



World Class Standards

Doc: ETSI/Green Agenda Seminar  
Agenda item:  
Document for: Information

# Green Agenda Seminar

ETSI for Efficient Home Equipment  
GeSI-EE IOCG Standardisation Branch

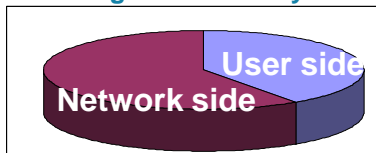
Flavio Cucchiatti  
GeSI-EE IOCG Co- Chairman

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ATTM Chairman  
GeSI-EE IOCG Co-Chairman

## Home equipment footprint

- ❑ Lots of BroadBand related appliances/gadgets today in our homes...  
...and many more will come
- ❑ Their consumption is already comparable to that of the Telecom Network part

W/average user - Today



W/average user - Long term

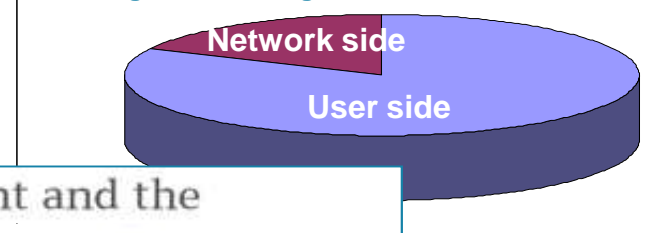
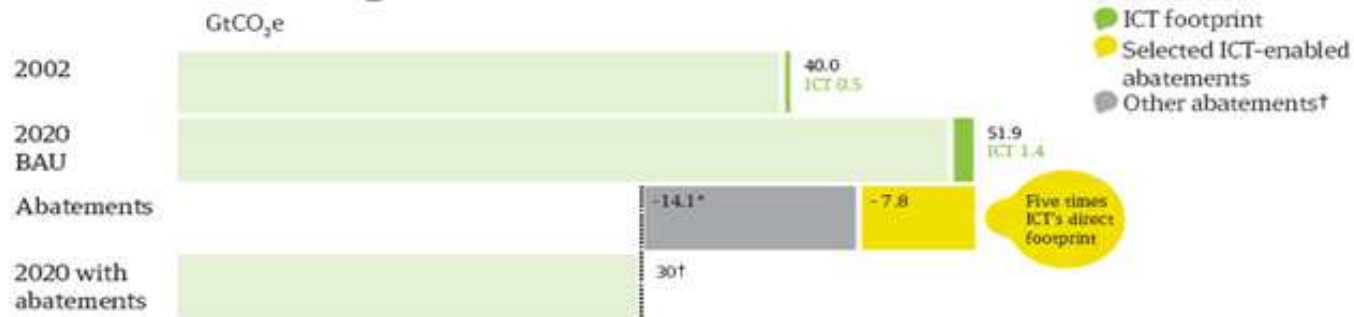


Fig. 1 ICT impact: The global footprint and the enabling effect



\* For example, avoided deforestation, wind power or biofuels.

† 21.9 GtCO<sub>2</sub>e abatements were identified in the McKinsey abatement cost curve and from estimates in this study. Source: Enkvist P. T. Nauder and J. Rosanier (2007), 'A Cost Curve for Greenhouse Gas Reduction', The McKinsey Quarterly, Number 1.

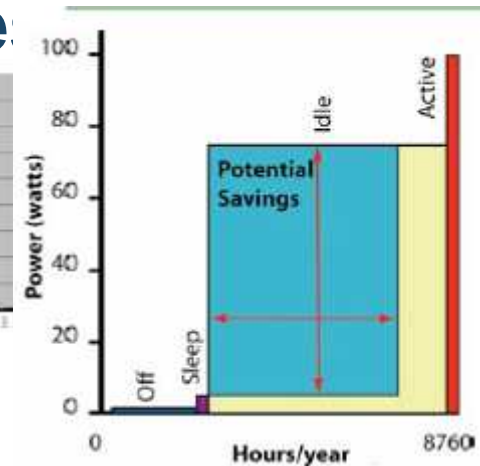
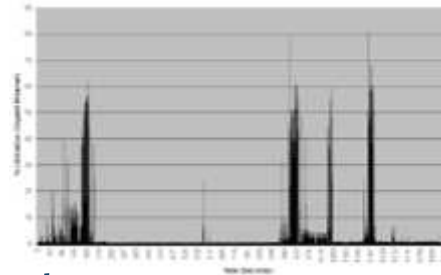
**Customers need Efficient Home Equipment**



## Energy Efficiency in ICT and Home

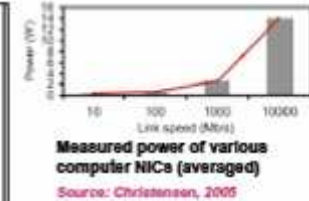
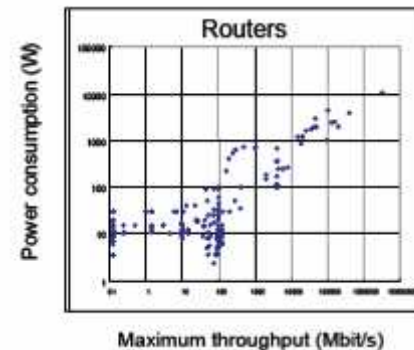
### FACTS:

- Utilization is low
- Edge devices are mostly idle
- Speed costs energy
- Reducing latency increases costs
- IP will go everywhere
- Most of the ICT energy consumption will be at the edge (User)
- Economics matter!\_



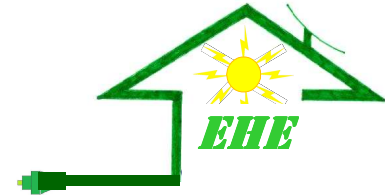
### OPPORTUNITIES:

- Think broadly
- Re-think your objectives
- Design for “real” operating conditions, not for peak
- Integrate networks and appliances
- Use Network to get info and enable edge devices savings



Source: METI, 2006

## Efficient Home Equipment



- ❑ Ensuring full and ubiquitous access to new services and life style
- ❑ Homes, both as single-tenant and multi-tenant premises, are unique with respect to cabling infrastructures and implemented equipment
- ❑ Within the home, telecommunications services fall into three groups
  - ICT (also referred to as HBES Class 2): for example, telephone with telephone set, transmitted digital TV with Operators' box and DOCSIS, local area network with PC
  - BCT (also referred to as HBES Class 3): for example, broadcast television with digital TV receiver
  - CCCB (also referred to as HBES Class 1): for example, security alarms, surveillance and door access control with warning system, environmental controls with electronic control unit

### Do we want efficiency soon?

### ..... Go standard! ... Rethink standards!

- ❑ Customers need earlier availability of energy efficient and efficiency enabling equipment/services
- ❑ Vendors need to guarantee longer life to their products
- ❑ Products are global!
  - Costly to develop, especially for every single market!

Working together on **Standardization** is a **win-win** ...

... but there is the need for

- ❑ **Coordinated action** among Operators, Vendors, Academia and SDOs
- ❑ **Strong commitment** of Regulators/Governments



## Strategy

- ❑ **Efficient broadband & multi-service networks and architectures**
  - **Efficient very high speed residential physical networks and equipment**
  - **Standardised approach for the engineering of the building and campus optical access networks**
  - **Optimized generic engineering of in-home fibre networks (e.g. plastic optical fibre)**
  - **Definition of most relevant functional characteristics of components (e.g. connector, cable)**
  
- ❑ **Efficient equipment**
  - **Energy consumption trends for different FTTx scenarii**
  - **Definition of KPIs to enable proper actions and monitoring**
  - **Definition of performance indicators of Energy efficiency and broadband deployment**

## ETSI Challenges

- ❑ **Next Generation Networks and Equipment = completely new network paradigm**
  - **higher speed services = more distributed electronics**
    - **Need for increased interworking and better control/management**
- ❑ **Any saving actions into the network could not be sufficient to counterbalance the increasing load in customer premises**
- ❑ **SDOs have the task (and the opportunity) to champion energy efficiency in developing specifications on ICT products and systems in order to deliver efficient and dependable multi-service**
- ❑ **SDOs should develop user residential networking guidance based on a sustainable approach**

## Home convergent platform

### □ Telecommunications Access and Home Networks including Terminal Equipment and Network Terminating Equipment

#### ➤ ETSI

- ATTM-AT2 (Telecoms & IT equipment and networks)
- ATTM-AT3 (Integrated broadband cable and television equipment and networks)
- EE (Equipment energy measurements)
- ERM (TG28 Short Range Devices)
- M2M (Machine to Machine)
- TISPAN (Core Network Architectures and protocols)

#### ➤ ITU-T SG5, SG9, SG15



#### ➤ FORA → HGI and Broad Band Forum



#### ➤ ATIS, IEC, EU-JRC, EPA, CCSA ...ECMA, IEEE, ...

### □ Copper, fibre and wireless transmission support in close cooperation with CENELEC TCs 205-209-215



## Next Steps and Actions

- ❑ ETSI already strongly liaised with  **GeSI-EE IOCG Standardization Branch**  and most SDOs and FORA to support the challenges
  
- ❑ Will be active on the new EC Mandate on Energy Efficiency & Broadband deployment
  
- ❑ Will welcome new liaisons with any organization or forum in order to support
  - Sustainability
  - Energy efficiency
  - Broadband deployment
  - Multi-service implementation

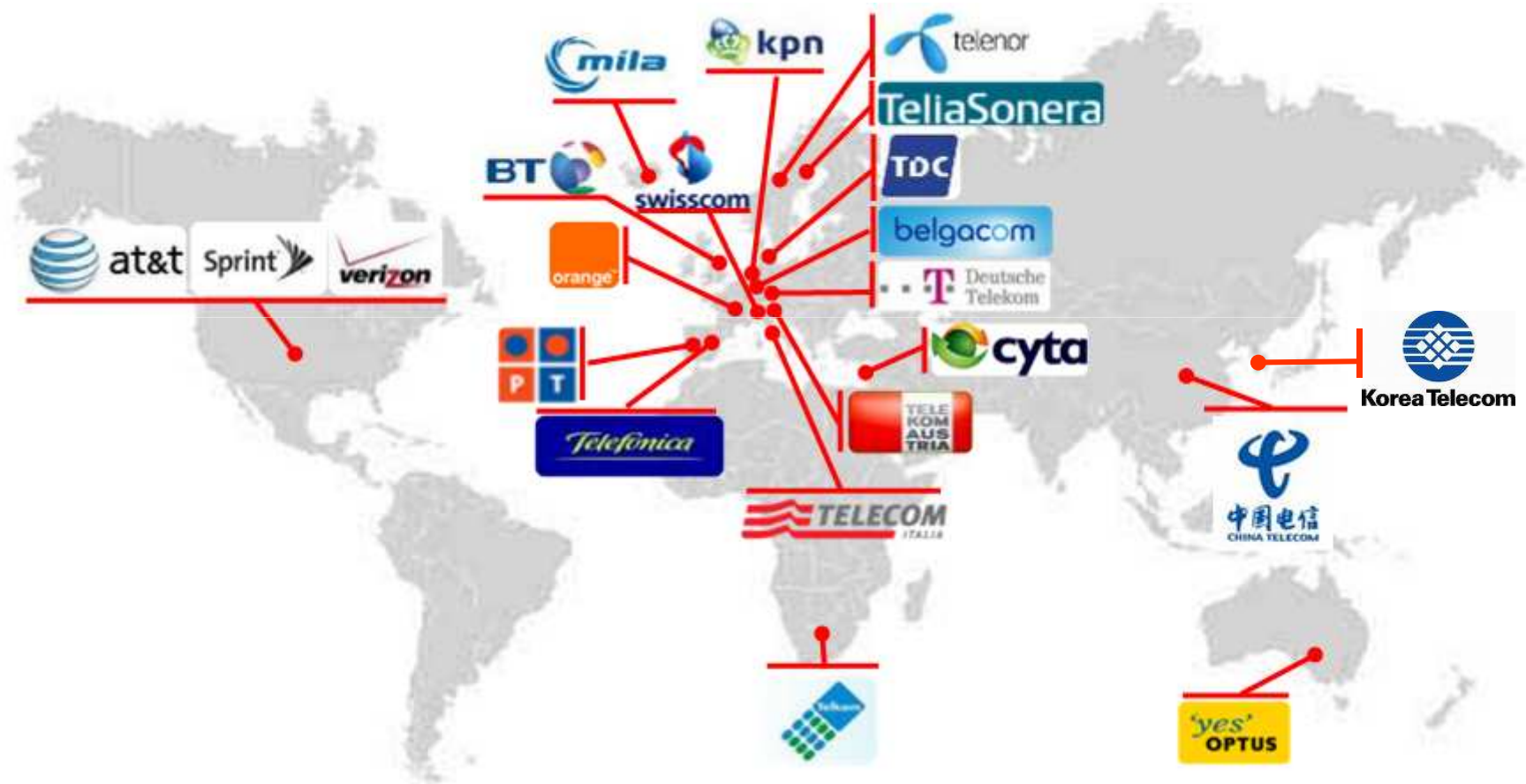
## Future EC Mandate on Efficient Information and Communication Technologies

EC manages relations with the European Standardisation Organizations for ICT (ETSI/CEN/CENELEC) through Mandates, followed by funding

- **Standardisation is key in enabling wide access to better equipment and services**
- Improvements originated into ICT would create positive fallouts in all other sectors
- **EC** wants **ESOs** to focus on **Energy Efficiency** to accelerate availability of corresponding standards and needs them to:
  - **really cooperate** towards BIG goals
  - **focus on whole** (and transversal) **sector goals**

Then the EC is preparing a Mandate to urge progress in ICT area

## GeSI-EE IOCG





## Standardisation arena

# World Class Standards

### Users need more efficient products

- Growing energy cost
- Governments/Regulators push for an accelerated availability of more sustainable and efficient equipment and networks

### Market is global

- Industries develop products for worldwide market
- No Operator alone can impact Industry product development

### Standardization is THE key

- Standardization is the key to guarantee: early availability; quality; interoperability and low cost

### Green is fashion Good/bad news

- All SDOs want to go green → Cooperation OK – Competition NO
- Competition in EE standards delays availability of better products
- Overlapping/non omogeneous std = confused industries

### EE actions fragmented

- Standardization is subdivided among a multitude of SDOs and Fora
- Transversal fields (like EE) have troubles in being addressed in uniform way

### Some std areas are overlapping

- Areas covered by multiple std organizations = fragmented results
- If the SDOs do not synchronize = loss of efforts, time and market results

### Most std are progressing slowly

- All SDOs have troubles on the skilled people availability to enable quick development of useful standards

## Proposal for global strategy

### More cooperation

- Open cooperation among SDOs will enable quick production of needed specifications (requested by market and regulation)

### Together Not against!

- To optimize actors number
- To minimize time to market

### Why standards coordination?

- State of the art/map of the EE STD activities in order to provide basis for efficient development of standardization
- Standardisation Landscape will be circulated by early in December

### Reuse what available

- Avoid reinventing the wheel
- Share and reuse available study results and documentation

### Identify the missing std

- To achieve consistent and optimized Standardization through identification of critical areas and right SDO

### Limit the regional variants

- To avoid unnecessary burden that would result in longer development time/cost as industries develop products for worldwide market

### Use same test methods (and objectives)

- To optimize testing costs
- To minimize time to market



## GeSI EE IOCG Hot Action Points agreed in November 09

A limited number of hot actions with high energy and sustainability impact

Area	Action Point	Description
Customer networking and equipment sustainability goals <i>(less equipment; reuse; optimize ...)</i>	Mobile (and small handheld) common charger	Need for unique, standardized charger for all mobile phones (and other small devices too). Support ITU/OMTP/GSMA Rec. development. Then promote follow-up with IEC activities
	Standard external power supply	Few standardized power supply types to power Home Networking devices (and other): Support HGI/ETSI specifications
Customer networking and equipment energy efficiency goals <i>(less user energy usage)</i>	EU BroadBand Code of Conduct	To define energy improvement goals to be inserted into the new EU BB CoC
	Home networking equipment requirements	To support harmonization among the world regional initiatives (EU and EPA/EnergyStar)
ICT networks energy efficiency goals <i>(less network energy usage)</i>	Data Centre	Act towards more environmental friendly IT equipment through the EU Data Centre CoC
	Radio Base Stations	Cooperate with ETSI in the definition of RBS testing methods and objectives <i>(What you can measure you can improve!)</i>

**Thank  
You**

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## GeSI-EE IOCG

### Reasons



**Huge investments** to deploy fixed & mobile NGN architectures



**Fragmented actions** on energy efficiency among different Standardisation Bodies/Forums



**Energy cost** continuously growing  
**Environmental responsibility** policies

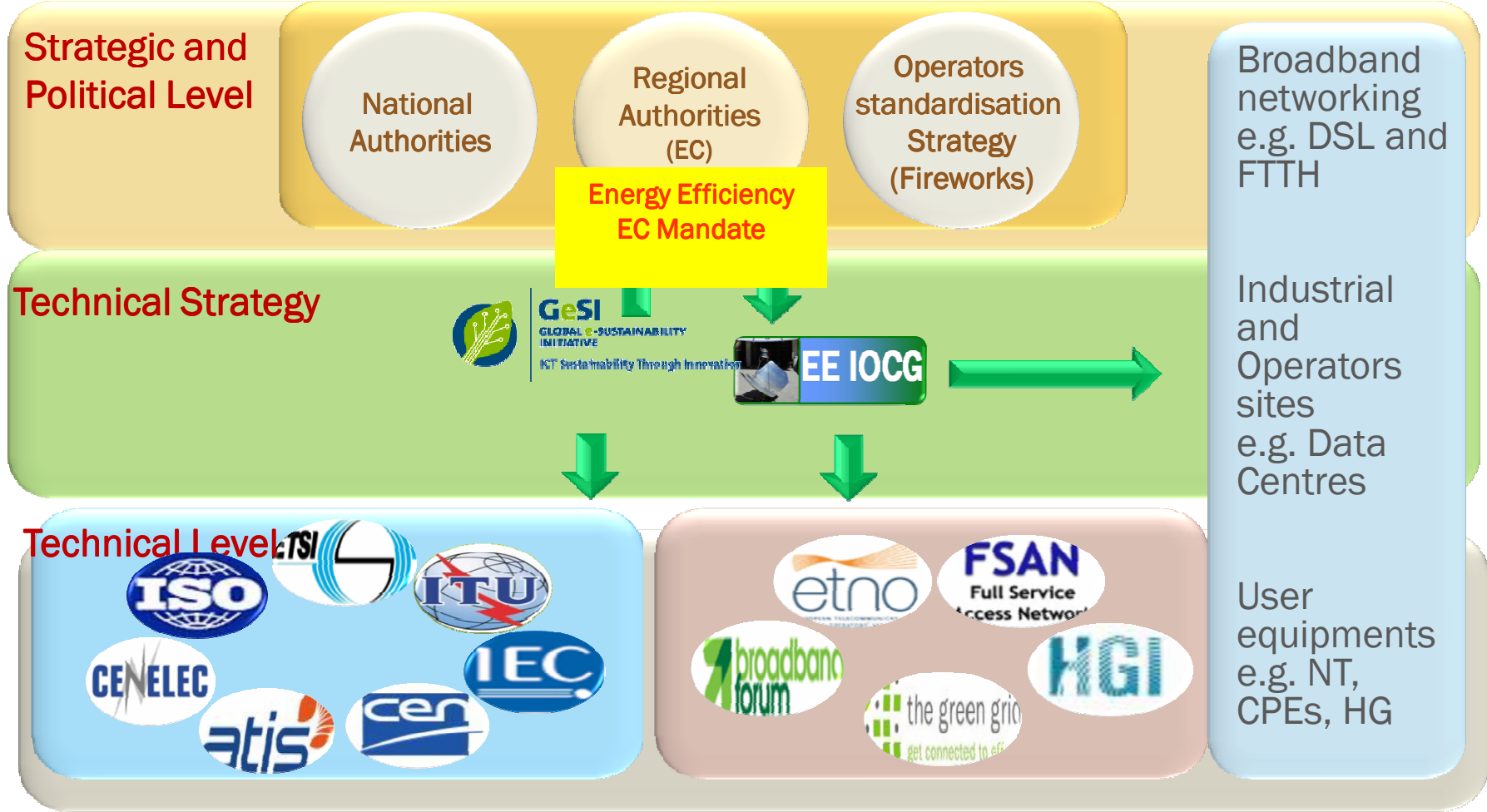
### Goals



**Define high level analysis**  
(evaluation of energy trends and KPI definitions)



## GeSI EE IOCG Energy efficiency policy activities





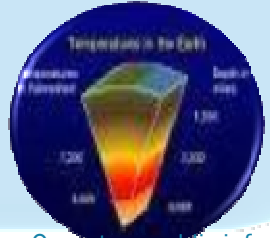
# World Class Standards

## GeSI EE IOCG numbers

>>50 TWh  
total electrical energy consumption (\*)

>700.000.000  
total POTS + Broadband customers (\*)

### EE IOCG



>30% of the total world's (\*\*) renewable energy production  
>~ 1% of the National electrical consumption (\*/\*\*)



> 10% of the total world's population

(\*) End of 2007 - Only Domestic market Source: Operators public information  
(\*\*) Source: International Energy Agency, 2006 data

