

26th of October 2026

CEB BEC

Global Gateway to Electrotechnical Standards in Belgium

Academic Standard Day

CEB BEC

Global Gateway to Electrotechnical Standards in Belgium

Standardization Landscape

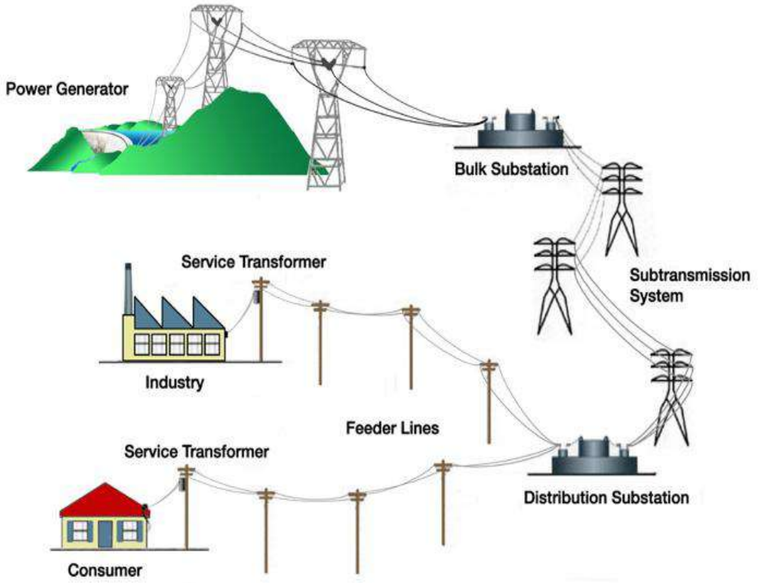


Electrotechnical Domains

Rotating machinery (TC 2)

Hydraulic turbines (TC 4)

Overhead lines (TC 11)



Overhead electrical conductors (TC 7)

Systems aspects for electrical energy supply (TC 8)

HV Switchgear and controlgear (TC 17)

Electric cables (TC 20)

Insulators (TC 36)

Surge arresters (TC 37)

Electrical accessories (TC 23)

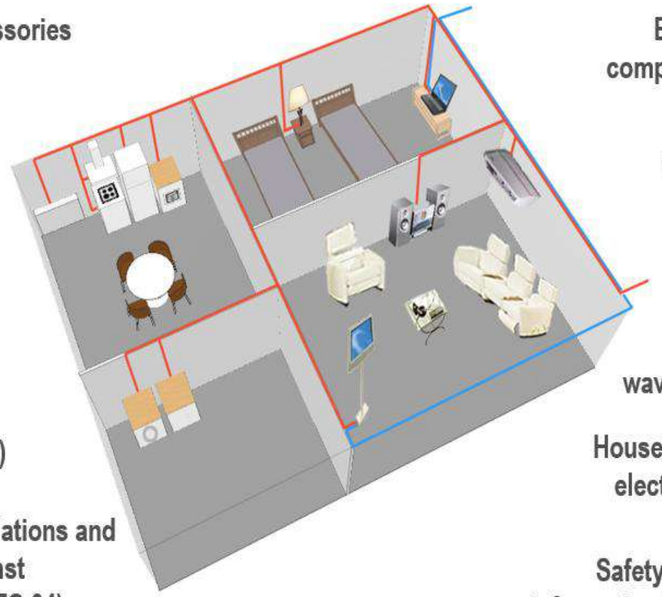
Fuses (TC 32)

Winding wires (TC 55)

Electric cables (TC 20)

Lighting (TC 34)

Electrical installations and protection against electric shock (TC 64)



Electromagnetic compatibility (TC 77)

Audio, Video and Multimedia (TC 100)

Fibre optics (TC 86)

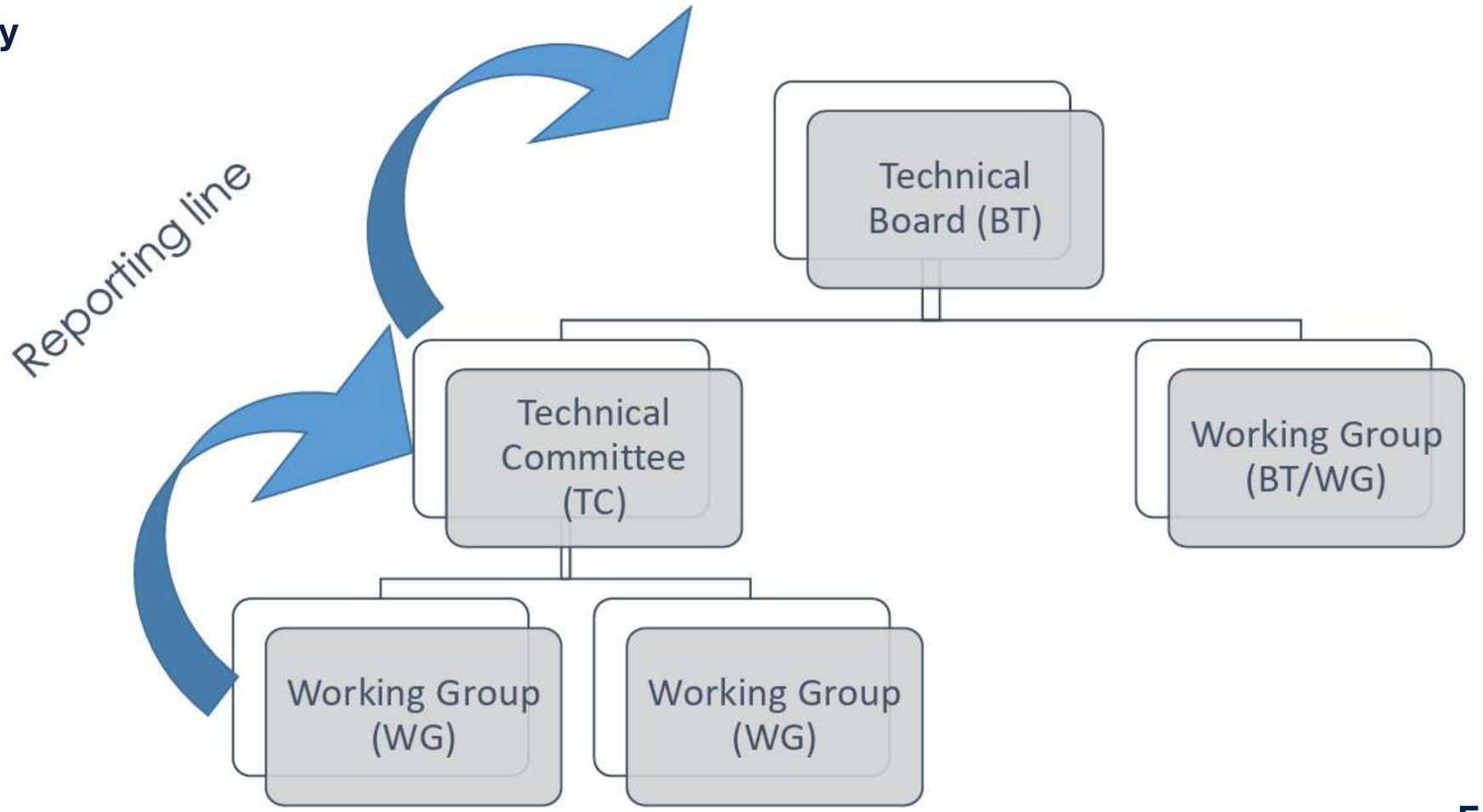
Cables, wires, waveguides (TC 46)

Household and similar electrical appliances (TCs 59 & 61)

Safety of audio/video, information technology and multimedia equipment (TC 108)

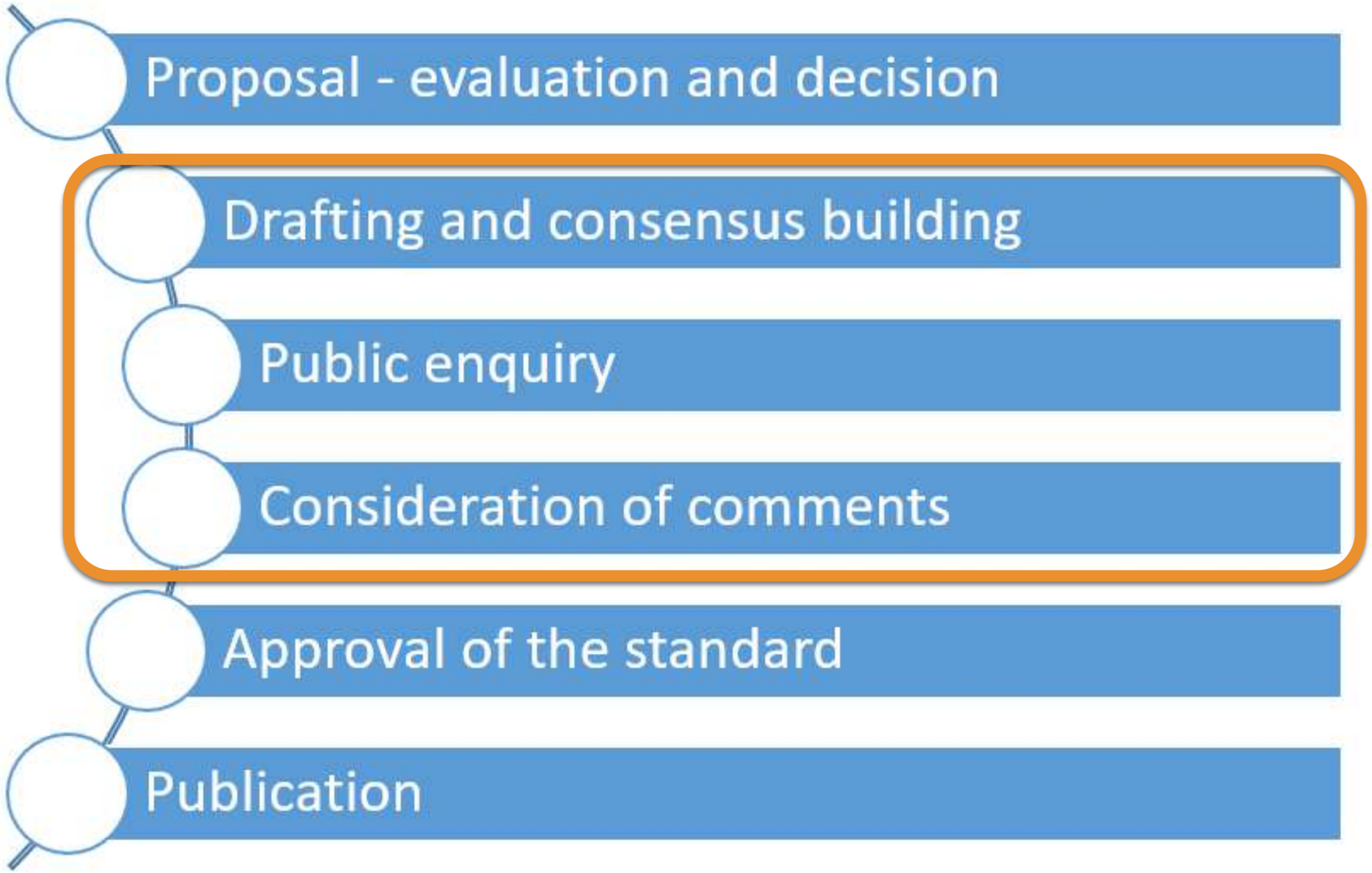
Three “Layers” of Standards Development

Emphasis on Strategy



Emphasis on Technique

Six “Stages” of Standards Development



Iterative

For more information on IEC Standards Development, please consult the IEC Committee Resource Area.
For more information on CENELEC Standards Development, please consult the CEN-CENELEC BOSS Reference Material.

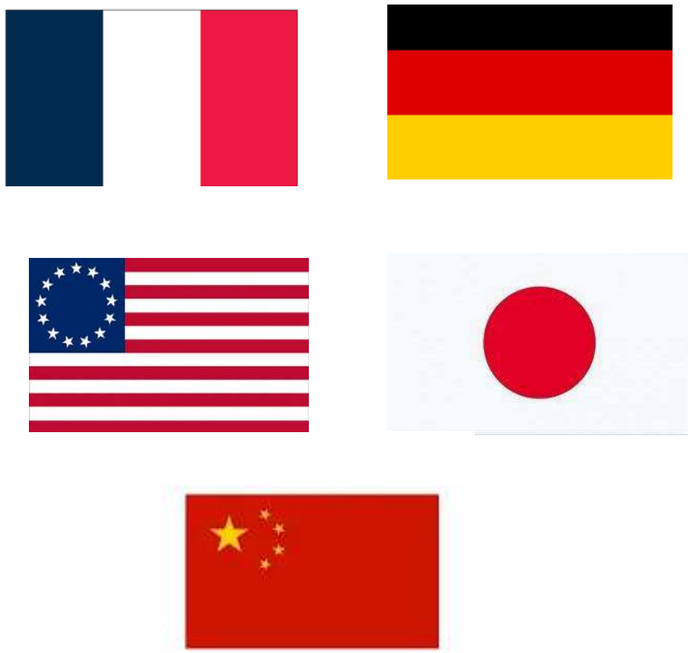
Proceedings of the day

Time	Activity
9:00-9:30	Arrival and welcome coffee.
9:30-10:15	General information: • Proceedings of the day; • Introduction to the standards development process; • Explanation of the roles for the breakout sessions; • Instructions for the Working Group (WG) breakout.
10:15-11:00	WG breakout: participants act on behalf of their **organization**.
11:00-11-15	Coffee break and networking.
11:15-11:45	Consolidation of the Final Working Draft pursuant to the feedback received from the WG breakout, with context, information and instructions for the Committee Draft (CD) breakout.
11:45-12:30	CD breakout: participants act on behalf of their **country**.
12:30-12:45	Presentations from industrial stakeholders in standardization.
12:45-13:30	Lunch break and networking.
13:30-14:00	Consolidation of the Committee Draft pursuant to the feedback received from the CD breakout, with context, information and instructions for the Committee Draft for Voting (CDV) breakout.
14:00-14:45	CDV breakout: participants act on behalf of their **country**.
14:45-15:00	Coffee break and networking.
15:00-15:30	Consolidation of the Committee Draft for Voting, with a breakdown of the results of the CDV breakout, the next steps to publication and national adoption.
15:30-15:45	Presentations from industrial stakeholders in standardization.
15:45-16:00	Conclusions and takeaways from the day, plus giveaways at the exit.

Role Cards



Organizations



Countries



Objectives (6)

International Standard: Electronic Baby Robots (EBRs)

IEC (CDV) 2023EBRs
Edition 1.0 2022-10

Academy & Capacity Building

THIS MOCK STANDARD IS USED FOR THE "STANDARD IN A DAY" BOOTCAMP AND THE CA BOOTCAMP, by IEC ACADEMY

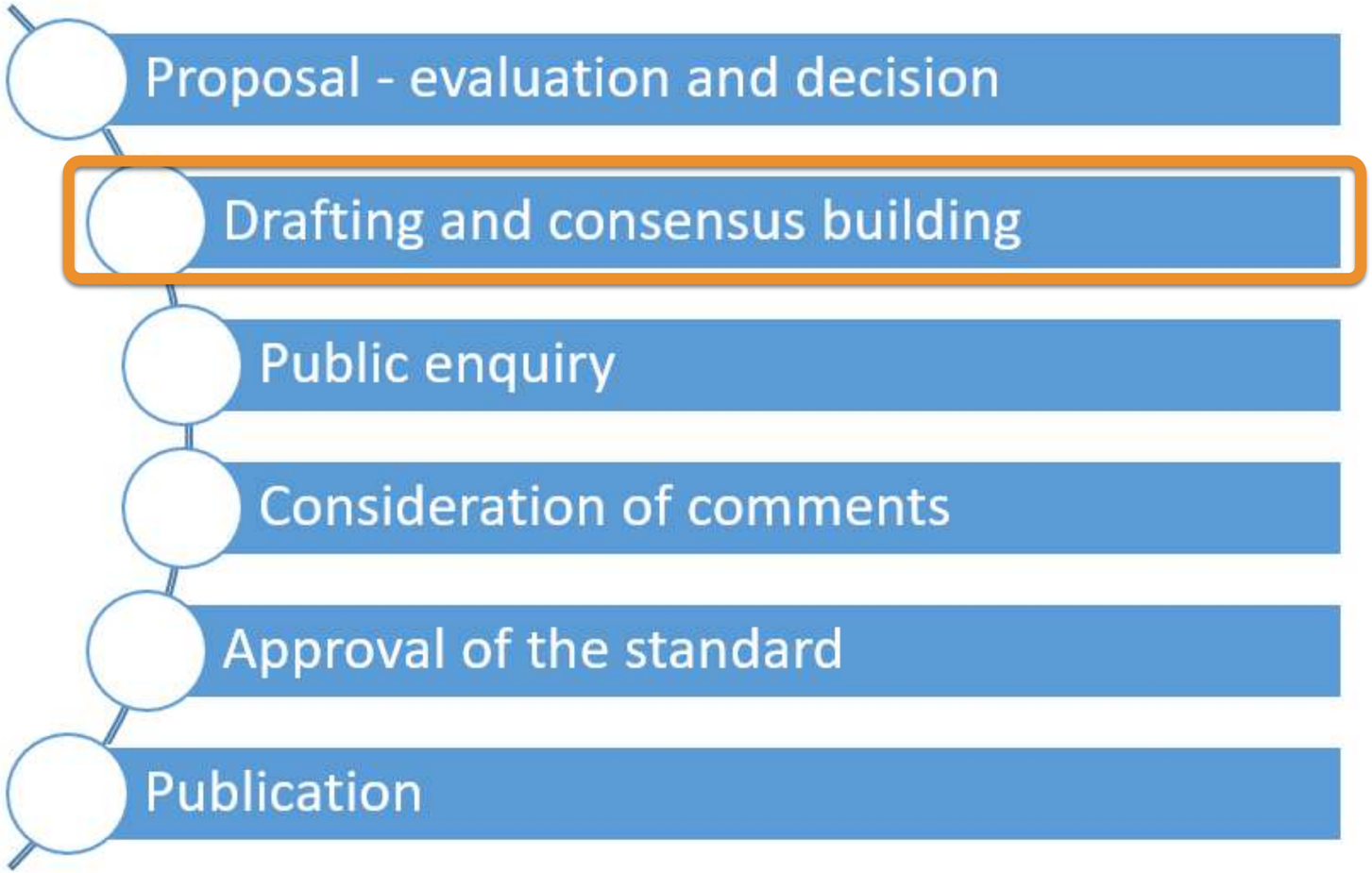
INTERNATIONAL STANDARD
Committee Draft (CDV)

Electronic Baby Robots (EBRs)
Part 1 - Specifications for Design and Construction

DRAFT



WG (Working Group) Breakout – Context



For more information on IEC Standards Development, please consult the IEC Committee Resource Area.
For more information on CENELEC Standards Development, please consult the CEN-CENELEC BOSS Reference Material.

WG (Working Group) Breakout – Rules & Proceedings

- You convey your objectives on behalf of your **organization** within your **Working Group (WG)** :
  - Each objective is tied to a specific Clause of the draft standard and dealt with by a specific WG.

  → Thus, read your Clauses carefully and try to understand what each objective is asking to you.
  - Your organization is either involved in Academia, Industry, Legal, Economy or Federation.

  → The role card provides a brief description of the general tendencies of your organization.

  At WG-level, your affiliation to the National Committee bears no significance.

- As part of the consensus-building :
  - You must try to convey as many of your objectives as possible, in a manner that does not create sustained opposition from other WG Experts or disrupt the operation of the WG.

  → **Be cordial and constructive, allow for others to speak and follow the moderation of the Chair.**
  - You are free in choosing a strategy to express your views and achieve your objectives.

  → You can choose to leverage some of your positions to prioritize others.

  At the end of the breakout, the Chair must decide which positions the WG retains. If no consensus is reached, the Chair can also propose to leave the Clause unchanged.

  The Rapporteur must convey the comments and the proposed changes, if any, to the Moderators.

Break ! (Reconvene at 11H15)



CD (Committee Draft) Breakout – Context



For more information on IEC Standards Development, please consult the IEC Committee Resource Area.
For more information on CENELEC Standards Development, please consult the CEN-CENELEC BOSS Reference Material.

CD (Committee Draft) Breakout – Rules & Proceedings

- You convey your objectives on behalf of your **country** within your **National Committee (NC)** :
  - Contrary to the WG-stage, your NC contains Experts who have provided input on other Clauses.

→ Thus, you are no longer strictly bound by the Clauses pertaining to your objectives.

→ In turn, you can consider the text of the whole draft standard to support your objectives.

At CD-level, your affiliation to your organization bears no significance.

- As part of the consensus-building :
  - You must seek to preserve as many of your objectives accepted within the WG, whilst pushing for the NC to accept as many of your remaining objectives as possible without considerable opposition.

→ **Be cordial and constructive, allow for others to speak and follow the moderation of the Chair.**

→ Leverage other Clauses of the draft standard to reinforce your position.

At the end of the breakout, only comments receiving 2/3 of NC Experts' approval can be maintained. For the exercise, each NC can submit at most five comments using the electronic commenting sheet.

The Rapporteur must convey the comments and the proposed changes, if any, to the Moderators.

Presentation by Siemens

M. Constant KOHLER



Global Gateway to Electrotechnical Standards in Belgium

Constant Kohler

Regulations & Standards expert, Cybersecurity Governance

Cybersecurity standardization expert at national, European and international level

Chair CEB-BEC 65
Convenor CEN-CLC/JTC 24/WG 3

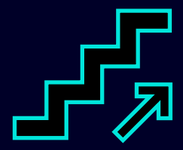
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SIEMENS

Role and importance of standards - “common way of doing something”



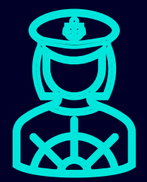
Market access and compliance



Interoperability and scale



Risks mitigation and trust



Shaping the regulatory baseline

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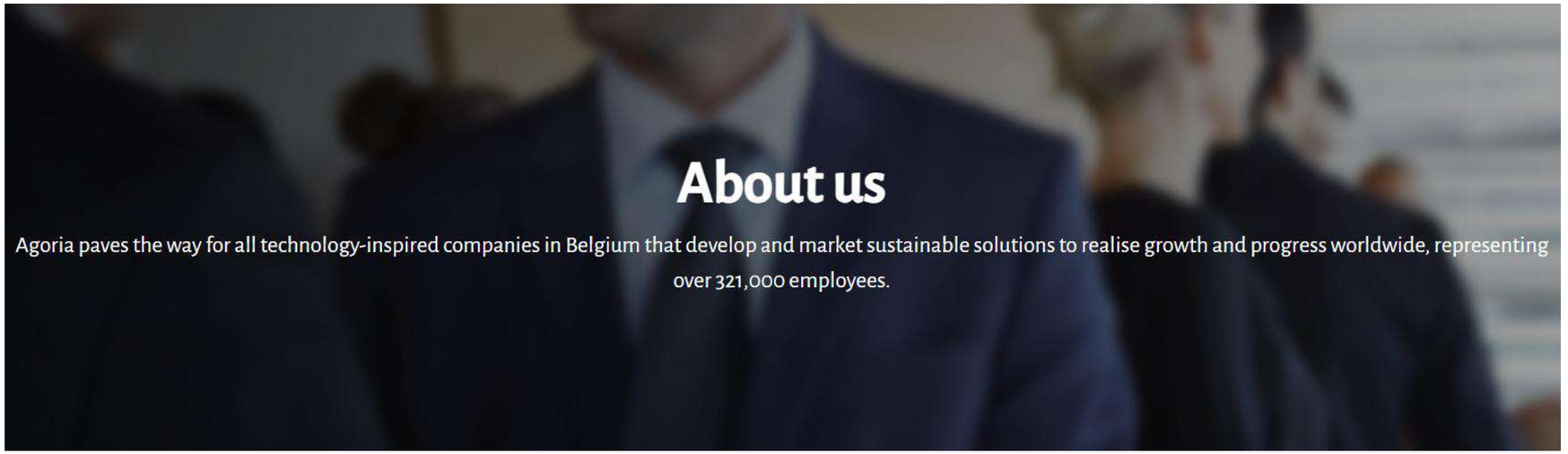
SIEMENS

Presentation by Agoria

M. Anirudh ESWARAN



Global Gateway to Electrotechnical Standards in Belgium

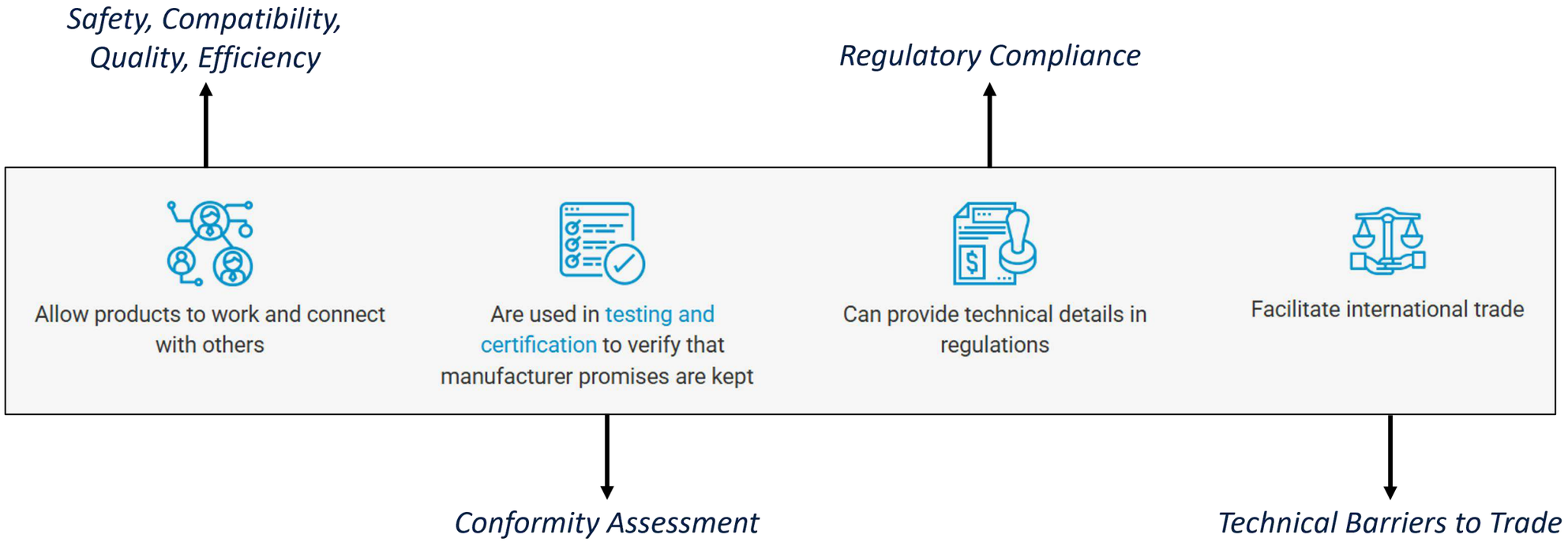


About us

Agoria paves the way for all technology-inspired companies in Belgium that develop and market sustainable solutions to realise growth and progress worldwide, representing over 321,000 employees.

Agoria provides promotion, services and consultancy services in the fields of:

- HR Legal & social dialogue
- Talent
- Legal, tax & finance
- Technical regulations & standardisation
- Digitalisation
- Green transition
- Industry 4.0
- Economic situation & prices


Safety, Compatibility, Quality, Efficiency
Regulatory Compliance
Allow products to work and connect with others
Are used in testing and certification to verify that manufacturer promises are kept
Can provide technical details in regulations
Facilitate international trade
Conformity Assessment
Technical Barriers to Trade

Recognition



- Fair and controlled environment to optimize collaboration on common deliverables.
- Publications of superior quality prescribing trialed and vetted methods and practices.



Network

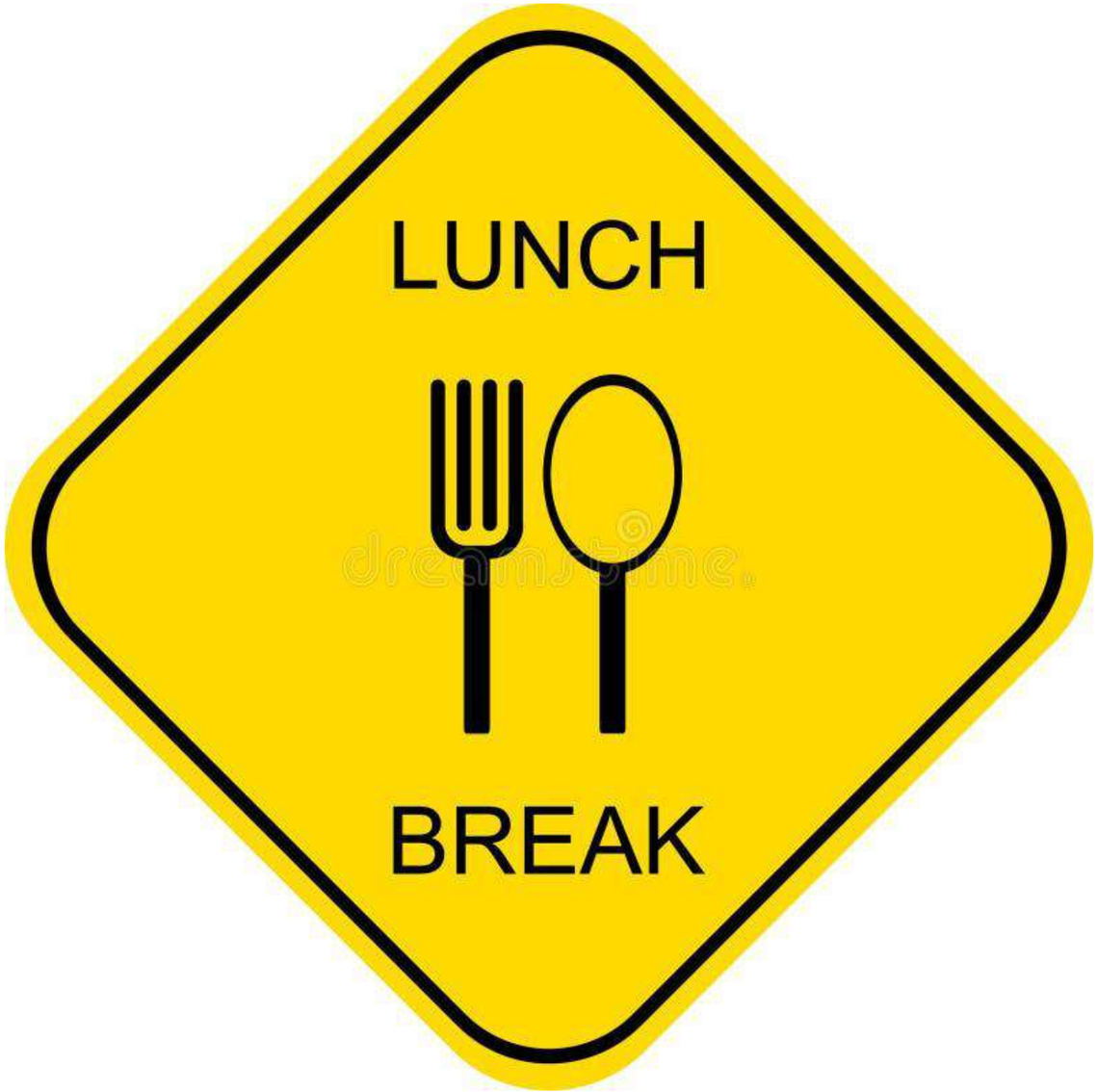
- Collective endeavor to define the state-of-the-art in a way that represents industry accurately.
- Knowledge-sharing between market competitors without jeopardizing sensitive information.

Competitiveness

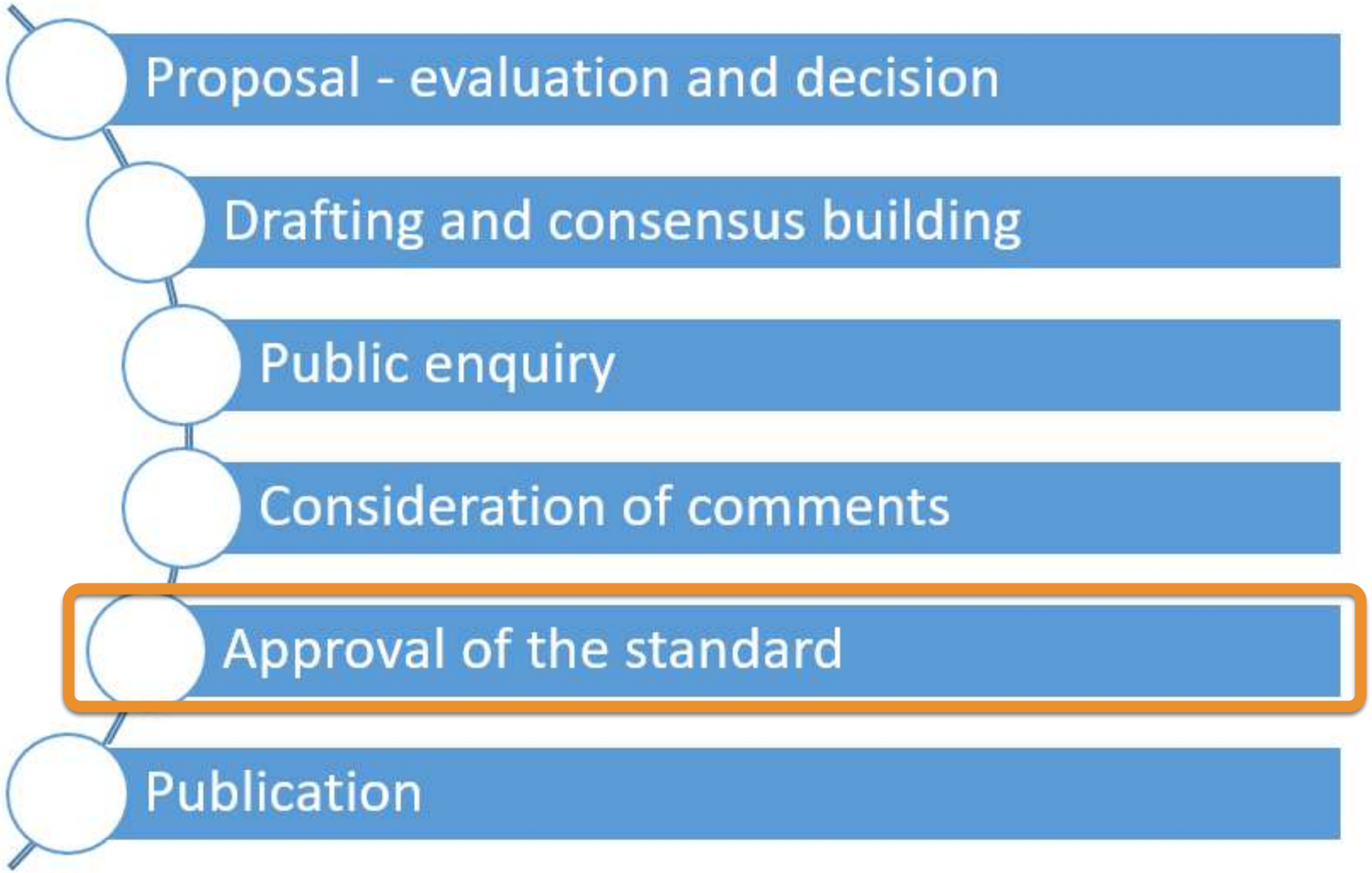


- Standardized requirements of technologically-neutral and result-oriented nature.
- Shared research, development and compliance costs to stimulate further innovation.

Break ! (Reconvene at 13H30)



CDV (Committee Draft for Voting) Breakout – Context



For more information on IEC Standards Development, please consult the IEC Committee Resource Area.
For more information on CENELEC Standards Development, please consult the CEN-CENELEC BOSS Reference Material.

CDV (Committee Draft for Vote) Breakout – Rules & Proceedings

- You convey your objectives on behalf of your **country** within your **National Committee (NC)**:
  - Akin to the CD-stage, your NC considers all Clauses of the draft standard.

  → Thus, you are not strictly bound by the Clauses pertaining to your objectives.

  → In turn, you must consider the text of the whole draft standard to establish your position.

  At CDV-level, your affiliation to your organization bears no significance.

- As part of the consensus-building :
  - You are asked to issue a vote of approval (Y/N) on the draft standard.

  → **Be cordial and concise in the communication of your vote and follow the moderation of the Chair.**

  → If disapproving (N) of the draft standard, substantiate your vote with justifying comments.

  At the end of the breakout, the NC approves of the draft standard if 2/3 of the NC Experts express a positive vote (Y). For the exercise, each NC can submit at most three comments substantiating a negative vote (N) using the electronic commenting sheet, with the first line specifying the NC position. If the vote is positive (Y), limit the comments to editorial changes only.

  The Rapporteur must convey the comments and the proposed changes, if any, to the Moderators.

Break ! (Reconvene at 15H00)



Next Steps – Context



For more information on IEC Standards Development, please consult the IEC Committee Resource Area.
For more information on CENELEC Standards Development, please consult the CEN-CENELEC BOSS Reference Material.

Next Steps – Considerations

- The draft standard proceeds to publication if 2/3 of the NC issue a positive vote (V), not counting abstention votes :
  - **US NC** : **positive vote** with no comments.
  - **FR NC** : **negative vote,** asking for clearer test procedures and the resolution of several inconsistencies.
  - **CN NC** : **positive vote** with no comments.
  - **DE NC** : **negative vote**, considering the temperature limits to be too stringent and disagreeing with the requirements for the battery performance.
  - **JP NC** : **abstention vote**.



→ **Conclusion : the standard is not published !**

Standards Development in Practice

- Standards development is **iterative**, in that stages may undergo multiple cycles before a draft standard is deemed sufficiently mature for the next stage.

- Acceptance is typically a **two-stage process**, with a first enquiry and a second formal vote. The enquiry is to gauge the technical robustness of the draft standard, whereas the formal vote is to encourage editorial finetuning and provide an opportunity for a final technical assessment.

- Between stages, the (technical) comments are submitted to the WG responsible for delivering the First Working Draft, for **analysis, observations and integration** where relevant, prior to being recirculated to NC for input. This ensures that WG can respond to the input received from NC and integrate those relevant to the standard in a revised draft text.

- Quorums for the **acceptance** of draft standards vary from one standardization organization to another. For example, in IEC, the acceptance criteria is 66% whereas in CENELEC it is 71%. Additionally, while IEC adheres to a “one country, one vote” policy, to the benefit of smaller NC, CENELEC uses a weighted national vote in function of Members’ Gross National Profit.

- Stakeholders, especially multinationals, may have Experts present in several NC to reinforce their **influence** in the standardization ecosystem. Conversely, larger organizations and NC may also seek to influence standards development by sending (considerably) more Experts to WG.

Presentation by Daikin Europe

M. Bert MEYNCKENS



Global Gateway to Electrotechnical Standards in Belgium

Impact of standards on HVAC appliances

B. Meynckens



Daikin: PERFECTING THE AIR

A global **leader in heating, cooling, ventilation, air purification & refrigeration innovations**

Residential





Commercial





Total Solutions





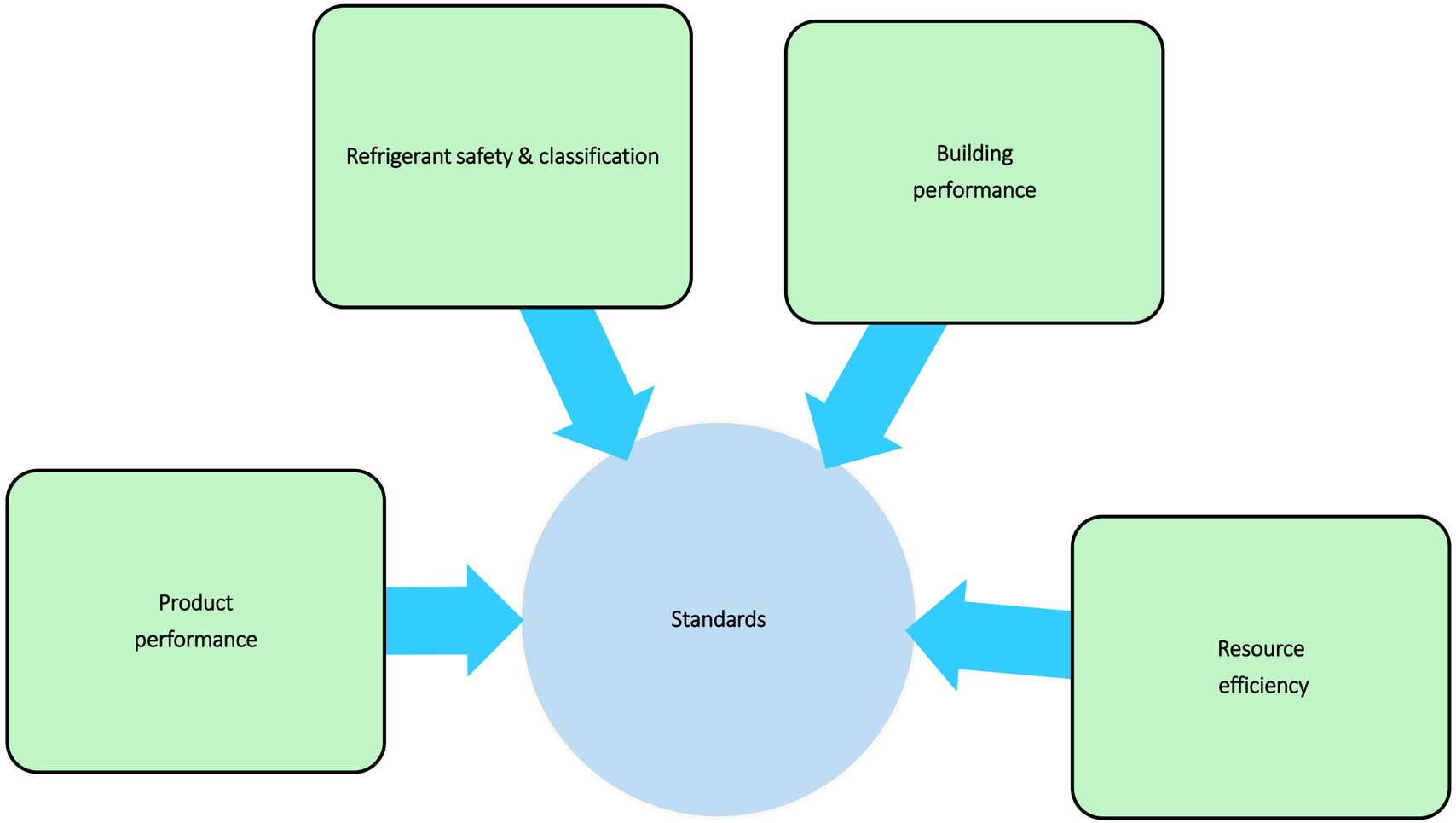
Cold Chain





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Relevant standards for Daikin & relation to regulations/policies



Safety standards scope: practical

ISO5149 / EN 378 (general)







Chillers, Factories
Refrigeration units & rooms
…

IEC/EN 60335-2-24

Freezer, fridge
Ice cream
maker





Household refrigeration

IEC/EN 60335-2-89

prof kitchen,
display
cabinets, single
split units.



Commercial refrigeration

IEC/EN 60335-2-40

Air to air, air to water
Household, shops, office..

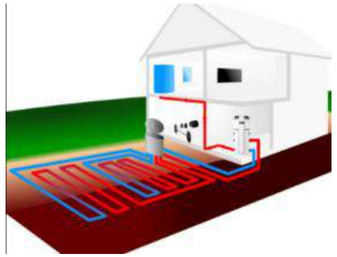












heat pump, air-conditioner& dehumidifier

Manufacturer to check the scope of the standard before apply it.
One standard leads to another…

DAIKIN

Safety standards – impact

Safety Standards are an important chain in the legislation

Product liability	Safety legislation	Harmonized standards	Third party assessment	Market surveillance
a product is “defect” when it does not provide the safety that a person is entitled to expect, considering all circumstances**.** Manufacturer needs to follow **state of the art!**	**Machine directive and Low voltage directive stipulates essential requirements** to proof the safety concept of the appliance. For compliance one needs to perform a **risk assessment.**	**Considers minimum safety requirements** which are the backbone to proof the state of the art. **Full life cycle**: => still open items.	**Proof of safety concepts via notified bodies** and compliance schemes connected to the standards.	**Mostly lacking, only when accidents happen or complaint**


DAIKIN

Presentation by Ion Beam Applications (IBA)

M. Laurent WILLEMET



Global Gateway to Electrotechnical Standards in Belgium



Industrial testimony : Ion Beam Applications (IBA)

Use of Medical Devices Standards at Ion Beam Applications (IBA)

Laurent Willemet, Technical Standards and Regulations Expert

Certified B Corporation | Life. Science.

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iba

My personal role at IBA

- Participation in standardization committees
  - IEC TC 62 : Medical electrical equipment
- Bring content of standards to IBA development teams
  - Help interpret content of the standard
  - Translate requirements of standards into product requirements
- Confirm correct implementation of requirements of standards through tests
  - Definition of and execution of tests in IBA test laboratory
  - Under supervision of an external accredited test laboratory

IBA : product portfolio

- Products based on particle accelerators



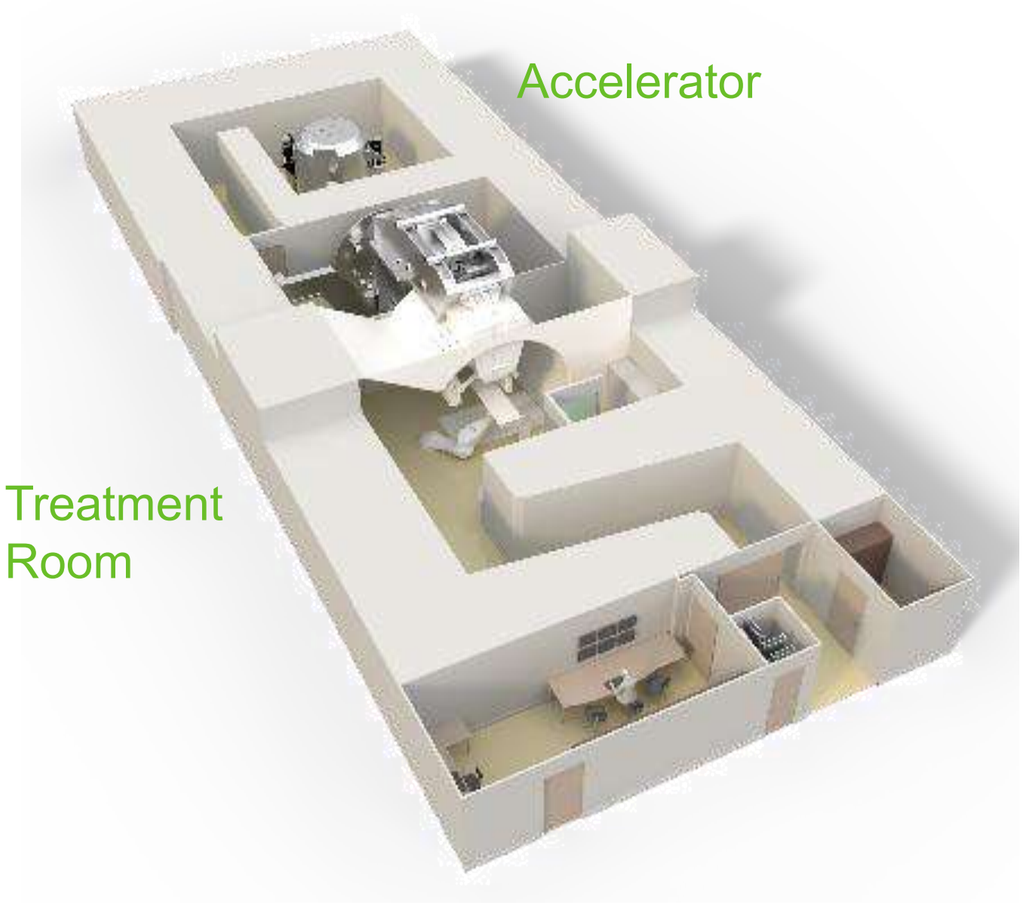


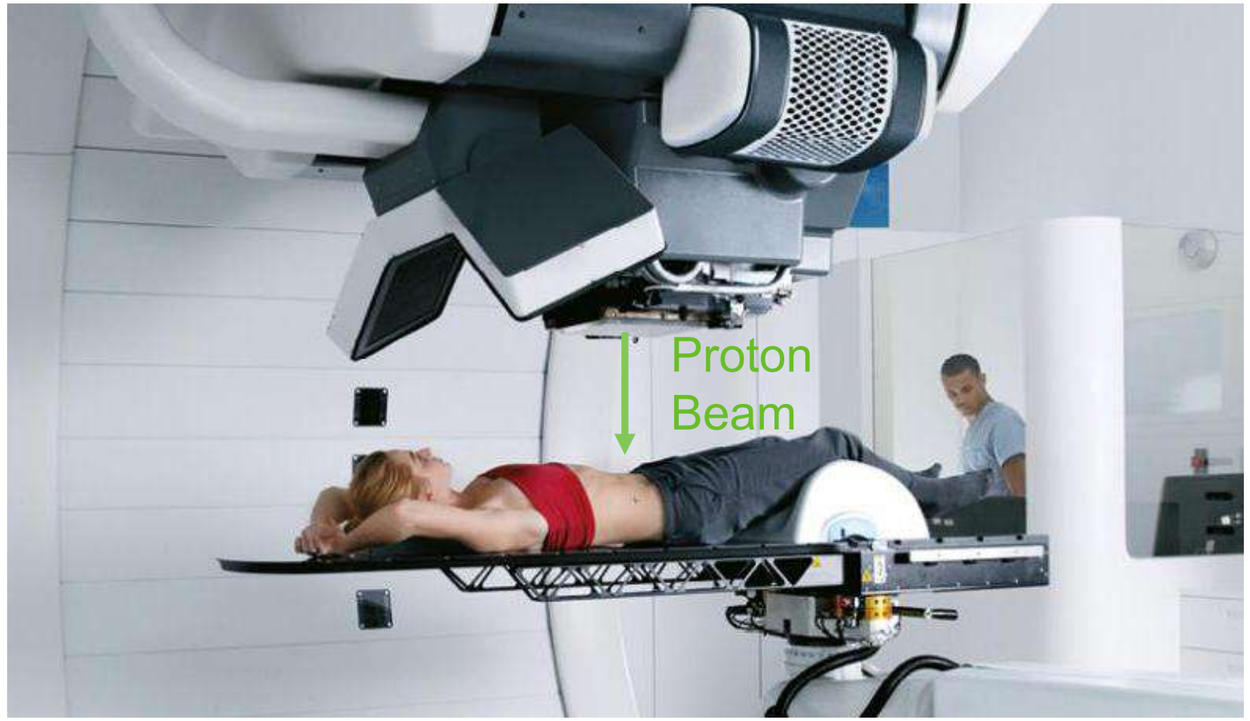




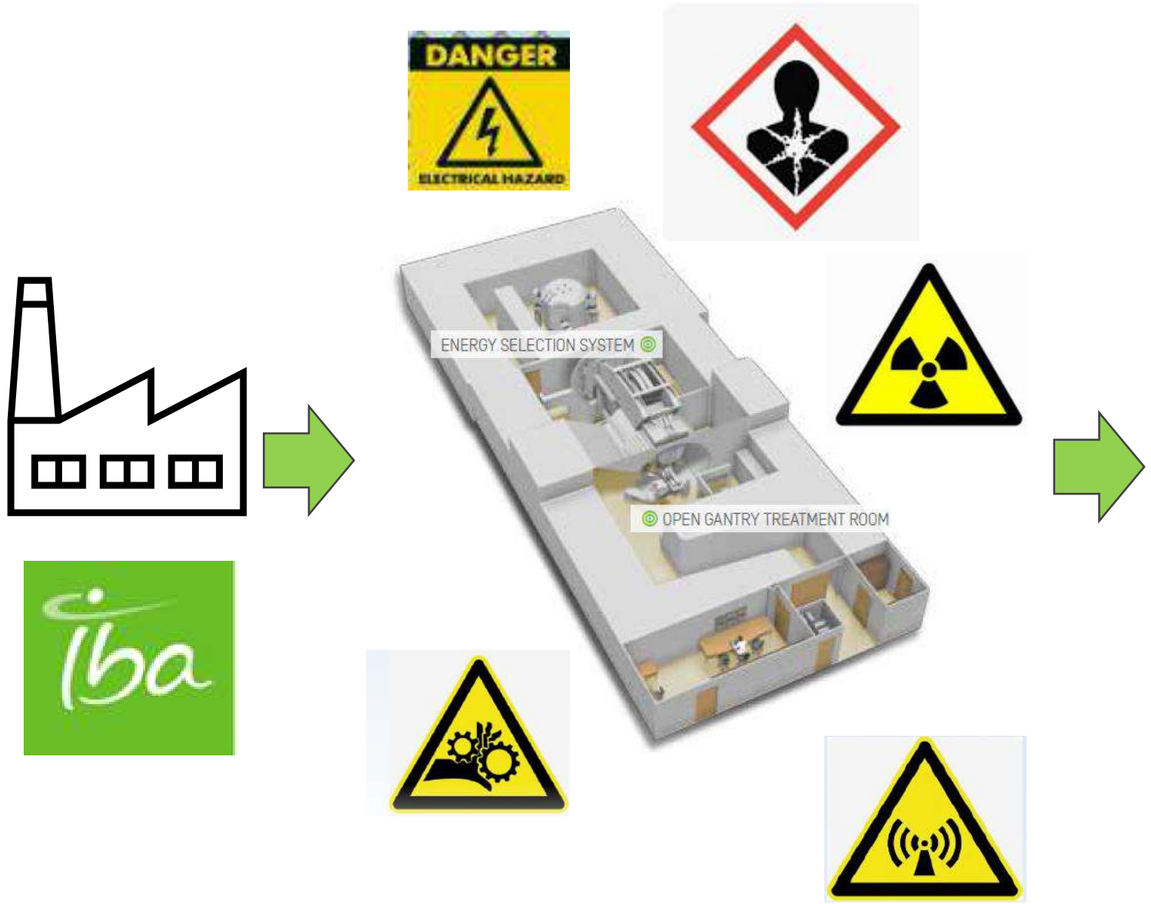
- Main applications
  - Proton therapy (treatment of cancer)
  - Production of radio-isotopes
  - Sterilization

IBA : Proton Therapy (medical application)





Market access for medical devices





- Access to markets is regulated by national and regional laws
  - Need to demonstrate safety and effectiveness of the device in different jurisdictions

Market access through standards

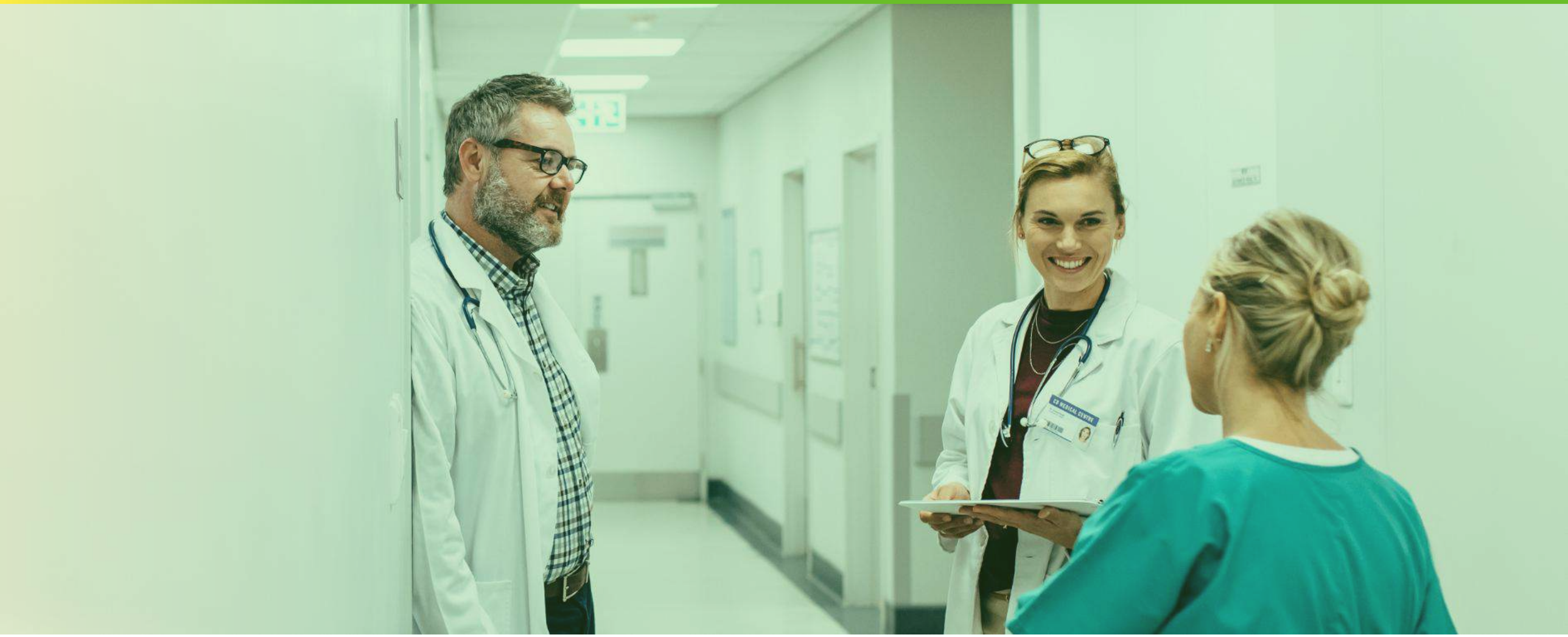
- Most jurisdictions recognizes standards as means to demonstrate conformity to regulations
  - Standards represent state-of-the-art (for safety, performance, …)
  - Conformity assessment framework (involving accredited test laboratory)

- Same standards recognized in different jurisdictions
  - Same test report can be submitted in different jurisdictions

Sub-contracting using standards

- IBA relies on sub-contractors and suppliers
  - Components incorporated in IBA products
  - Sub-assemblies designed or manufactured by subcontractors

- Standards to control the supply chain
  - Selection of components based on their conformity to standards
  - Contractual requirements for subcontractors
    - To apply specific standards
    - To provide proof of conformity



Laurent Willemet

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Life. Science.

Presentation by Société Générale de Surveillance (SGS)

M. Johan GORIS

Global Gateway to Electrotechnical Standards in Belgium



SGS CEBEC

CEB BEC Academic Standard Day

26th October 2026 - VUB

Johan Goris

WHEN YOU NEED TO BE SURE

SGS

SGS CEBEC

- 1923 – Belgian Safety Mark

100 YEARS 1923 - 2023

- 1961 – Marks Committee
- 1973 – CENELEC certification Agreement
- 1999 – BELAC accreditation

- 2003 – **Part of SGS Belgium NV**

  SGS = International TIC industry group

- 2008 – Relocated at Riverside Business Park

  SGS CEBEC Laboratory - 1000 m² / 20 FTE

ACCREDITATIONS & RECOGNITIONS

- National accreditation ISO/IEC/EN 17065 (Certification body)
- National accreditation ISO/IEC 17025 (Test Laboraory)

GCC ACCREDITATION CENTER
GAC
Product Certification
ISO/IEC 17065:2012
APC 0050

Testing for the Belgian National Market Surveillance Authorities
EU RAPEX / Safety Ga

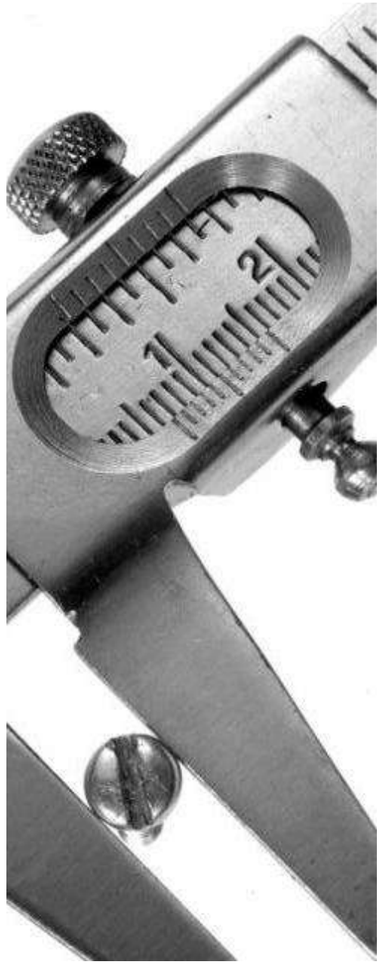
- Certifications (volontary and regulatory)

SCOPE OF PRODUCTS COMPETENCES

- **BATT** – Batteries
- **CABL** – Cables and Cords
- **CONT** – Switches for appliances and automatic controls for hous. appliances
- **E3** – Energy Efficiency
- **ELVH** – Electrical Vehicle
- **EMC** – Electromagnetic Compatibility
- **HOUS** – Household and similar equipment
- **INST** – Installation accessories and connection devices
- **LITE** – Lighting
- **MEAS** – Measurement, Control and Lab equipment
- **MED** – Electrical equipment for medical use
- **OFF** – IT and office equipment (**ITAV**)
- **POW** – Low voltage, high power switching equipment
- **PROT** – Installation protective equipment
- **PV** – Installation protective equipment
- **SAFE** – Safety transformers and similar equipment
- **TOOL** – Portable tools
- **TOYS** – Electric Toys
- **TRON** – Electronics, entertainment (ITAV)



SGS CEBEC



Participation in Standardization

- Belgian BEC TCs: 20 TCs (biggest BEC B-member)
- CENELEC TCs:
  - TC61, TC34, TC116, TC23E
- IEC TCs:
  - TC61, SC23E/WG1, SC23E/WG2

MED: TC62

Participation in Standards interpretation panels

- ETICS/OSM Meetings (EN standards)
- IECEE/ETF Meetings (IEC/ISO standards)

Updated Standardization

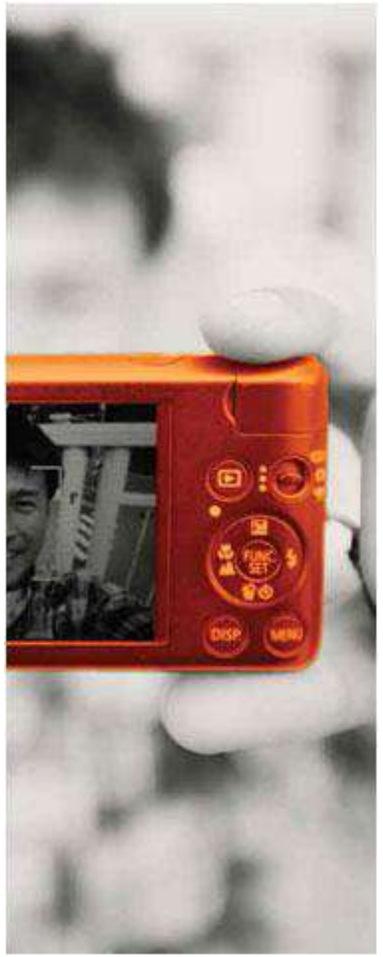
- Collection of more than **3300** standards (NBN, EN, IEC, CISPR, UL, CSA)

Standards subscription

- All IEC and EN standards under IECEE CB scope
- All ANSI/UL standards

MED: 200

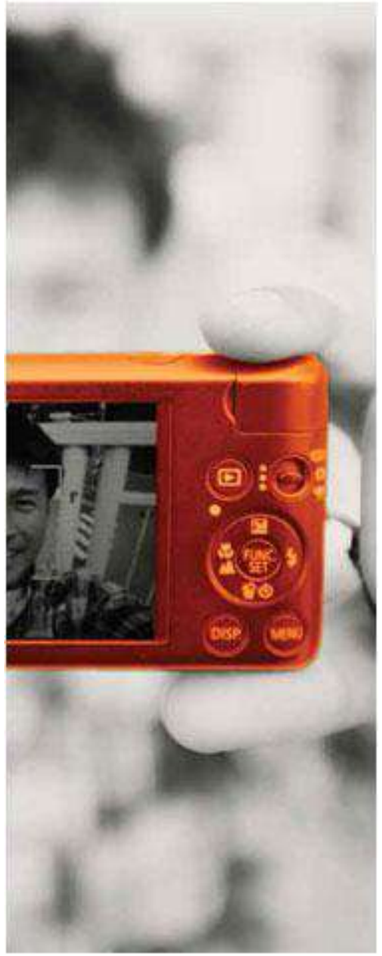
STANDARDS AT WORK



SGS CEBEC Laboratory (ISO/IEC 17025)

- LAB QUALITY Process standard
  - Qualification
    - Roles : Project Leader, Test Engineer
    - Standards => scope
  - Testing requirements
    - Test equipment calibration
    - Lab Environment
    - …
  - Standard forms and registration
  - …

STANDARDS AT WORK



MEDICAL product safety standard assessment

- **WORKFLOW**
  - STANDARD Applicability analysis
    - product / market(s)
  - STANDARD Impact analysis
    - Specific product / test requirements => plan
  - STANDARD Verification & Validation
    - File review (design, RM outcome, IFU, …)
    - Test
    - Report
      - IECEE report templates
    - Product certification (Mark)

CEBEC

THANK YOU FOR YOUR ATTENTION

WHEN YOU NEED TO BE SURE

SGS

WWW.SGS.COM

- cebec.info@sgs.com
- Johan.goris@sgs.com

Presentation by NBN

M. Yens VAN OVERLOOP



Global Gateway to Electrotechnical Standards in Belgium

NBN services
for students & academics

Who am I?



Yens Van Overloop

Training & Education

yens.van.overloop@nbn.be

Who is NBN?

Who are we?



NBN is an agency of the federal government (FPS Economy).

We are the **Belgian National Standardisation Body (NSB)**.

Our missie is to:

- **Develop** Belgian (NBN), European (EN), international (ISO) standards and ensure the voices of the Belgian stakeholders are heard
- **Stimulate** the use of standards
- **Develop** solutions for easy and effective access to standards

Who are we?

700+

NATIONAL COMMITTEES

+42.000

STANDARDS

NBN

3.500

BELGIAN EXPERTS

2000

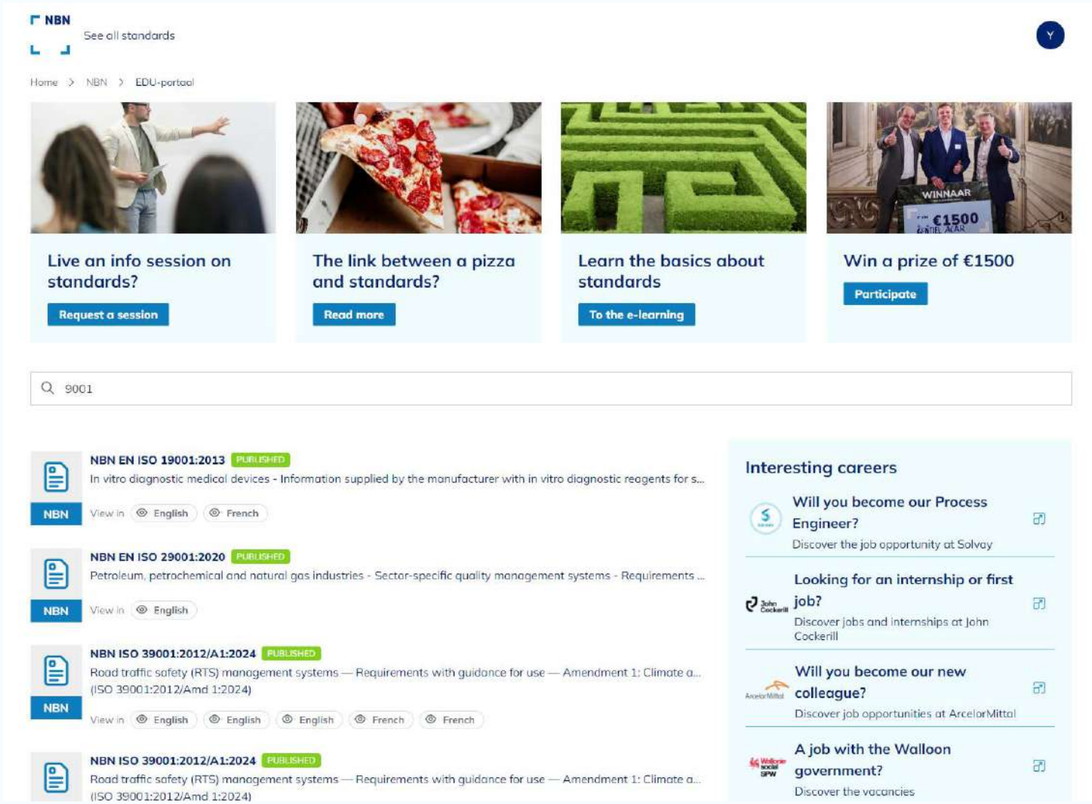
NEW STANDARDS
EACH YEAR

What do we offer to students & academics?

Edu-portal

Edu-Portal

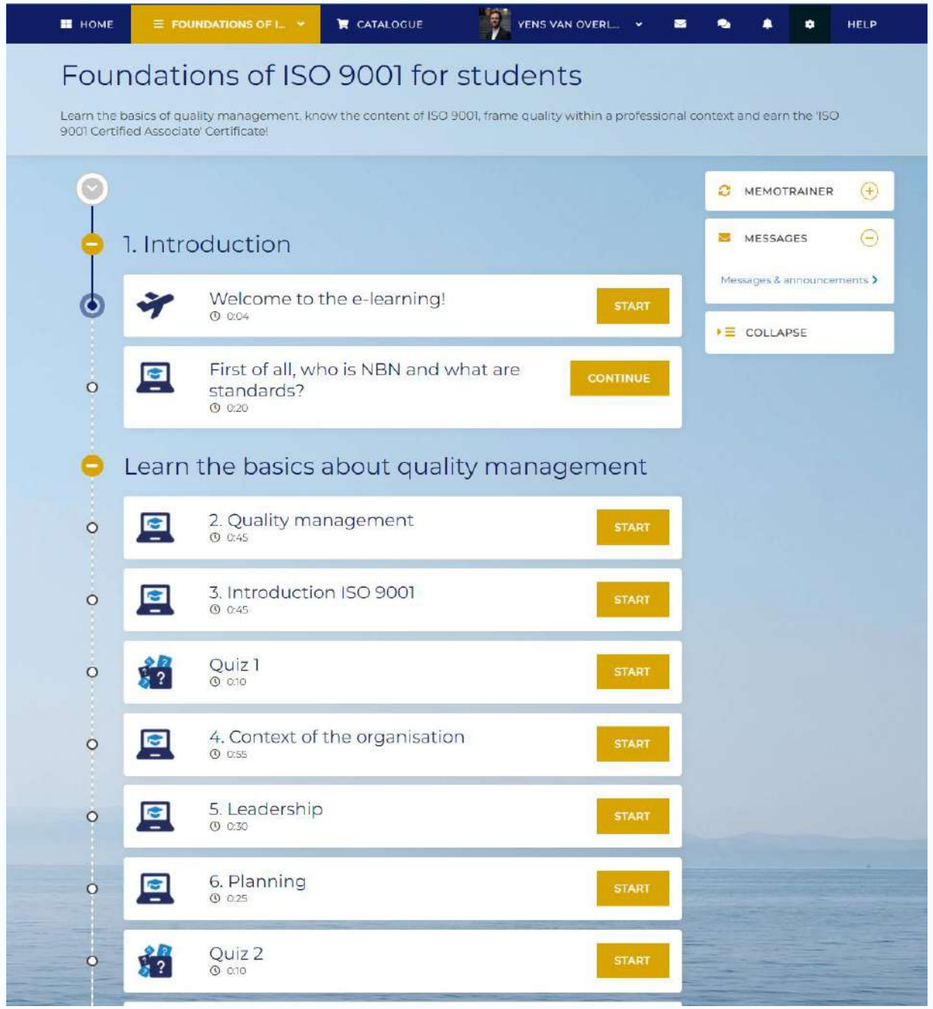
- Free access to more than **40.000 standards** in reading mode
- All standards in NBN catalogue
- Access for students and academia
- +5000 active users
- 325 active institutions in Belgium
- Visit: https://www.nbn.be/en/edu-portaal



E-learnings for students

Certified e-learning for students

- **E-learning** on management topics (quality, environment, etc.)
- Available languages: NL, FR, ENG
- Multiple choice test
- Used as an assignment
  - Students receive a certificate if they pass the exam
  - Saves time for the lecturer
- E-learning on the basics of standardisation and standards development



Standards Development

Standards development

- NBN offers a **50% discount** on membership for academics wishing to contribute to standards development.

- Currently, **156 academics** contribute to standards development.



Thesis Awards

NBN Sustainability Award

- Thesis about sustainability
  - Not just standards
- Award for students
  - Recognition
  - **Nice prize of €1500**
  - Value on their resume
- Support by Vlaamse Scriptieprijs (SciMingo)



Hera Awards

- Sponsorship by NBN
- 14 awards available for students
  - Focus on sustainability
- Workshops on standards and sustainability
- Support by Foundation for Future Generations



NBN

Questions?

Contact edu@nbn.be

or visit our website:
https://www.nbn.be/en/education

Conclusions & Takeaways

- **Parity** : stakeholders are supported by a balanced and codified framework, compliant with the Technical Barriers to Trade of the World Trade Organization.

- **Transparency** : stakeholders are systematically informed of results from standards development, such that antitrust and anticompetition is suppressed, if not eliminated.

- **Consensus :** conditions for acceptance are either codified, or representative of deliverables that face no sustained opposition. Where opposed, standardization foresees maintenance cycles allowing for changes to be foreseen in future editions of standards deliverables.

- **Community :** stakeholders represent different walks of life, illustrating the inclusiveness of standards development and the importance of standardization deliverables for the different categories (e.g., Academia, Industry, Legal, Economy, Federation).

Thank you ! Any questions ?



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