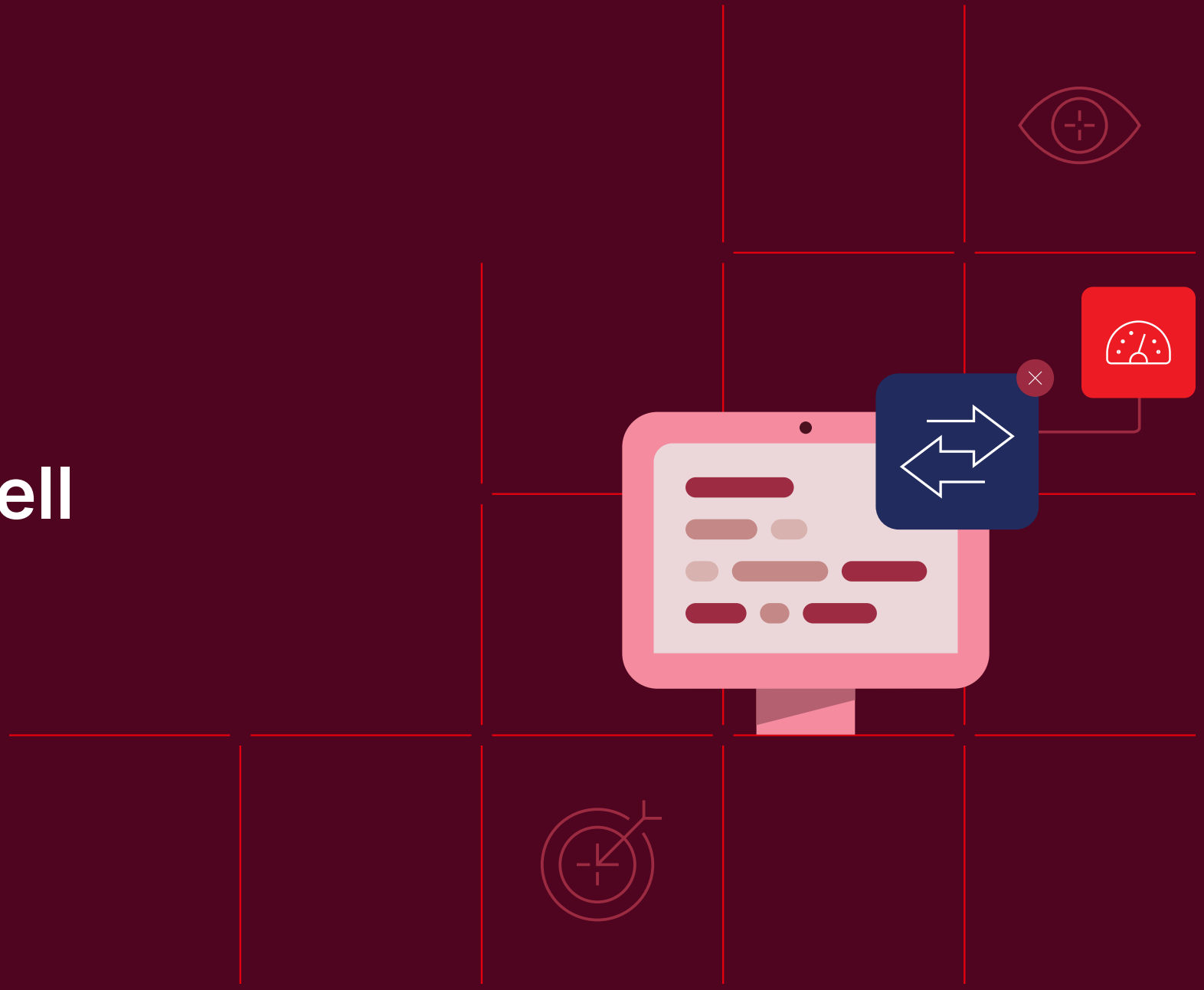
SMART programme update

Industry Day TC184/SC4
October 2024

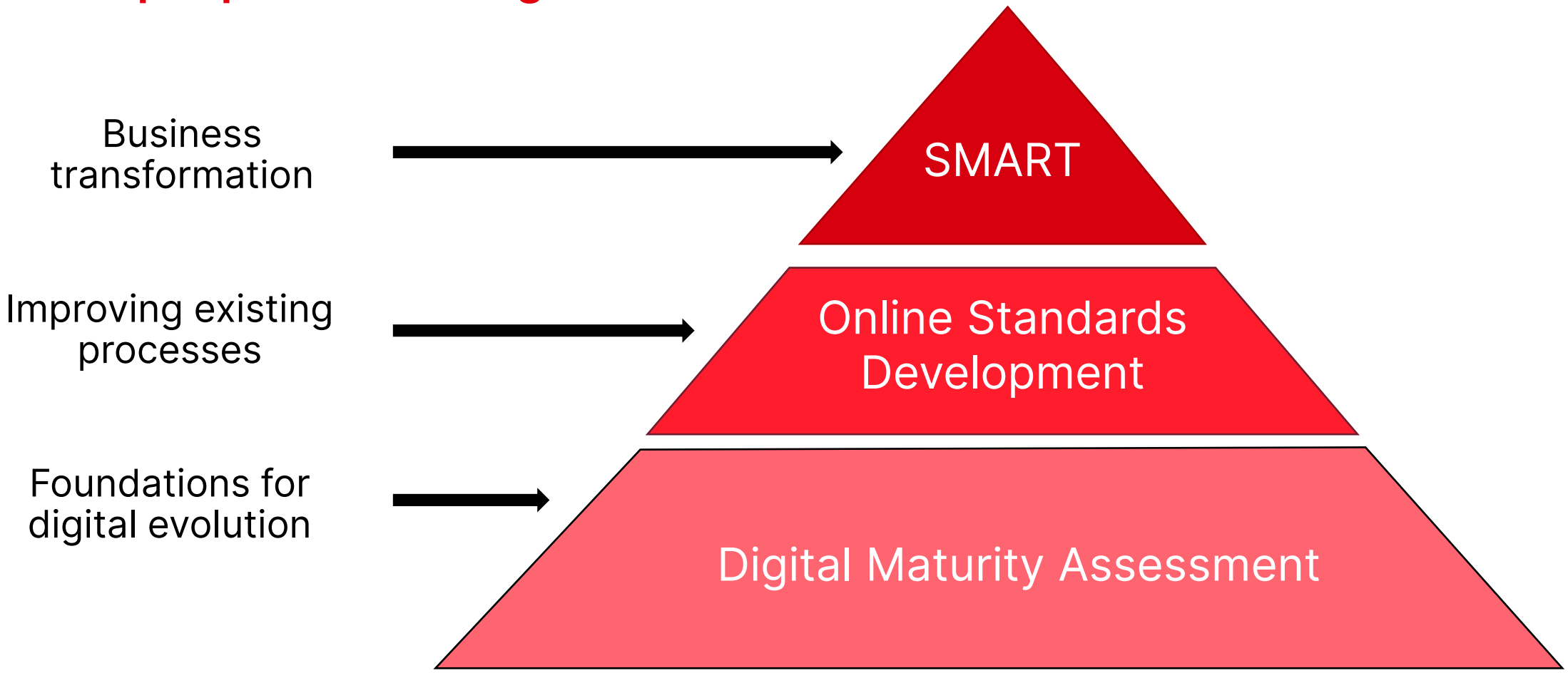
iso.org

SMART in a nutshell



Digital Evolution @ISO

For more people to be using more standards



Machine readable content

Semantic enrichment of content for selective access

Receive content of multiple standards for a given purpose.

XML

Machine readable document

Structured content of standard documents. Content can be processed by software.

PDF

Open digital format

Read and search on screen.

Paper

Standards available in paper

No machine interactions available.

Machine interpretable content

Self-learning analysis and validation cycles

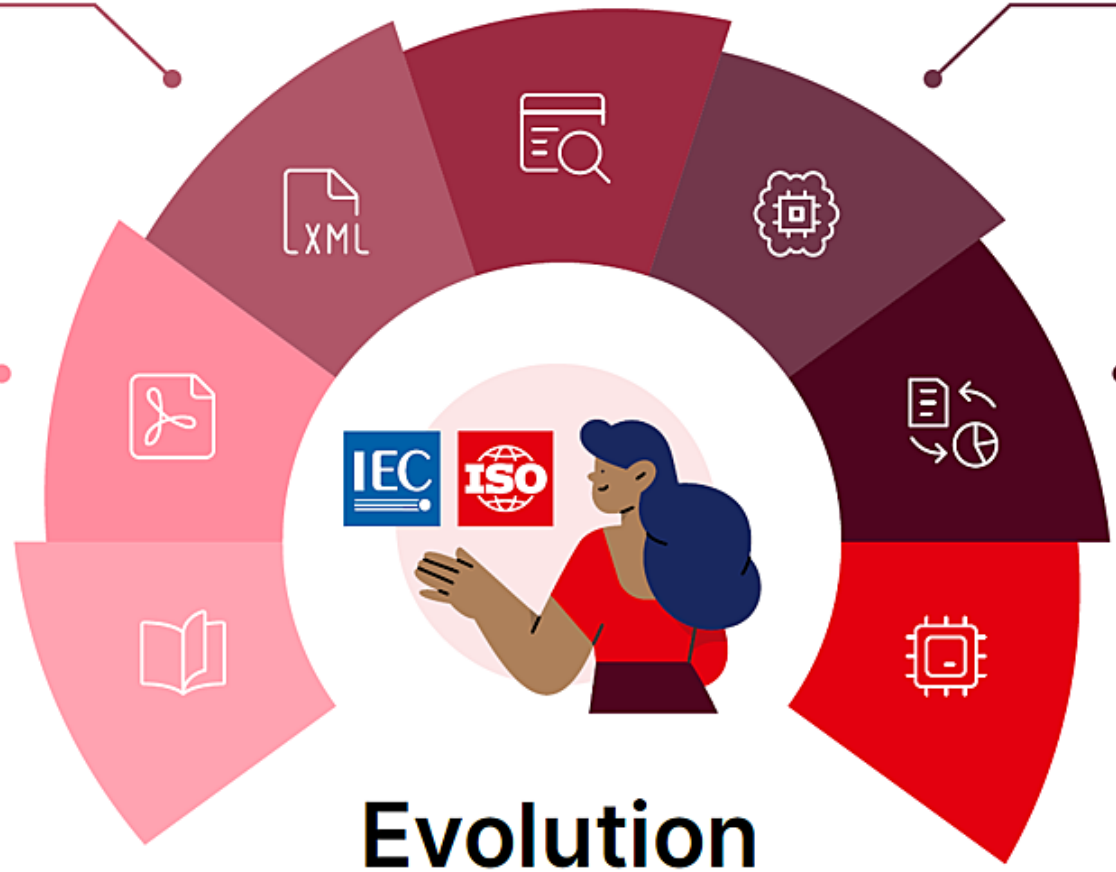
Information modeling that expresses content and relation between elements.

Individually

Standards as a service

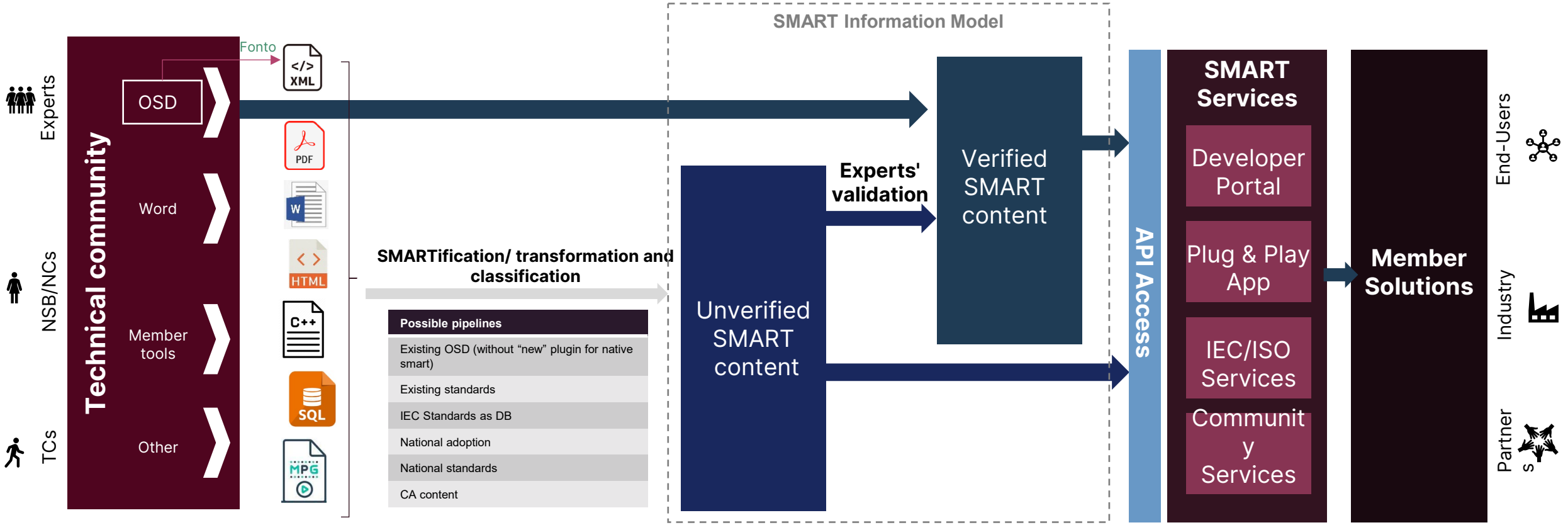
Provides dynamic deliverables that can adapt to user needs.

Future extensions



Evolution of standards

SMART end-to-end concept



How do ISO / IEC lead the way to SMART standards?

- Identifying and understanding the **needs of standards users** and how SMART can address them
- Exploring **new business models** supporting the distribution and commercialization of SMART standards and identifying related legal implications
- Specifying and **piloting the technical architecture** supporting SMART standards and integrating it into the existing production lifecycle
- Assessing the impact of SMART standards on how **conformity assessment** will be undertaken
- Developing **communications materials** to engage with the IEC and ISO communities

Common vision: More people using more standards

Before SMART

- Time-consuming manual research
- Scrolling through a PDF
- Cut and paste
- Identify and look for related information across static documents
- Provide a PDF

After SMART

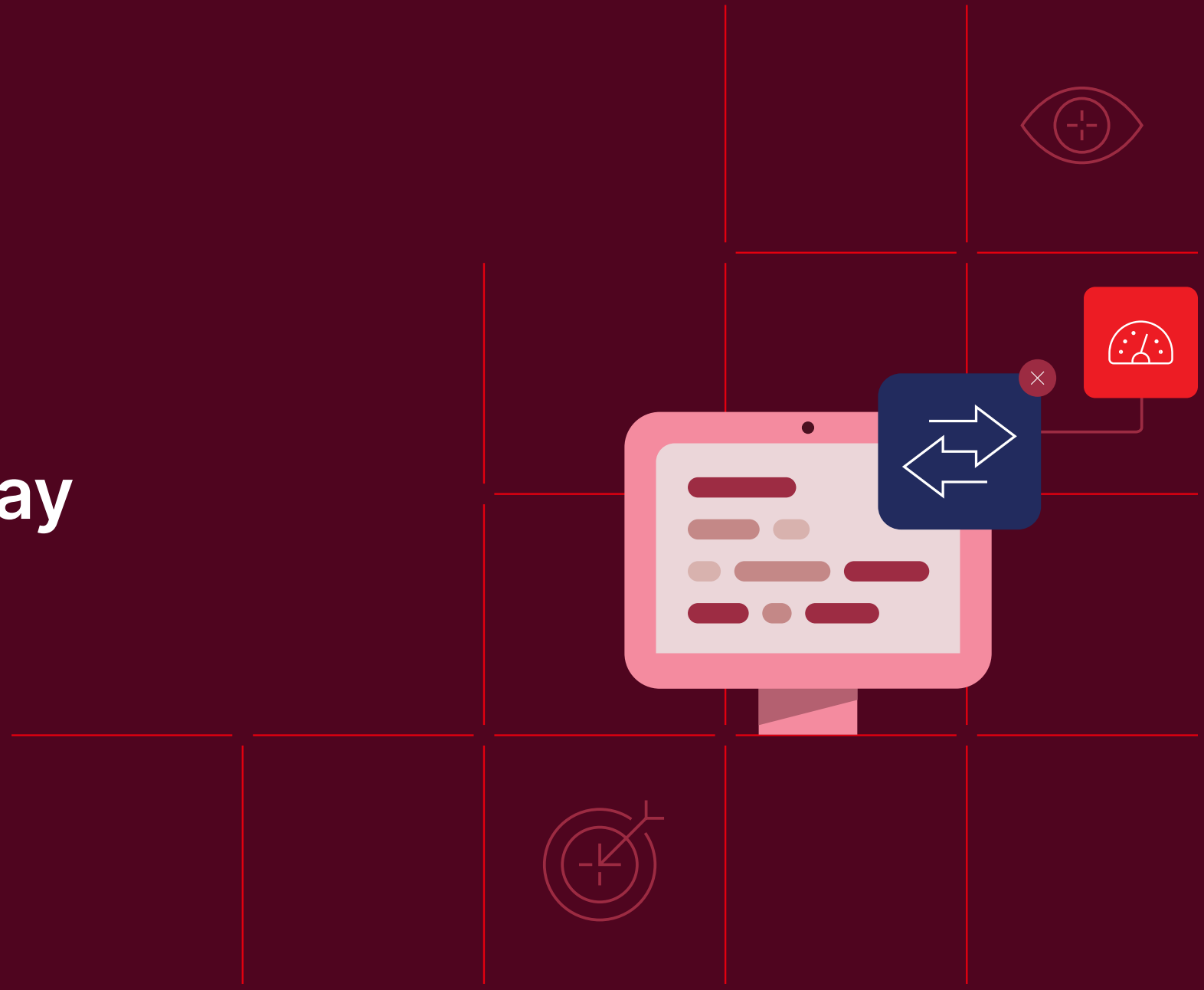
- Interactive guidance and navigation
- Intuitive search capabilities across multiple sources
- Requirements extraction
- Instant access to cross references and recommended material
- Provide a solution

SMART BENEFITS

- ✔ Stay up to date
- ✔ Better navigation
- ✔ Save time*
- ✔ Tighter security
- ✔ Monitor usage
- ✔ Boost your revenue
- ✔ Improve accessibility
- ✔ Get help

* Up to 2h based on research made on 9001

Where we are today



Product focus

Upstream | Midstream | Downstream

OSD integration (for experts)

To address native SMART content creation and terminology

SMARTification pipelines (for members)

To enable SMARTification of different types of content

Wizard / White Label

To help users on how to get started, easily access requirements, run self-assessment and increase efficiency

APIs /Developer Portal

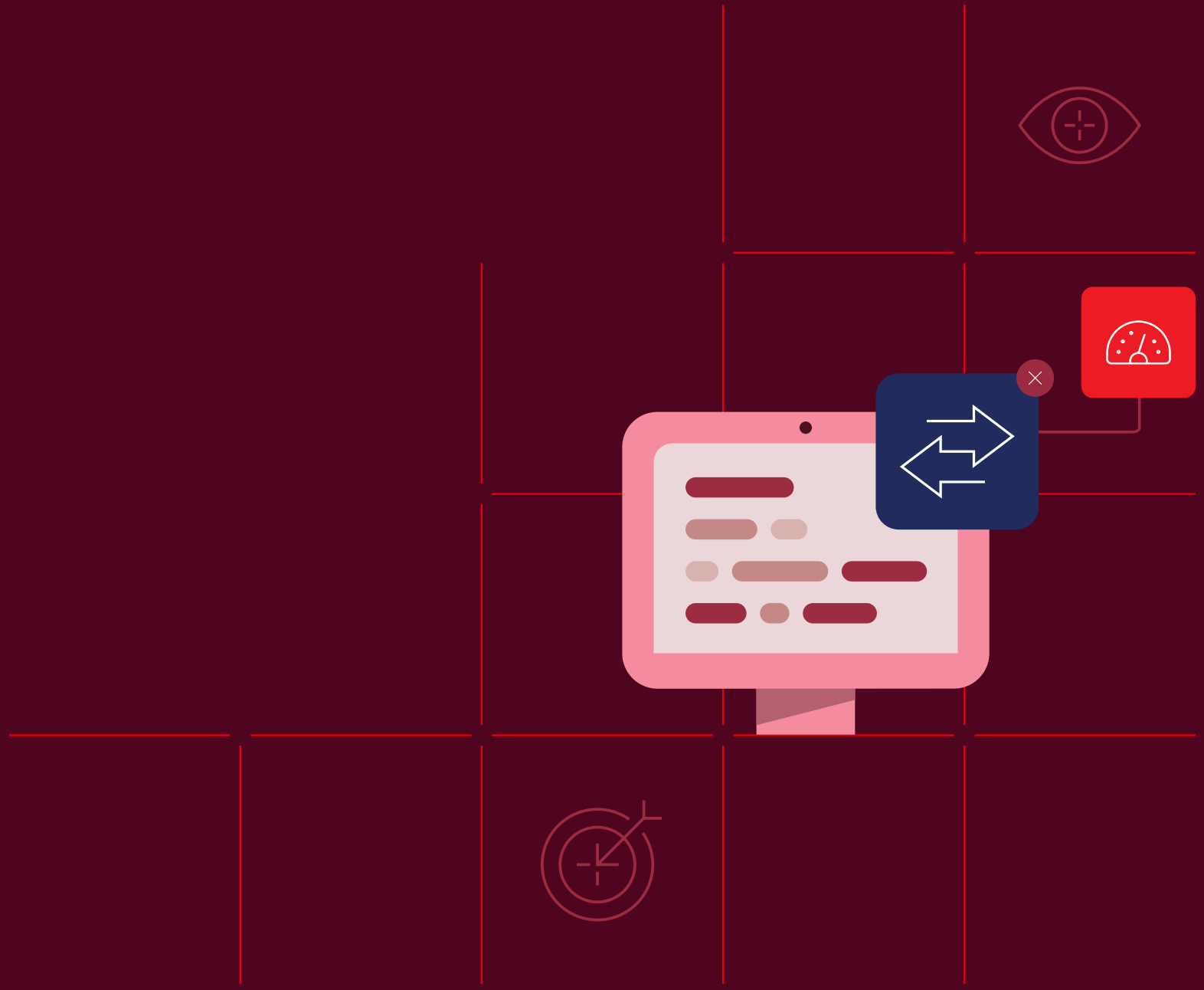
to enable Advanced Members' products and services by integrating SMART content

Approaches and challenges

Key technology pillars to be addressed/developed

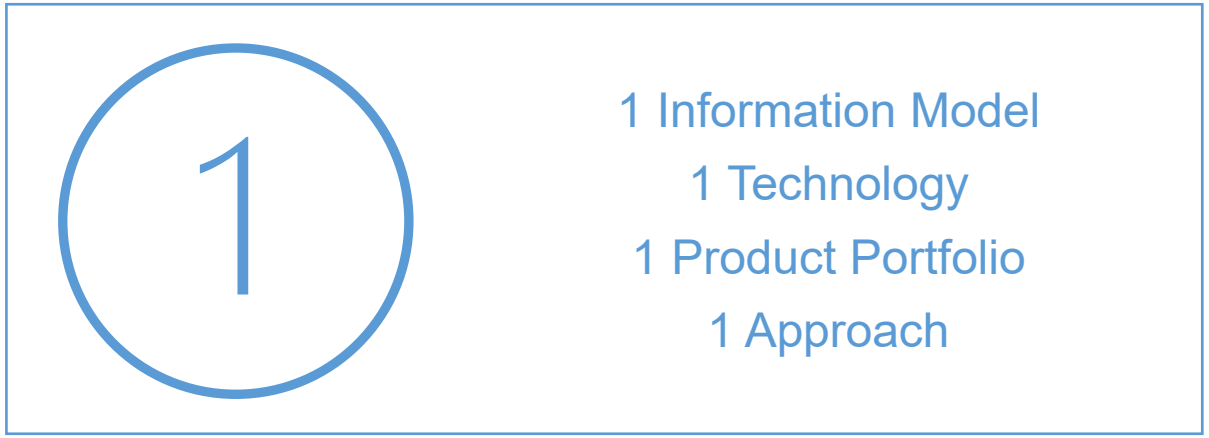
SMARTification Engine	**Currently under assessment by a joint design team**
SMART information and addressing model (Ont-SIM)	
SMART Architecture/ technology	
SMART capabilities in OSD	ISO assessing pilot 10 results possible extension to international content, and CEN/CENELEC approach
SMART content validation	IEC testing with members the validation process at TC level
SMART MVP/wizard/WL	ISO and IEC currently working on different products
SMART Playground	ISO currently assessing possibility to scale and include IEC
SMART APIs	Need to work on harmonized API

What’s the future



IEC & ISO SMART

ISO and IEC are aiming to achieve SMART together, 1 time.



Accessible to All

Implemented where Needed

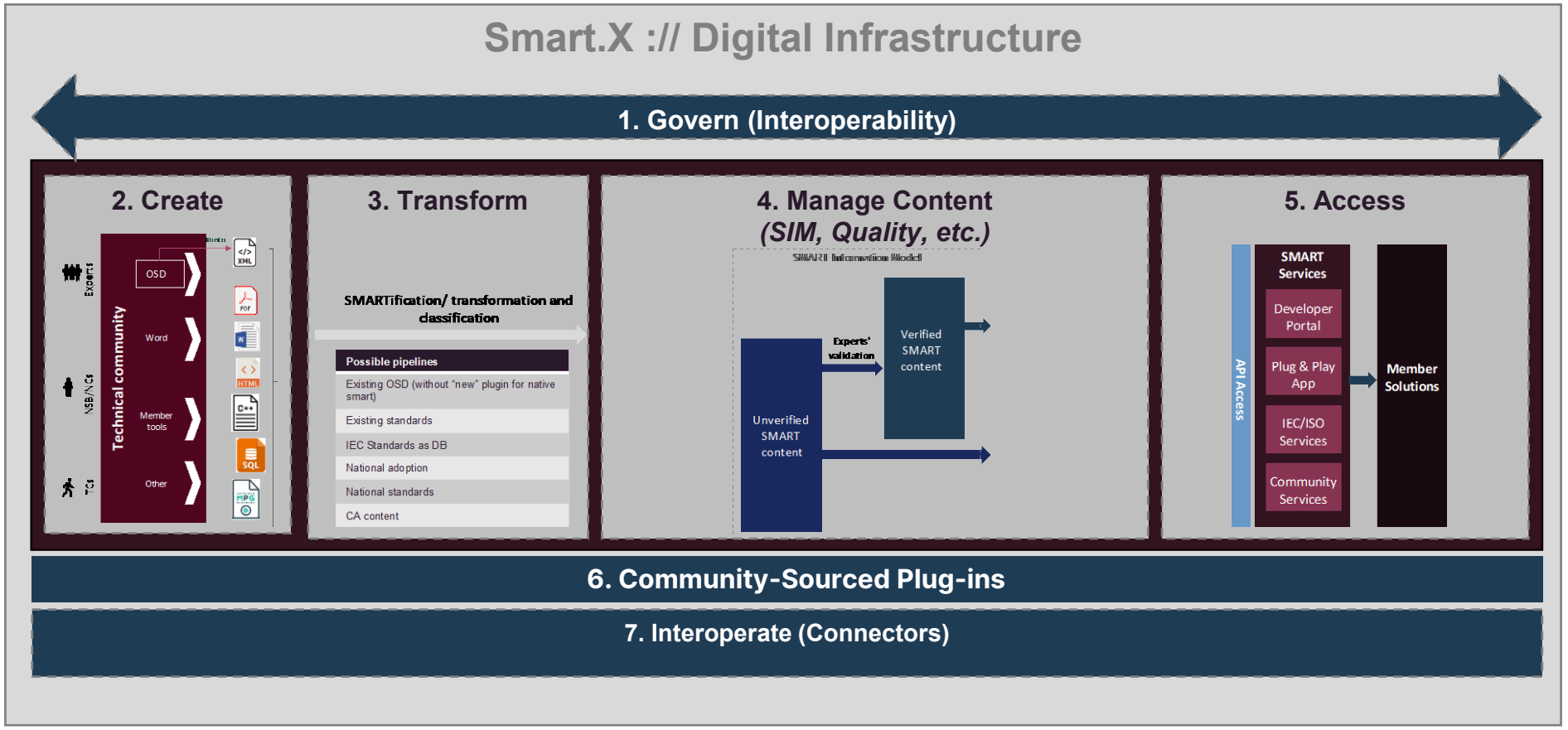
ISO/IEC interoperability will evolve into 1 SMART (Smart.X) framework which enables membership involvement and interoperability

SMART.X vision

SMART for everyone

- **Foundation** for a common, community-owned and operated digital standardization and conformity assessment solution.
- **Infrastructure** enabling global interoperability by providing governance, tools, data capabilities, and digital process to propel IEC, ISO and their Members into the digital age.
- **Enhances** the long-term value and sustainability of IEC and ISO’s trusted content and global ecosystem.

Smart.X enables 7 key building blocks: Governance, Creation, Transformation, Management, Access, Interoperability, and Community. These building blocks are designed holistically with a plug-in architecture to seamlessly work together or stand-alone.



OSD extension for SMART authoring/review

Defining key aspects of SMART authoring

Vision: OSD as an enabler of SMART content creation

- 21 initial requirements outlined by IEC and ISO for authoring functionality and policy needs
- Scoping different technical aspects tied to different options:
  - Review of approaches by CEN/CENELEC and SMART Pilot 10
  - Review of current OSD constraints

"the OSD platform will be considered the default choice for the development of any eligible ISO deliverable (new and revision) from January 2025"

-TMB Resolution 68/2024

Initial impact framework for SMART authoring

	Authoring	Reviewing	Production	Distribution	Technical Implementation	Usage Value	'SMART' impact	Content
Primary stakeholder	*Experts*	*Experts*	*Editors*	*Members*	*ISO CS . IEC CO / Developers*	*Users*	*Processes*	*Product and Service developers*
OSD 'as-is'	S	M	S	S	N/A	VS	S	Directives compliant***
SMART Assistant*	S	S	S	VS	S	M	M	Improved Directives compliance***
SMART QA	M	M	S	S	S	S	M	Possibly SIM compliant***
SMART author – Add. Metadata model [1]**	H	VH	N/A + M	N/A + H	M + H	S + H	S + H	SIM compliant and SIM extensions
SMART author – Update STS model [2]	H	H	M	M	H	M to H	M	Improved SIM compliance
SMART author – External model [3]	VH	M	VH	M to H	M	VH	VH	Native compliance and possibly SIM compliant

Effort (incl. change management, impact on the value chain etc)

Positive impact (incl. value for end-users, ecosystem benefits etc)

VS = Very Small; S = Small; M = Medium; H=High; VH=Very High

The impact is shown on a relative scale, with – in most cases – the OSD-as-is used as the reference. The reason OSD is scored in the first two instances is because OSD is not the default option at present (but once the document is in XML the rest of the workflow is stable, so N/A for further change).

[*] Implementing the SMART Assistant would reduce Reviewing tasks for the experts.

[**] Additional metadata implementation creates at least two deliverables, and increases complexity in production, distribution, usage for the secondary format, will be having small impact on existing deliverable workflows. I.e it is an additive process. The other authoring methods are replacement processes.

[***] It is significantly easier to predict and control the quality of SMART content if it is SIM compliant ('SMART from the start').

Current and next steps

ISO and IEC are finalizing a proposal to ensure alignment on common principles

- Functional requirements
- Non-functional requirements
  - Including governance to ensure SMART contents consistency based on ISO IEC Directives
- Limitations
- Future prospects

→ Approval and implementation

Next steps

Next steps - programme

- JCG recommendation to TMB/SMB
- Options to streamline process operations and governance discussion at next JCG
- IP strategy, comms & engagement work is ongoing
- Additional information:
  - JBMG kick-off (Sep)
  - SMART at ISO AM and IEC GM (Sep-Oct)
  - Next JCG (Nov)
  - SMART conference (Dec)

Thank you.

Making lives ***easier***, ***safer*** and ***better***.

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