



# Used and End-of-Life Mobile Phones

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# The GSM Association (GSMA)




- Founded in 1987.
- Ensure that mobile phones and wireless services work globally.
- Represents more than 850 second and third generation mobile operators.
- Supported by more than 180 manufacturers and suppliers.
- 218 countries have GSM or 3GSM networks.
- 86% of mobile users.

3.60 billion subscribers


# Mobile Phone Lifecycles

- Approximately 1 billion mobile phones sold.
  - 7 years design life.
  - 2 years for the first user.
  - 50-80% as replacement phones.
- Estimate 20 million phones collected annually.
  - About 0.003% of annual global e-waste.
- Potential for refurbishment:
  - Developed countries >70% reusable.
  - Developing countries <30% reusable.
  - 10% of new customers rely on a 'used' phone.
- Potential for recycling:
  - >80% of phone can be recycled or energy recovered.
  - Remainder converted to inert aggregates.
- Industry takeback in more than 80 countries.



Mobile Phone Lifecycles

Use, Take-back, Reuse and Recycle

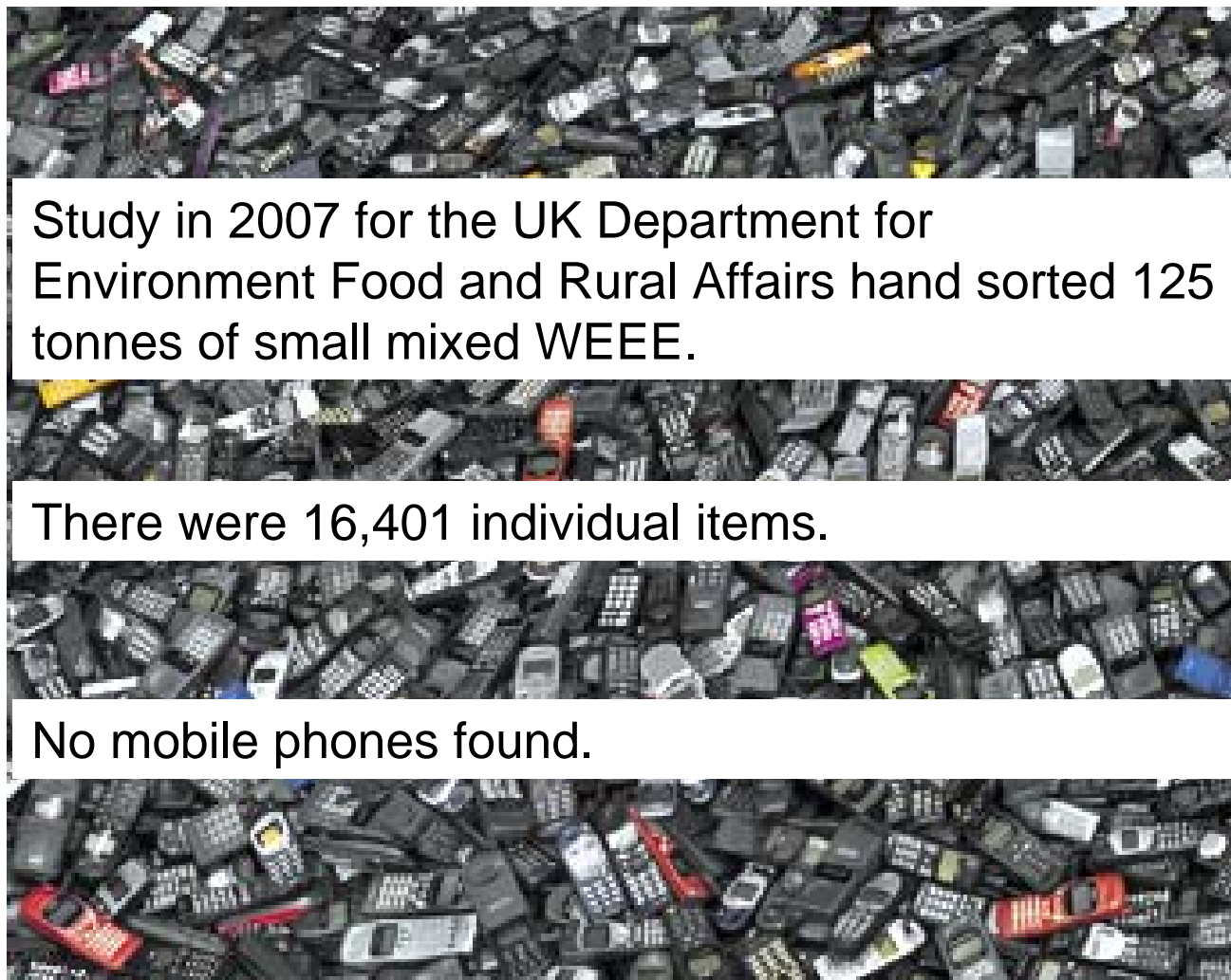


[www.gsmworld.com](http://www.gsmworld.com)



# Media Reporting versus Real Experience

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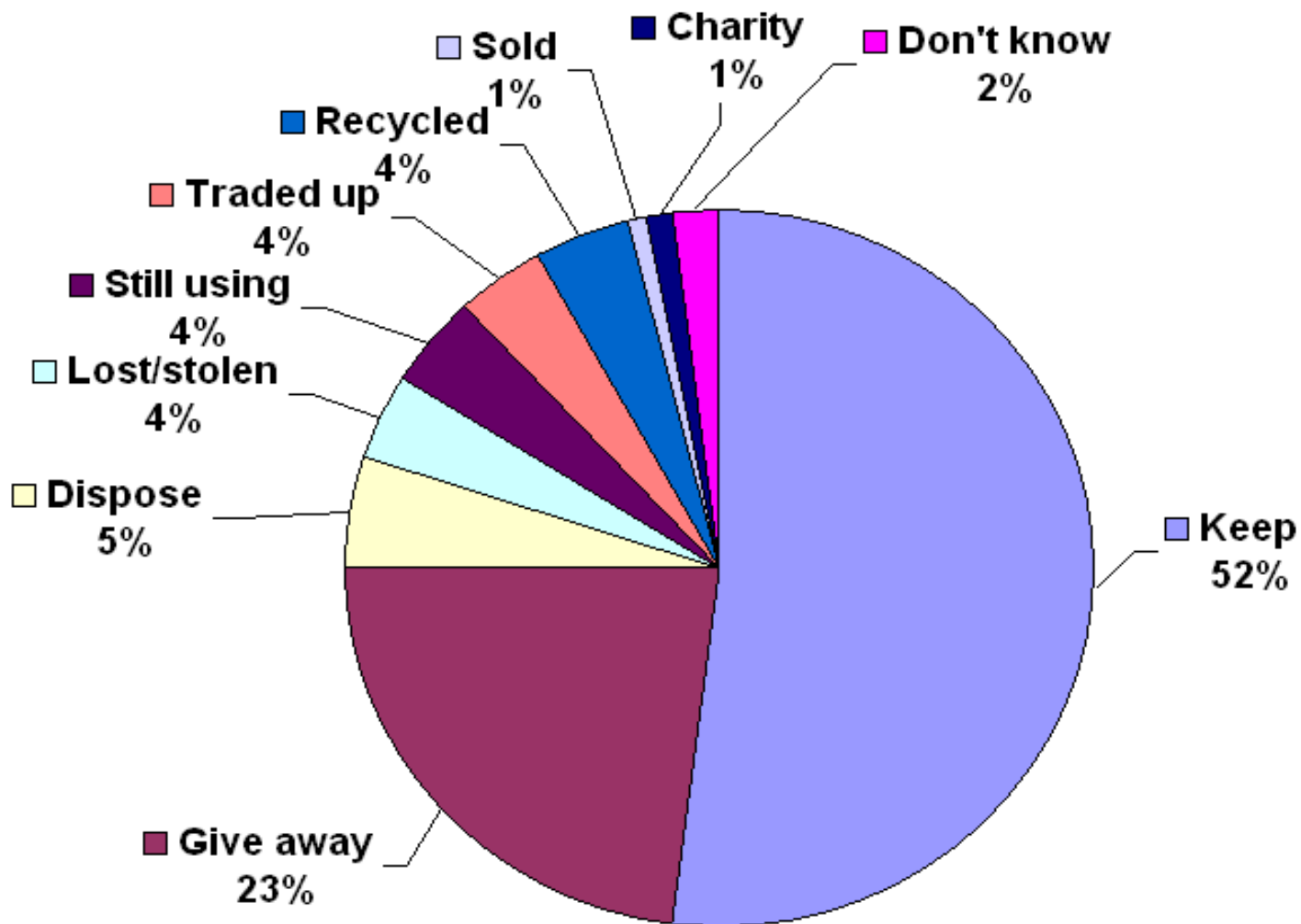
Study in 2007 for the UK Department for Environment Food and Rural Affairs hand sorted 125 tonnes of small mixed WEEE.

There were 16,401 individual items.

No mobile phones found.



# Collecting used mobile phones - Australia



Source: AMTA, 2006 (n=650)



# Collecting used mobile phones - Kenya

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- Limited infrastructure for all types of waste due to limited resources.
- Phones: 700 authorised shops, 7000 informal shops.
- Repairs: 10 authorised, 2000 to 4000 independent/informal.
- Recommendation:
  - Repairer based collection with local material sorting and related training/development.
- Incentives:
  - Financial.
  - Training.
  - Spare parts.
  - Accreditation.
- Sufficient materials for viability.
- Need for long-term solution for material recycling.

Source: Forum for the Future, 2007



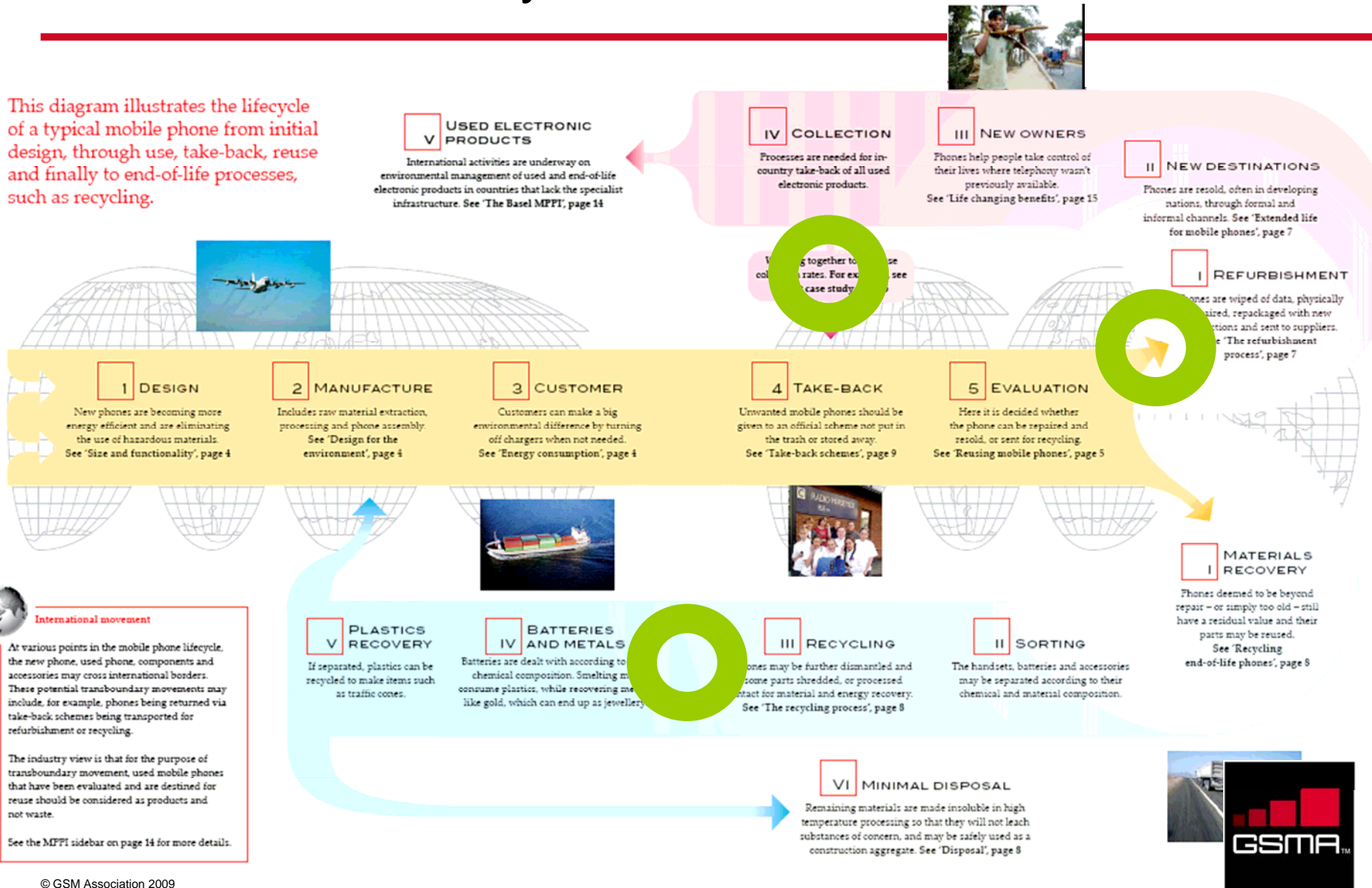
# The Basel Convention - MPPI

- Mobile Phone Partnership Initiative (MPPI) created in 2002.
- First concrete partnership with industry within the framework of the Basel Convention.
- Aim to address environmentally sound management of end-of-life mobile phones.
- Developed guidelines through volunteer working groups.



# Mobile Phone Lifecycle

This diagram illustrates the lifecycle of a typical mobile phone from initial design, through use, take-back, reuse and finally to end-of-life processes, such as recycling.





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- Committed to need to block illegal e-waste dumping and export.
- When does a used product become a waste?
- Transboundary movement:
  - Full Basel Convention controls.
  - Voluntary Notification Procedure for authorized facilities.

# General Conclusions

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- Mobile phones are small part of e-waste.
- Mobile operators and manufacturers willing to do their part.
- Mobile phones are valued and difficult to collect.
- Collection must be:
  - Integrated with business processes.
  - Convenient to the consumer.
  - Supported by awareness raising activities.
- Refurbishment value drives need for involvement of informal sector.
- Development opportunity in local sorting and limited processing.
- Safe final materials recycling likely to require export:
  - Mobile phones from one country may not be sufficient.
  - Material value may not be sufficient to cover costs.
  - Regulatory approaches can stimulate or be a barrier.



# Thank You

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