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D3.4 – STANDICT FELLOWSHIP PROGRAMME INTERIM IMPACT REPORT

Work Package	WP3 Management Facility for EU Experts in ICT Standardisation - the “Standardisation Fellowship Programme”
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Glossary

EC	European Commission
SDO	International Standardisation Organisation
ESO	European Standardisation Organisation
NSB	National Standardisation Body
DMS	Document Management System
EAG	External Advisory Group
EPE	External Pool of Evaluators
IPR	Intellectual Property Rights
NGI	Next Generation Internet
PC	Project Coordinator
PMB	Project Management Board
TL	Task Leader
WP	Work Package
WPL	Work Package Leader
TRUST-IT	Trust-IT Srl (Project Leader)
DCU	Dublin City University (Project Partner)
AUS	Australo Interinnov Marketing Lab SL (Project Partner)
EUOS	European Observatory for ICT Standardisation
TWG	Technical Working Group
WG	Working Group
TC	Technical Committee
OC	Open Call

Executive Summary

StandICT.eu 2023 is a European initiative supporting the EU engagement in international ICT standardization. The project has two objectives: firstly, it will fund 400+ European fellowships in ICT standardisation in **a series of 10 Open calls providing a total of 3M€ of funding**. Secondly, it **operates the European Observatory for ICT Standardisation (EUOS)** that is one-stop-shop for European ICT experts including an up-to-date standards repository as well as working groups sharing insights about ongoing ICT standardisation efforts across different standards bodies and related initiatives. StandICT.eu 2023 focuses on horizontal and vertical ICT fields that crucial for the European Digital Single Market and that are defined in the Rolling Plan for ICT Standardisation¹.

The Consortium of Partners is coordinated by the same organisation leading the precursory initiative – **Trust-IT Srl**² (Italy), an SME with over 15 years' experience of managing complex EC-funded projects in ICT– including 2 experienced partners: **Dublin City University**³ (Ireland), a major player in SDO WGs & TCs and in educating future ICT Standards experts through its ELITE-S programme, and **AUSTRALO Marketing Lab**⁴ (Spain), a SME specialised in communication dissemination and stakeholder engagement of EC-funded projects.



The success StandICT.eu 2023 Programme is directly dependent on the effective management and monitoring of the contracted fellowships. The management of the Open Calls, the evaluation of the received applications and the contracting is overseen by TRUST-IT, and as a complementary action to this, AUS manages defining and implementing effective monitoring and impact assessment strategies. On one hand, the continuous monitoring of the fellowships helps to follow up closely the fellows' project implementation and progress making sure that the contracted work plans are respected. On the other hand, the impact assessment enables to analyse the impact of the fellowship programme to the European and International standardization landscapes, on both individual and global levels.

During the first project half, in total 144 fellows were contracted and monitored in the programme. They were successful applicants from the Open Call 1 until the Open Call 4. AUS defined a monitoring strategy that is implemented in coordination with Tasks 3.1 "Open Calls Management" and Task 3.2 "Maintenance of StandICT.eu Platform" lead by Trust-IT. This strategy defines the used monitoring tools (ie., interim and final reports, the TRUST-GRANTS platform, dedicated databases for results etc.) and communication methods. In addition, the consortium has decided to share the Impact of the Fellowship projects to the StandICT.eu community, on a regular and timely manner, as soon as the contracted projects are finalized, and therefore, the team issues a series of 10 Impact Reports, dedicated to each open call, gathering the success stories of each individual fellow. Already two Impact Reports have been released.

¹ <https://digital-strategy.ec.europa.eu/en/policies/rolling-plan-ict-standardisation>

² www.trust-it-services.com

³ www.dcu.ie

⁴ www.australo.org

During the second project half, the monitoring will continue, and the process will remain flexible making place for improvements as necessary, for instance, via updating the interim and final report template according to the current needs. At the time of submission of this report, the OC#5 fellowships were contracted, and their monitoring was about to start, followed by the remaining Open Calls 6, 7, 8, 9 and 10. Furthermore, 8 Impact Reports on the Fellowship Programme are planned to be published, about every two months until the end of the project.

Moreover, **WP4 – task 4.1 “Communication and Outreach” supports widely the monitoring** as it enables to disseminate the impact of the fellowship programme to the entire StandICT.eu 2023 stakeholders’ community including namely ICT standards experts, researchers, varied Standards Bodies, European ICT PPPs, and associations but also related policy makers and the Multi Stakeholder Platform.

1 Introduction

This report presents the monitoring strategy of the StandICT.eu 2023 fellowship programme and the first impacts of the fellowships, covering the first project half (18 months) from September 2020 until February 2022.

1.1 Scope and specific goals of the deliverable

This report summarizes the first results and impact of the Fellowship Programme on the International ICT Standardisation Landscape, and therefore its main objectives are:

- Explain the used monitoring and impact assessment strategies.
- Provide an overview of the monitoring status until February 2022.
- Share the fellowship outcomes on a global level, impacting the different SDOs, WGs and TCs but also the engaged stakeholders.
- Promote the Individual Impact Reports gathering the fellows' success stories for each Open Call Batch.
- Share lessons learnt and set the plan for the next steps in the impact assessment until the end of the project.

1.2 Structure of the document

The document consists of the following sections:

- **Section 2** details the overall monitoring framework of the Fellowship Program implemented from the very start of the project. It specifies the used monitoring methodology and tools as well as it provides an overview of monitored fellowships from Batch 1 (OC1) until Batch 4 (OC4).
- **Section 3** is dedicated for the impact assessment of the fellowship programme from the global standpoint enabling to understand how the funded fellowships have contributed concretely to the international ICT standardization landscape.
- **Section 4** helps to understand the fellowship program impact with individual success stories that are published in a series of individual impact reports for each open call batch. This section explains the approach of the impact dissemination from the perspective of the individual fellowships.
- **Section 5** offers the conclusion of the task 3.3 including the lessons learnt and the next steps.

1.3 Relationship to other deliverables and project outcomes

The information provided in this report shall be updated in a final version on D3.7 StandICT Fellowship Programme Final Impact Report (M36, AUS). In addition, the following project outcomes correlate with this task:

In **WP3**, the 3 published Monitoring reports provide detailed information about the run Open Calls, the evaluation and fellowship contracting processes:

- D3.1 Call Monitoring Report no.1 (M7, Trust-IT)
- D3.2 Call Monitoring Report no.2 (M13, Trust-IT)
- D3.3 Call Monitoring Report no.3 (M17, Trust-IT)

In WP4, the communication activities support active engagement of the fellows in the programme and spread the fellowship programme impact to the entire StandICT.eu 2023 community.

- D4.1 Plan for communication & Stakeholders Engagement Strategy (M3, TRUST-IT)
- D4.3 Interim report on Communication (M18, TRUST-IT)

In WP5, the Ecosystem Building enables to connect the funded fellowship projects with related standardisation activities with the StandICT.eu 2023 community, including synergies with projects in the related fields and contributions to the EUOS platform (standards repository and Technical Working Groups).

- D5.2 Interim report on Ecosystem Building (M18, AUS)

2 Monitoring Framework

The aim is that StandICT.eu 2023 Fellowship Programme is a fully functional funding mechanism, adapting an end-user-friendly design and operating in a well-defined framework. Therefore, the operational monitoring framework is crucial for the project success. It enables to evaluate the performance story of each funded fellowship based on their defined work plans, putting effort to generate impact and make the most out of the public funding invested.

Once the evaluation of the Open Call applications by the EPE is finalized, the selected fellows are informed of their successful application and the contracting process takes place and this is managed by TRUST-IT team. Once this process is over, Trust-IT coordinates the start of the monitoring of the new Batch of funded fellows. Each Fellowship Program Batch (from 1 to 9, corresponding to each Open Call) is monitored in a defined framework.

The Fellowship Programme Monitoring framework consists of two approaches:

Monitoring that covers the collection, communication, and use of information about the progress of each funded fellowship. With a daily routine, the StandICT.eu team makes sure that all contracted projects are running as planned, respecting the set goals and timeline. In case challenges or problems (for instance, with the project delivery date) are met, the responsible staff members solve the problem with the concerned fellow. Moreover, the monitoring enables to make sure that the entire fellowship programme is executed according to the plan with respect of the set timelines and the available budget.

Impact assessment that analyses the collected monitoring information and producing communication material, such as infographics, templates for social media posts, and public impact reports, disseminating the fellowship programme outcomes to all stakeholders. The impact assessment runs on two levels: on the individual level including individual fellowship success stories and, on the programme-wide level highlighting the global impact of the fellowship programme on the international ICT standardisation ecosystem. The impact assessment gives a special attention to the following results of the fellowships

- Covered ICT Sector, engaged SDO and Work Groups (WG)/ Technical Committees (TC).
- Direct contribution to new / revised standards.
- Participation in newly established WGs / TCs.
- Contribution in specific deliverables.
- Relation to other research and innovation projects (e.g., H2020, HEurope)
- Impact of the contribution on the EU SMEs and on the society.
- Recommendations for the necessary further standardisation actions in the concerned areas.

The impact assessment benefits the entire StandICT.eu stakeholders' community, and especially the involved experts and policy makers, notably from the European Commission and the Multi Stakeholder Platform, enabling to understand better the ongoing standardisation priorities within the different SDOs and anticipate the needs in further standardisation.

2.1 Monitoring Methodology and Tools

The StandICT.eu 2023 Fellowship Programme monitoring is supported by **the Logical Framework Approach (LFA)** allowing to analyse and organise the gathered information in a structured way. Within this framework, the following project aspects are controlled:

- Identification of successes and problems during the fellowship implementation.
- Informed and timely decision making by project manager to support the implementation.
- Accountability for the activity and results achieved.
- Fellows' contribution to the dissemination of the results and participation in the StandICT.eu 2023 Programme.
- Assessment and validation of the fellowship's achievements and activities.

TRUST-GRANTSTM platform, created and run by Trust-IT, enables to implement the LFA in practice and to track down all the required fellowship data.

In addition to the platform, the StandICT.eu team set up an online **Excel sheet**, that tracks all requested reports & deadlines with key information about each fellowship project. This file allows the team to track the key results of the fellowship (contribution two ICT areas, SDOs, WGs, New Standards, New WGs & Deliverables) via a dedicated sheet "Track of New standards, WG and Deliverables".

Moreover, to gather the fellowship performance data, the funded fellows are requested to provide a set of monitoring elements:

For the One-Shot and Short-term fellowships (up to 3 months) three monitoring elements are requested: the fellowship work plan (defined in the application), the project summary (provided during the contracting phase) and the final report (submitted for the project end date).

For the Long-Term fellowships (up to 6 months) four monitoring elements are requested: the fellowship work plan (defined in the application), the project summary (provided during the contracting phase), the interim report (submitted in the mid-term of the project) and the final report (submitted for the project end date).

2.1.1 Reporting and TRUST-GRANTS™ Platform

The TRUST-GRANTS™ platform enables monitoring of the fellowships progress in real time based on the start and end dates of each individual funded fellowship, as well as on the work plan provided as a part of the fellowship application. The project team consults the platform daily to identify new achieved fellowship milestones (namely, interim, and final report submissions) and possible deviations. Only the designated StandICT.eu team members are granted rights to access the project monitoring tool on the platform.

ID	Title	Username	Name	Surname	Report Status	Report details
04-424	Big Earth Databe Analytics	pebau	Peter	Baumann	✓ On Track	Report Details
04-428	Danish participation in the ISO/IEC JTC 1/SC 32 WG 3 Database languages (SQL and new GQL), 3rd term	thomasf@if-informatik.dk	Thomas	Frisendal	✓ On Track	Report Details
04-429	Support for Chair of ETSI EP eHEALTH	SunoWood	SUNO	WOOD	⚠ Delay	Report Details
04-436	W3C Accessibility Education and Outreach	Vicki	Victoria	Menezes Miller	✓ On Track	Report Details
04-438	Standardisation actions towards the safety of EU citizens on roads and during emergencies - Part 3	mw-nty	Michelle	Wetterwald	✓ Complete	Report Details
04-444	Key Management and Public-key infrastructure: Establishment and maintenance	Erik Andersen	Erik	Andersen	✓ On Track	Report Details
04-445	Implementation and Evaluation of Authenticated Encryption Algorithms for the Internet of Things	jgrosz	Johann	Groszchaedl	✓ On Track	Report Details
04-449	Integration of Green aspect inside Internet of Things standard	monteil	Thierry	Monteil	✓ On Track	Report Details
04-450	Bridging the gap between EU R&I ecosystem and worldwide standardization on Smart Energy	oliviergenest	Olivier	genest	✓ On Track	Report Details
04-451	AI-ML based video encoding evidence activity for standard development	artusi	Alessandro	Artusi	⚠ Delay	Report Details

Figure 1: Fellowship Monitoring via the TRUST-GRANTS™ platform

The fellows perform their reporting via Trust-Grants respecting the set deadlines (at the mid-term and/or at the end of their fellowship).

The Interim Report, that LT fellows submit at their project M3, enable to follow the mid-term progress of the fellowships monitoring namely: the concerned standardisation challenges and gaps, the addressed SDOs, WGs and TCs, the number of participated meetings, webinars, workshops as well as the overall progress compared to the initial work plan. See *Annex 1: StandICT Fellowship Interim Report Template*.

The Final Report, submitted at the end of the fellowships (at M3 or M6 based on the fellowship type), contain questions notably regarding the achieved standardisation activities but also on the project's contribution to the new / revised standards and technical working groups, impact on SMEs, on the society as well as the possible contributions to the EUOS Technical Working Groups (TWGs). See *Annex 2: StandICT.eu 2023 Fellowship Final Report Template*.

The StandICT.eu 2023 project managers review the content and the quality of all submitted reports, and if the set quality criteria are met, the reports are validated enabling the project to move towards the next milestone. These criteria concern to assess the consistency of responses in the open questions; if all questions are addressed, and if the data provided enables to understand the main achievements and to draft the performance story of the fellowship for disseminating the project impact.

Upon the validation of the submitted final report, Trust-IT administrative team is notified, and they launch the grant payment process. In case that the submitted reports do not meet the set quality criteria, the re-submission of the report is requested with information on the improvements to be done for the validation of the fellowship.

2.1.2 Communication

To raise awareness about the monitoring process and the impact assessment, StandICT.eu 2023 team run internal and external communication.

Regarding internal communication with the funded fellows, to keep the monitoring process running smoothly, AUS is in daily contact via emails with the funded fellows making sure that the fellows are aware of the available reporting process, tools, and the set deadlines. In case

of delays or other foreseen complications during the fellowship, AUS connects the fellow with TRUST-IT team to mitigate all risks impacting the project as quickly as possible.

The external communication related to the monitoring focuses on the impact assessment and dissemination towards the StandICT.eu 2023 community. It includes a series of fellowship impact reports as well as regular communication on StandICT.eu social media channels, in Twitter⁵ (see Figure 2) and in LinkedIn⁶ (see Figure 3).

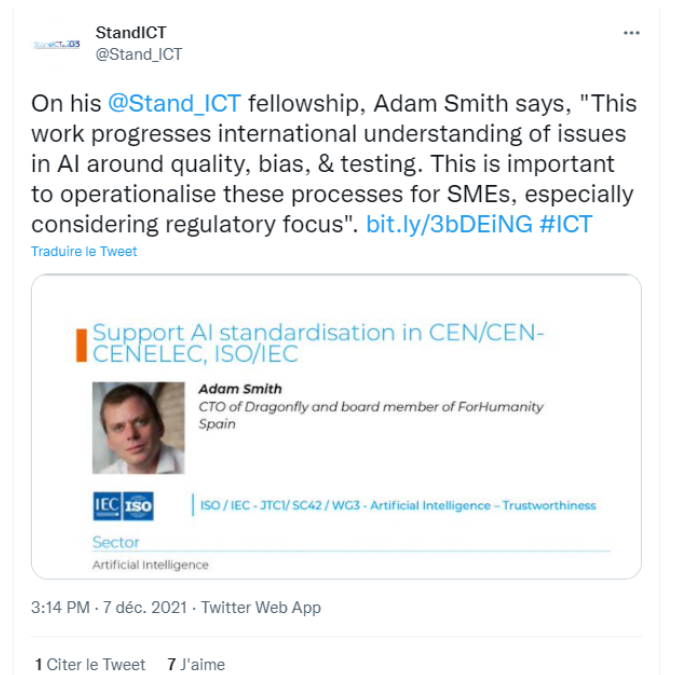


Figure 2 Example of a Twitter Post on a Fellowship Impact⁷

⁵ <https://twitter.com/Stand ICT>

⁶ <https://www.linkedin.com/company/standict-eu>

⁷ <https://twitter.com/Stand ICT/status/1468222329327136773>

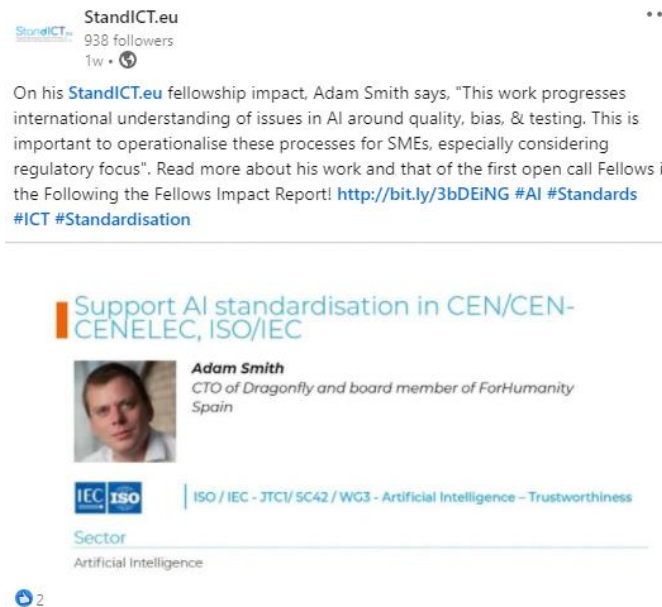


Figure 3: Example of a LinkedIn Post on a Fellowship Impact⁸

2.2 Monitored Fellows Until M18

During the first project half from September 2020 until February 2022, the StandICT.eu 2023 Fellowship Programme has contracted and directly funded **144 applications presenting a total amount of 1.247K€ of allocated funding for third parties**. The experts from SMEs are the most represented in the programme (with 45 running fellowships), followed by 33 experts from IT Consultancy sector and, on a third place, 29 projects from experts in academia and research sectors. Moreover, 23% of these fellowship projects are conducted by female researchers.

By the Open Call 4, the top-5 of the most targeted ICT areas cover:

1. Cybersecurity
2. Blockchain and DLT
3. 5G and fixed networks
4. Artificial Intelligence
5. eHealth

Moreover, the funded fellowships cover also many other vertical ICT sectors, namely Smart Cities, Semantic Interoperability, FinTech and RegTech. And in each open call results, new ICT domains of interest raise in the applications, such as ontologies or open data standards. Figure 4 shows the key findings of the aggregate results from Open Call 1 until Open Call 4.

⁸ www.linkedin.com/posts/standict-eu_ai-standards-ict-activity-6873989031038877696-m0-h



Figure 4: The Aggregate Results from OC#1 to OC#4

The monitoring of the fellowships is kicked off right after the contracting process (between TRUST-IT and the fellow) is finalized. Table 1 defines the monitoring timeline for each fellowship programme batch until Batch 4 (Open Call 4), which are monitored during the first project half.

Table 1: Fellowship Programme Monitoring Timeline OC1 - OC4

Monitored Batch	Start of Monitoring	End of Monitoring (When the last final report of the concerned Batch is submitted)
Batch 1 – Open Call #1	March 2021	November 2021
Batch 2 – Open Call #2	June 2021	February 2022
Batch 3 – Open Call #3	September 2021	August 2022
Batch 4 – Open Call #4	December 2021	August 2022

2.2.1 Batch 1 – Open Call #1

This first Open Call totaled 96 eligible applications received out of which **36 have been selected for funding, with an overall 307K€ granted**. After the evaluation procedure by external experts, the selected projects rated a remarkable average quality score (the minimum threshold to access funding was 8,30 score in a 1 to 10 scoring scale). The funded applications provided an extensive geographical coverage with 15 different EU countries represented, with a satisfying balance across the key technologies and priority topics of the first call, and with a wide spectrum of SDOs that will benefit of the competence and expertise of the applicants. Figure 5 resumes the key results of the Open Call #1.

1st Open Call RESULTS & POPULAR TOPICS



Figure 5: Open Call #1 Funded Results

63% of the fellows' effort is devoted to work within Global SDOs, while the remainder contribute to European SDOs. Another interesting observation that can be made based on the statistics is the considerable number of fellows coming from SMEs (40%), or Independent IT Consultants: this is a tangible proof of how much European Enterprises are investing resources to ensure a full ICT Standards uptake in the market in view of a steady commercial and economic growth. 13 European funded research projects are related to the presented StandICT.eu fellowships, with a strong focus within the eHealth and Smart Grids domains.

After the contracting phase, one fellow withdrew from the programme, which finally resulted to monitoring of **35 fellows supported with a total amount of 304,500€** in the Open Call 1 Batch. Table 2 gives an overview of the supported Open Call #1 Fellowships, engaged SDOs, WGs and ICT Sectors.

Table 2: Open Call #1 - Funded Fellowships

Fellow ID	First Name	Surname	Engaged SDO	WG and TC	ICT Sector
01-108	Patrick	Bezombes	ISO-IEC	JTC1/SC42/WG1: Artificial Intelligence - Concepts and terminology ISO-IEC/JTC1/SC 42/ WG13: Trustworthiness	Artificial Intelligence
01-113	Elzbieta	Andrukiewicz	CEN/CENELEC	JTC13 Cybersecurity and data protection/ WG3 Security evaluation and assessment	Cybersecurity / network and information security
01-122	Adam	Smith	ISO / IEC	JTC1/ SC42 / WG3 - Artificial Intelligence – Trustworthiness	Artificial Intelligence

01-129	Michelle	Wetterwald	ETSI	ITS WG1 Application Requirements and Services SC EMTEL.WG / TC Emergency Telecommunications	Connected and Automated Mobility (ITS-CCAM)
01-130	Giorgio	Cangioli	Cross-SDO project, involved in: HL7 IPS project under the HL7 Patient Care W	G ISO/TC 215 WG1 ISO 27269 project team CEN/TC 251 EN 17269 project team IHE PCC IPS project team IPS Cross-SDO coordination team	eHealth
01-133	Soumya	Datta	IEEE	P2145 Blockchain Governance Standards Working Group (WG)	Blockchain and Distributed Digital Ledger Technologies
01-134	Francisco	Medeiros-Filho	ISO/IEC CEN/CENELEC	JTC1/SC42 WG1 Foundational standards and WG3 Trustworthiness CENELEC - JTC21 Artificial Intelligence	Artificial Intelligence
01-140	Galia	Kondova	ISO UN/CEFACT	ISO TC 307 Blockchain Technologies - WG 6 Use Cases UN/CEFACT Chain Project « Recommendation for Cross-border Interoperable Blockchain infrastructure 4.0 » - WG 5 Use Cases	Blockchain and Distributed Digital Ledger Technologies
01-141	João Manuel	Leitão Quintas	IEEE	Autonomous Robotics - Autonomous Robotics (AuR) Ontology	eHealth
01-151	Octavian	Popescu	ETSI	TC Reconfigurable Radio Systems (RRS)	5G
01-154	Erik	Andersen	IEC	TC 57 Power Systems WG15 Data & Communication Security, ITU-T Study Group 17 – Security	Cybersecurity / network and information security
01-156	Olivier	Genest	IEC ISO/IEC	IEC SyC Smart Energy JWG3 & CAG7 ISO/IEC JTC1/SC41 IoT & Digital Twins - AG6 & AG21	Internet of Things (IoT)
01-158	Markus	Sabadello	WC3 / ECRIM	W3C Decentralized Identifiers Working Group	Blockchain and Distributed Digital Ledger Technologies

01-160	Erik	Andersen	IEC	TC 57 WG 15 Cybersecurity standards for power system communications	Cybersecurity / network and information security
01-161	Alojz	Hudobivnik	ITU	SG13 – Future Networks	5G
01-169	Elzbieta	Andrukiewicz	CEN/CENELEC	JTC13 Cybersecurity and data protection /WG3 Security evaluation and assessment	Cybersecurity / network and information security
01-170	Rusne	Juozapaitienė	ETSI	TC Cyber	eHealth
01-171	Ranganai	Chaparadza	ETSI Other involved SDOs: IEEE, ITU	ETSI TC INT AFI WG on Autonomic Management and Control (AMC) Intelligence for Self-Managed Fixed & Mobile Integrated Networks (AFI), IEEE INGR Future Networks Initiative (FNI) Standardization Building Blocks (SBB) Roadmap WG, IEEE INGR Future Networks Initiative (FNI) Systems Optimization WG, IEEE INGR Future Networks Initiative (FNI) Testbeds WG	5G
01-183	Victoria	Menezes Miller	W3C	WAI – Web Accessibility Initiative	Accessibility of ICT products and services
01-184	Suno	Wood	ETSI	WG eHealth	eHealth
01-185	Kate	Grant	IEC ISO/IEC	IEC SyC (Systems Committee) Smart Manufacturing/ WG1 IEC SyC Comm Technologies and Architectures IEC SyC Smart Cities /WG2 and AG 8/9 IEC SyC on Active Assisted Living (AAL)/ WG1 ISO/IEC JTC1 Information Technology ISO/IEC JTC1 AG8 Meta Reference Architecture for Systems Integration ISO/IEC JTC1 SC41 / AG25 and WG6 IEC TC100 AGS Audio, video and multimedia systems and Equipment	Internet of Things (IoT)
01-186	Niall	O'Reilly	Other	RIPE (Réseaux Internet Protocol Européens) All WGs	Cybersecurity / network and information security
01-187	Robert	Mueller	ISO/IEC	SC37 WG3 biometric data formats	Cybersecurity / network and information security
01-188	Jose	Pulido Carillo	ISO/IEC	JTC1 SC27 WG3 Security Evaluation, Testing and Specification	Cybersecurity / network and information security

01-192	Paulo	Goncalves	IEEE	WG P1872.1 – Robot Task Representation WG P1872.2 – Ontologies for Robotics and Automation WG P7007 – Ontological Standard for Ethically Driven Robotics and Automation Systems	eHealth
01-196	Christine	Perey	Other	Open Geospatial Consortium GeoPose Standard Working Group	Edge Computing
01-197	Christine	Perey	Other	3GPP - Technical Specification Group Service and System Aspects TSG SA WG4 (SA4)	5G
01-204	Muslim	Elkotob	ETSI IEEE	ETSI TC INT (Core Network and Interoperability Testing), ETSI TC INT WG AFI (Autonomic Management and Control Intelligence for Self-Managed Fixed & Mobile Integrated Networks), IEEE INGR SBB (Standardisation Building Blocks), IEEE INGR SysOpt (System Optimization)	5G
01-205	Jacak	Witold	Other	EITCI OQP Workgroup of the Quantum Standards Group (QSG)	Quantum Computing
01-210	Julien	Bringer	ISO/IEC	ISO/IEC JTC 1/SC 27/WG 5 Identity management and privacy technologies ISO/TC 68/ WG 13 Security in retail banking ISO/TC 68/ WG 18 Customer identification and authentication technologies	Cybersecurity / network and information security
01-221	Paolo	Campegiani	ISO / IEC	TC 307/JWG4 - Security, privacy and identity for Blockchain and DLT	Blockchain and Distributed Digital Ledger Technologies
01-224	Agnieszka	Rządowska	Other	EITCI Smart Energy Standards Group (SESG) - Smart-PV WG Work Group / technical committee	Artificial Intelligence
01-67	Richard	Pitwon	IEC ISO/IEC CEN/CENELEC	IEC TC86 JWG9 – Optical functionality for electronic assemblies ISO/IEC JTC1 WG14 Quantum Computing CENELEC - FG Quantum Technologies (GT) ITU-T – FG on Quantum Information Technology for Networks (FGQIT4N)	Quantum Computing

01-78	Amelie	Gyrard	ISO/IEC IEC	ISO/IEC SC41 IoT and Digital Twin ISO/IEC SC42 AI IEC TC57 "Power systems management and associated information exchange" - JWG3 "IEC Smart Energy Roadmap"	Internet of Things (IoT)
01-90	Peter	Baumann	ISO OGC (Open Geospatial Consortium)	ISO TC211 Geographic information / WG6 Group for Ontology Maintenance (GOM) OGC (Open Geospatial Consortium)	Open data and Big data

2.2.2 Batch 2 - Open Call #2

This second Open Call Batch totalled **68 eligible applications received out of which 37 have been selected for funding, with an overall 303,700 Euro** granted. After the evaluation procedure by external experts, the selected projects rated a very good average quality score (the minimum threshold to access funding was 7,27 score in a 1 to 10 scoring scale), just slightly lower than the one marked in OC #1. The funded applications provided an extensive geographical coverage with 11 different EU countries represented plus 2 representatives of H2020 associated countries, with a satisfying balance across the key technologies and priority topics of the second call, and with a wide spectrum of SDOs that will benefit of their competences and skillset. During and after the contracting phase, 3 have been withdrawn so only 33 were under monitoring.

The second Open Call featured the introduction of the new eligible topics for applicants in the priority list of ICT domains: **Edge Computing, Ontologies and Open Data Standards.**

As Figure 6 shows, Blockchain replaced Cybersecurity as leading topic addressed by our fellows (with 7 proposals vs 5), followed by 5G, Quantum Computing (new entry) and Artificial Intelligence. Noteworthy to underline the increasing submission of applications related to new and arising ICT domains as Semantic Interoperability, Trusted Information and Augmented Reality (witnessed also among the rejected proposals).

Therefore, the funded fellowships in this batch represent a broader distribution of ICT domains compared to the 1st Open Call (15 vs 9) and increase of applicants coming from an Academia/Research background.



Figure 6: Open Call #2 Funded Results

67% of the fellows' effort will be devoted to work within Global SDOs, while the remainder will contribute to European SDOs. Under this Open Call the fellows seem to come from widespread background, seamlessly distributed across multiple sectors mainly SMEs, Research institutions and IT Consultancy firms.

After the contracting phase, three fellows withdrew from the programme, which finally resulted to monitoring of **33 fellows supported with a total amount of 304,500€** in the Open Call 1 Batch. Table 3 Open Call #2 Fellowships, engaged SDOs, WGs and ICT Sectors.

Table 3: Open Call #2 Funded Fellowships

Fellow ID	First Name	Surname	Engaged SDO	WG and TC	ICT Sector
02-237	Lionel	Vodzislawsky	ISO/IEC CEN/CENELEC	ISO/IEC JTC1 SC27 WG1 and WG4 CEN/CENELEC JTC13 Data Protection / WG5 Privacy and Identity Management	Cybersecurity / network and information security
02-244	Thomas	Frisendal	ISO/IEC	JTC1/SC32/WG3	Semantic Interoperability
02-249	Tony	Allen	ISO/IEC	JTC 1/SC27/WG 5 – Identity and Privacy Management Technology	Trusted Information
02-252	Richard	Pitwon	IEC	Technical Committee 86	Quantum Technology

02-257	Alex	Cadzow	ETSI	The Securing Artificial Intelligence Industry Specification Group (ISG SAI)	Artificial Intelligence
02-259	Thomas	Länger	ETSI CEN/CENELEC	ETSI Industry Specification Group for QKD (ISG-QKD) CEN/CENELEC Focus Group Quantum Technologies (FGQT)	Cybersecurity / network and information security
02-262	Hedi	Karray	ISO Others	ISO/TC 184/SC 4 Core Terminology for Industrial Data OAG-IOF INCITS 573-3-202xAd Hoc Mid-Level Ontology (MLO)	Ontologies and open data standards
02-263	Carlos Luis	Parra-Calderón	ISO	TC 215 Health Informatics - Guidelines for implementation of HL7/FHIR based on ISO 13940 and ISO 13606 (ISO TC 215)	eHealth
02-267	Javier Jesús	Tallón Guerri	ISO-IEC	ISO SC27 WG3	Cybersecurity / network and information security
02-269	Jerome	Pons	ISO	TC307/WG1 Foundations	Blockchain and Distributed Digital Ledger Technologies
02-270	Nicolae	Paladi	IETF	Trusted Execution Environment Provisioning (TEEP) WG7	5G
02-272	Geoffrey	Goodell	ISO CEN/CENELEC	ISO/TC 307/WG 1 (Convenor) ISO/TC 307/CAG 1 ISO/TC 46/SC 11/JWG 1 (Co-Convenor) ISO/TC 68/AG 5 ISO/TC 68/SC 2/WG 17 ISO/TC 68/SC 8/WG 3 CEN/CLC/JTC 19 Blockchain and Distributed Ledger Technologies /WG 1 Decentralised identity management.	Blockchain and Distributed Digital Ledger Technologies
02-273	Shakira	Bedoya	ISO	ISOTC 68 Financial Services and ISO TC 309 Governance of Organizations	Fintech and Regtech Standardisation
02-274	Antonio	Kung	ISO/IEC	ISO/IEC SC 41, SC42 and AG8, SC27, SC41, PC317, SC43	Artificial Intelligence
02-276	Yanis	Kyriakides	CEN/CENELEC ISO	CEN-CLC-JTC19 JTC 19 Blockchain and Distributed Ledger Technologies ISO/TC 307/JWG 4, ISO/TC 307/WG	Blockchain and Distributed Digital Ledger Technologies
02-278	John	Grant	ETSI ISO/IEC	ETSI ISG NIN ETSI TC DECT ISO/IEC JTC1/SC6/WG7	5G
02-279	Luis	Moran Abad	ISO/IEC	ISO IEC / SC40 - Sub Committee for ICT Governance and Management	Fintech and Regtech Standardisation
02-281	Joachim	Koss	Other	oneM2M WG SGS (System Design and Security)	Semantic Interoperability

02-282	Ranganai	Chaparadza	ETSI	ETSI ISG IPE ETSI INT AFI WG	5G
02-285	Christophe	Stenuit	ISO/IEC CEN-CENELEC	ISO/IEC JTC 1 SC 27 WG 5 Information security, cybersecurity and privacy protection CEN/CLC JTC 13 WG 5 on Cybersecurity and Data Protection, Working Group 5 on Data Protection, Privacy and Identity Management	Cybersecurity / network and information security
02-287	Rob	van den Brink	CEN-CENELEC	CEN/CENELEC the formal Focus Group on Quantum Technology FGQT	Quantum Technology
02-290	Roland	Atoui	CEN/CLC Others	CEN/CLC JTC 13 Cybersecurity and data protection/ WG 6 Product security ISO/IEC JTC 1/SC 27 Information security, cybersecurity, and privacy protection / WG4 Security controls and services SRAHG	Cybersecurity / network and information security
02-293	Ljupcho	Antovski	ISO-IEC Other	ISO/IEC JTC 001/SC 17 Joint ISO/TC 307 - ISO/IEC JTC 1/SC 27 WG DIGITAL SME Task Force on Blockchain and DLT	Blockchain and Distributed Digital Ledger Technologies
02-294	Fiona	Delaney	ISO ISO / CEN- CENELEC	ISO TC307 WG6 Blockchain and DLT use cases. ISO/CEN-LEC JWG19 Blockchain and DLT	Blockchain and Distributed Digital Ledger Technologies
02-297	Edward	Zimmermann	Others	Cross-SDO Communication among OASIS, NIST, IETF, W3C/ECRIM	Open data and Big data
02-299	Andy	Heath	Others ISO/IEC	BSI ICT/002 ISO/IEC JTC1 SC41	Accessibility of ICT products and services
02-300	Svante	Schubert	CEN/CENELEC	CEN TC 434 WG1 (e-invoice/e- receipt) and TC 440 (e- procurement),	e-Invoicing
02-301	Nikita	Lukianets	IETF	The Internet Engineering Task Force (IETF)	Artificial Intelligence
02-302	Joseph	Roumier	ISO/ CEN/CENELEC	TC 215 WG 7 ELECTROTECHNICAL ASPECTS OF TELECOMMUNICATION EQUIPMENT	Ontologies and open data standards
02-306	Andrea	Caccia	ISO/IEC CEN Others	ISO/IEC JTC 1/SC 32 ISO/IEC JTC 1/SC 32/WG 2 OASIS CODELIST UNI/CT 522 CEN/TC 434 Eletronic Invoicing	e-Invoicing
02-308	Andy	Heath	ISO/IEC	ISO/IEC SC41 WG3 Internet of things and digital twin	Accessibility of ICT products and services

02-309	Harry	Halpin	Others	W3C DID Working Group IETF SAAG (Security Area)	Cybersecurity / network and information security
02-313	Christine	Perey	ETSI	Industry Standards Group Augmented Reality Framework (ISG ARF)	Cross Domain Technologies

2.2.3 Batch 3 - Open Call #3

The third Open Call resulted in 84 submitted applications out of which **35 have been selected for funding with an overall budget of 314K€ granted**. After the evaluation process carried out by the appointed external experts, the selected projects rated an average quality score of 7 (out of 10). These funded applications come from 15 European countries (also including the United Kingdom) with a balanced coverages of the key ICT technologies lead by cybersecurity, 5G, AI and Blockchain. Experts from SMEs and Academia sectors remain the major groups represented in the selected fellows under this Batch 3. The fellowships contributed to 11 different Standards Bodies; **72% of the funded activities contribute the global SDOs**, and the remaining part the ESOs. Figure 7 sums up the key results of the awarded fellowships in the OC3.



Figure 7: Open Call #3 Funded Results

After the contracting phase, one fellow withdrew from the programme resulting to **34 monitored fellowships under the Batch 3 supported with the total amount of 304K€**. Table 4 lists the supported Open Call #3 Fellowships, engaged SDOs, WGs and ICT Sectors.

Table 4: Open Call #3 Funded Fellowships

Fellow ID	First Name	Surname	Engaged SDO	WG and TC	ICT Sector
03-320	Edmund	Gray	CEN/CENELEC	all WGs in CEN/TC 434 Electronic Invoicing / WG 1, 3 and 7	FinTech/financial services/eInvoicing
03-325	Fabio	Massimo	ISO/IEC	JTC1 / SC7 / Risk management in systems and software engineering / WG24 Systems and software standards for Very Small Entities	Artificial Intelligence
03-327	Stephan	Krenn	ISO/IEC	ISO/IEC JTC1/SC27 WG2 and WG5; ZKProof WG Sigma-Protocols	Privacy Protection (Cybersecurity)
03-330	Fabien	Imbault	IETF	GNAP / Grant negotiation and authorization protocol	Identity Management (Cybersecurity)
03-333	Francisco	Medeiros-Filho	ISO/IEC CEN/CENELEC	ISO/IEC JTC1/SC42 Artificial Intelligence WG1, WG3 and JWG1 CEN/CENELEC JTC21 SAG (Strategic Advisory Group).	Artificial Intelligence
03-334	Paul	Burton	CEN ISO	CEN/ TC278 Road transport and traffic telematics/ WG4 TRAFFIC AND TRAVELLER INFORMATION (TTI) ISO/TC204 WG10	Intelligent Transport Systems
03-338	Roman	Beck	ISO CEN/CENELEC	ISO TC 307 WG 5 "Blockchain Governance" CEN/CENELEC JTC19 Blockchain and Distributed Ledger Technologies	Blockchain and Distributed Digital Ledger Technologies
03-340	Jacqueline	Zoest	ISO/IEC	ISO PC 317 Privacy by design / WG1 Consumer protection	Privacy Protection (Cybersecurity)
03-344	Erik	Andersen	IEC	IEC TC 57 WG 15 - Cybersecurity standards for power system communication	Cybersecurity / network and information security
03-348	Ulrike	Parson	iiRDS	iiRDS working groups	Ontologies and open data standards
03-350	Marios	Angelopoulos	ITU-T	Study Group 20 "Internet of Things, smart cities and communities"	Smart Cities

03-352	Richard	Pitwon	CEN/CENELEC ITU-T IEEE	CENELEC Focus Group on Quantum Technologies ITU-T Focus Group on Quantum Information Technology for Networks (ITU-T FGQIT4N) IEEE Special Interest Group for quantum technologies	Quantum Technology
03-357	Octavian	Popescu	ETSI	3 TCs: ERM - EMC and Radio Spectrum Matters (ERM) CYBER RRS - Reconfigurable Radio Systems	Cybersecurity / network and information security
03-359	Octavian	Popescu	ETSI	(TC) Reconfigurable Radio Systems (RRS)	5G
03-360	Sebastian	Posth	ISO	TC 46/SC 9/WG 18 – NP 24138 International Standard Content Code	Blockchain and Distributed Digital Ledger Technologies
03-362	Thomas	Frisendal	ISO/IEC	JTC1/ SC32/WG3 Database languages	Semantic Interoperability
03-363	Mark	Miller	ECSC CEN/CENELEC ETSI	ECSC WG1 WG1: Standardisation, Certification and Supply Chain Management that contributes and cooperates in many efforts at CEN/CENELEC and ETSI	Cybersecurity / network and information security
03-365	Muslim	Elkotob	ETSI IEEE	ETSI TC INT, TC INT AFI IEEE INGR SBB (Standardization Building Blocks), INGR SysOpt (System Optimization), INGR Testbeds	5G
03-366	Amelie	Gyrard	ISO/IEC	ISO/ IEC JTC1 SC41 IoT and Digital Twins JTC1 SC 42 Artificial Intelligence	Semantic Interoperability
03-367	Francesc	Wilhelmi	ITU-T	ITU-T's FG-AN "WG2: Architecture and Core Technical" and "WG3: Proof of Concepts".	5G

03-371	Mark	Schubert	Others	iiRDS Working Group Development, iiRDS Working Group Tooling, iiRDS Working Group Standardization, Industrial domain ontologies in OntoCommons, Demonstration in OntoCommons	Ontologies and open data standards
03-372	Marius	Preda	ISO/IEC	JTC 1/SC 29/WG 7 MPEG 3D Graphics Coding	Artificial Intelligence
03-373	Panos	Kudumakis	ISO/IEC	JTC1/SC29/WG03 MPEG Systems subgroup on 'Smart Contracts for Media'	Blockchain and Distributed Digital Ledger Technologies
03-374	Michelle	Wetterwald	ETSI	ETSI TC EMTEL	Emergency Communications
03-375	Antonio	Jara	IEEE ETSI OMA	IEEE ComSoc IoT Technical Committee ETSI NGSI-LD OMA Technical Group	Ontologies and open data standards
03-382	Ilkka	Rinne	ISO Others	ISO / TC 211 Digital geographic information (chair) OGC Observations and measurements Standards Working Group	Smart Cities
03-385	Alojz	Hudobivnik	ITU-T	SG13 Future Networks	5G
03-388	Julien	Bringer	ISO ISO/IEC CEN/CENELEC	ISO/TC 307 Blockchain and distributed ledger technologies ISO/TC 307/JWG 4 Security, privacy and identity for Blockchain and DLT (co-convenor) ISO/TC 68 Financial services/SC 2 (liaison representative of TC 307) CEN/CENELEC JTC 19 Blockchain and Distributed Ledger Technologies ISO/IEC JTC 1/SC 27 Information security, cybersecurity and privacy protection	Blockchain and Distributed Digital Ledger Technologies

03-392	Maria Ines	Robles	IETF	IETF ROLL (Routing Over Lower Power and Lossy Networks) working group ETF Internet of Things Directorate IETF General Area Review Team IETF Routing Directorate	Industry 4.0
03-395	Andrea	Basso	Others	MPAI (Moving Picture, Audio and Data Coding by Artificial Intelligence) - Artificial Intelligence Framework (AIF)-DC Working Group chair	Artificial Intelligence
03-396	Raul	Sanchez-Reillo	ISO/IEC	ISO/IEC JTC1/SC37 Biometrics / WG2 Biometric technical interfaces	Electronic Identification and trust services
03-397	Vasileios	Mavroeidis	OASIS	Threat Actor Context Technical Committee (TAC TC)	Cybersecurity / network and information security
03-403	Erlend	Øverby	CEN	CEN TC353 Information and Communication Technologies	Learning and Education
03-404	Antonio	Pinheiro	ISO/IEC	ISO/IEC JTC 1/ SC 29 Coding of audio, picture, multimedia and hypermedia information / WG 1 JPEG Coding of digital representations of images	Artificial Intelligence

2.2.4 Batch 4 - Open Call #4

The Open Call 4 resulted in 82 submitted applications, and after the evaluation process carried out by the external experts **38 were selected for funding with an overall 322K€ granted.** The average quality score of the winning projects was 7.9 (out of 10). The funded experts represent 11 EU members states, and 3 associated countries (Switzerland, Macedonia, and the United Kingdom). A consistent number of proposals are submitted by applicants coming from SMEs, and IT Consultancies as well as from Academia/Research sectors, and 24% of the funded experts are female. Moreover, cybersecurity and blockchain technologies continue to be the most popular topics. However, a wide range of different topics are tackle, such as e-government, Smart Cities, Ontology, FinTech & RegTech, and intelligent transport systems. The 65% of the funded fellowships contribute to the work of the global SDOs, and the remaining part are involved in European standards groups. Figure 8 displays the main results of the selected OC#4 fellowships.

4th Open Call RESULTS & POPULAR TOPICS

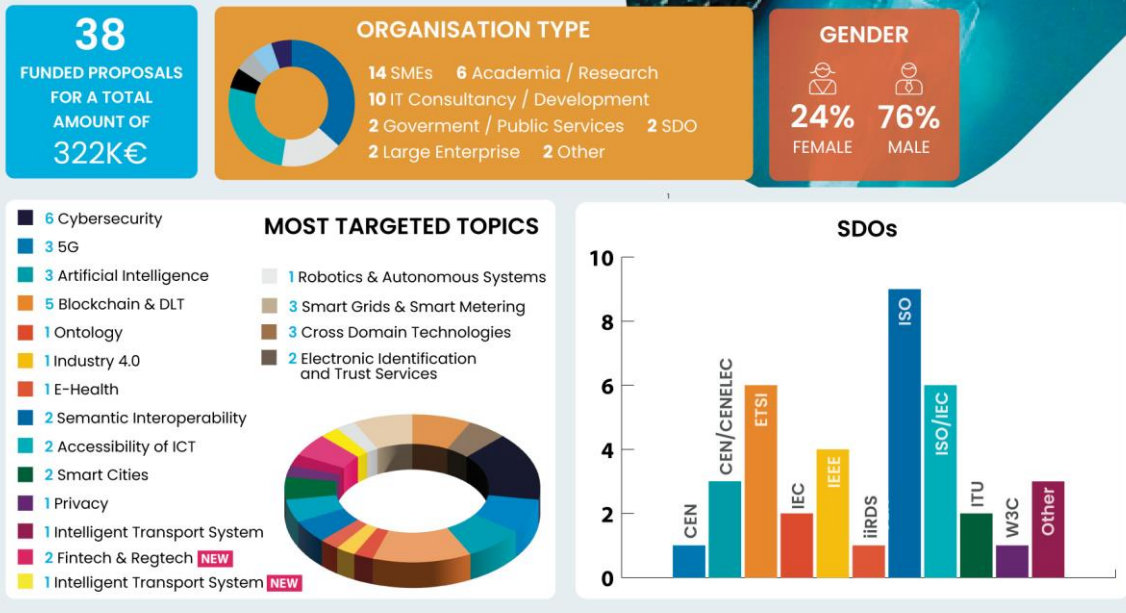


Figure 8: Open Call #4 Funded Results

Table 4 gives an overview of the 38 granted and monitored Fellowships, engaged SDOs, WGs and ICT Sectors under Batch 4.

Table 5: Open Call #4 Funded Fellowships

Fellow ID	First Name	Surname	Engaged SDO	WG and TC	ICT Sector
04-424	Peter	Baumann	ISO	ISO TC211 WG6, OGC Coverages.SWG, DIN AK INSPIRE	Data Commons, Cloud computing, Big Data
04-428	Thomas	Frisendal	ISO/IEC	ISO IEC/JTC1/ SC32/WG3 Database languages	Big Data
04-429	Suno	Wood	ETSI	EP eHEALTH; E4P work items	eHealth
04-436	Victoria	Menezes Miller	W3C	W3C WAI Educational and Outreach Working Group (EOWG), WCAG 2.1, WCAG 2.0	ICT Accessibility
04-438	Michelle	Wetterwald	ETSI	ETSI ITS and ETSI ITS WG1. ETSI TC EMTEL.	IoT, ITS/automated driving
04-444	Erik	Andersen	ISO/IEC,ITU	ISO/IEC JTC 1/SC 27 WG 2, "Cryptography and security mechanisms" .A liaison statement has been issued by ITU-T.	Cybersecurity/ ePrivacy
04-445	Johann	Groszschaedl	NIST	Within NIST, the Cryptographic Technology group	Cybersecurity/ ePrivacy

04-449	Thierry	Monteil	ETSI, ONEM2M	ETSI TC smartM2M, oneM2M SDS	IoT
04-450	Olivier	Genest	ISO/IEC, IEC	JWG3 between IEC SyC Smart Energy and ISO/IEC JTC1/SC41 "Internet of Things and Digital Twin"	IoT, Smart Grids and Smart Metering
04-451	Alessandro	Artusi	MPAI	MPAI-EVC	IoT, Artificial Intelligence
04-452	Adam	Smith	ISO/IEC	ISO/IEC SC 42 WG 3, CEN-CENELEC JTC 21	Artificial Intelligence
04-456	Muslim	Elkotob	ETSI	ITU, ETSI, IEEE (INGR), and others	5G / Fixed network
04-458	Richard	Pitwon	IEC	IEC TC86 SC86C WG6 - Fibre optic interconnecting devices and passive components	Quantum Technologies
04-459	Luis	Moran Abad	ISO/IEC	ISO/IEC JTC 1 – Information Technology. UNE CTN71 – Tecnología habilitadoras para la transformación digital. UNE SC40 – Subcommittee for ICT Governance and Management	FinTech
04-461	Paulo	Gonçalves	IEEE	IEEE P1855: Fuzzy Markup Language Working Group ; IEEE P2976: Standard for XAI - eXplainable AI Working Group	IoT, Artificial Intelligence, Industry 4.0, eHealth
04-462	Theofanis	Raptis	ITU	Qi standard, Wireless PowerShare	IoT
04-463	Witold	Jacak	CEN/CENELEC, EITCI	EITCI QRNG-QSG (Quantum Random Numbers Generation - Quantum Standards Group hosted under EITCI Institute), CEN/CENELEC Focus Group on Quantum Technologies (FGQT)	Cybersecurity /ePrivacy, Quantum Technologies
04-464	Léonie	Watson	W3C ERCIM	The W3C Accessibility Guidelines Working The WCAG 3.0 Task Force	ICT Accessibility
04-470	Shakira	Bedoya	ISO	ISO/TC68 AG2; ISO/TC68 AG4; ISO/TC68 TAG 1; ISO/TC 309/WG 1; ISO/TC 309/WG3; ISO/TC 309/WG4; ISO/TC 309/WG5; ISO/TC 309/WG6	FinTech/financial services/eInvoicing
04-471	Jonathan	Harrod Booth	CEN	CEN/TC278/WG8	ITS/automated driving
04-472	Fiona	Delaney	ISO ISO/CEN	ISO TC307 WG 6 blockchain and DLT use cases, ISO/CEN JEG 19 Blockchain and DLT	Blockchain/DLT
04-473	Ranganai	Chaparadza	ETSI, ITU	ETSI TC INT AFI WG; ITU-T SG11; IEEE INGR Future Networks Initiative Testbeds WG	5G / Fixed network
04-475	Octavian	Popescu	ETSI	ETSI TC CYBER	IoT
04-476	Paulo	Gonçalves	IEEE, OMG	IEEE WG 1872.1 - Robot Task Representation ; OMG Standardisation Project - RoSO - Robotic Service Ontology	IoT, Artificial Intelligence,

					Industry 4.0, eHealth
04-477	Agnieszka	Rządowska	CENELEC, IEC, EITICI	EITCI SMART-PV-SESG (Smart Energy Standards Group hosted under EITCI Institute), CENELEC / IEC-TC CLC/TC-82 (Solar photovoltaic energy systems) and the CLC/TC-57 (Power systems management and associated information exchange) for power systems control equipment and systems including EMS (Energy Management Systems) and SCADA (Supervisory Control And Data Acquisition)	Artificial Intelligence, Smart Grids and Smart Metering
04-478	Ljupcho	Antovski	ISO, ISO/IEC	European DIGITAL SME Alliance Task Force	Blockchain/DLT, FinTech/financial services, eGovernment
04-483	Christophe	Stenuit	CEN/CENELEC, ISO/IEC	SDO CEN/CLC/JTC 13 WG5 on Data Protection, Privacy and Identity Management ISO/IEC JTC 1/SC 27 WG5 on Identity management and privacy technologies	Cybersecurity/ ePrivacy
04-486	Caroline	Thomas	BSI, CEN/CENELEC, ISO	ISO TC/307 Blockchain and Distributed Ledger Technologies / Working Group 6 Use Cases / CEN-CENELEC	IoT, Cybersecurity/ePrivacy, Artificial Intelligence, Blockchain/DLT, Big Data, FinTech
04-491	Richard	Pitwon	IEC, IEEE	IEC TC86 SC86C WG4 – Fibre optic active components and devices.	Quantum Technologies
04-493	Christine	Perey	OGC	Open Geospatial Consortium Points of Interest Working Group	Ontologies and open data standards
04-494	Mark	Schubert	IIRDS	iiRDS Working Group Development, iiRDS Working Group Tooling, iiRDS Working Group Standardization, Industrial domain ontologies in OntoCommons, Demonstration in OntoCommons	Ontologies and open data standards
04-495	Christine	Perey	IEEE	IEEE Standards Association Spatial Web P2874 Working Group	Ontologies and open data standards
04-497	Edward	Zimmermann	ISO, DIN	TC 154	IoT, Data Commons, Artificial Intelligence, Big Data, eHealth, eGovernment, Other
04-500	Marios	Angelopoulos	ITU	ITU-T Study Group 20 Internet of things (IoT) and smart cities and communities (SC&C)	5G / Fixed network, IoT, Industry 4.0, Smart Cities

04-503	George	Suciu	IEEE	5G PPP WGs	5G / Fixed network, IoT, Cybersecurity/ePrivacy, Cloud computing,
04-504	François	Lorek	CEN, CEN/CENELEC, ISO, ISO /IEC	ISO JTC1 WG4 SD1	IoT, Cybersecurity/ePrivacy, Cloud computing, Artificial Intelligence, Blockchain/DLT, Big Data, Industry 4.0, FinTech/financial services/eInvoicing, eHealth, Smart Cities, Other
04-506	Robert	Mueller	ISO	ISO/IEC SC37 WG3	Cybersecurity /ePrivacy
04-507	Robert	Mueller	ISO/IEC	ISO/IEC SC17 WG11	Cybersecurity /ePrivacy

3 Global Footprint of the Fellowship Programme at M18

The Open Call Impact Reports (see Section 4) focus on the individual footprints of the funded fellowships, but all engaged communications, via presentations in meetings and webinars, newsletters and posts on the project website also share the overall results of each closed open call (as presented in Section 2.2.). **This section shares the key insights about the global impact of the funded fellowships (until Open Call 4) on the international ICT standardisation landscape.**

3.1 Contributions within SDOs and Standards Bodies

The StandICT.eu 2023 fellowships participate in the ICT standardisation in key international and global SDOs and consortia helping to make Europe’s voice heard in the Global Standards Scenario. The fellowships are carried on the dedicated ICT priority topic areas, as listed in the Open Call text ⁹ contributing in the development of new standards, revising obsolete standards, defining technical specifications or recommendations for further standardisation.

3.1.1 Overview of the covered SDOs and Standards Consortia

Overall, from Open Call 1 until Open Call 4, nearly 66% of the funded fellowships contribute in global standardisation organisations, and the remaining part in the European standards bodies. One of the central objectives of the StandICT.eu 2023 project being to increase the participation of European experts in the international ICT standardisation bodies, this representation is satisfying and shall be closed monitored until the last open call.

The fellowships have been conducted across **18 international or European organisations creating ICT standards**, as shown in Table 6.

Table 6: Covered SDOs and Standards Bodies

Organization Type	Involved Organisations
International Standardisation Organisations (SDOs)	ISO, ISO/IEC, ITU, IEC,
European Standardisation Organisations (ESOs)	ETSI, CEN/CENELEC, CEN
National Standards Bodies (NSBs)	BSI
International consortia	W3C, HL7, iiRDS, IETF, IEEE, OASIS
European consortia and PPPs	ANEC, 3GPPP, AIOTI

Up to Open Call 4, 144 fellowships were contracted and funded. ISO/IEC, ETSI, CEN/CENELEC and ISO are among the most attended organizations, as displayed on Table 7.

⁹ www.standict.eu/standicteu-2023-6th-open-call

Table 7: Number of Fellowships in the different Standards Bodies

Standards Body	Number of Funded Fellowships until OC4
ISO/IEC	32
ETSI	23
CEN/CENELEC	21
ISO	18
ITU	14
IEEE	7
CEN	6
IEC	6
HL7	3
IETF	3
3GPP	3
iiRDS	2
W3C	2
AIOTI	1
ANEC	1
BSI	1
OASIS	1

3.1.2 Overview of the covered TCs / WGs

Table 8: Engaged Work Groups and Technical Committees

ICT Area	Organization	Work Group of Technical Committee
5G and Fixed Network	ETSI	TC Reconfigurable Radio Systems (RRS)
	ETSI	ISG IPE
		TC INT (Core Network and Interoperability Testing)
	ETSI	TC Reconfigurable Radio Systems (RRS)
		TC INT AFI WG on Autonomic Management and Control (AMC) Intelligence for Self-Managed Fixed & Mobile Integrated Networks (AFI),
		ISG NIN
		TC DECT
	IEEE	IEEE INGR SBB (Standardisation Building Blocks),
		IEEE INGR SysOpt (System Optimization)
		IEEE INGR Future Networks Initiative (FNI) Testbeds WG
	IEEE	
	ETSI ISO/IEC	ISO/IEC JTC1/SC6/WG7
	3GPPP	UROCAE WG-105
	ETSI,ITU	ITU-T SG11
5GPPP	5G PPP WGs	

	IETF	Trusted Execution Environment Provisioning (TEEP) WG7
	ITU	ITU-T Study Group 20 Internet of things (IoT) and smart cities and communities (SC&C)
	ITU	SG13 – Future Networks
	ITU-T	ITU-T's FG-AN "WG2: Architecture and Core Technical" and "WG3: Proof of Concepts".
	ITU-T	SG13 Future Networks
	Other	3GPP - Technical Specification Group Service and System Aspects TSG SA WG4 (SA4)
Accessibility of ICT products and services	W3C	WAI – Web Accessibility Initiative
	ISO/IEC	ISO/IEC SC41 WG3 Internet of things and digital twin
Artificial Intelligence	ISO-IEC	JTC1/SC42/WG1: Artificial Intelligence - Concepts and terminology ISO-IEC/JTC1/SC 42/ WG13: Trustworthiness
	ISO / IEC	JTC1/ SC42 / WG3 - Artificial Intelligence – Trustworthiness
	ISO/IEC CEN/CENELEC	JTC1/SC42 WG1 Foundational standards and WG3 Trustworthiness CENELEC - JTC21 Artificial Intelligence
	Other	EITCI Smart Energy Standards Group (SESG) - Smart-PV WG Work Group / technical committee
	ETSI	The Securing Artificial Intelligence Industry Specification Group (ISG SAI)
	ISO/IEC	ISO/IEC SC 41, SC42 and AG8, SC27, SC41, PC317, SC43
	IETF	The Internet Engineering Task Force (IETF)
	ISO/IEC	JTC1 / SC7 / Risk management in systems and software engineering / WG24 Systems and software standards for Very Small Entities
	ISO/IEC CEN/CENELEC	ISO/IEC JTC1/SC42 Artificial Intelligence WG1, WG3 and JWG1 CEN/CENELEC JTC21 SAG (Strategic Advisory Group).
	ISO/IEC	JTC 1/SC 29/WG 7 MPEG 3D Graphics Coding
	Others	MPAI (Moving Picture, Audio and Data Coding by Artificial Intelligence) - Artificial Intelligence Framework (AIF)-DC Working Group chair
	ISO/IEC	ISO/IEC JTC 1/ SC 29 Coding of audio, picture, multimedia and hypermedia information / WG 1 JPEG Coding of digital representations of images
ISO/IEC	ISO/IEC SC 42 WG 3, CEN-CENELEC JTC 21	
Smart Grids	CENELEC,IEC,OTHER	EITCI SMART-PV-SESG (Smart Energy Standards Group hosted under EITCI Institute), CENELEC / IEC-TC CLC/TC-82 (Solar photovoltaic energy systems) and the CLC/TC-57 (Power systems management and associated information exchange) for power systems control equipment and systems including EMS (Energy Management Systems) and SCADA (Supervisory Control And Data Acquisition)
	IEEE	P2145 Blockchain Governance Standards Working Group (WG)

Blockchain and Distributed Digital Ledger Technologies	ISO UN/CEFACT	ISO TC 307 Blockchain Technologies - WG 6 Use Cases UN/CEFACT Chain Project « Recommendation for Cross-border Interoperable Blockchain infrastructure 4.0» - WG 5 Use Cases
	WC3 / ECRIM	W3C Decentralized Identifiers Working Group
	ISO / IEC	TC 307/JWG4 - Security, privacy and identity for Blockchain and DLT
	ISO	TC307/WG1 Foundations
	ISO CEN/CENELEC	ISO/TC 307/WG 1 (Convenor) ISO/TC 307/CAG 1 ISO/TC 46/SC 11/JWG 1 (Co-Convenor) ISO/TC 68/AG 5 ISO/TC 68/SC 2/WG 17 ISO/TC 68/SC 8/WG 3 CEN/CLC/JTC 19 Blockchain and Distributed Ledger Technologies /WG 1 Decentralised identity management.
	CEN/CENELEC ISO	CEN-CLC-JTC19 JTC 19 Blockchain and Distributed Ledger Technologies ISO/TC 307/JWG 4, ISO/TC 307/WG
	ISO-IEC Other	ISO/IEC JTC 001/SC 17 Joint ISO/TC 307 - ISO/IEC JTC 1/SC 27 WG DIGITAL SME Task Force on Blockchain and DLT
	ISO ISO / CEN-CENELC	ISO TC307 WG6 Blockchain and DLT use cases. ISO/CEN-LEC JWG19 Blockchain and DLT
	ISO CEN/CENELEC	ISO TC 307 WG 5 "Blockchain Governance" CEN/CENELEC JTC19 Blockchain and Distributed Ledger Technologies
	ISO	TC 46/SC 9/WG 18 – NP 24138 International Standard Content Code
	ISO/IEC	JTC1/SC29/WG03 MPEG Systems subgroup on 'Smart Contracts for Media'
	ISO ISO/IEC CEN/CENELEC	ISO/TC 307 Blockchain and distributed ledger technologies ISO/TC 307/JWG 4 Security, privacy and identity for Blockchain and DLT (co-convenor) ISO/TC 68 Financial services/SC 2 (liaison representative of TC 307) CEN/CENELEC JTC 19 Blockchain and Distributed Ledger Technologies ISO/IEC JTC 1/SC 27 Information security, cybersecurity and privacy protection
	ISO	ISO TC307 DLT (WG6)
	ISO,ISOIEC	European DIGITAL SME Alliance Task Force
BSI,CENCENELEC,ISO	ISO TC/307 Blockchain and Distributed Ledger Technologies / Working Group 6 Use Cases / CEN-CENELEC	
Cross Domain Technologies	ETSI	Industry Standards Group Augmented Reality Framework (ISG ARF)

Cybersecurity / network and information security	CEN/CENELEC	JTC13 Cybersecurity and data protection/ WG3 Security evaluation and assessment
	IEC	TC 57 Power Systems WG15 Data & Communication Security, ITU-T Study Group 17 – Security
	IEC	TC 57 WG 15 Cybersecurity standards for power system communications
	CEN/CENELEC	JTC13 Cybersecurity and data protection /WG3 Security evaluation and assessment
	Other	RIPE (Réseaux Internet Protocol Européens) All WGs
	ISO/IEC	SC37 WG3 biometric data formats
	ISO/IEC	JTC1 SC27 WG3 Security Evaluation, Testing and Specification
	ISO/IEC	ISO/IEC JTC 1/SC 27/WG 5 Identity management and privacy technologies ISO/TC 68/ WG 13 Security in retail banking ISO/TC 68/ WG 18 Customer identification and authentication technologies
	ISO/IEC CEN/CENELEC	ISO/IEC JTC1 SC27 WG1 and WG4 CEN/CENELEC JTC13 Data Protection / WG5 Privacy and Identity Management
	ETSI CEN/CENELEC	ETSI Industry Specification Group for QKD (ISG-QKD) CEN/CENELEC Focus Group Quantum Technologies (FGQT)
	Others ISO/IEC	BSI ICT/002 ISO/IEC JTC1 SC41
	ISO-IEC	ISO SC27 WG3
	ISO/IEC CEN-CENELEC	ISO/IEC JTC 1 SC 27 WG 5 Information security, cybersecurity and privacy protection CEN/CLC JTC 13 WG 5 on Cybersecurity and Data Protection, Working Group 5 on Data Protection, Privacy and Identity Management
	CEN/CLC Others	CEN/CLC JTC 13 Cybersecurity and data protection/ WG 6 Product security ISO/IEC JTC 1/SC 27 Information security, cybersecurity, and privacy protection / WG4 Security controls and services SRAHG
	Others	W3C DID Working Group IETF SAAG (Security Area)
	IEC	IEC TC 57 WG 15 - Cybersecurity standards for power system communication
	ETSI	3 TCs: ERM - EMC and Radio Spectrum Matters (ERM) CYBER RRS - Reconfigurable Radio Systems
	ECSO CEN/CENELEC ETSI	ECSO WG1 WG1: Standardisation, Certification and Supply Chain Management that contributes and cooperates in many efforts at CEN/CENELEC and ETSI

	OASIS	Threat Actor Context Technical Committee (TAC TC)
	ISO/IEC,ITU	ISO/IEC JTC 1/SC 27 WG 2, "Cryptography and security mechanisms" is working on development. of cryptographic algorithms and will be involved and their standards will be referenced. A liaison statement has been issued by ITU-T.
	NIST	Within NIST, the Cryptographic Technology group is concerned with the standardization of cryptographic algorithms, see https://csrc.nist.gov/Groups/Computer-Security-Division/Cryptographic-Technology .
	CENCENELEC,ISOIEC	• SDO CEN/CLC/JTC 13 WG5 on Data Protection, Privacy and Identity Management • SDO ISO/IEC JTC 1/SC 27 WG5 on Identity management and privacy technologies
	ISO	ISO/IEC SC37 WG3
	ISOIEC	ISO/IEC SC17 WG11
	ISO/IEC	ISO/IEC JTC1/SC27 WG2 and WG5; ZKProof WG Sigma-Protocols
	ISO/IEC	ISO PC 317 Privacy by design / WG1 Consumer protection
Edge Computing	Other	Open Geospatial Consortium GeoPose Standard Working Group
eGovernment	ISO	TC 154 Processes, data elements and documents in commerce, industry and administration
eHealth	Cross-SDO project, involved in: HL7 IPS project under the HL7 Patient Care W	G ISO/TC 215 WG1 ISO 27269 project team CEN/TC 251 EN 17269 project team IHE PCC IPS project team IPS Cross-SDO coordination team
	IEEE	Autonomous Robotics - Autonomous Robotics (AuR) Ontology
	ETSI	TC Cyber
	ETSI	WG eHealth
	IEEE	WG P1872.1 – Robot Task Representation WG P1872.2 – Ontologies for Robotics and Automation WG P7007 – Ontological Standard for Ethically Driven Robotics and Automation Systems
	ISO	TC 215 Health Informatics
	ETSI	EP eHEALTH; E4P work items
e-Invoicing	CEN/CENELEC	CEN TC 434 WG1 (e-invoice/e-receipt) and TC 440 (e-procurement),
	ISO/IEC CEN Others	ISO/IEC JTC 1/SC 32 ISO/IEC JTC 1/SC 32/WG 2 OASIS CODELIST UNI/CT 522 CEN/TC 434 Eletronic Invoicing
Electronic Identification and trust services	ISO/IEC	ISO/IEC JTC1/SC37 Biometrics / WG2 Biometric technical interfaces
Emergency Communications	ETSI	WG1 Application Requirements and Services
	ETSI	ETSI TC EMTEL Emergency Telecommunications
Fintech and Regtech Standardisation	ISO	ISOTC 68 Financial Services and ISO TC 309 Governance of Organizations

	ISO/IEC	ISO IEC / SC40 - Sub Committee for ICT Governance and Management
	CEN/CENELEC	all WGs in CEN/TC 434 Electronic Invoicing / WG 1, 3 and 7
	ISO	ISO/TC68 AG2; ISO/TC68 AG4; ISO/TC68 TAG 1; ISO/TC 309/WG 1; ISO/TC 309/WG3; ISO/TC 309/WG4; ISO/TC 309/WG5; ISO/TC 309/WG6
Identity Management (Cybersecurity)	IETF	GNAP / Grant negotiation and authorization protocol
Industry 4.0	IETF	IETF ROLL (Routing Over Lower Power and Lossy Networks) working group IETF Internet of Things Directorate IETF General Area Review Team IETF Routing Directorate
Intelligent Transport Systems	CEN ISO	CEN/ TC278 Road transport and traffic telematics/ WG4 TRAFFIC AND TRAVELLER INFORMATION (TTI) ISO/TC204 WG10
Internet of Things (IoT)	IEC ISO/IEC	IEC SyC Smart Energy JWG3 & CAG7 ISO/IEC JTC1/SC41 IoT & Digital Twins - AG6 & AG21
	IEC ISO/IEC	IEC SyC (Systems Committee) Smart Manufacturing/ WG1 IEC SyC Comm Technologies and Architectures IEC SyC Smart Cities /WG2 and AG 8/9 IEC SyC on Active Assisted Living (AAL)/ WG1 ISO/IEC JTC1 Information Technology ISO/IEC JTC1 AG8 Meta Reference Architecture for Systems Integration ISO/IEC JTC1 SC41 / AG25 and WG6 IEC TC100 AGS Audio, video and multimedia systems and Equipment
	ISO/IEC IEC	ISO/IEC SC41 IoT and Digital Twin ISO/IEC SC42 AI IEC TC57 "Power systems management and associated information exchange" - JWG3 "IEC Smart Energy Roadmap"
	ETSI,ONEM2M	ETSI TC smartM2M, oneM2M SDS
	ITU	Qi standard, Wireless PowerShare
	ETSI	ETSI TC CYBER
	IEEE	IEEE P1855: Fuzzy Markup Language Working Group ; IEEE P2976: Standard for XAI - eXplainable AI Working Group
	IEEE,OMG	IEEE WG 1872.1 - Robot Task Representation ; OMG Standardisation Project - RoSO - Robotic Service Ontology
	MPAI	MPAI-EVC
ITS/automated driving	ETSI CEN	ETSI TC ITS and ITS WG1: ETSI TS 103 300-2; ETSI TS 103 300-3; ETSI TS 103 248; ETSI TS 103 324. ETSI TC EMTEL: ETSI TS 102 181; ETSI TS 102 182; ETSI TR 103 582; ETSI TS 103 479; ETSI TS 103 755; ETSI TS 103 625. 3GPP standards: TS 22 179; TS 22 280. CEN/TC278/WG8
Smart Grids	ISO/IEC,IEC	JWG3 between IEC SyC Smart Energy and ISO/IEC JTC1/SC41 "Internet of Things and Digital Twin"

Ontologies and open data standards	IEEE	IEEE Standards Association Spatial Web P2874 Working Group
	ISO Others	ISO/TC 184/SC 4 Core Terminology for Industrial Data OAGi-IOF INCITS 573-3-202xAd Hoc Mid-Level Ontology (MLO)
	ISO/ CEN/CENELEC	TC 215 WG 7 ELECTROTECHNICAL ASPECTS OF TELECOMMUNICATION EQUIPMENT
	Others	iiRDS working groups
	Others	iiRDS Working Group Development, iiRDS Working Group Tooling, iiRDS Working Group Standardization, Industrial domain ontologies in OntoCommons, Demonstration in OntoCommons
	IEEE ETSI OMA	IEEE ComSoc IoT Technical Committee ETSI NGSI-LD OMA Technical Group
	OGC	Open Geospatial Consortium Points of Interest Working Group
Big data	ISO OGC (Open Geospatial Consortium)	ISO TC211 Geographic information / WG6 Group for Ontology Maintenance (GOM) OGC (Open Geospatial Consortium)
	ISO	ISO TC211 Geographic information / WG6 Imagery
	ISO/ IEC	ISO IEC/JTC1/ SC32/WG3 Database languages
	Others	Cross-SDO Communication among OASIS, NIST, IETF, W3C/ECRIM
Learning and Education	CEN	CEN TC353 Information and Communication Technologies
	W3C	W3C WAI Educational and Outreach Working Group (EOWG), WCAG 2.1, WCAG 2.0
	ISO/IEC	ISO/IEC JTC 1 – Information Technology. UNE CTN71 – Tecnología habilitadoras para la transformación digital. UNE SC40 – Subcommittee for ICT Governance and Management
	W3C ERCIM	The W3C Accessibility Guidelines Working Group WCAG 3.0 Task Force
	Other	EITCI OQP Workgroup of the Quantum Standards Group (QSG)
Quantum Technology	IEC ISO/IEC CEN/CENELEC	IEC TC86 JWG9 – Optical functionality for electronic assemblies ISO/IEC JTC1 WG14 Quantum Computing CENELEC - FG Quantum Technologies (GT) ITU-T – FG on Quantum Information Technology for Networks (FGQIT4N)
	IEC	IEC TC86 SC86C WG6 - Fibre optic interconnecting devices and passive components
	IEC,IEEE	IEC TC86 SC86C WG4 – Fibre optic active components and devices. "IEC 62150-6 Fibre optic active components and devices - Basic test and measurement procedures – Part 6: Universal mezzanine boards for test and measurement of photonic devices", which is due to be published in late 2021.
	IEC	Technical Committee 86
	CEN-CENELEC	CEN/CENELEC the formal Focus Group on Quantum Technology FGQT

	CEN/CENELEC ITU-T IEEE	CENELEC Focus Group on Quantum Technologies ITU-T Focus Group on Quantum Information Technology for Networks (ITU-T FGQIT4N) IEEE Special Interest Group for quantum technologies
	CEN/CENELEC, OTHER	EITCI QRNG-QSG (Quantum Random Numbers Generation - Quantum Standards Group hosted under EITCI Institute), CEN/CENELEC Focus Group on Quantum Technologies (FGQT)
Semantic Interoperability	ISO/IEC	JTC1/SC32/WG3
	Other	oneM2M WG SGS (System Design and Security)
	ISO/IEC	JTC1/ SC32/WG3 Database languages
	ISO/IEC	ISO/ IEC JTC1 SC41 IoT and Digital Twins JTC1 SC 42 Artificial Intelligence
Smart Cities	ITU-T	Study Group 20 "Internet of Things, smart cities and communities"
	ISO Others	ISO / TC 211 Digital geographic information (chair) OGC Observations and measurements Standards Working Group
Trusted Information	ISO/IEC	JTC 1/SC27/WG 5 – Identity and Privacy Management Technology

3.1.3 Contributions in New Standards – Revised Standards

One of the most important activities related to monitoring is to track the impact generated by the fellows in terms of Contribution to new/revised standards.

From OC1 to OC3, this information has been collected via email, while from OC4 onwards, it has been included in the final report.

When writing this deliverable, we collected the information from OC1 to OC3. Regarding OC4, the monitoring started in December 2021, and just two fellows completed their projects and provided this contribution. For this reason, the information provided in this section comprises data from OC1 to OC3.

Table 9 N. of fellows contributing to new/revised standards

Open call	N. of fellows contributing to new/revised standards
OC1	26/35
OC2	19/34
OC3	26/34

More details of the fellows' contributions per sector are available in Annex 3.

3.1.4 Contributions in New work groups

As indicated in the paragraph above, the StandICT.eu team tracked the contribution of our fellows in new work groups.

Details in the table 10 and 11 below:

Table 10 N. of fellows contributing to new work group

Open call	N. of fellows contributing to new work groups
OC1	28/35
OC2	10/34
OC3	12/34

Table 11 New work groups (OC1-OC3) per sector

Sector	New work groups
5G	<ul style="list-style-type: none"> SA WG4 (SA4); ETSI TC INT WG AFI (Autonomic Management and Control Intelligence for Self-Managed Fixed & Mobile Integrated Networks); The fellowship has fostered the collaboration of ETSI TC INT AFI WG and ETSI ISG IPE, by starting to form a special Joint Sub-Group of experts from the two Groups to work together on the Framework. The Sub-Group (though not standalone) is aimed at bringing experts together, ETSI TC INT experts and ETSI IPE ISG ETSI Member experts on Autonomics, 5G and IPv6 to start designing the Framework. ETSI TC INT members will bring competence on ETSI GANA Autonomics Framework and 5G Competence into the Sub-Group while experts from ETSI ISG IPE will bring competence on IPv6 and other related IETF protocols, in the joint work on the targeted Framework. New ITU-T SG13 organizational plan (ToR) was prepared in 2020 and agreed at TSAG (1/2021) for Study period 2021-2024. It includes updated and new Question descriptions of ITU-T SG13.
AI	<ul style="list-style-type: none"> SC41/WG6 Digital twin; Creation of SAG (Strategic Advisory Group) as WG1 under the newly established CEN/CLC JTC21 for Artificial Intelligence
Blockchain and Distributed Digital Ledger Technologies	<ul style="list-style-type: none"> P2145 Blockchain Governance Standards Working Group (WG) WG 5 & 6 Use Cases W3C Decentralized Identifiers Working Group TC 307/JWG4 - Security, privacy and identity for Blockchain and DLT Still under discussions: new WG/TC within the CEN/CLC/JTC19 to support the development of this new standard. CEN/CLC/JTC 19/NWI : "Decentralized Identity Management Model based on Blockchain and other Distributed Ledgers Technologies. - Reference Architecture" TC 307 /WG5 development of a new work group (WG), which was created in 2019: ISO/TC 46/SC 9/WG 18 (ISO/AWI 24138 International Standard Content Code) https://www.iso.org/committee/48836.html an MPEG Systems subgroup has been established on 'Smart Contracts for Media', chaired by the author, with the aim to develop the means (e.g., application program-ming interfaces) for converting MPEG IPR ontologies and schemas (ISO/IEC 21000-19 Media Value Chain Ontology, 21000-19/AMD1 Audio Value Chain Ontology, 21000-20 Contract Expression Language and 21000-21 Media Contract Ontology) to smart contracts that can be executed on existing blockchain environments
Cybersecurity / network and information security	<ul style="list-style-type: none"> WG3 Security evaluation and assessment WG15 Data & Communication Security WG3 biometric data formats WG3 Security Evaluation, Testing and Specification WG 5 Identity management and privacy technologies, TC 68, WG 13 Security in retail banking, WG 18 Customer identification and authentication technologies

	<ul style="list-style-type: none"> Set up of the newly founded CEN/CENELEC Focus Group Quantum Technologies (FGQT) where I am active in TWG6 responsible for the restructuring of the FGQT Quantum Standards Roadmap. Standardization Request Ad-Hoc Group (SRAHG) IEC TC 57 WG 15
Edge computing	<ul style="list-style-type: none"> Open Geospatial Consortium GeoPose Standard Working Group
E-Health	<ul style="list-style-type: none"> WG1 ISO 27269 project team IEE WG, AI sub-WG ETSI Work Group / technical committee WG P1872.1 – Robot Task Representation WG P1872.2 – Ontologies for Robotics and Automation WG P7007 – Ontological Standard for Ethically Driven Robotics and Automation Systems
Emergency communications	<ul style="list-style-type: none"> ETSI TC EMTEL. This committee recently changed its Terms of Reference to become an ETSI Technical Committee, as it now publishes important specifications for next generation of public safety communications.
Fintech and Regtech Standardisation	<ul style="list-style-type: none"> TC 68/SC 8: Digital Wallet Identification (DWI) Study Group
Identity management	<ul style="list-style-type: none"> IETF G NAP
IoT	<ul style="list-style-type: none"> EC SyC Smart Energy JWG3 WG1 IEC SyC Comm Technologies and Architectures IEC SyC Smart Cities, WG2 Active Assisted Living, WG1 Information Technology, WG6 Audio, video and multimedia systems and Equipment IEC TC57 “Power systems management and associated information exchange” new work item on smart energy ontology
Learning & Education	<ul style="list-style-type: none"> re-establishment and focus of CEN TC353. proposed to establish a number of Working Groups and standardisation activities to take place within those groups.
Open data & Big Data	<ul style="list-style-type: none"> WG6 Group for Ontology Maintenance
Privacy Protection	<ul style="list-style-type: none"> Trying to set up a dedicated working group for Sigma-protocols within the ZKProof initiative.
Quantum computing	<ul style="list-style-type: none"> OQP Workgroup of the Quantum Standards Group (QSG) IEC TC86 JWG9 – Optical functionality for electronic assemblies ISO/IEC JTC1 WG14 Quantum Computing Cross standards development organisation task force and a potential Joint Working Group in the IEC.
Quantum Technology	<ul style="list-style-type: none"> Newly founded the FGQT that prepares a roadmap for standardisation in QT and when to start for instance a working group to deliver a standard. This project has led directly to the formation by the consultant of the IEEE UK and Ireland Quantum Group, which was formed and ratified by the IEEE UK and Ireland Section in the first month of the fellowship project. This is a technology special interest group, which will promote quantum engineering as a discipline and promote standardisation of quantum technologies.
Trusted information	<ul style="list-style-type: none"> Set up of a technical drafting committee – which is being led by BSI. It is called IST33/5/5 – Age Assurance Systems.

4 Individual Success Stories until M18

StandICT.eu 2023 team has decided to follow an impact dissemination strategy for the Fellowship Programme that enables share the fellowship project results and their direct benefits towards the stakeholders on a timely and regular manner. Therefore, instead of having just two impact reports (interim and final ones, as foreseen in the project's Grant Agreement), the project will produce and publish nine individual impact reports corresponding to each of the 9 Open Calls. These reports gather the overview of the selected applicants in each funding round, and more importantly they share the results attained through the work carried out by the funded expert in terms of target outcomes for EU priorities, gaps, and challenges.

4.1 Purpose and Target Groups of the Impact Dissemination

The series of nine reports serves the overarching objective of showcasing success stories of the funded fellowships detailing the addressed standards and landscapes, how these will fill in the identified gaps as well as impact the related stakeholders and society.

The aim of the short and concrete success stories about each funded fellowship is to enable the value of standardisation in creating a fair market-based competition with a lot of benefits, including better interoperability of complementary products and services, reduced costs, improved safety, and enhanced overall competition. Their critical action in protecting health, safety, security, and the environment, make standards important to the public and consumers as well. On the other side, these reports enable to spot gaps in ICT standards on the concerned technology areas and to direct recommendations for the future standardisation efforts towards the persisting needs.

Therefore, the impact reports are not only addressed to the experts in the StandICT.eu 2023 community (such as the EAG and EUOS TWGs members as well as the funded fellows) but to wider public including all targeted stakeholders of the project:

- Members in national, European, and international standards bodies.
- EU technology PPPs (such as 5GPPP, 5GAI, ECSO etc.) and associations engaged in standardization (for instance, Digital SME Alliance, SBS, ANEC etc.)
- Large Industry Players (covering the major technology companies, such as ORACLE, HP etc.)
- SMEs and IT consulting firms contributing in standardisation groups
- Policy Makers (especially the EC and Multi Stakeholder Platform)
- Research and Innovation Projects (especially funded under the EU R&I funding programmes, H2020 and HEurope).

The impact reports present the success stories by different technology sectors. See here below, an example story about Core Standards for Blockchain and Distributed Ledger technologies by Geoffrey Goodell from OC2 Impact Report (see Figure 9 and Figure 10).

Core Standards for Blockchain and Distributed Ledger Technologies



Geoffrey Goodell
 Senior Research Associate at University College London, United Kingdom



ISO/TC 307 Blockchain and DLT/WG 1 Foundations (Convenor) and CAG 1 Convenors Coordination Group
 ISO/TC 46 Information and Documentation/SC 11/JWG 1 (Co-Convenor) Archives and Records Management
 ISO/TC 68 Financial Services/AG 5 Digital Currencies
 ISO/TC 68/SC 2/WG 17 Financial Services, Security
 ISO/TC 68/SC 8/WG 3 Reference data for financial services
 CEN/CLC/JTC 19 Blockchain and Distributed Ledger Technologies /WG 1 Decentralised identity management

Sector

Blockchain and Distributed Ledger Technology (DLT)

Addressed EU Standardisation Priorities and Gaps

Our projects are 'foundational' in the sense that they will establish the core logic and unifying themes that shall form the basis for significantly all future standards development inside ISO as it relates to distributed ledger technologies.

In addition to having a direct impact on the 'Blockchain and Distributed Ledger Technologies' topic area, our work implicitly relates to 'Fintech and Regtech Standardisation', particularly in the context of digital currencies, as well as 'Digital Twins' and 'Identity Management and Anonymisation'.

Distributed ledger technology offers an opportunity to promote an inclusive society, particularly in the context of digital currencies, which represent an opportunity for central banks and financial regulators to provide a public payment mechanism that citizen-consumers can use independently of potentially exclusive custodial relationships.

Concerned ICT Standards and contribution to the related landscape

My fellowship contributes to the development and publication of the documents that are considered essential to the success of ISO/TC 307 and to standards relating to distributed ledger technology throughout the ISO TCs. In particular, standards currently under development by the other WGs of ISO/TC 307 generally depend critically upon both ISO 22739:2020 (the vocabulary) and ISO/DIS 23257 (the reference architecture). These foundational documents shall establish a consistent way of specifying key properties and concepts, and will provide a clear, consistent view of the official answers to important questions about distributed ledger technology that can be incorporated into other standards documents. I am also working to develop other standards including ISO/TS 23258 'Blockchain and Distributed Ledger Technology – Taxonomy and Ontology' ISO/TR 24332 'Information and Documentation – Blockchain and DLT concerning authoritative records, records systems, and records management.

Figure 9: Example of a Success Story - Part 1

Impact

Distributed ledger technology offers an opportunity for economic transformation. For example, in the context of supply chain management, distributed ledgers can facilitate a shared view of inventory among participants in a supply chain, which in turn can mitigate the so-called "bullwhip effect". This standardisation will enable the adoption of these technologies by the institutions and governments that are most able to put them to use in such capacities.

Furthermore, by supporting the legitimisation, acceptance, and uptake of distributed ledger technologies by public institutions and private-sector businesses, this work has supported inclusive society in the digital economy, particularly by enabling decentralised public infrastructure, including infrastructure operated by private-sector businesses, wherein participants must share a common view of the state of a system. This is akin to existing co-regulated financial networks, e.g., MiFID for securities trading, but more general and applicable across a variety of sectors including manufacturing, agriculture, public services, and more.

More generally, blockchain and distributed ledger technologies, which are directly enabled by the ISO and CEN/CENELEC standards supported by my work, enable the development of a fairer digital economy, both by providing a means of public oversight and accountability of system operators, as well as by improving the efficiency of exchange of certain kinds of information, such as supply chain data.

Has your project directly involved or led to a specific recommendation or proposal for the development of new or revised standards?

Yes, it supports the development of the following standards: ISO/FDIS 23257, ISO/TS 23258, ISO/WD 22739, ISO/WD TR 24332, ISO 24165-1, ISO 24165-2, ISO/TS 23526

Has your fellowship contributed to developing a new Working Group (WG) or a new technical committee (TC)?

No.

Have the standardisation activities in your project led to specific deliverables?

Yes. Under my convenorship: (international standards) ISO/FDIS 23257 'Reference Architecture' is now in the Approval stage (50.00)., and ISO/WD 22739 'Vocabulary', the revision to ISO 22739:2021, is under development and close to submission for the Committee stage.

Technical specification: ISO/TS 23258 'Taxonomy and Ontology' that is now under publication (60.00).

Technical report: ISO/WD TR 24332 'Blockchain and DLT concerning authoritative records, records systems, and records management' that is making steady progress toward committee stage.

Also, I contributed as an expert to the development of ISO/TS 23526 'Security Aspects for Digital Currencies' which is advancing toward the Committee stage.

What future efforts or activities are still necessary for your area of application?

I aim to continue the engaged work to advance the standardisation of distributed ledger technology, digital currency, and other areas of financial technology is something that I hope to continue with the help of StandICT.eu. My current plan is to apply for additional funding in the forthcoming open calls.

Online references related to the fellowship work

<https://committee.iso.org/sites/tc46sc11/home/projects/ongoing/blockchain-and-records-management.html>

FOLLOWING THE FELLOWS / IMPACT REPORT FROM FUNDED APPLICANTS TO THE STANDICT.EU 2023 FELLOWSHIP PROGRAMME / SECOND OPEN CALL

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Figure 10: Example of a Success Story - Part 2

4.2 General Editing Process and Communication Strategy

AUS manages the daily monitoring of the fellowships with continuous support from TRUST-IT, as explained in Section 2. Therefore, these two partners collaborate closely in drafting and editing the impact reports; AUS manages the initial data collection from the fellows drafting the structures of all success stories and TRUST-IT performs the editing and lay outing of the entire report following the branding defined in the project's Communication Strategy (D4.1) and used in each of the Open calls.

The public spreading of the Impact Reports is done via the well-established StandICT.eu 2023 communication channels including:

- Dedicated articles on StandICT.eu 2023 website
- Dedicated Press releases
- One-to-one message campaigns to the stakeholders identified in Section 4.1 (in collaboration with task 5.1 Stakeholder Engagement)
- Availability on the Open Access Library "Zenodo"¹⁰
- Social Media Campaigns
- Featuring in StandICT.eu 2023 Webinars
- Featuring in the project newsletters¹¹ (see Figure 12)

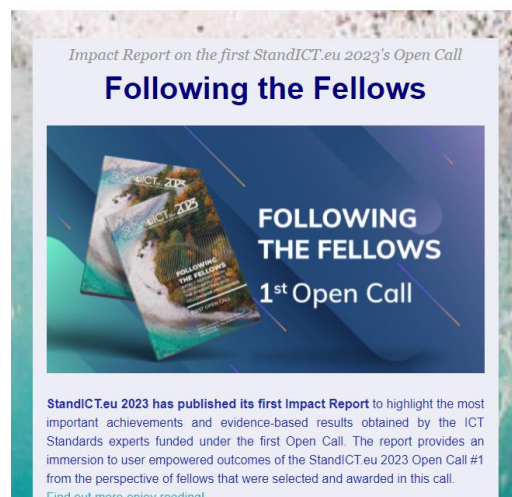


Figure 11: Impact Report spreading via Newsletters

4.3 Open Call 1 - Impact Report

StandICT.eu 2023 published its first Impact Report on August 2021, and it was widely communicated to the target groups via the different communication channels. In addition, the regular communication on the report continues after the publication, and a dedicated article

¹⁰ <https://zenodo.org/>

¹¹ https://mailchi.mp/9b95bc02dbd0/followingthefellows_summer2021

on the report was published on the StandICT.eu website in October 2021¹². The report is publicly available on Zenodo¹³, and until now it counts **1300+ views and 500+ downloads**

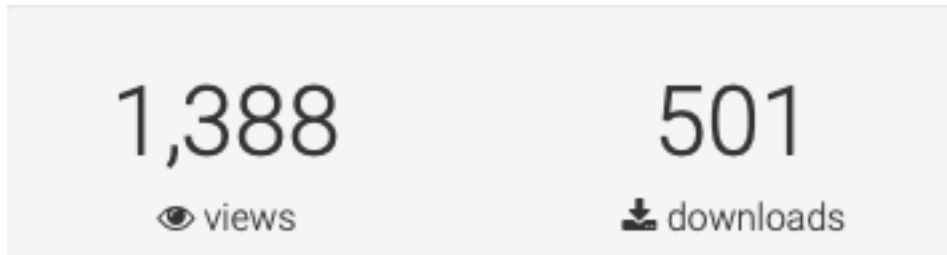


Figure 12: OC1 Impact Report Views & Downloads via Zenodo on 17th February 2022



Figure 13: Following the Fellows - 1st Open Call Report

4.4 Open Call 2 - Impact Report

The Open Call 2 Impact Report was released in December 2021, and as the first report, it was shared among the entire StandICT.eu 2023 stakeholders' community and beyond. A dedicated Press Release¹⁴ was published, followed with a dedicated article¹⁵ published on the project website. The report is publicly available on Zenodo¹⁶, and until now it totals **700+ views and 300+** downloads (see Figure 14 and Figure 15).

¹² www.standict.eu/news/standicteus-1st-impact-report-now-published

¹³ <https://zenodo.org/record/5179890#.YVLh133OM2z>

¹⁴ www.standict.eu/news/press-release-results-now-our-expert-fellows-available-our-open-call-2-impact-report

¹⁵ <https://www.standict.eu/news/press-release-results-now-our-expert-fellows-available-our-open-call-2-impact-report>

¹⁶ <https://zenodo.org/record/5720553>



Figure 14: Following the Fellows - 2nd Open Call Report

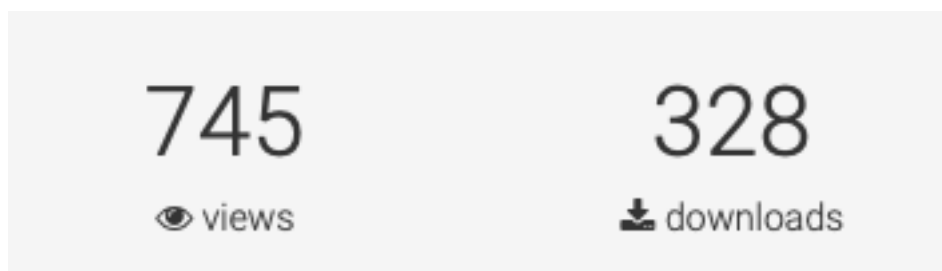


Figure 15: OC2 Impact Report Views & Downloads via Zenodo on 17th of February 2022

4.5 Forthcoming Impact Reports

Seven Impact Reports are foreseen to be created until the end of the project. The next one, the OC3 Impact Report, will be released in March 2023, – and then the following report publications are done every three months until the 9th Open Call, as planned in Table 12.

Table 12: Publication Plan for the Forthcoming Impact Reports

Impact Report	Publication Month
3 rd Open Call	March 2022
4 th Open Call	June 2022
5 th Open Call	September 2022
6 th Open Call	December 2022
7 th Open Call	March 2023
8 th Open Call	June 2023
9 th Open Call	August 2023

5 Lessons learnt and Next Steps

The success of the StandICT.eu 2023 Programme has been proved by the effective management and monitoring of the contracted fellowships. The tight collaboration between TRUST-IT and AUS teams (within the WP3) has resulted in fully functional monitoring and impact assessment strategies applied throughout the series of nine open calls. The team makes sure that all funded fellows understand and follow the monitoring process including two reports for long term fellowships (interim and final reports) and one report for one-shot and short-term projects (final report). These are submitted with respect of the set deadlines of each fellowship via TRUST-GRANTS™ platform, which enables timely follow up of the achieved results and impact of all contracted fellowships.

Impact assessment and dissemination are crucial for showcasing the concrete results of the fellowship programme in terms of contributions in ICT standards and work groups across the SDOs and the ESOs. And, with the series of nine impact reports, dedicated to each of the open calls, including success stories of the funded fellowships, the project regularly demonstrates the achieved impact and to which activities the allocated public grants are spent.

The fellowship programme monitoring, and impact assessment will continue until the end of the project, and this report will be updated with a final version in August 2023. The StandICT.eu 2023 team has defined the next steps for the task:

In terms of monitoring, for the remaining Open Call batches, once the selected candidates are contracted, the monitoring process of each individual fellow will be performed with the respect of the project work plan, timeline, and budget. As until now, the monitoring process will follow the well pre-defined framework, and when necessary, the process, especially the questions in the interim and final reports, can be updated according to the resurging needs of impact assessment in the project. All challenges and risks continue being mitigated on a timely manner between AUS and TRUST-IT teams. Moreover, frequent communication with all the funded fellows (via one-to-one messages based on the status of each fellowship) will be a corner stone of the forthcoming monitoring activities.

In terms of impact assessment, the project continues producing the series of individual Impact Reports. To keep engage with all StandICT.eu stakeholders regularly and to keep them informed about the fellowships' contributions to the global ICT standardisation, a new report will be published every three months. The active communication via the different established channels project will support spreading the impact reports to a critical mass of stakeholders, which contributes to attract new potential experts applying in the forthcoming StandICT.eu 2023 open calls but also showcase the actual work and the used public funding engaged with in the programme.

In addition, when communication the fellowship programme results and disseminating the impact of the funded standardisation projects, **more focus will be given on the relation between the ICT standardisation work conducted in the Fellowship Programme and the ICT Standardisation Rolling Plan's¹⁷** in four EU Policy areas supported by ICT Standardisation, including:

- Key enablers and security
- Societal Challenges

¹⁷ <https://digital-strategy.ec.europa.eu/en/policies/rolling-plan-ict-standardisation>

- Innovation for the digital single market
- Sustainable growth

Moreover, also the connection between the Fellowship Programme and the EUOS platform, both managed by StandICT.eu 2023, will be made even stronger making sure that are results of the fellowships and the performed work of the contributing standardisation experts are valorised in both the EUOS Work groups¹⁸ on the dedicated ICT domains and within the repository¹⁹ identifying ICT standards and work groups across European and global standards organisations. **The aim is that the funded StandICT.eu 2023 fellows become ambassadors of the programme and the EUOS enabling to engage an ever-increasing number of contributors in the initiative and making StandICT.eu 2023 the remarkable European reference point in ICT standardisation.**

¹⁸ www.standict.eu/discussion-groups

¹⁹ www.standict.eu/standards-repository

Annex 1 – StandICT.eu 2023 Fellowship Interim Report Template

Interim Progress Report

Only For Long Term Projects

0. Title of Your Fellowship Project

Scope

*The purpose of the present report serves the European ICT Standardisation community and National and global Standards Developing Organisations (SDOs) to advance a broader **understanding** on principal **standards** activities going on in the ICT sectors. We aim to share **high-level findings** from these reports to the **European Commission** related Directorates and to members of the **Multi Stakeholder Platform (MSP)**, with the intent to have major results cited as part of the future ICT Rolling Plan of Standardisation.*

Section 1 - Fellow Profile Information

1.1 Which of the following genders describe you the best? [Drop down list we several options possible]

- Female
- Male
- Other
- I prefer not to say

1.2 Your short professional bio in few lines [Free text - **limit 1000 char.**]

1.3 Your photo, please add the image [Requested size: 800px 800px]

1.4 For how long have you been working in ICT standards? Please, indicate in years. [Drop down menu with numbers]

1.5 Is your work linked to any existing funded project? [Drop down menu with one possible option]

- Yes
 - If yes, please explain [Free text, **limit 1000 char.**]
- No

1.6 Dissemination agreement - do you consent that StandICT.eu team uses the information provided here above to communicate your project & results in the StandICT.eu community? [Drop down menu with one possible option]

- Yes
- No

Section 2 - Progress Reporting

2.1 How is your funded application contributing to the ICT Standards landscape and can you name the ICT Standards you are dealing with? [Free text – **limit 2000 char.**]

2.2 Indicate which gaps, priorities or challenges you are addressing? Please list your response(s). [Free text – **limit 2000 char.**]

2.3 Which main Standards Developing Organisation(s) have you contributed to?

[Provide responses in the rolling list, multiple responses are possible]

- ETSI
- CEN-CENELEC
- ISO
- IEEE
- ITU
- IETF
- W3C
- IEC
- OASIS
- OGC
- HL7
- UNECE
- ASTM
- Other, please specify:

2.4 Are you a contributor to a Working Group WG (s) or Technical Committee TC(s) as a part of your fellowship? [Drop down menu with one possible option]

- Yes
 - If yes, please name it [Free text, **limit 1000 char.**]
- No

2.4.1 As a follow-up to the question 4, please indicate the SDO(s) [Provide responses in the rolling list, multiple responses are possible]

- ETSI
- CEN-CENELEC
- ISO
- IEEE
- ITU
- IETF
- W3C
- IEC
- OASIS
- OGC
- HL7
- UNECE
- ASTM
- Other, please specify:

2.5 Does your contribution impact European SMEs in any way? [Drop down menu with one possible option]

- Yes
 - If yes, please elaborate [Free text, **limit 1000 char.**]

- No

2.6 In the framework of your fellowship, have you collaborated with any Associations or any EU, or National project(s)? [Drop down menu with one possible option]

- Yes
 - If yes, which ones? [Free text – **limit 2000 char.**]
- No

2.7.1 To monitor your fellowship footprint (in KPIs), please indicate in numbers how many contributions you have performed until now as a part of your fellowship within the WG/TC:

2.7.2 Participation in WG/TC meetings [drop down menu with numbers]

2.7.3 Attendance of Webinars or Workshops [drop down menu number]

2.7.4 Delivered publication, report or deliverable [drop down menu number]

2.7.5 Other, please specify [Free text – **limit 2000 char.**]

2.8 What is the status of your contribution and what is the target release or publication expected date? [Drop down menu with several possible options]

- Pending
- In progress
- Finalized
- Submitted
- Delayed
 - Please, justify the delay: [Free text – **limit 1000 char.**]
- Date: [Free text – **limit 1000 char.**]

2.9 Have you shared your outcomes or joined discussions on the EUOS within the context of your project? [Drop down menu with one possible option]

- Yes,
 - If yes, in which Technical Working Group (TWG)? [Free text – **limit 1000 char.**]
- No

2.10 Do you have any other updates, comments, or concerns regarding your fellowship that you would like to share with the StandICT.eu team? [Drop down menu with one possible option]

- Yes,
 - If yes, please define the technical working group(s)? [Free text – **limit 2000 char.**]
- No

2.11 Will you avail of future Open call StandICT.eu funding opportunities to pursue your work further? [Drop down menu with one possible option]

- Yes,
- No

Thank you!

Annex 2: StandICT.eu 2023 Fellowship Final Report Template

Final Impact Report

Scope

The purpose of the present report serves the European ICT Standardisation community and National and global Standards Developing Organisations (SDOs) to advance a broader **understanding** on principal **standards** activities going on in the ICT sectors. We aim to share **high-level findings** from these reports to the **European Commission** related Directorates and to members of the **Multi Stakeholder Platform (MSP)**, with the intent to have major results cited as part of the future ICT Rolling Plan of Standardisation.

0. Title of Your Fellowship Project (as in the application)

Section 1 - Fellow Profile Information

1.1 Which of the following genders describe you the best? [Drop down list we several options possible]

- Female
- Male
- Other
- I prefer not to say

1.2 Your short professional bio in few lines [Free text - **limit 1000 char.**]

1.3 Your photo, please add the image [Requested size: 800px 800px]

1.4 For how long have you been working in ICT standards? Please, indicate in years. [Drop down menu with numbers]

1.5 Is your work linked to any existing funded project? [Drop down menu with one possible option]

- Yes
 - a. If yes, please explain [Free text, **limit 1000 char.**]
- No

1.6 Dissemination agreement - do you consent that StandICT.eu team uses the information provided here above to communicate your project & results in the StandICT.eu community? [Drop down menu with one possible option]

- Yes
- No

Section 2 - Progress Reporting

2.1 How is your funded application contributing to the ICT Standards landscape and can you name the ICT Standards you are dealing with? [Free text – limit 2000 char.]

2.2 Indicate which gaps, priorities or challenges you are addressing? Please list your response(s). [Free text – limit 2000 char.]

2.3 Which main Standards Developing Organisation(s) have you contributed to?

[Provide responses in the rolling list, multiple responses are possible]

- ETSI
- CEN-CENELEC
- ISO
- IEEE
- ITU
- IETF
- W3C
- IEC
- OASIS
- OGC
- HL7
- UNECE
- ASTM
- Other, please specify.

2.4 Are you a contributor to a Working Group WG (s) or Technical Committee TC (s) as a part of your fellowship? [Drop down menu with one possible option]

- Yes
 - If yes, please name it [Free text, limit 1000 char.]
- No

2.4.1 As a follow-up to the question 4, please indicate the SDO(s) [Drop down list of the SDOs as above]

2.5 Does your contribution impact European SMEs in any way? [Drop down menu with one possible option]

- Yes
 - If yes, please elaborate [Free text, limit 1000 char.]
- No

2.6 In the framework of your fellowship, have you collaborated with any other Associations or any EU or national project(s)?

- Yes
 - If yes, which ones? [Free text, limit 1000 char.]

- No

2.7.1 To monitor your fellowship footprint (in KPIs), please indicate in numbers how many contributions you have performed until now as a part of your fellowship within the WG/TC:

2.7.2 Participating in WG meetings [drop down menu with numbers]

2.7.3 Attendance in Webinars or Workshops [drop down menu with numbers]

2.7.4 Delivered publication, report or deliverable [drop down menu with numbers]

2.7.5 Other, please specify [Free text – limit 1000 char.]

2.8 Could you describe shortly these achieved contributions within the context of your fellowship? [Free text – limit 2000 char.]

2.9 What societal impacts did your work support? [Free text – limit 2000 char.]

2.10 What state of maturity is the standards of your topic in general?

- Very mature
- Mature
- Preliminary phase
- Other state of maturity, please specify [Free text – limit 2000 char.]

2.11 Please indicate what recommendations you propose in pursuing the work on the concerned standard or specification? [Drop down menu with one possible]

- Suggest continuation of action
- Additional EU experts needed to better support the EU position
- Action Successfully finalised
- No further action required

2.11.1 Please elaborate on the selected response [Free text – limit 2000 char.]

2.12 Has your project directly involved or led to a specific recommendation or proposal for the development of new or revised standards or was aimed at supporting the development or revision of a standard already under development? [Drop down menu with one possible option + free text]

- Yes
 - If yes, please specify. [Free text – limit 1000 char.]
- No
- I don't know

2.13 Have the standardisation activities in your project led to specific deliverables? [Drop down menu with one possible option]

- Technical Specifications
- Technical Report
 - Common Terminology
 - Development of a news standard
 - Reference Data
 - Recommendations for new/revised standards

- Reference material
- New Operating procedure
- Other, please specify:

2.14 Has your fellowship contributed for a new Technical Group or Work Group?

- Yes
 - If yes, please detail which one? [Free text – limit 1000 char.]
- No

2.15 What is the status of your contribution and when is the expected date of the target release or publication of your work?

- Pending
- In progress
- Finalized
- Submitted
 - Please provide the submission month [Drop down list with months & years]
- Delayed
 - Justify the selected response [Free text – [Free text – limit 1000 char.]
- Not relevant (for One-Shot projects)?
 - Justify the selected response [Free text – [Free text – limit 1000 char.]

2.16 Have you shared your outcomes or joined discussions on the EUOS within the context of your project?

- Yes,
 - If yes, in which Work Group? ([Free text – [Free text – limit 1000 char.]
- No

2.17 As a part of your fellowship, please indicate the TWG EUOS in which you have contributed to [Drop down list with one possible option]

- TWG Blockchain
- TWG AI Artificial Intelligence
- TWG BDDI Big Data Spaces & Data Interoperability
- TWG CYBER Cybersecurity
- TWG CITIES Smart Cities
- TWG TRUSTI Trusted Information
- TWG ACADEMY

2.18.1 Please define in which deliverable type you have contributed to [Drop down list with one possible option]

- Landscape & gap analysis
- Policy recommendations
- Other

2.18.2 Please indicate the time (in hours) spent [Drop down list with numbers]

2.18.3 Please describe your contributions in terms of actions and delivered work items

2.19 Please provide any public links available to demonstrate your work. [Free text – limit 2000 char.]

2.20 Please use this free text space to include any additional items you'd like to share that are not covered above. [Free text – limit 2000 char.]

2.21 Will you avail of future Open call StandICT.eu funding opportunities to pursue your work further? [Drop down menu with one possible option]

- Yes,
 - If yes, please share your plan [Free text – limit 2000 char.]
- No

2.22 Attachment - please add any additional attachments to justify your work.

Annex 3: Contribution to New/Revised standards per sector

5G New/Revised standards
<p>My fellowship project is the study of possibilities for standardisation of location-based spectrum sharing, based on a set of requirements that are technology neutral. Location-based enabling of certain features of the radio interface is necessary for allowing the regulators to control the use of the radio spectrum in their country in a more granular manner. Standardising this feature in a European Harmonised standard context would provide the regulators with a uniform and trustworthy way of allowing the use of such devices in their respective state.</p>
<p>Recommendations for new/revised standards (Technical Report).</p>
<p>The Project is about guiding the industry to develop a Standardised Framework for addressing Security Challenges that should be addressed through automated orchestration of security mechanisms and services and usage for 5G network slices, network segments and services delivered by the E2E 5G network; and through automated security policy computation and dynamic enforcement in various points in the network infrastructure using autonomics (closed control-loops) operations in response to new 5G service instantiations, new intents and security SLAs supplied as inputs by the human network operator and/or in response to detected and predicted security attacks/threats/risks.</p>
<p>the fellowship supports the development of TR26.998 in the 3GPP SA4 Video WG.</p>
<p>Development of a new standard (Technical Report).</p>
<p>supports the development or revision of a standard already under development: ETF Trusted Execution Environment Provisioning (TEEP) Architecture (very close to adoption) & IETF Attestation Results for Secure Interactions (early stage)</p>
<p>Two new standards and one report, all still under development: ETSI GS NIN 004: Carriage of Flexilink flows over DECT 2020 New Radio; ETSI GS NIN 005: Signalling messages and protocols; ETSI TR 103 884: DECT-2020 guide for implementers</p>
<p>The Project has led to a specific recommendation or proposal for the development of new Standard. A New Work Item has been created in ETSI to develop a "Framework for Implementing Autonomic/Autonomous IPv6 based 5G Networks, leveraging the ETSI GANA Multi-Layer AI / Multi-Layer Autonomic Management and Control Model and IPv6 Capabilities & Extensions that enable to Build Autonomic Networks". The Framework is to serve as Industry Guide to Implementing Autonomic 5G Networks, powered by ETSI GANA Multi-Layer Autonomics & AI and IPv6.</p>

Support of a future standard: Finalisation of location-based spectrum sharing standardisation is contributing work in order to standardise the means for location-based enabling of the radio interface of devices using radio communications. This is aimed at supporting the development of a future standard however this is not a standard in itself.

My work in this project supports several new and revised standards within ETSI (TC INT and TC INT AFI) and ITU including:

- ETSI Deliverable Technical Report (TR): Draft for TB Approval for the instantiation of the ETSI GANA model onto IMS architectures (stable draft (ETSI TR) completed and submitted for revision in October 2021)
- INT Artificial Intelligence (AI) in Test Systems and Testing AI models; Use and benefits of AI technologies in Testing; DTR/INT-00166, 00181:

Technical recommendations have/will be submitted to the ITU-T's Focus Group on Autonomous Networks (FG-AN), which may potentially lead to the development of new standards (to be delivered to Study Group 13)

I contribute to the following standards:

- Y.ICN-DOS: Requirements and capabilities of data object segmentation in information centric networking for IMT-2020
- Y.DTN-ReqArch: Requirements and Architecture of Digital Twin Network
- Y.IMT2020-AIICDN-arch: AI integrated cross-domain network architecture for future networks including IMT-2020
- Y.IMT2020-LC-req-arch: Future networks including IMT-2020: requirements and architecture for lightweight core-based dedicated networks
- Y.QKDN-qos-gen: General Aspects of QoS (Quality of Service) on the Quantum Key Distribution Network"
- Y.IMT2020-jg-Isn: Requirements and framework for jitter guarantee in large scale networks including IMT-2020 and beyond
- Y.FMC-EC : Unified edge computing for supporting fixed mobile convergence in IMT-2020 networks
- Y.FMSC-req: Requirements of fixed, mobile and satellite convergence in IMT-2020 network and beyond
- Y.SBN-TR : Service brokering network framework for Trusted Reality
- Y.FMC-AAEC-req: Use cases and Technical requirements for supporting application addressing in edge computing for future networks including IMT-2020 network

AI New/Revised standards

Yes, recommendations on a specific PWI on "Trustworthiness - concept and overview".

The project involves 2 phases. The first one already concluded involved conceiving RFC drafts for AI enabled smart PV definitions, concepts, architectures and use cases, as well as on AI Smart PV technical specification of processes and devices.

ISO 31700
 ISO/IEC 27556
 ISO/IEC 27561
 ISO/IEC 30149
 PWI 6089
 PWI-6 Guidance for IoT and digital twin use cases

We are working on a project to develop a new TR/TS related to a new area (AI) as a part of a family of standards aimed at the Very Small Entities and SMEs in the context of software engineering.

CEN/CLC JTC21 SAG (I am vice-convenor) is developing a roadmap to identify which standards need to be developed by JTC21.

The project has a direct implication in supporting a new standard proposal. It refers to “Artificial Intelligence tools for graphics compression and analysis” and it is currently in the Exploration phase in ISO/IEC JTC 1 SC 29 WG 7.

The main idea is to be active contributor in two new standardisation activities under ISO/IEC/ JTC 1/SC 29/WG 1

- JPEG AI (jointly with ITU Q6/16)
- JPEG Pleno PCC (Point Cloud Compression)

Blockchain and Distributed Digital Ledger Technologies New/Revised standards

Two dedicated use cases in Horizon 2020 research and innovation projects

For the development of a new standard: TR23249 in ISO is the Technical report on blockchain and digital identity, paving the way for the future Technical Specification.

It supports the development of the following standards:
 ISO/FDIS 23257, ISO/TS 23258, ISO/WD 22739, ISO/WD TR 24332, ISO 24165-1, ISO 24165-2
 ISO/TS 23526

It aimed at supporting the development of existing, planned or new standards and relates to the EU commission proposal for amending Regulation (EU) No 910/2014 [1] as regards establishing a framework for a European Digital Identity SEC(2021) 228 final [2], referred to in the present document as eIDAS 2.0.

ISO/NP 7603 - ed.1- id.8284
 ISO/IEC CD 23465-1 - ed.1- id.78003

It has been identified that a proposal for a new DLT Data flow TS is an expected outcome arising from this OC#2 Fellowship -entitled co-editorship and contribution to TR6277 Data flow model for blockchain and DLT use cases.

I am convener of a new TS 23635 Guidelines for Governance at ISO TC 307 Blockchain and DLT systems. This is a new TS that I have initiated as convener and editor.

Yes, the project led to the development of a new standard:
 ISO/AWI 24138 Information and documentation — International Standard Content Code
<https://www.iso.org/standard/77899.html>

This project has been leading the development of ISO/IEC 21000-23 Smart Contracts for Media wrt its specification, reference software and conformance testing from Draft International Standard (DIS) to Final Draft International Standard (FDIS) stage. Based on a DLT agnostic API that has been specified, it is currently working toward the completion of the bidirectional conversion of MPEG-21 CEL/MCO contracts to smart contracts for a) CEL/MCO to Solidity/Ethereum, b) CEL to Michelson/Tezos, and c) MCO to Teal/Algorand. By doing this conversion in a standard way for several smart contract languages it is going to ensure that ISO/IEC 21000-23 Smart Contracts for Media prevail as the interlingua for exchanging verified contractual data between different DLTs. The resulting standard, ISO/IEC 21000-23 Smart Contracts for Media, which has been reaching Final Draft International Standard stage, is envisaged to close the interoperability gap toward a semantic music and media blockchain. As such, it has the potential to unlock both the semantic web and in turn the creative economy and open the way forward for other industry domains.

The project is in particular related to all existing or new standards developed within ISO/TC 307/JWG 4. As such it does encompass
 ISO/TR 23644 - Overview of trust anchors for DLT-based identity management (under development)
 ISO/TR 23642 - Overview of smart contract security good practice and issues (under development)
 ISO/TR 23249 - Overview of existing DLT systems for identity management (publication expected)
 ISO/PWI 12833 - Re-identification and privacy vulnerabilities and mitigation methods in blockchain and distributed ledger technologies (preliminary work)
 ISO/AWI 7803 - Decentralized Identity standard for the identification of subjects and objects (new project)

Cybersecurity New/Revised standards
IEC 62351-14 was at Committee Draft (CD) state at the start of the fellowship. The fellowship has helped bring the coming standard a major step forward.

Cybersecurity / network and information security New/Revised standards
The result is this editorship is the revised ISO/IEC 27005.
The second edition of IEC 62351-9 has completed Committee Draft (CD) comment period and is now in the comment resolution phase. My fellowship has resulted in the rather stable text for a new ITU-T Recommendation. It was presented at latest ITU-T Study Group 17 meeting and well received.
it has contributed to the advancement of standard which entails a 36 months workplan.
The project work is aligned with the scope of the ISO JTC 1/SC 27/WG 3, specifically collaborating with the Technical Study and Preliminary Work Item for the proposal of a new standard for security evaluation criteria for connected vehicles (based on ISO/IEC 15408).
a PWI related to ISO/IEC 27553 has been initiated for the cases when biometrics are sent outside mobile devices (to ensure appropriateness of privacy requirements). I have been nominated as leader.
new ISO/IEC standard NWIP JT013037 on "Privacy Information Management System per ISO/IEC 27701 – Refinements in European context" = new European Standard.
Supports the current development of DGS/QKD-016 "Common Criteria Protection Profile for QKD" in the ETSI Industry Specification Group for QKD (ISG-QKD).
Providing inputs to the Standardization Request Ad-Hoc Group (SRAHG) on the RED Directive covering Cybersecurity has led to list of standards and got mostly the agreement of all parties (CEN/CENELEC & ETSI).

Our work has led to specific technical recommendations for revised standards on increased usage of blind and aggregate cryptographic signatures as well as the use of mixnets to prevent metadata collection in order to keep COVID-19 certificate applications compliant with the General Data Protection Regulation and data minimization. This is already done to some extent in the EU Digital Covid Certificate by the Dutch government, which interacted with our STANDICT effort, and harmonized with the CNIL recommendations for the TousAntiCovid application used in France. However, this proposal to use more modern cryptography in the EU Digital COVID certificate and related efforts, such as the WHO DCC:VS effort, has not yet led to agreement or been implemented widely.

The standard under development is a new standard that will be published in both ITU-T and ISO as Rec. ITU-T X.507 | ISO/IEC 9594-12. I am project editor for that specification.

The work for the new or revised standards did not yet start and the guidelines are in discussion.

Edge computing New/Revised standards

My fellowship project supports a standard already under development in the OGC. The materials for OGC GeoPose guides will accompany the standard. It explains use cases, key concepts/terminologies, how GeoPose fits in the landscape of standards, proprietary solutions and open source projects. It a

E-Health New/Revised standards

The International Patient Summary is a cross-SDO initiative, involving a set of different standards (ISO 27269; EN 17269; HL7 CDA and FHIR IPS; IHE IPS profile.). T

My fellowship supports the development of the IEEE1872.2 standard proposal. I

In total 4 new technical specifications have been developed.

My group has taken on responsibility for maintaining the work first published by ETSI ISG E4P: We participate in drafting sessions of new standards for Asynchronous Contact Tracing; also continuing consultation on Work Items for Use Cases and Data sharing for health.

I support the ongoing development of the three IEEE Standard projects: 1. IEEE WG P1872.2 for the Standard for Autonomous Robotics (AuR) Ontology; 2. IEEE WG P1872.1 - Robot Task Representation; 3. IEEE P7007 - Ontological Standard for Ethically Driven Robotics and Automation Systems

The development of the ISO/AWI TR 24305 "Guidelines for implementation of HL7/FHIR based on ISO 13940 and ISO 13606" + response by email " The main standards to share from my point of view are these:

ISO 13606 Family.

<https://www.iso.org/standard/67868.html>
<https://www.iso.org/standard/62305.html>
<https://www.iso.org/standard/62303.html>

ISO 13940:

<https://www.iso.org/standard/58102.html>

HL7 FHIR R4:

<https://hl7.org/fhir/R4/>

Electronic Identification and trust services New/Revised standards

The work item was already approved by ISO/IEC JTC1/SC37 WG2 and I contribute in boosting its development, progressing to CD next January.

Fintech and Regtech Standardisation New/Revised standards

Contribution to the development of a new standard : ISO 37008 revised standards (and contribution to the revision i.e. ISO 20275; ISO 18774; ISO 5009 (OOR); ISO 18774

FinTech/financial services/Invoicing New/Revised standards

The work contributes to the new standard EN 16931.
The work undertaken here can be used to inform CEN/TC 434's work on EN 16931 that will be used to inform future updates.

Identity management New/Revised standards

A new standard is being developed at IETF - "Grant Negotiation and Authorization Protocol (gnap)" <https://datatracker.ietf.org/wg/gnap/documents>

Industry 4.0 New/Revised standards

The chairing of ROLL (Routing Over Low Power and Lossy Networks) at the IETF led to the development of the following standard work:

- Supporting Asymmetric Links in Low Power Networks: AODV-RPL (Document in progress proposed as Standard Track)
- RPL Capabilities (Document in progress proposed as Standard Track)
- Root initiated routing state in RPL (Document in progress proposed as Standard Track)
- Controlling Secure Network Enrollment in RPL networks (Document in progress proposed as Standard Track)
- Mode of Operation extension (Document in progress proposed as Standard Track)
- Common Ancestor Objective Function and Parent Set DAG Metric Container Extension (Document in progress proposed as Standard Track)

Intelligent transport system New/Revised standards

This project has substantially enabled the revision of a cross cutting standard on defining and indexing Road Signs. This is particularly relevant to In-vehicle Information and leads to the significant development of databases to enable Connected Cooperative Automated Vehicles by allowing traffic regulations to be made continuously available to automated vehicles. The standard is EN ISO 14823 part 1. The CD ballot has completed and the final Draft International Standard will be submitted in early December 2021.

The project has substantially contributed to the revision and upgrade of ISO/TS 21219-series (20+ parts) to International Standards. Parts are in the process of revision and others being prepared for publication. Although this is an ISO standard only all the development work is undertaken in Europe.

IoT New/Revised standards

Work in IEC TC100 has led to a preparatory work item (PWI) being submitted for a technical report (TR) on Accessibility Goals and Needs with an exemplar of use with a household voice control system.

My company Trialog is the co-editor of JTC1-SC41/167/CDV - ISO/IEC 21823-3 ED1: Internet of Things (IoT) - Interoperability for IoT Systems – [Part 3: Semantic interoperability]. We have also sent contributions to ISO/IEC 5392 Knowledge Engineering Reference Architecture (KERA). Finally, we have contributed to IEC TC57 “Power systems management and associated information exchange” new work item on smart energy ontology (the work will be carried through contributions via the joint working group JWG3 “IEC Smart Energy Roadmap Managed by SyC Smart Energy” of SC41).

Ontology and Open data New/Revised standards

[Common Core ontologies,ISO] and IOF Core Ontology [OAGi]

ISO 11239 and ISO TS 20440

Open data and big data New/Revised standards

Yes, ISO 19123-1 ready for DIS ballot. Also, OGC has announced to adopt verbatim, too.

Privacy protection New/Revised standards

Support to the development of new standard ISO 31700 (commenced 2018/19): Consumer protection — Privacy by design for consumer goods and services

Learning and Education New/Revised standards

Yes, my involvement has led to a change in the Title and Scope of the CEN TC353 committee.

We have also outlined a new work group structure, and proposed a number of new European standardisation projects that will help and support the implementation of learning technologies throughout Europe. We have proposed standardisation projects on:

- simple API's and data models for reporting grades and attendance
- Common IAM solution for access to all digital learning resources, learning tools and learning services. And standardised attributes for describing the actors within the educational system, and their roles, groups, subject and curricula link.
- A set of standardised semantic anchors for enriching curricula document, to enable automatic computer processing of the curricula information, for curricula that are already digitised, standardised API's and data models should also be described.
- Requirements for accessibility for participation in digital learning activities free of barriers.
- How to make comparable learning activity data to capture learning activity data from all vendors
- Common digital infrastructure, where the schools/school owners/educational institutions would govern
 - of all data produced by learners, meeting European GDPR, Privacy and other data legislation.
- Metadata supporting a European EdTech ecosystem, where educators could choose resources and tools based on pedagogical outcome.
- Standards for exchange of learner information between Learning Management Systems
- Requirements for cyber security, and how to get «security by design» in all aspects of EdTech
- Use of blockchain in education

We also expect that when the committee is launched in November 2021, more NB's will identify the need for standards and propose project for the upcoming meetings in 2022 and 2023.

Quantum computing & Quantum technology New/Revised standards

The first (concluded) phase of the project resulted in publication of two technical standards drafts in the form of Request for Comments documents in scope of generalised quantum cryptography, including RFC for OQP protocol (definitions, key theoretical concepts and use cases for qubits encryption) and RFC for OQP implementation (technical specification of processes, devices and operative parameters for qubits encryption).

Yes - I made a proposal in IEC / TC86 / JWG9 for a "Technical Report on Quantum Technologies" to introduce quantum technologies to a mainstream standards committee. The proposal was accepted and I was invited to prepare a draft New Work Proposal (NWP) for the IEC General Meeting in October 2021.

The activities on the project have led directly to the recommendation for a Technical Report on Quantum Technologies to be proposed as a New Work Item within the IEC Technical Committee 86 on Fibre Optics. This will lay the foundation for a whole suite of standards over the coming years in this mainstream technical committee

Semantic Interoperability New/Revised standards

The WG is developing a new query language, Graph Query Language, GQL standard.

SQL is a standard being revised (extended with SQL-PGQ), and GQL is a new standard

ISO/IEC 21823-3 IoT Semantic Interoperability
 ISO/IEC SC42 AI WG05 - AFNOR CN IA - 5392 Knowledge Engineering Reference Architecture (KERA)
 ISO/IEC SC42 AI WG05 - AFNOR CN IA - Ontologies, Knowledge Engineering, and Representation (OKER) Report - Draft

Smart Cities New/Revised standards

This fellowship has been successful in establishing the new work item ITU-T YSTR.P2P-CC

Trusted information New/Revised standards

It will be ISO/IEC PWI 7732 – Age Assurance Systems. It is presented to ISO/IEC JTC1/SC27/WG5 and will be progressing to a working draft ballot.