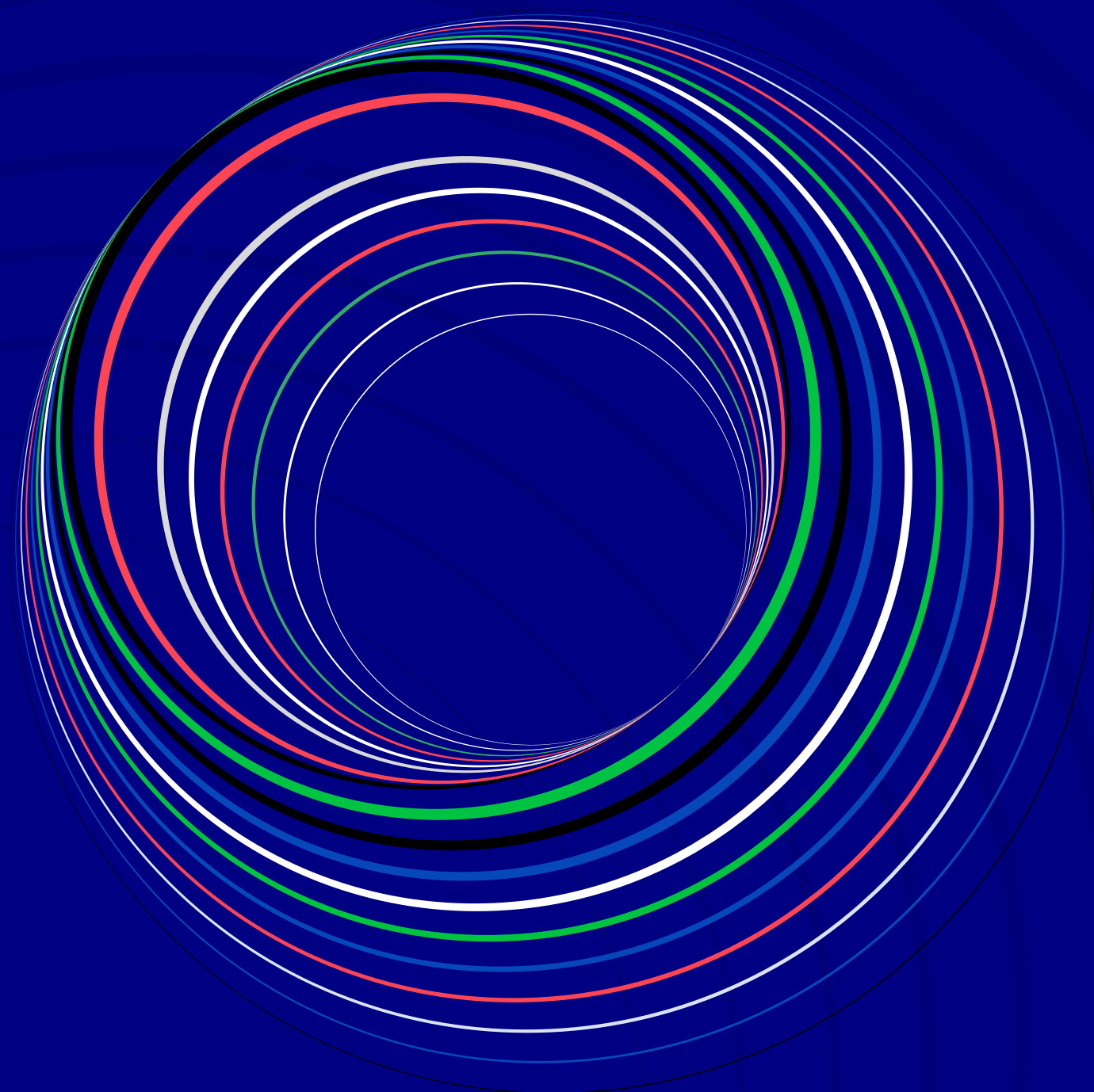


ITEA

Annual report

2023



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The Quality Management System
of ITEA Office is ISO 9001:2015
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About ITEA

ITEA is the Eureka Cluster dedicated to software innovation and digital transition. It fosters a global community comprising large industries, SMEs, research institutes, academia, and user organisations. This collaborative effort focuses on funded research and innovation projects, transforming ideas into new businesses, jobs, economic growth, and societal benefits. As an industry-driven programme, ITEA spans various innovation areas, leveraging digitisation for advancements in Smart mobility, Healthcare, Smart Cities, Energy, Manufacturing, Engineering and Safety & Security. ITEA drives key technology fields such as Artificial Intelligence, Big Data, Digital Twin, Distributed Cloud, and High-Performance Computing into tangible business applications.

Our vision

In a rapidly evolving society with ever-present challenges, digitisation is no longer just an option and should be regarded as an opportunity to innovate. Digital technology is a central aspect of society, impacting every element of people's lives. Software innovation is a crucial element for mastering this digital transition and is the primary focus of ITEA.

The digital transition is an ongoing, multi-dimensional process. The more digitisation advances, the more widespread the transition becomes. To smoothly steer this continuous evolution, a collaborative environment and a bottom-up approach are essential. This environment brings together innovative ideas and knowledgeable people, facilitating sharing, inspiration, and mutual learning from one another.

Our mission

ITEA's mission is to empower businesses, including their customers, to create innovative solutions that handle the digital transition and tackle major challenges, propelling society forward. ITEA encourages its global Community to make an impact and generate value through RD&I projects in the area of software innovation, utilising industry knowledge and national financing capabilities.

ITEA is:

- ▶ **Global and trusted cooperation in an industrial community**
ITEA stimulates innovation projects in a global community of large industries, SMEs, start-ups, academia, and customer organisations. Its bottom-up project creation ensures that project ideas are industry-driven and meet actual customer needs. ITEA provides a trusted framework for cooperation, managing confidentiality and intellectual property complexities and is managed by and for industry in close collaboration with national Public Authorities (PAs).
- ▶ **Project financing through national public and private funding**
ITEA's programme is publicly funded at a national level, allowing each project partner to seek funding from their respective national Public Authorities. Early dialogues with Public Authorities align projects with national priorities, enhancing opportunities for funding and leading to higher success rates.
- ▶ **Commercialisation of research results**
ITEA enables organisations to translate innovation projects into tangible commercial results. Impact is a core value, central throughout the project lifecycle: proposal evaluation, monitoring, closure, and result communication.
- ▶ **Focus on high-quality processes and support**
ITEA adopts a flexible and supportive coaching approach for project consortia to maximise results and impact. Annual bottom-up Calls for projects, brokerage events, and a two-step evaluation process ensure project quality. ITEA participates in Joint Eureka Clusters Calls when relevant and provides comprehensive full-cycle project monitoring through digital reports and reviews to improve the quality and value.

Message from our Chairwoman



ITEA Chairwoman Zeynep Sarilar



We invite you to check the message from our Chairwoman Zeynep Sarilar at:
<https://vimeo.com/912526434/613a940ea8>

Eureka and ITEA

ITEA is the Eureka Cluster dedicated to software innovation and digital transition. Eureka is the world's biggest public network for international cooperation on RD&I, present in over 45 countries. Eureka aims to boost the competitiveness and innovation capacity of Eureka countries and industries via international collaboration in funded projects.

Eureka has different instruments to foster innovation, including the Eureka Clusters Programme (ECP). The ECP consists of industry-driven and bottom-up RD&I programmes with thematic communities of experts, including ITEA. These Clusters enable Eureka to

be proactive, faster and more flexible and to also address new and emerging areas and cross-cutting themes for RD&I.

The industry-driven, bottom-up focus of the Eureka Clusters Programme and the close connection with national RD&I priorities perfectly complement the multinational and research excellence focus of Horizon Europe. In some cases, an ECP project might be the logical next step for a Horizon Europe project consortium to successfully exploit their project results and bring them to the market.

Although 2024 is already underway - with the Full Project Proposal (FPP) submission of Call 2023 marking the first significant milestone - we believe it is a perfect moment to reflect on ITEA's 2023. This reflection is summarised in the ITEA Annual Report 2023, providing a comprehensive overview of key activities and achievements.

The report highlights notable events, including the 25th anniversary celebration. It also offers insights into the impact generated by our pillars: the ITEA projects. Additionally, it will provide a glimpse into what lies ahead for 2024.

We wish you a pleasant read and look forward to welcoming you (again) into the ITEA Family in this new year!



1 /

About 2023



This year held particular significance for ITEA as it marked its 25th anniversary. To commemorate this milestone, a series of events, interviews and celebrations were organised, shining a spotlight on the ITEA Community and the strength of its international collaboration. Alongside these events, we released the 'ITEA – the fast track to software innovation' report, which highlights the unique properties of ITEA as a Eureka Cluster. The report also features numerous examples illustrating the impact achieved since the beginning of ITEA and serving as a proof of ITEA's eagerness to continue and improve. Further details and the various activities regarding our 25th anniversary celebration can be found within this Annual report.

Furthermore, there was a concentrated effort on the core process of ITEA: the promotion of software innovation through its annual Call and related activities. This included, among other things, the organisation of a Customer workshop focusing on the Smart Cities topic, participation in several (external) events and a fully-booked ITEA PO Days

event. For the first time, the PO Days also featured a high-level workshop attended by Public Authorities and Board representatives, as well as an exhibition highlighting the impact of ITEA's ongoing and recently completed projects.

ITEA has traditionally received strong support from long-standing contributors such as Germany, the Netherlands, and Finland. Additionally, the ITEA Community has expanded with the inclusion of committed countries like the United Kingdom (UK), Switzerland, and Hungary. Moreover, there have been strong efforts by Canada and Türkiye to bring the Clusters and their potential to the attention of the High Level Representatives, resulting in increased interest.

Openness is one of the key characteristics of ITEA. The statistics underline the increasing strength of newcomers each year. Metrics such as the number of new participants in the ITEA PO Days and the proportion of SME involvement serve as key indicators of ITEA's commitment to fostering an open and collaborative environment.

In its capacity as one of the Eureka Clusters, ITEA actively participated in various Eureka and Eureka Clusters Programme (ECP)-related activities and events. This involvement served to strengthen our relationships with Public Authorities and other Clusters and to inform newcomers about the ECP.

The following timeline offers a comprehensive overview of the key activities, achievements, and events that shaped ITEA in 2023. Furthermore, this report delves into additional details about the impact of ITEA's projects, looks at the progression of the ITEA Calls, and outlines what lies ahead in 2024.

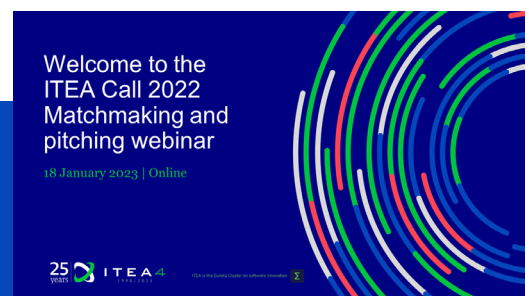
1.1 ITEA 2023 Timeline

18 January

ITEA Call 2022 Matchmaking and pitching webinar with UK partners

The UK expressed renewed interest in Eureka and the Eureka Clusters. Public Authority representative Ben Morris attended the ITEA PO Days in September and, as a follow up, this matchmaking and company pitching event was organised to support the matchmaking between UK companies and the ITEA proposals for ITEA Call 2022. At the submission deadline, 12 organisations from the UK were part of an ITEA Call 2022 Full Project Proposal (FPP).

The recordings of (the different programme elements of) this webinar can be checked at: <https://itea4.org/article/itea-call-2022-matchmaking-and-pitching-webinar-with-uk-partners.html>.



23 January

DEKRA ISO 9001 recertification audit

On 23 January, the ITEA Office successfully completed the ISO 9001 recertification audit conducted by DEKRA, a globally renowned testing and certification institution. This signifies that the ITEA Office's Quality Management System continues to meet all the requirements of the ISO 9001:2015 standard. The DEKRA certification, valid until 1 April 2026, reflects the commitment of the ITEA Office to maintaining a high level of quality in its operations.

For more information, please visit: <https://itea4.org/news/itea-office-successfully-passed-the-iso-9001-recertification-audit-1.html>.

13 February

ITEA Call 2022 FPP submission deadline

24 out of the 32 submitted POs were invited to submit a Full Project Proposal (FPP). By the deadline of 13 February, 21 FPPs had been submitted, with a total effort of 2,927 person-years.

21-23 March

Sweden Innovation Days 2023

The Sweden Innovation Days 2023, a digital event focusing on enabling innovation for a sustainable world, took place on 21-23 March 2023. The event was organised by Vinnova, the Swedish Energy Agency, Formas, SISP, Ignite Sweden, Business Sweden & AI Sweden and featured a digital mainstage programme, key experts, case studies, and interviews. A range of side events enabled participants to delve deeper into the topics covered on the main stage.

On 23 March, Vinnova and ITEA co-organised a dedicated side session focusing on learning more about how you can co-innovate with/as Swedish partners in international ITEA research projects on software innovation

and digital transition. During this session, Susanne Liljebblad from Vinnova shared information about the eligibility criteria and funding outlook in Sweden for innovative RD&I projects and ITEA Chairwoman Zeynep Sarilar introduced ITEA and its processes. Additionally, Mark van Helvoort, Program Manager Public-Private Partnerships MRI at Philips, showed the strong outcomes and benefits of participation in ITEA projects collaborating with Swedish partners, followed by Hubertus Tummescheit, CSO at Modelon, who presented their journey (within the ITEA programme) and advised on how you can successfully participate in ITEA as a (Swedish) SME.



The recording and the presented slides can be found at:

<https://itea4.org/news/recording-of-the-session-co-innovate-with-as-swedish-partners-in-itea-online-now.html>.

27 March

Announcement of labelled and rejected FPPs

On March 27, the ITEA Board officially labelled 20 innovative projects in ITEA Call 2022, reflecting a total effort of 2,751 person-years and engaging 348 organisations from 22 countries. Notably SMEs, contributing 47.9% of the overall effort, were well represented again, followed by large industries (26.3%), universities (15.4%), and research institutes (6%).

For more information about the coverage of ITEA's key challenges and the distribution of efforts per country, please check: <https://itea4.org/news/20-new-itea-projects-labelled-in-itea-call-2022.html>.

A short summary of the labelled ITEA Call 2022 projects can be found in section 2.4.

27-30 March

Eureka HLG Days, Riga

At the Eureka HLG Days, numerous bilateral meetings took place with representatives from various countries. Among them were delegates from existing ITEA supporting countries, including the Netherlands, Finland, Canada, and Germany. Additionally, discussions were held with representatives from newly funding countries such as Estonia, the UK, and Switzerland.

A significant part of the programme was devoted to presentations outlining the plans formulated by Türkiye for its upcoming Chairmanship. The main focus areas deal with Digitalisation and the Green Transition. Moreover, a dedicated Working Group was established to address initiatives related to disaster management, specifically focusing on challenges such as earthquakes.

30 March

ITEA Call 2022 Project leader briefing webinar

In order to support project leaders and technical contacts of the labelled ITEA Call 2022 projects to take off smoothly, the ITEA Office organised a Project leader briefing webinar on 30 March 2023. The webinar covered essential processes, including an introduction to ITEA and its procedures, along with valuable tips for a successful project initiation. Participants received guidance on preparing Change Requests, Project Progress Reports, and Project Reviews. Additionally, the webinar addressed communication and dissemination strategies.

Presentation materials and recordings for each topic are available for download at:
<https://itea4.org/article/project-leader-briefing-webinar-itea-call-2022.html>.

8-10 May

B2B International Software Days and Online Pitch sessions

On 8 and 9 May, the 7th International B2B Software Days took place at the Vienna City Hall in Austria. ITEA was invited by FFG, the Austrian funding agency, to host a dedicated open session on 9 May, shedding light on Eureka, the Austrian conditions for participating in ITEA, the benefits of participation through testimonials from the ITEA Community, and the advantages of including Austrian and any international partners in (future) ITEA consortia. Throughout both days, the event featured a small exhibition where ITEA attracted attention with a well-visited booth.



On 10 May, the virtual International B2B Software Day was organised as an online extension of the physical event held in Vienna. During this virtual event, ITEA organised an ITEA Innovation Challenges and Pitching session. Participants were given the opportunity to pitch their innovative ideas in the domain of software to our international audience and potential project partners, offering them a chance to kickstart the preparations for a potential future project proposal.

More information can be found at <https://2023.b2bsoftwaredays.com/>.

12 May - 31 August

25 years of ITEA Roadshow

To celebrate ITEA's 25th anniversary, the '25 Years of ITEA Roadshow' was launched. This Roadshow featured online and physical sessions organised in collaboration with national funding agencies from several countries supporting ITEA: Türkiye, the Netherlands, Spain, Canada, Belgium, Germany, the United Kingdom, Finland, and France.

These sessions were designed to provide newcomers with valuable insights into ITEA, information about funding opportunities in the respective countries, and the chance to learn from experienced partners about the benefits of participating in ITEA projects.



The Roadshow also offered participants the opportunity to present project ideas within the software innovation domain and showcase their expertise to potential future collaborators.

For a full overview of the Roadshow, along with links to all recordings, please visit: <https://itea4.org/25-years-of-itea-roadshow.html>.

7-8 June

ITEA Smart Cities customer workshop, Antwerp

On 7 and 8 June, ITEA organised its 9th international customer workshop in Antwerp, with a focus on Smart Cities - one of ITEA's key challenges. The workshop took place at Nokia's premises in Antwerp and was organised with the assistance of Esri Canada, Siemens, and BABLE.

The event brought together approximately 35 participants, including 12 city representatives, providing insights from the customers' perspective. Additionally, 18 solution providers, including large companies, SMEs and research organisations with expertise in the Smart Cities sector, actively participated in the workshop.

During the workshop, the following topics were discussed:

- > Environmental footprint
- > Mobility
- > City evolution planning
- > Security and crisis management

>>>



More information and a full report, including a detailed description of the challenges and proposed ideas, can be found at: <https://itea4.org/news/discover-the-challenges-from-the-smart-cities-customer-workshop-can-you-solve-them.html>.

20-22 June

Eureka HLG/NPC meetings, Brussels

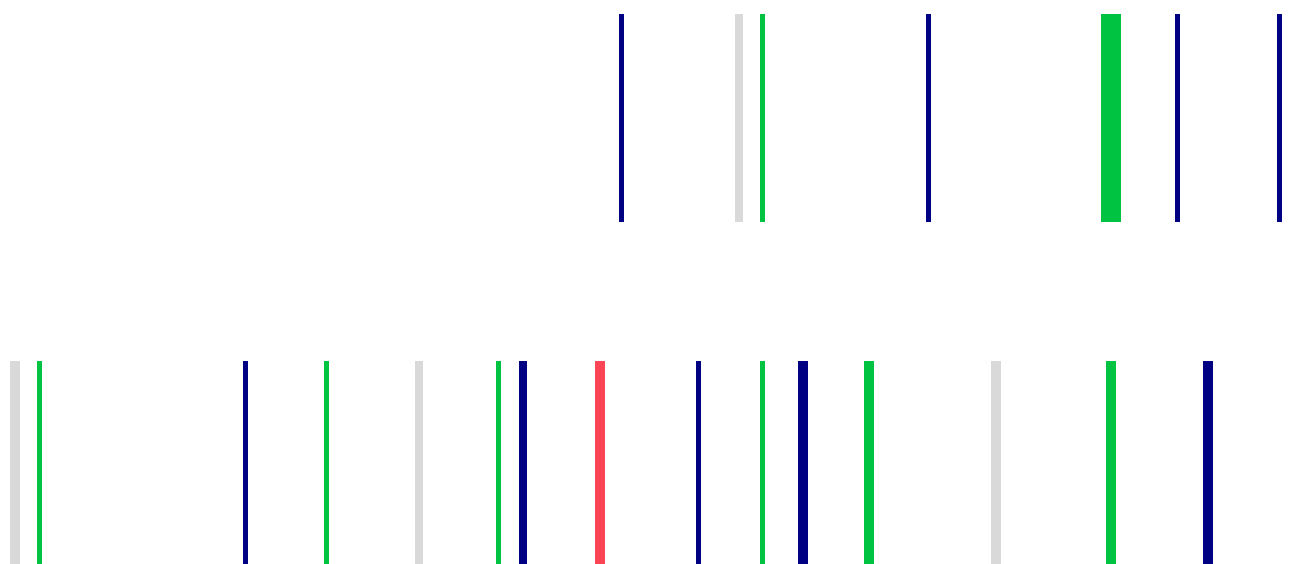
On 21 June, the HLG/NPC approved the Multi-Annual Plan (MAP) and the Annual Operating Plan (AOP), while CCFs shared a set of actions to conclude the mid-term assessment of the ECP. Additionally, the Turkish Embassy hosted a special event to commemorate the beginning of the Turkish Chairmanship in Eureka.

29 June and 12 December

Online Cyber Security Advisory Board meeting

To foster a dialogue between Cyber Security customers and innovative technology providers in the field, ITEA has formed the Cyber Security Advisory Board (CySAB). The ITEA CySAB meets (online) biannually: the initial meeting is dedicated to exchanging insights into the needs and challenges faced by customers, while the second meeting focuses on showcasing Cyber Security innovations stemming from the ITEA RD&I Community.

The challenges expressed during the first meeting are consolidated in a report, available for download from the dedicated CySAB portal: <https://itea4.org/cyber-security-advisory-board.html#challenges>.



12-13 September

Online ITEA Pre-PO Days sessions & ITEA PO Days 2023

Each year, ITEA launches a Call for innovative RD&I projects in the domain of software innovation. The ITEA Project Outline Preparation Days (ITEA PO Days), organised in conjunction with the Call opening, support consortia in finding the right partners and kickstarting the preparations for setting up a Project Outline.

This year, the ITEA PO Days consisted of several elements:

> (Online) Pre-PO Days sessions

– ITEA PO Days 2023 Preparation session

Based on our experience, we know that ITEA PO Days are an intensive, fully-packed event. Consequently, it is highly advisable to be prepared for the event well in advance. To assist with this, ITEA has set up the online ITEA Call 2023 Preparation session. This preparatory session was designed to enhance participants' understanding and readiness for the upcoming ITEA PO Days 2023 and covered the introduction of the Call and an explanation of the online brokerage tools. There was also opportunity for questions by the audience.

Check the dedicated webpage for slides and recordings:

<https://itea4.org/preparation-session.html>.

– ITEA Country information sessions

The ITEA programme is publicly funded at a national level. Each ITEA project partner can apply for funding from their own national Public Authority. An early dialogue between project teams and Public Authorities supports alignment with national priorities and the best possible opportunities for funding that lead to high success rates. That is why we offer Public Authorities the chance to present their national priorities, eligibility criteria and funding outlook before the ITEA PO Days 2023 in online country information sessions.

This year, 11 country information sessions were organised, the recordings of which can be viewed at:

<https://itea4.org/podays2023/national-priorities-eligibility-criteria-and-funding-outlook-2023.html>.

– ITEA Project idea pitch sessions

In order to enable all ITEA PO Days participants to learn about the project ideas upfront and optimise their time for fruitful discussions and consortia-building at the physical event, we have organised two online project idea pitch sessions in the week before the event. In total, 55 pitches were presented during the two sessions. For those who were unable to attend the sessions live, the recordings have been published at:

<https://itea4.org/podays2023/project-idea-pitch-session.html>.

– ITEA and PO Days introduction session for Canadian participants

On 11 September, an introduction to the ITEA PO Days was organised at the Canadian Embassy for Canadian organisations visiting Berlin for the ITEA PO Days. The event, with the collaboration of German participants, featured presentations from Canadian Public Authorities outlining funding conditions for ITEA. German organisations provided insights into technology strategies in Germany, while ITEA shared its success stories with the participants.



› ITEA PO Days – physical event

On 12 and 13 September, the physical event took place in the Palace Hotel in Berlin, attracting nearly 300 participants from 18 different countries.

The programme consisted of the following elements:

– Plenary information sessions

During a set of plenary information sessions, proceedings were opened with a welcome message from the Ministry of BMBF, (new) participants were introduced to ITEA, the event itself and ITEA's annual Call process.

– Interactive poster session

During this session, the first face-to-face interactions took place to discuss and discover possible future collaborations.

– Constructive workgroup sessions

In (small) groups, participants started exploring possible consortia and developing the first steps towards a Project Outline. The results of these sessions were presented plenary at the end of both days.

› ITEA PO Days in numbers

- 306 registrations/293 participants (13 no-show)
- 18 countries
- 83 project ideas uploaded to the project idea tool
- 55 online project idea pitches
- 57 project idea posters
- 17 plenary project idea update presentations
- Record high overall evaluation score of 4.3 out of 5.0

A full report on the event can be found at

<https://itea4.org/news/itea-po-days-2023-interest-in-itea-still-high-after-25-years.html> and
<https://itea4.org/magazine/46/november-2023/25-years-of-itea-po-days-through-time.html>.

All recordings and presentations can be downloaded from the dedicated ITEA PO Days 2023 website:

<https://itea4.org/podays2023>.

This year, the ITEA PO Days event was extended with a half-day programme consisting of the ITEA Awards of Excellence ceremony and the 'Highlights of the ITEA Impact' project poster exhibition.

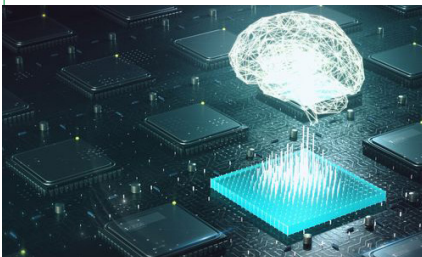


13 September

ITEA Awards of Excellence ceremony

On Wednesday 13 September, during the ITEA Awards of Excellence ceremony, we celebrated the exceptional outcomes of ITEA's three most outstanding software innovation projects that finished between mid-2022 and mid-2023.

ITEA 3 Call 5



IVVES - 18022

Industrial-grade Verification and Validation of Evolving Systems

Project leader: [Philips Medical Systems Nederland B.V. \(NLD\)](#)

The use of artificial intelligence (AI) is rapidly increasing and, in many domains, we are experiencing the strong benefits of AI, including reduction in human error, 24/7 availability, unbiased decisions and faster decision-making. On the other hand, more and more questions are being raised concerning the use of AI and how to make sure it is safe and correct. This is especially the case for fields like transportation, finance, healthcare, industrial automation, and cyber security, which are strictly regulated domains as a mistake can have huge consequences. The ITEA project IVVES has developed new verification and validation methods, ensuring the trustworthiness and reliability of AI and ML in these environments. IVVES received the ITEA Award of Excellence 2023 for Innovation.

ITEA 3 Call 4



SAMUEL - 17010

An intelligent platform for additive manufacturing

Project leader: [3DSemantix \(CAN\)](#)

Additive manufacturing (AM), also known as 3D printing in industrial production, is a rapidly progressing technology through which digital designs are directly transformed into physical objects. AM opens the door to customised products, rapid prototyping and innovative production solutions. As demand for 3D printed parts grows, it is a challenge to balance certified manufacturing with cost reduction. Many actors in the field lack awareness of new advancements, whilst reconciling data collection and reuse with intellectual property protection is difficult. The ITEA project SAMUEL has created innovative solutions to help additive manufacturing users learn more and improve their work, thereby making the whole process more consistent, reliable and trustworthy. SAMUEL is also a winner of the ITEA Award of Excellence 2023 for Innovation.

ITEA 3 Call 4



I²PANEMA - 17003

Bringing the value of IoT to the world of ports

Project leader: [Materna Information & Communications SE \(DEU\)](#)

Ports around the world face numerous challenges, from managing increased cargo demand to ensuring efficiency and sustainability in the face of urbanisation and labour management issues. I²PANEMA, comprising 17 partners from Germany, Spain and Türkiye, has integrated IoT solutions and new services for data handling in ports to enhance efficiency, sustainability and supply chain resilience in various port business cases. With a focus on data management and analysis, the project has achieved remarkable outcomes, including noise reduction, container localisation and logbook digitalisation. By leveraging IoT, I²PANEMA is revolutionising port operations. I²PANEMA is the winner of the ITEA Award 2023 for Exceptional Excellence.

13 September

ITEA exhibition 'Highlights of the ITEA impact'

As ITEA had not participated in any exhibition events since 2021, we organised an ITEA poster exhibition as an integral component of the ITEA PO Days 2023. 30 ITEA projects showcased their results and impact, and the ITEA Office offered guided tours for high-level attendees. This initiative not only served to highlight the outcomes of ITEA projects but also facilitated networking among diverse ITEA project partners and was highly appreciated by the participants.



The showcased posters from this exhibition are available at:
<https://itea4.org/itea-project-exhibition-2023.html>.

13 September

ITEA high-level workshop

The post-PO Days high-level workshop brought together 30 representatives from government and industry and fostered a dynamic exchange of software RD&I strategies. The discussions not only explored emerging collaborative themes and actions but also touched upon important national priorities shaping the trajectory of software innovation. The input will be used to further improve the ITEA programme, ensuring its ongoing competitiveness and effectiveness.

25-27 October

Major Cities of Europe 2023 conference, Prato

Major Cities of Europe held their annual conference on 25-27 October in Prato, with the theme 'A Loom With a View – Weaving the digital future of communities, cities and regions'. The goal of the conference was to explore and discuss the impact of digitisation and the climate transition in local public administrations as well as the impact of emerging technologies for the development of public services, for physical and IT security, for policies and projects in managing the climate transition and for the development of the new skills required. ITEA Chairwoman Zeynep Sarilar was invited to introduce ITEA to the attendees and to provide a presentation on 'AI and Digital Twins of Cities'. New collaboration opportunities with Major Cities of Europe, the ITEA Community and the ITEA Smart City Advisory Board may be explored in 2024.



30 October - 1 November

Korea Eureka Day 2023, Seoul

From 30 October to 1 November, the Ministry of Trade, Industry and Energy (MOTIE) of the Republic of Korea organised the Korea Eureka Day 2023 in Seoul in collaboration with the Korea Institute for Advancement of Technology (KIAT) and with the support of the Türkiye Chairmanship and the Eureka Secretariat. The primary objective of this event was to enhance and diversify the exchange of ideas and foster collaboration between the research and development stakeholders of Korea and Europe. The Eureka Clusters, including ITEA, were presented by ECP CCF for Industry, Sébastien Aubron.

During the Dutch country session, two project partners of the ITEA [MOS2S](#) project (TNO and ETRI) were invited to share their experience and present their project outcomes in the presence of the Dutch Ambassador and the audience. In addition, the impact of the ITEA projects with Dutch participation was also presented to MOTIE and KIAT during the Netherlands-Korea Joint Innovation Council.



More information:

<https://itea4.org/news/korea-eureka-day-2023-bridging-innovation-between-korea-and-europe.html> and <https://koreaeurekaday.kr/>.

1 November

ITEA moves to the AI Innovation Center

As of 1 November, we have moved to a new, more compact yet highly flexible office situated within the AI Innovation Center at the heart of the High Tech Campus. This relocation enhances our connectivity with companies operating in the AI domain, allowing us to fully leverage the available ecosystem on the High Tech Campus.



9 November

UK Eureka Clusters briefing webinar

This information webinar aimed to inform potential applicants about some of the funding opportunities within Eureka supported by the UK. The UK Programme Management Team at Innovate UK and representatives of the Eureka Secretariat and Eureka Clusters provided an overview on upcoming opportunities and Calls. Prospective applicants had the opportunity to ask for advice on the application process and join small interest groups.

Recordings and slides are available at:

<https://iuk.ktn-uk.org/events/eureka-programme-overview-information-webinar/>.

13 November

PO submission deadline for ITEA Call 2023

At the deadline for the Project Outlines for ITEA Call 2023, 37 proposals had been submitted with a total effort of 4,460 person-years.

14 November

Eureka Info Day, Luxemburg

This information day offered participants the chance to learn about the various programmes and initiatives that are coordinated by Eureka, such as Eurostars and other specific Cluster Calls. Furthermore, participants had the opportunity to learn about success stories, participate in engaging panel discussions, meet directly with representatives from public agencies involved in the network, and discuss topics of interest with companies from member states.

For more information, please visit: <https://www.luxinnovation.lu/event/eureka-day-2023/>.

16 November

Online Clusters workshop for new countries

This online workshop was organised to enhance awareness and knowledge regarding the Eureka Clusters. Each of the five Clusters was presented, offering insights into their focus areas and showcasing some examples of best practice cases/projects.

20-22 November

Eureka HLG/NPC Days, Ankara

On 21 November, ITEA presented its 25 years' success story with a presentation at the HLG meeting. The presentation encompassed the impact stories of ITEA over the years, outlining the timeline and emphasising the high return on investment (RoI) for ITEA projects within various countries, and expressing gratitude for the support received. Additionally, CCFs of ECP shared the mid-term report on ECP with HLG.

Throughout these sessions, a workshop on ECP Governance took place exclusively with PAC and another combined session took place PAC-SG and CC-SG. During these sessions, various new governance models were discussed, each assessed on its advantages and disadvantages.

23 November

Publication of 'ITEA - The fast track to software innovation'

Year after year, remarkable results are delivered through bottom-up ITEA projects, contributing to a substantial impact on society, the economy, and everyday life. This impact is achieved through the collaborative efforts of ITEA project partners, supported by national Public Authorities. A selection of these impactful outcomes has been documented in our recently released publication, 'ITEA – The fast track to software innovation':

<https://itea4.org/itea-publication/itea-the-fast-track-to-software-innovation.html>.



27 November

Smart City Advisory Board meeting, online

To foster a dialogue between Smart City customers and innovative technology providers in the field, ITEA has formed the Smart City Advisory Board (SCAB). The ITEA SCAB meets (online) biannually: the initial meeting is dedicated to exchanging insights into the needs and challenges faced by customers, while the second meeting focuses on showcasing Smart City innovations stemming from the ITEA RD&I Community. This year, the first meeting was replaced by the Smart Cities customer workshop.

The challenges expressed during the workshop are consolidated in a report, available for download from the dedicated portal: <https://itea4.org/smart-city-advisory-board.html#challenges>.

30 November

Bittium joins the ITEA Board

Since the beginning of ITEA 25 years ago, Finland has been a very strong and stable supporting country with nearly 120 ITEA projects and over 250 participating partners. To underline this position of Finland and to strengthen the ITEA programme, the ITEA Board has unanimously welcomed Bittium as a new member.

For the full press release, please visit:

<https://itea4.org/press-release/press-release-bittium-strengthens-connection-and-becomes-itea-board-member.html>.



13 December

AI Meetup High Tech Campus, Eindhoven

Every year, the AI Innovation Center on the High Tech Campus in Eindhoven organises several meetups to gather professionals from the AI Community, with the aim of sharing knowledge and creating new opportunities. As AI is becoming increasingly important in software innovation, ITEA was invited to present itself as a new resident of the AI Innovation Center and to share the (collaboration and funding) opportunities ITEA has to offer to the AI Community.

18 December

Publication of ITEA Impact stories 2023

Marking an incredible 25-year journey since its inception, ITEA stands as the catalyst behind over 300 RD&I projects. This collective effort has harnessed more than 35,000 person-years, a remarkable €3.7 billion in combined public and private investments, and many innovations that have shaped industries and lives.

Some examples of these life-changing innovations are gathered in the ITEA Impact stream: <https://itea4.org/impact-stream.html>. This year, this online living publication extends its collection to 40 stories! Among these, there are the four newly added stories showcasing extraordinary impacts of PARTNER, VMAP, IMPACT and TESTOMAT Project.



See also:

<https://itea4.org/news/unveiling-four-new-groundbreaking-stories-revealing-iteas-continuous-impact.html>.

19 December

Announcement of ITEA Call 2023 POs invited for FPP submission

On 19 December, 25 out of the 37 proposals, with a total effort of 3,316 person-years have been invited to submit a Full Project Proposal before the deadline of 19 February 2024.

21 December

ITEA Call 2023 FPP Briefing webinar

In order to support project leaders, technical contacts and country coordinators of the approved ITEA Call 2023 Project Outlines in preparing a high-quality FPP, the ITEA Office organised an FPP briefing webinar on 21 December 2023. During this webinar, the participants were able to learn more about the PO submission statistics & evaluation feedback from ITEA Call 2023 and the Full Project Proposal (FPP) preparation.

The recording and slides of this session are available at:

<https://itea4.org/article/fpp-briefing-webinar-itea-call-2023.html>.

1.2 Results of the ITEA 2023 Improvement priorities

As part of our annual quality process, key improvement priorities were collaboratively defined with the ITEA Board to strengthen the ITEA programme. In 2023, the primary focus was on successfully launching the 2023 Call. The fully-booked ITEA PO Days event, featuring a near record-high number of project ideas and resulting in 37 submitted POs, clearly indicated sustained high interest in ITEA.

Efforts were also directed towards enhancing knowledge and awareness of ITEA, its projects, and their impact among stakeholders. Numerous sessions were conducted as part of the 25 years of ITEA Roadshow, an exhibition that showcased results from ongoing and recently completed projects, and a high-level workshop that brought together 30 representatives from government and industry to foster a dynamic exchange of software RD&I strategies. The recently published 'ITEA - The fast track to software innovation' report delves into ITEA's unique properties and highlights its projects' results and impact.

To address the trend of decreasing Call sizes, new funding opportunities were explored, involving committed countries such as the UK, Switzerland, and Hungary. Additionally, there have been strong efforts by Canada and Türkiye to bring the Clusters and their potential to the attention of the High Level Representatives, resulting in increased interest.

Ongoing efforts included active participation in ECP groups for governing ECP execution, customer orientation through Advisory Board meetings and a customer workshop, expanding the Board with the inclusion of Bittium, augmenting the ITEA Impact stream with four new stories (refer to section 1.3.2.), and maintaining operational quality, confirmed by DEKRA through the ISO 9001 recertification.

1.3 ITEA 2023 Impact highlights

Through the ITEA programme, ITEA projects are always looking for improvement on the current state of the art, such as in production processes, the alignment of information streams and energy optimisation. Via a supportive coaching approach, ITEA helps partners to get the most out of their project participation.

After visiting the 2023 timeline of ITEA in section 1.1 and the results of the high-level 2023 improvement priorities in section 1.2, we take you to some of our main achievements and impact in section 1.3.

1.3.1 ITEA - The fast track to software innovation

Since 1998, ITEA has been fostering software innovation as an impactful and economic instrument. This report contains the unique properties of ITEA as a Eureka Cluster, a number of examples of the impact that has been achieved since the beginning of ITEA and proof of ITEA's eagerness to continue and improve.



In 2023, ITEA celebrated its 25th anniversary. With the continuous interest, commitment, ambition, and creative ideas of the ITEA Community and with the valuable trust and strong support of Public Authorities and Bodies, ITEA has become the fast track to software innovation with high return on investment.

As software innovation will become more and more important in our lives, touching more and more aspects and topics in the future, we look forward to continuing this success by strengthening collaboration even further within our network but also with additional countries and new (industrial) partners. ITEA is an open, trusted Community, and we hope this will expand and create more impact for all.

ITEA is ready to shape the future to keep industries and societies future-proof.

Discover the publication at <https://itea4.org/itea-publication/itea-the-fast-track-to-software-innovation.html>.

1.3.2 ITEA project Impact stories

As impact is one of ITEA's main ambitions, we have been gathering remarkable project Impact stories since 2017, and a total of 40 stories have already been published. Below, you can discover the highlights of four outstanding projects that have recently been added to the long list of ITEA Impact stories. The full (overview of) Impact stories can be found online via <https://itea4.org/impact-stream.html>. There, you can also create your own personal ITEA Impact stream by choosing the challenges, countries, and topics of your interest.

PARTNER Impact story

During a patient's journey through the health system, his or her medical information is often stored in multiple databases focusing on specific elements of the needed care and the patient's condition – even within one hospital. These databases generally cannot interact, which makes it impossible to draw up all information belonging to one patient. In addition, information coming from self-monitoring solutions can also be very valuable when integrated with hospital's data. The PARTNER project has developed an architecture that makes it possible to let different systems, offered by multiple vendors, communicate with each other.



Impact highlights:

- › PARTNER demonstrates that a patient-centric approach with an optimised collaborative care team leads to greater efficiency – up to a 10% improvement compared to traditional workflows – and a knock-on effect of lower healthcare costs.
- › For patients, the PARTNER approach should result in better health outcomes and, above all, a higher quality of life even when ill.
- › The successful collaboration in PARTNER has resulted in clear commercial opportunities for the consortium; every contributor involved has released new products and services, ready to be installed in several hospitals for further trials.
- › Barco's Synergi represents a new business case and has allowed Barco to push further into the health domain. Synergi can lead to a significant improvement in the efficiency of multi-disciplinary team meetings, as well as a significant reduction in the time between the referral of the patient and the commencement of treatment.
- › For iClinic in Canada, participation in the PARTNER project led to three additional full-time employees. In 2021, €200,000 of additional revenue was achieved and much more is expected in the future.
- › MEDrecord licensed its platform as a service, enabling four additional sales in 2022 based on the developments done within the PARTNER project. MEDrecord has also become a Microsoft partner in order to sell the MEDrecord APIs via the Azure marketplace.
- › The PARTNER experiments impacted the nature of SOPHEON's innovation management products: they are being launched to the global market and already have thousands of initial users.
- › Barco Healthcare had two startup initiatives, one of which was Synergi. In addition, ETRI also transferred the technology to DATAIZE, a Korean startup.

STARLIT Impact story

The global incidence rate of cancer is expected to grow by 70% over the next two decades, with radiation therapy (RT) treatment currently recommended for 52% of new patients. Although radiation oncology has caused a drop in mortality for several cancers, the need remains to reduce side effects. The solution lies in 'first-time-right' treatment in which the right dose is given to the tumour while keeping the dose to healthy tissue as low as possible. STARLIT - a follow-up to the award-winning ITEA project SoRTS - developed technology to improve treatment accuracy and minimise the unintended dose in image-guided radiation therapy.

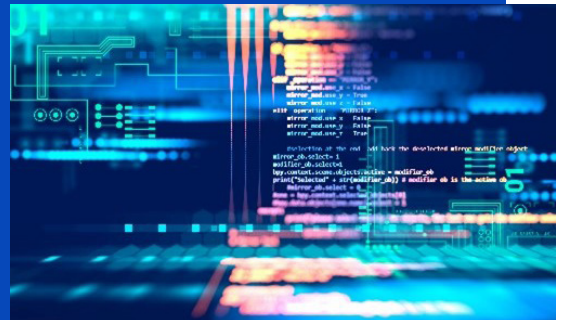


Impact highlights:

- As a result of the STARLIT project, the number of radiotherapy treatments needed for cancer patients will be reduced and so too will the related burden.
- A cancer patient can also benefit from a risk reduction of side effects as less tissue is damaged. This improves the overall safety of the treatment and reduces recovery time.
- The projected annual top-line revenues for the consortium are over USD 650 million after 2020.
- Before the project, low-latency motion detection for tracking was clinically impracticable or suffered delays of over 500 ms, whereas STARLIT has created a prototype with delays of just 200 ms.
- High-resolution imaging has also seen an enormous boost thanks to STARLIT: an echo time reduction from over 100 ms to 70 ms, a 20-30% increase in signal-to-noise ratio (this ratio compares the level of a desired signal to the level of background noise) and a decrease in distortion from more than 10 mm to less than 1 mm.
- Elekta has already received over 80 orders in more than 25 countries.
- Philips had sold roughly 10,000 Compressed SENSE software licences by Q4 2022, which have been used in nearly 25 million examinations.
- Thanks to participation in STARLIT, Tesla Dynamic Coils (TDC) was able to address a new market for flexible and wearable coils which increase the comfort for the patient, especially children. They are maturing the technology to TRL 8.
- In addition to generating 19 full-time positions within the consortium, STARLIT has led to eight master's theses, one PhD thesis and four new courses at Utrecht University.

TESTOMAT Project Impact story

In software development, reliability and agility often seem like opposing forces. This issue is aggravated by the increasing complexity of software and the constant drive towards faster release cycles for maximum market impact. The goal of ITEA's TESTOMAT Project was to allow software teams to increase development speed without sacrificing quality. To achieve this goal, the project advanced the state of the art in test automation for software teams, moving towards a more agile and automated development process. The project focused on providing software teams with personalised roadmaps for improving their automated testing in a cost-efficient manner.



Impact highlights:

- The TESTOMAT Project's great strength is its customised nature, which guarantees promising results regardless of the level of automation already found within a company. For those using fully manual testing, an average improvement of 60-80% can be gained in their time to market.
- For already-automated companies, 15-30% fewer faults are predicted thanks to the TESTOMAT Project. These achievements, resulting in fewer bugs in software, are fundamentally important as nowadays people totally rely on and trust, for example, the use of software tools in healthcare, scientific experiments and many more domains.
- An advantage for the Finnish industry partner Ponsse was that the execution of tests was 25% faster with test automation and it was able to execute tests automatically outside of office hours. Nowadays, Ponsse's simulators run test automation outside of office hours, saving about 500 hours/week of functional testing work for testers. Alongside this, Ponsse has been able to reduce defects that could have ended up in the customer's product by 20%.
- Ericsson already carried out completely automatic testing but still saw a 29% improvement in product quality thanks to the TESTOMAT Project.
- Likewise, Saab increased its number of product users by 440%, leading to higher quality in earlier development phases.
- Spanish SME Prodevelop managed a 220% increase in test efficiency using to the TESTOMAT Project outcomes.
- Within the project's duration, the TESTOMAT Project had already established 23 university courses on test automation, 22 industry-academia transfers, and 27 new employees within the consortium.
- A book on AI testing has been published by a PhD student who participated in the TESTOMAT Project – and was recruited by Ericsson afterwards – and another book will be released by Springer in the future.

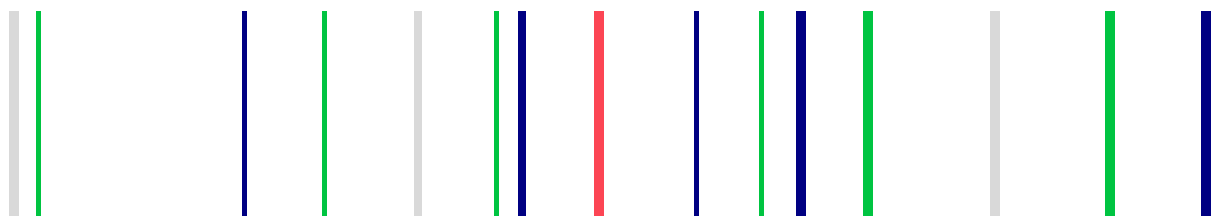
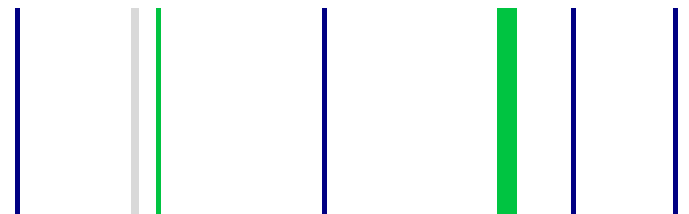
VMAP Impact story

A wide range of computer-aided engineering (CAE) software tools already enable virtual material and product design, virtual manufacturing and machining process parameterisation, and virtual product testing of high-tech materials. However, these tools are rarely interoperable and contain multiple native formats for storing the CAE data to be transferred between simulation code. The VMAP project has created the world's first CAE workflow interface standard for integrating multidisciplinary and multi-software simulation processes in the manufacturing industry and its major result is simple: setting up and adapting workflows in computer-aided engineering is now quicker, easier and more cost-effective than ever before.



Impact highlights:

- › The VMAP project has created the world's first CAE workflow interface standard for integrating multidisciplinary and multi-software simulation processes in the manufacturing industry. This standard is vendor-neutral, cost-free and completely open. The first public version of the standard was announced by the VMAP project in January 2020, before the end of the project.
- › As a result of VMAP, Philips boosted the innovation speed of highly complex parts by almost 50%.
- › The time spent on strength assessments in the moulding of plastic parts by RIKUTEC Richter Kunststofftechnik in Germany has been reduced by 42%.
- › The set-up time for virtual process chains for lightweight automotive components with composites within a prominent German car manufacturer fell by 40%.
- › The VMAP Standards Community e.V. (VMAP SC) was created in December 2022 by 16 founding members. It currently contains more than 150 entities, including large players such as Bosch and Philips, and has good links with other standardisation groups such as Modelica/FMI, the European Material Modelling Council and the ISO STEP 242 community.



1.4 25 years of ITEA anniversary

2023 marked 25 years of ITEA. Over this period, the ITEA Community has grown to over 2,000 unique project partners from large industry, SMEs, universities and research institutes in 37 countries worldwide, creating huge impact and changing businesses and lives.

To mark this remarkable 25th anniversary, a series of activities have been organised throughout the year to celebrate the strong and unique collaboration within ITEA. First of all, we have compiled an inspiring video with some of the most memorable moments:



<https://vimeo.com/863538531>

Additionally, we have set up a Country Roadshow (refer to the timeline in section 1.1) and organised roundtable sessions with esteemed project partners and ITEA Steering Group members. During these sessions, we delved into important topics such as diversity, equality, and inclusivity, exploring potential enhancements. Moreover, we took the opportunity to reflect on memorable moments and conducted interviews with ITEA Community members who have witnessed and played pivotal roles in crucial phases of ITEA's journey.

A comprehensive overview of all activities including recordings and magazine articles can be found at <https://itea4.org/25-years-of-itea.html>.

1.5 ITEA stakeholder satisfaction

Together, the different stakeholders of ITEA create the strong ITEA Community that forms the central point of the ITEA programme. Given the importance placed on quality by ITEA, the opinions, ideas, and experiences shared within the ITEA Community are highly valued, as they contribute significantly to the ongoing improvement of the ITEA programme.

To collect this valuable information, ITEA conducts surveys following each event and completed process, including the PO phase, the FPP phase, reviews, project start-up and completion. Each survey comprises inquiries about the participants' experiences during the respective process or event and welcomes suggestions for potential improvement. The results of each survey are discussed within the ITEA Office and issues are resolved or further investigated. Presented here are some of the results and highlights from the 2023 surveys:

ITEA Stakeholder satisfaction survey results 2023 vs 2022

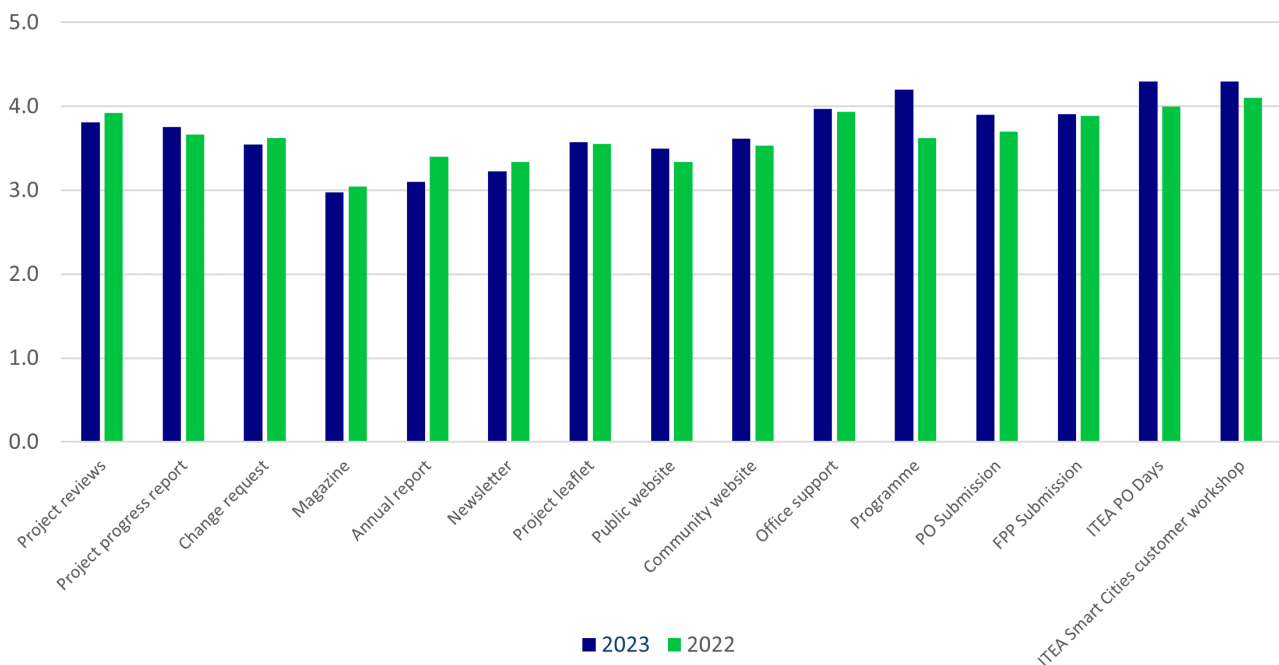


Figure 1: Evaluation scores of the project leader and technical contact satisfaction surveys and event surveys, 2023 vs 2022. Scores are measured on a scale of 5, where 1=very poor, 2=poor, 3=good, 4=very good and 5=excellent or an equivalent of these values.

- > 99% of all respondents of six different surveys would recommend ITEA to a colleague.
- > Unique benefits of the ITEA proprogramme, according to participants, are its strong ecosystem, flexibility, bottom-up and close-to-the market approach, openness, professionalism, encouraging and excellent support and the family feeling.
- > ITEA Office support is evaluated with a 4.2 out of 5 (where 4 is very good and 5 is excellent).
- > Both the ITEA PO Days and ITEA customer workshop received all-time record scores in 2023; respectively 4.26 and 4.27 out of 5.

2/

Calls overview

2.1 ITEA programme size (status on 16 January 2024)

Currently, ongoing projects span across two Calls from ITEA 3, two Calls from ITEA 4, and three Joint Eureka Clusters Calls: the AI Call 2020, AI Call 2021, and Sustainability Call 2022. Additionally, the PO stage of ITEA Call 2023, the third Call of ITEA 4, has recently come to a close. This delivered a total of 37 projects with submitted Project Outlines (PO) and, following evaluation, 25 of these projects were selected to proceed to the Full Project Proposal (FPP) stage, with a submission deadline set for 19 February 2024.

Within the ITEA 3 Programme, a total of 70 projects have been successfully completed, with 16 concluding in the last 12 months. Currently, 39 projects are in progress (12 from ITEA 3, 13 from ITEA 4, and 14 from the Joint Eureka Clusters Calls). Meanwhile, 20 projects that have received the ITEA label now await final funding decisions (17 from ITEA 4 and three from the Joint Eureka Clusters Sustainability Call 2022, with ITEA as the main Cluster).

Number of ITEA projects per project status since the start of ITEA 3

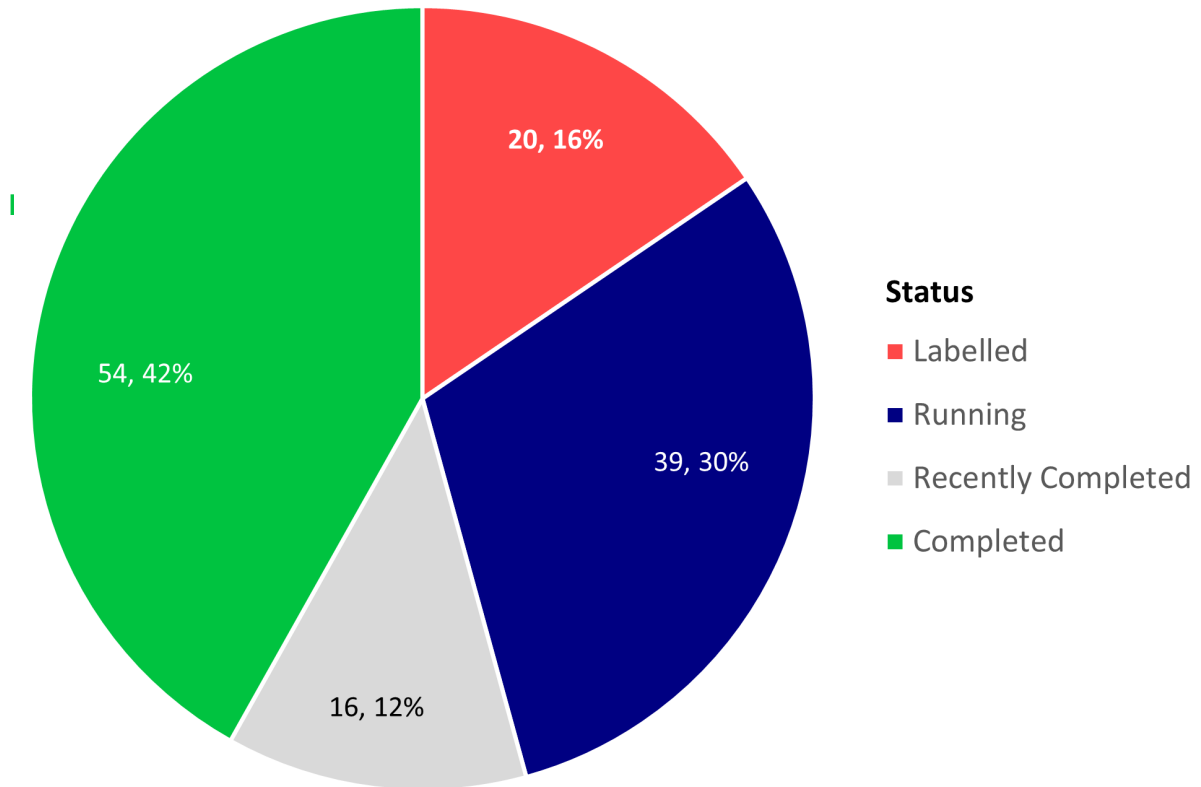
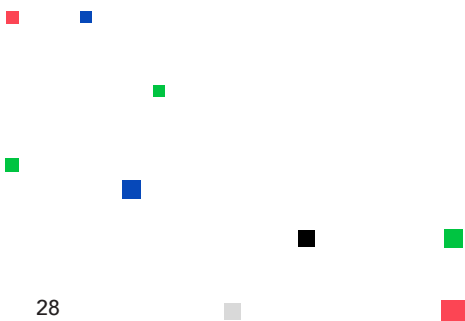


Figure 2: Number of ITEA projects per project status since the start of ITEA 3

All projects of Calls 1 to 5, initiated under ITEA 3, have successfully concluded, with respective funded Call sizes of €103 million, €114 million, €104 million, €123 million, and €94 million. However, due to funding constraints and delays in decision-making for Call 6, only nine out of the planned 20 projects were initiated, resulting in a reduced funded Call size of approximately €60 million. ITEA 3 Call 7 signals a modest increase, with the funded amount expected to be around €68 million.

For ITEA Call 2021, characterised by its smaller scale, the realised funded Call size will reach approximately €52 million. Furthermore, the Joint Sustainability Call 2022, running alongside ITEA Call 2021, is anticipated to reach a funded size of about €1 million.

As funding decisions for ITEA Call 2022 are delayed, only 20% of the projects are currently underway. Consequently, forecasting for this Call is challenging. Nevertheless, despite the uncertainties, there is a discernible increase compared to ITEA Call 2021. An estimated funded amount for ITEA Call 2022 is around €85 million.



(Estimated) funded Call size of ITEA Calls and Joint Eureka Clusters Calls in €M



Figure 3: ITEA (estimated) funded Call sizes in million euros.

2.2 ITEA Calls and Joint Eureka Clusters Calls progress

The next graph illustrates the progress of ITEA Calls through various hit rates. These hit rates represent the percentage of projects, efforts, and costs that have been successfully completed or are currently in progress within the ITEA programme, in comparison to the initially planned projects, efforts, and costs submitted in the FPP stage.

Hit rate of ITEA projects and Joint Eureka Clusters Calls projects

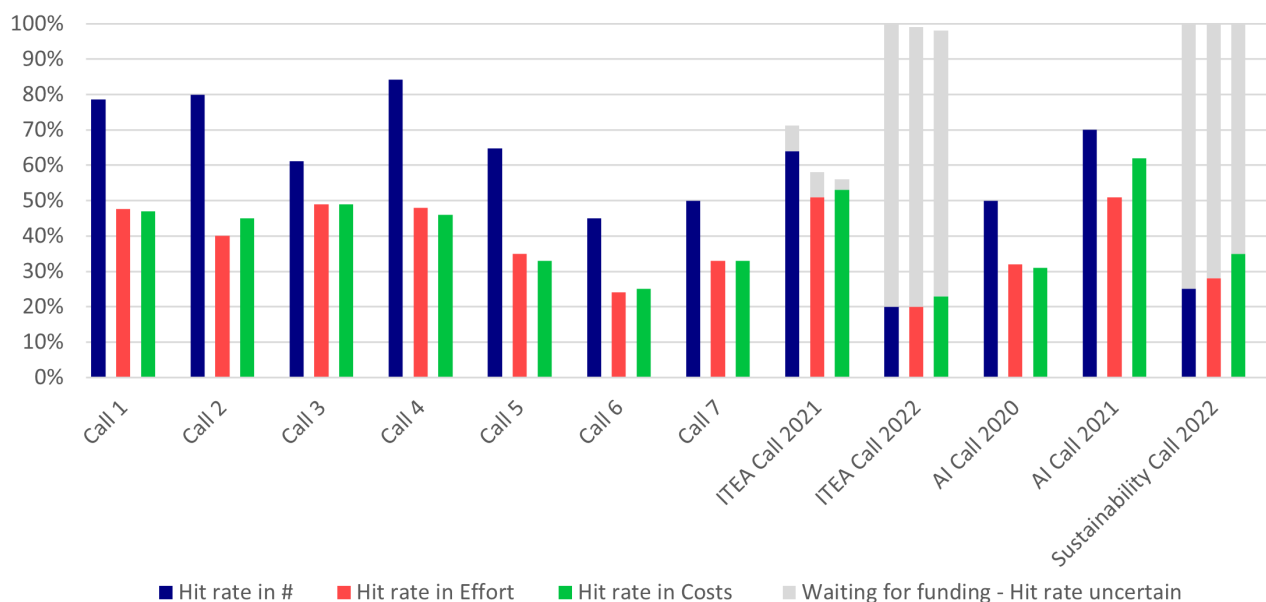


Figure 4: ITEA hit rates for ITEA 3 Calls 1 to 7, ITEA 4 Calls 2021 and 2022, the Joint Eureka Clusters AI Call 2020 and AI Call 2021 and Sustainability Call 2022 as of 16 January 2024. Figures based on latest FPP.

All projects in ITEA 3 Calls 1 to 5 have now been completed. ITEA 3 Call 6 and Call 7 are still subject to some (minor) changes as Change Requests can be submitted for ongoing projects. Nevertheless, these Calls are rather stable now. The same goes for the Eureka Clusters AI Call 2020 and AI Call 2021.

Following the low hit rates in Call 6, there has been a significant improvement in ITEA 3 Call 7, ITEA Call 2021, and AI Call 2021. However, uncertainties persist for ITEA Call 2022 and Sustainability Call 2022, making it challenging to provide a precise estimation of the final hit rates for these Calls.

The table below shows the status of ITEA projects at the of 2023 and 2022, respectively.

	2023			2022		
	#	Effort in PY	Cost in €M	#	Effort in PY	Cost in €M
Labelled during the year	20	2742	231	18	2417	194
Running at the end of the year	36	2773	249	48	4485	402
Waiting at the end of the year	23	2888	220	13	1323	85
Completed during the year	16	1439	141	13	1177	96
Cancelled during the year	6	680	53	5	512	48

Table 1: Status of ITEA projects in 2023 and 2022 as of 31 December 2023 and 31 December 2022 respectively. Figures are based on labelled and latest FPPs. Note: the figures include the ITEA projects that resulted from the Joint Eureka Clusters Calls as these projects become ITEA projects after labelling (if they indicate ITEA as the main Cluster).

Months between idea and project start of ITEA projects

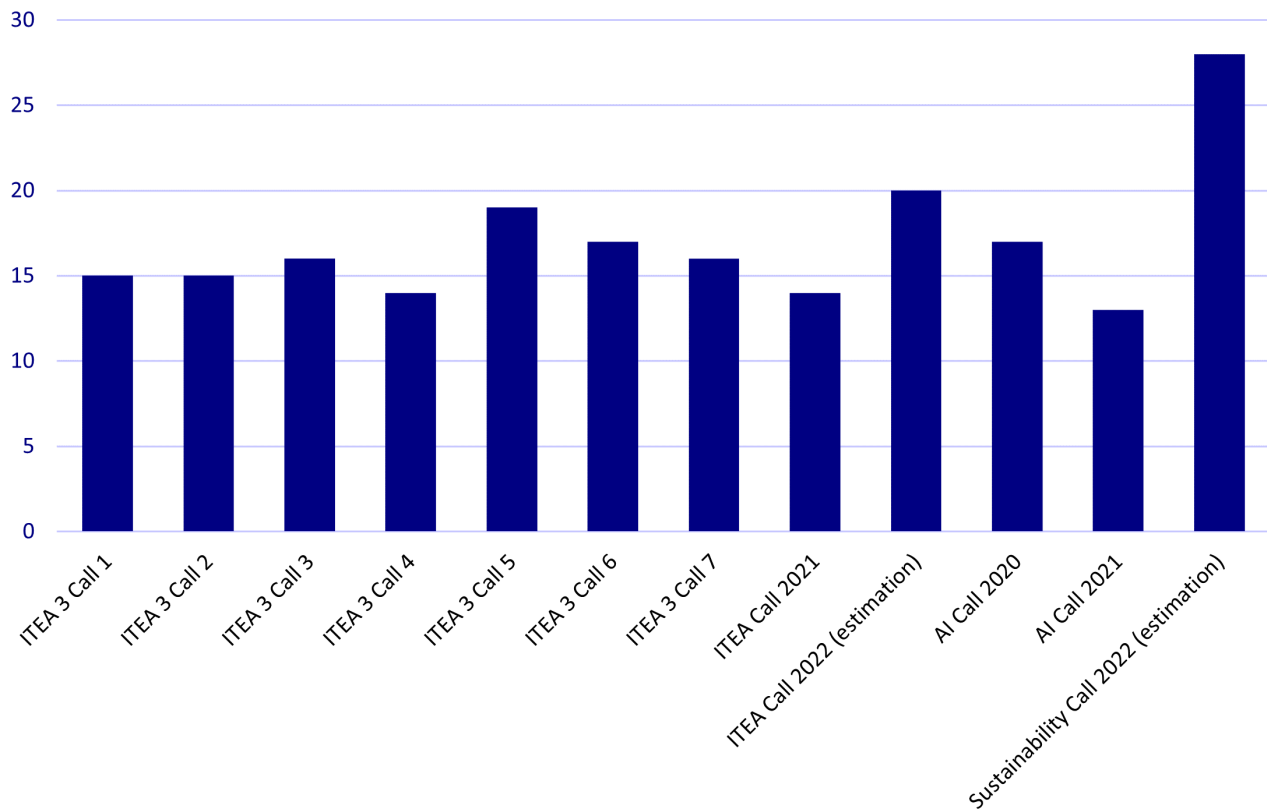


Figure 5: Time from ITEA project idea to project start (when >50% of the projects of the Call have started) from ITEA 3, ITEA 4 and the Joint Eureka Clusters Calls.

Despite the label validity deadline, there hasn't been a systematic reduction in the time to project. Specifically, ITEA 3 Call 5 experienced a prolonged time to project compared to previous Calls, influenced by funding decisions in Germany and evolving circumstances in France. Call 6 was unique, failing to meet the 50% hit rate threshold for projects initiated, with only nine out of 20 projects launching.

In a positive turn, Call 7 achieved a shorter time from idea to project, completed in 16 months - an improvement over Call 5 and Call 6. AI Call 2021 and ITEA Call 2021 both reached the 50% threshold in 13 and 14 months, respectively, getting closer to the desired timeframe of 12 months or less. However, this favourable trend did not persist for ITEA Call 2022 and the Sustainability Call 2022. Projections indicate that the 50% hit rate may only be achieved after 20 months or more, making this a remaining improvement priority.

2.3 Project landscape

To create innovation-driven growth, ITEA needs to focus on future markets and the challenges posed by a fast-changing world in which 'smart' is the key concept. At present, there are eight main societal challenges that the ITEA Community addresses. The figure below shows the distribution of the ITEA 3 and ITEA 4 projects across these challenges, except for the Smart Energy challenge that was introduced only in 2021. Over time, the strongest contribution has been in the field of Smart Engineering, with a very good coverage of the Smart Health, Safety and Security and Smart Industry challenges as well. As Joint Eureka Clusters Calls do not use the same main societal challenges, figures from these Calls are not represented in this graph below.

Project landscape - projects per challenge

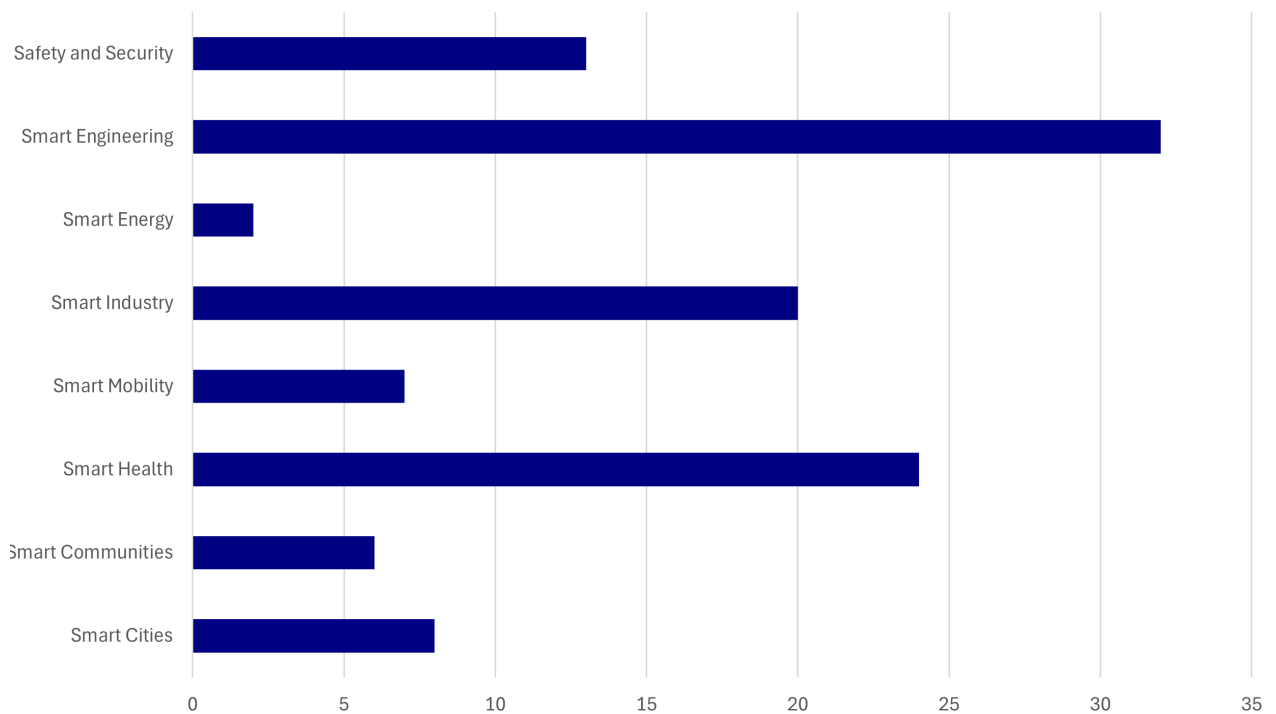
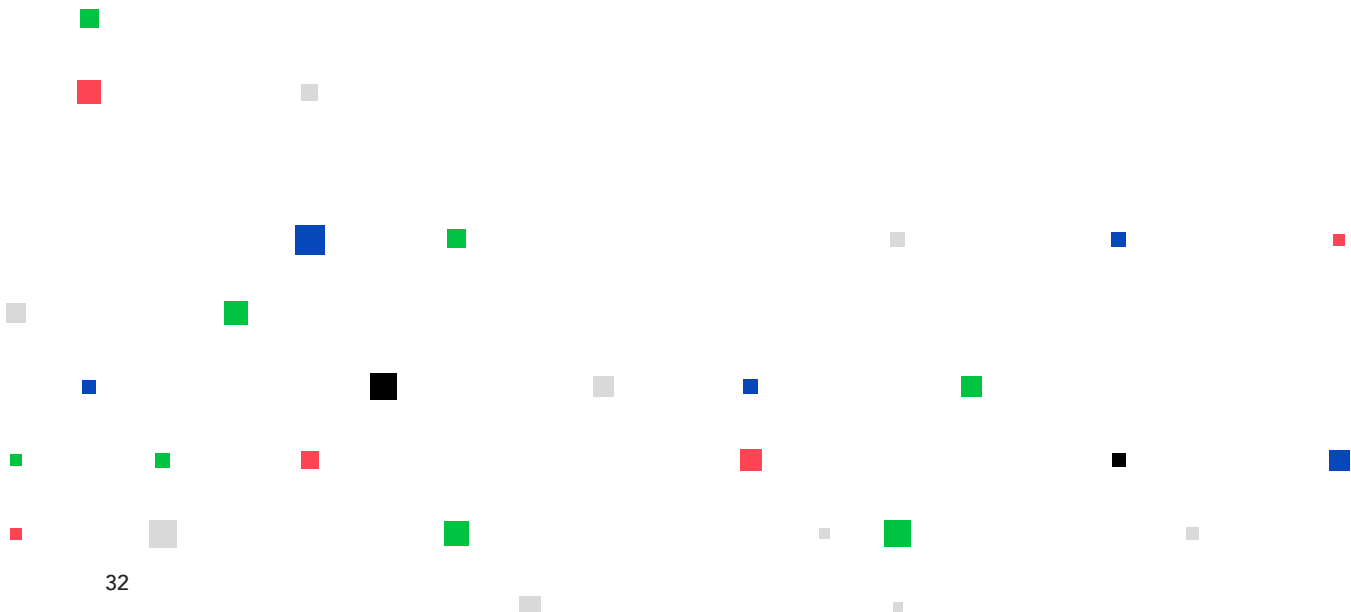


Figure 6: Number of ITEA 3 and ITEA 4 projects per ITEA challenge.



2.4 New projects - ITEA Call 2022

ITEA Call 2022, the second Call of the ITEA 4, has yielded compelling and high-quality proposals. In March 2023, the ITEA Board endorsed 20 of these proposals with the ITEA label, reflecting a collective effort exceeding 2,740 person-years and engaging partners from 23 countries. As usual, the selection demonstrates a well-balanced mix, with almost half of the effort led by agile SMEs driving innovation, complemented by large industries capable of swiftly bringing project outcomes to market and research centres contributing cutting-edge, beyond state-of-the-art knowledge.

Noteworthy is the international scope of this Call, with support now extending to new European countries, including the United Kingdom, participating in five projects, and Switzerland. Additionally, companies from the United States and Australia expressed interest in joining the ITEA research programme, even if they are likely to participate in a self-funded manner. While Belgium, Canada, Germany, Finland, Portugal, South Korea, Spain, Sweden, the Netherlands, and Türkiye continue to play pivotal roles in this Call, the global outreach has expanded.

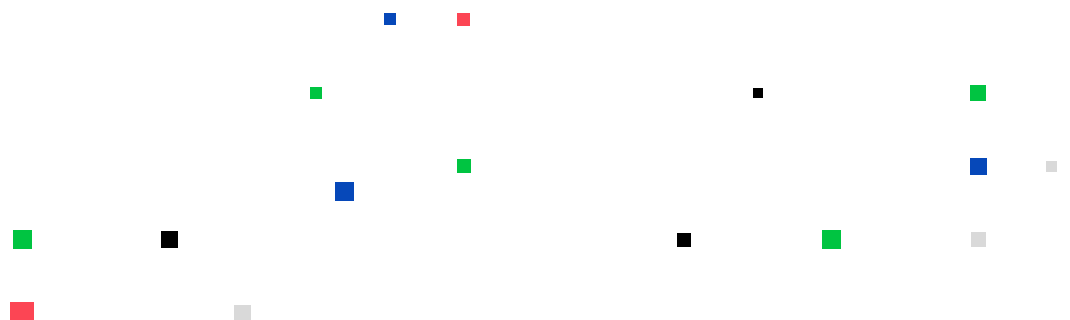
Beyond their international dimension, the projects have well-defined objectives, ambitious market goals, and consortia aptly composed to address the technical challenges and facilitate the eventual exploitation.

It is expected that the size of several ITEA Call 2022 projects will be reduced due to some (delays in the) funding decisions. As of now, no labelled projects have been cancelled this year but, due to lack of funding in the main countries, some projects might be cancelled in the coming months.

The ITEA challenges arising from this Call are:

Theme	ITEA Call 2022 projects
Smart Engineering	MAST, OpenSCALING, SOSIS, SmartEM
Smart Health	MediSpeech, PROFIT, SAFETE, TREAT
Safety and Security	CODEFILE, FireBIM, NADIR, SINTRA, Sa4CPS
Smart Communities	CAPE
Smart Mobility	Optimal-LOADS
Smart Industry	ARTWORK, FERIDE, I2DT
Smart Energy	BE Faster, RCFPEP

A short description of each project can be found on the next pages.



ARTWORK

SmART and connected WORKer

22019



Project leader: Volvo (Sweden)

ARTWORK is developing a real-time assistance system for workers in plants who still work with their hands to build customised products like trucks and machines. The solution will comprise digital twins of factory workers and equipment, smart instruction generation and a worker feedback system. The goal is to connect workers to the production line and enable automatic derivation of process instructions based on the context, allowing workers to build customised products more efficiently. Furthermore, the use of and contribution to standards will allow widespread deployment of the technologies and tools.

<https://itea4.org/project/artwork.html>

BE Faster

Building Energy Flexibility at Scale for Trading and Earning of Revenues

22046



Project leader: Consortio Limited (United Kingdom)

BE Faster brings countries closer to net zero by creating a scalable flexibility trading platform enabling a smarter use of data and controls to reduce energy wastage and support grid supply-demand balancing. The solution defines the net-zero pathway for organisations by looking at carbon grid intensity as a signal for trading. BE Faster provides novel algorithms for trading based on several parameters identified using digital twins. The ecosystem will be accessible using open-source code and templates and standards developed will be used to roll out the solution to partner countries.

<https://itea4.org/project/be-faster.html>

CAPE

Cognitively Smart Assistant in Phygital Environment

22017



Project leader: Inosens (Türkiye)

The retail sector plays a crucial role in a country's economy but needs to undergo a transformation in order to be able to provide a seamless shopping experience, combining online and offline activities, that includes personal recommendations and the continuation of purchases initiated in one channel to the other. CAPE addresses these challenges by using various technologies, such as AI, deep learning, blockchain and IoT, to develop personal experiences, improve the performance of robots/kiosks and offer alternative opportunities and technologies not widely available in today's market. The targeted impact includes improved customer and employee satisfaction, increased sales and more efficient store operations.

<https://itea4.org/project/cape.html>

CODEFILE

Cross-Organisational Data Enrichment for Financial Institutions and Law Enforcement

22012



Project leader: TNO (The Netherlands)

CODEFILE aims to enable the usage of sensitive data in such a way that no information leakage occurs by developing tools to support joint data analysis between financial institutions and law enforcement agencies. This will enable the detection of suspicious activities without compromising privacy or violating regulations. CODEFILE will deliver solutions that improve the anti-money laundering detection success rate with less effort and will additionally create a network where information can be shared securely.

<https://itea4.org/project/codefile.html>

FERIDE

FERtigation Irrigation DEcision Support System

22016



Project leader: ARD GROUP (Türkiye)

Increasing food demand and decreasing water resources have created an urge to find new technologies for the efficient use of water and fertiliser for agriculture. FERIDE aims to provide a technologically controlled farming environment to improve the availability and absorption of water and nutrients in the soil, resulting in a substantial increase in crop production and quality while decreasing farming costs. They will develop a European-scale network of actors to better manage logistics and implement an information system platform, allowing communication between different system actors such as farmers, fertiliser suppliers and irrigation providers.

<https://itea4.org/project/feride.html>

FireBIM

Accounting for fire safety engineering using Building Information Modelling

22003



Project leader: RISE - Research institutes of Sweden (Sweden)

European national building regulations on fire safety are different from country to country, making international collaboration demanding, costly and risk-prone. FireBIM aims to harmonise and implement the fire codes of its participating countries in an open-source, web-based BIM platform for fire safety assessment that facilitates (inter)national fire safety documentation and compliance from the early design stages. This will enable collective interpretation of fire regulations and automated compliance checking of buildings against fire safety regulations. As a result, design teams will be digitally assisted to create safer and better buildings cost-effectively.

<https://itea4.org/project/firebim.html>

I2DT

Intelligent Interoperable Digital Twins

22025



Project leader: RISE - Research Institutes of Sweden (Sweden)

The I2DT project aims to create an interoperability framework, methodology and tool support for constructing digital twins that can reflect complex systems with large-scale heterogeneous data and interactions. The project will address core technologies and application domains of interoperable digital twins and apply them to relevant areas like industrial production, smart cities, infrastructure asset management, wildfire protection and renewable energy resources. The project will also advance model-based development, integrate machine learning components, define a unified reference architecture and provide tool support for both engineering and operating digital twins.

<https://itea4.org/project/i2dt.html>

MAST

Managing Sustainability Tradeoffs

22035



Project leader: University of Groningen (The Netherlands)

Software-intensive systems are required to be more and more sustainable in regard to the ease of making changes to their code and to their power consumption and its associated carbon emissions. Often, these aspects conflict with each other. By developing tools and methods, MAST will deal with the complex trade-offs between these two aspects of sustainability, aiming to guide development teams in optimising their design decisions according to stakeholder concerns and system/environment constraints. Organisations will benefit from the MAST results by reducing carbon footprints and technical debt, complying with sustainability regulations and being more competitive by increasing product quality and creating new business models.

<https://itea4.org/project/mast.html>

MediSpeech

22032

Automated medical reporting-improved clinical efficiency to enhance the patient experience



Project leader: MEDRecord BV (Netherlands)

Nowadays, administrative tasks can consume up to 30% of clinicians' working hours, diverting attention from patient care and contributing to physician burnout. The MediSpeech project aims to reduce administrative waste in healthcare by creating an open digital healthcare ecosystem for automated medical reporting. The proposed solution uses AI-powered speech recognition, data interoperability and harmonisation, and technology-advanced clinical decision support to transform the healthcare model into a patient/doctor-centred approach.

<https://itea4.org/project/medispeech.html>

NADIR

22014

Eco-system for disease specific clinical workflow and data integration



Project leader: EarthDaily Analytics (Canada)

Climate change has a significant impact on our biosphere and is affecting people's lives, properties and health while hastening biodiversity loss through wildfires, flash floods and mega-drought events. NADIR aims to build a natural hazard/disaster risk and assessment platform to provide advanced risk assessment products and critical intelligence information to support the mitigation and management of natural hazards/disasters using (new) satellite imaging. This type of data, together with the known ground truth, will allow the extraction of significantly improved intelligence information, enabling better monitoring, management (simulation and operational planning), prediction and, in some cases, prevention of the large-scale impact of natural disasters, thereby reducing damage and saving lives.

<https://itea4.org/project/nadir.html>

OpenSCALING

22013

Open standards for SCALable virtual engineering and operation



Project leader: Robert Bosch GmbH (Germany)

The European Climate Law sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030 and for Europe's economy and society to become climate-neutral by 2050. OpenSCALING extends open standards and established modelling and simulation tools to support large-scale systems and distributed controllers deployed in the edge-cloud continuum in order to reduce energy consumption and greenhouse gas emissions. Several industrial demonstrators will showcase how the OpenSCALING innovations and benefits can be applied in the energy, building, aviation and automotive domains through green hydrogen production, more efficient heat pumps, fuel cell propulsion and electrified vehicles.

<https://itea4.org/project/openscaling.html>

Optimal-LOADS

22004

Cross-Organisational Data Enrichment for Financial Institutions and Law Enforcement



Project leader: Materna Information & Communications SE (Germany)

Recent crises have demonstrated the importance of ensuring the resilience of the supply chain and its logistics processes and have reinforced the need for the logistics industry to permanently enhance these processes. Optimal-LOADS plans to optimise and digitise logistics and aims to create trust among data providers and users by developing data spaces in various sectors, ensuring data sovereignty and enabling interoperability in multi-stakeholder environments. This will contribute to improved efficiency of the multi-modal logistics supply and transport chains and the valorisation of data in the logistics sector.

<https://itea4.org/project/optimal-loads.html>

PROFIT

22021

Procedure Optimisation and data-driven eFFiciency Improvement in healthcare environmenTs



Project leader: Barco N.V. (Belgium)

Hospitals are facing acute staff shortages and the prevalence of chronic diseases will only continue to increase. The PROFIT consortium plans to simplify healthcare tasks and enhance patient outcomes with novel solutions that optimise and streamline workflows in hospitals. The key targeted technical innovations are real-time tracking systems based on sensors and video data, a context-aware communication tool for nurses to handle alerts and tasks and AI-based software for the automatic interpretation of clinical images. Clinical experts will ensure user needs are met and use cases will demonstrate the clinical practice of the solutions.

<https://itea4.org/project/profit.html>

RCFPEP

22010

Real-time Carbon Foot-Print at Product, Equipment, Plantwide



Project leader: LeanCost International Pte Ltd (Singapore)

The production and transportation of goods are two major contributors of greenhouse gases (GHG). For green production to move ahead, there is a basic need for unified, comparable and easy-to-use emissions data. RCFPEP aims to create a tamper-proof, real-time digitalised carbon footprint measurement product tool, covering the manufacturing processes, its first-tier suppliers' freight transportation of inbound raw materials and the transportation of outbound finished goods to customers. The developments will also reflect on ongoing improvement efforts in the circular economy and lower GHG emissions. RCFPEP will provide a digital contribution to help businesses make more sustainable decisions.

<https://itea4.org/project/rcfpep.html>

SAFETE

22018

Swift Access for Emergency Triage/Treatment e-strategy



Project leader: ARD GROUP (Türkiye)

Health emergencies can happen unexpectedly to anyone at any time. If after-hours primary care services are not available or are difficult to access, patients will visit the emergency department (ED) to seek help, which results in ED congestion. The SAFETE project aims to develop digital health systems to transform after-hours urgent primary care service delivery by offering the right care at the right time. The system includes virtual care, sensing using patients' own cameras and wearables, data intelligence, and clinical intelligence. It will have a positive impact on health system operations, patients and health professionals and will optimise costs at the same time.

<https://itea4.org/project/safete.html>

SINTRA

22006

Security of Critical Infrastructure by Multi-Modal Dynamic Sensing and AI



Project leader: TAV Technologies (Türkiye)

Stakeholders of critical industrial and civil infrastructure, e.g. airports, power plants and road networks, frequently suffer from disruptions caused by an overwhelming diversity of man-made physical safety and security threats, ranging from well-organised criminal activities to low-level but costly actions like vandalism. SINTRA aims to improve the resilience and protection of these critical infrastructures by developing an open data-streaming AI platform that enables interoperability, information sharing and privacy protection. Using multi-modal sensing and AI-powered data analysis, it will provide a comprehensive view of the infrastructure's safety and security and detect complex anomalies.

<https://itea4.org/project/sintra.html>

SOSIS

22029

Software product line Optimisation for Safety-/mission-critical Industrial Systems



Project leader: Alstom Transportation (Sweden)

A major challenge for all companies working with software product lines (SPL) is to handle the variability aspects of the SPL over their complete lifecycles, especially in safety-critical and mission-critical systems. The objective of SOSIS is to develop methods and solutions to improve the management of variability and reduce certification efforts. SOSIS's approach is holistic, looking into methods and techniques related to model-based development for requirement engineering, variant development and variant management while investigating model-based and AI/ML-based techniques for variant testing and deployment phases and providing a platform for experimentation and knowledge transfer for European industry.

<https://itea4.org/project/sosis.html>

Sa4CPS

22007

Secure situational awareness for critical cyber-physical systems



Project leader: VTT Technical Research Centre of Finland (Finland)

Sa4CPS aims to develop a secure situation awareness concept for critical cyber-physical systems in the logistics, mobility, energy and security sectors, particularly in ports. The targeted innovation will arise from the application of novel solutions for situational awareness with a digital zero-trust approach with distributed ledger technologies (DLT). The aim is to enable situation-aware IoT, operating in a smart way with AI, and DLT for enabling shared digital trust for multiple stakeholders. The Sa4CPS concept is expected to improve the resiliency, security, privacy and safety of people, autonomous physical objects and company digital twins during unexpected events such as accidents and physical or virtual attacks.

<https://itea4.org/project/sa4cps.html>

SmartEM

22009

Open reference architecture for engineering model spaces



Project leader: Philips (The Netherlands)

SmartEM aims to address the limitations of current engineering models by developing a reference architecture for engineering model spaces. The architecture will enable the reuse, exchange and integration of computational engineering models, reducing the need for costly design corrections and promoting early data and model exchanges. SmartEM will use AI-assisted methods to create surrogate models from heterogeneous data sources and allow their re-combination within a given engineering domain. The project will develop use-case model spaces to manage reusable and transferable engineering models for various domains and provide solutions for IP management to enable model exploitation in an increasingly digital engineering market.

<https://itea4.org/project/smartem.html>

TREAT

22022

Security of Critical Infrastructure by Multi-Modal Dynamic Sensing and AI



Project leader: My Viva Inc. (Canada)

TREAT aims to increase patient self-efficacy in managing non-communicable diseases, including heart attacks, cancers and chronic respiratory diseases, by using an asynchronous model and integrating data from wearables, journals and medical records. In such a model, healthcare access moves from the clinic (system-centric) to the patient's daily life and health management shifts from the clinician to the patient. The project will develop software-based solutions, like semantic interoperability, automated care feedback loops with AI recommendations and novel interfaces using interactive augmented reality, to improve patient self-efficacy.

<https://itea4.org/project/treat.html>



3/

What lies ahead in 2024



2023 was a successful year for ITEA. With the strong support of the Public Authorities and ITEA Body members and thanks to the impact realised by the ITEA project partners, we were able to increase awareness of the opportunities the ITEA programme has to offer. We welcomed a high number of newcomers, while maintaining a good base of experienced Community members, forming a solid foundation for both quality initiatives and upcoming developments. Looking ahead, our commitment is to continually enhance our efforts in the coming years to better support ITEA project partners in achieving strong impact for both business and society.

3.1 Improvement priorities for 2024

To foster this commitment, ITEA has outlined a set of strategic improvement priorities for 2024. Summarising the high-level objectives approved by the ITEA Board, the focus includes preserving the overall size of the industry-driven, bottom-up Calls for projects and mobilising new countries for enhanced funding opportunities. The UK has initiated an annual investment of £5 million in ITEA, demonstrating a commitment to sustained support. The delegations from both the UK and Canada highly appreciated the openness to collaborate of the ITEA Community. Switzerland and Hungary have also committed investments to enhance their presence within the ITEA Community. Furthermore, Singapore has joined the ITEA Call, marking an expansion of global participation.

In our ongoing efforts to broaden our Community, we aim to include new territories such as Chile, Japan, and South Africa. This strategic expansion aligns with ITEA's goal to foster collaboration and innovation on a global scale.

Alongside this, efforts to increase interaction between project partners and the ITEA Community are highlighted through

various events, including a poster exhibition and B2B sessions planned before the PO Days, the customer workshop and the topical (online) Roadshow.

Sustainability will also be a key theme, with the creation of a Sustainability Strategic Plan. The plan will focus on integrating sustainability goals/KPIs into ITEA projects by embedding guidelines in the Project Progress Reports and during the Full Project Proposal phase. Software innovation stands as a cornerstone of sustainability, playing a pivotal role in enhancing the sustainability capacity of any system. Effective monitoring of resource consumption and optimal resource management are essential components in this challenge, both of which can be achieved through software innovation. Consequently, ITEA is committed to emphasising the significance of sustainability in the outcomes of its projects. By integrating sustainable practices and leveraging software innovation, ITEA aims to contribute to a more resilient and environmentally conscious future.

Continued efforts encompass maintaining the overall Call size, minimising the time from idea to project start, customer orientation, expanding the ITEA Board and Impact Stream, and ensuring operational quality through ISO 9001 certification. As a Eureka Cluster, active participation in InterCluster cooperation and ECP Bodies will be maintained.

In conclusion, as we reflect on the accomplishments of the past year, we express our sincere gratitude to the ITEA project partners, ITEA Body members and Public Authorities for their continuous involvement, enthusiasm and support. With a devoted commitment to innovation and excellence, we eagerly anticipate the opportunities and challenges that lie ahead, confident in our collective ability to build a brighter future together.



<https://vimeo.com/913043445/eb1c6ae4b9>



Appendix A. Call statistics

Call statistics per year

ITEA 3 Programme + Joint Eureka Clusters Calls issued during ITEA 3

Call	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
ITEA 3 Call 1	47	257	341	312	105	11	-	-	-	-	-	1073
ITEA 3 Call 2	-	67	316	428	324	64	2	-	-	-	-	1202
ITEA 3 Call 3	-	-	105	364	400	264	6	1	-	-	-	1140
ITEA 3 Call 4	-	-	-	80	410	518	375	44	-	-	-	1426
ITEA 3 Call 5	-	-	-	-	40	287	360	308	77	-	-	1072
ITEA 3 Call 6	-	-	-	-	-	65	211	232	145	1	-	654
ITEA 3 Call 7	-	-	-	-	-	-	47	240	283	241	1	812
AI Call 2020	-	-	-	-	-	-	42	94	88	36	-	260
Grand total	47	324	762	1184	1279	1209	1044	918	594	278	1	7640

ITEA 4 Programme + Joint Eureka Clusters Calls issued during ITEA 4

Call	2022	2023	2024	2025	2026	2027	2028	2029	Total
AI Call 2021	64	103	91	32	-	-	-	-	290
ITEA Call 2021	71	353	454	341	29	-	-	-	1248
ITEA Call 2022	-	107	872	969	761	3	-	-	2713
Sustainability Call 2022	-	69	95	84	11	-	-	-	260
Grand total	135	633	1512	1426	801	3	-	-	4510

Table 2: Participation in Person-Years per Call per year as of 11 January 2024. Effort based on latest FPP. Projects from Joint Calls have ITEA as the main Cluster. Projects with ITEA as a secondary Cluster are not taken into account.

Call statistics per country

ITEA 3 Programme + Joint Eureka Clusters Call issued during ITEA 3

Call	AUT	BEL	CAN	DEU	ESP	FIN	FRA	KOR	NLD	POR	SWE	TUR	OTH	Total
ITEA 3 Call 1	20	53	12	146	67	3	177	85	222	-	40	138	108	1073
ITEA 3 Call 2	-	92	68	200	106	52	119	71	181	-	56	158	99	1202
ITEA 3 Call 3	29	72	102	208	98	69	49	28	168	37	83	136	63	1140
ITEA 3 Call 4	7	91	82	225	242	134	5	-	170	94	125	203	49	1426
ITEA 3 Call 5	12	21	74	11	104	300	5	23	203	65	63	139	51	1072
ITEA 3 Call 6	2	26	29	102	24	30	2	13	140	53	72	101	61	654
ITEA 3 Call 7	20	25	81	91	105	81	-	-	159	44	67	101	39	812
AI Call 2020	-	-	-	75	c	55	-	13	55	-	-	46	16	260
Total ITEA 3	91	379	447	1059	745	725	356	233	1299	293	507	1021	485	7640

ITEA 4 Programme + Joint Eureka Clusters Call issued during ITEA 4

Call	AUT	BEL	CAN	DEU	ESP	FIN	FRA	KOR	NLD	POR	SWE	TUR	OTH	Total
AI Call 2021	32	12	-	61	-	-	-	-	62	9	28	58	28	290
ITEA Call 2021	24	32	34	57	138	129	36	40	210	207	19	295	26	1248
ITEA Call 2022	17	127	171	219	188	277		45	365	341	86	639	238	2713
Sustainability Call '22	11	7	16	-	18	-	-	-	-	64	-	95	49	260
Grand total	84	178	221	337	343	405	36	86	638	621	133	1088	340	4510

Table 3: Participation in Person-Years per Call per country as of 11 January 2024. Effort based on latest FPP. Projects from Joint Calls have ITEA as the main Cluster. Projects with ITEA as a secondary Cluster are not taken into account.

OTH (others) = Australia, Cyprus, Czech Republic, Denmark, Greece, Hungary, Israel, Italy, Lithuania, Luxembourg, Norway, Romania, Singapore, Slovenia, South Africa, Switzerland, Taiwan, United Kingdom, United States. NB: countries differ per Call.

Glossary of terms

3D	Three-dimensional
AI	Artificial Intelligence
AM	Additive Manufacturing
CAE	Computer-Aided Engineering
CCF	Central Coordinating Functions
CySAB	Cyber Security Advisory Board
DLT	Distributed Ledger Technology
e.g.	'exempli gratia' (meaning 'for example')
ECP	Eureka Clusters Programme
ED	Emergency Department
FPP	Full Project Proposal
GHG	Greenhouse Gases
ICOG	InterCluster Operating Group
IoT	Internet of Things
ISO	International Organization for Standardization
IT	Information Technology
KIAT	Korea Institute for Advancement of Technology
KPI	Key Performance Indicator
M	Million
ML	Machine Learning
mm	Millimetres
ms	Milliseconds
PA	Public Authority
PhD	Doctor of Philosophy
PO	Project Outline
PY	Person-Years
Q4	Quarter 4 (October – December)

QMS	Quality Management System
RD&I	Research, Development and Innovation
RT	Radiation Therapy
SCAB	Smart City Advisory Board
SME	Small and Medium-sized Enterprise
SPL	Software Product Lines
TC	Technical Contact
TDC	Tesla Dynamic Coils
TRL	Technology Readiness Level
USD	United States Dollars

Countries

AUT	Austria
BEL	Belgium
CAN	Canada
DEU	Germany
ESP	Spain
FIN	Finland
FRA	France
KOR	South Korea
NLD	Netherlands
OTH	Other
POR	Portugal
SWE	Sweden
TUR	Türkiye
UK	United Kingdom

