

STANDARDS FOR SME BUSINESS STRATEGY - LEARN THE ESSENTIALS

27-28 April 2026 - Online Event

Day 1 10:00>12:30 - Understanding Standards and its players

Day 2 10:00>12:30 - Participation in Standardisation for SMEs

Partners









TU/e EINDHOVEN
UNIVERSITY OF
TECHNOLOGY

27 April






Funded by
the European Union





-  **10:00 Welcome!**
-  **10:15 Standards, their values, and their role in industry**
-  **11:00 Drafting standards, sponsors and patents**
-  **11:35 A good standard for SMEs**
-  **12:15 Key messages**
-  **12:25 Give us your feedback!**



Rudi Bekkers


-  *TU/e (since 2003), Dialogic (since 2001), TELP (since 2015)*
-  *Full Professor of Standardization and Intellectual Property*
-  *More info on rudibekkers.com*

Specific standardisation activities:

-  *Appointed member of EC HLF on Standardisation, IEEE SA Europe Advisory Council, NL gov' Forum Standardisatie*
-  *Over 40 papers, 22 books/chapters, 75 commissioned studies, many on standards; PI of "Essentiality Pilot" of the EC*
-  *Member of ETSI, working with CEN/CENELEC, ITU*
-  *Chair of SOONS (academic collaboration with NEN)*



Jon Echanove

 *Small Business Standards (SBS) Secretary General - Small Business Standards (SBS), the European non-profit association representing and defending Small and Medium-sized Enterprises (SMEs) in standardisation.*

Specific standardisation activities:

 *Appointed member of EC HLF on Standardisation*

 *Expert in supporting quality infrastructure and competitiveness policies*

 *Former Director Corporate in the European Committee for Electrotechnical Standardisation (CENELEC)*

Copyright Rudi Bekkers, Hristina Veljanova, Barbara Reiter and Jon Echanove (2025, 2026). This work is licensed under the Creative Commons CC BY 4.0 license (see <https://creativecommons.org/licenses/by/4.0/>)

Note that some of the text and graphic material in this slide set is based on the following source, used by Eindhoven University of Technology with permission. Re-use of those parts is possible after applying for and receiving permission by ETSI via <https://www.etsi.org/education/teaching-material>

 Abdelkafi, N., Bekkers, R. N. A., Bolla, R., Rodriguez-Ascaso, A. & Wetterwald, M. (2021). Understanding ICT Standardization: Principles and Practice (2nd edition). Sofia Antipolis, France: ETSI. 280 p. ISBN: 979-10-92620-50-1.

This sheet deck was prepared in the context of the edu4standards Horizon project, funded by the European Commission. Please visit edu4standards.eu for more information and materials.

Standards, their values and their role in industry

Rudi Bekkers




A 15 mins hot group exercise:


Based on your experience, list the main benefits of standards in the business strategy of SMEs

You will be assigned to breakout rooms for discussions, after we reconvene in the plenary room, summarise your main ideas in the word cloud.



1. ... shape how the future of technology looks like
2. ... determine who is the winner and who is the loser
“Wer nicht selbst normt, der wird genormt!”
3. ... Are a wonderful collaborative mechanism, resulting in access to actor networks
- 4 ... Are fascinating. ;-)

-  **ISO:** “A standard is a document, established by a consensus of subject matter experts and approved by a recognized body that provides guidance on the design, use or performance of materials, products, processes, services, systems or persons.’

-  **CEN/CENELEC:** “A standard is a technical document designed to be used as a rule, guideline or definition. It is a consensus-built, repeatable way of doing something.”

https://www.iso.org/sites/ConsumersStandards/1_standards.html

<https://www.cencenelec.eu/european-standardization/european-standards/>

Our definition:

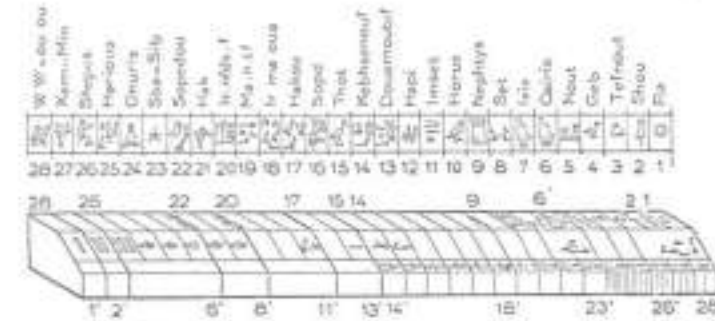
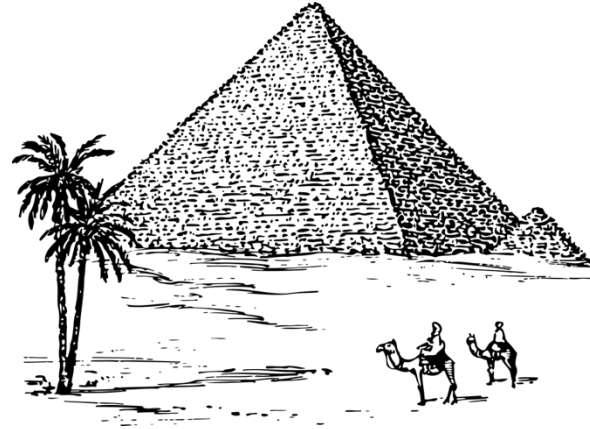
“A standard is a widely agreed way of doing something:

“designing a product”,

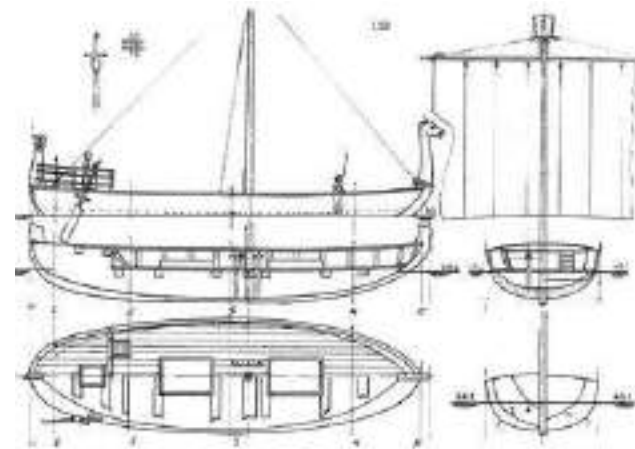
“building a process”,

“implementing a procedure”

“delivering a service”.”



Egyptian Measures







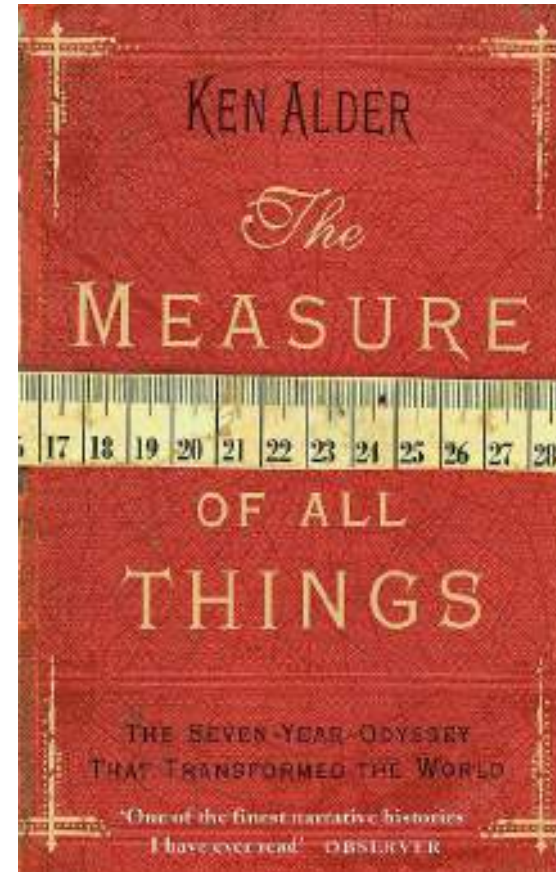
Shipbuilding in Venice

Types of standards:





-  **Measuring / metrology standards**
-  **Safety standards**
-  **Variety-reducing standards**
-  **Compatibility/interoperability**


Examples:

-  Meter
-  Kilogram
-  Volt (standard: Josephson Junction)
-  Time



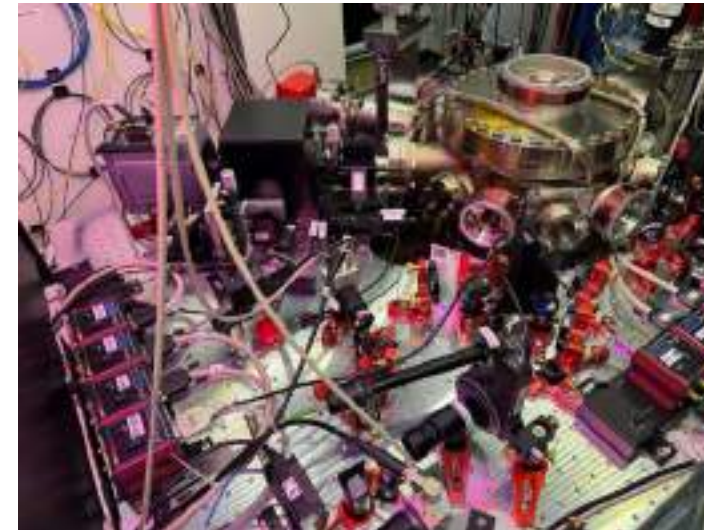
Examples:

-  Meter
-  Kilogram
-  Volt (standard: Josephson Junction)
-  Time

 Increasingly, metrology standards are defined on fundamental physical constants rather than artifacts



Clocks at PTB
Braunschweig



Optical clock based
on trapped ions

Relative uncertainty
 3×10^{-18}

 Examples:



EN 1866-1:2007



EN 12278:2007



NEN 1010



EN 15227:2020



Siemens Europrinter,
Introduced 2000, approx.
~940 build



New Siemens Vectron,
Introduced 2010, more
than 2000 build

Collision safety of trains and trams is a concern

Safety only based on energy absorption levels proved inadequate in numerous accidents

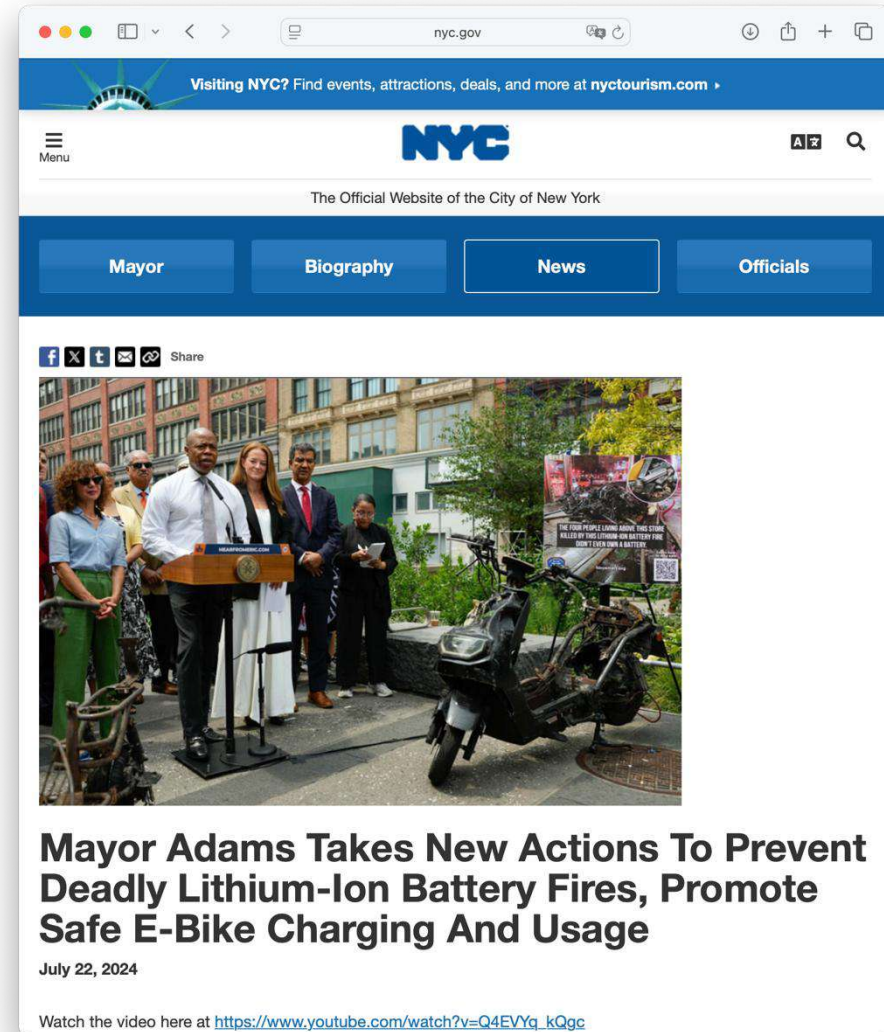
Research by EU and International Railway Union (UIC) by demonstrated gain by optimised arrangements

New standard EN 15227 (published 2008) and obligatory by EU Technical Specifications for Interoperability

Some statistics:

- In 2023, there were 216 fires in total, resulting in six deaths.
- In the first half of 2024, more than 60 incidents of e-bike fires had already been reported in New York City alone, and five people had died.

Source: <https://www.getwhizz.com/blog/battery/e-bike-battery-fire-statistics>



The screenshot shows the official website of the City of New York (nyc.gov). The page features a navigation bar with 'Mayor', 'Biography', 'News', and 'Officials' buttons. The main content area displays a news article with a photo of Mayor Adams at a podium next to an e-bike. The article title is 'Mayor Adams Takes New Actions To Prevent Deadly Lithium-Ion Battery Fires, Promote Safe E-Bike Charging And Usage', dated July 22, 2024. A video player is embedded below the text, with a link to watch the video on YouTube.

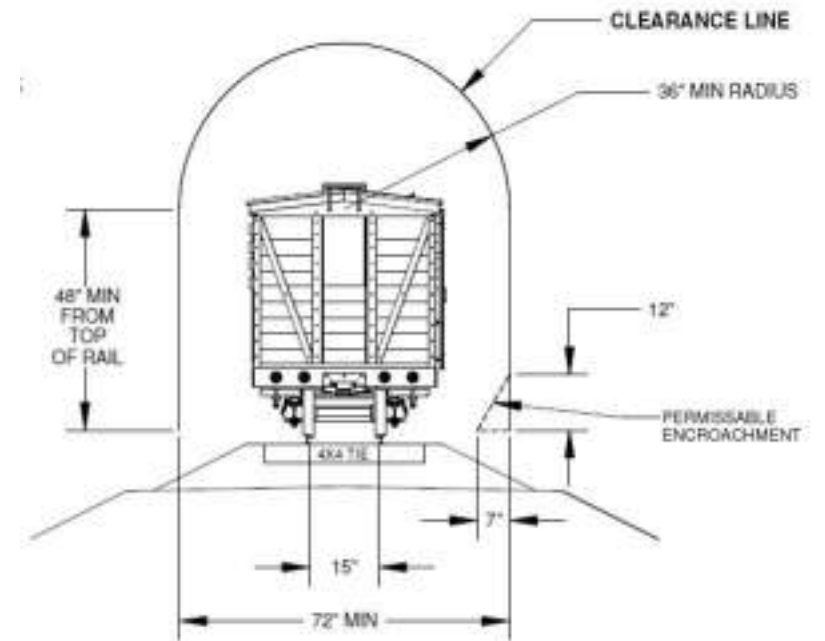
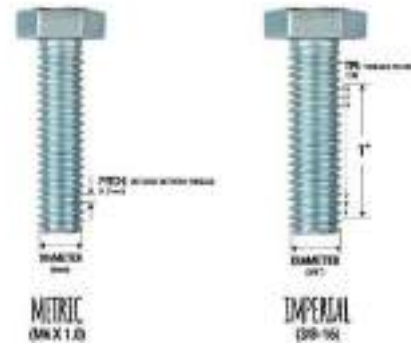
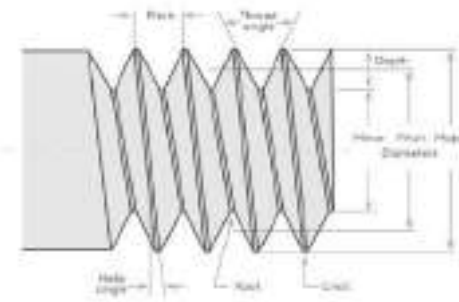
Mayor Adams Takes New Actions To Prevent Deadly Lithium-Ion Battery Fires, Promote Safe E-Bike Charging And Usage
 July 22, 2024

Watch the video here at https://www.youtube.com/watch?v=Q4EVYq_kQgc

Examples

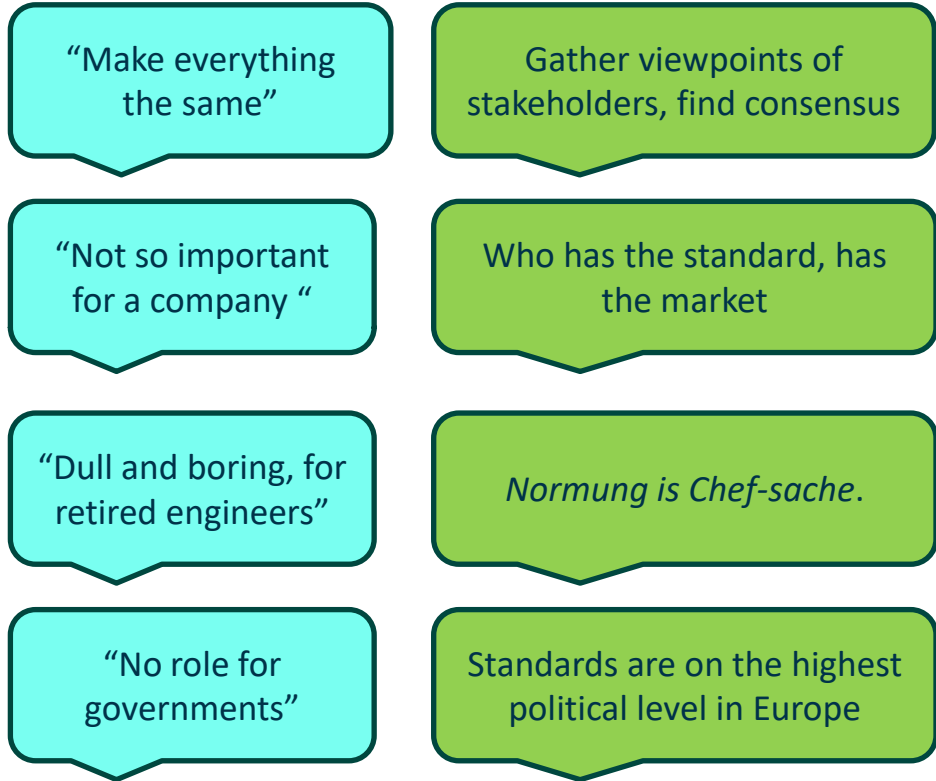


The Great Baltimore Fire:
Setting the Standards



Compatibility standards





Eurocommissioner Thierry Breton chairing the EC High-Level Forum (HLF), 20 January 2023



In Germany, Siemens vice president chairs the DIN-Präsidialausschusses FOCUS.ICT (Presidential Committee)

 Standards and standardisation are valuable for

 **Society**

 *Industry (a company)*

 *An individual*

 *(At least, in most cases...)*

Benefits	
Economy	<ul style="list-style-type: none"> ■ Incentivising investments ■ Enable economies of scale by fostering interoperability. ■ Standards facilitate trade
Environment/ safety	<ul style="list-style-type: none"> ■ Sustainability and safety requirements promote the design and realization of more sustainable products and services by providing targets.
innovation	<ul style="list-style-type: none"> ■ Promoting the interoperability of products, services, and processes. ■ Avoid duplication and reduce development time ■ Reduce design costs ■ Reduce risks
Risks	
Economy	<ul style="list-style-type: none"> ■ Standards can jeopardize innovation ■ Standards might jeopardize fair competition ■ Inconsistency in standardization landscape, competition between standards

 **Effects are different for different type of standards**

 *Let's explore...*

	Positive Effects	Negative Effects
Minimum Quality/ Safety Standards	<ul style="list-style-type: none"> • Avoiding adverse selection • Creating trust • Reducing transaction costs 	<ul style="list-style-type: none"> • Regulatory capture • Raising rival's costs
Variety Reduction Standards	<ul style="list-style-type: none"> • Economies of scale • Building focus and critical mass 	<ul style="list-style-type: none"> • Reduced choice • Leading to monopoly, market access barriers
Information/ measurement Standard	<ul style="list-style-type: none"> • Facilitates trade • Reduced transaction costs • Providing codified knowledge 	<ul style="list-style-type: none"> • Regulatory Capture

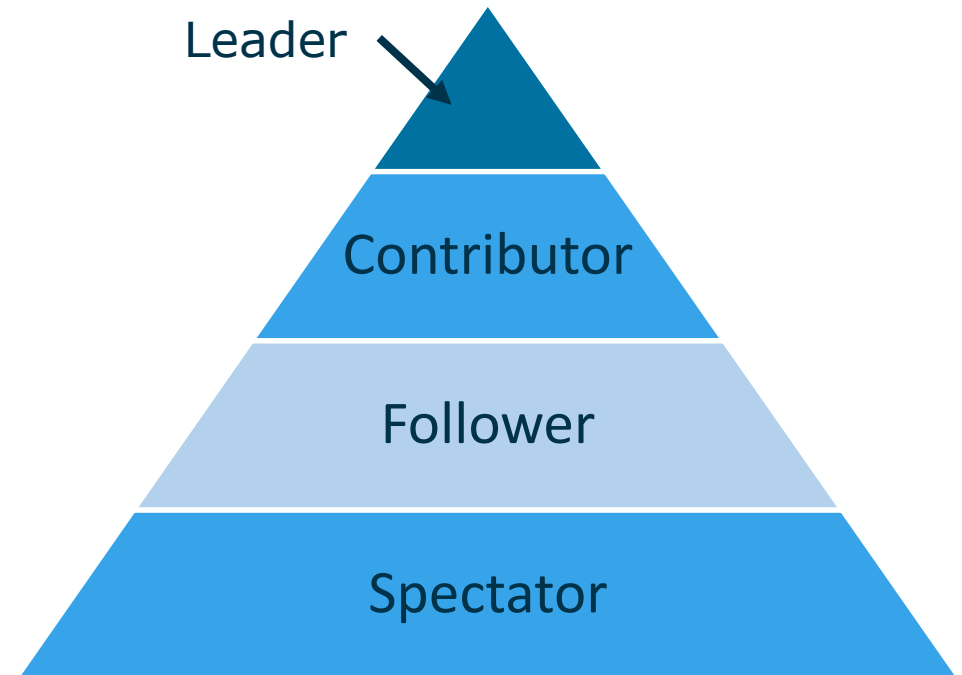
	Positive Effects	Negative Effects
Compatibility/ Interface Standards	<ul style="list-style-type: none"> • Network externalities • Avoiding lock-in in old technologies • Increased variety of system products • Efficiency in supply chains 	<ul style="list-style-type: none"> • Anti-competition, leading to monopoly • Lock-in in old technologies in case of strong network externalities
... also...	<ul style="list-style-type: none"> • Lower switching costs • More suppliers • More competition • Greater offer and lower prices of complementary good • Less risk of tying • Easier evaluation of offerings • Easier combination • Reduces risk for choosing a future loser • Lower risk for one-supplier dominated markets 	<ul style="list-style-type: none"> • Reluctance towards newer and better standards • Loss of variety • Less competition early in product life cycle • Protection of markets; entry barrier • Bias to large vendors • Bias to large purchasers • Costs to rival vendors • Large power for standards sponsor • Higher costs associated with over-standardisation • Costs of setting the standard

Standards and standardisation are valuable for

 *Society*

 ***Industry (a company)***

 *An individual*



Leader:

“Who sets the standard, has the market”.

- Bring standard close to in-house tech, platforms, prototypes
- Foreclose other technology routes
- Recombine tech in leadership partnerships
- Exploit your IP




Follower:

- Decrease or manage adaptation costs for in-house tech
- Decrease compliance costs
- Obtain knowledge at the frontier of technology
- Market intelligence

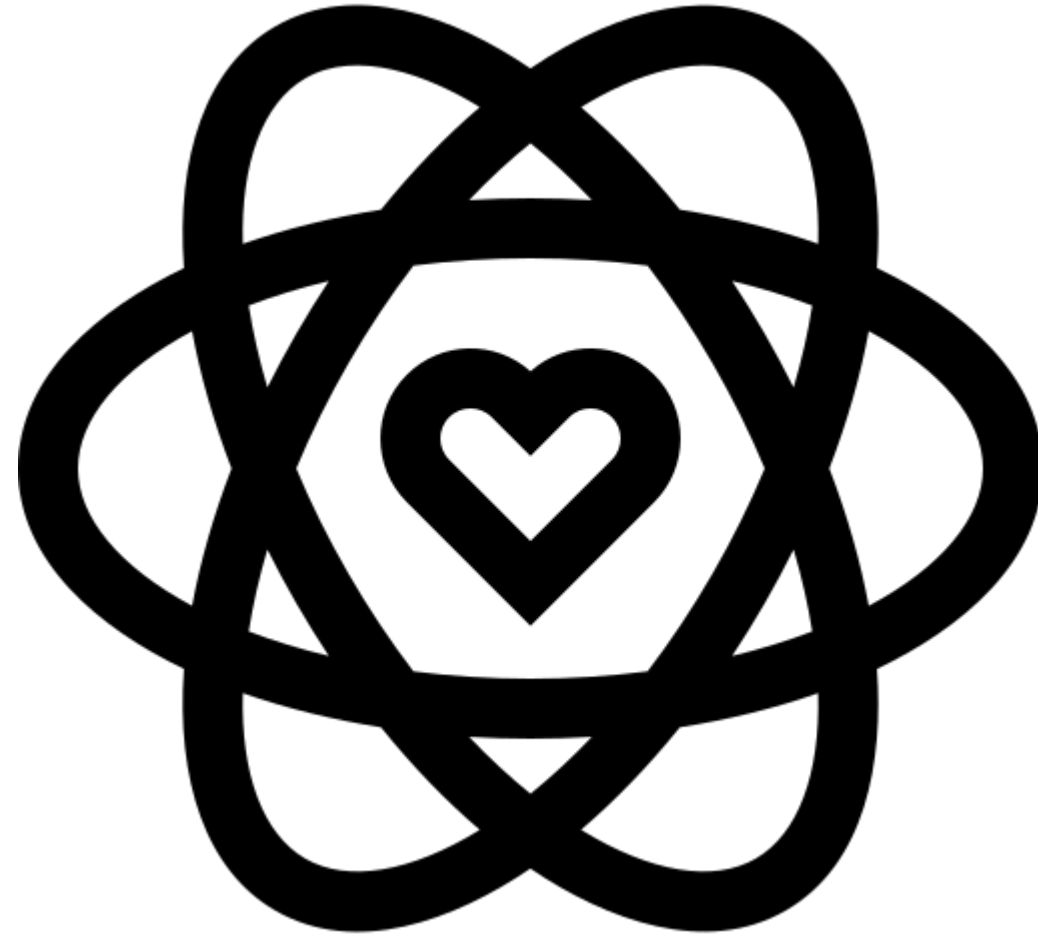
Obstructor:

- Prevent success of standard
- Market intelligence

- 🌐 **Companies need business models to justify putting resources into standardisation**
- 🌐 **Standards that are developed...**
 1. ... create markets that otherwise would not have existed
 - a) Not at all: no single company covers all these parts of the value chain
 - b) not at this size: alternative is multiple small, fragmented markets
 2. ... create markets for complimentary goods and services, that are not part of the standard itself but will be needed to use the standard in practice
 3. ... may require the use of patented technologies (SEPs), which generate revenue for their owners

-  Companies (equipment man., service providers, operators)
-  Academia and research centers , consultancies
-  Certification bodies, Administration and public authorities
-  End users, social organisations







In its 2022 Standardisation Strategy (EC, 2020), the European Commission emphasises the role of values

-  “[...] standards do not only have to deal with technical components, but also incorporate core EU democratic values and interests, as well as green and social principles.” (p. 4).
-  “The EU’s objective is to shape international standards in line with its values and interests” (p. 5)
-  “[The EC is] committed to making the European standardisation system [...] to reserve and reinforce democratic values.” (p.9)

What values? There are several value sets:





-  Article 2 TEU (European values)
-  Code of conduct in the field or company
-  Personal values

Also:

-  Chart of Fundamental Rights of the European Union
-  European Declaration on Digital Rights and Principles for the Digital Decade
-  Political Guidelines for the next European Commission 2024–2029
-  Universal Declaration of Human Rights

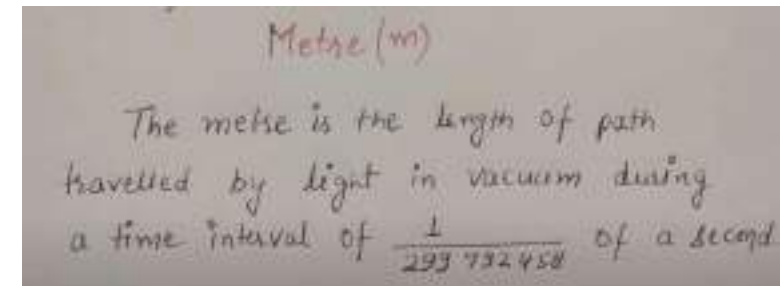
Standards, like technical solutions, are seldom neutral

Examples:

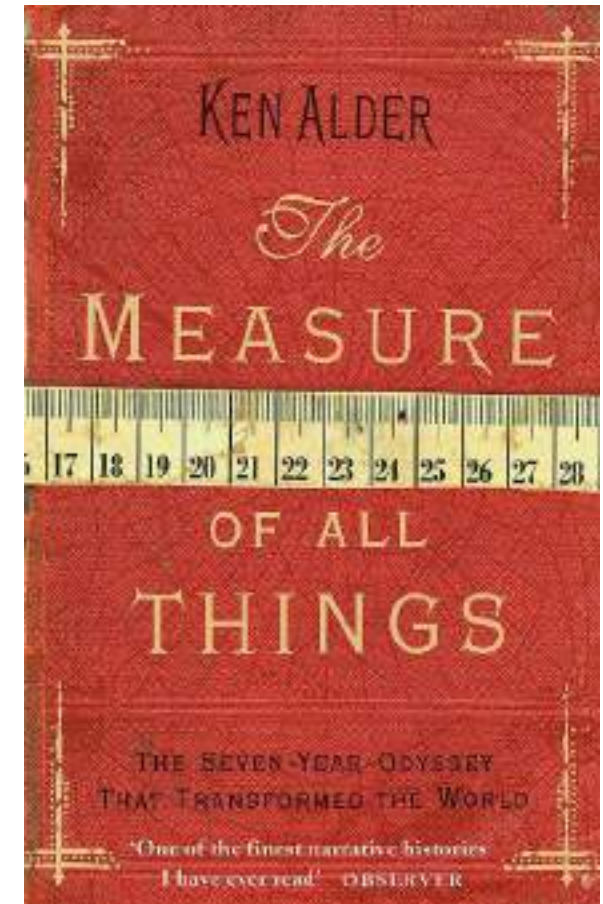
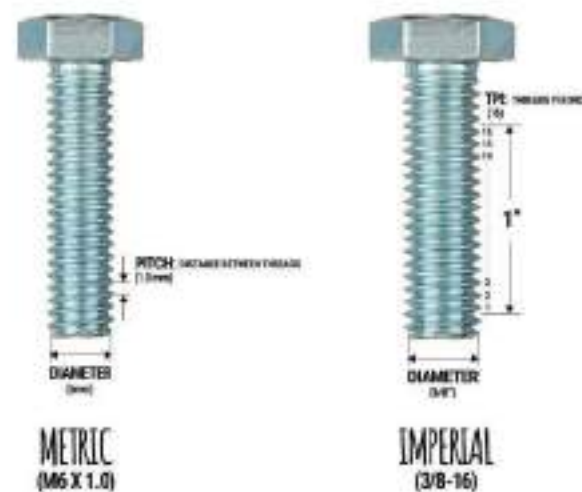
-  The development of the meter
-  The requirements for airbags
-  AI-based recommender systems
-  The ‘new internet’ as proposed by Chinese actors in the 2020s

 We will now discuss these examples in more detail....





- Originally defined in 1791 by the French National Assembly as one ten-millionth of the distance from the equator to the North Pole. (Right: Historic meter reference, at the Conservatoire national des arts et métiers, in Paris)
- In 1799, the metre was redefined in terms of a prototype metre bar. (Right: a bar certified to have a length of $1 \text{ m} - 1.6 \mu\text{m} + 8.657 \mu\text{m} \cdot T + 0.001 \mu\text{m} \cdot T^2 \pm 0.2 \mu\text{m}$)
- From 1983 until 2019, defined as the length of the path travelled by light in a vacuum in a given time
- From 2019: same, but the definition of a second is in terms of the caesium frequency $\Delta\nu_{\text{Cs}}$ (revision of SI)



- 🌐 **Q: Is the meter neutral?!?**
- 🌐 A: not really, it represents all sorts of vested interests
- 🌐 A fascinating story is in the book of Ken Adler
- 🌐 And as of today, we still have both the metric and imperial system



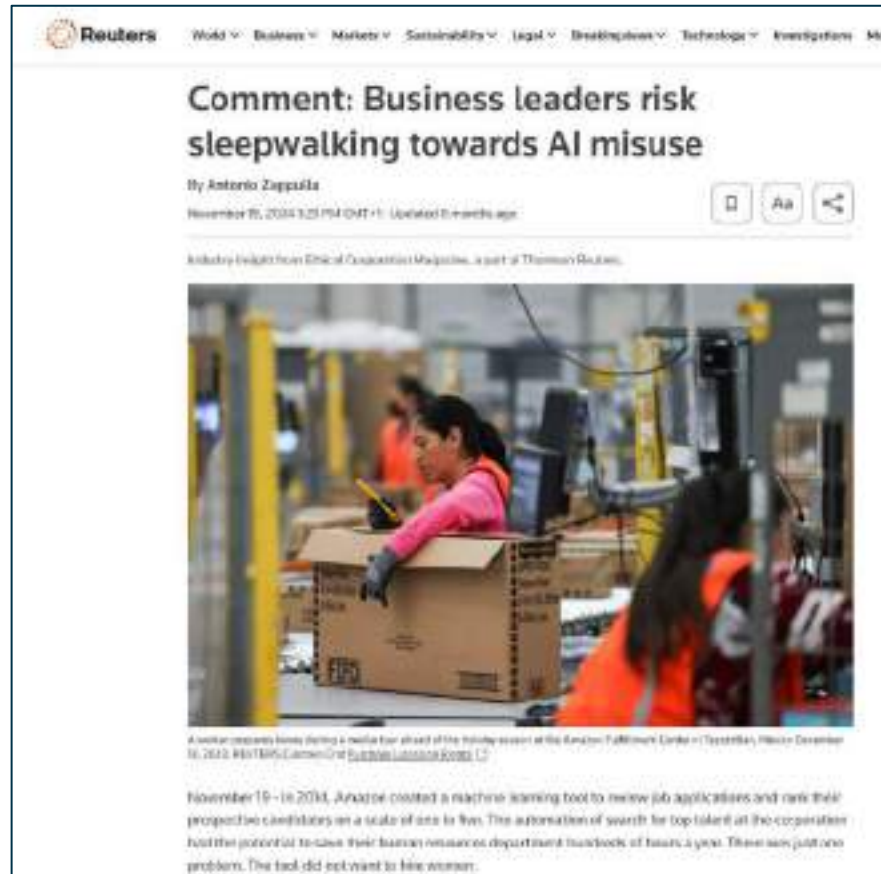
Source: Adler (2002)

-  Most dummies used in car crash tests are represented by the standardised 50th percentile male dummy (175cm tall, weighing 78kg, NHTSA).
-  Scaled-down version of the male dummy used for women (149cm tall, weighing 48kg, NHTSA).
-  Females are at a greater risk of dying from a car crash and more prone to severe injuries in accidents.
-  The world's first female crash test dummy developed by a team of Swedish engineers (162cm tall, weighing 62kg).




Courtesy VTI

Source: NANOC (2022)



Comment: Business leaders risk sleepwalking towards AI misuse
 By Antonio Zappalà
 November 15, 2024 12:15 PM GMT+1 · Updated 5 months ago

Industry insight from *Ethical Quarterly Magazine*, a part of Thomson Reuters.



A worker recently being fitted a mask for ahead of the holiday season at the Amazon Fulfillment Center in Tarrytown, New York December 16, 2022. AP/WIDEWORLD/Chris Wedel/Contrasto/Corbis Out

November 19 - In 2014, Amazon created a machine learning tool to review job applications and rank their prospective candidates on a scale of one to five. The automation of search for top talent at the corporation had the potential to save their human resources department hundreds of hours a year. There was just one problem. The tool did not want to hire women.



Revealed: bias found in AI system used to detect UK benefits fraud
 Exclusive: Age, disability, marital status and nationality influence decisions to investigate claims, prompting fears of 'first first, fix later' approach

Robert Booth UK technology editor
 14 Dec 2024 09:01 GMT



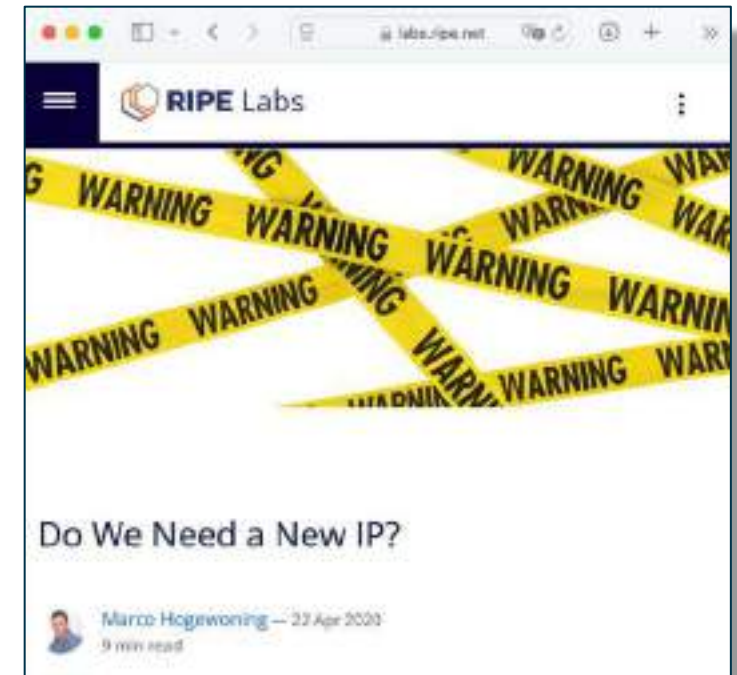
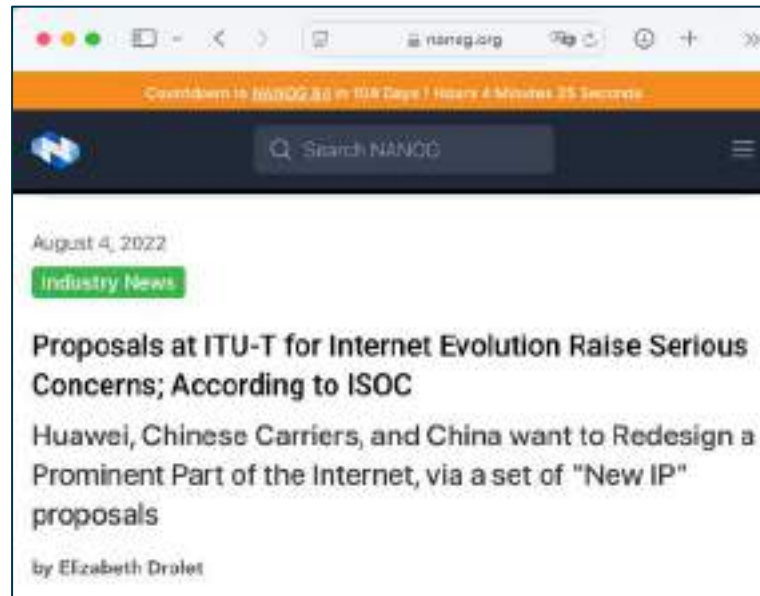
Claims for advances on universal credit payments are being assessed by a biased AI system designed to detect fraud, it has emerged. The Telegraph has learned.

An artificial intelligence system used by the UK government to detect welfare fraud is showing bias according to people's age, disability, marital status and nationality, the Guardian can reveal.





An internal assessment of a machine-learning programme used to vet thousands of claims for universal credit payments across England found it incorrectly selected people from some groups more than others when recommending whom to investigate for possible fraud.

The admission was made in documents released under the Freedom of Information Act by the Department for Work and Pensions (DWP). The "statistically significant outcome disparity" emerged in a "fairness analysis" of the automated system for universal credit advances carried out in February this year.

“There was just one problem. The tool did not want to hire women.”



While having standards incorporating core EU democratic values and interests certainly has benefits, it also raises questions

-  Are those developing the standard equipped to understand and identify all relevant values, translate them to technical properties, and implement them?
-  Does this outsource the democratic tasks that regulators have themselves?
-  What about responsibilities and liability?
-  May this chase of individuals contribute to standards development?

- 🌐 EC (2022). Communication From The Commission [...]: An EU Strategy on Standardisation: Setting Global Standards in Support of a Resilient, Green and Digital EU Single Market. COM(2022) 31 Final. European Commission. EC.
- 🌐 Chart of Fundamental Rights of the European Union: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12016P/TXT>
- 🌐 European Declaration on Digital Rights and Principles for the Digital Decade [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32023C0123\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32023C0123(01))
- 🌐 Political Guidelines for the next European Commission 2024–2029 (https://commission.europa.eu/priorities-2024-2029_en)
- 🌐 Universal Declaration of Human Rights / UDHR (<https://www.un.org/en/about-us/universal-declaration-of-human-rights>)
- 🌐 Hogewoning, 2020: Do We Need a New IP? https://labs.ripe.net/author/marco_hogewoning/do-we-need-a-new-ip
- 🌐 NANOC (4 Aug 2022) <https://nanog.org/stories/articles/new-ip-proposals-are-a-threat-according-to-isoc/>
- 🌐 Engadget, 2020. China, Huawei propose internet protocol with a built-in killswitch New IP sounds good in some ways, but might help authoritarian crackdowns. Article by Jon Fingas, Mar 30, 2020. <https://www.engadget.com/2020-03-30-china-huawei-new-ip-proposal.html>
- 🌐 Ken Alder (2002). The Measure of All Things: The Seven-year Odyssey and Hidden Error that Transformed the World. Simon and Schuster, ISBN 9780743216753.

Drafting standards, sponsors and patents

Jon Echanove



A 5 mins exercise:

Who drafts the standards?



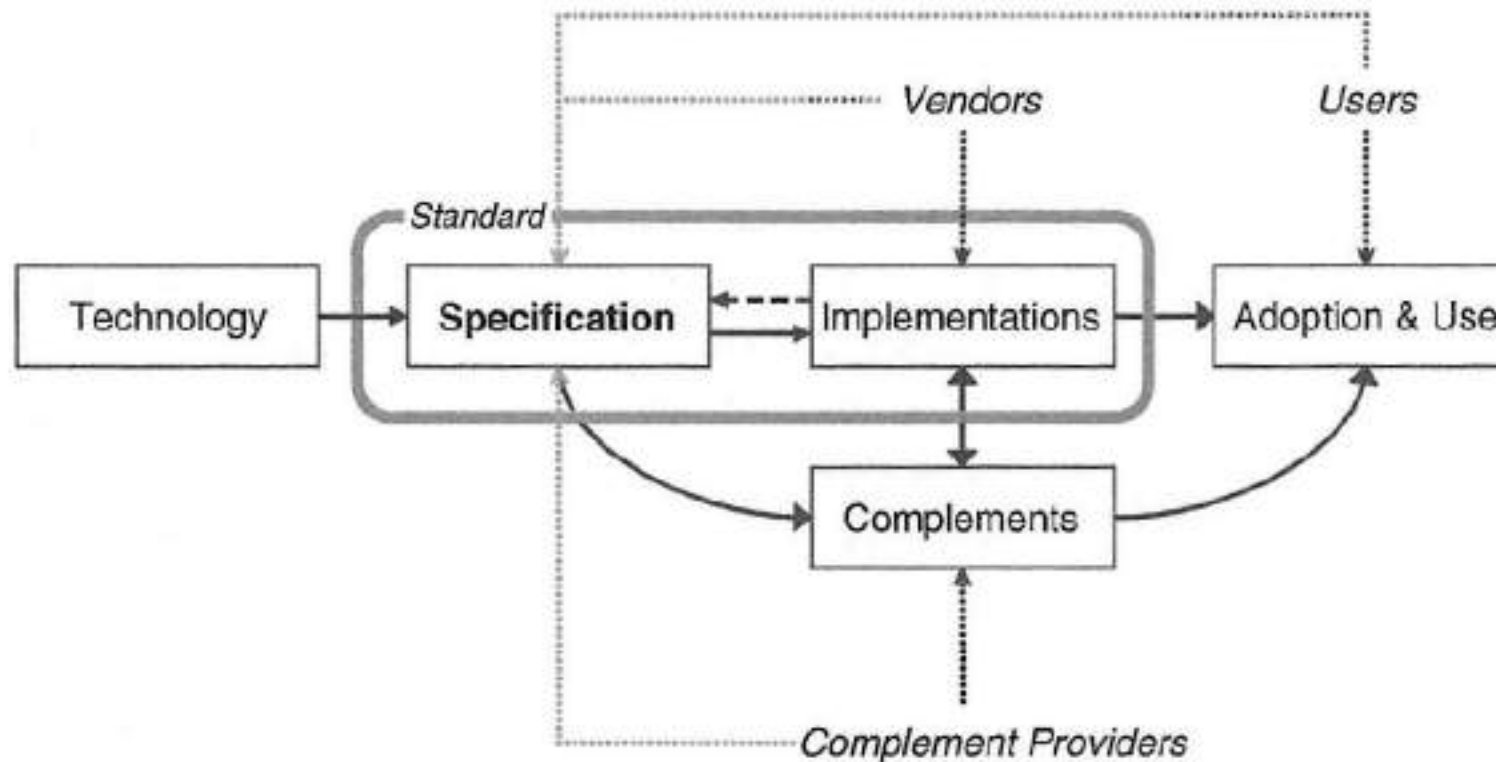


Figure 3.2. Process model for stakeholders in creation and adoption of standards.

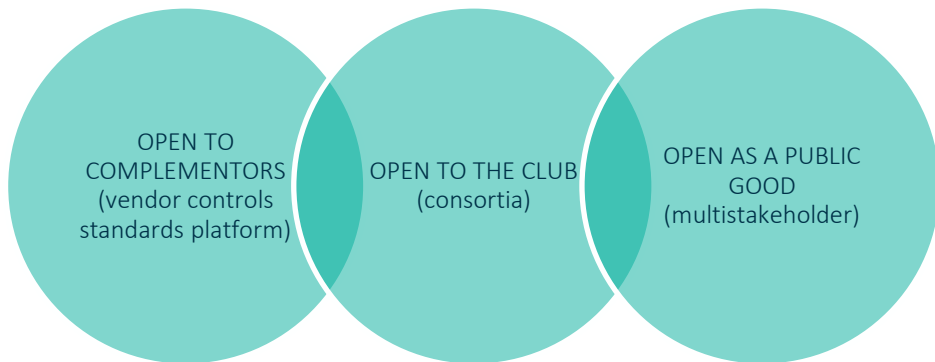
West, J. (2007). The economic reality of open standards. In S. Greenstein & V. Stango (Eds.), Standards and public policy. Cambridge University Press.

STAKEHOLDER	MAIN MOTIVATION
TECHNOLOGY PROVIDERS	Return on the R&D invested
INCUMBENT VENDORS	Acceptance of their own standard
VENDOR CHALLENGERS	Avoid being shut out of the market
COMPLEMENT PROVIDERS	A large market for complementary products
USERS	Interoperability

West, J. (2007). The economic reality of open standards. In S. Greenstein & V. Stango (Eds.), Standards and public policy. Cambridge University Press.

Matching existing implementations	Vendors, users and complementors want new standards compatible with the standards already adopted
Patent Royalties	Vendors seek standards to "read on" their patent portfolio
Alignment of technology	Implementers seek to influence standards in a direction that gives them competitive advantage
Pace of standardisation	Single-firm de facto standards favour a higher rate of change (increasing the challenge of having commercially viable competing implementations)

West, J. (2007). The economic reality of open standards. In S. Greenstein & V. Stango (Eds.), Standards and public policy. Cambridge University Press.



Committee-based Standardisation:

Public domain but not sponsored by one organisation without proprietary interest (e.g., Linux)

Sponsored by one organisation with proprietary interest (e.g., Windows)

Mandated by government

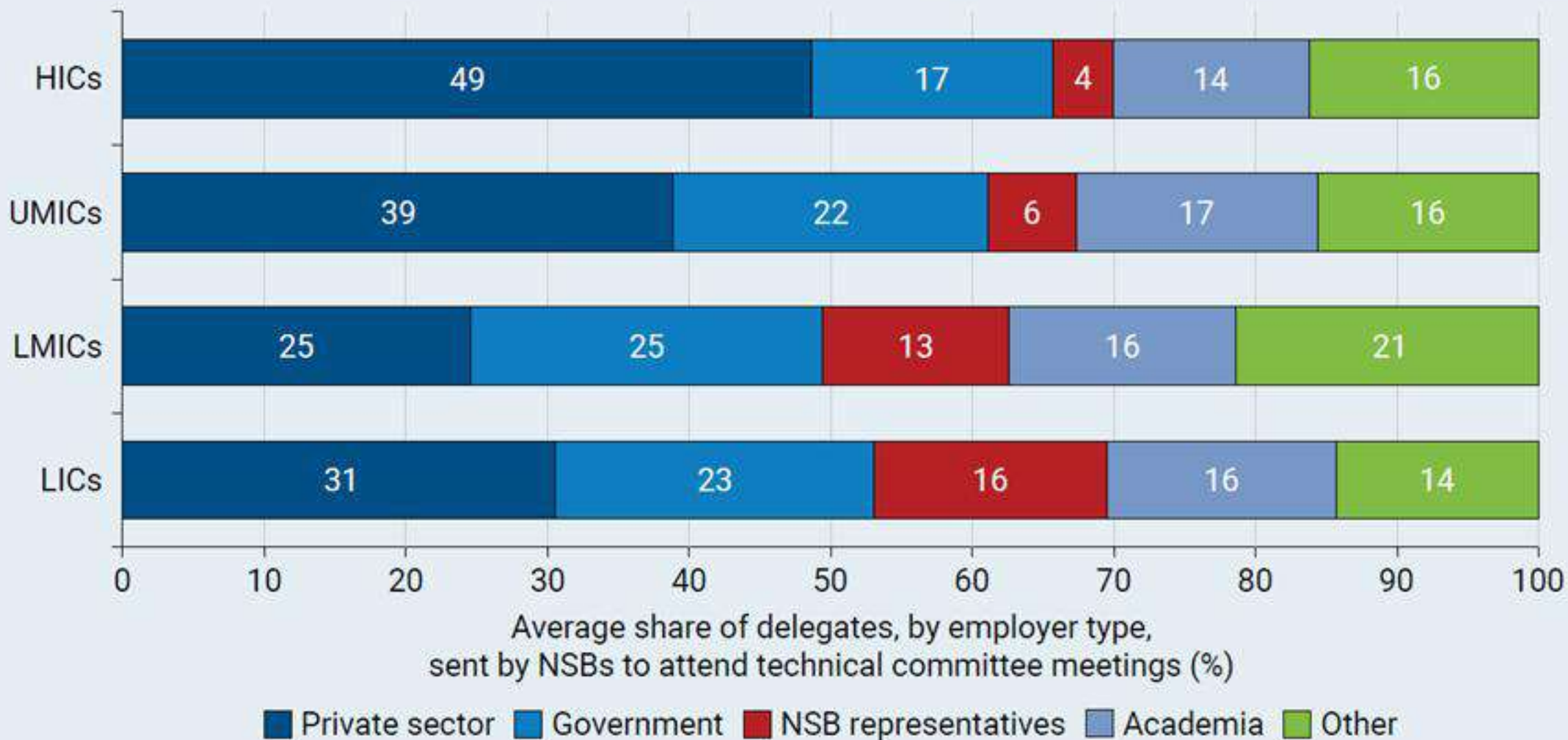
Published by voluntary standard-developing organisations

David, P.A. and Greenstein, S. (1990). The economics of compatibility standards: An introduction to recent research. *Economic Innovation and New Technology* 1: 3-41

Committee-based Standardisation business processes:

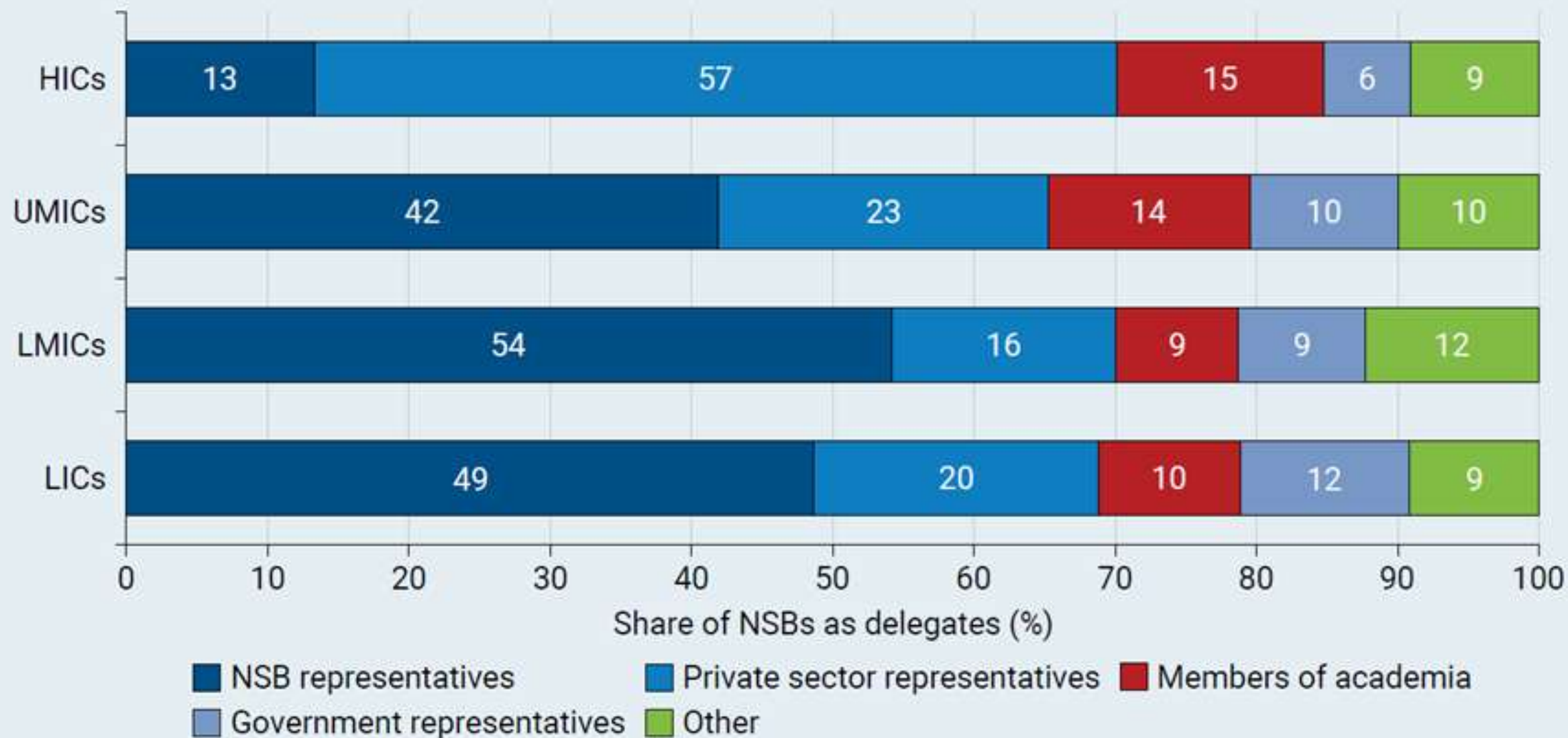


Figure S3.3 Among income groups, the private sector has the greatest representation in technical committees of national standards bodies in high-income countries



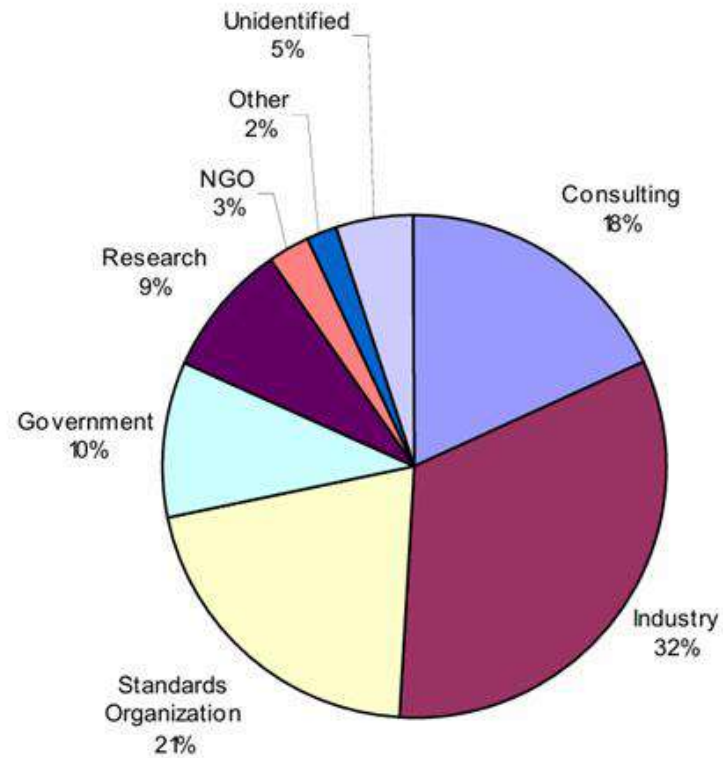
Source: WDR 2025 team, based on World Bank and ISO 2025.

Figure S2.3 The share of national standards bodies represented on ISO and IEC committees and subcommittees declines with income




Source: WDR 2025 team, based on World Bank and ISO 2025.

Figure 11: Average TC 207 Plenary Meeting Participation by Stakeholder Group (1997-2003)






Source: Morikawa M. & Morrison J. (2004). Who Develops ISO Standards? A Survey of Participation in ISO's International Standards Development Process. Pacific Institute




Standards have a complex relation to Intellectual Property Rights (IPRs)

-  *Standards are aimed at wide diffusion and should be equally accessible by all parties*
-  *IPR aims to restrict diffusion by granting temporary, exclusive rights*

Note that:


-  Here, we are mainly talking about patents
-  A standard as such can't be patented
-  However, a standard might include patented technologies

Standards Essential Patents (SEPs)

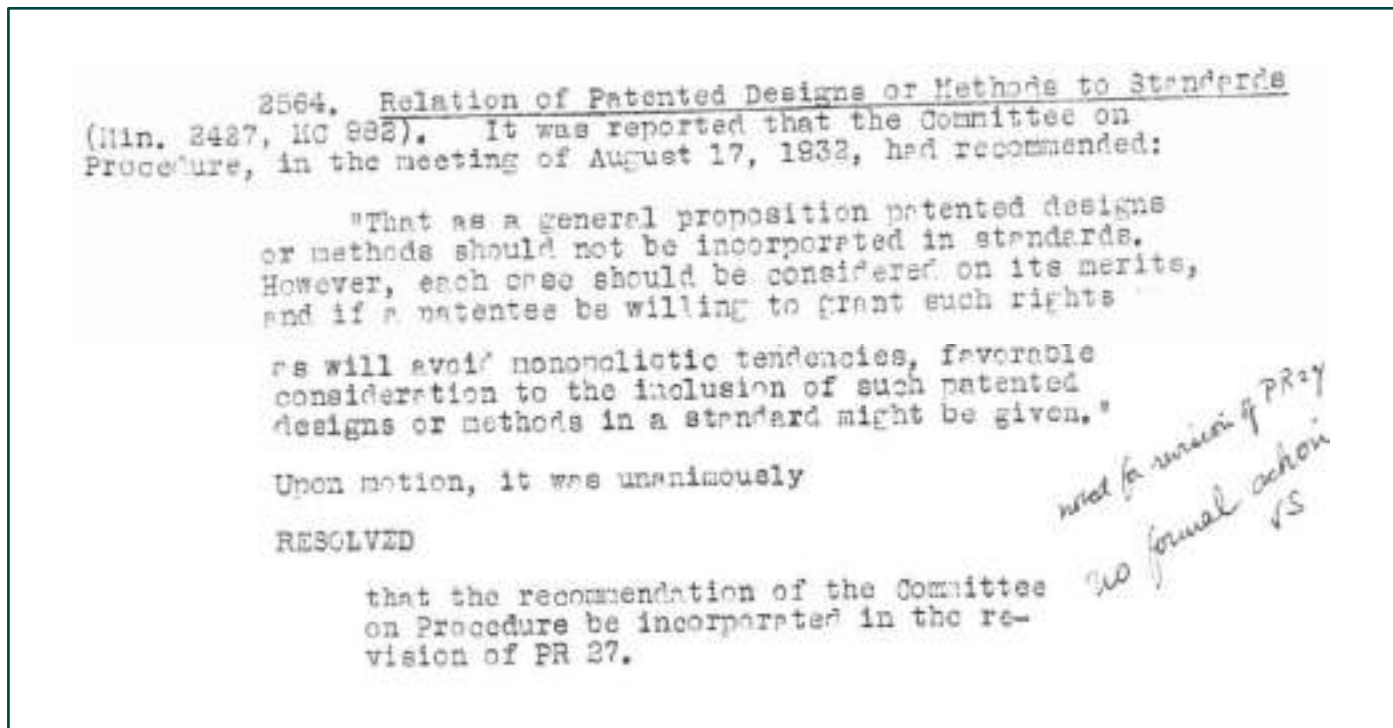
-  *A SEP is a patent that is indispensable to producing a product or offering a service based on a standard. That is, complying with the standard without infringing that patent is not possible.*
-  *The exact definition of ‘essential’ by SSO differs and is complex.*
 -  *See Bekkers & Updegrove (2013).*

- 🌐 **Including patented technology can be a desirable thing:**
 - 🌐 Valuable technology may improve standards' performance, cost-effectiveness, or environmental friendliness
 - 🌐 Many valuable technologies are patented
- 🌐 **As long as benefits outweigh costs, inclusion may be legitimate**
- 🌐 **But there may also rise concerns**
 - 🌐 The actual or prospective implementer of the standard simply has no choice but to use the technology covered by essential patents and seek a license

Non-availability of licenses	... where standard setting bodies and their participants might only find after a long investment in a standard that one or more of the essential patents will not be licensed at all by its owner
Ex post patent holdup	... where a patent owner uses the lock-in of standards' implementers to demand higher licensing fees for their essential patents than they could have done before their patent was selected for inclusion in the standard
Royalty stacking	... where the cumulative royalties of many different patent owners amount to a high level, even if each individual claim is reasonable
Undue discrimination	... where implementers face difference burdens of licensing fees, thus restricting a level playing field.
Over-inclusion	... where patented technologies are included for the patent owner's interests, not because they significantly contribute to the standard (in terms of performance, price-effectiveness, environmental-friendliness, etc.).

 Of course, these concerns must be balanced against the benefits of patents in standards, including long-term incentives for parties to invest in R&D



- 🌐 Problems of unavailability, hold-up, stacking, and more are not new. Some identified them as early as 1932...








In: Contreras (2015)

- 🌐 **From the 1990s on, most standard setting bodies started to adopt IPR policies. Several flavors:**
 - 🌐 *Royalty Free policies (RF), like in IETS and W3C, main bodies for internet standards*
 - 🌐 *Participation-based policies, where participants are by definition subject to FRAND, and do not have to disclose*
 - 🌐 **Commitment-based Fair, Reasonable and Non-discriminatory (FRAND) policies. Two core elements:**
 - 🌐 *Disclosure: Members will make a reasonable effort to inform about IPRs they are aware of;*
 - 🌐 *Commitment: When an essential IPR is identified, the director of the SSO will request its holder, member or not, to make licenses available under fair, reasonable and non-discriminating (FRAND) terms*

SEPs cases have led to of court cases worldwide

-  In Europe, the competition law dimension often guising
-  In the US, contract law is the usual approach

Disputes are about:

-  Proper behaviour at SSOs
-  The FRAND royalty fee
-  Global portfolios
-  The place of licenses in the value chain
-  The use of injunctions, anti suit injunctions anti-anti suit injunctions

A good standard for SMEs

Jon Echanove

A 15 mins hot group exercise:

Based on your experience, list the main obstacles encountered by SMEs when dealing with standards

You will be assigned to breakout rooms for discussions, after we reconvene in the plenary room, summarise your main ideas in the word cloud.



Most SMEs are either **USERS** or providers of
COMPLEMENTARY SERVICES

INTEROPERABILITY

Technology Lock-in

IMPLEMENTATION

Complexity

Cost

Example of a non-SME compatible requirement

Previous version of the ISO 9001 standard required:

🌐 “The organization shall (...) provide training or take other actions to satisfy the needs for the necessary competence for personnel performing work affecting product quality”

🌐 Irrelevant for a **one-person SME**



Had the wording been:







🌐 “If product quality might be affected by a lack of training, then the organization shall provide training or take other actions (...)”

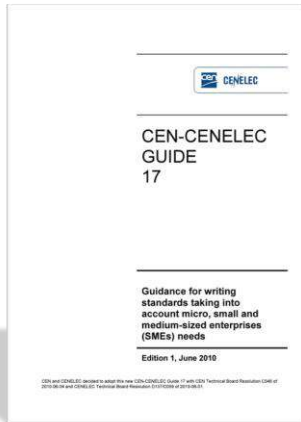
🌐 One-person SME could **fully comply** with the standard

🌐 **No effect** on the obligation on larger organizations to provide appropriate training

GENERAL CONSIDERATIONS



-  Ensure that standards are **understandable** by all users, including SMEs
-  Understandable terminology & language
-  Consider possible different **business models** and **diverging interests** of all stakeholders **throughout the value-chain** of the product or service, including **SME-specific interests**
-  Manufacturers, suppliers, consultants, research laboratories, certifiers, testing facilities, etc.



CEN-CENELEC Guide 17 - 'Guidance for writing standards taking into account micro, small and medium-sized enterprises (SMEs) needs'



Referring to several sections of the Guide in 22 questions

#Standards4SMEs

Preparation of the New Work Item	Preparation of a standard	Development of the content	Structure and presentation of the content	Final review
<input type="checkbox"/> (5.2.1) Have you checked the SME relevance of the standard? <input type="checkbox"/> (5.2.2) Have you checked among all the stakeholders if there are special SMEs needs? <input type="checkbox"/> (5.2.2) Did you evaluate if SMEs are among the target groups?	<input type="checkbox"/> (5.3.1) Did you evaluate the costs of investment (technology, equipment, testing)? <input type="checkbox"/> (5.3.1) Did you evaluate the cost of training (staff)? <input type="checkbox"/> (5.3.1) Did you evaluate the costs of implementation? <input type="checkbox"/> (5.3.2) Have you verified that all elements are available?	<input type="checkbox"/> (5.4.1) If the performance approach is used, is it understandable? <input type="checkbox"/> (5.4.2) Have you used descriptive explanations? <input type="checkbox"/> (5.4.3) Is the standard precise and complete within its scope? <input type="checkbox"/> (5.4.4) Did you avoid strict testing regimes? <input type="checkbox"/> (5.4.4) Did you evaluate the cost of testing? <input type="checkbox"/> (5.4.5) Have you identified simple and cost-effective ways of verifying conformity with the requirements?	<input type="checkbox"/> (5.5.1) Is the standard as short as possible? <input type="checkbox"/> (5.5.1) If the standard is long, did you evaluate the possibility of dividing it in shorter standards? <input type="checkbox"/> (5.5.2) Is the structure of the standard easy to follow? <input type="checkbox"/> (5.5.3) Have you included supportive graphs, charts, etc (when possible)? <input type="checkbox"/> (5.5.4) Have you used clear language understandable by all expected standard users? <input type="checkbox"/> (5.5.5) Did you minimise the number of referenced standards? <input type="checkbox"/> (5.5.6) Did you provide clear information on the changes from the previous versions of the standard?	<input type="checkbox"/> (5.6.1) Have you suggested a transition period reflecting the implications of changes? <input type="checkbox"/> (5.6.2) Have you made the evaluation on the need for an implementation manual?



Provide an overall perception of the SME compatibility of any given standard



Based on Guide 17



Rank into broad categories (good, average and poor standards)



Starting point for possible improvement of standards



<https://sbs-sme.eu/tools/sme-compatibility-tests/>



✓ Justification, target group and relation with other standards

✓ Scope

✓ Normative references

✓ Market access

✓ Relevance of the content

✓ Cost (requirements) & conformity assessment

✓ Readability

✓ Availability of guidance

✓ Necessary modifications before applying the standard

✓ Availability of external elements for implementation

✓ Appropriate transition period



0 - 49%

The standard is poor & causes substantial challenges for SMEs. It requires urgent/fundamental improvement.



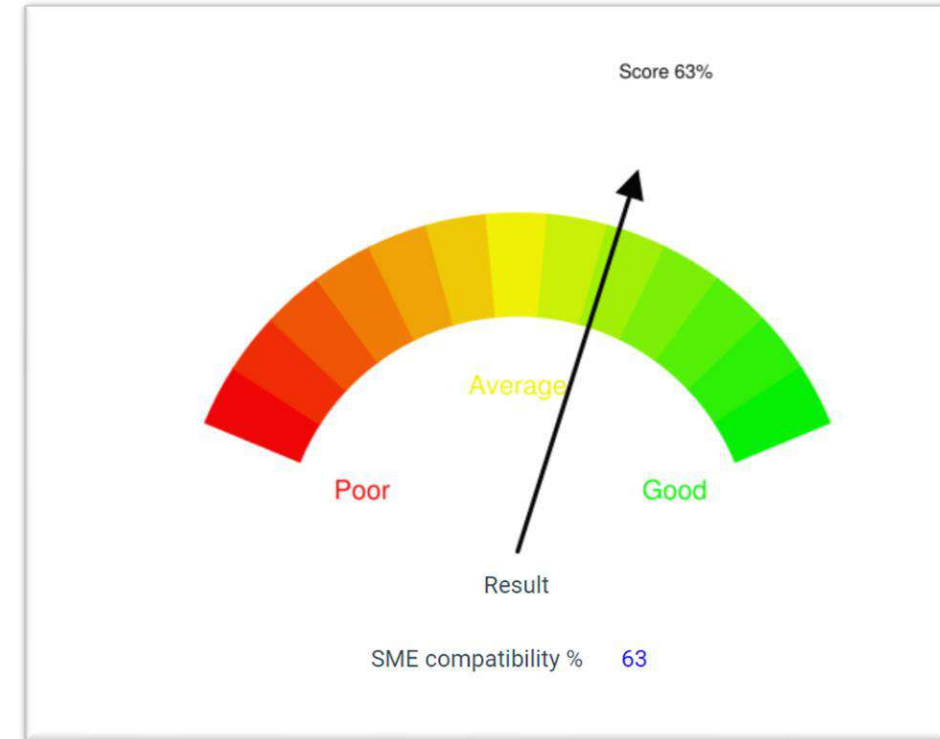
50 - 74%

The standard is average in relation to compatibility with SME's needs. It should be improved.



75 - 100%

The standard is good & compatible with SMEs' needs in general. It requires little or no change





EDU4
Standards.eu

Key Messages

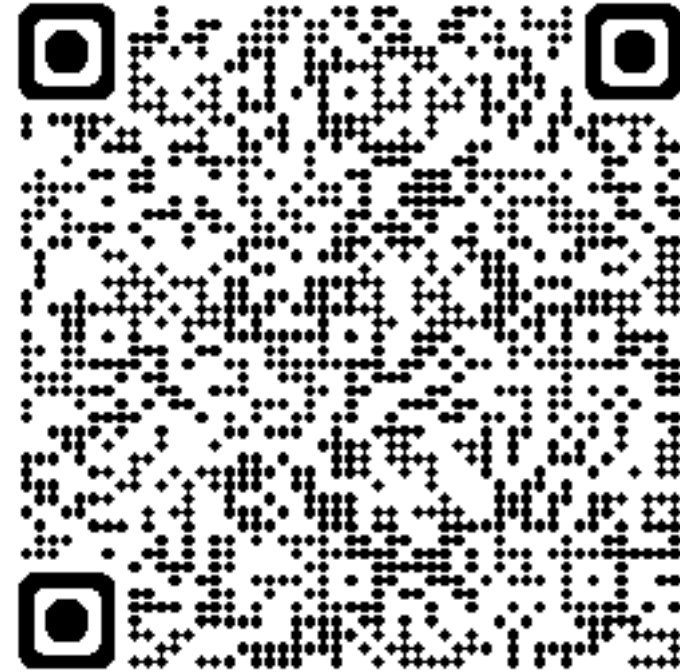
Rudi Bekkers



Funded by
the European Union

 THANK YOU FOR PARTICIPATING!

**YOUR FEEDBACK MATTERS,
COMPLETE THE
SATISFACTION SURVEY**



[EDU4Standards - Pilots
Questionnaire for participants
V1.5 - SME](#)