

4 Operations

To enable the ITEA stakeholders to get the most out of the ITEA programme and to promote the ITEA programme in the best way, there are several operational actions carried out by ITEA. In this section, the details about the main operations achieved in 2020 are reported.

4.1. ITEA Impact stories

As indicated in section **1.1 ITEA project impact**, one of our main activities was to promote the incredible results of the ITEA projects. Because of this, the Impact stream grew to 28 strong Impact stories in 2020. Two examples, C³PO and SCALARE, were already shown to inspire you. Here, you can continue your journey with 3 additional ITEA Impact story highlights. The full stories can be read online: <https://itea3.org/impact-stream.html>.



ACOSAR Impact story

The development of vehicles has become increasingly complex, involving over 50 different suppliers who need to ensure that all components, parts and devices work together. Co-simulation methodologies and the interoperability of simulation tools and infrastructure were introduced, but there was no standardised way of integrating distributed simulation and test environments. The ACOSAR project aimed to accelerate development steps with new simulation technologies.


Impact highlights:

- Since July 2018, the main and most sustainable project outcome - the Distributed Co-simulation Protocol (DCP) - has been developed as a Modelica Association Project (MAP) and is available as an open-access international standard.
- International technology leaders such as AVL, Volkswagen and Boeing are already applying this solution.
- Competitors and non-funded partners collaborated in this project because of its importance.
- A prominent German sports car manufacturer reports that

over 13,000 developer days could be saved in the next five years thanks to this developed protocol, which corresponds to a value of around five to seven million euros.

This prominent German sports car manufacturer represents less than 1% of the market share of car manufacturers, clearly showing the huge impact the ACOSAR project results can have in the automotive domain.

- The international partner network of Virtual Vehicle Research GmbH now consists of 30 national and 50 international industrial partners (OEMs, Tier 1 and Tier 2 suppliers as well as software providers) as well as 18 national and 30 international scientific institutions.




M2MGrids Impact story

The M2MGrids project aimed to create enablers for a dynamic cyber-physical information ecosystem that would interoperate in real time with the business processes of companies and real-life objects, people and things. M2MGrids focused on major disruptions in targeted energy and mobility domains.

Impact highlights:

- The World Wide Streams (WWS) horizontal service platform developed by Nokia Bell Labs can already be considered an enabler of 20-30% higher business growth in application-enabling Digital Value Platform (DVP) projects for these segments worldwide.
- For Tracker, the commercialisation impact estimation of the M2MGrids project including device and related services sales was about €3 m in 2020. The development is essential to Tracker's growth and four persons were employed permanently even after the project, with market share potentially increasing in the future.
- Slimmer AI developed machine learning knowledge on short-term energy consumption, reducing forecasting timeframes from daily to 15-minute horizons (called nowcasting) within M2MGrids. Slimmer AI expects to employ up to 10 colleagues within three years on the basis of this M2MGrids technology.
- LiveU has opened significant market opportunities, having won a tender for the next Olympic games with the Japanese police department and also having collaborated with Associated Press on a new live video exchange newsgathering platform: AP Live Community, an app based on M2M.
- Several new research opportunities were identified during the project and these have led to the preparation of EU-wide research and national co-innovation projects, including INTERFACE (flexibility markets), TloCPS (trustworthy communities), iFLEX (end-user perspective for flexibility markets) and OneNet (scaling of flexibility market mechanisms).



3DPathology Impact story

Many years ago, the pathology process was digitalised by capturing glass slides with a scanning device to provide a high-resolution digital image. More recently, these digital images became increasingly accurate in order to render 3D shapes of objects. Organs structures and contents were already revealed with 3D distribution, but this was not yet the case for tissues. 3DPathology created a 3D digital pathology solution for same-day diagnosis and much more personalised treatment of cancer.

Impact highlights:

- A 3D multi-modal pathology demonstrator, the first of its kind in the world, enables unique features such as access to the microscopic organisation of tissue sub-structures in 3D, providing complete chemical information and access to unexplored dimensions of histology.
- The Academic Medical Center of the University of Amsterdam reported a 10% reduction of re-occurrences/readmissions; the cost for a typical re-occurrence/readmission for bladder cancer diagnostics is €2 to 3k every 6 months.
- Barco has already sold several hundred optimised display systems worldwide that address a variety of pathology lab needs and, in the next few years, Barco is expecting a large increase in sales of display systems for Digital Pathology.
- Slimmer AI combines the AI-based image analysis line with its Natural Language Processing developments to form the PoC version of an innovative data room tool in co-creation with a launching customer. This tool might become Slimmer AI's next product, leading to a 20 FTE spin-out within 5 years.
- Philips has been given FDA clearance in the US to market its IntelliSite Pathology Solution for primary diagnostic use there.

These Impact stories were also covered in long-read ITEA Success stories in the ITEA Magazine and on the ITEA website: <https://itea3.org/success-stories.html>.

4.2. ITEA events

One of the other main operations was the organisation and attendance of events. In 2020, we (co)organised the following events:

4.2.1. Online ITEA Project Outline Preparation Days 2020 – ITEA 3 Call 7



On 7 September, ITEA 3 Call 7 opened with the Online ITEA PO Days 2020, which was held from 7-11 September 2020. As it was not possible to get together with the ITEA Community, the ITEA PO Days were organised online this year, spread over five days. Over the event, four live webinars were organised covering the established programme elements of the annual PO Days, including the introduction to the Online ITEA PO Days 2020, instructions and a Q&A, the ITEA

Awards of Excellence ceremony and the closing final results and conclusions. National priorities and eligibility criteria were presented by Public Authorities in dedicated online information sessions and during each of the five days there was room to discuss project ideas in online workgroup sessions and shape them into initial project proposals.

A total of 77 project ideas were presented via the ITEA Project Idea Tool, online posters and video pitches. The high number of online workgroup sessions gave our Community members the chance to meet online, start shaping a consortium and further develop the ideas towards successful Project Outlines. A record number of 338 participants from over 20 countries joined the online event, with the highest participation coming from Turkey, the Netherlands, Germany and Canada, but countries like Korea showed a strong increase in participation as well this year. In addition to established participants from previous years, the Online ITEA PO Days 2020 were able to attract 51% newcomers, which shows the openness of the Community once again. We were very pleased to welcome Singapore for the first time.

Online ITEA PO Days 2020 in numbers

- A record number of 338 participants from 20 countries
- 77 project ideas uploaded in the Project Idea Tool before the event
- 77 project ideas presented in the online poster tool
- 15 video pitches presented in the online pitch tool
- 79 online workgroup sessions held
- 18 final project idea presentations

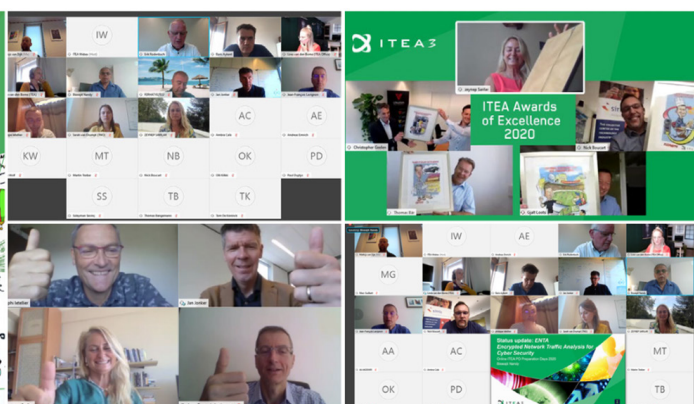


The project ideas were clustered by 7 societal challenges: Safety and Security, Smart cities, Smart communities, Smart engineering, Smart industry, Smart health and Smart mobility. Although each challenge was well-covered, the number of Safety and Security project ideas was remarkably high (24), showing the impact again of this year's ITEA International Customer Workshop on this topic. As in previous years, Smart health (15), Smart engineering (13) and Smart industry (10) remain important topics for the ITEA Community as well. Although a Joint Eureka Clusters AI Call had already been organised in June earlier this year, AI remains a big topic in ITEA 3 Call 7, covered by 27 out of 77 ideas.

As in the past few years, there was again strong participation from the Public Authorities. Finland, Germany, the Netherlands, Spain, Sweden and Turkey organised an interactive 'country information session'. Furthermore, Austria, Belgium, Canada and Korea recorded a video presentation explaining their national priorities, eligibility criteria and funding outlook. The involvement of all these Public Authorities was highly appreciated by the Online ITEA PO Days 2020 participants.

On 1 September 2020, Jean-François Lavignon became the new ITEA Vice-chairman, succeeding Philippe Letellier, who held the position since 2008. These Online ITEA PO Days 2020 were also an excellent opportunity to welcome and introduce Jean-François to the ITEA Community.

During one of the webinars of the Online ITEA PO Days 2020, best practices were shown by four ITEA projects that received the 2020 ITEA Award of Excellence. They presented their impressive outcomes, impact and advice for future project leaders in an interactive online panel session moderated by departing ITEA Vice-chairman Philippe Letellier. This year's award winners were ENTOC, Flex4Apps, MOS2S and PS-CRIMSON.



Online ITEA PO Days 2020 impression.

Turning a physical event into an online event is a challenge, with expectations aligned to a 'normal' physical event. We asked all participants to share their evaluations and suggestions for improvements and, with a 3.5 score on a 5-point scale (where 3 is good and 4 is very good), the online event was well-appreciated.

The Online ITEA PO Days 2020 created new opportunities in the sense that attendees did not need to travel and be away from the office for multiple days. This resulted in a higher number of participants from both Korea and Canada and a higher number of participating countries in general. The general view expressed by the participants was that the online event was successful, but spontaneous encounters and interactions were sorely missed. Face-to-face meetings make a stronger contribution to shaping a consortium and developing ideas towards a successful project proposal.

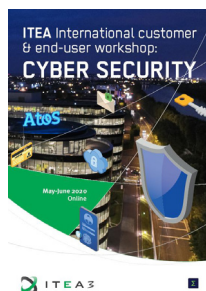
As Greet Bilsen of the Katholieke Universiteit Leuven aptly stated: “Both formulas have their advantage; the online formula makes it easier to prepare and jump into the relevant sessions (losing less time), whilst the physical event allows for ‘unexpected’ contacts and discussions.”

By the deadline of 10 November, 35 Project Outlines had been submitted with a total effort of 3967 Person Years. On 11 December, 25 out of the 35 submitted Project Outlines with a total effort of 3319 PY were invited to submit a Full Project Proposal (deadline: 15 February 2021).

A detailed description of the ITEA Call progress and figures can be found in section **3.2 ITEA Calls progress** of this report.

4.2.2. ITEA international customer and end-user workshop on Cyber security

For the sixth time, ITEA organised the ITEA international customer workshop, which took place in May and June 2020 and was co-organised with Airbus, Atos, Bosch and KoçSistem. Originally, this event was scheduled for 29-30 June, kindly hosted at the Atos



headquarters in France. However, due to COVID-19, it was not possible to organise a physical meeting and the event was therefore transformed into online sessions in which Atos still provided strong support.

On 28 May, a one-hour kick-off webinar was organised to explain the new set-up and process. This kick-off supported an understanding of the different tools available to brainstorm and push project ideas.

As early as mid-May to mid-June, customers were invited to one or several interactive online panel sessions of 1.5 hours together with a set of other customers who have similar challenges. Videos of these sessions and background information on all participants were made available to all customer workshop participants and in particular to the technology providers.

For this customer workshop on Smart Cyber security, we gathered representatives from:

Customers:	Amadeus, Amsterdam UMC, AVL List, Axens, Eczacıba ı Building Products Group Vitra, Empower, Ericsson, Ford Otosan, IOC, Koçfinans, Orange, PAL Robotics, Siemens Mobility, Signify, Yapi Kredi Bank
Contributors:	French Ambassador for Digital Affairs of the Ministry of Europe and Foreign Affairs
Industry:	Airbus, Atos, Bitdefender, Bittium, Bosch, ENEA, KoçSistem
SMEs:	CMD, Cosmian, Decknet, Difenso, ERSTE Software Limited, Genode Labs, ICTerra, IOTIQ, iSecurity, Labris Networks, MedVision360, Mondata, PICUS, SecureKey, Starflow, ThinkON

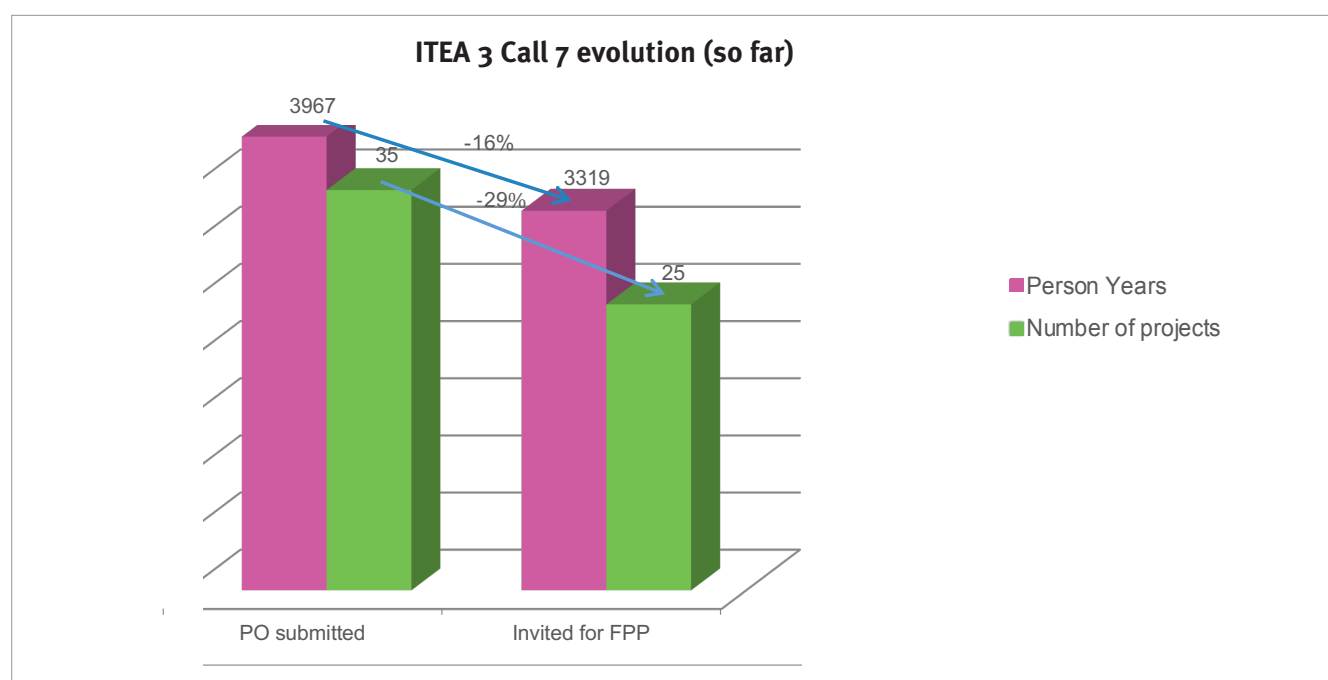


Figure 5: ITEA 3 Call 7 evolution (so far).

The topics/challenges discussed in-depth during the different sessions were:

- Building trust
 - Maturity model to trust a company
 - Cybersecurity quality assurance
 - Risk awareness
- Collaborative security
 - 'Bubble of security'
 - Methodology to define classification of information for protection
 - Cooperation framework even with different security maturity levels
- Digital territories
 - Notion of 'territory to protect' in cyberspace
 - Procurement value chain

A full report of the customer workshop is available at:

<https://itea3.org/publication/download/itea-cyber-security-customer-workshop-final-report.pdf>

At the Online ITEA PO Days in September 2020, 22 project ideas related to cyber security were presented. This ultimately resulted in the submission of six cyber security Project Outlines (some of the project ideas merged into one Project Outline) related to the customer workshop out of 35 in total. Four of these six were invited to submit a Full Project Proposal (FPP).



ITEA international customer and end-user workshop on cyber security 2020 impression.

4.2.3. Smart City Digital Business Event: The Road to Smart City Live

On 2, 9 and 16 November, the Smart City Digital Business Event was organised. This event was The Road to Smart City Live, which was organised as an online equivalent of the Smart City Expo World Congress.

ITEA was very pleased to again team up with the Nordics and the Netherlands to organise this business event that focused on developing the innovation system within Europe and connecting people and organisations in an early stage of developing solutions for city challenges. And with over 900 registrations coming from

65+ countries and over 40 workshops, this online event proved to be a good substitute for the physical event in which ITEA participated last year.

During this event, which was spread over three Mondays, ITEA and its project partners organised five workshops focusing on Safety and Security in the city, ITEA as a Smart City R&D&I platform, the integration of IT developments in a Smart City and the City of the Future. Furthermore, project leaders who are preparing a Smart City-related Project Outline for ITEA 3 Call 7 had the chance to present their project to further strengthen their consortia. Next to the workshops, participants had ample opportunity for online B2B matchmaking.

Next year, we hope to be able to join the Dutch and the Nordics again in the organisation of a physical Smart City Business Event in Barcelona.

4.2.4. Cyber Security & Cloud Expo 2020

In 2020, ITEA intended to participate with 10 R&D projects in the Cyber Security & Cloud Expo that was supposed to take place on 1-2 July. The event was postponed to 25 and 26 November and then transformed into an online event. ITEA was mentioned as one of the platinum sponsors of this event and was offered an exhibitor profile on the online platform, where we promoted a set of short project videos to show the participants which solutions ITEA projects can provide for their challenges. You can find the full video here: <https://vimeo.com/482976176>

Next to the mostly pre-recorded online sessions, the event also provided an online B2B matchmaking tool to organise online one-to-one meetings.

Our physical participation has shifted to next year's event in November 2021.

4.2.5. External events and activities to promote ITEA

During 2020, the Presidium and the ITEA Office representatives also attended various additional external events and meetings to promote ITEA. Highlights included:

- **HiPEAC interactive workshop on collaboration enhancement - Brussels (16 January)**

On 16 January, HiPEAC organised the workshop 'CPS Technology Uptake & Innovation'. Charles Robinson, former ITEA MERGE project leader and member of the HiPEAC steering committee, invited ITEA to contribute to this workshop. Jan Jonker participated in this workshop to introduce ITEA.

- **Connecting South Korea and Denmark - video conference (27 March)**

KIAT and Innovation Fund Denmark (Innofond) hosted a video conference to promote the Danish-Korean collaboration, especially Eureka's Advanced Materials and Green Transition Call (Material Call) and ITEA. The video conference consisted

of a short introduction to the event, where ITEA was also introduced, and multiple parallel pitch sessions.

- **Kids Digital Health Virtual Launch Event - video conference (2 April)**

Chairwoman Zeynep Sarilar and Vice-chairman Philippe Letellier were invited by Panacea Gaming Platform project leader Robyn Woods to take part in the virtual launch event of the Kids Digital Health™ platform. This virtual event featured speakers from Canada, the USA, Belgium, South Korea, France and Turkey, showcasing the importance of global, collective action when it comes to the future of digital health. Experts brought their global perspectives to topics ranging from research, engagement, technology and data to clinical validation, accessibility, safety and international collaboration. Zeynep Sarilar and Philippe Letellier stressed the importance of international collaboration and R&D incentives and informed the audience about the opportunities the ITEA programme can offer.

- **NRC IRAP Canadian Collaboration Pilot Program Cyber security Workshop - video conference (4-5 June)**

Vice-chairman Philippe Letellier was one of the keynote speakers at the Canadian Collaboration Pilot Program - Cyber security Workshop, which was held on 4-5 June. This virtual workshop was part of an NRC IRAP pilot programme to promote and facilitate domestic and international R&D collaborations between Canadian SMEs, beginning with the cyber security sector. The main topics were:

- Key Canadian cyber security technology development
- Perspectives on cyber security from leading large enterprises and university experts
- The value of collaborative R&D projects to SMEs
- Government programme support for collaborative R&D projects
- Domestic and international collaborative R&D opportunities

- **KIAT - ITEA Meeting - video conference (27 August)**

The goal of this meeting was to strengthen the participation of Korea in ITEA and increase the opportunities of collaboration between Korea and ITEA. As a result of this meeting, we participated in the Korea Eureka Days on 25 November, during which Jan Jonker presented the ITEA Cluster and the possibilities for organisations to participate. Future developments within the Eureka environment and the impact for ITEA and the Eureka Clusters were also discussed. The new ECP was considered as a beckoning perspective for Korea within ITEA.

- **ANI - ITEA Meeting - video conference (26 November)**

On 26 November, a meeting took place with Portugal to discuss the opportunities to strengthen the cooperation between ITEA and Portugal. This is especially interesting as Portugal will take over the Eureka Chairmanship from Austria

in mid-2021. Portugal aims to select several topics during its chairmanship and keeping in close contact with Portugal could be of importance in order to e.g. anticipate potential Joint Call topics and activities that may be developed for the next Annual Operating Plan under the Portuguese Eureka Chairmanship. A possible topic could be space-based Earth observation, for which GIS and software systems play an important role in innovation.

Portugal has been a partner of ITEA since the beginning of ITEA 2. The involvement of Portugal in ITEA will be highlighted in the ITEA Magazine to be issued in March 2021.

- **(Re)new(ed) interest from Israel and Singapore**

Besides the aforementioned meetings, there have been positive meetings with both Israel and Singapore as well. During the last four months of 2020, several online meetings took place to promote ITEA in different countries. Both new and already involved countries showed a (renewed) interest in participation in the ITEA Community. There is a renewed interest from the Israeli Innovation Agency to explore and exploit the opportunities for Israeli companies on topics such as Smart cities, Smart energy and sustainability. We are happy to mention that Israel has joined the ITAC WG for Public Authorities involved in ITEA.

Furthermore, there has been contact with Singapore, which is considering a partnership with Eureka. Singapore showed a specific interest in Artificial Intelligence and joined the first Joint Eureka Clusters Call that was focused on this topic. Besides this, Singapore also participated in the ITEA PO Days for the first time.

4.3. ITEA stakeholder satisfaction surveys

The different stakeholders of ITEA together create the strong ITEA Community that forms the central axis of the ITEA programme. As quality is of paramount importance to ITEA, the opinions, ideas and experiences of the ITEA Community are highly valued as they allow ITEA to keep improving. To collect all this information, ITEA conducts several surveys each year.

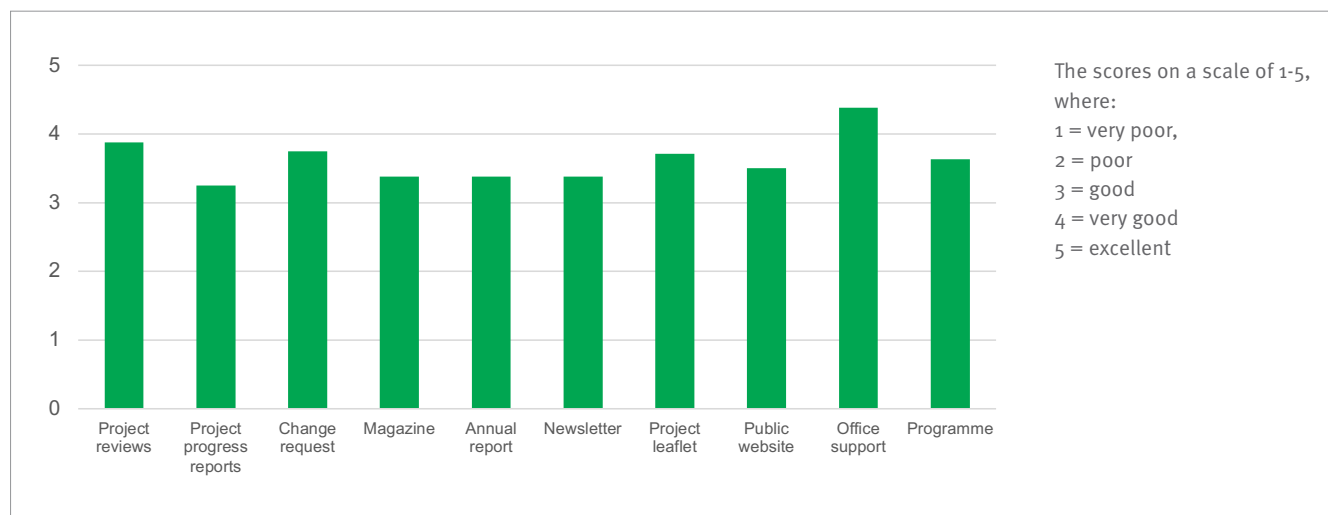


Figure 6: Results Project leader satisfaction survey 2020.

- **Project leader satisfaction survey**, sent to the project leader after completion of the project, covering all the different processes of a project and the different elements of the ITEA programme. The results per topic are shown in the figure above. Based on the feedback received in 2019, the Change request process has been analysed and improvements were implemented in January 2020. This resulted in an increase of the score from 3.2 to 3.8 (where 3 = good and 4 = very good).
- **PO submission survey** (ITEA 3 Call 7), sent to all Project Outline (PO) leaders, technical contacts and country coordinators, covering all topics of the PO stage. Overall, the PO submission process was well-appreciated, as usual. PO leaders gave a score of 3.86 (compared to 4.11 in 2019). Technical contacts and others gave a score of 3.82 (compared to 3.72 in 2019). The lower satisfaction level of the PO leaders was mostly due to the fact that project partners were not able to meet in person due to the COVID-19 pandemic, which complicated the coordination of the proposal.
- **FPP submission survey** (ITEA 3 Call 6), sent to all Full Project Proposal (FPP) leaders, technical contacts, work package leaders and country coordinators, covering all topics of the FPP stage. The FPP submission process was well-appreciated with a record score of 4.25 (out of 5.0) from FPP leaders and 3.88 from the technical contacts. Based on the submission process surveys, several improvements have been made:
 - All work package-related chapters have been removed from the PO stage
 - Work package descriptions are now fully online
 - More guidance for online data entry is provided
- **ITEA event surveys**, sent to all participants of an event:
 - **ITEA International Customer Workshop on Cyber Security 2020:**
After a year of slightly decreased appreciation (3.72 out of 5.0), the 2020 event was well-appreciated again. Although the event was held online, participants were satisfied with the remote sessions and gave the workshop 4.08 out of 5.0. In addition, every respondent could see opportunities resulting from the workshop.
 - **Online ITEA PO Preparation Days 2020:**
This year, the PO Days scored 3.5 out of 5.0, which was a relatively low score compared to 3.9 in 2019. The ITEA PO Days 2020 needed to be organised online due to the COVID-19 pandemic. The online set-up limited the (one-to-one) networking possibilities, which is an improvement action for 2021 if the PO Days should be held online again. All plenary sessions were valued equally to previous years; an online session is quite similar to a physical plenary session.
- **Eureka Impact Assessment 2020**, sent to all project leaders and technical contacts of projects that finished in 2019. According to this survey, all projects achieved their objectives and 75% contributed to the development of technical standards. On an organisational level, 82% of the respondents indicated that their organisation was able to successfully achieve its intended goals in the project; the remaining 18% indicated that they partially achieved these. In addition, 95% indicated that the project had an R&D&I/technical impact for their organisation in terms of patents, pilots, demonstrators and scientific results. The added value of the international cooperation to their project was rated 81 on a

scale of 100. Finally, improvement suggestions were made to better align funding decisions/budgets, to create shorter Call templates and to create more discussion opportunities around technologies.

Results of each survey are discussed within the ITEA Office and

issues are solved or further investigated. In this digital era in which you may receive surveys for (too) many interactions you are involved in, ITEA promises that this is not only an administrative step but truly a way to make your voice heard in order to further improve the ITEA programme and facilitate your participation in successful projects.

4.4. ITEA press coverage

In 2020, ITEA and its projects were mentioned several times on external websites and in press publications. Thanks to the collaboration with TNO, Sirris, NXP, Daimler and all ITEA project partners of PS-CRIMSON, the coverage strongly increased in 2020. The PS-CRIMSON news item issued by the Technical University of Eindhoven was particularly well picked up. In addition, Elekta Unity (a result of the SoRTS project) is a continued success, appearing in the press on a regular basis.

In total, there were 81 publications written by 69 different bureaus from 14 different countries.

We have excluded announcements of the Eureka events, the ITEA customer workshop and the PO Days from this overview. The same goes for news messages about these events on our partner websites.

A full press coverage overview is available at:
<https://itea3.org/press-coverage.html>