



# **Convergence and Interoperability**

## **Challenges for creating viable horizontal mass markets**

TELECOMMUNICATIONS TECHNOLOGY.//.CONSUMER ELECTRONICS.//.INFORMATION TECHNOLOGY

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# Presentation Outline



## About EICTA

## Setting the scene

## What should be done

- ➔ General issues
- ➔ Improving the standardization process to ensure interoperability
- ➔ Interoperability in Digital TV

# EICTA overview



**Established in 1999, EICTA represents the interests of the European Digital Technology Industry.**



Our Members

- ➔ A wide range of multinational companies (57) and national trade associations (36)...
- ➔ Which represent more than 10.000 businesses and two million employees...
- ➔ And generate revenues of over 1.000 billion euros ...
- ➔ Thus bringing credibility and legitimacy to the organization...
- ➔ Which has become the voice of the European digital technology industry.

# List of Members







Accenture, Adobe, Agilent, Alcatel, Apple, Bang & Olufsen, BenQ, Blaupunkt, Brother, Bull, Canon, Cisco, Corning, Dell, EADS, Elcoteq, Epson, Ericsson, Fujitsu, Hitachi, HP, IBM, Infineon, Intel, JVC, Kenwood, Kodak, Konica Minolta, Lexmark, LG Electronics, Loewe Opta, Lucent, Marconi, Microsoft, Motorola, NEC, Nokia, Nortel, Océ, Panasonic, Philips, Pioneer, Qualcomm, Samsung, Sanyo, SAP, Sharp, Siemens, Sony, Sony Ericsson, Sun Microsystems, Symantec, Texas Instruments, Thales, Thomson, Toshiba, Xerox






Austria: FEEL; Belgium: AGORIA; Bulgaria : BAIT; Czech Republic: SPIS; Denmark: ITEK, ITB; Estonia: ITL; Finland: SET, FFII; France: ALLIANCE TICS, SIMAVELEC; Germany: BITKOM, ZVEI; Greece: SEPE; Hungary: IVSZ; Italy: ANIE, ASSINFORM; Ireland: ICT Ireland; Latvia: LITTA; Lithuania: INFOBALT; Malta: ITTS; Netherlands: ICT-Office; Norway: ABELIA, IKT Norge; Poland: KIGEIT, PIIT; Slovakia: ITAS; Slovenia: GZS; Spain: AETIC; Sweden: IT Företagen; Switzerland: SWICO, SWISSMEM; United Kingdom: INTELLECT; Ukraine: IT Ukraine; Turkey: ECID, TESID

# EICTA on Convergence and Interoperability



## EICTA has long advocated convergence and mass markets and related interoperability issues in various contexts:

-  i2010
-  mobile communications,
-  digital broadcasting,
-  etc.

## EICTA Interoperability Task Force

-  Generic “White Paper on Interoperability”, 2004
-  systematic analysis, policy summary
-  Now working on extension addressing challenges for standardization process

## EICTA Broadcast Cluster

-  “Position Paper on “Interoperability in Digital TV”, Dec. 2005
-  ‘White Paper on Digital Switchover” Jan. 2006

# Setting the Scene

# The single market does not exist for the European digital industry.



**Europe is still a set of countries with different and flawed regulation systems**



**Fragmentation prevents opportunities such as economies of scale**



**Member States are pulling back from the Single Market**

# The political framework undermines innovation due to its lack of flexibility and responsiveness.



**The slowness of policy implementation cripples progress in the sector**



**Policy makers fail to respond to the digital industry's needs**

# The shortage of highly qualified people is weakening future innovation prospects

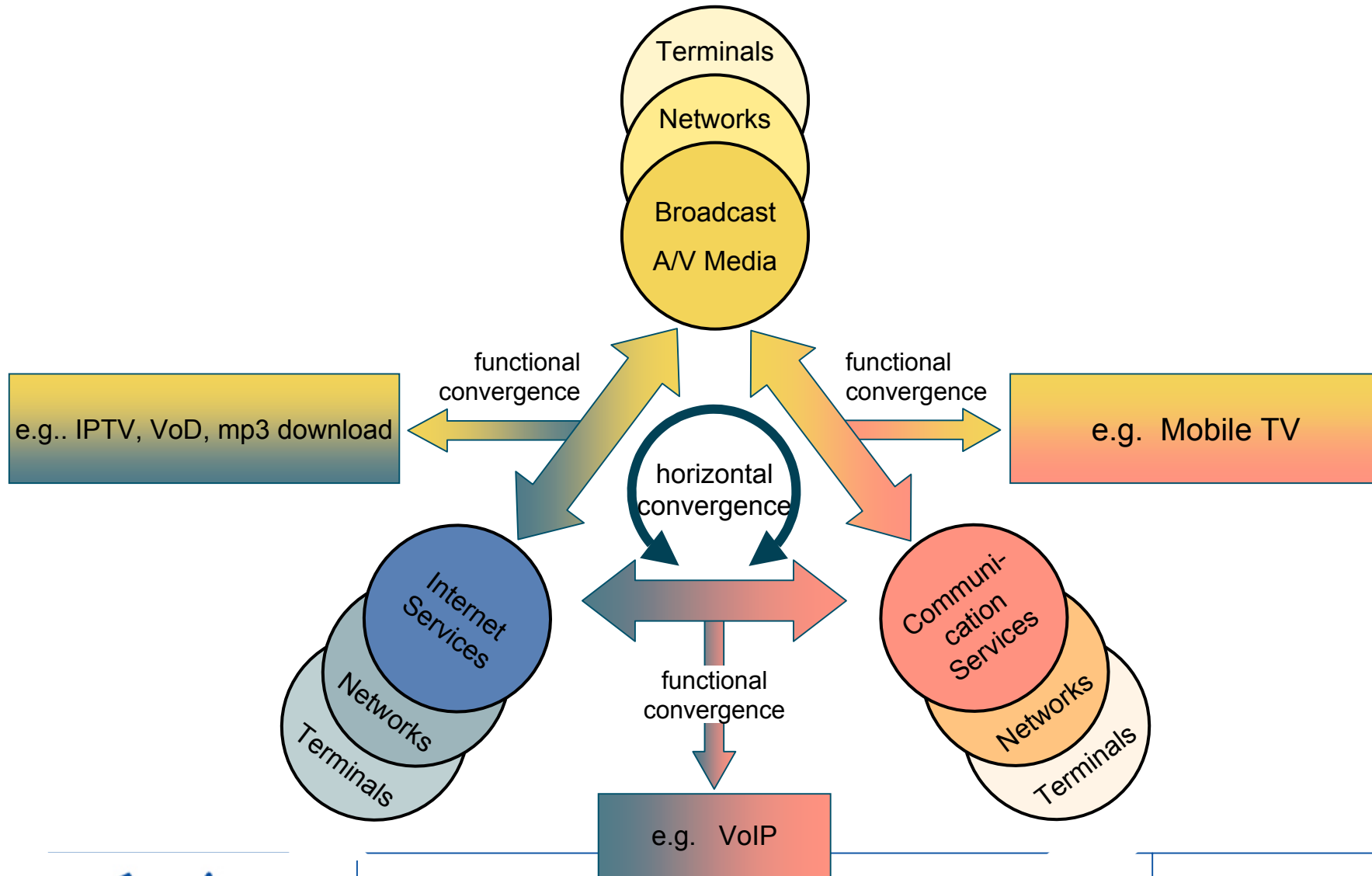


**Fewer and fewer people study information and communication technologies**



**Industry and academia do not cooperate sufficiently**

# Convergence of Services, Networks and Terminals



# Mastering the Challenges of Converging Environments

## ➤ **Convergence caused by digital technologies offers new opportunities**

- terminal devices becoming hybrids [instead of special purpose]
- content and services spilling over borders of traditional “islands
- Next generation networks becoming an intelligent packet network converging domain and technology specific networks

## ➤ **Services, networks and terminals becoming independent from each other**

## ➤ **No mass markets without seamless interoperability between devices and services**

## ➤ **Convergence is about combining existing value chains and their traditions into new ones**

## ➤ **Maintaining interoperability in this process is the key challenge**

# Creating viable mass markets



**Interoperability more important than ever**

**Digital convergence adding new dimension**

**Open standards preferred basis for enabling interoperability**

**Successful digital switch-over and convergence requires coordination**

**Coordination must include early installation of an advanced open technical platform for interoperability in an open service environment**

**What should be done:**

# **General Issues**

# ***The European digital technology believes that now is time to:***



**Create an attractive Europe without frontiers.**



**Reform the European Institutions in depth.**



**Develop incentives to stimulate research and development**

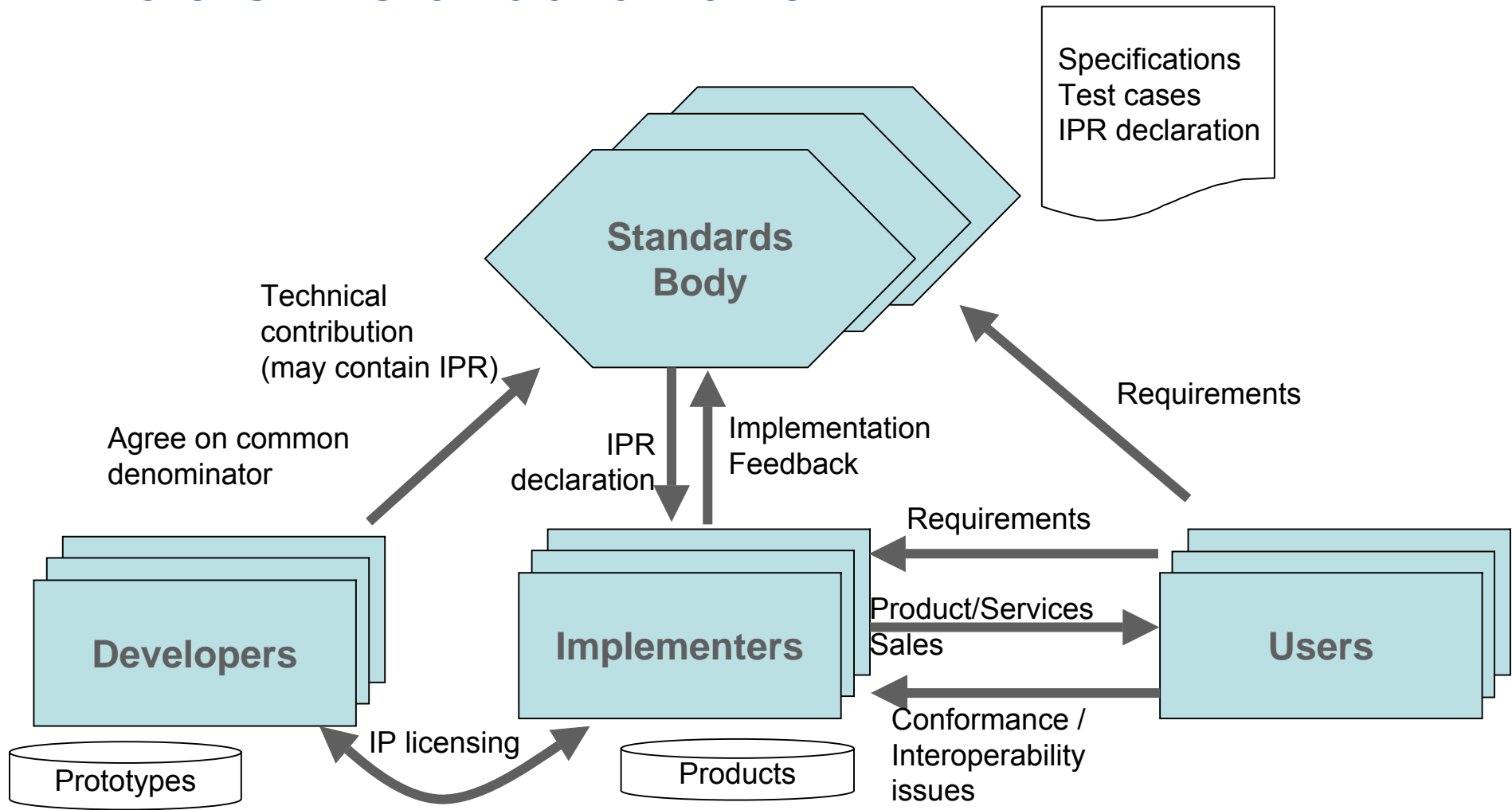


**Establish an efficient consumer communication**

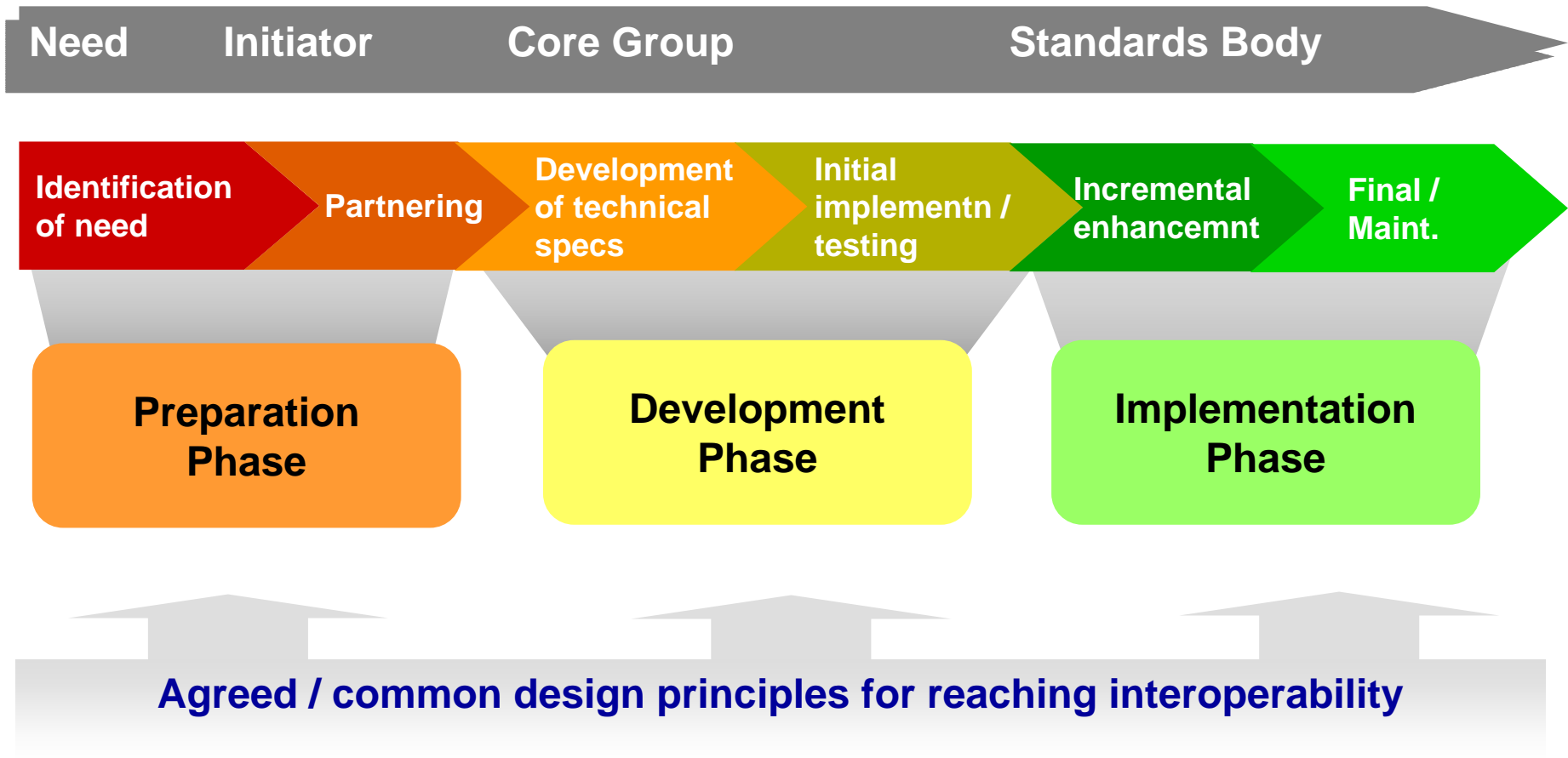
**What should be done:**

**Improving the  
Standardization Process**

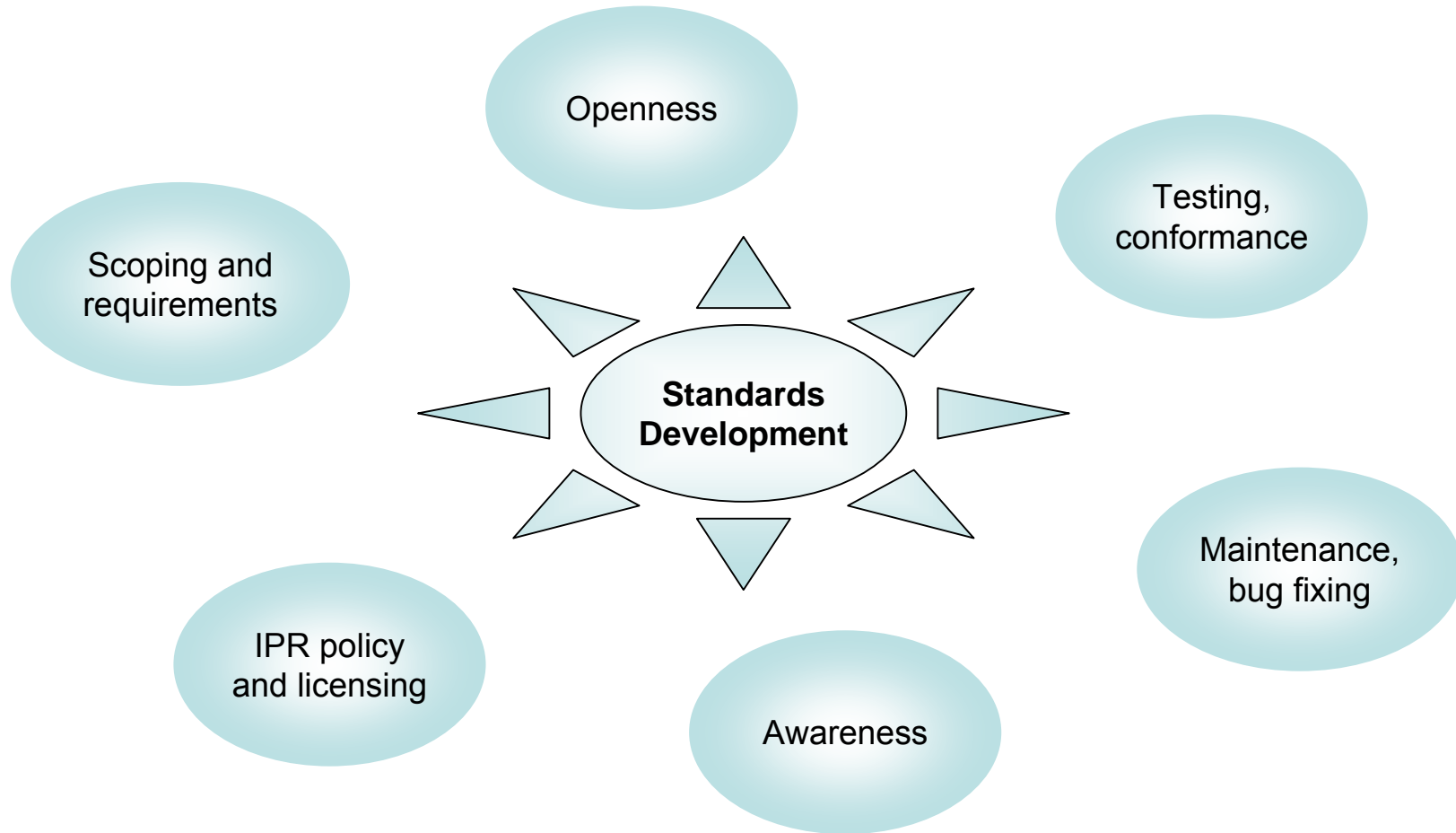
# Actors in Standardization



# Interoperability Imperative for Standards Development Process



# Facilitating Interoperability



**What should be done:**

# **Interoperability in Digital Television**

**conclusions also applicable for value chains**

# DTV receiver market today



## Strong vertical receiver markets due to leading market share of Pay TV



Highly fragmented

- ▶ different proprietary conditional access systems
- ▶ different proprietary APIs (middleware)
- ▶ different PVR solutions



## Advanced functionality segment dominated by STB in vertical markets



## Integrated DTV (iDTV) sets play only minor role

Common Interface as CA interoperability enabler hardly deployed where not required by regulation (>30cm-screen iDTV sets)



## Horizontal receiver market



increasingly dominated by cheap zapping boxes



Limiting opportunities for advanced services to open mass-market basis of installed device populations

**Viable horizontal mass market for all kind of future-proof equipment**

**EICTA**

building digital europe

**not yet existing**

eBusiness W@tch Workshop , 15 June 2006

G. Lütteke 20

# Commercially viable horizontal broadcast receiver mass market

## - Industry Vision -



### **Mass market of receivers with broad a range of functionality**

- ➔ low-cost STB to fully equipped iDTV with long life-span
- ➔ support for interactive services, CA, PVR, content protection, .....



### **Shaping the horizontal market**

- ➔ Equally serving Free and Pay TV to provide a long-term and full (100%) market option



### **Paramount for broadcast services relying on an open base of installed devices**



### **Requires interoperability beyond the basic transmission mechanisms in a converging environment**

**Open standards the preferred basis for enabling interoperability  
and thus future-proof horizontal markets**

# Enablers for Horizontal Mass Markets – Managing the switch-over Value Chain Enablers (1)

## ***Vertical & horizontal markets follow same economic principles***



### **Value chains need to be coordinated**

- ➔ harmonised and targeted action plan
- ➔ solicit and control associated commitment



### **Fast generation of market reach**

- ➔ Accelerated introduction of advanced receiver concepts (API, CA)
  - ▶ Subsidies
  - ▶ Regulatory approach
- ➔ Last populations of zapping boxes impede future-proof market development



**Media policy (= economic policy !) to take this into account**

# Enablers for Horizontal Mass Markets – Managing the switch-over

## Value Chain Enablers (2)



### Vertical markets

- ➔ Pay-TV operators acting as coordinators determining and controlling the (closed) technical platform for interoperability within their service environment
- ➔ Taking financial risk



### Horizontal market

- ➔ Potential members of value chain waiting for each other
- ➔ **Political authorities to act as initiators and coordinators**
- ➔ Coordination must include the aspect of an open technical platform for interoperability in an open service environment
- ➔ Successful market introductions have proven model (UK, Italy)

# Enablers for Horizontal Mass Markets – Managing the switch-over

## Technology Enablers



**Open standards are the primary ingredients for open technical platforms as required in horizontal markets**



**Open Standards are required for *all* areas affecting the interoperability of digital broadcast receivers and services**



**In particular, PayTV will continue to play an important role in the future digital broadcasting landscape (~75% market share today)**



**Mass market/business case for receivers supporting exclusively free-to-air hence becoming questionable**



**An open technical platform for horizontal broadcast markets requires tools (open standards) to support interoperability for receivers equipped to serve a mix of encrypted and non-encrypted services**

## Summary:

### Towards interoperable DTV receivers

- ➔ **Mass market receivers to be equipped for serving both FTA and pay TV services**
- ➔ **Open API and CA essential for interoperable receivers with long life span**
- ➔ **The Common Interface as an interoperability tool has failed to achieve its purpose, alternative technology enablers for CA interoperability are becoming available**
- ➔ **Coordinating the value (supply) chain**

**EU policy to support actively early installation of advanced receiver population based on open standards**

# Thanks for Listening