Sustainable production, consumption and environmentally safe disposal and recycling of discarded hardware and components used in ICT's

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What is GeSI?

- GeSI is a Global INPA to address sustainability

- industry led and open to full ICT industry

- manufacturers, operators and regional associations

- partnered with UNEP and ITU, ETNO and the USTelecom Association

- Carbon Disclosure Project and WWF

- GSMA and the EICC

- addresses triple bottom line

GeSI Members

GeSI Activities

- Supply Chain
- E-Waste
- Climate Change
- EU ICT Sustainability Forum
- Study on ICT and Energy efficiency
- Materiality
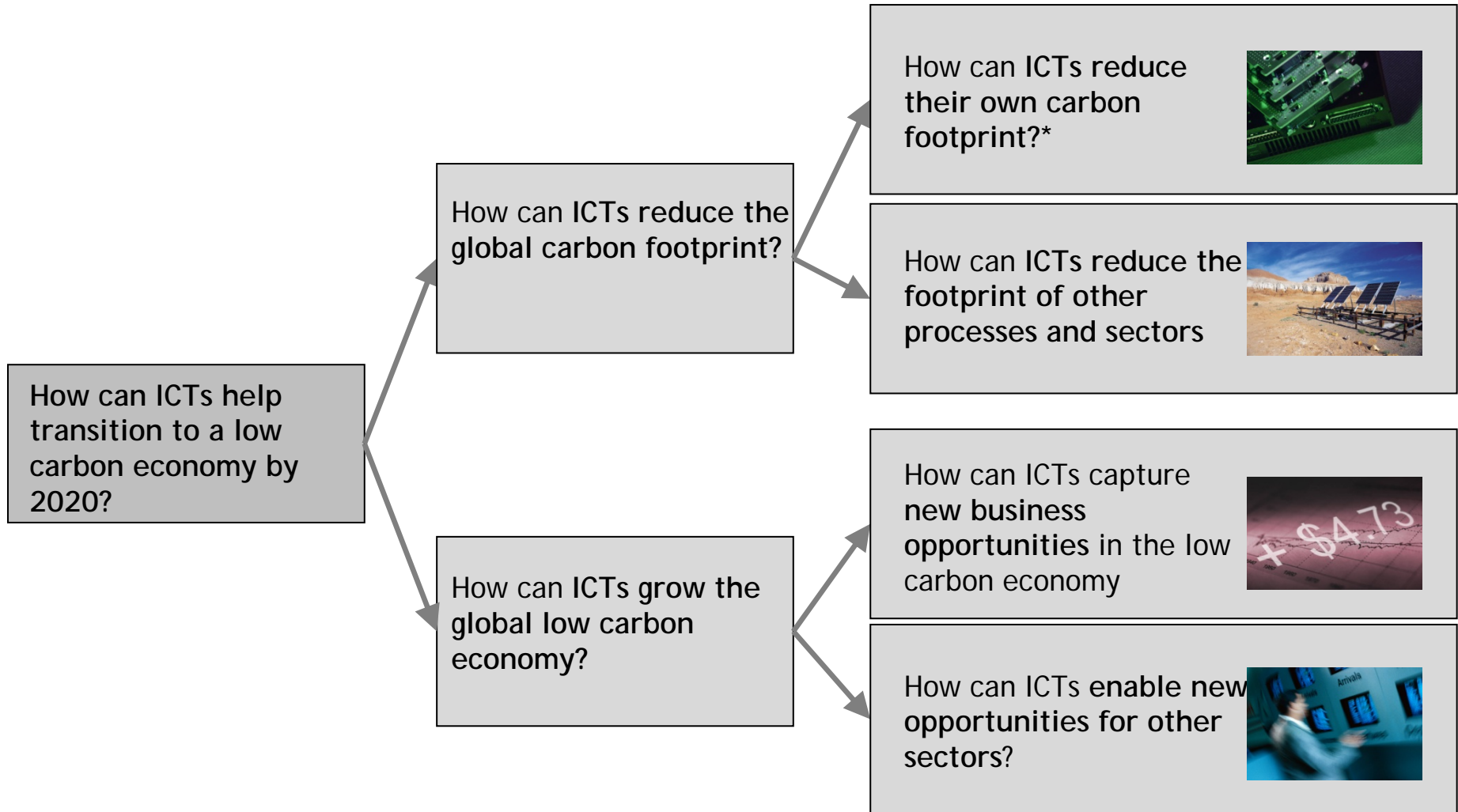- Stakeholder Engagement
- Communications WG

CONTEXT

The Global e-Sustainability Initiative (GeSI), and The Climate Group have undertaken a study on the role of the ICT sector and Climate Change to support the publication of a **major report** designed to examine how the application of ICT can, not only deliver energy savings and carbon reduction, but do so in a way that drives even greater economic growth and productivity

This Study presents the first comprehensive estimates and projections of the ICT sector footprint out to 2020

AIMS

- Deliver the first globally comprehensive picture of direct and indirect carbon emissions of telecoms, computing, services and software;

- Define common themes and issues across the ICT lifecycle, identifying critical trends, scenarios and impact assessments for the ICT sector to 2020;

- Create a 'road map' to allow the ICT sector to act now on reducing global energy usage and greenhouse gas emissions;

- Examine how the application of ICT can, not only deliver energy savings and carbon reduction, but do so in a way that drives even greater economic growth and productivity

Key questions addressed

How can ICTs help transition to a low carbon economy by 2020?

How can ICTs **reduce the global carbon footprint?**

How can ICTs **grow the global low carbon economy?**

How can ICTs reduce **their own carbon footprint?***

How can ICTs reduce the footprint of other **processes and sectors**

How can ICTs capture **new business opportunities** in the low carbon economy

How can ICTs **enable new opportunities for other sectors?**

Some Key Messages

- The ICT sector is central to the transition to a low carbon economy. ICTs represent 2% of worldwide energy consumption and related carbon emissions, **with further growth by 2020** driven primarily by new needs in Emerging markets (especially in China and in India).

- ICT can also facilitate carbon reductions across sectors world-wide, to a **much higher order** of total emissions by 2020. The focus so far has been on dematerialisation or substitution of high carbon activities for lower Impact activities (ie: videoconferencing or telecommuting), but the study shows that the scope for efficiency measures from providing platforms through which energy efficiency can be captured across all sectors of the economy is potentially many times larger

Some Key Messages

- All of these opportunities represent new markets for ICT and other high Tech sectors with large value at stake, from the savings that can be obtained. That value will be divided between the end users and the solution providers. Total value across the opportunities we identified, that is: efficiency gains from logistics, energy savings associated to buildings, reductions in transmission and distribution losses from the adoption of a smart grid and motor systems optimisation could amount to **many hundreds billion Euro**. This does not take into account the additional value placed on these technologies from non-energy related benefits. It does not take into account the savings if there is a price of carbon.

- To realize these opportunities, multiple barriers will need to be overcome. Market barriers, policy barriers, behavioural barriers or some combination of the three have been identified. These barriers can be seen as opportunities for the sector and point to policy and industry implications.

Identify and use the opportunities

- To apply the strengths of the ICT sector to enable climate change solutions…

- To reduce inefficiencies in current products and processes

- To de-couple economic growth from energy use across the economy through intelligent systems design or through retrofit of existing building, transport and power infrastructure

- To focus on the emerging economies and invest now to prevent locking in carbon-intensive practices and technologies

- To enable better decision-making and behaviour change through better information provision, feedback and response

- To enable new low-carbon ways of working and living through collaborations with other sectors

E-waste approach

- As consumers around the globe become more reliant on electrical and electronic equipment, the amount of electronic waste (e-waste) reaching end-of-life poses a growing problem;

- E-waste is especially difficult to manage in a sustainable way because much of it contains toxic chemicals and materials that are difficult to reuse.

- However, many products can be reused or refurbished, and where this is not practically possible, products can be recycled for basic components, particularly metals like ferrous, copper and aluminium or precious metals, allowing 'waste' to become a raw material for another product or service and thereby reducing raw material extractions, CO_2 emissions for climate change and energy demand.

GeSI commitments

- GeSI supports the long-term goal of ensuring that no usable ICT products, components, or e-waste containing hazardous substances are deposited in landfills.

- In response to the increasing challenge of e-waste, GeSI is exploring various reduction methods.

- Currently GeSI member companies are working to cost-effectively reduce e-waste by sharing information and best practices around energy delivery and use, re-use, cradle-to-cradle design, take-back programs, and monitoring methods.

GeSI commitments

- Increasing basic knowledge on the potential of sustainable production, consumption, and environmentally safe disposal and recycling of ICT products and its components
- Voluntary initiatives by companies, entrepreneurs, governments, and individuals for environmentally sound management of electronic equipment
- Government policies, legislative frameworks, and incentives for cleaner ICT products
- Continuous improvement in the design of electrical and electronic products and components to eliminate e-waste and enhance recyclability
- Exchange of information throughout the supply chain, including users and treatment facilities, to manage disposal of e-waste and facilitate the re-use or recycling of end-of-life electronic products
- Treatment of ICT products going to disposal, reuse, or recycling in facilities with the highest environmental, health, and safety and labour standards

How do we achieve this

- Additional efforts towards sustainable operations and use in the ICT sector are being carried out by the GeSI Supply Chain Working Group.
Two projects are currently underway:

    - The first is developing and refining the Electronics-Tool for Accountable Supply Chains (E-TASC);

    - The second is a study on extractive industries and ICT products.

- Further integration of the E-Waste Working Group's activities with the other GeSI working groups would allow for a more effective and efficient reduction of e-waste production and help fight climate change by further reducing energy use and C02 emissions.

Work Package

- Expand the E-TASC tool to include End-of-Life (EoL) Management.

- Promote "material stewardship" across the ICT based on the preliminary results of the "Extractive Industries and ICT Sector" and the full life cycle analysis of metals to identify entry and exit points of metals in the ICT product life cycle including the e-waste phase

- Develop an "Integrated Approach" road map for the E-Waste Working Group to link activities with those of the Supply Chain Working Group

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