

# Mastering the Food Standards Landscape

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Halifax, Canada



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# Why standardize?

## Benefits:

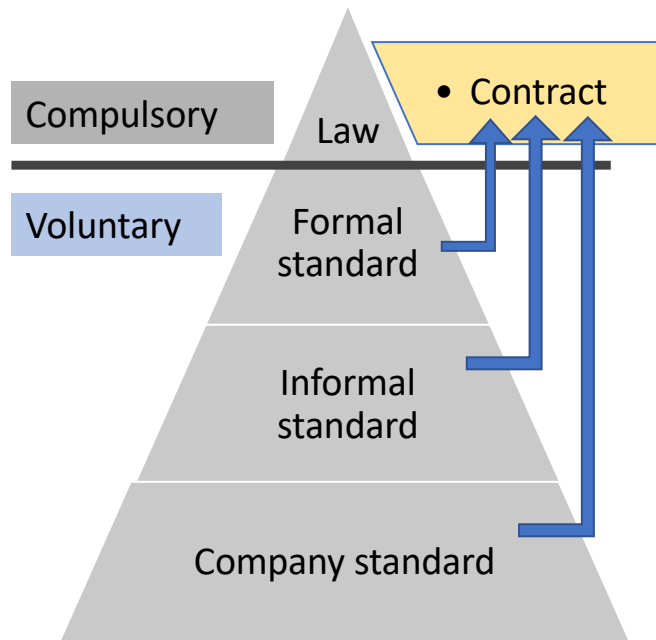
- Safer products and services
- Enhanced purchasing power
- Simplicity and compatibility
- Improved social and economic well-being

- Source: SCC/CCN website

## Concerns:

- #1: standardization means monotony and boredom
- #2: standardization destroys creativity

# Why standardize?



## Standards

- A standard is an agreed way of making a product, managing a process or delivering a service across industries
- A standard is not a law, it is voluntary.... but standards become compulsory when referred to in:
  - Legislation
  - Contracts
  - Certification

# Why standardize?

Some issues that  
will never change?

- Metric vs Imperial
- Electricity supplies
- Paper sizes



26°F or

26°C ?



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Regulations soon??



## The benefits of being involved in standardization

### **Value to participants**

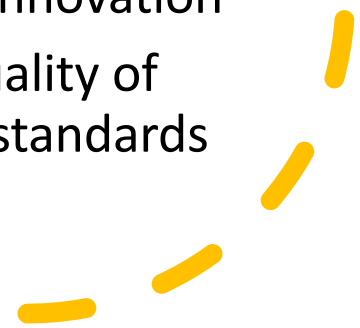
- Gaining first-hand knowledge about future technological developments and trends
- Influencing the standards development process. A participating organization may protect its investments in products and research & development
- Building a network. Standardization committees are meeting places to develop new contacts and exchange ideas



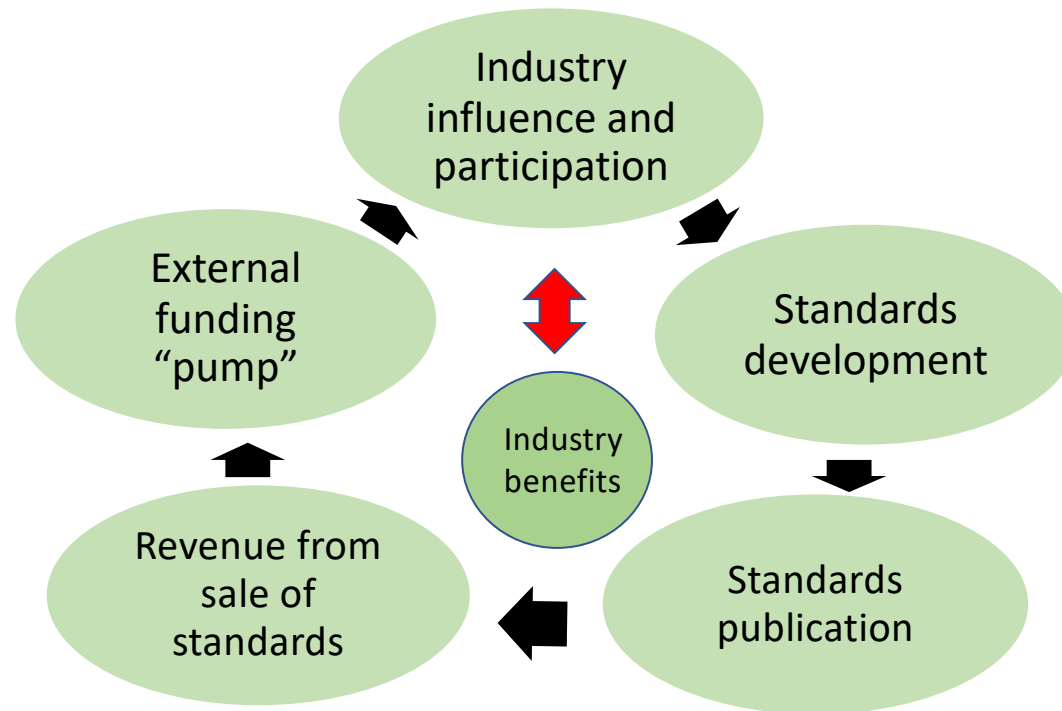
## The benefits of being involved in standardization

### **Value to community**

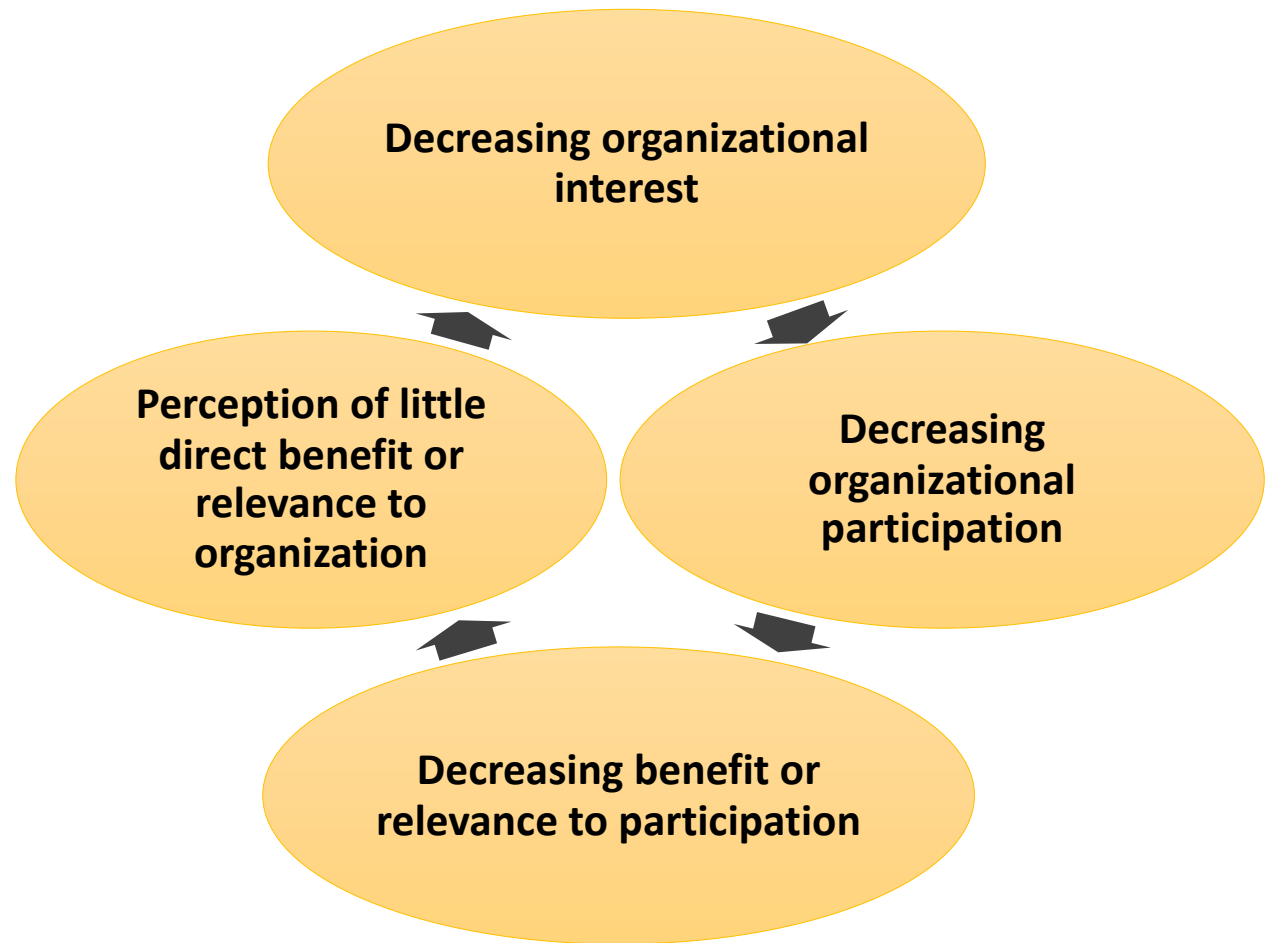
- Cost savings: using standards increases efficiency and quality, thereby reducing costs
- Trade: standards ensure that products or services are better accepted in other regions
- Innovation: standards enable access to know-how reducing the cost of innovation
- Customer satisfaction: higher quality of products as a result of applying standards



Positive  
outcomes of  
participation in  
standardization



Consequences of  
reducing  
commitment to  
standardization



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Where do Food Standards  
come from?

And who makes them?



### Private Standards

- Developed by consortia or auditing companies to meet specific needs

### Public Standards/Consensus Standards

- Developed by Standards Development Organizations (SDOs)

### Regulatory Standards

- Often adopted from SDOs but can be developed directly or by commission

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# Some definitions

**SDO** - Standards Development Organization

**NGO** - Non-Government Organization

**INGO** - International Non-Governmental Organization

**IGO** - Intergovernmental Organization

**NSB** - National Standards Body (ISO)

**ISO** - International Organization for Standardization (def)

Not-for-profit (non-profit) organization (US: 501 (c) 3)

Trade Organization/Trade Group

Public/private standards

Publicly available standards



## Principles of consensus standards development



WORLD TRADE  
ORGANIZATION

- Six Principles:
  - transparency,
  - openness,
  - impartiality and consensus,
  - relevance and effectiveness,
  - coherence - no duplication,
  - Inclusivity (development dimension)

# What is an SDO?



- ▶ Standards Development Organizations (SDOs) create standards of all types.
- ▶ SDOs come in many forms with different working principles.
- ▶ Common features:
  - Work in open fora to develop a document to meet a defined need.
  - Experts drawn from different interested and/or materially affected organizations.
  - Attempt to get balanced participation.
  - Develop a standard by consensus in multiple rounds of discussion/voting.
  - Output (Standard) should conform to accepted international norms.



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# Food Relevant Definitions

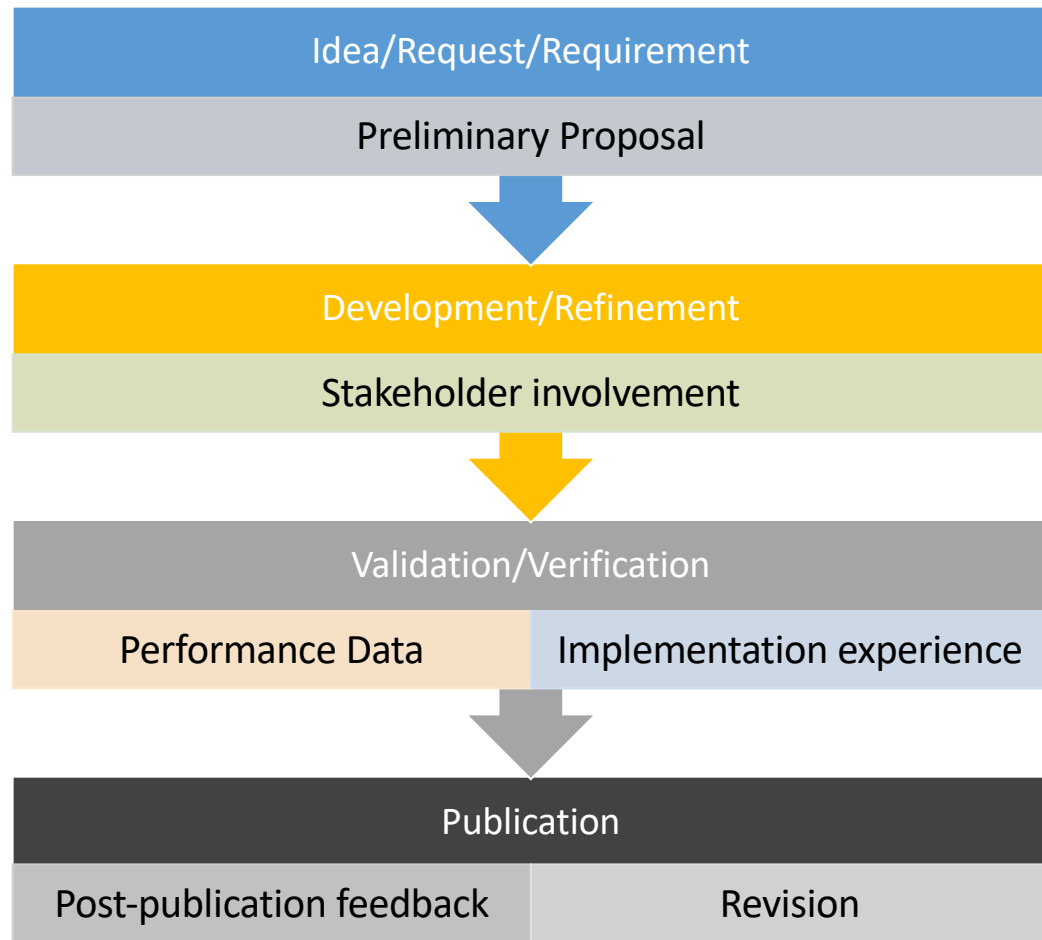


**Standard:** codified criteria, instructions or recommendations (IDF)

In the **food space** a **Standard** may be:

- Test method - ***Analytical standard***
- Specification - ***Compositional standard***
- Reference material - ***(Reference) standard***
- Guidance - ***Procedure, Quality, Management (standard)***

# Generic Method Development Process



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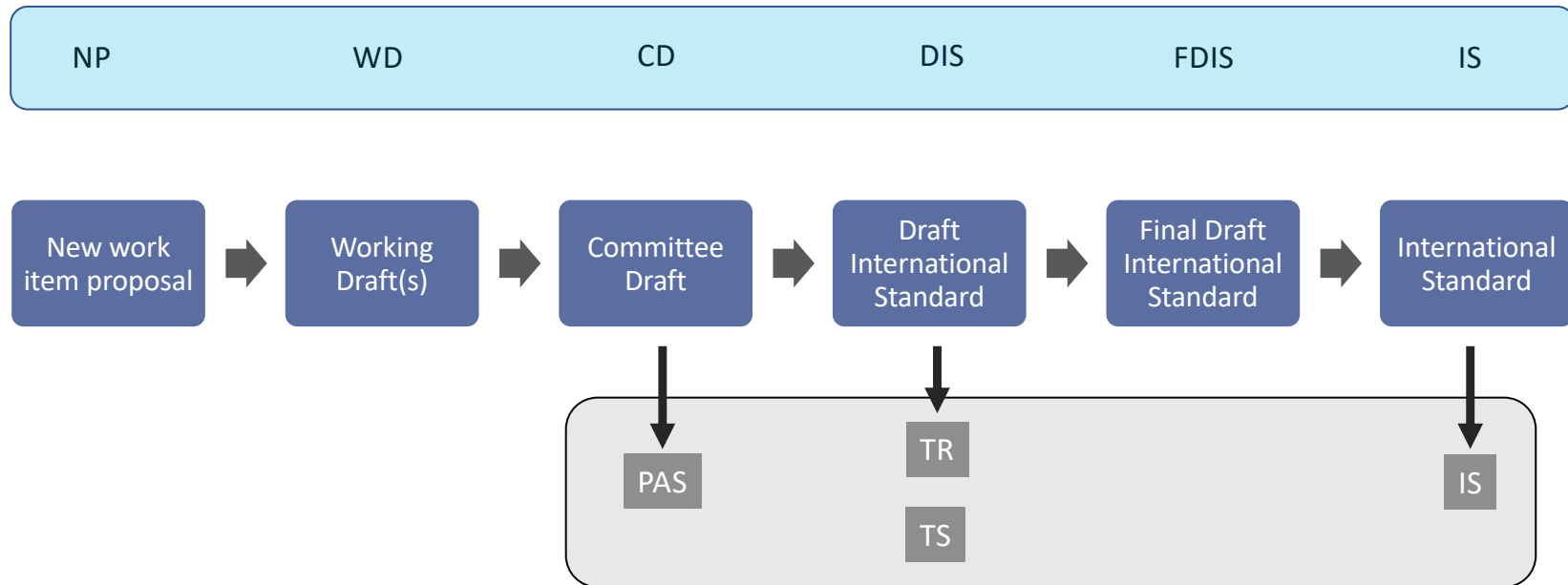


- INGO comprising 164 national standards bodies.
- Its experts develop voluntary, consensus-based, market relevant International Standards (WTO).
- Central Secretariat is in Geneva, Switzerland.
- Published over 22844 International Standards covering A to Z of specifications, technology and manufacturing.
- 779 technical committees and subcommittees.
- More than 160 people staff Central Secretariat.

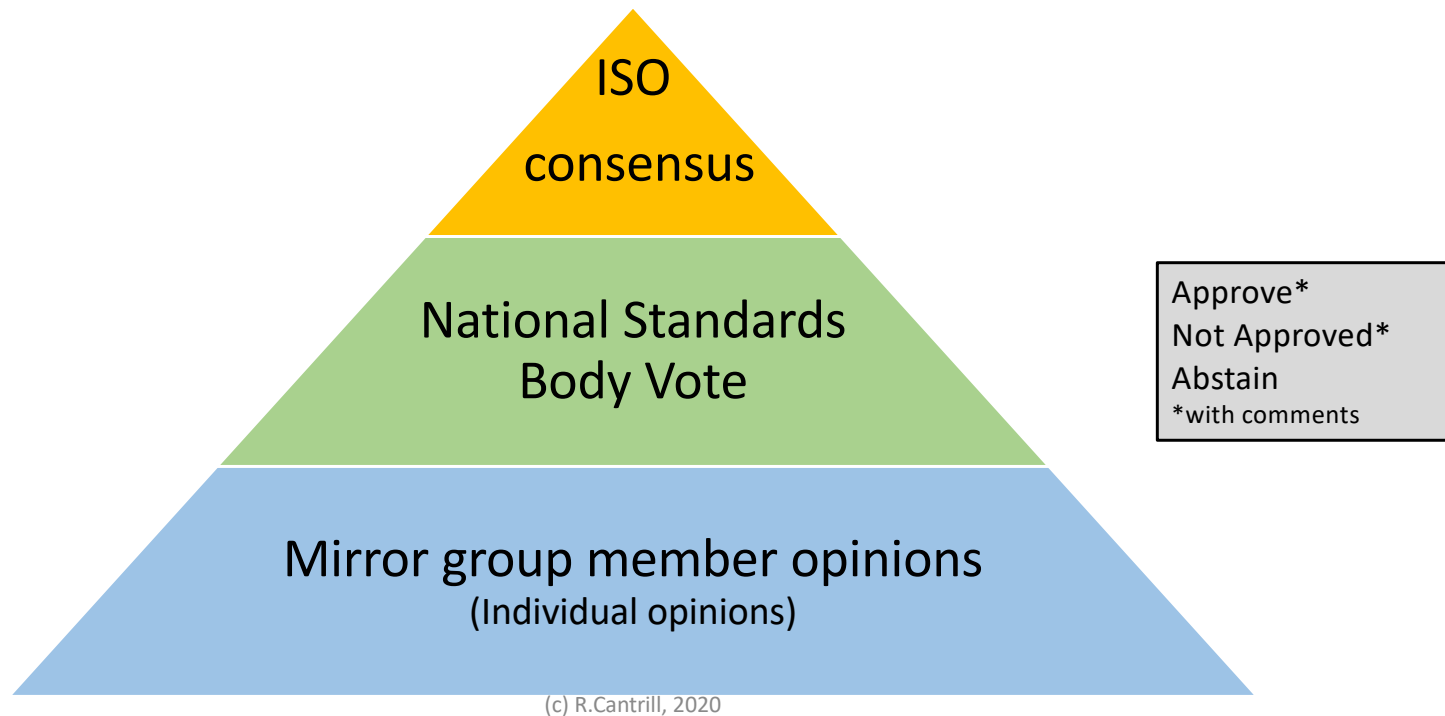


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# ISO Standard Development Process



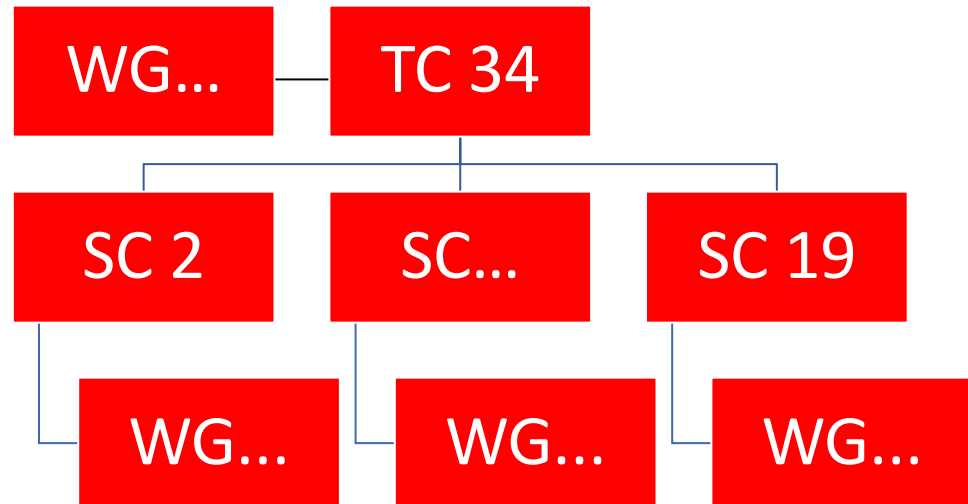
## ISO – Building “Consensus” – One NSB at a time



# ISO/TC 34 (Food Products) Statistics

- 79 “P” members 61 “O” members
- 862 Published Standards; 129 Standards in progress
- 8 Active Working Groups under direct administration
- 16 Active Subject Matter Subcommittees under indirect management
  - Under individual NSB management
- SECRETARIAT: AFNOR (FRANCE)  
Committee Manager: Mme Sandrine Espeillac
- TWINNED SECRETARIAT: ABNT (BRAZIL)  
Twinned Committee Manager: Mrs Milena Pires

# ISO TC 34 Committee Relationships



## ISO TC/34 – Food Products – Working Groups

ISO/TC 34/CAG	Chairman's Advisory Group
ISO/TC 34/WG 14	Vitamins, carotenoids and other nutrients
ISO/TC 34/WG 16	Animal welfare
ISO/TC 34/WG 20	Aflatoxins
ISO/TC 34/WG 21	Social responsibility/sustainability
ISO/TC 34/WG 22	Natural antimicrobial
ISO/TC 34/WG 23	Food suitable for vegetarians/vegans
ISO/TC 34/WG 24	qNMR (Quantitative nuclear magnetic resonance spectroscopy)

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# ISO TC/34 – Food Products – Subcommittees

<a href="#">ISO/TC 34/SC 2</a>	Oleaginous seeds and fruits and oilseed meals	<a href="#">ISO/TC 34/SC 10</a>	Animal feeding stuffs
<a href="#">ISO/TC 34/SC 3</a>	Fruits and vegetables and their derived products	<a href="#">ISO/TC 34/SC 11</a>	Animal and vegetable fats and oils
<a href="#">ISO/TC 34/SC 4</a>	Cereals and pulses	<a href="#">ISO/TC 34/SC 12</a>	Sensory analysis
<a href="#">ISO/TC 34/SC 5</a>	Milk and milk products	<a href="#">ISO/TC 34/SC 15</a>	Coffee
<a href="#">ISO/TC 34/SC 6</a>	Meat, poultry, fish, eggs and their products	<a href="#">ISO/TC 34/SC 16</a>	Horizontal methods for molecular biomarker analysis
<a href="#">ISO/TC 34/SC 7</a>	Spices, culinary herbs and condiments	<a href="#">ISO/TC 34/SC 17</a>	Management systems for food safety
<a href="#">ISO/TC 34/SC 8</a>	Tea	<a href="#">ISO/TC 34/SC 18</a>	Cocoa
<a href="#">ISO/TC 34/SC 9</a>	Microbiology	<a href="#">ISO/TC 34/SC 19</a>	Bee products

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## Codex Alimentarius (Secretariat based at FAO in Rome)

- “CODEX ALIMENTARIUS is about safe, good food for everyone – everywhere”
- Provides international food standards, guidelines and codes of practice for safety, quality and fairness in international food trade.
- Codex considers specifications for commodities, diet and nutrition, veterinary drug and pesticide residues, food additives and contaminants, food import and export principles, methods of analysis, as well as debating regional issues.
- Codex standards are based on sound science provided by independent international risk assessment bodies (JECFA, JEMRA, JMPR and JEMNU) or ad-hoc scientific consultations organized by FAO and WHO.
- Individual committees composed of government representation and observer organizations.

# Codex Alimentarius committees

## Codex Alimentarius Commission

[CAC](#) Codex Alimentarius Commission

## Executive Committee

[CCEXEC](#) Executive Committee of the Codex Alimentarius Commission

## General Subject Committees

[CCCF](#) Codex Committee on Contaminants in Foods

[CCFA](#) Codex Committee on Food Additives

[CCFH](#) Codex Committee on Food Hygiene

[CCFICS](#) Codex Committee on Food Import and Export Inspection and Certification Systems

[CCFL](#) Codex Committee on Food Labelling

[CCGP](#) Codex Committee on General Principles

[CCMAS](#) Codex Committee on Methods of Analysis and Sampling

[CCNFSDU](#) Codex Committee on Nutrition and Foods for Special Dietary Uses

[CCPR](#) Codex Committee on Pesticide Residues

[CCRVDF](#) Codex Committee on Residues of Veterinary Drugs in Foods

# Codex Alimentarius committees

## Commodity Committees

<a href="#">CCCPL</a>	Codex Committee on Cereals, Pulses and Legumes
<a href="#">CCFFV</a>	Codex Committee on Fresh Fruits and Vegetables
<a href="#">CCFO</a>	Codex Committee on Fats and Oils
<a href="#">CCPFV</a>	Codex Committee on Processed Fruits and Vegetables
<a href="#">CCSCH</a>	Codex Committee on Spices and Culinary Herbs

## ad hoc Intergovernmental Task Forces

<a href="#">TFAMR</a>	Ad hoc Codex Intergovernmental Task Force on Antimicrobial Resistance
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## FAO/WHO Coordinating Committees

<a href="#">CCAFRICA</a>	FAO/WHO Coordinating Committee for Africa
<a href="#">CCASIA</a>	FAO/WHO Coordinating Committee for Asia
<a href="#">CCEURO</a>	FAO/WHO Coordinating Committee for Europe
<a href="#">CCLAC</a>	FAO/WHO Coordinating Committee for Latin America and the Caribbean
<a href="#">CCNASWP</a>	FAO/WHO Coordinating Committee for North America and South West Pacific
<a href="#">CCNE</a>	FAO/WHO Coordinating Committee for Near East

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# Codex Alimentarius



Adapted from Word Cloud from Codex Stan 234 (2019)

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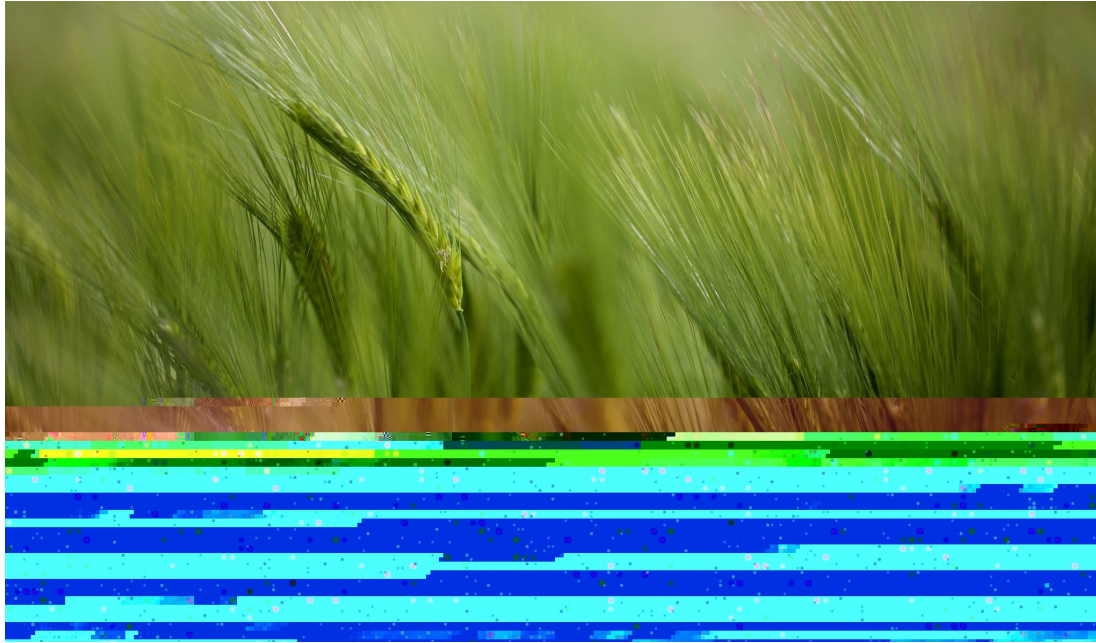
Codex  
Alimentarius  
specifications for  
oils and fats

CCFO – Codex Committee on Fats and Oils

CODEX STAN 19-1981	Standard for Edible Fats and Oils not Covered by Individual Standards	2019
CODEX STAN 210-1999	Standard for Named Vegetable Oils	2019
CODEX STAN 211-1999	Standard for Named Animal Fats	2019
CODEX STAN 256-2007	Standard for Fat Spreads and Blended Spreads	2019
CODEX STAN 33-1981	Standard for Olive Oils and Olive Pomace Oils	2017

## Case Studies

- Agricultural Food Products
- Olive oil - Relationship of standards and standards producers
- International trade
- Standards organizations and competitive intelligence

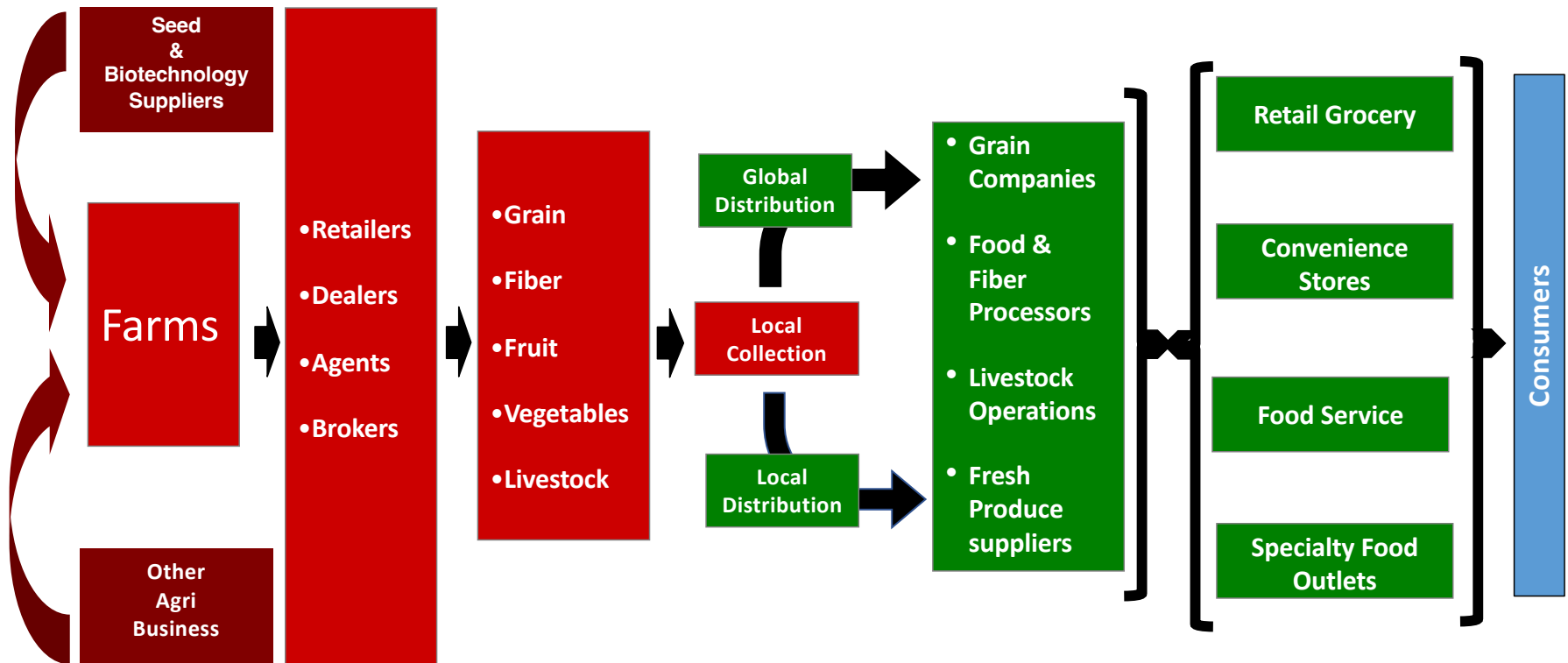


# Agricultural Food Product Stakeholders and Standards

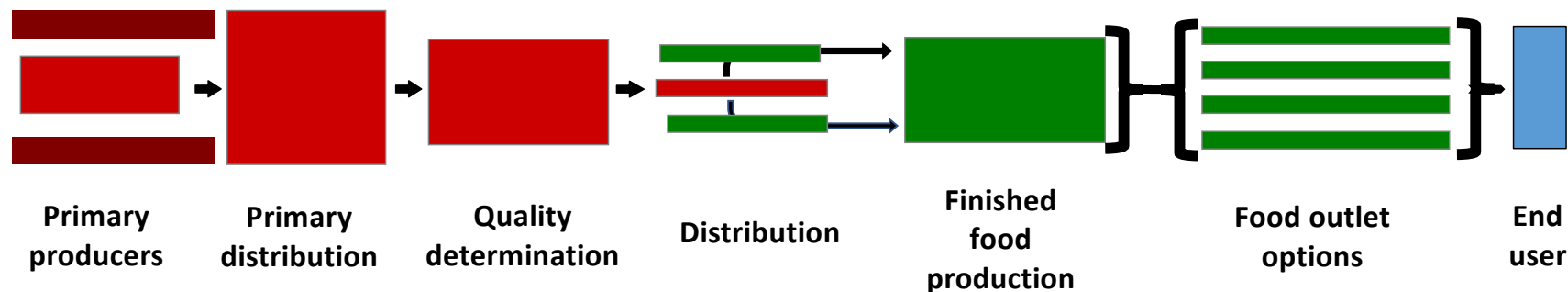
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- Seedstock, plants/shrubs/trees, inputs, machinery
- Farms
- Distribution channels, produce handlers
- Food & feed processors
- End use food & feed companies
- Consumers

## Food Chain Stakeholder - **Agricultural Product Delivery**



## ISO/TC 34, the SCs and WGs cover the food from field to consumer



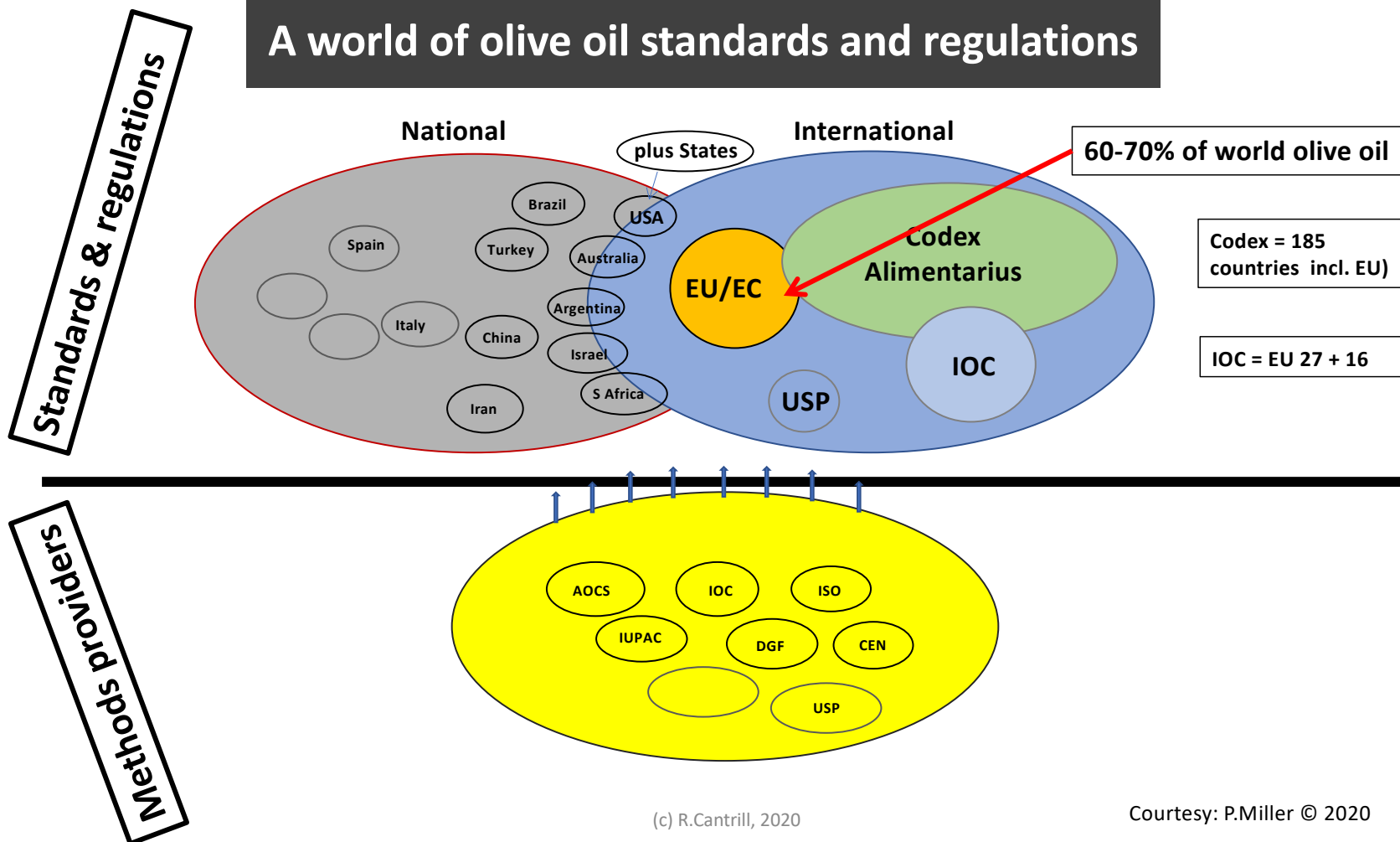
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# Olive oil methods and standards



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# A world of olive oil standards and regulations



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Courtesy: P.Miller © 2020

# International trade

Joining the dots



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# Production/Consumption of Oils and Fats

## Production

- **Rapeseed** – North America, Northern Europe, Australia
- **Soybeans** – USA, Brazil, Argentina
- **Palm Oil** – Malaysia, Indonesia, Central America
- **Olive Oil** – Mediterranean Basin, Argentina, Australia, Chile, South Africa, New Zealand, USA

## Consumption

- North America, Europe, Asia
- North America, Europe, Asia
- Europe, Asia, North America
- Europe, North America, Rest of the World

# Trade and contractual methods of analysis

## FOSFA International

- Contracts for more than 50 for specific oils/fats/oilseeds
  - Are used for about 80% of world trade in oils/fats/oilseeds
  - Set expectations for delivery and quality of the goods
  - Methods of analysis are set in the contract
  - Usually ISO methods
- Driver for methods harmonization

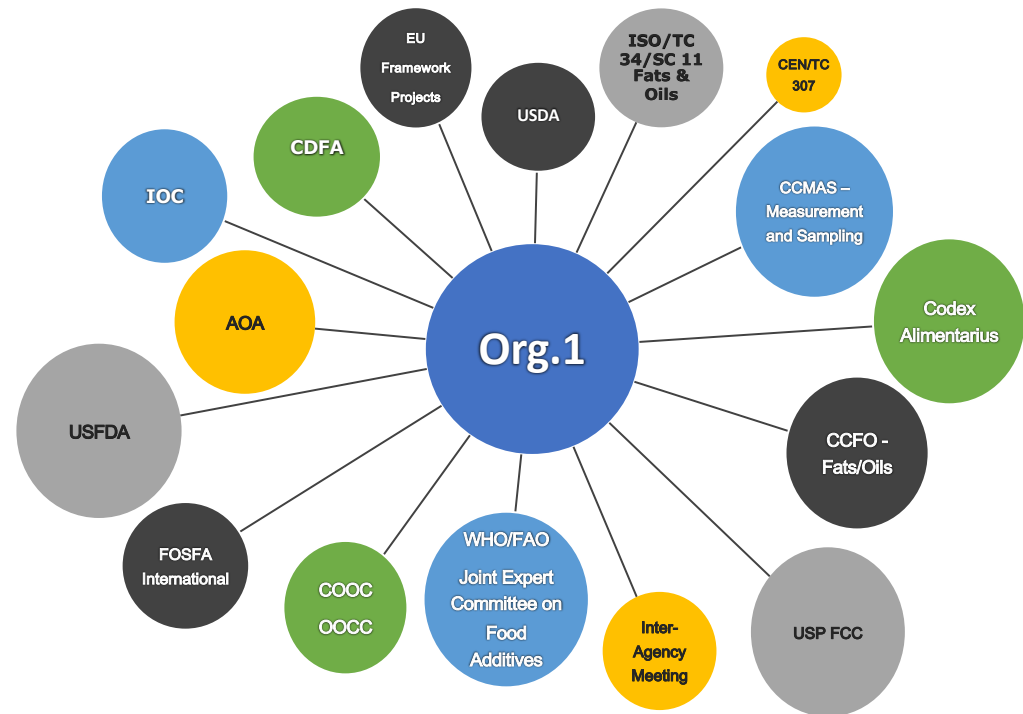
Standards  
organizations  
and competitive  
intelligence

Aim: determine which activities of key competitors may be useful in furthering the success of your own enterprise.



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# Relationships with olive oil-related organizations and activities



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Relationship levels  
with other  
organizations

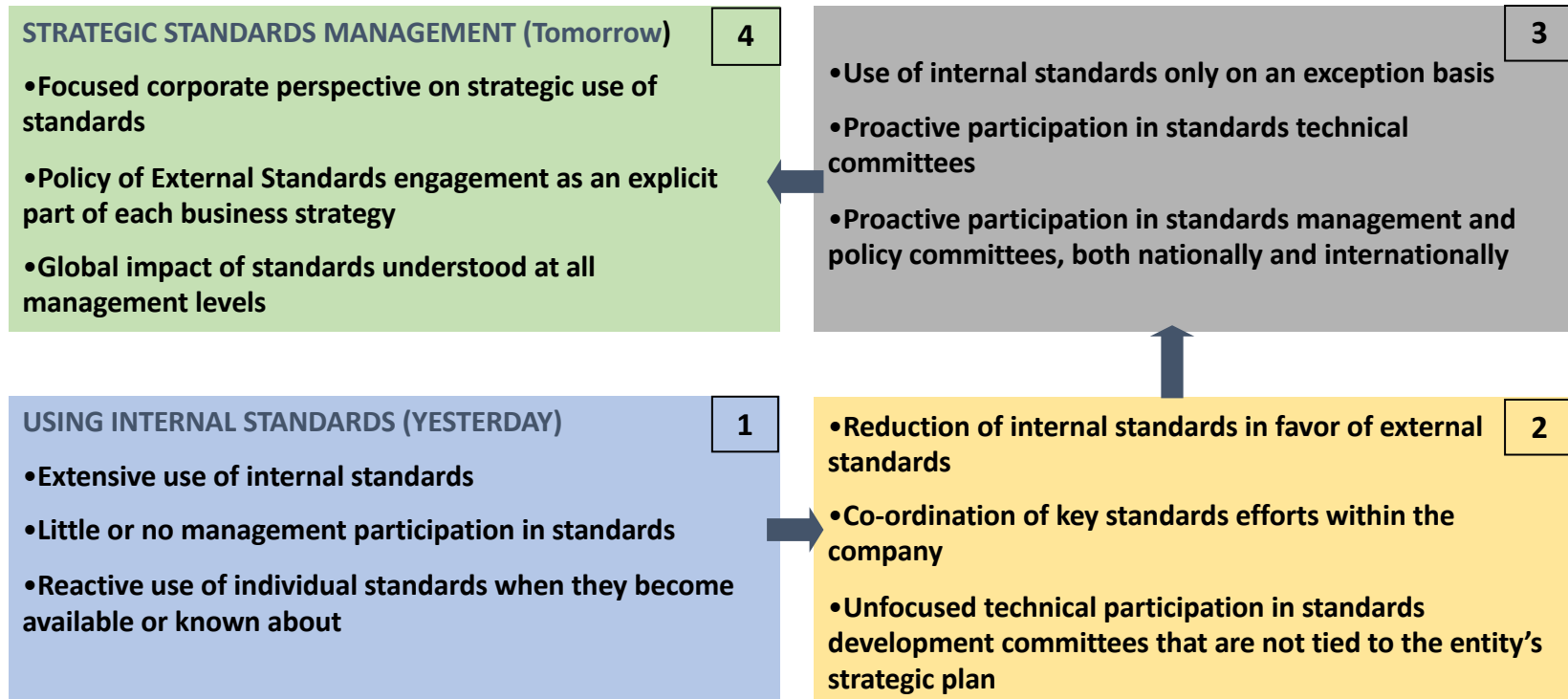


Some wisdom



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# The path of global standards awareness and utilization

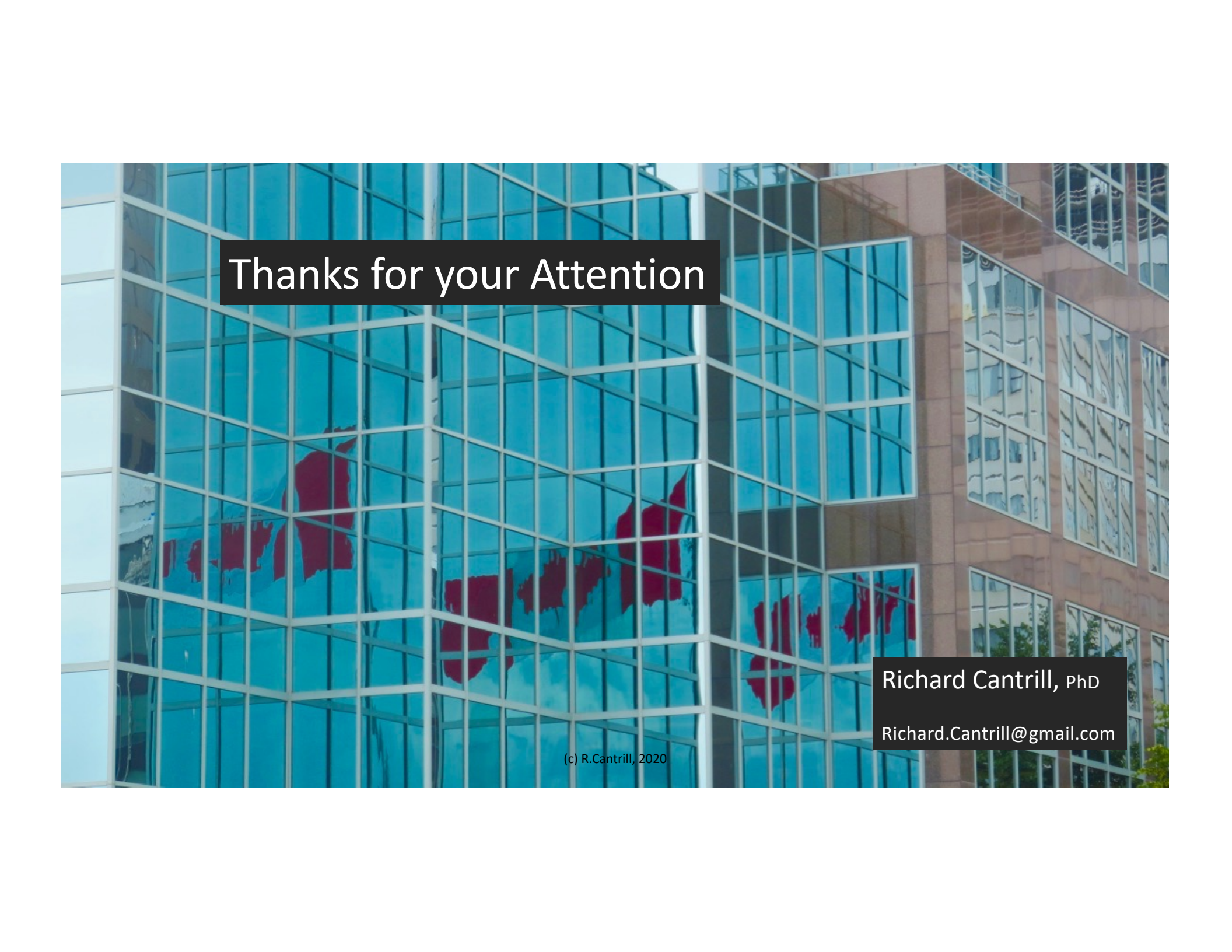


## The benefits of being involved in standardization

“You may perhaps think that a local standard will offer support for your industry and more rapid advances. But even though this approach may be successful locally in the short term, in the long run it will be wrong.”

Authors: Svenolof Karlsson & Anders Lugn  
“The converged network. Description in Ericsson’s annual report, 2006.”





Thanks for your Attention

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