# Digitalization and Trade Facilitation:

## Technological progress will never be as slow as today

Addis Ababa, November 2018, Jan.Hoffmann@UNCTAD.org

UNITED NATIONS
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FORUM FOR NATIONAL TRADE FACILITATION COMMITTEES | AFRICA
27-29 NOVEMBER 2018, ADDIS ABABA, ETHIOPIA

- ► Stages of digitalization
  - ▪ Optimization
  - ▪ Extension
  - ▪ Transformation
- ► Challenges
  - ▪ Interoperability
  - ▪ Competition
  - ▪ Development

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- **Development**

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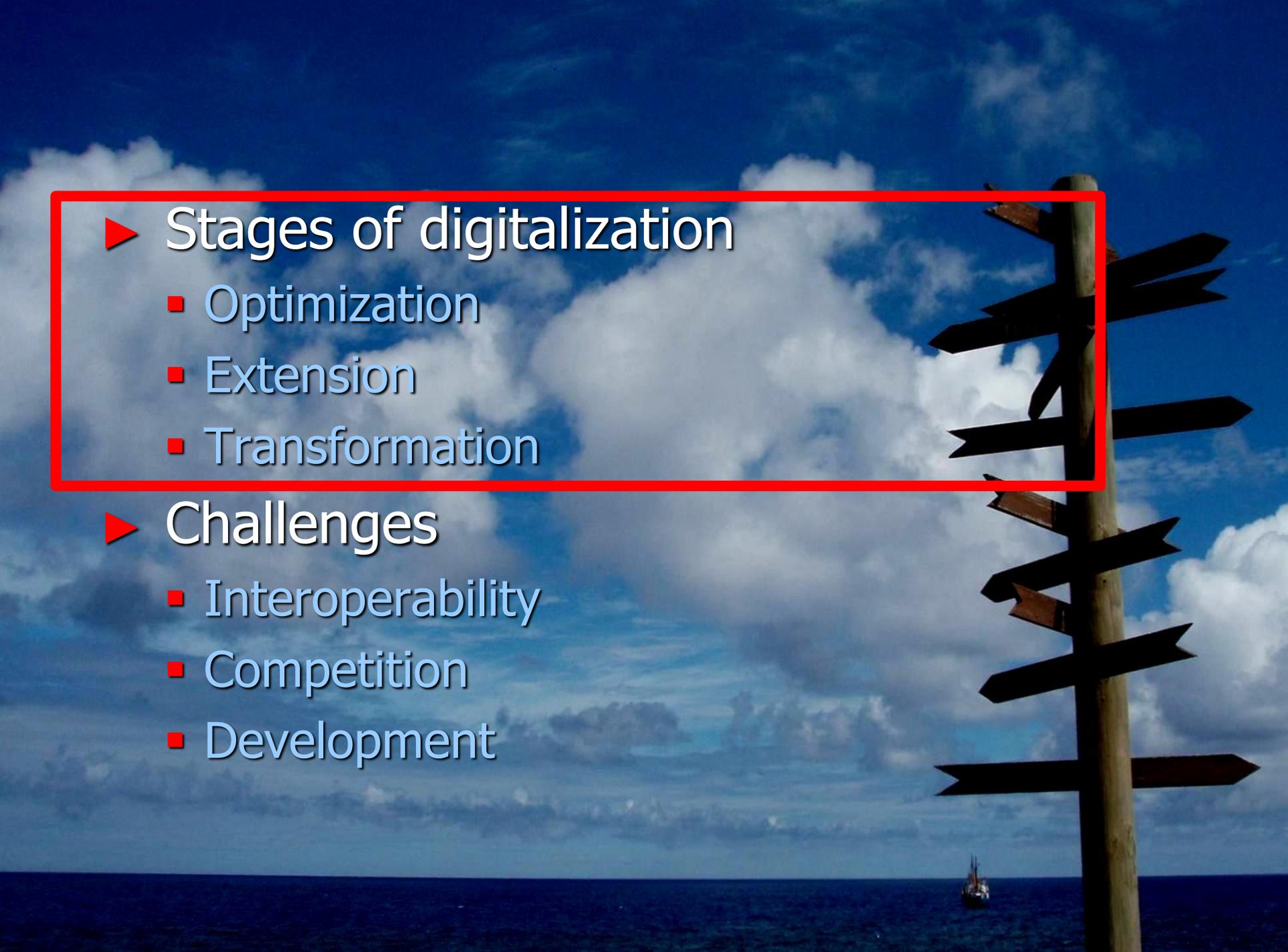
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# Three stages

▶ **Optimization**
Maximizing efficiency and reliability in existing processes

▶ **Extension**
Moving beyond efficiency to capture new sources of value

▶ **Transformation**
Reinventing logistics, trade and business models, based on data-driven revenue streams

Source and further reading:
https://t.co/vbHAdYaSWf



SAP Leonardo
Travel and Transportation

**Transforming Transportation for the Intelligent Enterprise**

How to Build a Smart, Seamless Supply Chain

THE BEST RUN **SAP**

# Optimization

**Example: Port call optimization**

"Port Call Optimization is about optimizing speed, draught and port stay, leading to lower costs, cleaner environment, more reliability and safety for Shipping, Terminals and Ports".



International Taskforce
Port Call Optimization

https://portcalloptimization.org/

# Optimization

"An important driver for the optimization of port calls is that relevant **data is shared in advance**. This enables better planning of berth occupation, availability of equipment, labour resources, as well as stowage planning and the subsequent distribution and delivery arrangements (…)".

Source:
Digital Data Sharing: The Ignored Opportunity for Making Global Maritime Transport Chains More Efficient. Blog written by Mikael Lind et al. Article No. 22 for *UNCTAD Transport and Trade Facilitation Newsletter* N° 79 - Third Quarter 2018

# Extension
## "Action opportunities"
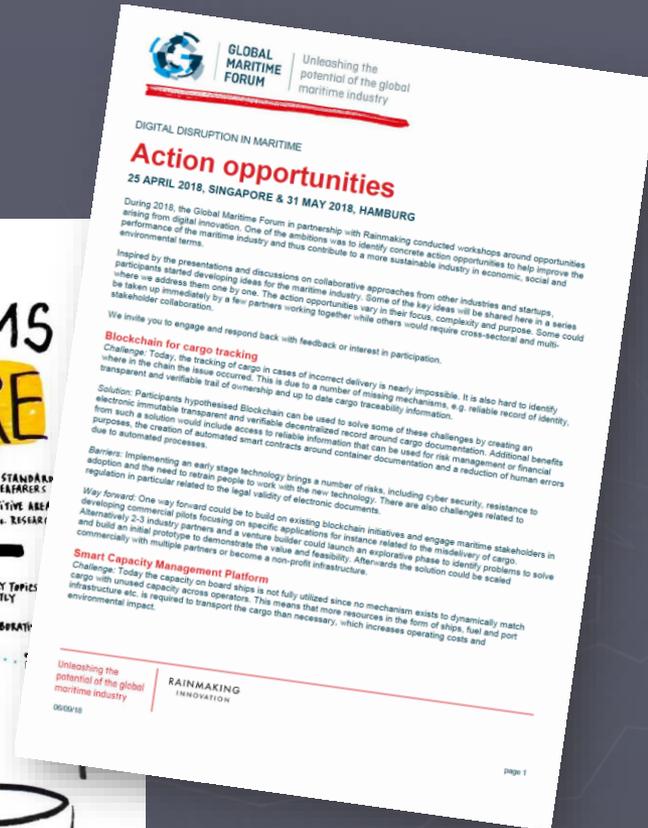




Further reading: http://globalmaritimeforum.org

# Extension

## "Action opportunities"

- Blockchain for cargo tracking
- Smart capacity management platforms
- Circular logistics solutions
- Driver and crew recruitment and allocation marketplace
- "Trip advisor" for transport industry
- …



Further reading: http://globalmaritimeforum.org

# Transformation



**Human-like A.I. will emerge in 5 to 10 years, say experts**

A survey conducted at the Joint Multi-Conference on Human-Level Artificial Intelligence shows that 37% of respondents believe human-like artificial intelligence will be achieved within five to 10 years.

**STEPHEN JOHNSON**  26 September, 2018

NICK BOSTROM
SUPERINTELLIGENCE
Paths, Dangers, Strategies

'I highly recommend this book' BILL GATES

Life 3.0
Being human in the age of Artificial Intelligence
Max Tegmark

HOW TO CREATE A MIND
THE SECRET OF HUMAN THOUGHT REVEALED

RAY KURZWEIL
AUTHOR OF THE NEW YORK TIMES BESTSELLING
THE SINGULARITY IS NEAR
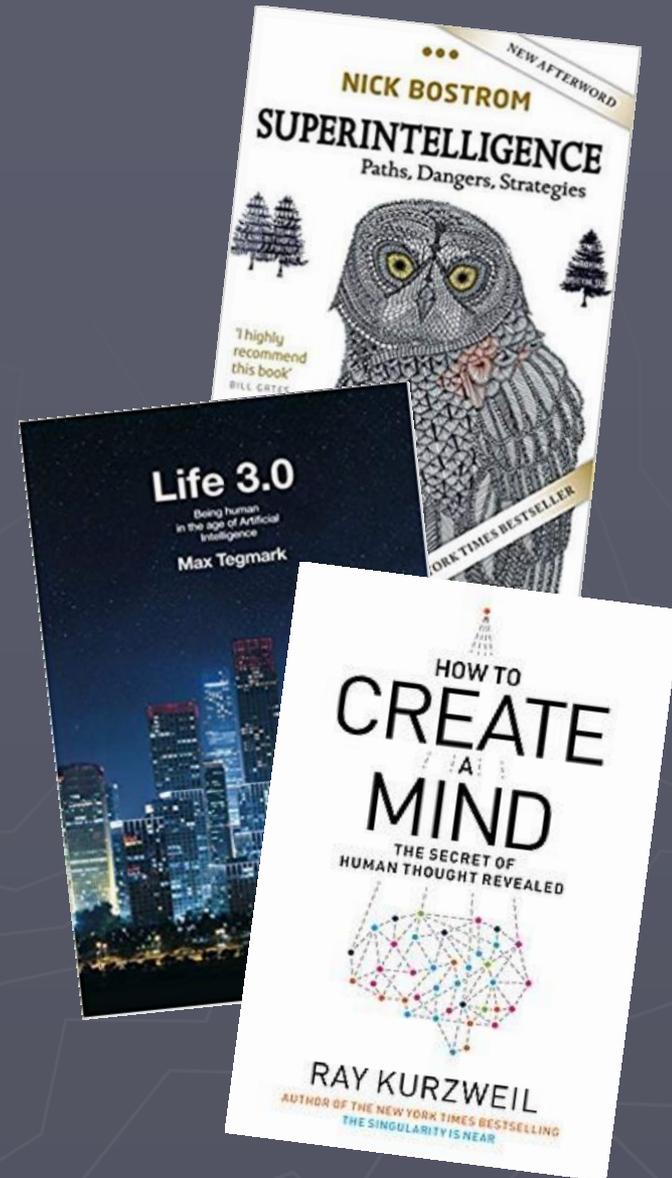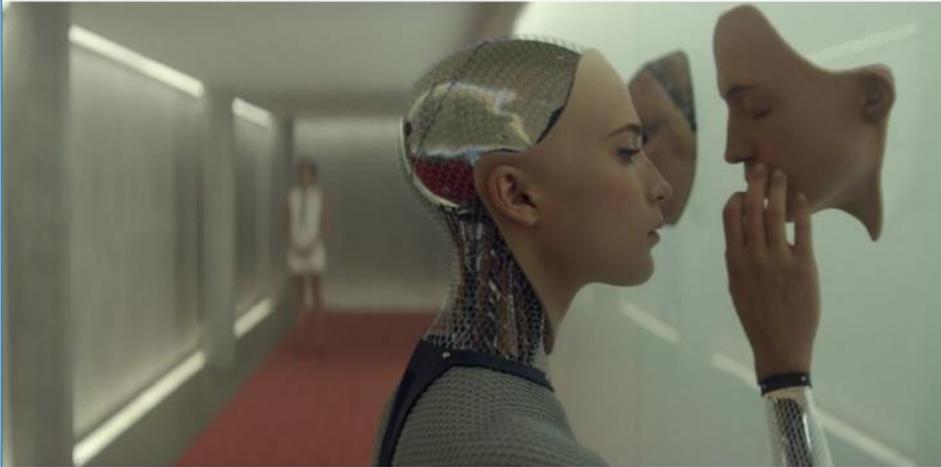
# Transformation

"...urgency among leaders to embrace digitalization, to better understand the implications, and to transform the enterprise to respond to the new reality."

*UNCTAD RMT 2018*

**Further reading:**
www.weforum.org/system-initiatives/shaping-the-future-of-digital-economy-and-society
https://twitter.com/W_Lehmacher
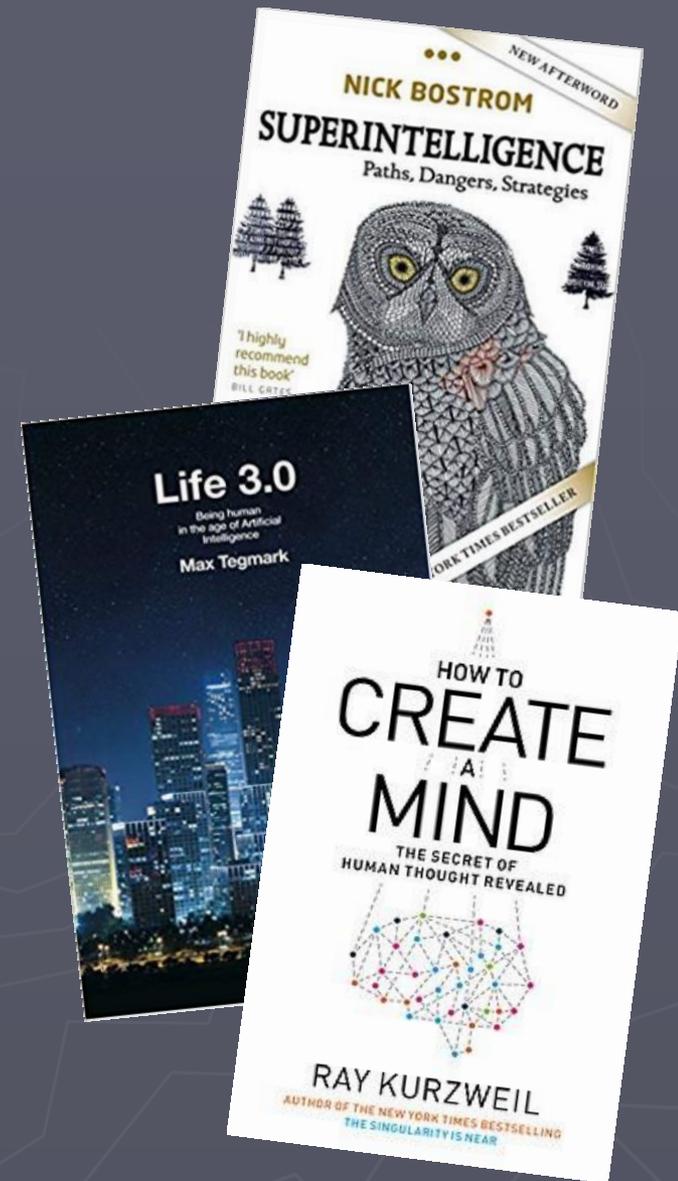
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For your Agenda:
Nairobi
10-14 December
E-Commerce week Africa

# Interoperability

Example: The Box (the container)

How can we ensure interoperability?

► Challenge of cybersecurity

► A role for global standards?

► A role for the public or private sector?

# Competition & Cooperation

We want to encourage technological progress without creating monopolies



Further reading:
Global Maritime Logistics Dialogue:
https://2018.itf-oecd.org/global-maritime-logistics-dialogue-towards-holistic-governance-maritime-logistics-chain

# Consolidation in the container market

► **Mergers and Acquisitions**

"As of January 2018, the top 15 carriers accounted for 70.3% of all capacity. Their share has increased further with the completion of the operational integration of the new mergers in 2018, with the top 10 shipping lines controlling almost 70% of fleet capacity as of June 2018."

# **Development**



Challenges and opportunities for Developing countries

▶ Open up or protect?

▶ The right mix of global and national rules?

▶ Role of Trade Facilitation?



Further reading:
E-Commerce Week https://unctad.org/en/conferences/e-week2018

# TF measures help!

► **Improve revenue collection**
► **Improve controls**
► **Improve security**

# Trade facilitation
## trade-off?

# TF measures help!

► **Improve revenue collection**
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# WTO Trade Facilitation Agreement

► Article 1 - "Publication and Availability of Information"

# WTO Trade Facilitation Agreement

► Article 1 - "Publication and Availability of Information"

► Article 2 - "Opportunity to Comment, Information before entry into force, and consultations"

Select a country on this list or click on a country on the map to access relevant information

Select a country ▼
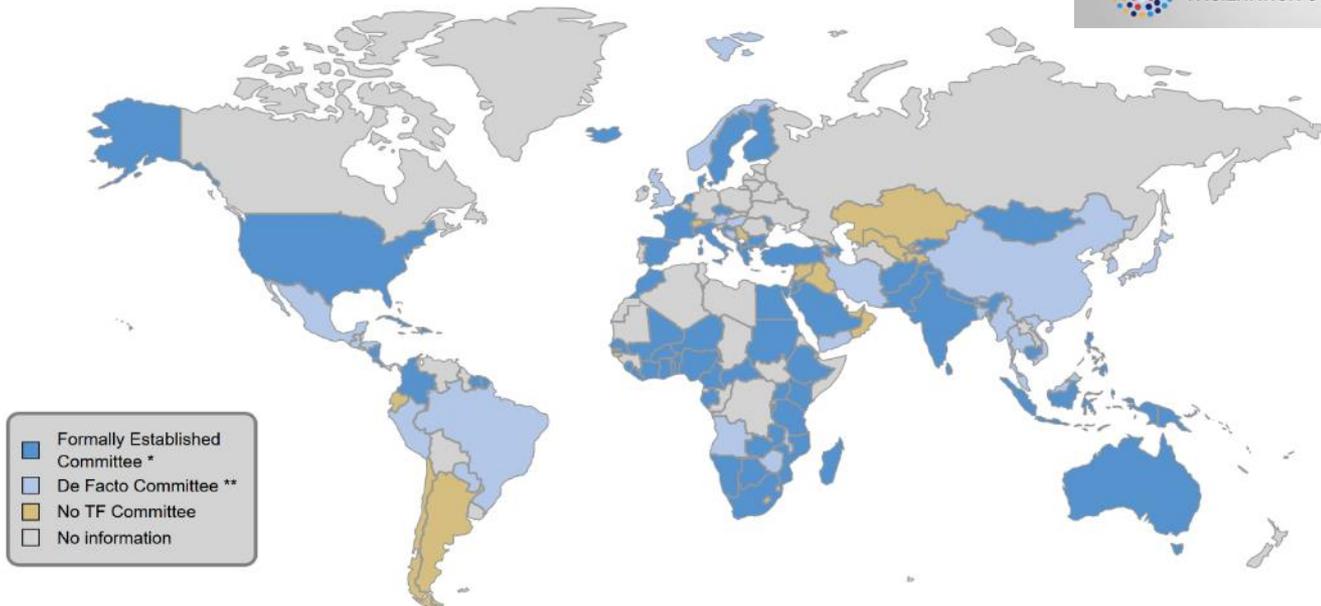
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- ■ Formally Established Committee *
- ☐ De Facto Committee **
- ■ No TF Committee
- ☐ No information

# WTO Trade Facilitation Agreement

► Article 1 - "Publication and Availability of Information"

► Article 2 - "Opportunity to Comment, Information before entry into force, and consultations"

► Provisions related to licences, declarations and clearance. E.g. Article 7 on the "Release and Clearance of Goods" and Article 10 on "Formalities Connected with Importation, Exportation and Transit".

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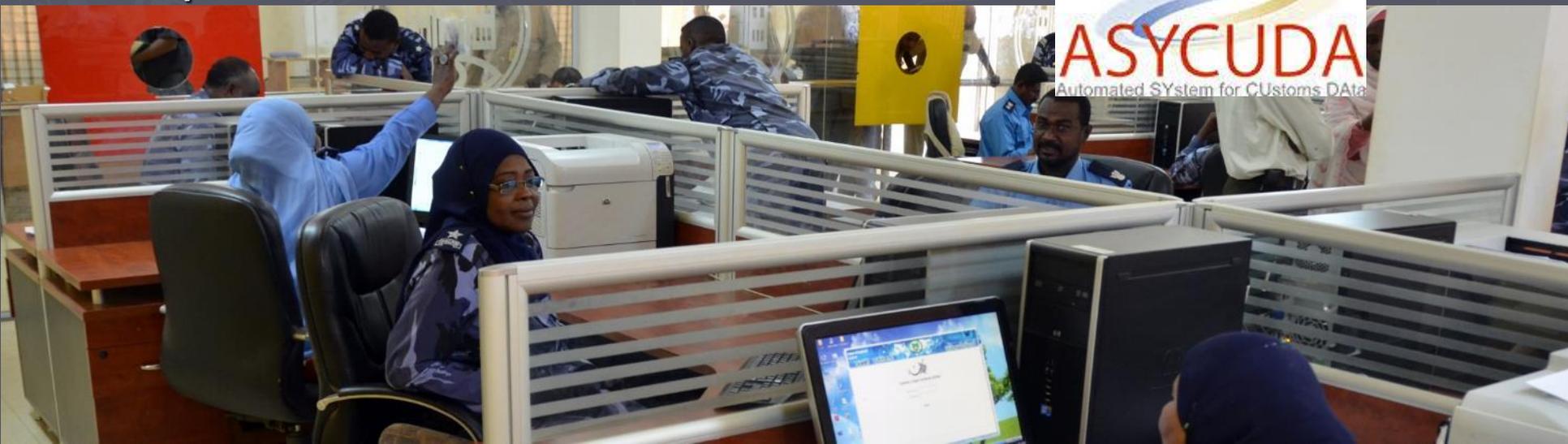
# Trade Facilitation for E-Commerce

► Which Trade Facilitation measures are most likely to go hand-in-hand with e-commerce?
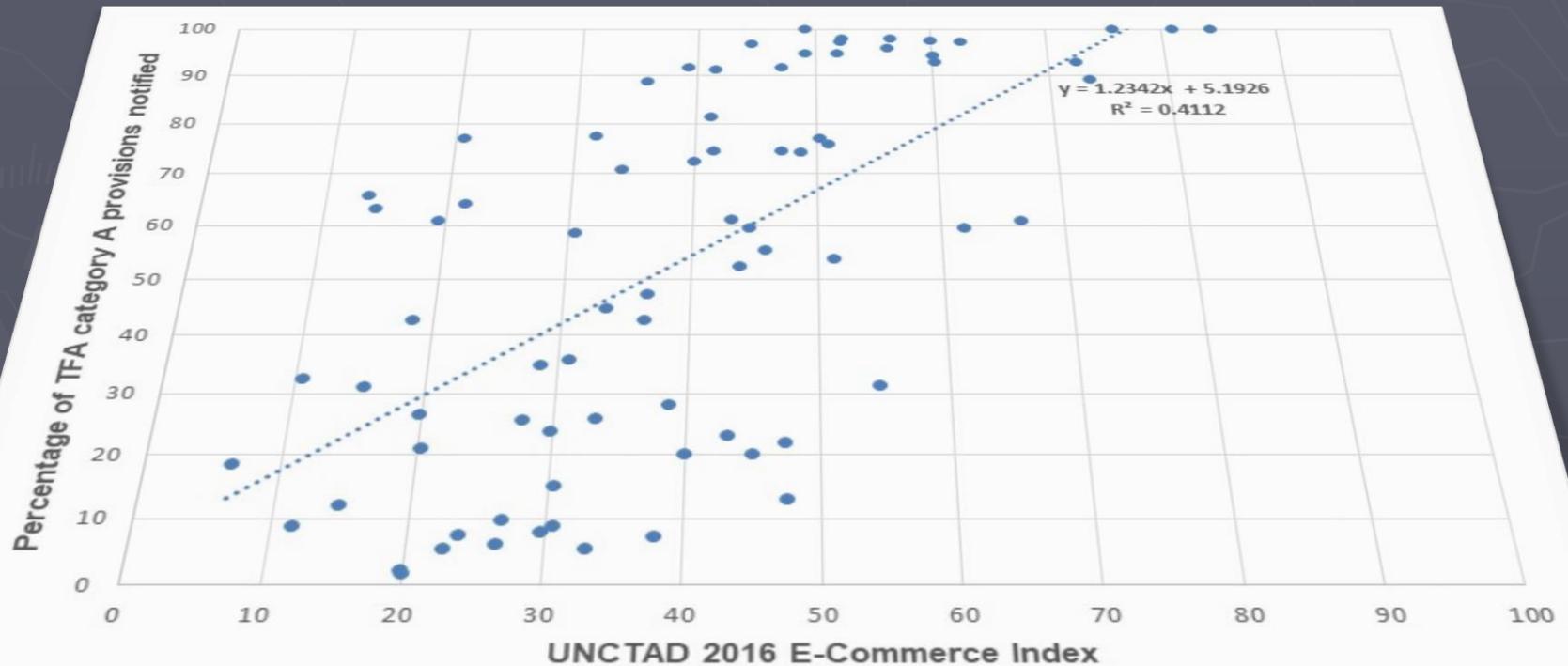
# Trade Facilitation for E-Commerce

► All 37 trade facilitation measures included in the TFA have a positive correlation with e-commerce readiness (UNCTAD index)



Radar chart with axes: Article 1: PUBLICATION, Article 2: CONSULTATIONS, Article 3: ADVANCE RULING, Article 4. APPEAL PROCEDURES, Article 5: IMPARTIALITY, NON-DISCRIMINATION, Article 6: FEES & CHARGES, Article 7: CUSTOMS PROCEDURES, Article 8: BORDER AGENCY COOPERATION, Article 9: INLAND-CUSTOMS TRANSIT, Article 10: FORMALITIES AND DOCUMENTATION, Article 11: FREEDOM OF TRANSIT, Article 12: CUSTOMS COOPERATION. Scale 0.10 to 0.70. Legend: UNCTAD E-commerce Index 2016

# Trade Facilitation for E-Commerce

The top 4 measures with the strongest statistical "impact" (correlation) on the UNCTAD e-commerce index:

➤ Border agency cooperation (Article 8): **+77%**

➤ Publication (Article 1.1): **+71%**

➤ Single Window (Article 10.4): **+ 66%**

➤ Expedited shipments (Article 7.8):   **+61%**
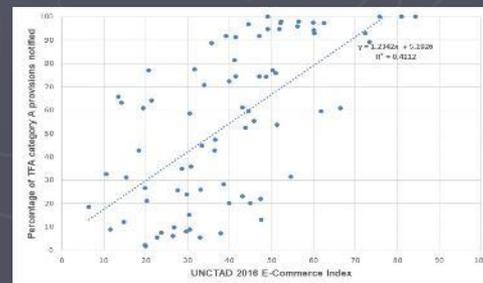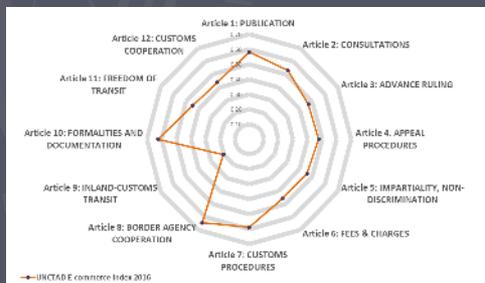
# The mindset

► How to set today's rules for the future?

**Technological progress will never be as slow as today**

WTO OMC

► The negotiation, ratification and implementation of conventions take time
► Need to commit to whatever is the best [future] technological solution

# Out of date already?

► In the future the concept of "copies" versus "originals" as per Article 10.2 TFA will become obsolete
as processes
focus on data
rather than on
documents.
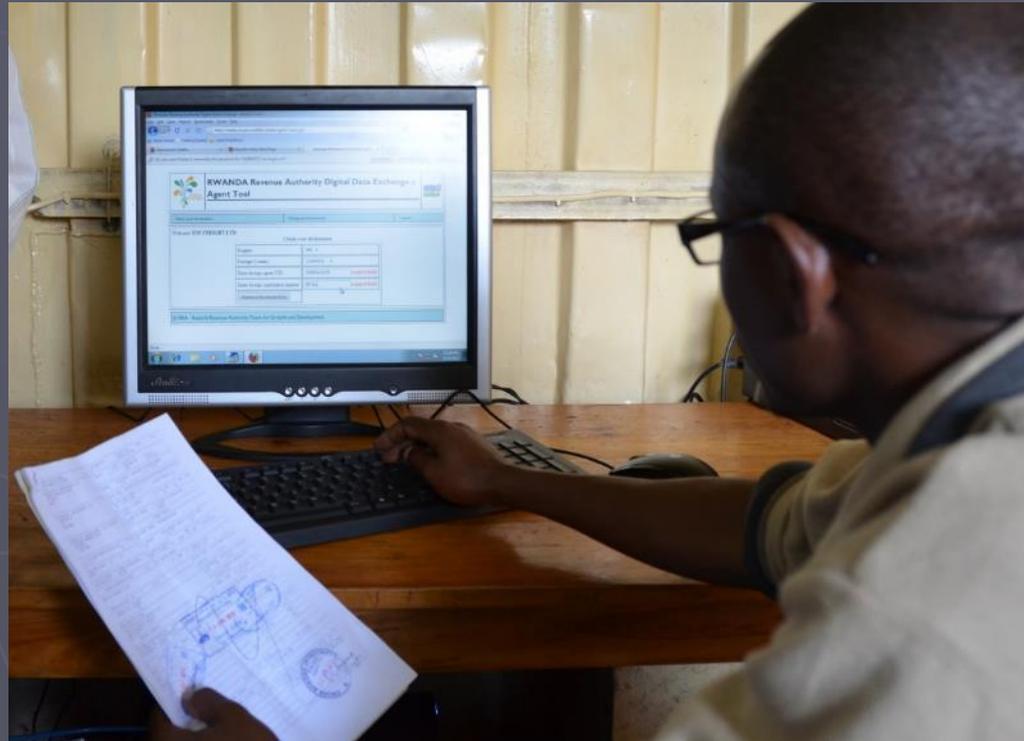
# Out of date already?

► The same may apply to "information technology to support the single window" as per Article 10.4, as focus shifts to data and information on a **distributed** ledger.

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► In the long term, Article 10.1 will gain in importance, it does not prescribe any specific technological solution.

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► Progressively, various provisions will become antiquated or obsolete and we will just want to *minimize* "the incidence and complexity of import, export, and transit formalities"; continuously "*review*" requirements; keep "*reducing* the time and cost of compliance for traders and operators"; and always choose "the *least* trade restrictive measure" (10.1 TFA)

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