



Information and Communication Technologies

By Professor Soulla Louca
Chair DC ICT

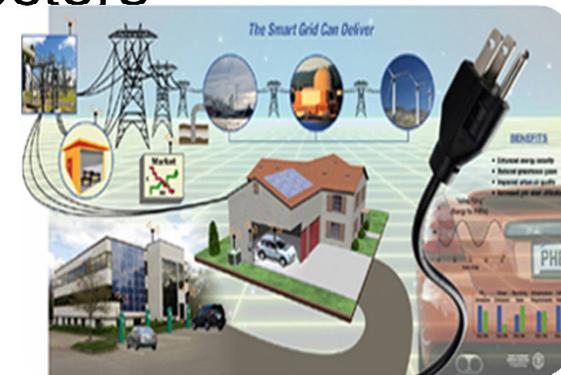




Introduction

Smart Cities & Green Economy

- ✓ ICTs can have a major impact on the reduction of Greenhouse Gas Emissions by increasing energy efficiency and enabling the use of innovative sources of renewable energy through the development of:
 - buildings, production/distribution processes in the agricultural, resource and manufacturing sectors
 - smart energy grids
 - transportation systems
 - Smart services.





Introduction cont.

- ✓ demand for energy and materials through dematerialization
 - e-commerce, digital media, tele-work, e-government, e-education, e-health, etc.

- ✓ Monitoring, measuring and managing various systems through:
 - Remote sensing systems,
 - Embedded sensor networks,
 - RFID and Ubiquitous networking technologies that together make up the - Internet of Things





Introduction cont.

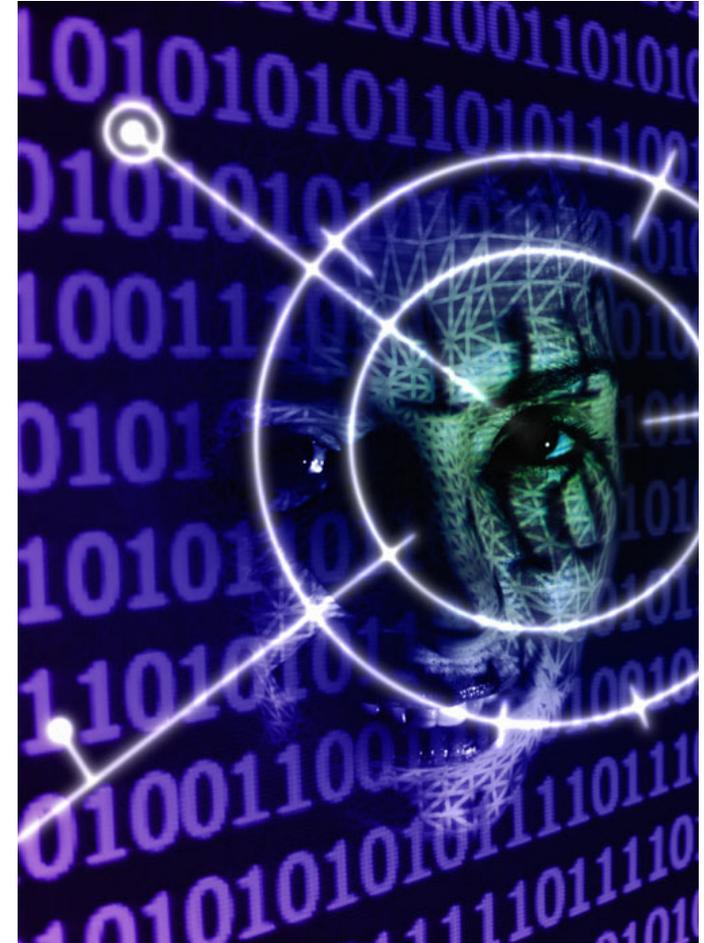




ICT – Domain Description

- **Scope:** Coordination of research on:
 - ❖ Information science and technologies
 - ❖ Communication technologies
 - ❖ Societal aspects of ICT

- **Brief history:**
 - Until 1999: Telecommunications only
 - 1999-2006: TIST (Telecommunications and Information Sciences and Technologies)
 - 2006: Creation of **ICT Domain**





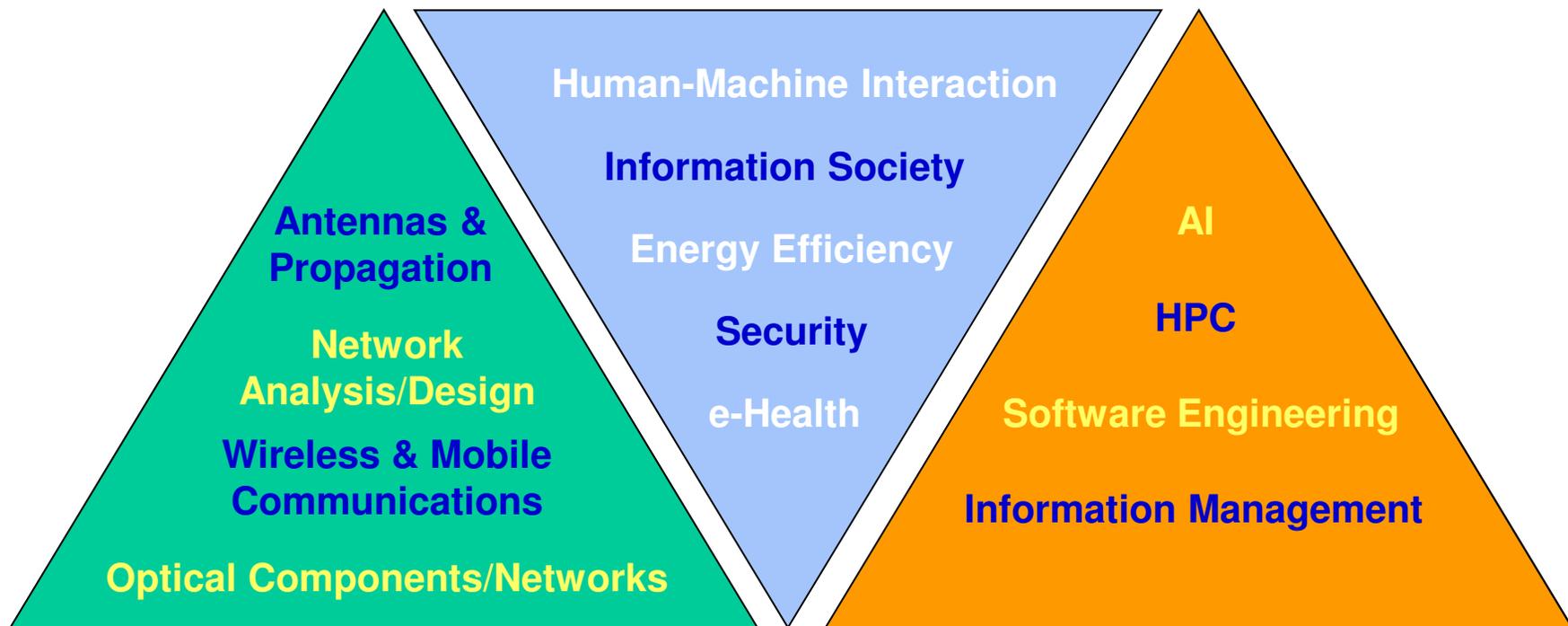
ICT Domain – Facts Sheet

- Actions: 25 Actions (2011)
- Impact: ~1000 Organisations, ~3000 Researchers



ICT Domain – Thematic Areas

e-Society



Telecommunications

Information Systems & Technologies



ICT Domain – Thematic Areas

- **Information science and technologies.**
 - aspects related with the foundations, design, analysis, development, and application of hardware and software systems.
 - computer science, software development technologies, software engineering, intelligent and expert systems, advanced interfaces, user aspects, information management, high performance computing and embedded systems.



ICT Domain – Thematic Areas

- **Telecommunications.**
 - on fundamental aspects and applications regarding physical, electromagnetic and functional modeling of all elements of information and communication systems such as terminals, antennas, transmission channels and propagation, as well as optical components (e.g. photonic devices), networking aspects, wireless mobile communications and the Future Internet.



ICT Domain – Thematic Areas

- **Societal aspects of ICT.**
 - Influence of ICT on society and the requirements imposed by society on the ICT infrastructure and services.
 - characterized by the use of ICT as enabling technology for the benefit of society, in fields like sustainable development, ambient assisted living, e-health, energy efficiency, e-learning, bioinformatics and many others



We use ICT to Green, We add Green to ICT

Thank you





Further information at

www.cost.eu