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IBM

Standardisation in Support of the Digital Single Market Strategy

Round Table Event
Brussels, 30 June 2015

ICT Standardisation and Policy Objectives

Standardisation processes

Standardisation and Innovation

Trends and Challenges

Collaboration for Supporting the DSM

Regulation, Policy Making and Standardisation

Legal Framework
- EU Regulation 1025/2012
- Patent law
- Competition law

Regulation
- Health, safety, environment, public interest
- New Approach / New Legislative Framework
- Standardisation Requests, Mandates
- Annual Union Work Programme

Industrial / Innovation Policy
- Digital Single Market
- EU Rolling Plan for ICT Standardisation
- National Digital Agendas or similar policies

Public Procurement
- Procurement Directives, ICT Procurement Guidelines
- European Interoperability Framework
- National Interoperability Frameworks, policies, etc.

Research
- Horizon 2020 and R&D (EU Research funding)
- National R&D programmes

Basic rules and processes

Regulatory requirements for market access

Principle of voluntary standardisation

Presumption of conformity based on European Standard
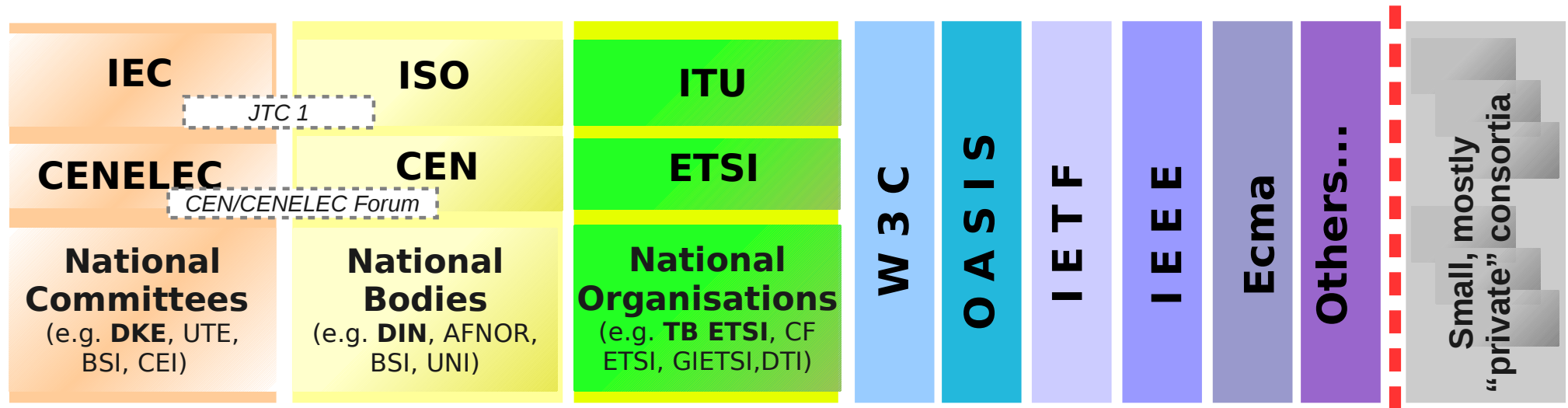
Support global competitiveness

Promote uptake of new technologies

Promote interoperability

Support referencing standards in public tenders and implementing standards based solutions
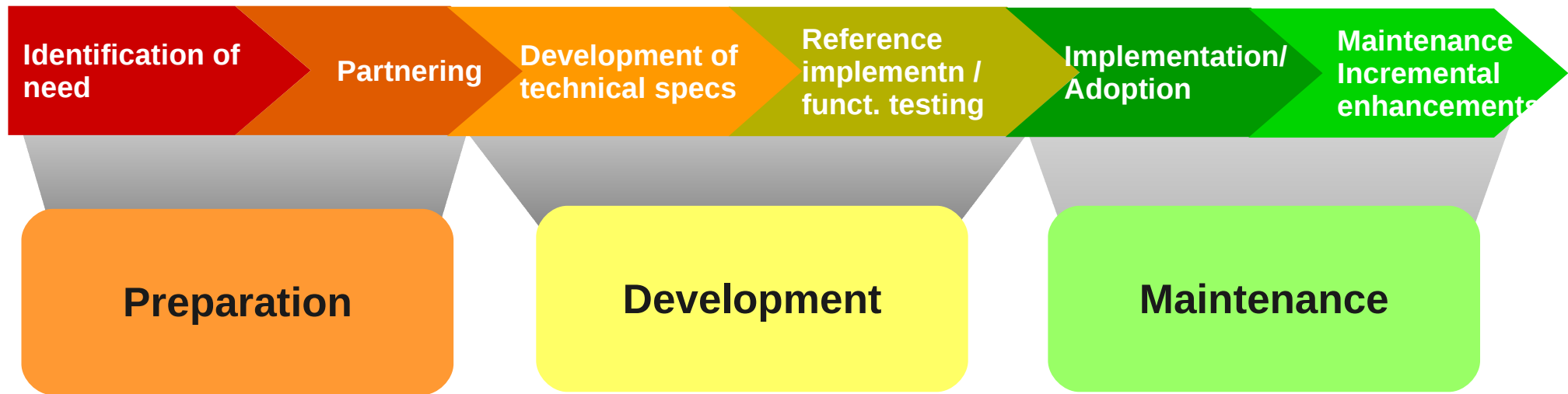
Foster innovation and knowledge and technology transfer

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Global ICT Standardisation Ecosystem

IEC	ISO	ITU	W3C	OASIS	IETF	IEEE	Ecma	Others…	Small, mostly "private" consortia
JTC 1									
CENELEC	CEN	ETSI							
CEN/CENELEC Forum									
National Committees (e.g. **DKE**, UTE, BSI, CEI)	National Bodies (e.g. **DIN**, AFNOR, BSI, UNI)	National Organisations (e.g. **TB ETSI**, CF ETSI, GIETSI,DTI)							

A large number of relevant and successful ICT standards are developed in global, industry driven standards bodies (aka "fora/consortia").

Global standards are of critical importance for serving the global market and being competitive.

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Typical Lifecycle of Successful Standardisation

Identification of need	Partnering	Development of technical specs	Reference implementn / funct. testing	Implementation/ Adoption	Maintenance Incremental enhancements

Preparation

Development

Maintenance

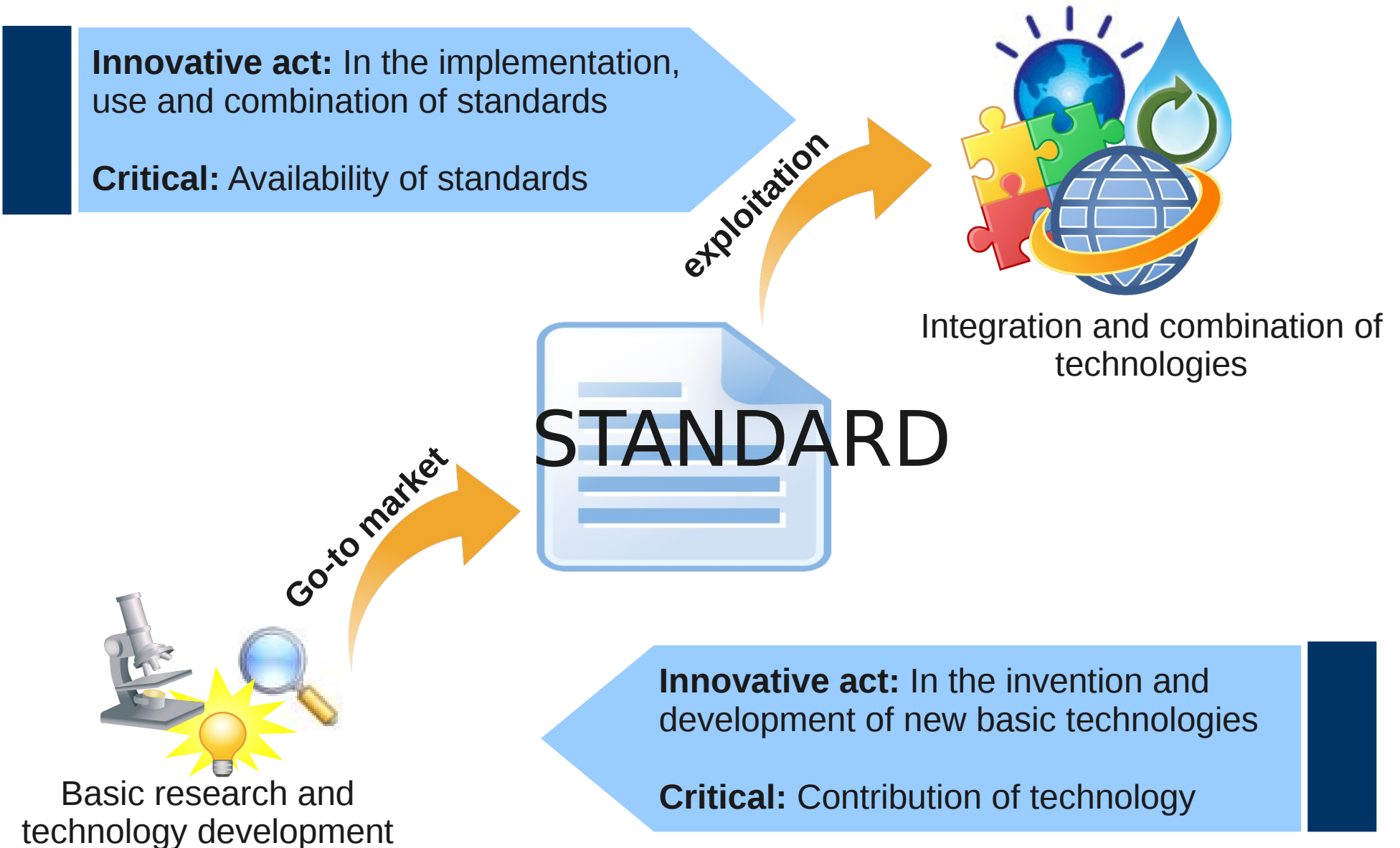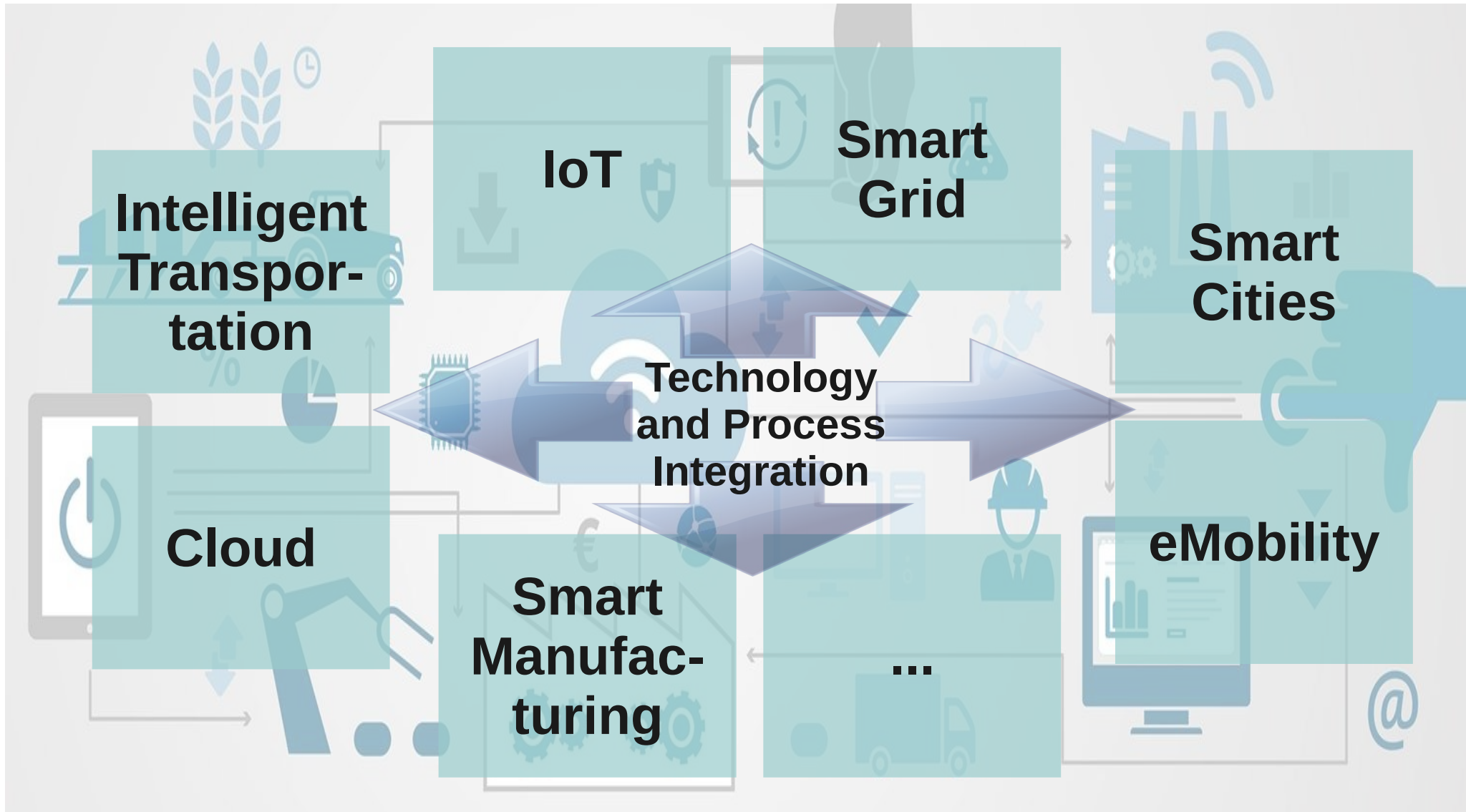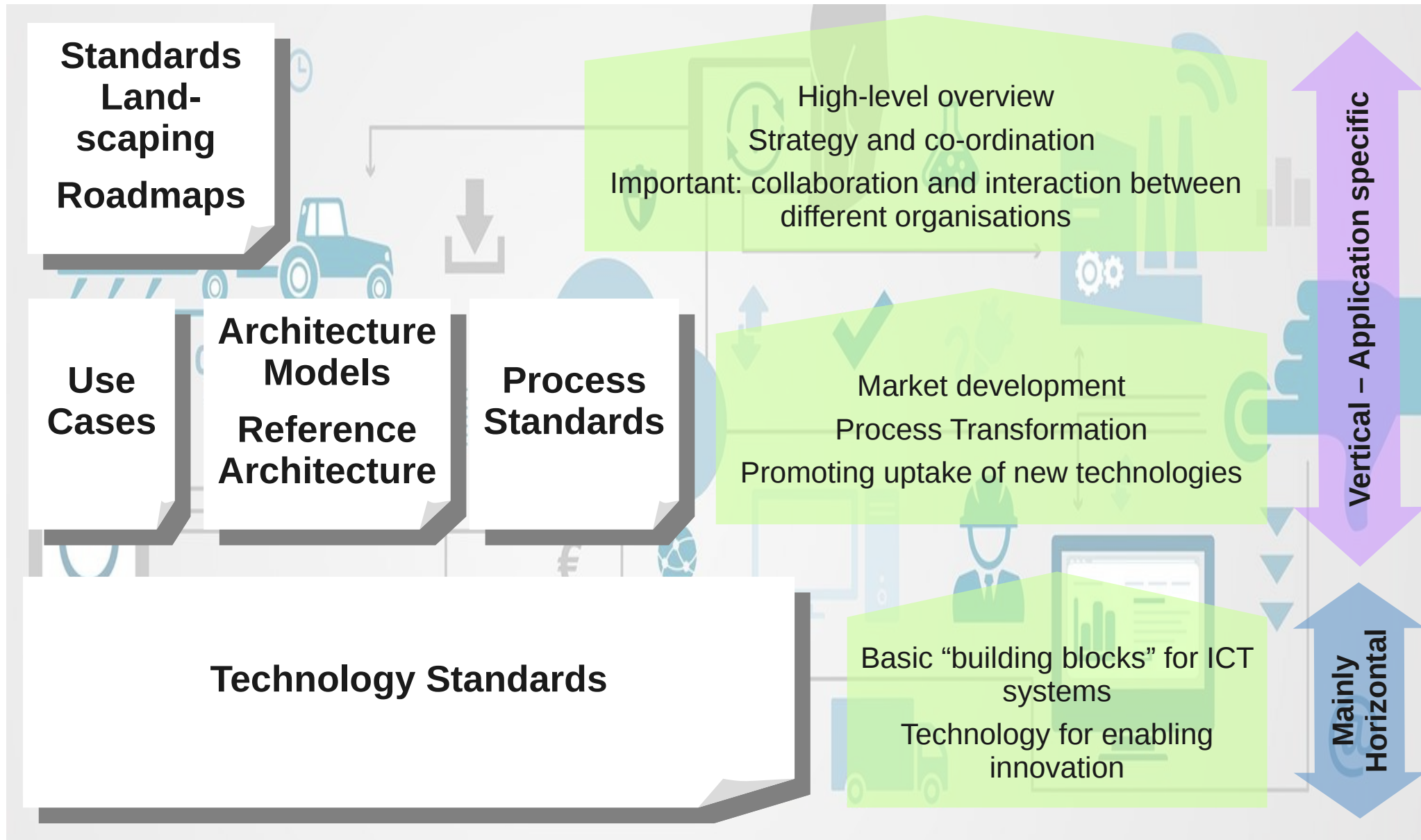| **Market need**	Stakeholder support (bottom-up) Broad adoption and market uptake
High quality	State-of-the-art technology Requires contribution of key global experts
Timeliness	Includes the aspects of the required quality, consensus and speed.

Standardisation and Innovation

Innovative act: In the implementation, use and combination of standards

Critical: Availability of standards

exploitation

Integration and combination of technologies

Go-to market

STANDARD

Innovative act: In the invention and development of new basic technologies

Critical: Contribution of technology

Basic research and technology development

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Different Roles of Standards at the Intersection to Innovation

Dissemination of technologies, e.g. transfer of research results into standards

Go-to Market/ Market Access, e.g.meeting regulatory requirements

Access to coded information, e.g. machine readable formats, M2M data processing

STANDARD

Interoperability, e.g. promoting fair competition, preventing vendor lock-in

Technology integration, e.g. systemic approaches

From Products to Systems – New Challenges for ICT Standardisation

Standardisation in Innovative and Complex Domains

Standards Land-scaping

Roadmaps

Use Cases

Architecture Models

Reference Architecture

Process Standards

Technology Standards

High-level overview

Strategy and co-ordination

Important: collaboration and interaction between different organisations

Market development

Process Transformation

Promoting uptake of new technologies

Basic "building blocks" for ICT systems

Technology for enabling innovation

Vertical – Application specific

Mainly Horizontal

Coordination and Collaboration

- There is no such thing like THE Internet of Things standard, or THE smart cities standard

- Basic technology standards are mostly available from different European and global standards bodies (including fora/consortia)

- Landscapings, Roadmaps, Reference Architectures are developed in multiple organisations – often duplicating respective efforts

- Coordination and collaboration can help to reduce efforts

- Structures for coordination in response to European policy needs should be inclusive, i.e.
  - Consider all available global standards and
  - Allow all relevant organisations and stakeholders to contribute on even ground
  - Allow global key experts to contribute

Smart Grid

eHealth

ITS

Industry 4.0

Smart Cities

...

Vertical application and process standards

Horizontal ICT and technology standards
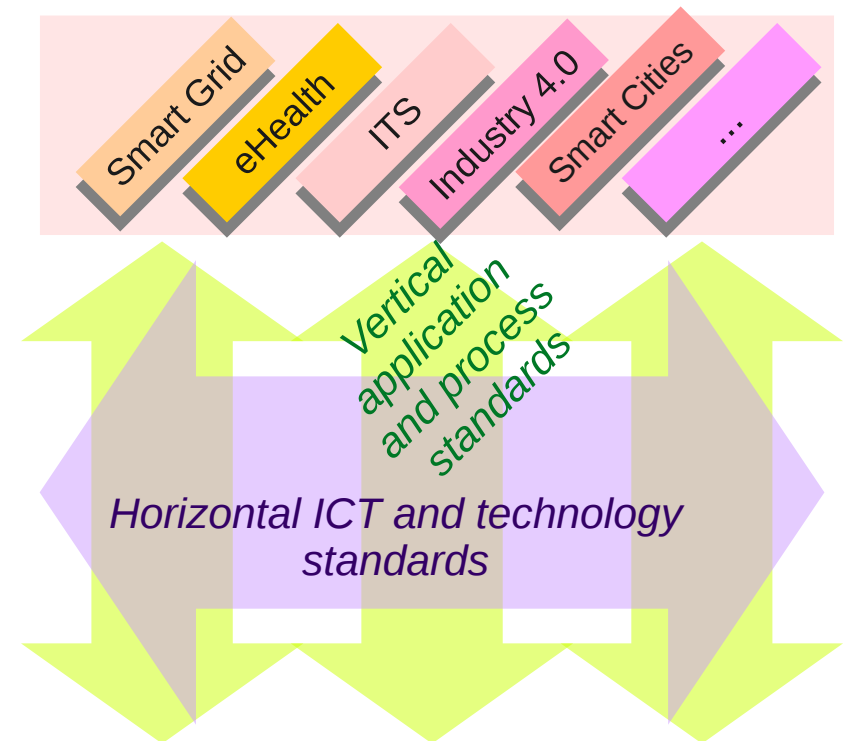
Promoting Interoperability versus "Soft Regulation"

Increasing activity: selecting standards

Roadmaps, Mappings or Catalogues for areas of importance (Cloud, Internet of Things, Big Data, ...)

Promote interoperability and uptake of standards

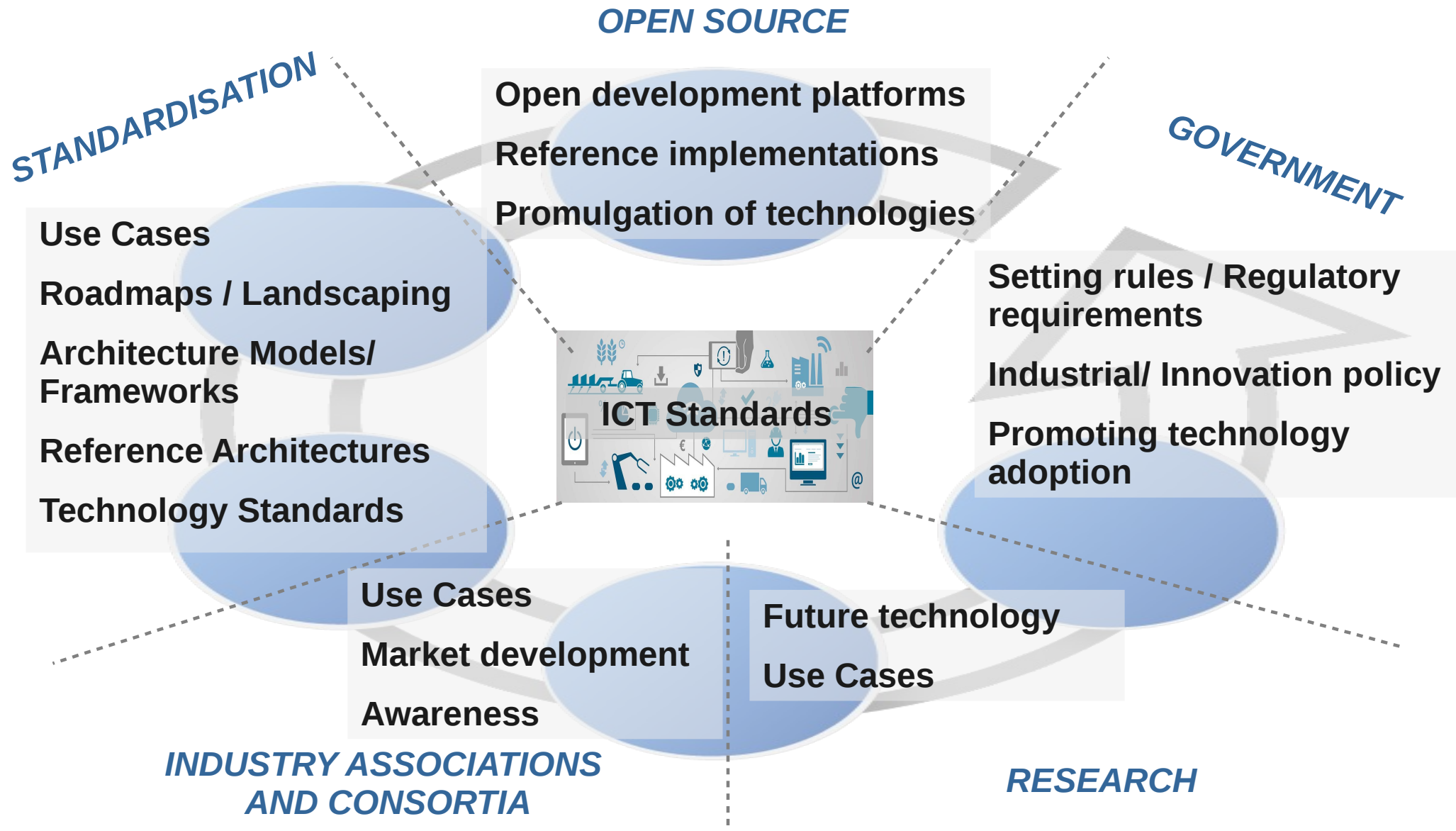Reference lists, e.g. used in public procurement

Governments set "standards" via such lists they commission or set up

Even though these lists are not binding they are relevant in the context of industrial policy

This may lead to de facto or "soft regulation" in non-regulated domains.

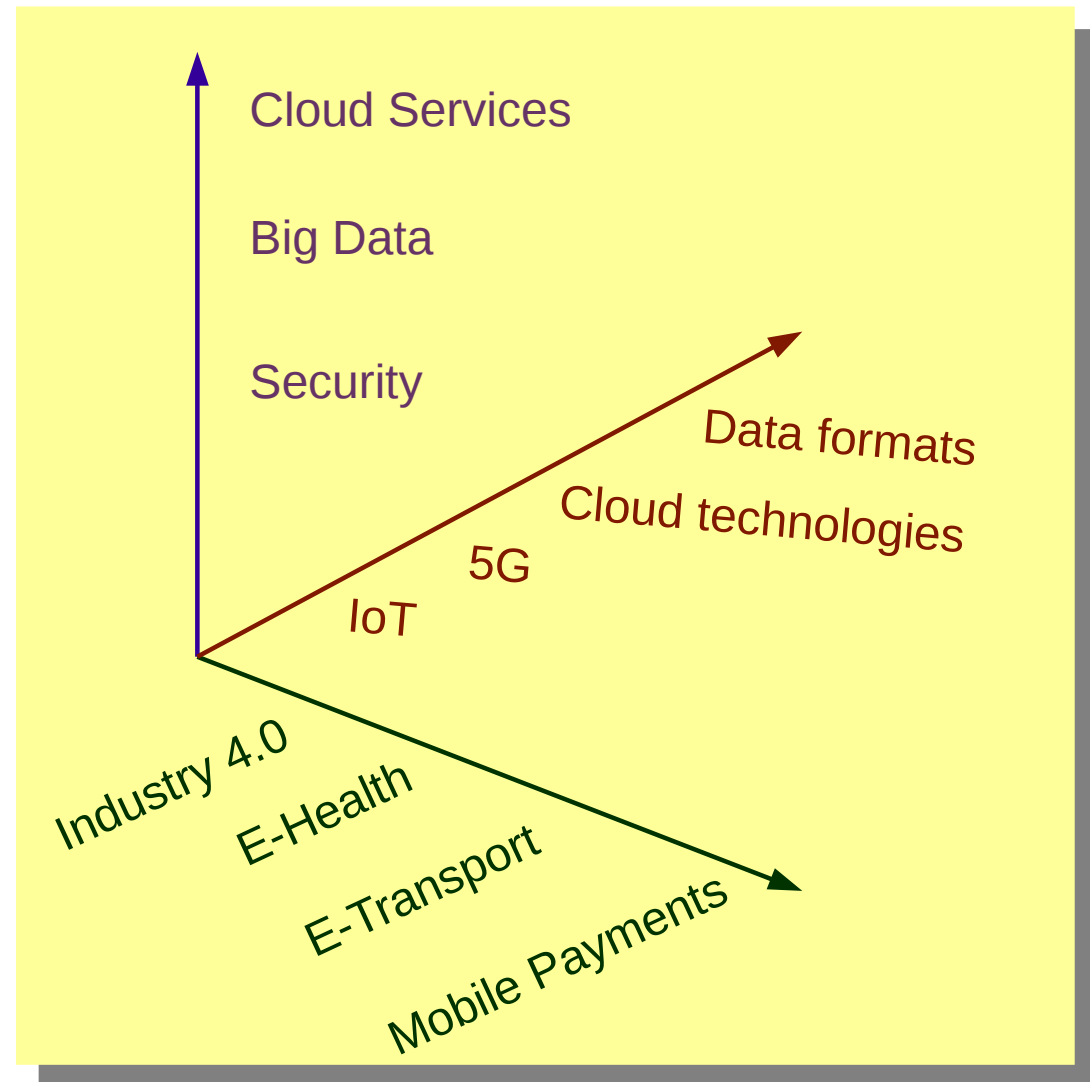**Balance between promoting interoperability and Soft Regulation is critical**

The Ecosystem Broadens

OPEN SOURCE

STANDARDISATION

GOVERNMENT

Open development platforms

Reference implementations

Promulgation of technologies

Use Cases

Roadmaps / Landscaping

Architecture Models/ Frameworks

Reference Architectures

Technology Standards

ICT Standards

Setting rules / Regulatory requirements

Industrial/ Innovation policy

Promoting technology adoption

Use Cases

Market development

Awareness

Future technology

Use Cases

INDUSTRY ASSOCIATIONS AND CONSORTIA

RESEARCH

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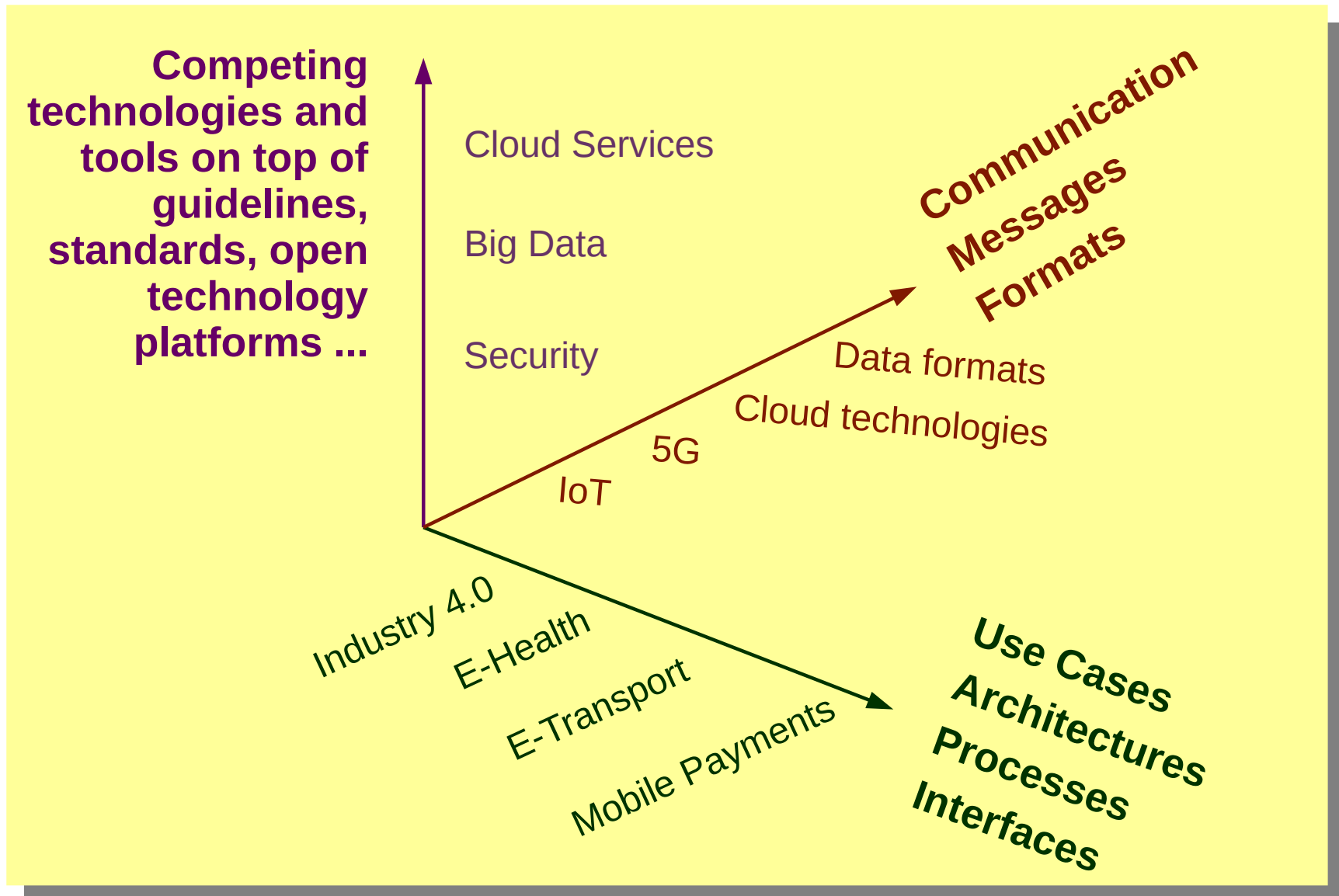
Digital Single Market Priorities

Standardisation has an essential role to play in increasing interoperability of new technologies within the Digital Single Market. It can help steer the development of new technologies such as 5G wireless communications, digitisation of manufacturing (Industry 4.0) and construction processes, data driven services, cloud services, cybersecurity, e-health, e-transport and mobile payments. [...] We need to define missing technological standards that are essential for supporting the digitisation of our industrial and services sectors (e.g. Internet of Things, cybersecurity, big data and cloud computing) and mandating standardisation bodies for fast delivery.
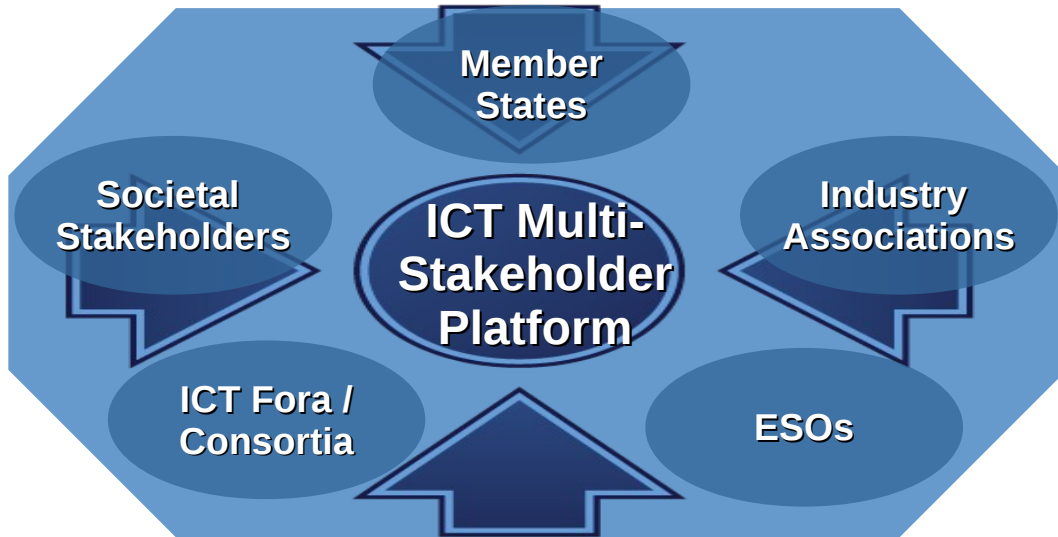
[COM(2015) 192, p. 15]

Cloud Services

Big Data

Security

Data formats

Cloud technologies

5G

IoT

Industry 4.0

E-Health

E-Transport

Mobile Payments

Towards a Strategy for Action

Competing technologies and tools on top of guidelines, standards, open technology platforms ...

Cloud Services

Big Data

Security

Communication Messages Formats

Data formats

Cloud technologies

5G

IoT

Industry 4.0

E-Health

E-Transport

Mobile Payments

Use Cases Architectures Processes Interfaces

ICT Multi-Stakeholder Platform

Identifikation of global ICT technical specifciations for use in public procurement
(Regulation 1025/2012, Cons 32., Art. 13 & 14, Annex II)

Initiative: Public Authority
↓
Advice: MSP
↓
Sectorial Experts
↓
Commission Decision

In order to further innovation and competition, the identification of a particular technical specification should not disqualify a competing technical specification from being identified ...
(Regulation 1025/2012, Consideratum 32)

EU Rolling Plan for ICT Standardisation

Policy Priorities and Strategy

Legislation in place

Ongoing and available work

Concrete proposed actions

Unique government – stakeholder collaboration

Fast and direct advice on standards policy issues

In progress: complementary key priority plan as announced in the DSM

Concluding Remarks

- Global standards, developed in global industry-driven standards bodies, are most critical for the success of ICT technologies.

- ICT standards are at the heart of the evolvement of innovative systems. This includes different aspects regarding the relation between standardisation and innovation.

- There are different aspects and layers regarding standardisation in support of policy objectives.

- The broadening of the standards ecosystem requires a common understanding and practice of roles and responsibilities to avoid unnecessary duplication of efforts

- Structures and processes might be modernised for being well suited to facilitate coordinated standardisation work in support of policy objectives

- Government – stakeholder cooperation has established as extremely fruitful and successful in Europe and is well positioned to form the core of a successful implementation of the standards related issues outlined in the DSM.

Thanks very much for your attention ...

... Happy to discuss ...

The Interplay between Patents and Standards