



5th International Conference On Innovation for Shared Prosperity: Past Tense, Present Perplexed, Future Perfect

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Outline

- Who am I?
- A brief introduction to standards
- Education about Standardization (EaS)
- How Standards helps in Economic Development
- Conclusion



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Expert in India
Enabling Europe-India Cooperation on Standards

Project is a permanent presence in India

SESEI (Seconded European Standardization Expert in India) is a face for the European standardization community in India



Why SESEI: India is a major trade partners for Europe, Increasing role of standards to gain market access and Evolving & complex national regulatory and standardization landscapes

Sector: 1. ICT: M2M/IoT, Security, 5G, NFV/SDN, e-Accessibility, eHealth, eCALL... **2. Electrical equipment including Consumer Electronics:** Smart Grid, Smart Meter, LVDC, Micro- Grid, Lift Escalator... **3. Automotive:** Connected Cars, ITS, e-Mobility... **4. Smart Cities:** Mobility, Waste, Energy, ICT..

www.sesei.eu , www.sesei.in , www.eustandards.in

Standard?

- Standards are simply a way of sharing good practice. It is a document that defines technical or quality requirements with which current or future products, production processes, services or methods may comply
- Standards present the consensus view on products/services, managing processes or even improving behaviours.
- They can be agreed specifications, recommendations, guidelines or principles.
- They demonstrate that products/services meet agreed criteria, processes and principles.
- Standards are written & maintained by business/industry, consumers, govt., innovators, etc.
- Organizations of all sizes and across all sectors choose standards to help them achieve their goals.



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Standards vs Législation

Standards :

1. Voluntary & Consensual
2. Developed by independent organisations
3. Revised every 5 years
4. Provide specifications and test methods (interoperability, safety, quality, etc.)



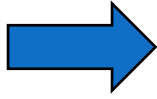
Legislation :

1. Mandatory & Imposed by Law
2. Established by public authorities
3. Revised when legislators decide
4. Gives requirements to protect public interests

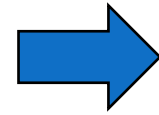
How Standards are Made?



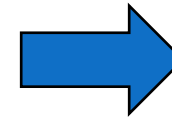
Anyone can suggest an idea for a new Standard



All ideas for new standards are assessed & stakeholders are consulted on the potential scope



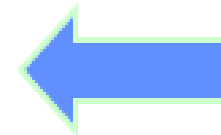
The Proposal is assessed and *if* approved a stakeholder group is formed



The Stakeholder group forms a committee to draft the standards



The draft is then issued for public consultation



Once the document passes final approval it is published



Standards are reviewed every five years some as early as two years from publication. The committee or drafting panel considers any comments they have received about standard and decides whether it needs to be withdrawn, confirmed or reconfirmed amended or revised. A decision to amend or revise the standard will lead to a new proposal for work

Integrated with International

Objective - Avoid duplication of work at International and European levels with an aim for a identical worldwide standards



“Vienna Agreement” with

Chemistry, Material, Energy, Environment, Transport, Construction, Services, eMobility etc



Founding member of ISO and working with IEC since 1911



“Frankfurt Agreement” with

Electricity, Electro-technical



MoU for telecommunications sector (ITU-T), Agreement on radio-communication sector (ITU-R)

Information & Communication Technologies (ICT)



DoT/TEC are member of ITU-T and WPC for ITU-R



Founding Partner to 3GPP & oneM2M



Organisational Partner of 3GPP and Partner Type 1 of oneM2M



Education about Standardization (EaS)



Why EaS...

- Business needs – increasing competition
 - New stakeholders – knowledge gap
 - Research and innovation – marketization
 - Regulation – understand role of standards & laws
 - CEN-CENELEC Guide 30 'European Guide on Standards and Regulation - Better regulation through the use of voluntary standards - Guidance for policy makers'
 - Sustainable system – maintain expert base
- **Hence it is imperative that:**
 - ✓ Public authorities and educational and training organizations are aware of need for education about standardization and include relevant content in their curriculum
 - ✓ Raise awareness & spread knowledge about standardization as a powerful tool to bring new technologies to market and drive (future) businesses.



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What - EaS

- EaS is teaching pupils, students, CEOs, managers, employees in business, and life-long learners the subject of standards and standardization.
- It shall include the followings as below:
 - ✓ The use and benefits of standards
 - ✓ the strategic importance of standardization for business and competitiveness
 - ✓ how to implement standards in businesses and
 - ✓ how to participate in standardization to influence the content of future standards.



CEN-CENELEC-ETSI JWG EaS

- The [Joint Working Group on EaS](#) is between the Three EU Standardization bodies namely CEN, CENELEC & ETSI
- JWG-EaS was established as a [policy on EaS \(2011\)](#) with the aims of
 - ✓ improving the understanding of the added value of standardization amongst the key stakeholders (business executives, academia, government and relevant authorities, ...);
 - ✓ increasing the competency of those persons seeking to participate in the standards-making process.
- [Masterplan on Education about Standardization \(2012\)](#) to set up a strategy for achieving the vision set out in the Policy on EaS (2011)
- [Model curricula was developed by JWG-EaS to be used by higher education and vocational training organizations:](#)
 - ✓ [model curriculum for higher education \(2011\)](#)
 - ✓ [model curriculum for vocational training \(2012\)](#)
- [eLearning tool for SMEs \(2015\)](#) and [repository of teaching tools and materials](#)
- [Textbook for higher education “A world built on standards” \(2015\)](#)
- [Boosting ICT Business and Innovation: A Comprehensive Approach to Standardization Education in Europe](#)



How Standards Benefit in Economic Growth



Standards are important for economic growth?

It is widely accepted that standards play a vital and often invisible role in supporting economic growth:

- ✓ by promoting productivity and efficiency in companies
- ✓ through their role in supporting international trade
- ✓ by acting as a catalyst for innovation within companies and sectors.
- ✓ Enhance **safety of products**
- ✓ Promote **common understanding**
- ✓ **Facilitate trade** by reducing TBs
- ✓ Promote **interoperability of products and services**
- ✓ Benefits of **economies of scale**
- ✓ Support **environmental sustainability**
- ✓ Facilitate the **uptake of innovation &** reflect the outcome of **research and Development**



Boost productivity & improve performance

- Increase efficiency by streamlining processes
- Reduce cost by minimizing waste & time spent
- Lower cost of regulatory compliances
- Allows production at scale with standardized solutions, performance or outcomes, thus freeing resources for differentiating products and services from those of competitors
- High Quality of Product & Services results in:
 - ✓ buyers' confidence
 - ✓ enhances companies' reputation
- Shorten time to market



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Kick Starts Innovation

- Agree common terminology and transfer new information into the commercial environment, which accelerates the spread of innovation
- Support innovators by providing expert, authoritative new knowledge, which in turn becomes a platform for further innovation
- Build communities and promote the exchange of knowledge, which catalyzes collaborative development and speeds up technology lifecycles
- Encourage process innovation through continual improvement
- Enable organizations to unlock their full potential in terms of their products, processes and behaviors



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Support Domestic & International Trade

- Give buyers confidence that products will be safe and fit for purpose, so they are more widely accepted
- Improve transparency – buyers know what they're getting – which reduces the costs of international trade, such as the need for repeated product testing
- Make firms more efficient and innovative, so they can compete globally
- Overcome arbitrary national technical barriers to trade
- Improve confidence and transparency throughout complex and often multinational supply chains



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Case Study of UK Economy

- Review of Role of Standards from 1921 to 2015 was carried out to provide a comprehensive examination of how standards have impacted UK economic growth:
 - ✓ Standards Contributed worth £8.2 Billion to the UK economy i.e. 28.4 % annual GDP
 - ✓ £ 6.1 billion additional exports per year
 - ✓ 37.4% growth in productivity attributed to standards
 - ✓ SMEs are 41% more likely to export if they use standard based products/ services
 - ✓ Large Companies are 36% more likely to export with the adoption of standards

Source : Centre for Economics and (Cebr) Business Research



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...making excellence a habit™

Business benefits of standards



84% of companies say that using standards enhances their reputation



73% of companies say that standards allow greater control of environmental problems

#BSI8bn



50% of companies say standards encourage innovation through diffusion of knowledge



89% of companies say that standards contribute to the optimization of compliance with regulations such as health and safety legislation

Standards boost UK productivity and improve performance, kick-start innovation, and support UK and domestic trade

bsigroup.com/EconomicBenefits

Source: Centre for Economics and Business Research (2015). The Economic Contribution of Standards to the UK Economy, published by BSI, June 2015.

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Case Study of Nordic Economy

- Menon Economics in cooperation with Oxford Research and the Social Science Research Institute of the University of Iceland carried out study - “THE INFLUENCE OF STANDARDS ON THE NORDIC ECONOMIES”
- By doubling the stock of standards increase of 10.5 percent in labour productivity across the Nordic countries.
- Given the average growth in stock of standards in the Nordic countries of 6.8 percent during the period studied (1976-2014):
 - Standardization is associated with an annual increase in labour productivity of 0.7 percent per year of a total average growth of 1,8 percent.
 - This result suggests that standardization is associated with as much as 39 percent of the labour productivity growth and 28 percent of GDP growth in the Nordic countries during the period.
- The most important reason for companies to use standards is to improve market access (34 percent of respondents), improve product/service quality (32 percent of respondents) and reduce risk (26 percent of respondents).

Source : Report THE INFLUENCE OF STANDARDS ON THE NORDIC ECONOMIES



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Conclusion

- ❑ **Standardisation is a form of self regulation and** is a tool to create **markets** as **large** and **homogenous** as possible to allow for **economies of scale**
- ❑ **Compliance** with **standards** in support of **regulation/legislation** implies “the **right** to **place** a **device** on the **market**”, “that is to **offer** it for **sale**”
- ❑ **ICT Standards need to be global** considering the **fact of interoperability**
- ❑ **Standards Portfolio Harmonization with Global Standards, raising awareness and visibility** plays an important role in strengthening trade
- ❑ Educational and training organizations **must be aware of need for education about standardization** and include relevant content in their curricula
- ❑ **Standards** helps in **Boosting productivity, improve performance, Kick Starts Innovation and help in Domestic & International Trade**

Thank you!

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