



Guidelines for adoption plan of the new standards

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Implementation

1. GOALS

- to raise the **awareness** about the necessity to develop and adopt the new standards;
- to identify and **remove** the PEST **barriers** related to different stakeholders;
- to **motivate** decision-makers in the public and commercial organisations to improve the knowledge and skills of their employees about the new standards.

2. RESULTS

- Awareness campaign (on going business)
- **Practical guidelines (focus on EU)**
- Generic setup for future pilot projects
- Evaluation method (included)



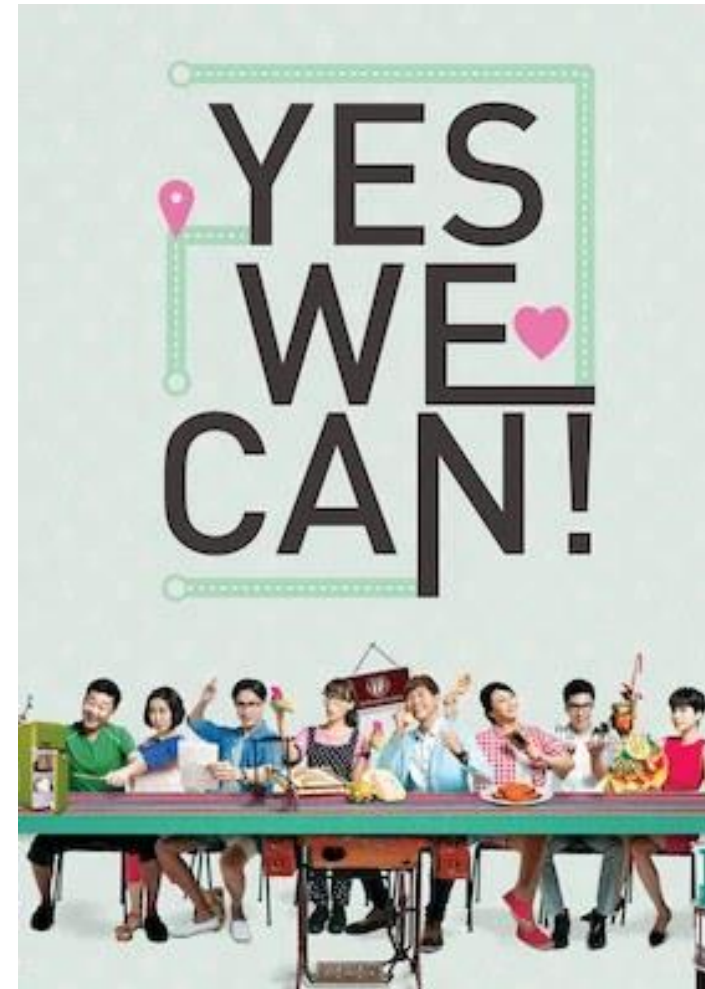
How?

Guidelines: focus on support by EU

- Financial support
- Program
- Timeline (roadmap)

Approach

- Inventory:
 - Elements to be addressed:
 - EU examples
 - Change management
 - SWOT
 - Stakeholders
 - EU tools
- Analysis => guidelines

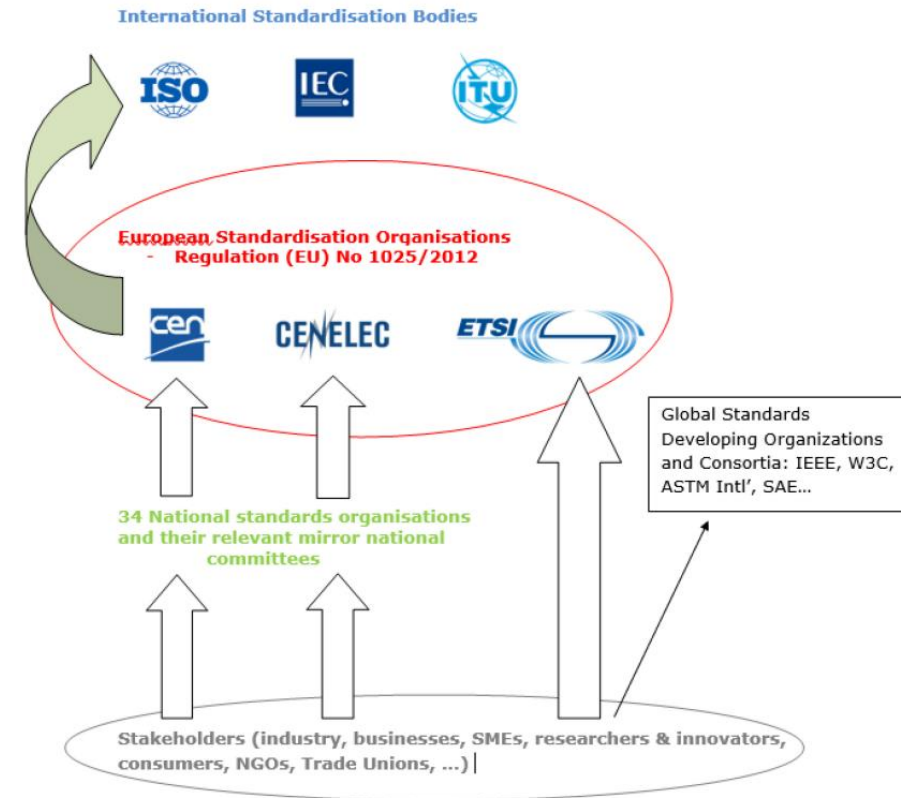


EU Examples

CEN-CENELEC

An EN shall be implemented

- *by giving it the status of a national standard, either by publication of an identical text (see 11.2.4.3) or by endorsement (see 11.2.4.4), and*
- *by withdrawing any conflicting national standards.*



EU Examples

Concluding elements

- Translate standard in national language
- Setting of National Determined Parameters (NDP's),
- Publishing National Standard and National Annex (NA),
- Adoption of national provisions,
- Training.



From: J. Engelen et al. / The role of technical standards for AT and DfA equipment and services

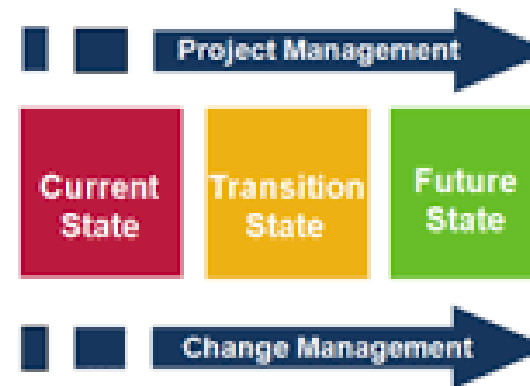


Change management

1. Creation of urgency, awareness
2. Creation of group(s) of frontrunners with authority
3. Showing wins, good examples
4. Money and time to invest in new way of working
5. Interaction between stakeholders
6. Knowledge building
7. Measurement of progress
8. Sharing of lessons learned

What is Change Management?

Technical side of moving from current state to future state



People side of moving from current state to future state

https://cio-wiki.org/wiki/Change_Management



SWOT

- Creating awareness;
- Creating knowledge;
- Adjusting and adapting of contracts;
- Translating the standards;
- Gathering and analyzing predictive maintenance data;
- Arranging finance/funding;
- Including the proper stakeholders, like local authorities;
- Knowledge dissemination

Generic features of the sector (General perspective)

KANBAN – SWOT (Strengths, Weaknesses, Opportunities and Threats) IM - SAFE	Strengths	Weaknesses
	<ul style="list-style-type: none"> ✓ Contribute to the enforcement of laws and regulations for the sector. ✓ Enables reduction of infrastructure lifecycle costs. ✓ Enables the prevention of catastrophic failures. ✓ Standardized maintenance and monitoring will help establish/improve lesson learned. 	<ul style="list-style-type: none"> × Countries have their own standards, experiences, culture, way of working. × Change resistance of traditional players. × Maintenance is normally contracted in long term contracts × Each stakeholder has a unique economic and timeframe schedule. × Prediction is hard.
	Opportunities	Threats
	<ul style="list-style-type: none"> ✓ Contribution to employment stabilization ✓ Promotes new ways for data processing and monitoring. ✓ Allows the introduction of new digital tools ✓ Allows the incorporation of sensor systems more cost-effective and quicker ✓ Enables reduction of infrastructure lifecycle costs ✓ Enables the prevention of catastrophic failures 	<ul style="list-style-type: none"> × Ignorance of responsibility to advise in critical situations × Reduction of maintenance budget due to the effectiveness of harmonization × Each country has a standard as a reference and creates its own ad-hoc standard × Uncertainty associated with deterioration of materials × Obsolescence of current quality standards.





Conclusion: elements to be addressed

1. Urgency, awareness
2. Acceptance
3. Knowledge
 - a) Creation
 - b) Dissemination
4. National adoption
 - a) Translation
 - b) NDP's
 - c) NA
 - d) Adoption national provisions
5. Finance / funding
6. Monitoring implementation

Element => impact	Examples	Through	Funding EU
1. Creation of urgency, awareness => willingness to change	awareness campaign	CoP	COST / Horizon
	communication strategy	CoP	COST / Horizon
	showing wins, good examples	CoP	COST / Horizon
2. Creation of acceptance => standard is supported	Creation of group(s) of frontrunners with authority,	SAG	
	interaction between stakeholders	CoP	COST / Horizon
	Exemplar contracts	Pilots	Horizon Europe / Interreg / Digital Europe
	Infrastructure specific translation of standards	TC	CEN
	Provide/develop required software	Pilots	Digital Europe
3. Knowledge => standard and practical use is understood	Make data available from own assets	CoP / digital platform	Digital Europe
	Pilot projects and evaluation	Pilots	Horizon Europe / Interreg / Digital Europe
a. Creation	Education and training	Training	Erasmus+
	Development of courses,	Training	Erasmus+
	Pilot projects and evaluation	Pilots	
b. Dissemination	Adjustment and adoption of contracts	Pilots	
	Sharing knowledge	CoP / training	Erasmus+
	Education and training	Training	Erasmus+
	(IM-Safe) website and Wiki	CoP	COST / Horizon
	CoP's	CoP	COST / Horizon
4. National adoption => local accessibility of standards, connection to national legislation and circumstances, formal approval	Practical handbooks (day to day use)	Pilots	Horizon Europe / Interreg / Digital Europe
	CEN-CENELEC process (development of standards in TC's)	TC	?
a. Translating the standards;	Translate to local language by National TC	TC	?
b. Setting of National Determined parameters (NDP's),	By National TC	National TC	?
c. Publishing National Standard and National Annex (NA),	By National TC	National TC	?
d. Adoption of national provisions,	By EU	EU	DG
5. Arranging finance/funding => governmental / public support of change	EU tools for financial support	EU	DG
6. Monitoring implementation => show results, create pressure (awareness and urgency)	Measurement of progress	EU	Direct assignment
	Best practices, pilot projects	Pilots	Horizon Europe / Interreg / Digital Europe
	(Re)distribution of effort, money and capacity	EU	DG





Stakeholders (supply chain)

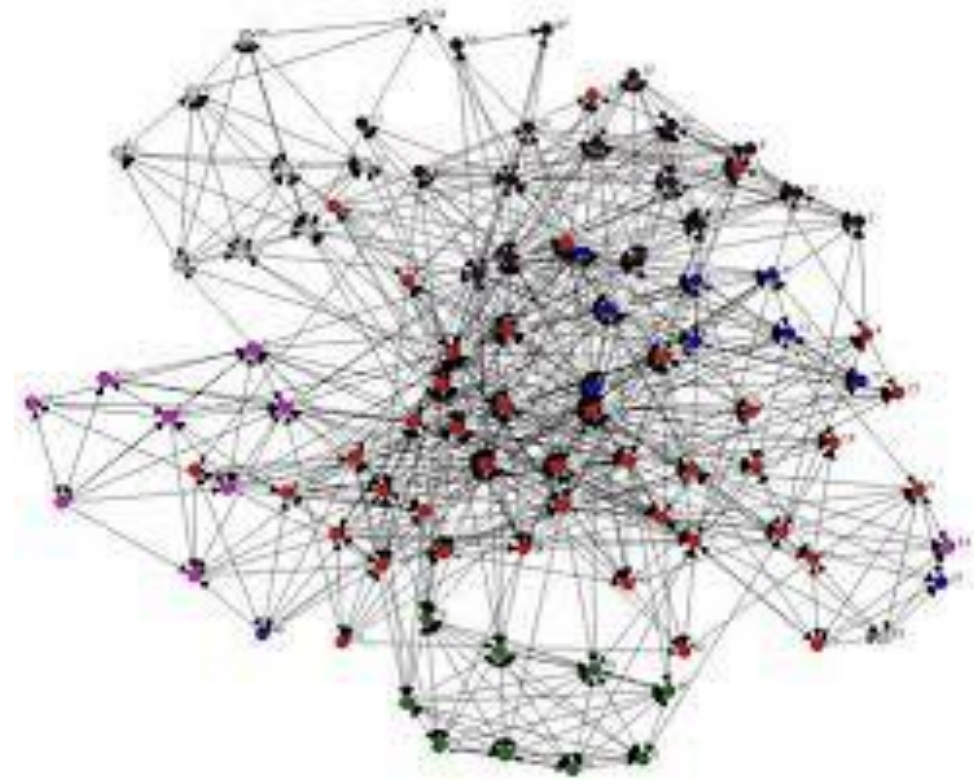
- Asset owners, governmental bodies and suppliers of financial services (investments and insurance, strategic)
- Asset managers (tactic)
- Engineering companies (operational, limited liability, great responsibility)
- Building companies (operational, great liability and responsibility)
- Suppliers of services (eg, inspection services, research, laboratories)
- Suppliers of material (concrete, steel, girders, etc.)





Stakeholders (others)

- CEN-CENELEC
- Network organisations
 - ECTP
 - CEDR
 - FEHRL
 - FIB
 - EUROSTRUCT
 - EIC
- Knowledge institutes (national)



<https://rossdawson.com/>





EU tools

- Direct assignments
- Erasmus+
- Horizon Europe
- COST action
- ~~Connecting Europe Facility (CEF) transport (investment in TEN-T network)~~
- Digital Europe
- ~~Important Projects of Common European Interest (IPCEI)~~
- Interreg





Process

EU

1. Prepare CEN-CENELEC standard development activity
Prepare preconditions: subject addressed in EU tools
Connect with CEDR in order to prepare an Infravation-like call
2. Incorporate the elements of the program in the calls for proposals (EU tools)
3. Assign projects to consortia in order to execute the program
4. Assign monitoring project(s) to dedicated organisations / consortia

CEN-CENELEC

In parallel: start and carry out standardisation and adoption / implementation process





Actions and funding

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	Exemplar contracts	Pilots	Horizon Europe / Interreg / Digital Europe
	Infrastructure specific translation of standards	TC	?
	Provide/develop required software	Pilots	Digital Europe
	Make data available from own assets	CoP / digital platform	Digital Europe
	Pilot projects and evaluation	Pilots	Horizon Europe / Interreg / Digital Europe





Actions and funding

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Actions and funding

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	(Re)distribution of effort, money and capacity	EU	EU





Stakeholder involvement

	Supply chain					Norm.		Network organisations						Other	
	asset owner/manager	engineering comp	building comp	suppliers of services	suppliers of material	CEN-CENELEC	Nat. norm. bodies	ECTP	CEDR	FEHRL	FIB	EUROSTRUCT	EIC	Nat. know. institutes	DG
CoP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SAG						X		X	X	X	X	X	X	X	
Pilots	X	X	X	X	X				X	X	X	X	X	X	
Digital platform	X	X	X	X	X				X	X				X	
Training	X	X	X	X	X	X	X		X	X				X	
(Nat.) TC	X	X	X	X	X	X	X							X	X
EU															





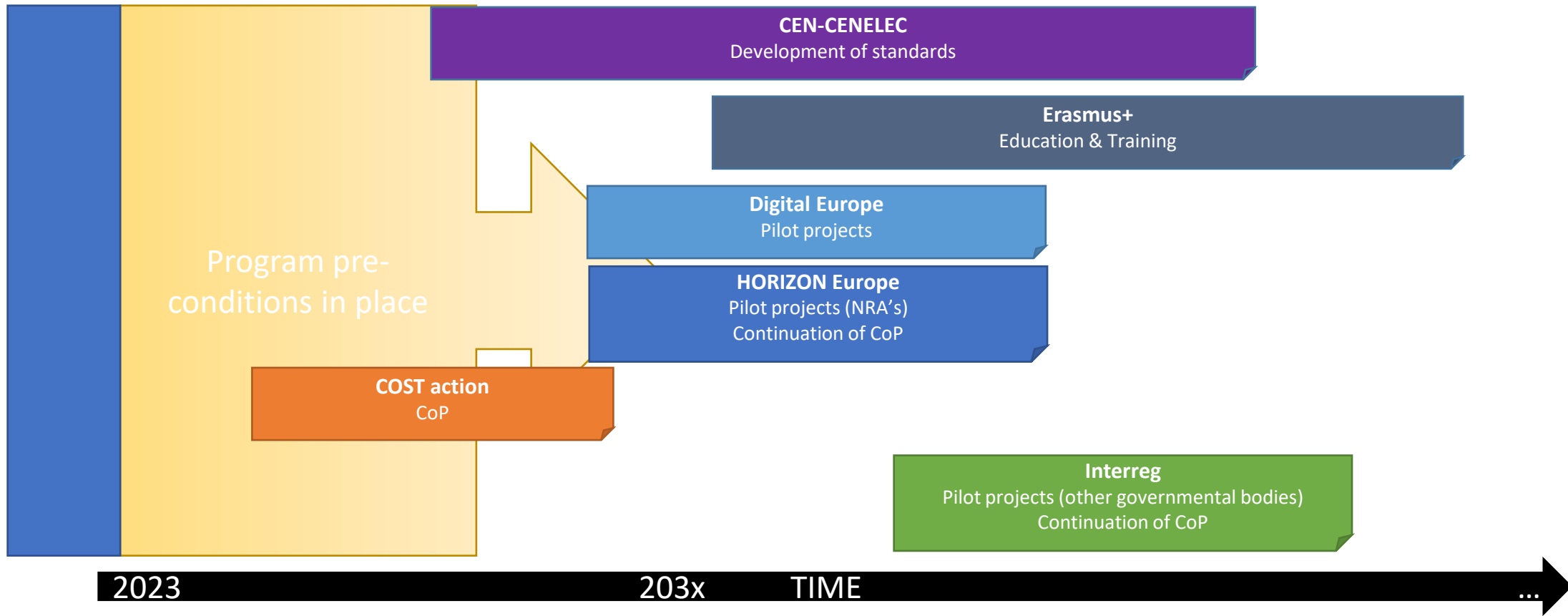
Stakeholders: “specials”

- CEDR => infravation, NRA's
- FEHRL => opportunities for innovation (members)
- FIB, EUROSTRUCT, EIC, etc. => dissemination, SAG, CoP
- CEN-CENELEC / national standardisation bodies => TC's, Training



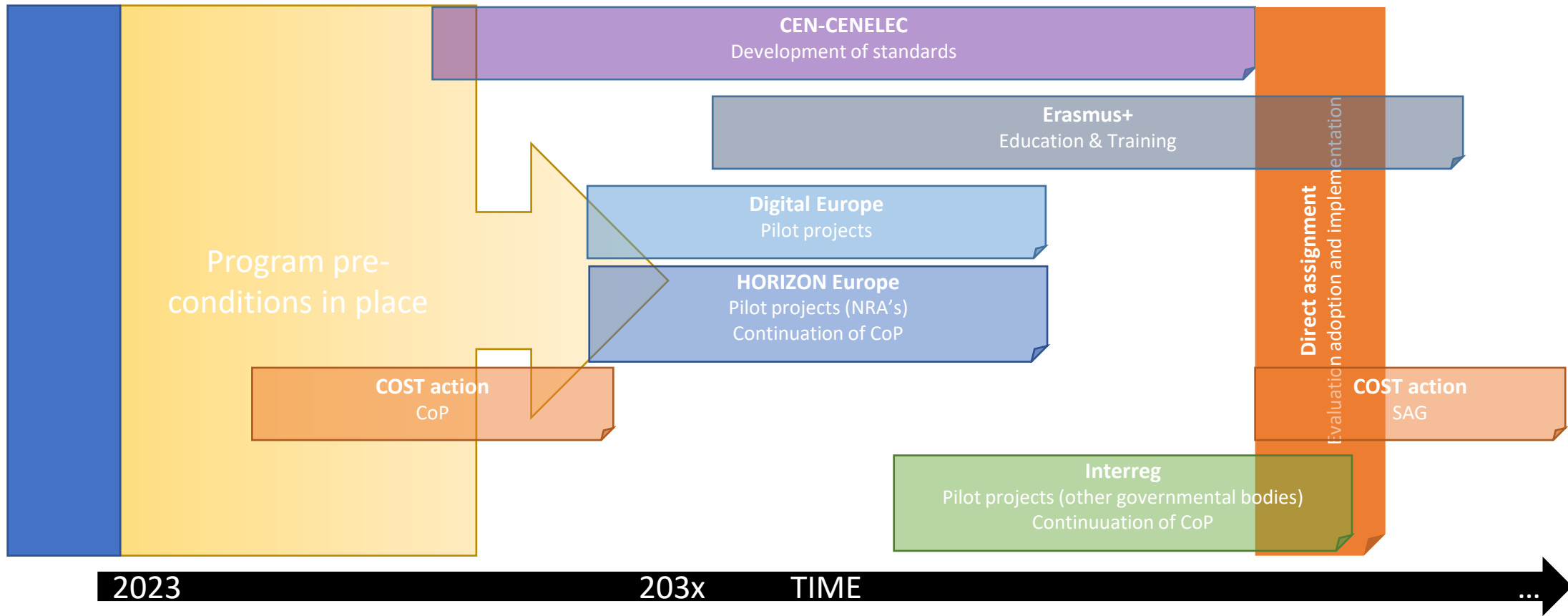


Program / Roadmap





Program / Roadmap



› **Thank you for your attention**

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