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Update on Standards and Insights into new Activities



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Disclaimer: the views expressed in this presentation are contributions from the mentioned independent expert not implying any kind of endorsement by the mentioned organizations

Interoperability: the search for the holy grail

- We all want interoperability as the Holy Grail that enable all the benefits of digitalization, but...
- Like the quest for the Holy Grail... it can be quite tricky and sometimes the right way is not the one that appears as the most obvious
- The story of the electronic invoicing standard began when at the EMSFEI we realized that thinking in terms of «formats» or «syntaxes» - the most obvious starting point - did not bring us to any progress: too many vested interests of many communities
- Creating yet another format – and mandating its use – worked well in some countries at national level but creates fragmentation at EU level and no national format can aspire to become a standard beyond national boundaries as it is typically tailored on national requirements

Once upon a time...

- Here are in fact the first words of Directive 55/2014/EU of 16 April 2014 on electronic invoicing in public procurement

Whereas:

(1) Several global, national, regional and proprietary standards on electronic invoices exist and are currently used in Member States. None of those standards prevails, and most of them are not interoperable with one another.

(2) In the absence of a common standard, Member States decide, when promoting the use of electronic invoices in public procurement or making their use mandatory, to develop their own technical solutions based on separate national standards. Hence, the number of different standards coexisting across Member States is increasing and is likely to continue increasing in the future.

Did standardization improve this in the last 5 year?

The European Standard on e-Invoicing

- Directive 55 requested to the European Standardization specific activities to tackle vast number of e-invoicing standards, data formats, and usage requirements that exists across the EU and globally
 - CEN accepted and TC 434 was established
- The key point is to stick at the **semantic level**: recognize that the semantic fragmentation is the main problem → **technically neutral approach**
- **EN 16931-1** specifies a semantic data model of the core elements of an electronic invoice → legal certainty (for now in EU) and common use business elements for **Cross border and cross sector**
- The EN preserves the necessary flexibility through
 - **Restrictions** with Core Invoice Usage Specifications (CIUS) → compliance to the standard is fully guaranteed and requirements at national/community level can be taken into account
 - **Extensions** → guaranteed conformance but not compliance, bilateral agreement

EN 16931 use in Directive 55

- [Directive 2014/55/EU](#) obliges central government bodies of the Member States of the European Union to accept electronic invoices in public procurement from 18 April 2019 onwards → this is where we are today
- Member States may postpone the obligation for local authorities until the 18 April 2020 → see the [2019 eInvoicing Country factsheets](#) published by CEF
- These electronic invoices must comply with the European standard on electronic invoicing (EN 16931-1) and with one of the syntaxes on a limited list of syntaxes specified in CEN/TS 16931-2, i.e. UBL and CII
- The standard was designed – as requested - also to **support B2B**

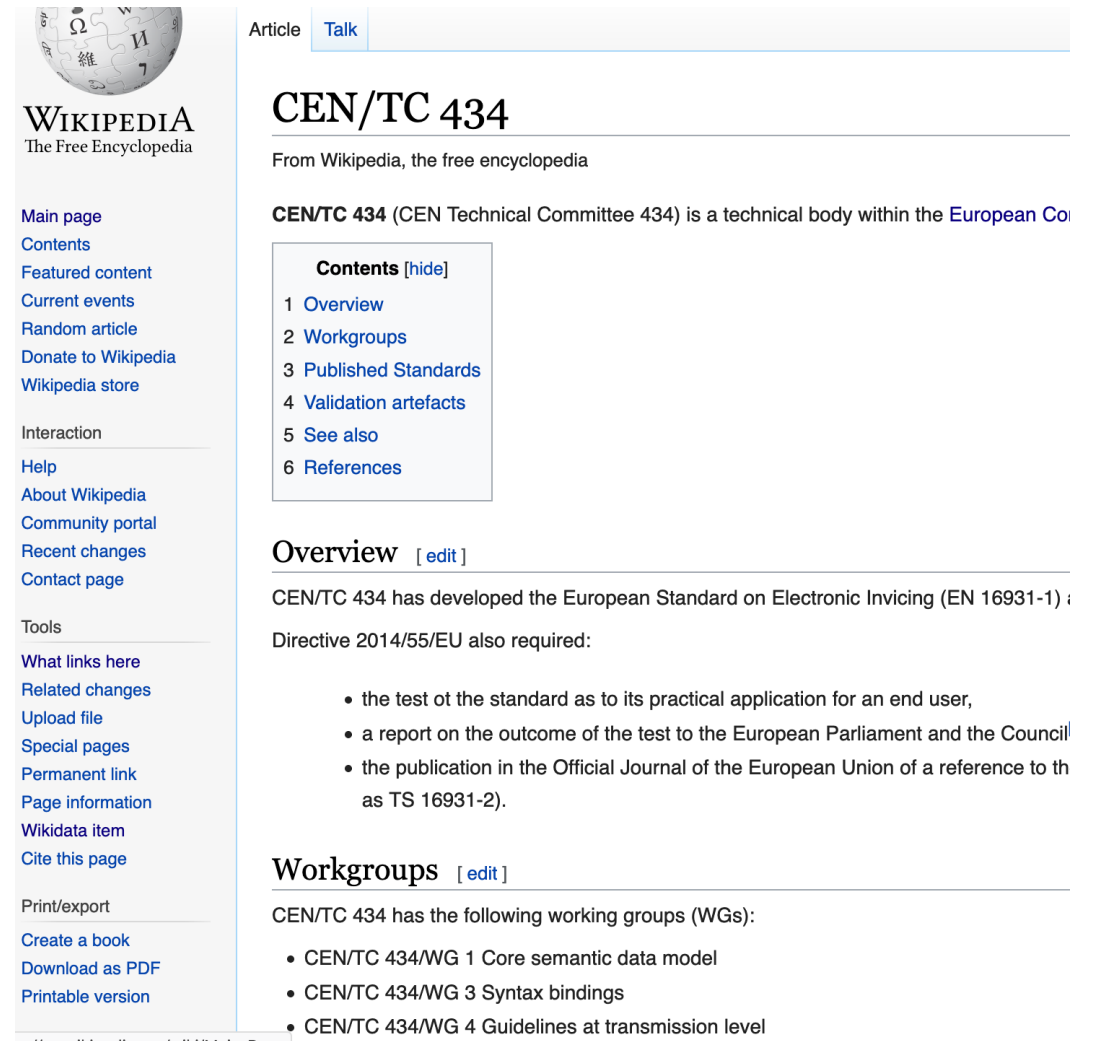
CEN/TC 434 ongoing activities

- Support the implementation of EU Directive
- Make the use of EN 16931 successful in EU (and beyond?)

How:

- New standardization activities
 - Maintenance
 - CIUS methodology
 - Registry services
- Capacity building, i.e. Meetings, workshops, web pages

https://en.wikipedia.org/wiki/CEN/TC_434



The screenshot shows the Wikipedia page for CEN/TC 434. The page title is "CEN/TC 434" and it is categorized under "Article" and "Talk". The page content states that CEN/TC 434 (CEN Technical Committee 434) is a technical body within the European Commission. It has developed the European Standard on Electronic Invoicing (EN 16931-1) and Directive 2014/55/EU also required: the test of the standard as to its practical application for an end user, a report on the outcome of the test to the European Parliament and the Council, and the publication in the Official Journal of the European Union of a reference to the standard as TS 16931-2). The page also lists the working groups (WGs) of CEN/TC 434: CEN/TC 434/WG 1 Core semantic data model, CEN/TC 434/WG 3 Syntax bindings, and CEN/TC 434/WG 4 Guidelines at transmission level.

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CEN/TC 434
From Wikipedia, the free encyclopedia

CEN/TC 434 (CEN Technical Committee 434) is a technical body within the [European Commission](#).

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Overview [\[edit\]](#)

CEN/TC 434 has developed the European Standard on Electronic Invoicing (EN 16931-1) and Directive 2014/55/EU also required:

- the test of the standard as to its practical application for an end user,
- a report on the outcome of the test to the European Parliament and the Council
- the publication in the Official Journal of the European Union of a reference to the standard as TS 16931-2).

Workgroups [\[edit\]](#)

CEN/TC 434 has the following working groups (WGs):

- CEN/TC 434/WG 1 Core semantic data model
- CEN/TC 434/WG 3 Syntax bindings
- CEN/TC 434/WG 4 Guidelines at transmission level

WG 1: Core semantic data model – ongoing activities

- New Technical Specification under approval (expected availability in November): CEN/TS 16931-7 Electronic invoicing - Part 7: Methodology for the development and use of EN 16931-1 compliant structured Core Invoice Usage Specifications
- CIUS = Core Invoice Usage Specifications (specified in EN 16931-1) support communities which need to restrict use of information elements defined in the eInvoicing standard data model according to sector or national requirements, while preserving full conformance with the standard
- Aims to give guidance on the creation and implementation of a CIUS with a quality control objective, providing guidance for the creation and implementation of Core Invoice Usage Specifications (CIUS) as defined in EN 16931-1 while preserving interoperability and harmonized implementation, providing a common methodology for designing and documenting CIUS restrictions, limiting unnecessary proliferation, giving guidance with a quality control objective, covering registration, communication, machine processable format
- The most important concepts are described in the white paper [Best practices on the development and registration of EN 16931-1 compliant registrable Core Invoice Usage Specifications](#) made available by the [CEN eBusiness Coordination Group](#) in close collaboration with CEN/TC 434

WG 1: Core semantic data model – ongoing activities

- Maintenance of EN 16931-1
 - an internal TC call for contribution for a possible amendment just closed
 - WG 1 will discuss the proposal received, however no substantial change is foreseen
 - Up to now the orientation is to eventually identify “quick fixes” that are urgent but with minor or possibly no impact on implementations
 - It’s important to gather feedback from the stakeholders and this will be complete when the second milestone of Directive 55 will be achieved (April 2020)

Possible issues with derogations to the VAT Directive

- Article 395 of Council Directive 2006/112/EC (VAT Directive) set the rules for the Council to authorise any Member State to introduce special measures for derogation from the provisions of the Directive (including specific invoice content)

Real example: the split payment now in force in Italy with Council Implementing Decision (EU) 2017/784

- it applies to public authorities (in scope of Directive 55) and allow Italy to derogate from Article 226 of the VAT Directive requiring that invoices include a special remark that VAT has to be paid to a separate and blocked bank account of the tax administration
- > This de facto prevents the application of EN 16931 in Italy to domestic invoices, not possible without mandating a specific extension (e.g. the total to be paid changes)

Derogations to the VAT Directive

- Can an extension be mandated in Italy on the basis of Decision 2017/784?
- Directive 55 forbids national extensions but Article 9 reads: “This Directive is without prejudice to the provisions of Directive 2006/112/EC”: this includes the derogation mechanism?
- If it is not possible to mandate the extension, Italian public authorities cannot process domestic invoices as required by article 7 of Directive 55, that makes no distinction between domestic and cross border invoices
- Also Poland and Romania can have similar needs in future for “split payment”, so:
 - similar issues can then arise
 - In general, derogations to the VAT Directive can challenge the applicability of EN 16931 to one or more Member States

A-Deviations in European Standards

- If extensions can be mandated (when necessary) as part of the authorizations to publish national legislation that derogate the VAT Directive, this can create barriers to Service providers and software vendors to sell their products/services
- To overcome this issue the EN can be amended with an "A-Deviation" - a specific amendment to an European standard foreseen by CEN rules
- an informative annex including information on the specific national adaptations that need to be implemented in some MS
- an A-Deviation was asked by Italy as a short term solution for “split payment” but this should hopefully be solved in future in a general way in future EN 16931-1 amendments
- The A-Deviation was approved and is now pending publication

EN 16931-1 ongoing update

- An amendment for EN 16931-1 is now pending publication including a corrigendum and an A-Deviation to support split payment for Italy - see [HERE](#)

CEN/TC 434 Work programme

Project reference ▲	Status ▲▼	Initial Date	Current Stage ▲▼	Next Stage ▲▼
EN 16931-1:2017+A1 (WI=00434019) Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice	Under Drafting	2019-09-06	2019-09-06	2019-09-25
EN 16931-1:2017+AC (WI=00434018) Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice	Under Drafting	2019-07-30	2019-07-30	2019-12-02
EN 16931-1:2017/prA1 (WI=00434020) Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice	Under Drafting	2019-09-06	2019-09-06	2020-01-06

TC 434 Work program (see [HERE](#))

CEN/TC 434 Work programme

Project reference ▲	Status ▲▼	Initial Date	Current Stage ▲▼	Next Stage ▲▼
<u>FprCEN/TS 16931-7</u> (WI=00434015) Electronic invoicing - Part 7: Methodology for the development and use of EN 16931-1 compliant structured Core Invoice Usage Specifications	Under Approval	2018-04-04	2019-08-22	2019-11-14

WG 3: syntax bindings

- How to use concretely EN 16931-1? → Syntax binding
- Available for
 - UBL [ISO/IEC 19845 (UBL 2.1) invoice and credit note] in CEN/TS 16931-3-2,
 - CII [UN/CEFACT XML Industry Invoice D16B] in CEN/TS 16931-3-3, and
 - EDIFACT [UN/EDIFACT INVOIC D16B] in CEN/TS 16931-3-4.
- A Corrigendum for TS 16931-3-2 was published in 2018 to fix some errors;
- An amendment for all the 3 TSs is now under approval aiming at clarifying what code lists and what codes to use to achieve better interoperability by adding a specific Annex
- Validation artefacts are now available and maintained by some WG 3 members on voluntary basis and available in the [TC 434 repository on Github](#)
- WG 3 is also collaborating with the CEN Open Source project (in the context of the CEN/CENELEC Digital Transformation Strategy) that aim to tackle OS development under the CEN system defining governance, OS communities engagement, etc

TC 434 Work program (see [HERE](#))

CEN/TC 434 Work programme				
Project reference ▲	Status ▲▼	Initial Date	Current Stage ▲▼	Next Stage ▲▼
FprCEN/TS 16931-3-2 (WI=00434013) Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note	Under Approval	2018-02-27	2019-07-18	2019-10-10
FprCEN/TS 16931-3-3 (WI=00434014) Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Industry Invoice D16B	Under Approval	2018-02-28	2019-07-18	2019-10-10
FprCEN/TS 16931-3-4 (WI=00434017) Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B	Under Approval	2019-05-28	2019-08-29	2019-11-21

Specification of Registry Services

- A Study Group has gathered requirements for Registry Services relating to the implementation and use of EN 16931-1 focused on artefacts such as CIUSs, Extensions and Code Lists.
- It has developed a set of proposals for governance and operational procedures to support a Registry defining roles and responsibilities and making use of existing methodologies.
- And developed the functional requirements for an on-line web tool available to stakeholders on an easy to use basis.
- Develop a new Technical Specification to give guidance and specify how to design and operate a registry service with a partner organization.

WG 7: Registry Services

- WG 7 is carrying on activities on registry services in TC 434 aiming to:
 - support artefacts such as CIUS / Extensions / Code list and their publication
 - Drafting a Technical Specification for registry requirements, governance, formats, protocols, etc
 - An external entity (a Registry Authority) is needed to actually run the service
 - CEF is involved long term **sustainability** should be taken in due account (→ EU Publication Office as long term solution?)

The EN requires Registry Services

- Section 7.4 of the EN 16931-1 states that ‘It is recommended that core invoice usage specifications are documented in an appropriate repository for retrieval and sharing. The availability of such a repository is expected to foster convergence over time’
- Section 6.4 of TR 16931-5 “Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment” asks the same for extension specifications
- The specification of such a repository and how to implement the appropriate accompanying processes to ensure it meets the requirements and provides a fully functional registration and publication process for users is the goal of WG 7 activities

TC 434 Work program (see [HERE](#))

CEN/TC 434 Work programme

Project reference ▲	Status ▲▼	Initial Date	Current Stage ▲▼	Next Stage ▲▼
prCEN/TS 16931-8 (WI=00434016) Electronic invoicing – Part 8: Functional specification and guidance for registry services	Under Drafting	2018-08-17	2018-08-17	2019-02-07

IPR and cost of CEN deliverables

- Standards are developed by CEN and in general sold by CEN members
- A CEN member cannot make available standards free of charge unless “sponsored access” is agreed
- Use of standards is subject to specific licensing: the possibility to reuse, reproduce and transfer the content of the specifications in derivative work is not the same for all CEN members, however standards can be bought by any CEN member
- In general the use of standards is on a voluntary basis however in case of EN 16931-1 and TS 16931-2 their use is almost mandated by Directive 55/2014
- EC and CEN signed a specific agreement for a new type of sponsored access distribution of EN 16931-1 and TS 16931-2 free of charge (by CEN members)
- Use TS 16931-3 and any CEN TC 434 deliverable in derivative works is possible without any additional cost and covers for example software development, manuals, training material, etc.
- There could be further “structural” evolutions, for example with the outcome of CEN digital transformation strategy projects (ongoing) can influence future rules

So: did EN 16931 improve interoperability?

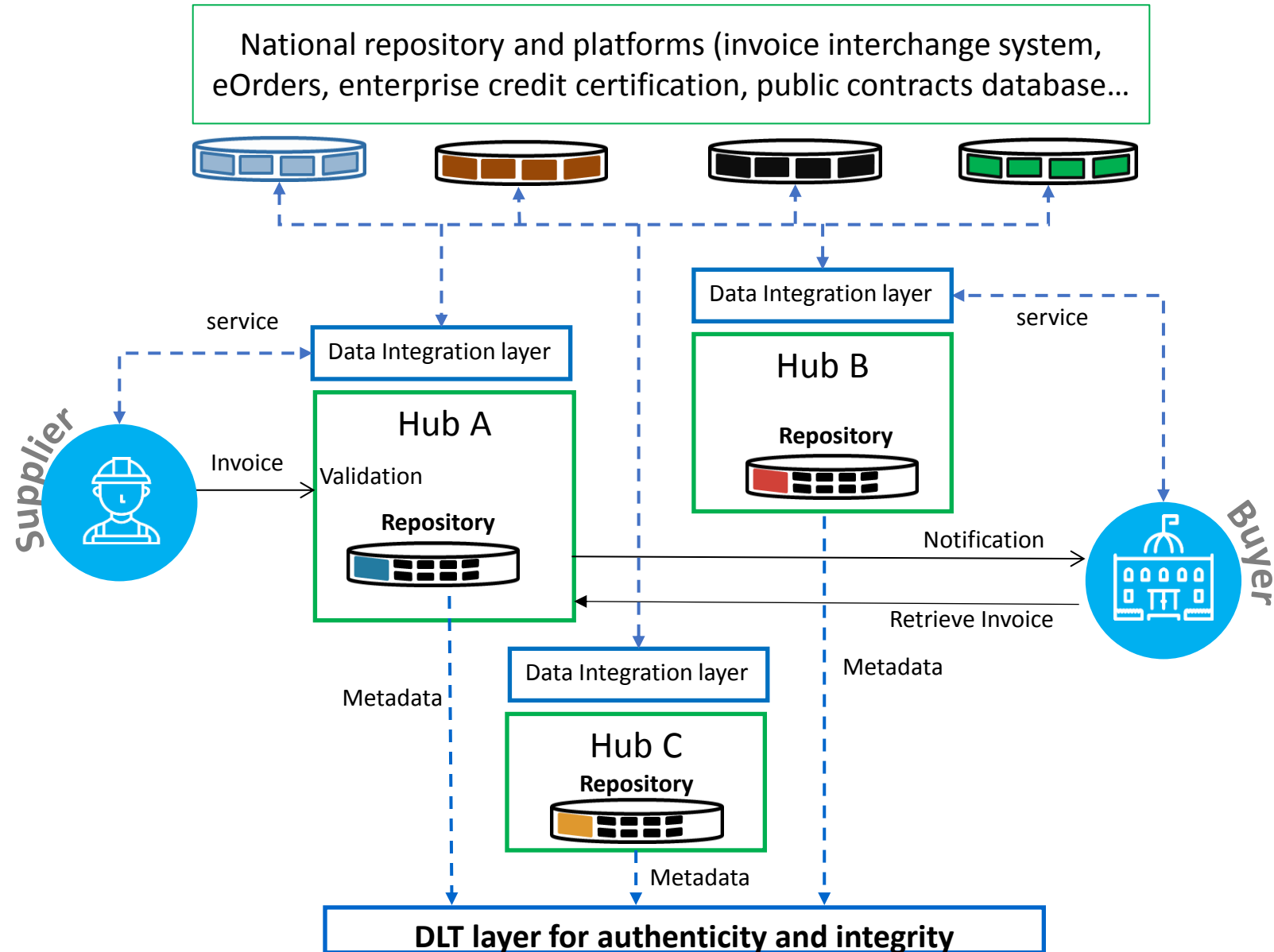
- The work of CEN is already a reference for some global projects:
- From the presentation of Todd M. Albers (Federal Reserve Bank of Minneapolis) at the last Exchange Summit – Berlin (see <http://bit.ly/USEINV>)
 - 80 to 90% of the EU semantic model is applicable to the US, Main “gap” identified was in the tax area (Sales and Use Tax versus VAT)
- From Australia / New Zealand interoperability framework (see http://bit.ly/AUS_IF)
 - “It follows a proven approach based on the European standardisation work undertaken by the CEN BII Workshop and CEN Technical Committee 434 in their publication ‘Electronic invoicing - Semantic data model of the core elements of an electronic invoice’”
- Australia and Singapore joined OpenPeppol (where an international working table was established) – This outcome from this group can be the basis for further development at international level and try to extend the approach globally

Internationalization of the European approach

- ISO seems the natural place to try to find consensus on the approach and – if found – start the process to develop an International Standard
- CEN can leverage on the agreement with ISO already in place (“Vienna agreement”) to develop an international standard
- “free of charge” is seen by TC 434 as a strong requirement - This needs to be further investigated and addressed in ISO
- Involvement of other international fora could be difficult without breaking CEN IPRs
- ISO/IEC JTC 1/SC 32/WG 1 “eBusiness” seems the best candidate as it was approached already by OASIS to bring UBL to ISO (then approved with the PAS procedure at JTC 1 level)
- Next meeting in Montreal on Oct 28

A look to the future: SCALES, an Italian CEF co-funded project

- Adoption of a **Distributed Repository/DLT** based model and enforcement of the **Provide Data Once Principle**
- Suppliers do not send invoices, but make them available to the buyer and tax authorities.
- Document metadata stored in distributed repositories accessible only by authorized users and integrity guaranteed by DLT
- Expected better data control and protection, scalability and performance than centralized hub architecture
- Use of national platforms data such as credit certification, eOrders, ... can enable value added services such as factoring, payment reconciliation, etc.
- **Use of common standards is even more important: EN 16931 is key for interoperability (and possible reuse)**



Co-financed by the Connecting Europe Facility of the European Union

CEN/CENELEC activities on Blockchain & DLT

- CEN and CENELEC - European Standardization Organizations whose members are the European NSO - established a Focus Group on Blockchain & DLT in Jan 2018 with a foreseen duration until Dec 2019
- The FG [published a white paper](#) on specific European needs “Recommendations for Successful Adoption in Europe of Emerging Technical Standards on Distributed Ledger/Blockchain Technologies”

Focus Group recommendations and way forward

- The White Paper includes already 25 recommendations, but...
- No position on how to address these needs was taken when the white paper was published
- FG members agreed on the primacy of international standards setting on Blockchain and Distributed Ledger Technologies and that ISO/TC 307 shall be the first target for new development proposals
- The FG however recognized that specific European standardization needs and/or priorities not recognized at the international level might require the development of standards at the European level
- The FG decided then to recommend to the Technical Boards of CEN and CENELEC to establish a Joint TC, a ballot is expected to start

Scope for a CEN/CENELEC Joint TC on Blockchain & DLT

- When ISO/TC 307 standards on Blockchain and DLT are developed, they need to be adopted: the JTC can do so at CEN/CENELEC level guaranteeing automatic adoption in Europe, by all CEN/CENELEC members (European NSOs)
- The JTC will undertake standardization for specific European standardization needs and/or priorities establishing collaborative development with ISO, whenever applicable
- CEN/CENELEC have in fact agreements already in place with ISO/IEC (Vienna/Frankfurt agreements): they foresee procedures for the notification of the documents developed in one body to allow simultaneous approval in the other body
- The new JTC will also take over the FG activities and in particular the maintenance of the white paper
- First priorities identified relates to compliance for eIDAS for identification means and GDPR for personal data
- The result of the ballot for the JTC establishment is expected for today

Any question?



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