The Big Picture:
Vision of a Web-based Service Economy

SAP

NETWORK PARTICIPANTS

GOVERNMENT & INFRASTRUCTURE

BUSINESS & SCIENCE

CITIZEN/CONSUMER/ EMPLOYEE

OPEN SERVICE DELIVERY PLATFORM

SECURE BROADBAND INFRASTRUCTURE

INTERNET of SERVICES

SERVICE-/USER- FRIENDLY IT
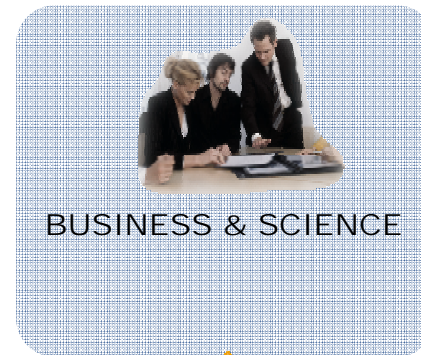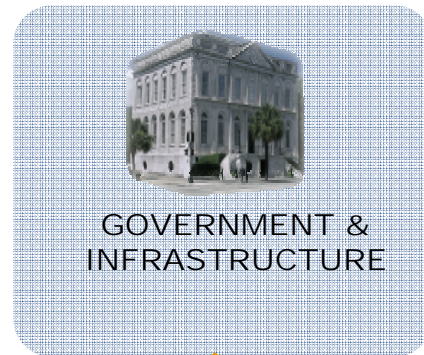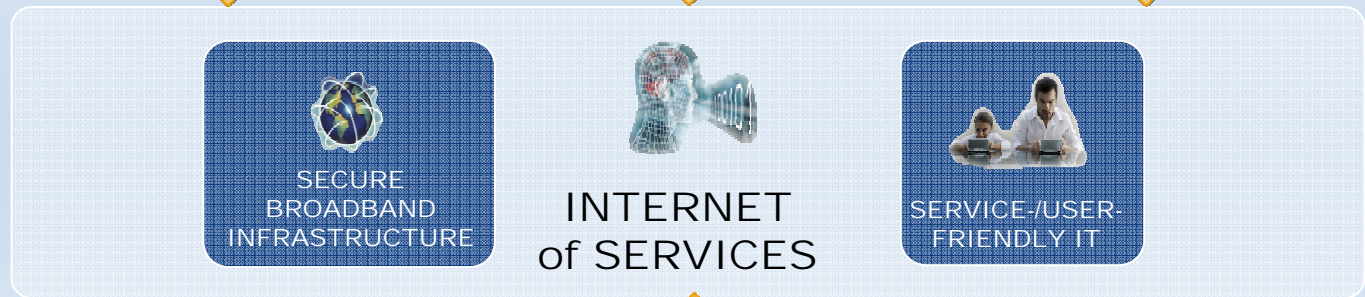
NETWORK ENABLER AND FOUNDATION
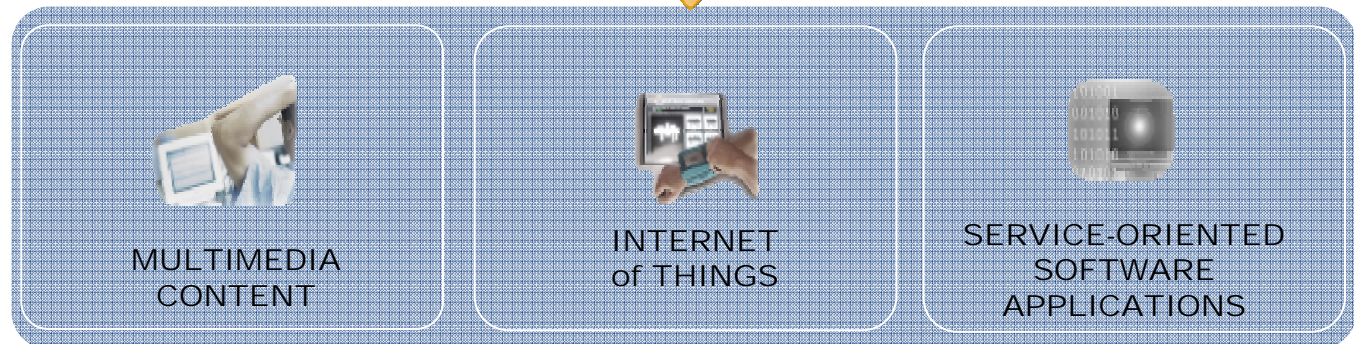
MULTIMEDIA CONTENT

INTERNET of THINGS

SERVICE-ORIENTED SOFTWARE APPLICATIONS

Today's Situation
Present weaknesses could lead to tomorrow's threats

Today, commercially successful services available through the Internet are primarily owned by US companies.

Hypothesis I:

Europe will (again) lose the battlefield if it continues to drive service evolution only from the technological perspective not including the business perspective!

It's even worse...

Successful service providers in the US continue to move into offering network and computing services this way competing with traditional service providers in that area.

Hypothesis II:

They will sooner or later start doing that in Europe!

SAP RESEARCH

How can Europe face this Situation?

**… By Strengthening European Competitiveness
through Service-Enabling Applications in Important Domains!**

- Manufacturing industry (including embedded systems)
- End-to-end product lifecycle management (including Green IT)
- Logistics
- Retail
- ICT-based services industry
- eEnergy (Energy and infrastructure management)
- Healthcare and Assisted Living

**… By Facing the Various Challenges
to Built up a Competitive Platform for the Future Internet!**

- Unleash the full potential of real-world awareness (Internet of Things)
- Develop scalable open global service delivery platforms (Internet of Services)
- From intra-enterprise SOA to secure and trusted inter-enterprise business webs
- Manage the global decentralized information pool transparently in real-time

SAP RESEARCH

How can Europe keep the Pace as Frontrunner in the Area of Sustainability?

… By Adding the Service-based Perspective to Sustainability!

Service Examples:

- Manufacturing industry *– IT managed energy efficiency!*
- End-to-end product lifecycle management *– Lead the carbon footprint initiative!*
- Logistics *– reduce carbon footprint through route and load optimization!*
- Retail *– consumer insight and product transparency!*
- ICT-based Services Industry *– make sustainability an ICT-based service!*
- eEnergy *– decentralized energy generation, provisioning and consumption!*

… By Enabling the Service-based Approach through ICT!

- Environmental intelligence systems for analysing collected data and providing decision support
- Business applications managing the optimal balance of energy production and consumption
- Leverage the Internet of Things to provide context and transparancy
- Low power consumption ICTs (less of an issue)

SUGGESTED FOCUS

NEW

- **The Internet of Services (IoS)**
  - Low entry barriers for provisioning and consumption of services
  - IoS forms an open platform for tradable, composed, value-added services on the Internet
  - The service consumer will get customized services
  - Jointly address legal, security, business and technological aspects

- **The Internet of Things (IoT)**
  - A world where physical objects are seamlessly integrated into the information network
  - Physical objects can become active participants in business processes.
  - Research Challenge: How can technical issues, e.g. managing the convergence with the IoS, be solved?

- **A new service-oriented network infrastructure**
  - New generation of ICT utility infrastructure for providing services
  - Technical integration of the "Internet of Services" and the "Internet of Things"

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Sustainability (incl. eEnergy, Environment)

SUGGESTED FOCUS

NEW

- **ICT transforming the way to manage and use resources:**
  - Environmental economics
  - Environmental footprints
  - Environmental intelligence

- **Leverage ICT:**
  - Sensors and Actuators integrated in Sustainability Applications
  - Constant monitoring of real-world objects regarding their sustainability KPIs

- **Lower power consumption ICTs:**
  - Powersaving semiconductor technologies, ICT components, devices and systems
  - New, highly efficient lighting techniques through advances in Photonics

- **Dematerialisation and virtual mobility:**
  - Reduce consumption of natural resources through
    - presence research, video conferencing and advanced collaborative tools
    - virtual prototyping and design
    - new ICT based services

The New Web-based Industry

SUGGESTED FOCUS

NEW

- **New customized business services**
  - Vision of a new service industry that will leverage the IoS and IoT
  - Provide completely new business services
  - Take context information of the user into account
  - From Searching to Finding of customer-specific services
  - Composition of services for customers added value

- **Service-enabled application architecture**
  - Set of new applications leveraging new business services
  - Knowledgeable Internet considers intended service usage, service context and information about the user

- **Business Webs**
  - Seamless inter-enterprise service-enabled collaboration, in a secured and trusted way

- **The new ICT-based service industries**
  - Did we already loose the consumer to the US and should focus on industry and government?

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