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20 years ITEA

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Editorial

Dear ITEA Innovation Community,

Innovation specialists divide the innovation scope into two broad categories: incremental and disruptive. Incremental innovation focuses on cost-reduction or feature improvements in existing products or services. Disruptive innovation creates a dramatic change that transforms existing markets or industries, or even creates new ones, by introducing groundbreaking new products.

In ITEA, both incremental and disruptive innovation exist. In the Success story on the ITEA project CAP, you may read how the existing knowledge base has been used to create more smart city or smart manufacturing innovative solutions. And 3DPathology gives an example of a disruptive innovation where Artificial Intelligence (AI) and image processing are used to support pathologists and to dramatically reduce the decision-making time.

In both cases, knowledge transfer and collaboration are the key aspects:
- transnational collaboration serves to accelerate innovation processes and to decrease the risk factor of research. In the focus on South Korea, you may read how transnational collaboration enables the international commercialisation of products.
- and in the FEops article, you may read how SMEs, large industry and research institutes benefit from knowledge transfer from each other or, as CEO Matthieu De Beule puts it: "The opportunity it provided to open our eyes to what others are doing as well as open their eyes to what we are capable of."

The system performance issue for high-tech systems ten years ago has been solved by exponential growth in computing power so the focus today has shifted to how to interpret collected data to create value. AI and Machine Learning (ML) seem to be the solution for now, as you can read in the Reflexion showcase.

Although the challenges faced by companies, like smart health or smart manufacturing, are familiar, the technologies used are changing constantly and faster than ever. We have moved from solving singular issues towards more integrated issues like creating smart factories and now even to using AI, ML and Blockchain technologies to be more adaptable, intelligent, connected and secure.

In 1998, when ITEA was established, it was not that easy to guess today's discussion topics. It is even more difficult to guess what subjects will be discussed in 20 years. Looking back and then forwards, we try to understand the magic of ITEA and how it stays young and agile. In his interview, Stefan Van Baelen recalls the "fascinating process to witness how this organisation has grown from its early tentative days to become the mature, well-oiled machine that we see today."

As part of the celebration of 20 years of ITEA, this year, there will be a series of interviews. Moreover, there will be a birthday celebration during the ITEA PO Days in Stockholm, and an added present with the Impact stream of ITEA that will be upgraded to 20 Impact stories. This 20th anniversary year will be a very special year for ITEA. I would like to invite to share with us any memories related to ITEA as a video so you may take your place in the ITEA video collage.

We can foresee the impact of some technologies coming our way in the next decade, but some innovations will take us by surprise – the only thing we can do is stay curious, open to learn and ready to adapt. If we can do this, then I think we will be prepared for whatever the future holds for us in twenty years from now.

Happy reading!

Zeynep Sarılar)

20
years
ITEA

From the generation of an idea to becoming a significant player with impact in Europe and beyond

Jan Lohstroh, currently Secretary General of the ARTEMIS Industry Association and one of the founders of ITEA, looks back at the beginnings of ITEA, to the autumn of 1997 and a meeting of the management of Philips Research and the innovation management team of Philips Consumer Electronics. This meeting concluded that the existing innovation funding programmes in Europe were too much hardware oriented and that software needed a boost as more and more systems were becoming software-intensive.

Off to a 'flying' start

"As General Manager of the Advanced Systems and Application Labs of Philips Consumer Electronics at that time, I was in that meeting and I proposed setting up a MEDEA look-alike EUREKA programme/Cluster for software," Jan recalls. MEDEA was then the micro-electronics EUREKA Cluster that later evolved into CATRENE and Penta. "My proposal was accepted, and I was assigned the task of carrying it out. Together with Jan van den Biesen from Philips Corporate R&D Government Relations, I invited some 20 representatives we personally knew, from companies that we supposed would be interested in this new initiative, to a meeting on 27 January 1998 at Schiphol airport." Some 15 persons showed up, and Jan van den Biesen gave a presentation entitled 'ITEA, an initiative for a new EUREKA programme on Information

Technology in European Applications'. "The name ITEA had been invented by our Philips colleague, Wil Kreuwels," Jan adds.

The presentation was well received, and it was decided to compose an 'ITEA Starting Group', including two Working Groups, one on content and one on IPR. "I became the Chair of the Starting Group and we had many meetings during the rest of 1998, with our main goal being to gain the EUREKA label from the EUREKA High Level Group. For that purpose, we drafted a kind of Strategic Research Agenda: the colourfully entitled 'ITEA Rainbow Book' for 'leapfrogging

the in-systems software gap to boost European Competitiveness'. In the meantime, we changed the meaning of the ITEA acronym to 'Information Technology for European Advancement'. The upshot of this was the award of the EUREKA label on 1 October 1998.

A place to call 'home'

"So having spent the intervening period setting up the organisational and legal entity," Jan continues, "we got a provisional board together. My proposal to start a cost-effective office in Eindhoven was not immediately accepted because of the sharp contrast with the glamorous and more costly MEDEA office in the Tour Mont-Parnasse in Paris.

However, I managed to convince the board that in these modern times of good electronic communication, the location of the office was less important, and so Eindhoven got the nod. The first office, led by Pieter Dekker, was located next to Jan's own office in a Philips building and when Pieter left for another job, his successor Vincent Evers found a new location at the Eindhoven University of Technology campus to demonstrate that the initial organisation had grown up and could stand on its own two feet, away from its founding father. After Vincent retired, Kees van Mourik took over as Office Director till 2007, the year in which the current Office Director Fopke Klok took over. A year later, Fopke moved the ITEA office to the High Tech Campus in Eindhoven, where it still is."

For the legal structure the ITEA Office Association was formed from three companies (Philips, Siemens and Alcatel), with a board of three. The Philips representative was the Chair, and the other two secretary and treasurer. "Initially my boss, Roel Kramer, held the Chair of this small board but when Roel left Philips, I took over," Jan remembers. "Later Aart van Gorkum, Kees van der Klauw and Casper Garos took over respectively, after I switched roles within Philips to the Philips Intellectual Property and Standards organisation."

Still doing very well
In the beginning of ITEA the focus was very much on the content and there was an urgent need to fill the position of the ITEA Vice-chair (for the technical content). "We found the very enthusiastic Eric Daclin from Alcatel prepared to take this role," Jan says. "Later Paul Mehring from Daimler assumed the Chairmanship, followed by Rudolf Haggenmüller in 2005 until Zeynep Sarılar, the current Chairwoman took over in 2016. When Vice-chairman Eric Daclin retired from Alcatel, Jean-Pierre Lacotte from Thomson became his successor, succeeded by Gérard Roucairol from Bull and in 2008 succeeded by the current Vice-chairman Philippe Letellier.

The ITEA submission and selection process was copied 1:1 from MEDEA (with the Board Support Group) and that worked very well, with the so-called ITAC meeting with the Public Authorities established at a working level, and the Board

Jan Lohstroh

Zeynep Sarılar

had its meetings with the directors from the founding countries. The first ITEA Symposium in 2000 was held in Toulouse, where Eric Daclin lived. The second symposium in Berlin was also the venue for our first project demos and it was there that we organised a guided tour for the Public Authorities for the first time. I am very proud that ITEA did very well from the beginning," Jan concludes, "and that it is doing still very well today. Cooperation in Europe is a must and ITEA has contributed significantly to that."

Ambition is a constant factor
Current Chairwoman, Zeynep Sarılar is indebted to the legacy inherited from her predecessors and the foundations laid for ITEA today. When Zeynep first became part of the ITEA Community back in 2004, "ITEA was a smaller community than the one we know these days and while a lot has changed over the past decade or so, the high level of ambition we have today going into the future was also very much in evidence then. That is a constant factor. As is the demand we have for projects to have an economic impact, something that will continue to be a growing focus. A recent development is the increasing degree of contact we have with our customers, and it may very well be that over the next decade we will see an even closer relationship with end users. After all, it is the end user that really

determines what our customers produce, and what the customer needs to fulfil this demand provides the focus for the project goals."

Beyond borders
Another significant development is the way in which collaboration has taken on a broader perspective, both geographically and in respect of interfacing with areas related to software-intensive systems in a world that is becoming increasingly digitalised. "We are beginning to 'touch' innovative start-ups and venture capitalists and many other of the players that may not have featured in our 'cast' some years ago," Zeynep explains. "We saw how relevant these players are to our community, and vice versa, in our DIF event in Amsterdam last year. Furthermore, while ITEA is, and will remain, a tool for European competitiveness, we have to be realistic and understand that we live in a globalised world, one in which first the ICT and digital revolution means that geographical borders are no longer a barrier to business or technology. The fact that we have countries like Canada, Korea, Chile, South Africa – indeed from all over the globe – now participating in very successful projects and enabling European-driven technology to be transferred into products and services that benefit society all over the world is a real statement not only of intent but also of impact. This underlines the trend whereby

1998   2006   2014

collaboration has become a much more all-embracing movement. The whole community, the entire eco-system, all working together. It is a direction that ITEA has to and will follow. It's a question of going where the knowledge is or where the knowledge is needed."

Digital focus
It is the search for knowledge that is a key driver for the ITEA Community. "We are very curious people. We are always searching for new things, novel approaches, innovative techniques. In the way we profile the community through new kinds of events, the partnerships we enter into, for example with venture capitalists, incubators and accelerators, the collaboration we have with other associations. So the territory of ITEA will certainly expand," Zeynep says, "but the main focus will remain the same. We are focused on the digital transition and this will lead us, through innovation, to use new technologies, new concepts in software, whether that's AI or blockchain – it's not easy to predict how great the impact of new technologies will be. What we will have to bear in mind, however, is that they will change our lives as we become increasingly creatures of a digital age."

Growing community
With change happening all around and at such a rapid tempo, to what extent is the organisation of ITEA set up to deal with this changing world? "I think that one of the important developments over the past few years, as far as this is concerned, has been on the level of communication. We have been much more active in our contacts with our community and the key stakeholders – more telco's, more

meetings, more feedback, more interaction in general. It is vital that we are in constant touch with the changing world around us. At the ITEA Office we have increased not only our number of staff but also our communication efforts – PR, interaction with partners and customers, getting the message across with impact. We are really pushing the communication and soft skills. And that underlines, also, the importance of the people in our community. They spread the word and as the community grows, so does

> ## "If we stay curious, open to learn and ready to adapt, we will be prepared for whatever the future holds for us"

awareness about what ITEA is and does, and the opportunities it offers. If I look ahead, I can see an open event where we also meet other communities, where we appeal to and attract 'outsiders' – where there is more and more of a 'multi' character – multi-national, multi-cultural, multi-technological, multi-business."

Twenty years from now
So where might ITEA be twenty years on from now? "We are adaptive and flexible, we are able to shape ourselves according to the market. These are qualities that will ensure we remain relevant and impactful. Who can say how the

world will look in five years' time, let alone twenty. All I can say is that our raison d'être will stay firm but how we do things will almost certainly, even have to, change. For example, we will become increasingly digital ourselves as ITEA. Also with our communication. Fewer face-to-face and more digital meetings. So the whole digital transition will affect the way we work, too. If I go back the twenty years to when Jan and his fellow initiators got together physically at Schiphol airport, at around the same time I was wondering about the prospects for VoIP, because even though we had the technology, legislation was still a barrier that had to be overcome. Yet in the end, the technology won over. And look at what is happening nowadays to financial transactions, for example. The digital transition is having a significant impact on our money. Cash payments have dwindled and who knows how long plastic cards will remain. Will it all get swallowed up by crypto-cash and currency? We can foresee the impact of some technologies coming our way in the next decade but some innovations will take us by surprise – the only thing we can do is stay curious, open to learn and ready to adapt. If we can do this, then I think we will be prepared for whatever the future holds for us in twenty years from now."

Country focus on Korea

In this issue, Dr. Myung Jun Oh, Director of International Cooperation Division in KIAT, the Korea Institute for Advancement of Technology, talks about the impact of the 4th Industrial Revolution on the agenda of the Korean government. "It is an intelligence revolution where hyper connectivity is being triggered by digital technologies and everything is connected to the network. The quantity of data is increasing and intelligence technologies, such as IoT, data technology, machine learning, have become the drivers of economic growth, influencing every field of life. In the era of the 4th Industrial Revolution, many countries are setting plans around intelligence convergence and Korea is no exception."

Three pillars

The key concepts of the 4th Industrial Revolution are 'connectivity' and 'intelligence' in which ICT technologies such as IoT, 5G, Cloud, Big Data, Artificial Intelligence and machine learning are fundamental. "The government aims to strengthen the technology infrastructure," Dr. Myung Jun Oh explains, "focusing on three pillars: establishing a hyper-connectivity intelligent network, enhancing data production and usage, and securing global technology competitiveness. This will help intelligence innovation to spread into every industrial field and service, and future societal changes can be dealt with pre-emptively. Such a strategy aims to facilitate boosting overall industrial productivity, solving severe social problems, thereby leading to improving the quality of life and making a new growth engine."

Data heaven

In terms of strengthening the science and technology infrastructure, the government is in the process of building a hyper-connectivity intelligent network to allow intelligence to spread into every industrial field and to secure the foundations for leadership in the 4th Industrial Revolution. Korea plans to become the first country to commercialise 5G and deploy the

Software innovation: the key to quality of life and economic growth

10 GiGa internet on a commercial scale, aiming to turn the country into a 'data heaven' where anyone can easily access, use, do business with and create immense values from data. This is being backed by increasing government R&D investment in strategic fields, with more funding going to basic technologies such as artificial intelligence and robotics along with efforts to combine Big Data with the R&D output. Five specific areas have been designated for innovation and further development of the national industrial structure with software innovation in mind: electric and autonomous vehicles, IoT home appliances (smart home), energy new industry, IoT-related bio and health, semiconductors and displays.

Intelligence technologies

"Strengthening the science and technology infrastructure leads to intelligence innovation and convergence in industry and services," Dr. Myung Jun Oh continues. "Through software innovation, the government aims to promote intelligent innovation through all areas of society, such as medical, manufacturing, transportation, finance and distribution, agriculture and fisheries, smart cities, welfare, environment, security and national defence. Through the overall convergence of intelligence technologies, it aims to boost competitiveness not only within the software sector but in every industrial field, as well as to come up with new industries and open new jobs. For example, accelerating manufacturing sector reform by implementing smart factories and advanced manufacturing robots. Intelligence in transportation will be achieved via autonomous vehicles, autonomous smart ships, next-generation drones, etc."

International cooperation

As a public organisation under the Ministry of Trade, Industry and Energy (MOTIE), KIAT is responsible for enhancing Korean industrial development through policy making, building infrastructure, supporting international cooperation and so on. It is also entrusted with managing industrial technology international cooperation in Korea. With a national policy direction and industrial objective that fully coincides with EUREKA's goal of boosting company growth through market-oriented technology development, Korea positively explored the possibility to join EUREKA and became the first non-European country to join as an Associate Member State in 2009. In 2017, thanks to the will of the Korean government and the support received from membership of EUREKA, Korea's status was promoted to Partner Country, a first in the history of the EUREKA Network.

Powerful platforms

"We need to respond to the drastic changes in the industrial paradigm as a result of the 4th Industrial Revolution and to be an industrial leader," Dr. Myung Jun Oh underlines. "Korea has to strengthen its capacity in the ICT convergence, in particular the software sector, and as boundaries between industrial technology sectors and countries disappear, the importance of acquiring standard and ICT convergence technologies will become even bigger in the future. From this viewpoint, EUREKA Clusters, especially ITEA, play a very important role as powerful platforms allowing Korean companies to participate in top-level technology development, strengthen capacity and expand their markets. And in cooperating with the ICT sector and applied technology expertise in Korea, European companies and countries with strong ICT sectors also enhance their capabilities and utilise this as an opportunity to enter Asian markets. The fact that 64% of Cluster projects with Korean participation belong to the ITEA Cluster is a sign of high ITEA participation demand and a proactiveness between Korea and Europe."

SMEs

"In accordance with the rapid industrial paradigm shift as a result of the 4th Industrial Revolution, the importance of open innovation through international cooperation is gradually increasing. However," Dr. Myung Jun Oh admits, "Korean companies' participation rates in global technology cooperation are low as compared to that of major economies. Large companies either have the networks and sufficient capacity required for global cooperation, or the capital for that. Universities and research institutes also have secured their global networks and actively engage in academic and talent exchanges. However, SMEs, despite being so important for a country's continuous growth and quality jobs,

are facing difficulties when relying on their own capacity to find outstanding partners and collaborate with them."

KIAT operates various programmes that aim to assist domestic SMEs overcome a lack of information regarding overseas organisations as well as insufficient bargaining power and helps them maximise their global capacities. Dr. Myung Jun Oh: "We promote their active participation and output realisation by offering full-cycle support: from searching for (overseas) partners and planning R&D projects, through R&D funding to commercialisation via vehicles like the Korea EUREKA Day and Korea-Europe technology cooperation workshops and various matchmaking activities, either in Korea or overseas. With expansion to foreign markets and technology commercialisation in mind, we are also actively participating in the European Entreprise Network (EEN) and E!InnoVest."

International Technology Cooperation Centres
To enhance the global capacity of SMEs as well as to invigorate cooperation between industry, academia and research institutes, KIAT is planning to utilise outstanding public research institutes this year, designating a focus technology area and provide a budget based on each organisation's characteristics. This way they can act as "International Technology Cooperation Centres" in their particular sector, engaging in activities like networking and match-making, project feasibility checks and customised global technology cooperation support for SMEs. "Hence," Dr. Myung Jun Oh concludes, "the current limitations facing SMEs right now will be resolved and core technologies that are being researched in universities and research institutes will be commercialised in the process of cooperating with companies, all of which will contribute to economic growth and high value added."

GMT
Bringing safety and happiness to the maritime world

Joohwan 'Arthur' Lee is CEO and co-founder (with his brother) of the Korean company GMT, which started up in 2002 and whose key technologies are surveillance, communication, navigation and security for safety in both land and maritime domains. GMT makes use of state-of-the-art technologies to develop its Smart Integrated Surveillance Systems that enable users to command and control all types of situation. As Arthur puts it, "GMT is the best ICT solution company when it comes to contributing both safety and happiness to the maritime world." This twin aim is certainly music to the ears of the ITEA Community for whom happiness is a familiar undercurrent.

Cutting-edge solutions

The ambition of GMT is to reduce and protect maritime incidents by developing solutions for surveillance, communication and navigation, ultimately for the benefit of national wellbeing and competitiveness. And in that respect its ICT activities are specifically geared to ensuring safe navigation, maritime traffic safety and national security based on Maritime Location-based Solutions. The company plays an important role here, sharing information with national situation control centres (like the national crisis management centre GICOMS). In the field of surveillance, GMT offers cutting-edge integrated maritime situation control solutions for real-time vessel monitoring, situation analysis, prediction and response while it also provides navigation devices for safety in compliance with International Convention for Safety of Life at Sea, such as real-time embedded middleware and base station equipment.

Client-driven R&D

"A key player in the development of our products," Arthur points out, "is the client because customer requirements are the input for the R&D we work on. Our aim is to satisfy client demands." And these demands are for navigation devices for all kinds of vessels, including mobile devices that are capable of accessing connections anywhere. Furthermore, GMT develops and manufactures products based on ENC (Electronic Navigation Chart) and location-tracking technology to fully enhance safe navigation.

Sharp end of innovation

"You see that the role of software in the marine safety domain has grown exponentially in the past couple of decades," Arthur says. "You just have to look at the prevalence of AIS, or Automatic Identification Systems, that has become so vital to modern-day marine traffic. It's an essential tool in our own product development. The Korean shipbuilding and shipping industry is a global leader and if we are to maintain that position, it is essential for the (software) support infrastructure, of which we are an important player, to stay strong and at the forefront of future developments. We have to be at the sharp end of the innovation business. But that is not something that we as a company can do alone and even as a country
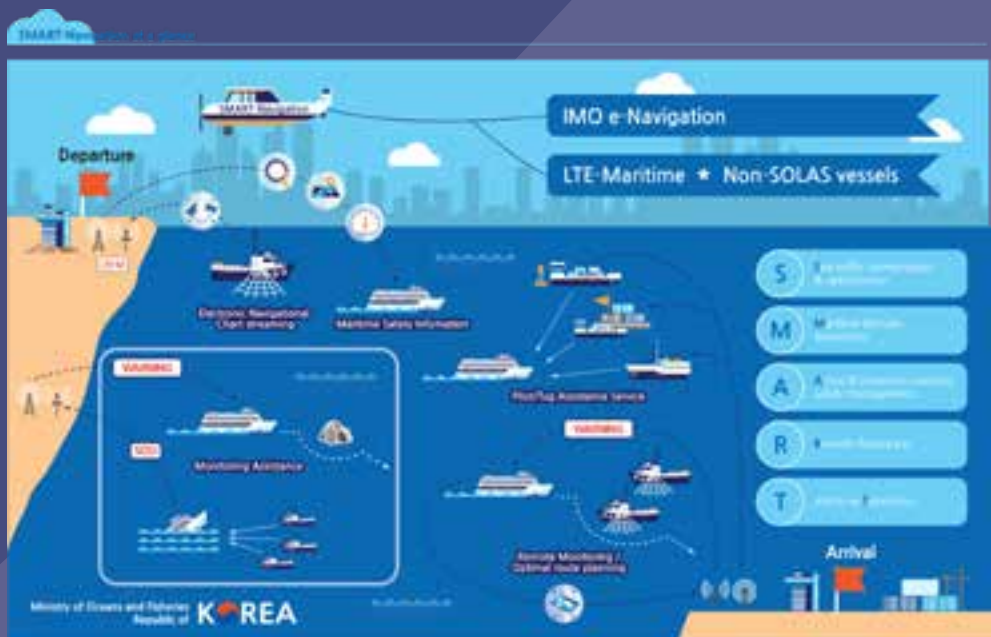
that is such a strong player in the high-tech world in terms of both hardware and software, we know and understand the value of and need for collaboration. We have a lot to offer to and we also have a lot to gain from partnering in international projects. We are grateful to our government's efforts to create the opportunities for us to engage in this way."

RECONSURVE

"One of the many awards we have received, and one of which we are very proud, was the KOREA EUREKA Day Award for "Most Innovative and Commercially Viable Project" in 2013. The RECONSURVE project consortium in which we were a partner and which included some of Europe's leading maritime engineering and systems companies, like Thales and Aselsan, won a top prize for significantly improving maritime security and surveillance by developing an open, interoperable maritime surveillance framework utilising a navigational pattern analysis. While this kind of recognition for our expertise in AIS and surveillance systems is a great honour, the benefits of working together with other leading companies to give maritime safety provides a real boost in itself with gains all round, both from a technological and commercial perspective. The profile of our European partners in Asia and our profile in Europe: we both get stronger from it. So the

value of publicly-funded projects is evident."

The bottom line

R&D collaboration has been a strong impulse in GMT's recent international growth. "In 2017, we really kicked on in the international market," Arthur explains. "Before we started participating in the EUREKA world around seven years ago, our annual revenue was USD 4 million. Now it has more than tripled, to 14 million. And I expect this year to be in the region of 20 million. I think it is fair to say that this would not have happened without our involvement in projects like RECONSURVE. Now we have implemented a national SMART-navigation project for the Korean government to implement the concept of IMO e-Navigation, providing additional services for non-SOLAS ships such as fishing boats, coastal vessels and small ferries. Finally, we will continue contributing to safer navigation and happiness at sea."

More information

http://gmtc-global.kr/

ITEA Event 2018

as part of the EUREKA Innovation Days
The power of collaboration

Again, ITEA this year lines up with the EUREKA Chairmanship team and other EUREKA Clusters, and co-locates its annual ITEA Event on 24 May with the EUREKA Innovation Days 2018 (22-24 May) in the Finlandia Hall in Helsinki. The EUREKA Innovation Days will show you the "Power of collaboration" and will address 4 main themes: Smart Mobility, Smart Health, Smart Energy and Smart Industry.

FINLAND 2017/18 EUREKA CHAIR +

Looking forward

The EUREKA Innovation Days offer the perfect opportunity to meet companies and research organisations from across Europe and beyond in Finland's dynamic capital. The three-day conference includes:

- forward-looking keynote speakers from industry, government and academia, including Lauri Oksanen, VP Research & Technology of Nokia Bell Labs, and Joakim Appelquist, deputy DG & Director of International Collaboration at Vinnova

- debates on the European Innovation landscape
- expert insights into cutting-edge innovations in energy, industry, mobility and health
- an exhibition area showcasing 70 R&D&I projects and a chance to discuss directly with participating companies
- the EUREKA Innovation Award 2018 announced by this year's Millennium Technology Prize Winner
- opportunities for B2B matchmaking and networking

ITEA Event 2018 - programme 24 May

Thursday 24 May will focus on the EUREKA Clusters with a joint Clusters session on industry-led collaboration in the morning, followed by the ITEA Event 2018. This specific

ITEA session will consist of:

- a visionary welcome message from the ITEA Chairwoman Zeynep Sarılar;
- exciting programme highlights by the ITEA Vice-chairman Philippe Letellier; and
- an interactive panel discussion with the four winners of the 2018 ITEA Awards of Excellence, highlighting their project results and impact.
- celebration of 20 years of ITEA

Each year, the ITEA Board Support Group nominates outstanding ITEA projects for the ITEA Awards of Excellence. This year these awards will focus on the key achievements for ITEA Innovation and Business impact. The 2018 winners are (in alphabetical order):

- **BENEFIT**: Better Effectiveness aNd EFficiency by measuring and modelling of Interventional Therapy. BENEFIT has been selected for an ITEA Award of Excellence for Business impact.
- **C³PO**: Collaborative City Co-design PlatfOrm. C³PO has been selected for an ITEA Award of Excellence for Business impact.
- **FUSE-IT**: Future Unified System for Energy and Information Technology. FUSE-IT has been selected for an ITEA Award of Excellence for Innovation.
- **IDEA4SWIFT**: Identity, Doc, Exchange, Authentication 4 Systems Worldwide Interconnections of Frequent Travellers. IDEA4SWIFT will even receive the ITEA Award of Excellence for both dimensions, Innovation and Business impact!

22 May	HIGH-PERFORMANCE COLLABORATION – IN EUROPE AND BEYOND *Keynotes, South Korea Collaboration Forum, guided tours, exhibition (including about 40 ITEA projects), matchmaking B2B meetings*
23 May	SMART COLLABORATION – EXPLORING OPPORTUNITIES *Keynotes, thematic parallel sessions, EUREKA Innovation Award winners, guided tours exhibition, matchmaking B2B meetings*
24 May	ITEA EVENT 2018 + EUREKA CLUSTER DAY *Messages from the ITEA Chairwoman and Vice-chairman, interactive panel session with ITEA Award of Excellence winners, celebration of 20 years of ITEA, EUREKA Clusters joint session, exhibition, guided tours*

Come and see the power of collaboration at the exhibition
During the event visitors will be able to roam around the exhibition to witness the power of collaboration by themselves. Representatives from about 70 leading R&D&I projects, including about 40 running or recently finished ITEA projects, will share insights in the developments of their technologies to date. Furthermore, you can learn more about EUREKA and the EUREKA Clusters, the associated EUREKA countries and also the EUREKA Innovation Award winners will present themselves at this exhibition.

Do not miss this opportunity. Register now for only 160 euros (excl. VAT)!
For more information, visit our ITEA Event 2018 web pages:
https://itea3.org/itea-event-2018/index.html

Please note that for the actual registration you will be forwarded to the EUREKA Innovation Days website.

Why attend?

- Learn more about trends and outlooks for the future in your own field
- Benefit from cross-fertilisation of ideas from adjacent areas of smart industries
- Network and collaborate with your peers

Come to Helsinki and meet/network with/share your insights with the expected over 1,000 participants to this event!

Community Talk with:

Stefan Van Baelen

From 'ancient' Commodores to innovative captains of industry

Stefan Van Baelen is Funded Project Manager for Digital and User Centric Solutions at imec in Belgium, the world-leading research and innovation hub in nanoelectronics and digital technologies whose ground-breaking innovation covers application domains such as healthcare, smart cities and mobility, logistics and manufacturing, and energy.

Commodore and Pascal

Stefan is a computer scientist by education whose PhD was in model-driven engineering just over ten years ago. "At the time I did my PhD, the topic of model-driven engineering was still predominantly an academic one whereas today you see its application in a whole range of industry sectors. As such, that's a good example of the transfer from academic research to industrial use." Computer science and Stefan Van Baelen go back a long way. "I can't remember when I wasn't interested in computer science and I can certainly recall my first computer, when I was in high school – the Commodore 64! With some Pascal programming

in high school I felt that this was the direction for me to go."

From researcher to coordinator

"Interestingly, it was when I started my PhD, nearly 20 years ago, that I got involved in ITEA too. Quite a commitment, I must say – and it meant that I took a little while longer to finish my thesis than I had originally anticipated." At the time Stefan was a researcher at the imec-DistriNet research group at KU Leuven, a software engineering research centre with extensive expertise in secure software engineering and middleware for distributed systems.

A community that matters

Stefan helped to set up a number of consecutive ITEA projects, so he is quite well positioned to make observations on the various developments that have taken place at ITEA. "It has been a fascinating process to witness how this organisation has grown from its early tentative days to become the mature, well-oiled machine that we see today," Stefan recalls. "The ad-hoc of the early days has become a sharply defined, streamlined procedure nowadays. From the professional office support that project partners receive to the much larger events that are organised, like the DIF last year in Amsterdam and the various PO Days. You get a sense that you are part of a community that matters, that has impact. You feel you get the chance to work on the topics that matter to you as a member of that community. And sharing it among the community. This openness is one of the secrets of ITEA's success, I think, especially in a world that is changing and developing so fast. Being 'open' in all senses of the word is key to adjust to the needs and demands of the community. And this is something that will stand ITEA in good stead for the future. The global dimension is a trend that is also being reflected in the ITEA Community. We are growing geographically, but while we welcome other countries from all parts of the globe, it is important that we take the time to integrate them properly, get around the table and get acquainted."

The human aspect

From a personal point of view, being part of the ITEA Community has enriched Stefan's life in various ways. "It has given me the opportunity to work with so many different people, players, cultures, nationalities and industries. But perhaps the most important thing, from a personal perspective, is the human aspect. Getting to know people, having fun when doing the project – it is a big motivator. I remember at the end of the AGILE project when all the partners paid a visit to the home of Santa Claus in Finland. We had so much fun sending Christmas cards from there and playing around in the snow. So a job well done was a job celebrated together."

Bottom-up, industry-driven

"It was then as a researcher that I came into contact with ITEA since it was part of my job to coordinate European projects in the ITEA programme. I think to date I've been involved in eight. These projects, with a bottom-up, industry-driven approach, appealed to me because I've always been interested in how research results are applied in industry. One of the companies with whom I've had a lot of contact is Barco, a familiar face in ITEA consortia. When academic and industrial innovation come together to achieve practicable results – well, this is when I feel proudest of what I do. Solving industrial problems rather than depositing hypotheses in an academic ivory tower."

In 2012, though, Stefan took a slightly different track, switching to iMinds, where he was appointed research coordinator, responsible for setting up new projects. In 2016 iMinds merged with imec, resulting in a large research hub and combining hardware and software. "And that's how I came to be at imec," Stefan explains. "where we have two kinds of project:

government or publicly funded and contract research projects that are funded directly by industry. So my job is to set up new funded projects and find new opportunities, taking responsibility up until the point at which a project gets approved, and then I step out. I am, if you like, the project pipeline from idea to the labelling of it by ITEA."

Broader mindset

Going back to the beginnings of his involvement with ITEA, Stefan says that this is largely down to Barco, which proposed a project in the very first ITEA Call. This was DESS, a project aimed at improving capabilities for handling complexity and boosting productivity. It ran from 1999 to 2001. "It was a real challenge and opportunity at the same time. ITEA gave us the chance to work with industrial players and other partners from different European countries. This was something new at the time. It helped broaden my mindset and underline the desire I had for my own research to be industry-driven. I also think that ITEA is a good and important counterweight to the top-down European Commission programmes."

# ITEA project results enhancing people's lives

Improving diagnostics in pathology

Histopathology is the microscopic examination of biological tissues to observe the appearance of diseased cells and tissues in very fine detail. Currently histopathology diagnostics takes only a fraction of the tissue into account and no special attention is given to the biochemical composition of the tumour. This makes the pathological examination labour intensive and subject to large inter-observer variation. With the introduction of the 3D Pathology solution, not only is more tissue taken into account, but also the biochemical composition is used to find the best solution for patient care.

The 3D Pathology solution creates a diagnostic street where tissue biopsies are digitised and reconstructed into a multi-modality three-dimensional volume. By viewing the resected tissue in 3D instead of 2D, the spatial arrangement of the tissue is restored, potentially giving more insight in the growth patterns of tumours. Together with the biochemical information as provided by Mass Spectrometry Imaging, this will increase the amount of information provided to the pathologists.

However, to keep the workload of pathologists low, the data is processed using state-of-the-art analysis techniques, including deep learning. By creating a multimodal 3D reconstruction and combining this with deep learning techniques, the 3D Pathology solution can improve the diagnostics in pathology. This way the pathologist is guided to the regions of interest, reducing his/her workload and enabling more accurate diagnosis, resulting in more and better optimised treatment options for patients.

ITEA 3 project
3DPathology
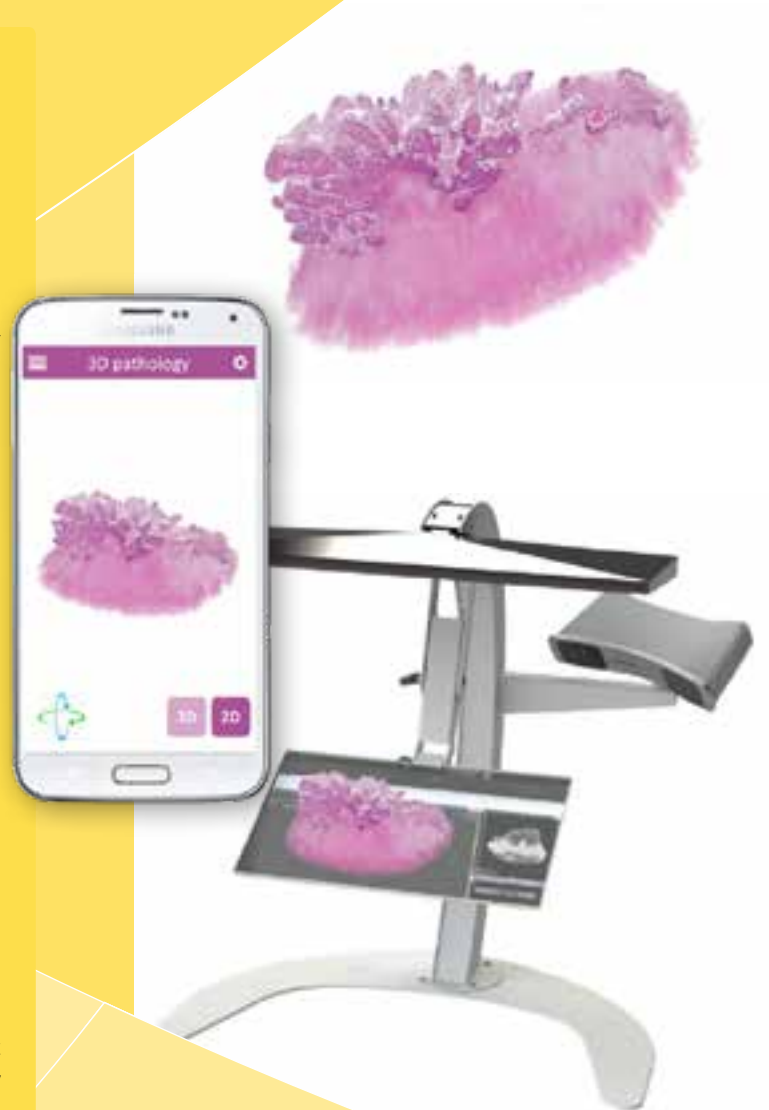
Sweden strongly increases the EUREKA Clusters budget

Sweden has been an active member country in ITEA since its beginning in 1998. Over the past few years, the participation has been increasing very fast with Sweden 9th in terms of effort per country of the ITEA 3 Call 4 PO submission of 2 November 2017. To support this growth for the future, Vinnova increased its budget for the EUREKA Clusters by 50% in 2017. For 2018 another €1 m has been added to the Swedish EUREKA Clusters budget and the dedicated budget is now set at €7 m. The ambition is to add another €1 m for 2019, which would mean a 100% increase in the total budget for EUREKA Clusters from 2016 to 2019.

The Swedish Public Authorities and ITEA have taken a number of initiatives to achieve this growth, e.g. hosting several events like the 2016 EUREKA Innovation Week, the pre-PO Days event in May 2016, the ITEA Digital
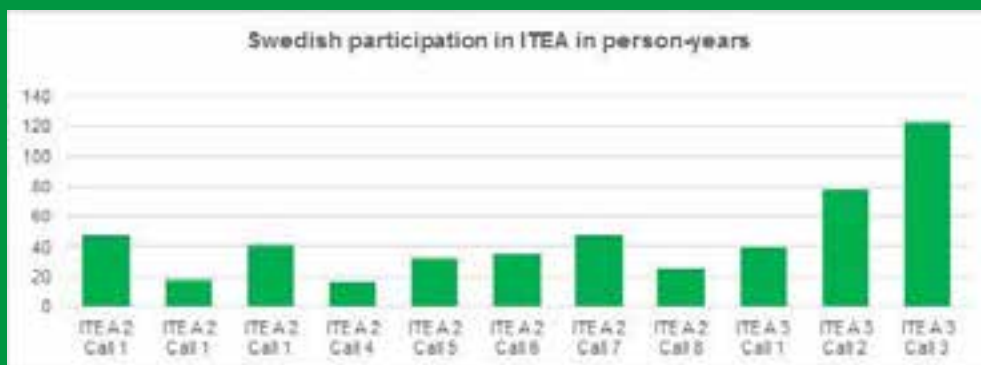
Transition Masterclass in October 2016 and the SSF – Vinnova conference on Software for Competitiveness in November 2017.

On 4 and 5 September 2018, ITEA will organise the Project Outline (PO) Days, the annual brokerage event, in Stockholm, facilitating even

more Swedish participation in the upcoming ITEA Call.

So make sure to save the dates of the ITEA PO Days 2018: 4-5 September 2018

See you in Stockholm!

If a picture is worth a thousand words, then a video is worth a million!

As an ITEA project partner, you might have been asked to explain your project to a friend or relative. And without a technological background, some of them might have had difficulties in understanding it. Several ITEA projects have tackled this problem by creating short videos promoting their ITEA project (results) in a clear,

comprehensible way. Compelling examples of the SCALARE and SEAS project videos can be found in our YouTube Channel (ITEA Office).

Also in ITEA, we use the strength of videos by creating video tutorials supporting the project partners with the different processes in ITEA. They can all be found on the ITEA Community and public ITEA website.

We are currently collecting all ITEA project videos and we will publish them on our dedicated ITEA YouTube Channel. We invite you to have a look and get inspired. If you have an ITEA project video, we can promote it on your ITEA project page, in our newsletters and on our social media, so please feel free to share it and let us spread the word…and video :).

ITEA Success Story

CAP

Making a valuable asset out of Big Data

While the arrival of enabling technologies has made a wealth of public and organisational data available for analytic processing, access to the data and to efficient analytic tools is often difficult. Furthermore, combining such sources of massive data can yield much richer applications and greater insights to intelligence reporting. Hence, a collaborative platform, which makes it easy on the participants to share data safely and to gain access to latest technology tools easily, is required. By positioning the target open-source architecture to support Big Data, ecosystems and value chains, the ITEA project CAP (Collaborative Analytic Platform), which successfully ran from November 2013 to October 2016, contributed to the development of new but sustainable business models, and laid the foundation for a market value proposition of 'Big Data as a Service'.

The 27 partners of CAP, coming from six different countries worldwide, defined standard, extensible data models and interfaces for the exchange of data between the data owners, platform operators, cloud infrastructure operators and data scientists. The platform incorporated open Big Data tools and features that all participants can use and enhance, thus enabling access to data, sharing and processing in real-time facilitated by a single platform. A key deliverable was the new range of business models that established metrics for the value of Big Data. These features enabled CAP to regulate the stakeholders' collaboration and develop a new innovative business environment based on shared data and knowledge in a safe setting where data owners have the opportunity to valorise their data across other domains: the Big Data Marketplace.

CAP partners are themselves prime examples of the impact of the platform on their business.

In Turkey, Turkcell Technology created a partnership with a large industry company and established a real-time IoT data flow from fuse boards. Once the integration was completed, Turkcell Technology developed predictive models by getting electric consumption values from these fuse boards and developed a trend-tracking dashboard that will enable near real-time energy-saving actions to be taken, such as improving refrigerators that consume a lot of energy. There are plans to integrate this same model for restaurant and market chains, which is a great opportunity for Turkcell Technology to enter new markets, with more than 20,000 market chains and 5,000 restaurant chains as potential users.

In addition, Turkcell and Ericsson have been testing the applications of Narrow Band IoT in LTE network since the beginning of 2017 with contributions from their own engineers and their local business partners. Smart meters, smart parking IoT systems integrated into the mobile payment system (Paycell), smart manhole examples of warning systems to be used in natural disasters and the recent "Smart Irrigation Hydrant" solution, which is an agriculture use case, have been developed. For the Smart Water Meter solution, consumption values from smart water meters will be sent to CAP for real-time data analysis. Smart water meters measure consumption and basic water quality metrics. Currently a proof-of-concept (POC) is running. Once the POC is completed, it is expected that nearly one million smart water meters will be added to the system. There will be many benefits from this implementation including the reduction of manual meter reading by employees, near real-time detection of water quality anomalies at the home entrance, daily water consumption prediction, etc.

In 2017, the CEO of Turkcell Technology, Kaan Terzioğlu, highlighted the importance of the CAP project in a Turkish daily newspaper: *"One of the best examples of our international collaborations is the Collaborative Analytical Platform project we have been leading in ITEA."*

Furthermore, the CAP project has focused the mail division of La Poste Group on the real value of the data collected by the mail sorting machines. Several terabytes where analysed to qualify the quality of the data and then to extract useful conclusions about the processes, with the focus on two aspects. Firstly, the fraud on the franking marks was examined, highlighting the customers and/or the products where the legal manual controls may be the most cost-effective (several million euros may be recovered with the same control workforces). Secondly, a data visualisation of the real process inside a sorting centre was compared with the theoretical flows of mail, helping to reduce futile handling and reducing mail transit delays. Finally, La Poste Group decided in 2016 to invest in Probayes, a French SME with great success in data science, to accelerate the digital transition.

VTT has created a publicly available Wind Power Icing Atlas (WIceAtlas), providing information on in-cloud icing severities for existing and planned wind farms worldwide.

• City-wide Surveillance Center

The core of the WIceAtlas consists of over 4500 meteorological stations worldwide with over 20 years of observation data and 35 years of MERRA reanalysis data. By analysing extensive historical icing weather conditions, it is possible to estimate, for example, the resulting long-term iced turbine production losses thus giving valuable Annual Energy Production (AEP) estimates for financial calculations. In addition to production losses, WIceAtlas can provide icing information for ice throw risk assessments and turbine lifetime analysis. The WIceAtlas with low temperature climate layer also helps in the design of pre-construction resource assessment instrumentation and can be used in pre-selection of appropriate turbine model and type.

Thanks to the project's results, the Finnish SME NetMan created services focused on entities needing a high level of automation and data exploitation. CAP was a catalyst to more data-driven business models and also to information security service business. Nowadays information security is the most rapidly growing business area and data analytics is becoming an increasingly important part of business within various services. The story continues with new service packages focusing on adding value and boosting productivity through data collection and automated analysis in digitalisation management. NetMan was acquired by MPY in the summer of 2017 and together they are challenging IT service markets with tomorrow's service portfolio.

In Korea, ETRI had developed a concrete CAP platform with multitenant architecture. Based on this platform, Innodep developed the interactive CCTV monitoring service which analysed CCTV metadata together with data from external systems (e.g. weather, traffic, accident, etc.) and

recommended more important CCTV videos and situations to focus observer attention on them. Innodep received great interest in introducing this service to several exhibitions and local district surveillance centres in Korea and has been implementing the steps for its commercial product. For application in various domains as well as CCTV, ETRI has been developing the next platform following CAP, whereby data interoperability and distribution among different platforms are being advanced.

The CAP project has created a bigger picture of real-time Big Data by delivering a powerful easy-to-use service platform, which engenders new value-added services and new business models. While corporate companies are short to mid-term targets, end-user services have huge potential in the long term.

FEops

## A gazelle in the medtech sector

Matthieu De Beule, CEO of FEops, and Peter Mortier, CTO of FEops, are Engineering graduates who gained their PhDs for their study on cardiovascular devices and procedure modelling, following this up with a 'Technology Transfer' general management programme. So is it a foregone conclusion that, after their PhDs, Matthieu and Peter should combine technology and management to co-found this Gent University spin-off.

"Peter and I were finishing off our PhDs on computer modelling of cardiovascular devices. In other words, mechanical modelling that helps you predict how things will work. This has been used for decades in the automotive and aerospace industries. We use the same kind of software – in our case from the French company Dassault Systèmes – to study medical devices rather than cars and aeroplanes. We already had contacts with industry via the university at the time. They were interested in what we were doing. So in 2009 we decided to get started as consultants to manufacturers of medical devices. We found that our customers returned to us and new customers came on board – whether that was because we were too cheap or very good was a question that we wondered about at the time," Matthieu quips.

Techno-wizardry
"Anyway, after a few years of interacting with and gaining feedback from our customers we came to the realisation that combining patient information with the computer models of the devices could help build predictive models that will determine what would happen with that patient." It was a notion that met with some scepticism at the time because there was a general consensus that patient individuality could put a spoke in this innovative wheel. However, "we had Peter on our side," Matthieu adds, "and being a bit of a techno-wizard, he

Guiding structural heart
interventions to increase
safety and efficacy
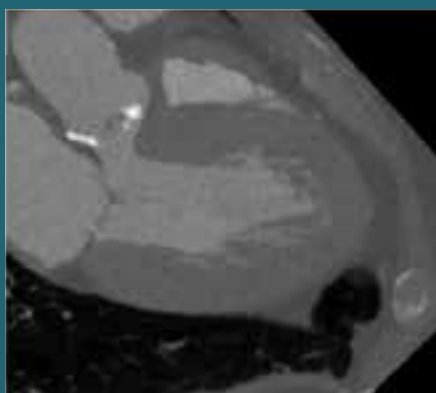
The TAVIguide™ technology empowers clinicians to personalise device size selection and positioning (see above). TAVIguide™ predicts the interaction between the TAVI device and the specific patient, combining routine preoperative CT imaging with advanced computer simulations (see below). FEops is the first and only company to be cleared to market a patient-based simulation model for structural heart interventions.
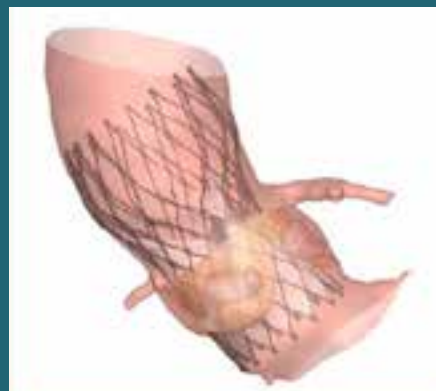
managed to come up with strategic solutions to circumvent these problems, so we were able to produce proof-of-concept with our TAVI (Transcatheter Aortic Valve Implantation) model for minimally invasive replacement of the aortic valve." (See box TAVIguide™)

Knowledgeable investors
Initially, the small FEops team channelled all its profits from consulting into R&D to develop patient-based modelling technologies, aided by grants from the Flemish authorities (IWT / VLAIO). Very quickly it became apparent that the company needed to shift up a gear and it sought venture capital investment to give the growth and ambitions a financial boost. "It was at this time that we began to work in the ITEA BENEFIT project together with our colleague Gianluca De Santis, and this gave us a good opportunity to find out how we could integrate our technology with the technologies of others."

The field of cardiovascular technologies is growing very fast and it underlines the need for good procedural methods. It also provides huge potential for FEops products, like TAVIguide™. "Of course, this means we need more money, so this past summer we once again had another capital investment round, and this initiative was backed by the current investors (Capricorn Venture Partners and PMV) who are keen on driving the company forward. And," Matthieu goes on, "a new investor, Valiance, which is very familiar with investing in the area of transcatheter-based structural heart interventions. With the combination of public funding, like the ITEA BENEFIT project, supporting our R&D and private investors, we have been able to transform FEops from a small

university spin-off to a unique European gazelle, with a highly talented team of 20 persons."

> **"With the combination of public funding supporting our internal R&D and private investors, we have been able to transform FEops from a small university spin-off to a unique European gazelle."**

Unique
Of course, you have to stand out in your market, be unique. What makes FEops unique, according to Matthieu, "is that we are all about personalised computational modelling and simulation – we're really at the forefront of what's going on in the structural heart space. We want to empower manufacturers of medical devices to get their products faster to market and thereby ultimately help the patient." These twin goals are embedded in the company's mission statement.

The growing centrality of software in medical practice and devices is further revealed in the FEops HEARTguide proprietary array of products that use advanced computational modelling and simulation to provide clinicians and valve manufacturers with insights, for the first time, into the interaction between valve and specific patient anatomy – preoperatively. "Such insights have tremendous power to accelerate

research and development of novel valve-based solutions, as well as ultimately improve clinical outcomes in real-world hospital settings," Matthieu points out. "There is a real conviction among the medical authorities, such as the MDIC (Medical Device Innovation Consortium) in the US, that computational modelling will unquestionably play a much more important role in the future development of medical devices and, in the end, in reducing patient risk. Although we focus predominantly on the structural heart domain, we are leading the way to show the potential of computational modelling for medical devices, and in helping to develop the virtual patient concept and push the horizons of personalised medical care and intervention."

Value of software innovation …
It goes without saying that software is key to FEops but software innovation even more so. "Let me give you an example," says Matthieu. "In the past three years we've come down from days to hours to run a simulation. I think that software innovation will allow us to get close to real time in a couple of years. Our expertise, I should point out, is in modelling strategies and automating the workflows. We know that this is our strength but we also know where the strengths of others lie. Which is why we are using Dassault software because it's the best there is. We want to work with the best technologies that are out there and link these up to our own R&D."

… and collaboration
And that's where the value of funded research projects comes into its own. We would never have been able to do what we are doing without public funding and the kinds of projects in programmes like ITEA. We are very positive about the whole process involved in the BENEFIT project and, of course, the opportunity it provided to open our eyes to what others are doing as well as open their eyes to what we are capable of. It's a great forum to pitch your technology. It's very likely that we will be part of future projects where the R&D is aligned to ours."

More information
http://www.feops.com

Calendar

19-23 March 2018
DATE 2018
Dresden, Germany
🌐 https://www.date-conference.com

4 April 2018
EUREKA ICT CLUSTERS AND INNOGLOBAL 2018
Madrid, Spain
🌐 https://ametic.es/es/formularios/JORNADA-CLUSTERS-TIC-EUREKA

9 April 2018
NEXTA 2018 CO-LOCATED WITH ICST 2018
Västerås, Sweden
🌐 https://www.testomatproject.eu/nexta2018/

9-13 April 2018
ICST 2018
Västerås, Sweden
🌐 http://www.es.mdh.se/icst2018

11 April 2018
HOLLAND HIGH TECH SPRING EVENT
Eindhoven, The Netherlands
🌐 https://www.hollandhightech.nl/nationaal/actueel/agenda/holland-high-tech-voorjaarsevenement-2018

23-27 April 2018
HANNOVER MESSE 2018
Hannover, Germany
🌐 http://www.hannovermesse.de/home

15-16 May 2018
GSVF 2018 - Artificial intelligence meets model-centric design
Graz, Austria
🌐 https://www.gsvf.at

22-24 May 2018
EUREKA INNOVATION DAYS
Helsinki, Finland
🌐 http://eurekainnovationdays.org

23-24 May 2018
IMEC TECHNOLOGY FORUM 2018
Antwerp, Belgium
🌐 https://www.imectechnologyforum.com

23-24 May 2018
EUROPEAN BUSINESS SUMMIT 2018
Brussels, Belgium
🌐 http://www.ebsummit.eu

24 May 2018

ITEA EVENT 2018

(as part of the EUREKA Innovation Days)
Helsinki, Finland
🌐 https://itea3.org/itea-event-2018/index.html

27 May – 3 June 2018
RET'18 COLLOCATED WITH ICSE2018
Gotheburg, Sweden
🌐 http://ret.cs.lth.se/

6-8 June 2018
MEASURING BEHAVIOR 2018
Manchester, Great Britain
🌐 http://www.measuringbehavior.org/

11-15 June 2018
CEBIT 2018
Hannover, Germany
🌐 https://www.cebit.de/en/

13-14 June 2018
ECLIPSECON FRANCE 2018
Toulouse, France
🌐 https://www.eclipsecon.org

15 June 2018
ITEA 3 MEASURE INDUSTRIAL WORKSHOP 2018
Nantes, France
🌐 http://measure.softeam-rd.eu/events-workshops

19-20 June 2018
TERATEC FORUM
Palaiseau, France
🌐 http://www.teratec.eu/gb/forum/index.html

SAVE THE DATE

4-5 September 2018
ITEA PO DAYS 2018
Stockholm, Sweden

Project showcase: Reflexion

The value of exploiting data

In 2015 the ITEA Reflexion project began, involving a consortium comprising companies throughout the Netherlands and Belgium, with the goal of looking at the huge amounts of log data that complex high-tech systems such as medical devices and professional printers produce on a daily basis and finding out how this operational data can be used to improve the product.

From mechatronic to smart…
Bas Huijbrechts, senior project manager at the Embedded Systems Innovation (ESI) group within TNO, is coordinating this project that runs till the beginning of 2019. "I would firstly like to qualify why this is predominantly a Dutch-Belgian project," Bas explains. "It centres largely on high-tech manufacturing and that is a field in which the wider Eindhoven region is particularly strong. Where manufacturing had traditionally been based on mechatronics systems, we have seen a clear shift towards the smart, digitised systems that are operating today. Coupled with this is an exponential growth in complexity and connectivity, which means that all these components and systems are capable of logging data, not necessarily because there is any kind of specific vision but because they simply can. So, what happens? All this operational data is collected and stored. But what do you do with it? How can this data can be converted into something of value?"

… requires a new mindset
The industry partners are keen to discover how this data can be used to improve their future systems. That might be to detect system redundancies or to optimise system processes or validate steps in product or system development. Real tangible applications. "I would say that this project is the first stepping stone towards trying to change the mindset of traditional machine-builders that are now actually building complex, high-tech systems," Bas says, "so that they exploit the operational data that is being generated for both future development purposes and for troubleshooting and maintenance." A key element in this project

**Project details
14035 Reflexion**

Project leader
Bas Huijbrechts

Partners
Belgium
Barco N.V.
Siemens Industry Software NV
Yazzoom

Netherlands
Axini
Océ Technologies B.V.
Philips
SynerScope B.V.
TNO

Start date
September 2015

End date
February 2019

Website
https://itea3.org/project/reflexion.
 html

is the combination of domain knowledge with data science. This is also the germ of the collaboration that is taking place in Reflexion, where industry and data analytics expertise converges to look for answers.

Data conundrum
So how far has the project already come? "Well, it's not a project whose intention is to come up with products, but we are tackling the issue of how we can connect the worlds of data science and high-tech systems. The outcome will thus not lie in a technology product as such but in an approach. The industry partners are 'employing' data scientists within their R&D departments and, in doing so, gaining insight into the data conundrum. What is interesting is that the feedback we have been getting sometimes reveals that the wrong data is being collected, making it worthless from the perspective of adding value. So that in itself is valuable from a project perspective. We are finding out what kind of data needs to be collected to be of value. Or the information could be more valuable if it contained certain data that is in the machines but is not being logged. In the case of Philips, where clinical procedures are first of all based on the clinical expertise, analysis of the field data actually reveals the differences in the procedures being followed around the world. This data can become valuable input for creating models that can subsequently help improve

future procedures. It's also a very good example of where data science and clinical expertise join to exploit operational data to improve the product – the purpose of our project."

The next step is to get domain knowledge into the machine in such a way that we can use this knowledge to learn. "That's a challenge. Ten years ago, in high-tech systems we were focused on system performance but we've solved that one. It has become less an issue as computing power has grown exponentially. But the problem is that data generation has grown just as exponentially. In other words, we can produce data ad infinitum but now we have to be able to interpret it if it is to be of any value."

Data as competitive asset
The project is now at the 'awareness' stage, which means that industry players, or rather the industry executives, are starting to understand how important it is to be able to exploit the right data to stay competitive in the future. "They need to know what is happening in the systems and learn from this. With connectivity increasingly omnipresent and extending from the manufacturer to the customer, there is a real opportunity for everyone along the chain to benefit from data exploitation. Once there is awareness that this is the new reality, then the integration of data analytics in smart engineering processes can become a valuable

business asset. While we don't have all the answers to the questions, we have demonstrated the value of data science in specific dedicated cases in the project."

Philips is one such dedicated case. It wants to improve the design of its MRI machines – determining which features are essential and which are not will not only optimise development, and cut costs, but also accelerate time-to-market by not having to undergo costly certification and validation for features that are not necessary. Another case is Océ, the manufacturer of professional printing systems. The new technology is digital and complex, the systems are full of sensors. Chemistry, physics and software all 'compete' - all at high speed. And all are producing masses of data. "Océ wants to get an optimal grip of what is happening in these systems through the data. So, if something goes wrong, if sense can be made of the data by non-data specialists, then this could cut trouble-shooting and maintenance drastically by a factor five."

"We need to keep our high-tech industry competitive – it benefits not only the industry and employment but also society and the end users who ultimately will get reliable, robust and better products. And to do that we need innovation which, in turn, means exploiting the data that is produced. Which is what we are targeting in this project."

ITEA joins EUREKA at the InterCluster booth at EFECS 2017

Credits: Simon Pugh Photography

On 5-7 December, EUREKA and the EUREKA Clusters presented the different EUREKA Instruments at the EFECS 2017 exhibition and informed the visitors about the funding possibilities through the EUREKA Clusters, EUREKA Network projects and Eurostars. In addition, Finnish EUREKA Chairman Heikki Uusi-Honkonen explained the impact of the EUREKA funding tool during one of the plenary sessions: "Public R&D&I funding is helping companies to bring products to the market and to answer to societal challenges," stated the Finnish Chairman, "and EUREKA will help companies to break into new markets."

EUREKA Cluster events and Call dates

ITEA3	24 May	ITEA Event 2018 / EUREKA Innovation Days 2018	Helsinki, Finland	https://itea3.org/itea-event-2018/index.html
	4-5 Sept	ITEA PO Days 2018	Stockholm, Sweden	https://itea3.org
Celtic-Plus	23 Apr	Deadline Celtic-Plus Spring Call 2018		www.celticplus.eu
	24 May	CelticPlus Event 2018 / EUREKA Innovation Days 2018	Helsinki, Finland	
EURIPIDES²	24 May	EURIPIDES²/PENTA Communities session / EUREKA Innovation Days 2018	Helsinki, Finland	www.euripides-eureka.eu
	7 Jun	Submission deadline - Full Project Proposal Spring Call 2017		
eurogia 2020	24 May	EUROGIA2020 session / EUREKA Innovation Days 2018	Helsinki, Finland	www.eurogia.com
	25 May	Next Cut-off date		
metallurgy europe	24 May	Metallurgy Europe session / EUREKA Innovation Days 2018	Helsinki, Finland	http://metallurgy-europe.eu/
Penta	24 May	EURIPIDES²/PENTA Communities session / EUREKA Innovation Days 2018	Helsinki, Finland	http://penta-eureka.eu
	22 May	FPP Submission deadline		
SMART advanced manufacturing	24 May	SMART Community Forum / EUREKA Innovation Days 2018	Helsinki, Finland	https://www.smarteureka.com
	11 June	FPP Submission deadline		

Colophon