony Ericsson

The outcome is included in the IPP Voluntary Agreements –document.

7.3 Task force members

The members of the task force were:

- Michael Riess, Siegfried Pongratz - Motorola
- Veronique Steukers, Guillaume Artois - Albemarle
- Adrian Beard - Clariant
- Olli Väänänen - Spansion
- Beatrix Pichl - Texas Instruments
- Brigitte Dero, Christine Crab, David Cadogan, René Montaigne, Tim Edgar - CEFIC;
- Jarkko Epäily - Nokia
- Pontus Alexandersson, Daniel Paska – Sony Ericsson
- Julian Lageard, John Harland, Stephen Tisdale - Intel

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- Lars Wallin - IPC
- Line Andersen - forbrukerradet
- Matthew Wilkinson – WWF
- Eelco Smit - Epson
- Anthea Carter – Samsung
- Yu Mi Mun – LGE (monitorin status)
- Rudi Borms – Eurobrom B.V.
- Sander Kroon – Supersta/ICL

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8. TASK FORCE 5: TAKE-BACK OF PHONES

8.1 Introduction of the task force

The task force on the Take back of Phones was lead by Vodafone. Other participants were TeliaSonera, Motorola, Nokia, Umicore, Redeem and Samsung Electronics. The aim of the initiative was to analyse, identify and share good practices in the incentivisation of the return of used/unwanted mobile phones, devices and batteries in different countries/markets. The results will be communicated across industry with the intention of using new incentives, if proven successful, into existing return schemes, where appropriate.

8.2 Overview of the progress and results achieved

The challenge of incentivising the return mobile phone handsets is influenced by a number of factors, including the market penetration of mobile phones in that country, the availability of options for return in that market, the knowledge of the environmental importance of dealing with old handsets responsibly and the cost of the incentives offered. These factors vary greatly from country to country. There is a wide variety of schemes already in operation and in some countries there are many competing schemes working at the same time but run by different stakeholders.

The Influence of different Market penetration rates

The countries of Europe have a range of penetration levels, with some still some way from 100% penetration and others now reaching over 100%. This creates different challenges as the motives for individuals' intentions for their handsets are different. In a market with low penetration handsets are typically handed down within families or social groups from one user to the next, until the handset reaches end of life or until everyone in the group has one. Even then this trickle-down will continue as the primary users upgrade to newer handsets and pass their models on down. This process means that it can take years for a handset to be returned into a scheme after having been sold, and that the numbers being returned will be very low until market penetration increases.

In countries with high penetration the issue is simpler as there are not such long hand-me-down chains. All individuals who want a phone have one and often when they upgrade their handset they have no one to pass their handset on to. However often there is not a direct return of the unused handset as users feel that their old handset still has a value, it will often be kept for one or more of the following reasons: as insurance in case the new handset fails, they have invested money in the handset and they are unwilling to let that investment go, the handset has games, music or pictures on it and they do not know how or have time to move them to their current handset or just in case some one else they know needs one. These issues combined result in a situation where many handsets are kept "in drawers".

Availability of return options

This is the most crucial factor in ensuring the return of handsets, if people are unaware that they are able to return their handsets to be reused and how they can do it then they will not return their handsets.

Possible options

- National return scheme set up as part of WEEE implementation
- Manufacturer led return schemes
- Network operator led return schemes

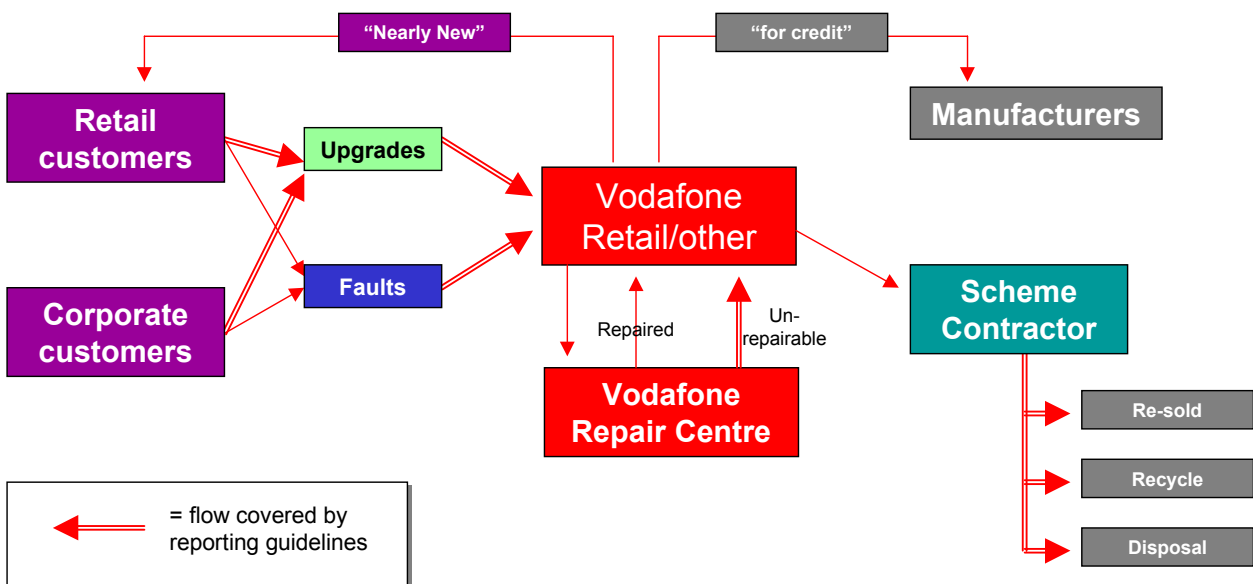
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- Retailer led return schemes
- Refurbishment operator run return schemes
- Independent one-off charity return schemes
- Possible combinations of the above

The below image is an example of the structure of a typical Operator led scheme (taken from Vodafone handset recycling reporting guidelines)

Handset Recycling



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Importance of raising and maintaining awareness

Even if collection schemes are in place, an awareness campaign is still needed to ensure that people are aware of the importance of returning phones and how to go about it. It is also important that awareness of the importance of the environmental impact of not disposing responsibly of old handsets is kept high. Information about return and recycling of obsolete equipment is still very different within the EU, usually awareness is highest in countries with advanced household waste practices in place and lowest in countries where the general awareness is still developing.

Incentivisation

The handset collection schemes that are already running have used a wide variety of incentives, including:

- cash in hand
- free airtime
- free sms
- gifts
- charitable donations

These have all been successful although little analysis has been done by the organizations involved on how much the incentives improved the number of handsets being returned. It goes without saying that the more attractive the offer, the more likely people are to be induced by it. However, attractive offers are often more costly to the organizations running the schemes. Striking a balance between the ideal of inducing more phone returns and running a viable scheme is the principle challenge for any scheme operator.

Almost all handsets have a value; breaking down the handset to its component material allows this value to be regained, however this is much less than the original market value of the handset. In markets with high penetration handsets that still have a high value are often returned and these can be refurbished and sold in developing markets. This is a valuable revenue source and can be used to help fund the running of the scheme. It also helps to satisfy the demand for mobile communications in these markets, as the handsets are cheaper to buy than new ones.

However this is a controversial issue but will remain a key driver for the collection handsets from developed market. Steps are being taken to build capacity to deal with waste electronic and electrical equipment in developing markets but the resources are still very limited

8.3 Other issues and development

The identification of good practice was hampered the small availability of information available from the participating companies. The aim was to identify a baseline of performance of the schemes in times when incentives were not running and compare that to performance when incentives were run. However, very little information was available on which to base the comparison.

There was a good amount of evidence available as to the various schemes that were run and anecdotal evidence on the success of the various incentives that had been used. What was highlighted in this was the sheer variety of schemes and incentives that were available and the challenge that would be faced in trying to find comparable factors.

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One challenge that we faced was the closeness of incentivising handset return to the issue of reselling handsets to developing markets. As this at best is a profitable business, it is not easy to get solid information for further studies.

Many of the participants already co-operate in different set-ups and projects, of which one is the Secretariat to the Basel Convention –led Mobile Phone Partnership Initiative. The Guidelines that were developed during that project are being tested, with the aim of getting them ready by the end of spring 2008.

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9. TASK FORCE 6: ENVIRONMENTAL ASSESSMENT METHODS/TOOLS

9.1 Introduction of the task force

This task force has been set up as an outcome of the stage I of the IPP pilot project on mobile phones. As past experiences from the mobile phone industry have shown, it is not an easy task to use environmental impact methods and tools such as life cycle assessment (LCA) for eco-design and product information purposes in the mobile phone sector. Therefore the aim of this task force was to solve the difficulties, especially to set inventory data for all important components on a broader base and to find a consensus about the best suitable impact assessment methods. The focus was especially on simplified environmental assessment methods such the Key Environmental Performance Indicators (KEPIs) and their data requirements.

Companies that showed interest in the task force were Nokia, Motorola, Intel, ADM, Epson and Umicore. In addition, Finnish Environment Institute SYKE was chosen to be leading the task force. It was agreed that the task force may be expanded with e.g. technology experts of Member States and non-governmental organizations after a positive funding decision is received.

9.2 Overview of the progress and results achieved

The working plan prepared by the Finnish Environment Institute (SYKE) was introduced in the IPP stakeholder meeting in May 2006. At that point it was assumed that the Commission could also finance the project. However, the Commission did not promise any funding for it. On the other hand, Nokia did not want to finance the project alone because the results might not be seen to be reliable, if the link to one company is too strong. Also, the work would offer benefits for the whole electronic industry, not just one company.

After the summer holiday period the Finnish Environment Institute (SYKE), the University of Stuttgart and PE Europe prepared a new working plan for the task force. The budget of the project was cut in half. The idea was that the work would be funded by mobile phone and component manufacturers and it would be started in the autumn of 2006.

In September an invitation letter with the new project plan was sent to fifteen contact persons working at the mobile phone and component manufacturers. The answers revealed that the companies were not prepared to pay additional money for the project, but some companies were interested in investing their time and working for the task force for free.

In the beginning of 2007 SYKE started to search for possibilities to develop and test the KEPI method through EU projects. For this suitable funding sources and partners within the EU had to be found. For example, it seemed that the 7th Framework Programme could offer themes suitable for KEPIs. However, as we know now, this approach led to a solution in which the results could not be obtained during this year.

In April 2007 SYKE with other European research organisations prepared an EU project plan concerning sustainable consumption and production. The project plan contained a working package that would have enabled gathering experiences and views on environmental management in the mobile phone sector. The project would also have allowed for collecting opinions about KEPIs in the mobile phone sector. However, this project would not have offered possibilities to develop KEPIs. Moreover in September 2007 the project was declined.

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In the beginning of June 2007 SYKE prepared a new working plan in which the aim was to identify the feasibility of Key Environmental Performance Indicators (KEPIs) for eco-design in the mobile phone sector and to create a voluntary agreement on the future activities in the field of KEPIs. The scope was to make a rapid study by the end of September.

The working plan was sent to Nokia before delivering it to other stakeholders. Nokia found that the new project plan could not create enough new aspects for KEPIs and was not in line with the original purpose of the task force. For this reason, Nokia decided that it was better to postpone the development of KEPIs after the deadline of the IPP Pilot Study (see Section 9.4) until suitable funding possibilities are secured.

9.3 Special features of the task force

A prerequisite for conducting the Task Force was that it had to get external funding for research organizations, whereas the other Task Forces were carried out by the voluntary work of companies and led by the industry. In addition, the Task Force had clear research elements which were missing in the other Task Forces.

Parallel to Key Environmental Performance Indicators (KEPIs) a similar indicator approach was developed by a consortium of research institutions, industry and consultancy in an EU funded project called EPIC-ICT (www.epic-ict.org). The IPP stakeholders did not know the work well when they appointed the task force of Environmental Assessment Methods/Tools as a development area in the IPP study on mobile phones. The contents of the work were shown better when after the summer 2006 the final report was introduced. It seemed that the EPIC-ICT gave a good basis for applying the KEPI thinking, but there were still several open issues (see Section 9.4). However, the question raised among some stakeholders was: "What is the additional value of the KEPI project compared with the EPIC-ICT?"

It is important to notice that the contribution of product manufacturers to the total environmental impacts caused by mobile phones is important (Report I of the Nokia IPP Pilot). However, there is lack of data on environmental impacts caused by manufacturing of components due to global markets and complex product chains. This may also be one reason why the industry was quite reluctant to put their money on the project. It was difficult to image that the project could produce new information about the impacts of mobile phones without better data on components. On the other hand, this year data availability has improved when the Commission project "European Platform on LCA" (carried out by the Joint Research Centre) has developed the quality of life cycle inventory (LCI) databases (<http://lca.jrc.it>) and some new activities in industry to gather the inventory data of electronics have been detected (e.g. LCA workshop held in Switzerland in June 2007).

The original idea of the Task Force was that during the project the best practices for environmental impact assessment would be studied. However, the work relating to the best practices is still ongoing in the European Platform on LCA. The work seems to be difficult due to the weaknesses of current impact assessment methods. For example, nowadays the methods are mostly developed for European and North American conditions, whereas methods for assessing environmental impacts in other areas, especially Asia (with the exception of Japan), are missing.

Many stakeholders may have an idea that the KEPI project will be more useful after the project "European Platform on LCA" has strengthened the quality of the impact assessment methodology by introducing clear recommendations for the industry.

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9.4 Future outlook

In the studies of Nokia and EPIC-ICT, the KEPI approach has been identified to be the most promising method to make a link between ecodesign and the most important environmental impacts derived from life cycle assessment (LCA). It seems that KEPIs are easy to use, and require little time and data for eco-design. The method of KEPIs may significantly reduce the cost of data used in the analysis, and allows the manufacturers to easily assess the relative environmental performance of their products and alternative solutions. However, KEPIs, which have been very recently developed, have not yet been put in practical application at mobile phone companies. They also lack a fully scientific background based on environmental impact assessment, rules for updating inventory data and an established procedure for stakeholder consultation. For this reason, there is a need to test, develop and standardize the KEPI approach in order to get a general methodological acceptance in IPP.

It is recommended that in the near future the new work plan relating to KEPIs should be prepared, for example, to the 7th Framework Programme of the EU by a consortium of research institutions, industry and consultancy.

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10. CONCLUSIONS

The objective of the IPP approach is to “reduce the environmental impacts from products throughout their life-cycle, harnessing, where possible, a market-driven approach, within which competitiveness concerns are integrated”. Two pilot projects were chosen to test the approach and at least the pilot project on mobile phones has proven to be successful. The pilot was run in five stages, which are briefly summarized below (the reports can be found on <http://ec.europa.eu/environment/ipp/mobile.htm>).

First Stage:

In the first stage of the pilot project the stakeholders were selected and the environmental impact of mobile phones throughout their life cycle was analyzed.

Second Stage:

In the second stage of the pilot project options to improve the environmental impact of mobile phones were identified based on the findings in the report that was prepared at stage one.

Third Stage:

The third stage of the pilot project aimed at evaluating the social and economic effects of the improvement options that were identified at the second stage.

Fourth Stage:

The stakeholders committed to take actions in order to reduce the environmental impact of the mobile phones in the chosen areas.

Fifth Stage:

The task forces have been working to implement the commitments that were made in the earlier stages to improve the environmental impact of mobile phones.

Already in the beginning of the fifth stage of the IPP pilot, all key stakeholders were represented in the task forces. During the follow-up year even more members have joined in, which has been welcomed by the task forces and shows that they have been able to deliver useful content.

While all task forces have dealt with difficulties caused by changes in personnel and limited resources, most have been able to deliver what they had committed to. Three voluntary agreements have been drafted and are now signed by major mobile phone manufacturers: LG, Motorola, Nokia, Samsung Electronics and SonyEricsson. These companies represent probably over 90 % market share in Europe. This is a significant figure.

These companies, together with the other participating stakeholders like Epson, Intel, Orange / FT, Swisscom, Vodafone, have shown that the mobile phone industry is showing leadership for improvement of environmental aspects of their products and are able to commit to taking action jointly beyond legal requirements.

After the trials and triumphs experienced during the pilot, it can be stated that while this type of approach can be time consuming and demanding, it is also very rewarding when different stakeholders can voluntarily work together and achieve a goal that brings benefits for all. A similar type of approach has

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also been used in the EuP (Energy Using Products, http://ec.europa.eu/energy/demand/legislation/eco_design_en.htm) preparatory studies, where stakeholders have been invited to participate in the process. This has been fairly successful as well, and therefore it is clear that the IPP approach is something that should be encouraged and the experiences taken into account also in the future, when new regulatory initiatives, such as the Action Plan on Sustainable Consumption and Production (http://ec.europa.eu/environment/eussd/escp_en.htm) are developed.