

ICT & Climate Change: Our Global Challenge NOW.



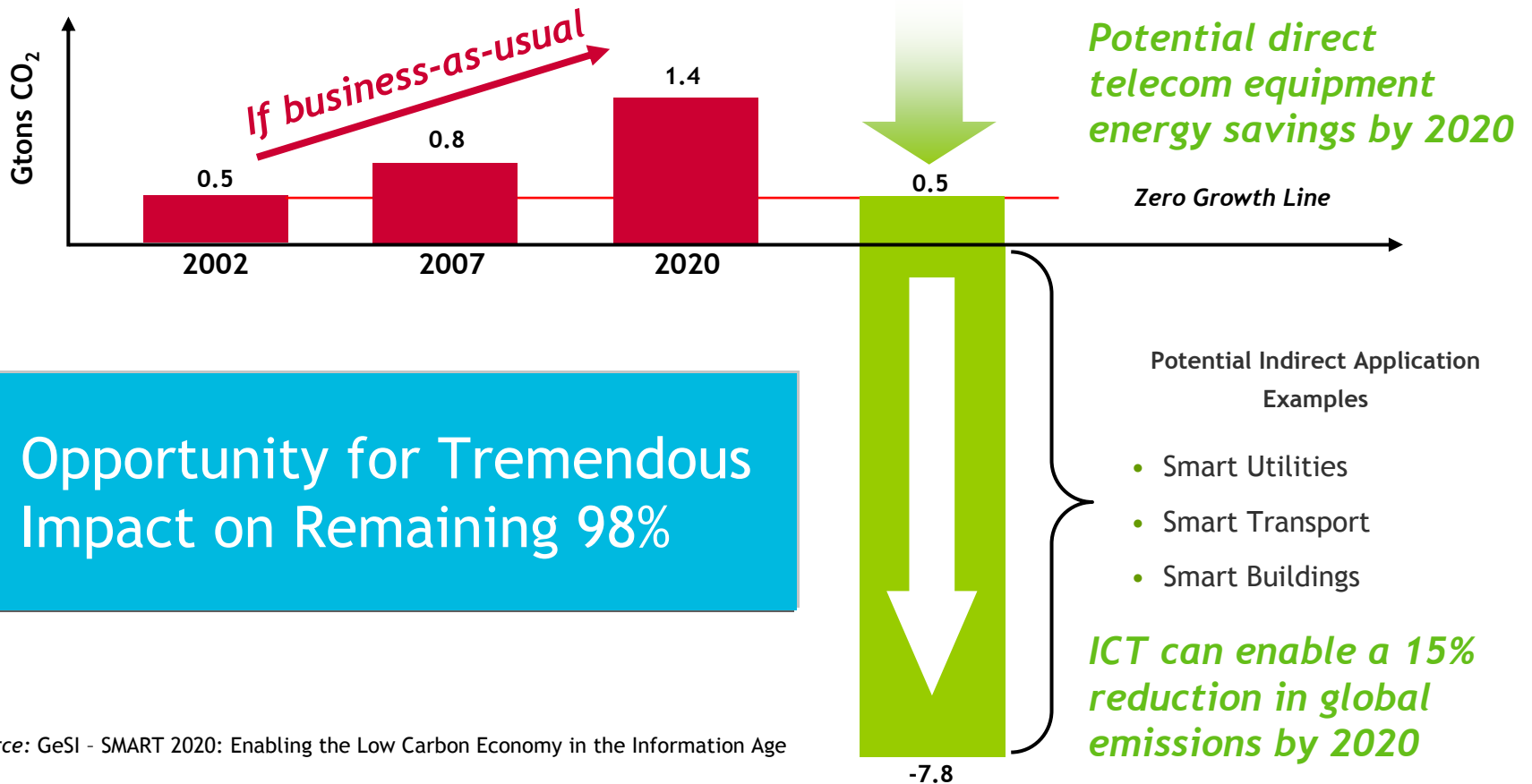
Gee Rittenhouse

Vice-President Bell Labs Research, Alcatel-Lucent



ICT: An Opportunity to Tackle Climate Change

ICT today about 2% of global emissions



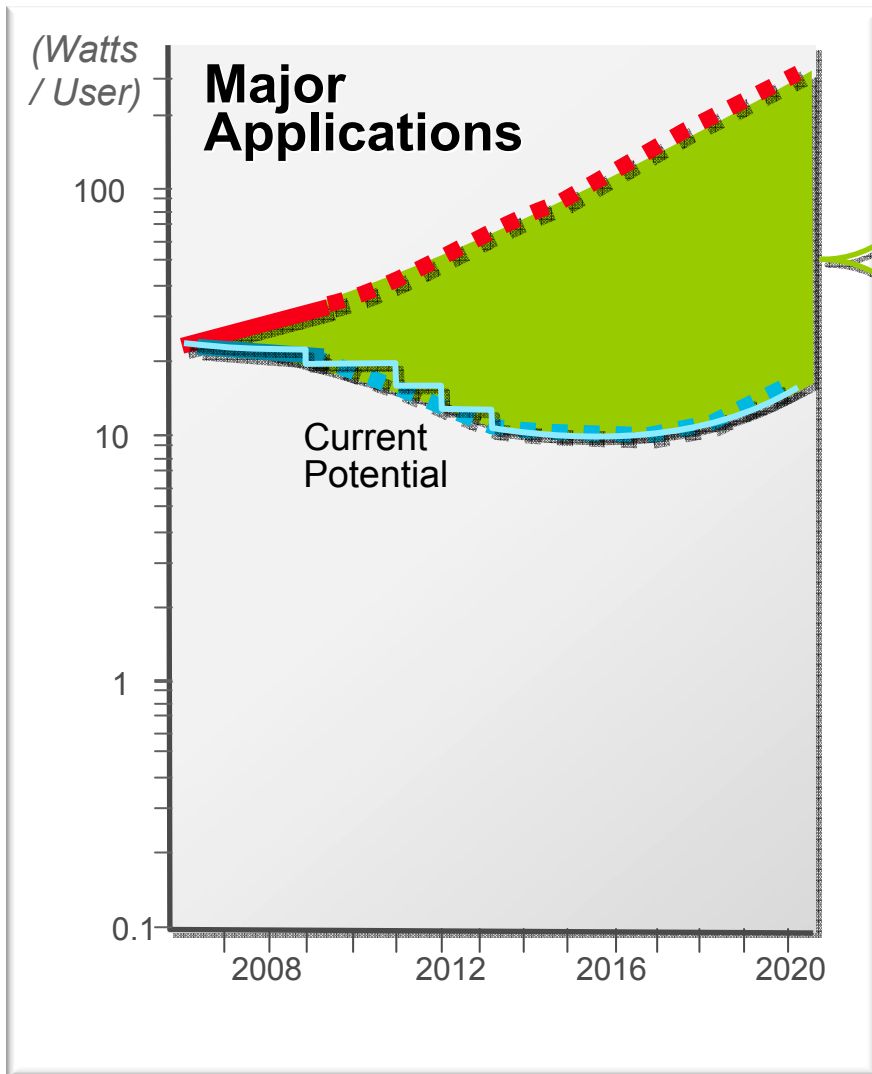
An Opportunity for Tremendous Impact on Remaining 98%

Source: GeSI - SMART 2020: Enabling the Low Carbon Economy in the Information Age

Bell Labs' Smart Grid Research in Korea



Addressing ICT's Potential to Improve Energy Efficiency



Mobile Access

- Ultra-efficient power amplifiers
- Small cells
- Self organizing networks
- Network MIMO

Fixed Access

- Cost-reduced FTTH/N
- Green PON

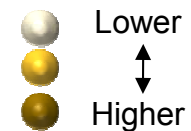
Metro/Core

- Mesh protection / fast restoration
- Dynamic Optical Bypass

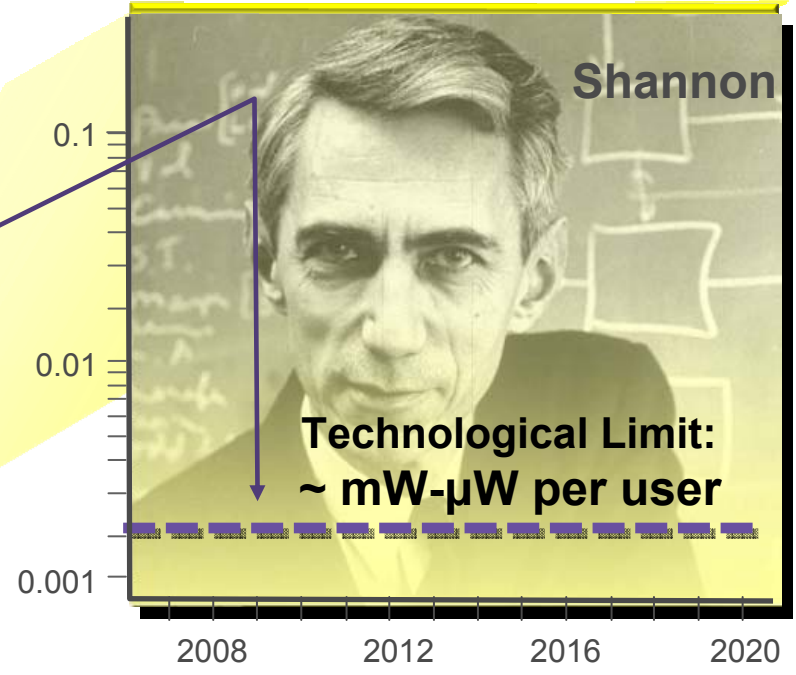
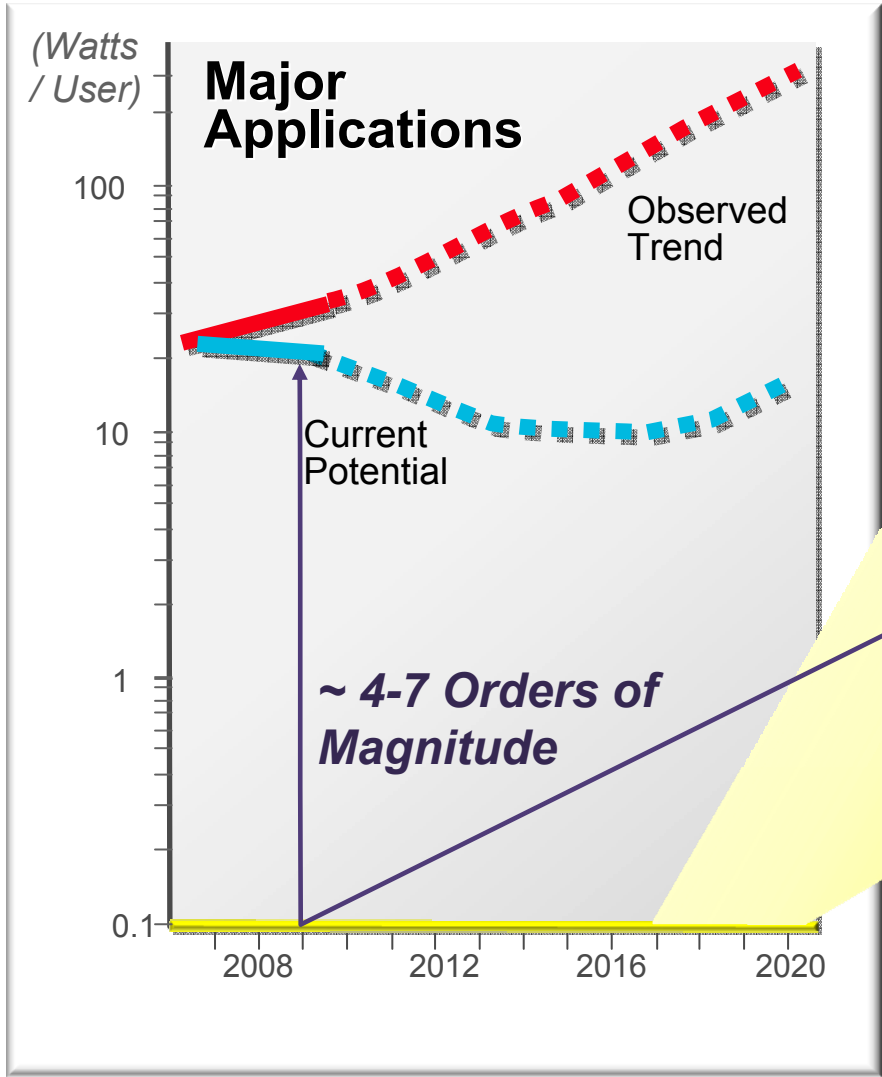
Other

- Passive cooling everywhere
- Dynamic energy usage (proportional to load)
- Network Virtualization

Degree of Difficulty:



Bell Labs: A Huge Opportunity to Improve Energy Efficiency



Bell Labs Alternative Energy Program





Alcatel-Lucent: Our Commitment



“The world’s leaders on climate change **CANNOT** say it’s difficult, let’s do nothing. Set the bar high on climate change and business will jump.”

Ben Verwaayen, CEO Alcatel-Lucent

At the World Economic Forum in New Delhi, India

We are:

- Developing solutions that tackle the energy footprint
- Reducing our own carbon footprint
- Working with our customers and stakeholders worldwide
- Active in key ITU discussions on Standards & Climate Change

Our Global Challenge



Let's Work Together





www.alcatel-lucent.com/eco