



ICES Workshop:
The Dimensions of Education about Standardization
Educational Needs

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Landscape: Non-Standards People

• Pre - 2000

- Standards: huh? (hein, ¿eh?, 혀?, 吧?, va?, vai?, هاه?)
- Engineering for technical elegance and use
 - Does my nut fit your bolt?
 - Why doesn't my mobile phone work in your country?

• Post - 2000

- Increased awareness regarding standards
- Increased understanding of how markets and businesses use standards and contribute
- Increased internal standards education needed

Increased Awareness = Challenges

- Aging out of practical standards expertise
 - Fewer senior people (retirement)
 - Less understanding of standards history
 - To reduce chance of repeating the mistakes, or making new mistakes, study the history
- Standards impacts are even more complex
- Maintain balanced process to allow all businesses to thrive
- Long term versus short term goals

Standards Education: Corporate

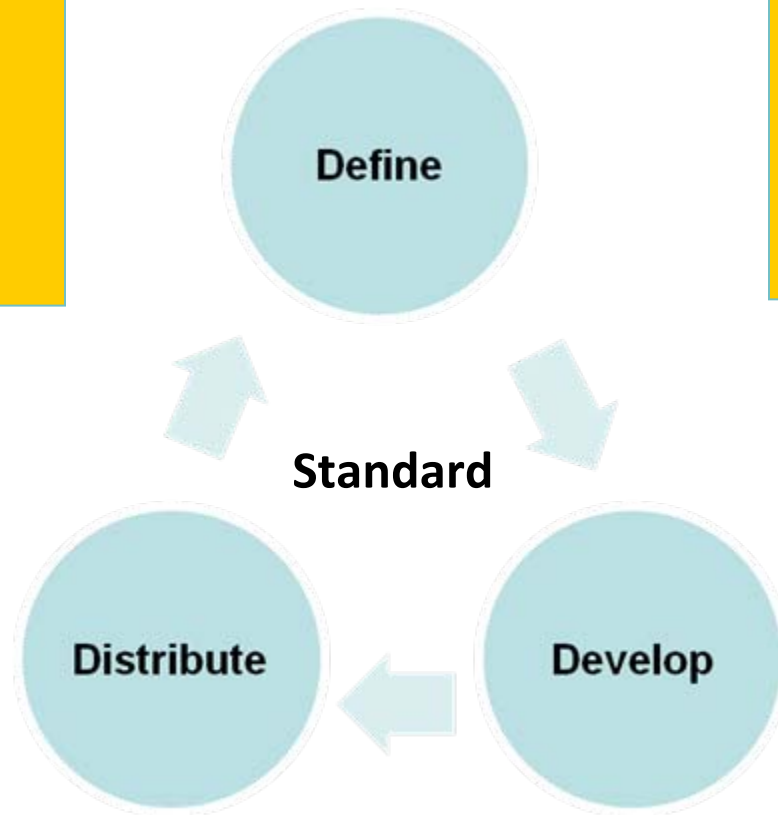
General Costs

- Educate on Policies
- Financial impact
- Participation
- (SME issues)

IP Registration

Processes:

- Patent, CR, TM
- IP disclosure
- Licensing statement



Market Access

- Government Procurement
- Export/Import
- Trade Barriers

Standards Conduct

- Ethics
- Anti-Trust
- Market access / relationships

Professional Skills in Standardization

- Engineers
 - R&D
 - Standards
 - Business development
- Compliance oversight
- Quality managers
- Process analysts
- Quality control

General Knowledge About Standards

- Not directly associated with specific job
 - Executives
 - Business strategy implementers
 - Managers
 - Societal issues
 - Sustainable development

Example Policies, Programs and Attitudes

- Organizations policies
- Organizations programs
- Companies attitudes towards:
 - Qualification
 - Training
 - Professional development of personnel dealing with standards related matters
 - Conferences, Workshops

Disclosure Requirements Spectrum

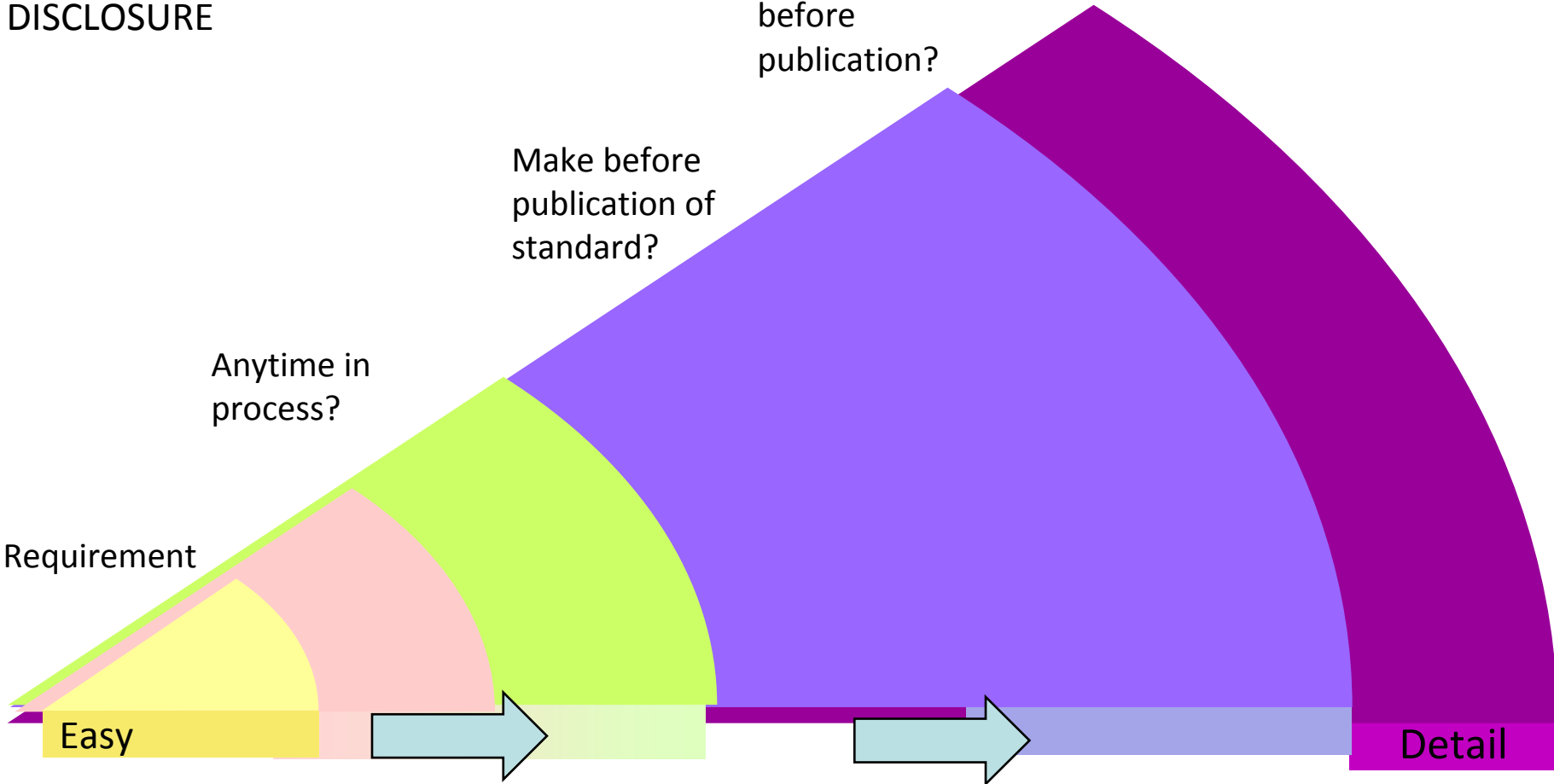
TEACHING WHEN TO MAKE DISCLOSURE

Make at meeting before publication?

Make before publication of standard?

Anytime in process?

No Requirement



Recommendations

- Clear definitions and understanding for education
 - Understanding who is consumer in discussions (person, company, government?)
- Studies based on empirical data versus theoretical studies
 - Companies are well positioned to provide cutting edge data points
- Educational materials must be clear, objective, and accurate
 - Analytical case studies balanced with empirical input from companies
- Separate the “wheat” from the “chaff”
 - Separating true facts and impacts from personal opinion, speculation, hyperbole, and business interests

Recommendations

- Understand differences regarding technology diffusion for new versus mature products and effect on pricing
- Understand true cost breakdown to consumer for developing, producing, implementing, and using technology
- Economic education should include analysis of total costs to consumer
 - Device/system purchase can be lesser cost
 - Service costs can be substantial
 - Installation of system
 - Maintenance of system



Thank you

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