ITEA Magazine 27

ITEA3

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Editorial

In this magazine you will discover a vision of the future by Jan Segerstam, the importance of SMEs with stories about Esri Canada and SRDC, the global focus with Canada, the secure society objective with IDEA4SWIFT and the partnership spirit with Systematic. All these values are the heart of ITEA. ITEA stands for advanced innovation and the realisation of an envisioned future. I encourage you to read the visionary paper of Jan Segerstam on energy. He is surely one of the best visionaries I have met on energy. I appreciate his balanced vision between local optimisation and system optimisation, taking into account open future and legacy, thanks to the ITEA projects SEAS and M2MGrids. Once more ITEA is seizing the future.

Canada is a strong new country in ITEA. Randy Zadra explains the impact of software in Canada, stressing how the software revolution is impacting all the different industries. In ITEA we are fully in line with Randy on such positions and we are pleased by his account of how Canadian companies can take advantage and feel comfortable in our community. Yes, the European ITEA platform is becoming a more global organisation in line with a more global market.

It is always an honour to welcome in our magazine a successful entrepreneur like Alex Miller, founder of Esri Canada, a geographical information system company. He explains that his product is software but the challenge is usage and change management. He lets us in to the PS-CRIMSON digital twins, the neocortex of smart cities.

When you are a regular traveller you experience long queues at the control gate. This hampers our daily lives or, should I say, hampered. Read the IDEA4SWIFT article, an ITEA success story which revolutionises the control gate with multi-biometric systems, speeding up the flow and increasing the level of security. Please mail me whenever you encounter such a gate. ITEA is working for the good of our society.

ITEA is a unique tool to steer R&D towards market impact, but we know it remains a continuous challenge for any organisation. The good balance between advanced innovation and strong roots in market reality isn't a given. Cooperation between companies of worldwide impact, agile and innovative SMEs and the academic community is not easy. We aren't alone in having been able to build such a good balance; there are some national clusters which are similar in nature with whom we have built a long-term relationship. Have a look at the description of the French Cluster Systematic Paris Region given by its President Jean-Luc Beylat, a renowned person in ITEA.

We cherish SMEs because they represent the new emerging generation of large companies. You experienced the new tools we set up during the DIF2017 to strengthen their visibility at the European level. We will continue in this direction. I am pleased to welcome in this magazine the SRDC story. This company is working on 'infobesity' (the overload of information) to transform raw data into actual information in the smart health Medolution project. This confirms the agility of the ITEA framework. SRDC appreciates the ITEA bottom-up approach and proposes some enhancements for ITEA. My thanks to them for that.

ITEA is so exciting that you cannot afford to miss out on creating new projects and participating in the PO Days on 12 and 13 September in Berlin. Also read the international customer workshop report on smart manufacturing. It gathers actual customer issues that provide targets for you to position your proposals if you want to push a project on these topics.

Look forward seeing you in Berlin!

Philippe Letellier

Digital Innovation Forum 2017

A DIFferent story, with a beginning, middle and end

Every good story, they say, should have a beginning, a middle and an end. From the inspiring keynotes at the beginning of day one through the delightful dining experience of the evening to the celebrations of award-winners on day two, this Digital Innovation Forum (DIF) told a compelling story. For two days the innovation that lies at the heart of the digital transformation in Europe was displayed, debated and demonstrated. Even more importantly, perhaps, the DIF 2017 provided a showcase of opportunities to add value to both industry and society as well as a stage for SMEs and start-ups with innovation sessions and an innovation market.

DIF2017
DIGITAL INNOVATION FORUM

The beginning

"1500 years ago, everybody knew that the Earth was the centre of the universe. 500 years ago, everybody knew that the Earth was flat. And 15 minutes ago, you knew that people were alone on this planet. Imagine what you'll know tomorrow." An amusing quip from the movie 'Men in Black' yet this perspective was echoed by the two 'women in black', Zeynep Sarilar (ITEA Chairwoman) and Laila Gide (President

of ARTEMIS Industry Association), who opened the proceedings of the Digital Innovation Forum in Amsterdam on 10 May. Commenting on the internet revolution, Laila Gide said, "little did we know then what that would mean today. And little do we know today what that will mean in the future. But it's one of the reasons we are here. To explore the future through what we do today." And Zeynep went on to emphasise that "digitalisation is not an option

anymore. It is a multi-layered issue and one that needs all of us to work together – large and small companies, universities and research institutions, governments and authorities. It's an all-inclusive, all-embracing effort. And it is why we have organised this Digital Innovation Forum and make it open to all the different players throughout the value chain."

"To stay competitive in the future, we need to transform our business activities, processes and competencies."

Innovation

So it was quite appropriate for the exploration to begin with a keynote speech by Jasper Wesseling, Director for Innovation and Knowledge at the Dutch Ministry of Economic Affairs, who championed the vital role of innovation today in tackling the challenges of tomorrow: "To stay competitive in the future, we need to transform our business activities, processes and competencies. SMEs, large companies, universities and research organisations, they all have their role to play in creating European-wide ecosystems for pre-competitive cooperation in the field of R&D. [...] Investment in R&D is necessary for future economic growth, technology development and tackling societal challenges."

And this innovation was no better highlighted than in Smart Health, one of the four 'smart' areas addressed by the DIF. Henk van Houten, Chief Technology Officer of Royal Philips, underlined the importance of the digital innovation solutions developed in projects

like ITEA project MEDIATE, in the launch this year for Philips' new Azurion platform. This new generation image-guided therapy platform introduces real-time multi-workspot technology. "Digitisation," he said, "is transforming every industry, and digital solutions will enable industrialisation and personalisation of care."

Food for thought

A central feature running throughout the DIF was the exhibition of the many impactful projects. At the 60 booths visitors and participants alike were able to find out for themselves how the collaborative efforts are generating impact on business and society. Such as the ITEA projects SCALARE, which aims to enable companies to scale their software capabilities. Or IDEA4SWIFT that improves the security of border management in Europe through intelligence and facilitating the legitimate free movement of people and goods. There were many impressive projects on show, too many to list, but special mention has to go to the recently completed

BaaS (Building as a Service) project, which was the recipient of the ITEA Exhibition Award. In visiting the booths of the DIF 2017 exhibition another keynote speaker, Max Lemke, Head of Unit "Technologies and Systems for Digitising Industry" in DG CONNECT of the European Commission, was prompted to claim "how strong we are in digitising Europe".

The thematic workshops in the afternoon of the first day which considered the four 'smart' areas of energy, health, manufacturing and mobility, were sold-out affairs, standing room only. They provided not only insight into the latest developments but also a real opportunity to exchange ideas and opinions.

- The **Smart Energy** workshop looked at issues like distributed energy and grid integration, active grid monitoring, optimising energy consumption, transactive energy in a multi-faceted market and disruptive energy technologies.

■ **Smart Health** discussed the trends and innovations impacting the market and topics included the personalisation, industrialisation and digitalisation of healthcare along with design and engineering challenges.

■ **Smart Manufacturing** explored the digitalisation that is affecting production and addressed important issues like the efficient and secure implementation of digitalisation technology in production systems.

■ **Smart Mobility** provided a platform for discussion on the latest and most critical issues as well as the emerging technologies on route to connected, cooperative and automated mobility.

These workshops provided plenty of opportunity for participation and food for thought!

The middle – thought for food

Moving from food for thought to thought for food, the DIF participants headed to the Amsterdam Foodhallen and a walking dinner for a different kind of sensory stimulation to suit every taste. The daytime activities provided a springboard for further conversation and networking in the very informal atmosphere

DIGITAL
INNOVATION
FORUM
RAI Amsterdam
10-11 May 2017

of this social and sociable middle. Asian dishes mixed with Italian pastas and Lebanese falafel with Mexican tacos, while a Canadian discussed business perspectives with a Turk and a Scandinavian explored energy synergy with a Spaniard. At times, the enthusiasm in this tower of Babel seemed to translate an intake of food into an outpouring of opinion, and all in excellent taste.

In the spotlight
The second day kicked off with the ARTEMIS panel session on the Digital Transformation, in which five different panellists from the ecosystem considered the current state of affairs in a roundtable debate. Parallel to this, the ITEA community session took place, a session that looked back at recent community trends and celebrated the achievements of projects during the past couple of years. Zeynep Sarilar opened the community session by bringing sense to the

chaos theory and referring to the butterfly effect of the innovations that have a wider impact. Speaking of impact, ITEA Vice-chairman Philippe Letellier presented a special focus on the usage of ontologies in the ITEA projects which appear as well-advanced high-level technologies to solve different kinds of problematic, but in particular the general interoperability that is an integral part of the digital transition. Then he presented the four ITEA awards of excellence to a number of outstanding projects. He cited the "direct impact on the organisation of industrial plants in all application domains" in the AVANTI project in the smart manufacturing domain. In the smart healthcare domain SoRTS "delivered a unique innovation to synchronise imagery and therapeutics with some world-first real-time demonstrations" and MoSCHA was praised as "a project by SMEs and led by an SME that has resulted in a long list of innovations and immediate impact on the market." Finally, SEAS

Philippe Bourguignon of Engie, the coordinator of the SEAS project claims "a world first for Europe," and the impact of the results is wholeheartedly underlined by Engie's CTO, Raphael Schoentgen, who compared the impact of SEAS with that of the international banking standard SWIFT that allows safe and secure money transfers between banks all over the world. "SEAS is a standard that will allow any kind of energy – heat, cold, gas, electrons – to be transferred securely and automatically with embedded artificial intelligence between devices that either produce, store or consume. This is a really, really major development in the IoT for energy, one that is going to transform the future."

is "at the heart of the energy transition and can become a game changer through their targeted exploitation" in smart energy.

Iconic SMEs – what the juries said

Smart Energy

Evolution Energie
"We love the concept of blockchain as the underlying technology to support distributed energy markets. Very nice presentation and clear idea on how this will add value to the future energy sector."

Synelixis Solutions Ltd. – COSSIM
"Synelix provides a game-changing solution for the simulation of complex and secure distributed systems."

Smart Manufacturing

Batchforce
"Works like a market place for manufacturing services. They are to be the booking.com of manufacturing services."

Jotne EPM Technology
"A proven business model on integrated applications for engineering data that fits well into Industrie4.0"

Smart Health

FEops
"Convincing technology to put patient modelling in practice, will create revenue streams in different applications and increase patient outcome."

Santech
"Social collaboration and connecting the care community is key for the quality of life, but a challenging mission to realise. The proof is in the elderly eating the pudding."

Smart Mobility

Kalray S.A.
"Kalray developed a strong but flexible hardware technology to bring the connected car dream to reality."

Livedrive
"The Livedrive approach to have the driver at the centre of their platform usage is very unique and clear."

Innovation market and SMEs
Something new to the agenda – an innovation market that enabled SMEs and start-up companies to exhibit their innovative ideas, services and products to the DIF 2017 attendees. A series of parallel innovation sessions, along the same themes as the workshops the previous day, saw pitches by these innovative SMEs. Each pitch was subject to a Q&A by a high-ranking jury composed of industry top executives and Venture Capitalists and a general Q&A with the audience. The sessions offered a fascinating insight into the approaches and solutions to specific challenges being taken in the various

smart domains. The jury selected two iconic SMEs per thematic session and provided a quote for each selected SME (see table above for the quotes). These eight iconic SMEs were invited to pitch in the plenary closing session. For more information go to https://dif2017.org/iconic-smes.html.

The end
And so all good things must come to an end. In closing, both Laila Gide and Zeynep Sarilar reiterated the vital role of open collaboration across the industry spectrum and the need to develop ecosystems in the digital

transformation process. The Digital Innovation Forum in Amsterdam demonstrated that it is doing its part to bring knowledge and innovation together and enable European industry to stay at the forefront of a successful and accelerated digital transformation. It also lays the foundation for further collaboration and innovation.

By now, the ladies had swapped their black garments for less monotone and brighter, more colourful apparel. The prospects for the future, after two DIFferent days, appeared to have gained a brighter, richer tint.
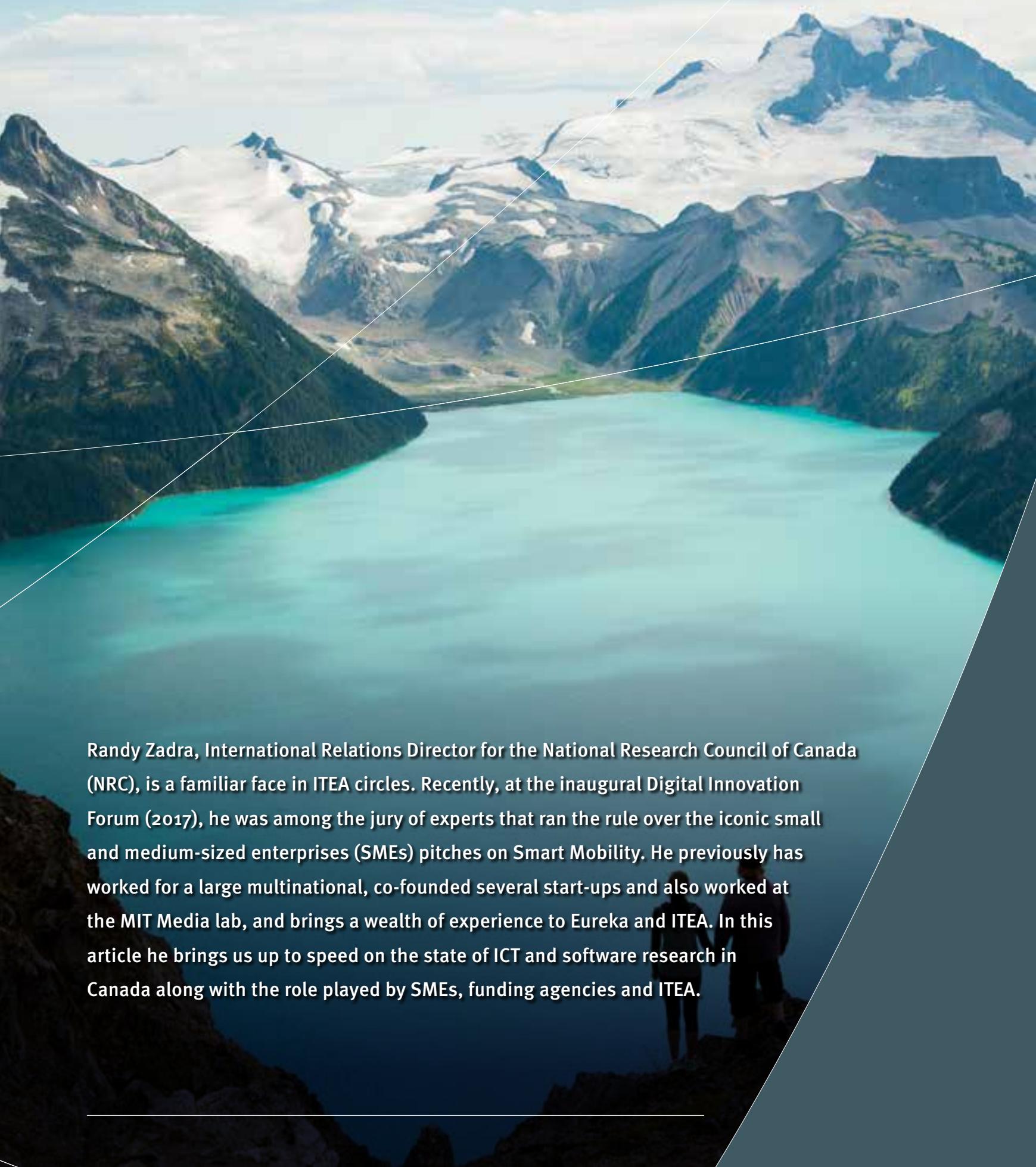
Randy Zadra, International Relations Director for the National Research Council of Canada (NRC), is a familiar face in ITEA circles. Recently, at the inaugural Digital Innovation Forum (2017), he was among the jury of experts that ran the rule over the iconic small and medium-sized enterprises (SMEs) pitches on Smart Mobility. He previously has worked for a large multinational, co-founded several start-ups and also worked at the MIT Media lab, and brings a wealth of experience to Eureka and ITEA. In this article he brings us up to speed on the state of ICT and software research in Canada along with the role played by SMEs, funding agencies and ITEA.

Focus on Canada

Transformation of industry

Randy gets straight to the point. "Software and information technology is transforming every industry on the planet, and that goes for every domain, whether transportation or health or education. Banking is looking at it to transform its banking systems; hospitals to improve their own internal service delivery. My view, and Canada's view, is that software technology is subsumed into the modernisation of many different types of industry. That's how it's evolving. And now many industries are looking at how they can leverage the internet in terms of its own products and services. There's no industry in Canada that I know of that is not looking at how to use in software and internet technology into its corporate transformation. Take automotive as an example. It's software engineers who are now in great demand. With everyone so focused on seeking ways to use software to modernise, we see this in Canada as one of the chief reasons why EUREKA and ITEA are so relevant. It's not just a matter of generating software solutions and building apps but integrating these solutions into actual practice and redefining how business is done. This is why we like ITEA. It sits nicely with our own vision of the transformation that's happening.

"It's also an open innovation ecosystem," Randy continues. "Large companies cannot innovate all by themselves. The world is moving too fast. They need support in this direction from smaller, quicker players, universities, and great research institutions. That's why Canadian recently announced in its budget that government funding would be provided to develop 'superclusters' in targeted areas to help expedite this transformation process, and develop world leading technologies. The addition of the international component, such as ITEA and others, helps us gain a better perspective of what else is happening around the world and the role that Canadian companies might be able to play in the innovation-information flow. And we think that the kinds of international projects that ITEA does are very important in achieving this."

Showcasing success

Randy refers to the DIF 2017 event as exactly the kind of vehicle that helps drive forward the transformation processes he refers to above. "It was a celebration of the successes of these international projects and accelerates the innovation potential of the all the partners that are involved. Its win-win for everyone and the main reason why Canadian companies, universities, and research centres participate. The Canadian domestic market for these companies is relatively small and for them to be successful, they need to be working in the international market more or less from day one. Through clusters like ITEA, they get a great opportunity to experience and learn, especially about the needs of the marketplace and users.

The involvement of the latter in these projects is a real added value component."

Canadian companies that have benefited from ITEA include Esri Canada, a supplier of world-class geographic information system (GIS) solutions and part of the ITEA PS-CRIMSON project that aims to deliver an integrated 3D digital model and information platform to enable information collection, sharing, management, analysis and dissemination from diverse public and private urban infrastructures and resources. "What is also appealing to Canadian companies to get involved in ITEA projects is the strong track record of success, along with very good leadership within the board and sufficient flexibility to change as required. For example, we are now working with ITEA on the Manufacturing 4.0 initiative that we very much support."

Backbone of Canadian economy

The Industrial Research Assistance Program (IRAP) is a key component of the National Research Council of Canada (NRC) and one of the Government of Canada's primary mechanisms for providing innovation support to Canadian SMEs. IRAP aims at accelerating the growth of Canadian SMEs to stimulate wealth creation in Canada through technological innovation. It is a vital component of the NRC, a cornerstone in Canada's innovation system, and regarded worldwide as one of the best programmes of its kind. "SMEs in Canada are the backbone of the economy, so there's a great emphasis on supporting SMEs", added Jiang Chen, industrial technology advisor with IRAP. The IRAP programme is complemented

by a variety of other funding programs. As in most countries, there are multiple funding programmes available and here at the NRC we try to leverage all of them. Last year, for example, we leveraged funding from the Canadian Institutes of Health Research (CIHR), which supports excellence in health research, and currently they have a tremendous focus on eHealth. It will be funding participants in some of the ITEA projects that involve eHealth. We are also able to tap provincial programmes. What's important," Randy stresses, "is that ITEA provides a platform that exists to coalesce a number of these players, bringing sometimes disparate funding instruments together, not just in Canada but also in other countries. That's a critical value added of the cluster. And having the specificity of well-defined projects with concrete targets and results – not theory, not abstract – gives the funding agencies tangible targets to aim at."

Global open platform
"We're still relatively new members to the EUREKA and ITEA communities but we do really want to reach out and expand our participation. Chile, a dynamic country, is now on board. There is clearly a geographical transition that is taking place within EUREKA, from a predominantly Euro-centric to a worldwide more open platform. It's an unstoppable trend. Information is developing so fast that 'going global' is inevitable. Part of the reason for Facebook's success is that it opened up its platform to half a million developers around the world, resulting in a win-win for all. The go-it-alone companies such as Kodak are fossilising and going out of business, whereas those companies that adopt an open, collaborative innovation approach are developing new innovative products in a shorter time and also give sustainability a significant boost. EUREKA provides a great platform for the companies who want to work collaboratively to develop projects that can showcase how this transformation can be effected faster and quicker by open innovation and collaboration."irrelevant are giving their chances of survival and sustainability a significant boost. EUREKA provides a great platform for the companies that want to work collaboratively to develop projects that can showcase how this transformation can be effected by open collaboration and innovation."

Esri Canada
much more than 'X' marks the spot

In 1984, Alex Miller founded Esri Canada, which provides geographic information system (GIS) solutions to more than 10,000 organisations in various sectors, helping them boost efficiency and productivity as well as enhance decision-making. Now, with more than 350 employees and one of 'Canada's Best Managed Companies' since 2012, Esri Canada is a name that is becoming familiar to many in the ITEA community. Alex talks about the company's role in the world of GIS and the role of ITEA in the company's burgeoning relationship with Europe.

"My own background in engineering, mapping and computer science," Alex explains, "are the ingredients that enabled me to design systems that combine high-quality cartography with powerful GIS analysis capabilities. At Esri Canada, we want to use these capabilities not only to advance the field of geomatics and promote the use of GIS technology in Canada, but also to help players in the public and private sectors apply information technology in such a way that this makes a positive contribution to the sustainability of Canada's economy, environment and society."

Software heart
"Our main focus at the moment is Smart Cities. Cities as we know them today aren't sustainable, whether socially, economically or environmentally. So we need solutions to rectify this situation, especially given the growing urbanisation occurring all over the world. We develop quite a bit of software around the solutions. But our focus is more on the application of GIS – GIS was actually invented in Canada by Dr. Roger Tomlinson in the 1960s, by the way. I think there is a much more sustainable business model to be gained from applying technology to

a specific business problem. Having said that, software is very important to our industry – it's software driven. Technology is an enabler, but for technology to actually result in smarter cities, it requires significant effort in terms of change management, especially in the very stable, low-risk mindset of municipal decision-makers, for example. Software is at the core of the technology – it's the heart – but it extends far beyond this into getting it used effectively. Similarly, our software solutions extend beyond the geographical analysis and modelling to help people make better decisions."

Digital twin

In the ITEA PS-CRIMSON project on public safety and crisis-management service orchestration, Esri Canada is helping to deliver an integrated 3D digital model and information platform for information collection, sharing, management, analysis and dissemination from diverse public and private urban infrastructures and resources. "We are building a 'digital twin' – a term that's used in the infrastructure industry. This digital twin of the city can be analysed and modelled, and it has to be maintained and kept updated so that the actual city can be designed and tested in the digital world first. Will this new road help traffic flow faster? Should I take the train or my 'smart' car? In fact," Alex adds, "Elon Musk is going straight from computer modelling to production of the company's new vehicle because the computer modelling is now so good that the intermediate prototyping stage has been made redundant. He was mocked for it at first, but Volkswagen is now doing the same!"

Neocortex

So, what should we be addressing when we consider 'smartness' as a concept? Alex recalls a panel debate in which he was involved last year. He was asked what his definition of a smart city was. "That had me stumped for a bit. After some discussion, I had a bit of a brainwave. In essence, cities work as parts. The transit system does its thing. The electrical system works; the water system works. But, X works independently of Y. Like a chameleon catching an insect. It's eye-tongue coordination. The brain's not really involved. So, in a city, if a water main bursts and flows into an electrical transformer chamber, the first thing the electrical utility company will know about it is when a short-circuit occurs

or something blows. What we need to do as a society is to build a digital neocortex for cities. The big-data analysis learning that is at the cusp of everything today is really emulating our brain – that's what the smart city will become, with all the constituent parts connected by this digital neocortex." Is this still far away? "I think it is an evolutionary process. It begins with building this digital twin I spoke about. The Internet of T hings is going to become our nervous system

that feeds our neocortex. So, a lot will depend on the speed of the digitalisation process. In many respects, it's a journey, an ongoing one. But, we're under way and it will be an interesting road, that's for sure."

From support to solutions

Along its journey, Esri Canada has come across ITEA, and the experience to date has been a very positive one. "We're still at the stage of working on packages in our own countries but we're looking forward to the PS-CRIMSON pilots we will be doing in Rotterdam and Istanbul soon. The rubber's still hitting the road, but it's very motivating to work internationally in a well-coordinated programme. I found the Istanbul and Stockholm workshops to be exceptionally

informative and great networking events. I think that the contacts between Canada and Europe are likely to intensify in the future, especially in the light of the free trade agreement signed recently. I must admit that we're fortunate in that Canada has a number of support programmes for industry. Like the National Research Council of Canada's Industrial Research Assistance Programme (IRAP), whereby funding helps mitigate risk in product development, and
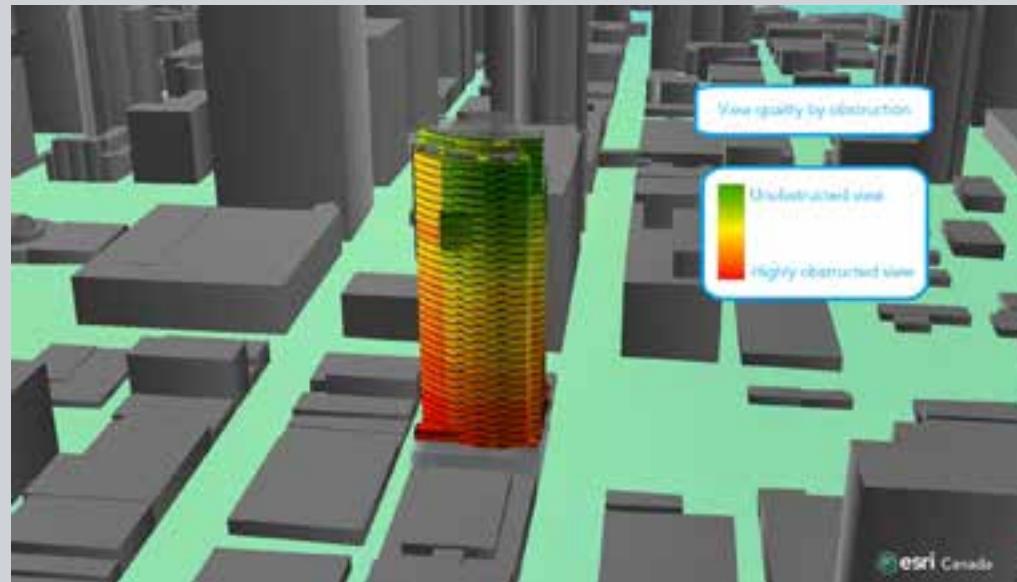
With a 3D city model, you can visualise how factors such as obstructions to building views and the amount of sunlight affect property values.

the Scientific Research and Experimental Development (SR&ED) tax credits, which provides a significant funding boost, especially for SMEs in Canada. One programme that we've benefited from is the multi-year GeoConnections initiative, similar to the INSPIRE initiative (for building a geospatial infrastructure) in Europe. Support is not an issue; it's turning all that research into real-life business solutions – that's our biggest challenge!"

More information
http://esri.ca/

Community Talk with:
Thomas Bär

Thomas originally studied production engineering before gaining his PhD in the area of design engineering from the Saarland University in Saarbrücken, Germany. And it was while he was doing his PhD that he spent some time in Japan, "and that widened my horizon, as it were. As for my interests, these lay between IT, design engineering and production engineering, so this goes from one end of the process to the other." It was in 1999 that he first joined Daimler, largely as a result of the contacts he had had during his PhD studies. After following a trainee programme, in 2002 he got started in the area of digital engineering and digital factory, working on research and pre-development. "That's something I really took to. Indeed, it's my job to bring scientific research and innovation to real-life application. While my work has remained more or less the same during my time at Daimler, I have moved from powertrains through bodywork to final assembly. So that's a brief résumé of my professional life so far."

Virtual commissioning

Looking at what you have achieved to date, what would you consider to be the highlights so far? "My PhD, certainly, and working for such a major player like Daimler, where I have gradually been getting more responsibility. I started off as a project leader and then took on more of a technical management role – not a general manager but in terms of managing projects." One particular highlight Thomas refers to here is the research award for Virtual Commissioning he received at Daimler in 2010. It had taken five years to get to the position where virtual commissioning really works, and then "when we passed it on to the user, it took another five years to get a standard process, introduced into all different car lines and so on."

Virtual commissioning is at the heart of the ITEA project AVANTI, which finished last year in June. Was this your first hands-on experience with ITEA? "Yes, so I cannot claim to be a seasoned campaigner yet! In fact, it was rather by coincidence that I took over the coordination

This aspect of the interaction between people is clearly important to Thomas and was a key factor in the AVANTI project. "I think that having the right mix of people was crucial to the success of the project. Experience and youth, having the right partners. We pushed for example the functional mock-up unit approach, which largely came from the guys of TWT. Without them we would not have succeeded. But we also had the SME EKS InTec, the leader in the virtual commissioning software market in Germany and maybe Europe. They worked so well together. And Daimler and others used these solutions. Ultimately, it's the people – the right mix – that make it all happen."

Getting technology into industry
How do ITEA projects compare with other European projects? "In a word, faster. Being industry driven and having less administrative bureaucracy than many other European projects, we see faster reactions, quicker turnaround. Of course, it's never as fast as we would like it to be but I guess you can't have everything. The projects do sharpen the competitive edges. It's important from the perspective of a healthy business environment in Europe. If that helps us to seize the high ground on the global front, then ITEA is a very useful tool. In the years to come I think that ITEA's mix of research, industry and academia will help push generic research forward and make it applicable for European industry so that opportunities to take the lead can be created."

And does that make you happy? "Yes. I'm a research guy and I want to see the technology getting used in the industry. Does ITEA help me do that? Yes. Does that make me happy? Yes. I can push the requirements and challenges in the ITEA roadmap and stand a realistic chance of getting these challenges into a project, bring the right expertise and partners together to solve the challenge. If I can do this, and get the answers to the problems, then that makes me happy. And on a more personal note, ITEA has brought me not only contacts through the network but also friends. From Finland to Turkey, many of my project partners have become good and valued friends. As I said earlier, behind each technology stands a group of people and in that group of people, you will find friends. And that makes me happy!"

of the project. A colleague of mine who had been drafting the proposal left the company to become a professor and it was left to me to find someone to take over. Having looked around and in the mirror I saw myself as the guy to take it forward. Of course, ITEA was not an unfamiliar name to me because a couple of years previously a neighbouring team was involved in the MODELISAR project. I had experience of working in European projects but not in ITEA. And I guess ITEA has grabbed hold of me now because I am also coordinating the follow-up to AVANTI, the ENTOC project that started in September last year and I have also provided input to the smart manufacturing workshop which was recently held. So I am, starting to spread my wings a little."

People make things happen
As a 'novice', if you like, Thomas does not

have the benefit of calling on so many years to compare the ITEA of then and the ITEA of now. However, he has experienced the difference between the final Co-summit in Berlin and the DIF 2017 in Amsterdam. "I noticed quite a difference. In Amsterdam I had much more contact with people, with different partners. I felt there was much more opportunity to talk, to be involved. The Amsterdam event, with its workshops and very accessible booths, was 'with it' if I can put it this way. There was a more dynamic atmosphere. Like the walking dinner where you could really enjoy the company of the community and socialise informally. I think the tone has been set, and it's encouraging. The panel sessions, too, threw up a lot of ideas, not necessarily new, but nevertheless they gave a good impression of what is going on in other companies and branches. More of this, please, in the future. At least, that's my personal view."

ITEA project results enhancing people's lives

Happiness on the fly

Border control constraints can be a frustrating process for both passengers and the authorities, having to couple fast processing with prudent security. And with passenger numbers continuing to increase, the need for an appropriate solution is urgent. On the Fly® technology, developed in the IDEA4SWIFT project and marketed by Morpho, provides the answer.

Fast, contactless biometric recognition at locations where high-speed identity verification is a priority, like borders, airports and sensitive sites not only simplifies deployment and improves user experience but also uses advanced biometrics to facilitate security for agents and users.

The world's fastest contactless four-finger scanner, MorphoWave Desktop® responds to the growing pressure to find ever faster, more accurate scanners that maximise available security resources; swiping four fingers across the scanner provides an efficient and elegant solution to generating more information, improving both accuracy and speed.

While current On the Fly® products meet business expectations, plans are underway to even further optimise product performance, giving even greater deployment flexibility. Superior user experience combined with the ability to deploy anywhere is set to broaden the use of On the Fly products, and consolidate Morpho's market lead in advanced biometrics.

ITEA 2 project
IDEA4SWIFT

Calendar

12-13 September 2017
ITEA PO DAYS 2017
(opening ITEA 3 Call 4)
Berlin, Germany
🌐 https://itea3.org/podays2017/index.html

13 September 2017
HOLLAND HIGH TECH ROADMAP EVENT
's-Hertogenbosch, the Netherlands
🌐 https://www.hollandhightech.nl/nationaal/
actueel/agenda/holland-high-tech-
roadmapevent-2017-hightech-oplossingen-
voor-maatschappelijke-uitdagingen

18-19 September 2017
INDUSTRY OF THINGS WORLD
Berlin, Germany
🌐 http://industryofthingsworld.com/en/

20 September 2017
EURIPIDES² AUTUMN CALL 2017
Deadline for submission of Project outlines
🌐 www.euripides-eureka.eu

22 September 2017
EUROGIA²⁰²⁰
Next Cut-off date
🌐 http://eurogia.com/

3 October 2017
TNO-ESI SYMPOSIUM 2017
Managing complexity
Eindhoven, the Netherlands
🌐 http://www.esi.nl/innovation-support/
sharing-know-how/TNO-ESI-Symposium/

4 October 2017
SOFTWARE-CENTRIC SYSTEMS CONFERENCE
Eindhoven, the Netherlands
🌐 https://softwarecentricsystems.com/

12 October 2017
INNOVEIT 2017 - EIT INNOVATION FORUM
Budapest, Hungary
🌐 https://eit.europa.eu/interact/events/
INNOVEIT-2017

16 October 2017
CELTIC-PLUS AUTUMN CALL 2017
Submission deadline
🌐 https://www.celticplus.eu/call-information/

2 November 2017
ITEA 3 CALL 4
Deadline for submission of Project outlines
🌐 https://itea3.org/

ITEA 3
Project Outline Preparation Days 2017

13 & 14 September
Berlin

Can you solve one of these Smart Manufacturing challenges?

Results of the ITEA customer workshop

Following the success of the previous two years, ITEA organised its third International customer and end-user workshop on 21-22 June 2017. This year's theme was 'Smart Manufacturing'. The event was hosted by Airbus at its premises in Toulouse and gathered 37 invited participants from 9 countries, coming from large industry, SMEs and public authorities:

The first day was dedicated to a set of presentations from the customers to understand where their most urgent issues lay to deploying Smart Manufacturing functionalities, and from the large industrials to identify key innovation trends. The innovative SMEs that attended the workshop were introduced by ITEA Vice-chairman Philippe Letellier. In the beginning of the evening, participants had the unique opportunity to visit the assembly line of the Airbus A350 with a special demo on digitalisation.

On the second day, two parallel sessions (Manufacturing digitisation & Manufacturing organisation) took place focusing on the challenges highlighted by the customers. The aim of these parallel sessions was to deliver usable input to initiate new R&D projects targeting clear user and business added value, resulting in a number of issues, some of which are outlined below. The full report can be downloaded in the ITEA Project Idea Tool of Call 4.

End-to-end digital integration
The challenge is to ensure seamless cooperation and data exchange between all the stakeholders within the company and with the external partners. A lot of data is still on paper and the first step is to digitise the data followed by real exploitation of all the digitised data in a truly digital process that is optimised across the full chain of stakeholders. Three levels of data with very different dynamics were identified, each with very different characteristics:
- Enterprise resource planning (ERP)
- Process definition
- Real-time line data

There are some very complex data, like 3D models of complex structures like a car or a plane, including the metadata related to material, identification tags, etc. Different sets of metadata and different levels of detail are required at different stages and for different applications like visualisation or Bill-of-Material. A plant is still a system of heterogeneous sub-systems. A challenge is to build a global vision of the system from this heterogeneity.

Examples of challenges:
- Models and algorithms to automatically generate an optimal workflow
- Automated detection of situations that require a special action or sub-process
- Definition of a hierarchy of data and metadata translators such that access to

Customers	Technologies providers	Innovative SMEs
Transport ■ Alstom ■ Ford Otosan ■ Daimler ■ Kordsa ■ Valeo **Aeronautics** ■ Airbus ■ Fokker ■ Safran **Consumer market** ■ Eczacibasi Group | Vitra ■ Philips Lighting **International** ■ National Research Council Canada	■ KoçSistem ■ Siemens	■ Algoryx Simulation ■ Convergent Manufacturing Technologies ■ EKS InTec ■ Enforma Bilisim ■ Evolution Energie ■ ICC Elektronik ■ Innovalia Metrology ■ Jotne ■ Nextel ■ Ometa ■ Seclab ■ SGS Control Systems ■ Sigfox

the most detailed information is easy when required
■ How to support a worldwide ramp-up of production lines

Middleware for digital manufacturing
This covers the data management along the different stages of one production line including data acquisition, data analysis and machine learning. For an optimal process, the equipment should be open to allow access to all relevant machine data, sensor data and external data through one common backbone. This requires "middleware" to define the required interfaces.

Examples of challenges:
■ Easy introduction of new equipment
■ How to deal with legacy equipment
■ Machine learning for predictive maintenance, problem solving, etc., at both the level of the product and the production line
■ Connectivity, security and wireless interoperability also need to be considered

Augmented reality
Many new tools and devices for virtual reality and augmented reality are entering the market with manufacturing applications in

troubleshooting, training and maintenance, in process definition, verification and optimisation as well as marketing.

Examples of challenges:
■ Wearable devices
■ Software tools for VR/AR
■ Safety: augmented reality can cause safety issues for staff requiring e.g. alerts to prevent collisions

Production-line flexibility
Many participants stressed the importance of production-line flexibility to fulfil their customer needs for personalisation. Companies need to produce different types of products on the same production line while the flexibility of the equipment has intrinsic limitations. In some businesses the required flexibility is extreme: every single product is specified individually and at the same time the response time to customer order should be minimal.

Examples of challenges:
■ Product configuration tracking
■ Automatic configuration of the line
■ High-end simulation to design the line
■ Capture workers' knowledge

Many other important topics and challenges were discussed at the workshop. In smart manufacturing, *security* is everywhere. It is important for all sensors, production machines, robots and the communication between them. The industrial network may have to be disconnected from the internet, but how to maintain the flexibility? There is the trade-off between security and flexibility. Perhaps the risk of non-sharing of data has to be quantified to make the proper decisions.

Optimisation of product and assets logistics may require *geo-localisation* at different temporal resolutions. Situations where robots are cooperating with human workers are more and more frequent and pertinent. These "*cobots*" or cooperative robots have to be programmed to operate safely and efficiently. The topic of *3D printing* still has many open questions: which technology for which application (dimensions, finishing), management of the 3D models and many others…

We invite you to read the full report on https://itea3.org/news/the-results-of-the-itea-international-customer-end-user-workshop-on-smart-manufacturing.html.

The ITEA international customer and end-user workshop on Smart Manufacturing was highly appreciated with a score of 4.0 out of 5.0, corresponding to 'very good' (63% response rate of the survey). 47% of the respondents intends to submit a PO on Smart Manufacturing in ITEA 3 Call 4 and 42% is still considering it. So now the ball is in your court to use this valuable input and create or join a customer-oriented idea for project proposal in ITEA 3 Call 4!

First cancer patient successfully treated with Elekta Unity developed in ITEA project SoRTS

In 2014, the ITEA project SoRTS started with Elekta in Sweden and Philips in the Netherlands as main partners. The goal of the project was to develop a System of Real-Time Systems to support healthcare professionals in the transition from invasive, open surgery to minimally invasive, image-guided intervention and treatment, to boost the effectiveness of cancer treatment and to reduce patient risk.

One of the key outcomes of the SoRTS project for Elekta was the MR-linac system (Magnetic Resonance Imaging - Linear Accelerator) which is designed to improve the targeting of tumour tissue while reducing exposure of healthy tissue to radiation. The system allows physicians to precisely target a tumour, even when tumour tissue changes shape, location, size or composition during treatment, due to e.g. breathing of a patient. The Elekta Unity is the only MR/RT system that integrates a premium quality (1.5 Tesla) MR scanner, from MR technology partner Philips, with an advanced linear accelerator and intelligently designed software.

On 19 May 2017, less than six months after the end of the SoRTS project, the University Medical Centre (UMC) Utrecht treated the first patient as part of a clinical study with Elekta Unity. Analysis of the first clinically derived data shows that visibility of the treatment target and radiation beam accuracy is excellent. In total, five planned patients in a clinical study will receive therapy for spine metastases.

More information: http://www.sorts.eu/

Turkcell Teknoloji CEO highlights importance ITEA project CAP

Since 2008, Turkcell Teknoloji has been participating in ITEA projects and in May 2011, it joined the ITEA Board. Up to 2017, Turkcell participated in 10 (completed or still running) ITEA projects, three of which they led; DEMWatch, Ewatch and CAP.

The CAP (Collaborative Analytics Platform) project, which ran successfully from November 2013 until October 2016, included 27 partners from 6 countries. The project focused on developing an open cloud-based Big Data analytics platform that facilitates producing business and industry intelligence from data on public and private clouds, for future predictions.

The CEO of Turkcell Teknoloji, Kaan Terzioğlu, highlights the importance of the CAP project in the Turkish daily newspaper Akşam: "One of the best examples of our international collaborations is the Collaborative Analytical Platform project we have been leading in ITEA," said Terzioğlu, who emphasised the importance of not only national but also international collaborations in R&D centres. "We see Turkcell Teknoloji as an R&D innovation centre not only of Turkcell but of Turkey. At Turkcell we continuously work to develop and to produce next generation communication technologies so that Turkey will be one of the authority countries on value added of high technology products."

More information:
https://itea3.org/project/cap.html

Materna founded a dedicated R&D department inspired by successful participation in ITEA projects

Since the first Call of ITEA in 1999, Materna has been an active partner in the programme through participation in 6 projects (Softec, SIRENA, OSAMI-Commons, EASI-CLOUDS, BaaS and the still running Medolution), and with success. The SOFTEC, SIRENA and EASI-CLOUDS projects received the ITEA Awards of Excellence (formerly called ITEA Achievement award) for their outstanding innovation and business impact. Next to that, EASI-CLOUDS also received the Korea EUREKA Day Award in recognition of developing the most innovative and commercially viable EUREKA project in 2014.

This award-winning business impact was clearly shown by the fact that Materna's participation in EASI-CLOUDS and the knowledge and results gained from it, laid the foundation for Materna's Cloud Computing business.

During February 2017, Materna founded a dedicated R&D department called "Innovation Centre". Franz-Josef Stewing, Vice President R&D and Education / Shared Services at Materna, ITEA "veteran" and project leader of the BaaS project, was asked to contribute to the elaboration of a concept for this Innovation Centre. He indicates that "the achievement of Materna is quite unique, from a privately owned company with an SME background and history to a company with its own dedicated Innovation Centre. This Innovation Centre was inspired by the successful participation in funded ITEA R&D projects and it will even further increase the probability of commercial success of Materna's current innovation efforts in IT and multiply its latest R&D achievements".

More information: https://www.materna.com

ITEA projects MEDIATE and BENEFIT part of Philips' new Azurion platform

On 22 February, Royal Philips announced the global launch of Azurion, its innovative next generation image-guided therapy platform. Developed in collaboration with leading hospitals worldwide, the Azurion platform allows clinicians to easily and confidently perform a wide range of routine and complex procedures, helping them to optimise interventional lab performance and provide superior care. Philips Azurion forms the new core of its integrated-solutions portfolio for the fast-growing image-guided therapy market.

Parts of this platform were developed in the ITEA projects MEDIATE and BENEFIT. The MEDIATE project ran from September 2010 until December 2013 and was awarded with the ITEA Award of Excellence in the category 'Business impact' in 2015. A new architecture and the integration of multiple image and data sources were the core of this project and therewith it was an integral part of the development of the Azurion platform. In BENEFIT (July 2014 - December 2017), Philips is already working on new IT tools, which can be included in a next release of Azurion.

More information: www.philips.nl

ITEA VIEWPOINT

I have tried the future, and it works

By Jan Segerstam - Development Director, Empower IM Oy

"I have seen the future, and it works" was a phrase used in a historic context, not without reason per se, but how did the future turn out? Being a visionary and realising a vision are two different things that are sometimes hard to combine. Today we are at a crossroads regarding the energy system, which will enable the development of the sustainable economies of our children's future. Energy is a basic need and it remains the foundation of our society. How we make sure it is available and shared between ourselves is of key importance.

The energy system of tomorrow is often described as being distributed and just as often we see new technologies emerging to enable smarter control of this system. The question often overlooked is whether we are enabling something new or simply tweaking the old. The ITEA Project "Smart Energy Aware Systems" (SEAS) enabled a visionary team to propose how future energy systems could communicate without limiting themselves to existing structures. The ongoing ITEA Project "M2MGrids" is allowing a key group of energy-ecosystem partners to experiment and create self-forming groups of entities that can be at the heart of optimising the use of scarce resources, but with an important twist, including the value of these resources through incorporating market mechanisms and the infrastructure. Most energy-related projects either lock themselves in the current market structure or simply overlook it. They often focus on optimising energy and technical resources. While both are pertinent subjects and well suited to the scope of limited projects for incremental development, they are not the complete future, if anything fixed can be. To allow the emergence of new thinking and enable innovation beyond today, what we develop must be flexible and adaptive so that the values of tomorrow can be wisely, or at least fairly, distributed among the stakeholders, who themselves will be different from what we see today.

Jan Segerstam is the Development Director of the Finnish Energy Information Management Company Empower IM, which specialises in Services and Digital Platforms for energy-driven businesses in the Nordic countries and beyond. Through multiple European projects and collaboration across the board with partners across the value chain in Europe, Jan Segerstam continues to look beyond the status quo while embracing emerging technologies in implementing solutions for today's markets in Europe.

An example of a real-world situation illustrates the need for these capabilities well. Let's say we have a house. We buy a solar panel and start to save on the energy bill. We might even get a return on that investment in the long run. If our neighbour does the same, it will be all the better, or will it? Without changing the responsibilities for the chain of delivery and the value distribution of it, we will end up in overlapping investments and a vicious circle of higher distribution costs for non-implementers of solar panels in the beginning and eventually for everyone until there is an inevitable demise of the current distribution network. So what, one might say, but in the Western world we have invested trillions of euros of taxpayers' money in the infrastructure. This should be used well instead of being overridden and replaced by overinvesting in generation capacity due to a lack of cost-effective sharing capabilities, certainly if we want to compete with the emerging world that does not have to worry about overlapping investments. In general, we have already done that by liberalising the energy market but, sadly, the structure of it today only enables the value of centralised generation to be shared between consumers clustered in one-

way distribution networks. Entering distributed generation at distribution grid level into the equation does not work without rearranging the market scope and use of distribution resources.

Nobody wants to sit around flicking switches, even less think about when to do that. Technology has brought us the comforts of modern society and allowed us to work and play like never before. Today's technologies allow us to mandate automated behaviour and to let machines of ever smaller scale in ever larger numbers make decisions for us, also in the energy system. To utilise this wisely, we need the kind of work being done in the ITEA projects to enable us to think out of the box and play with the future, even before it is here and with everyone, not just the technologists or the existing establishment. That brings to us the relevant questions of how to enable the best sharing of value and best use of infrastructure without having to adhere to structures that are there simply because they are. Answering these questions will allow us not only to see the future, but to be the future and experience how it works, because seeing is not always believing.

In 1919, American writer Lincoln Steffens visited the Soviet Union and was presented with the state illusion of the emerging Soviet system. He came back and exclaimed: "I have seen the future, and it works." As it turned out, the system did have its shortcomings and as such it is important for us to not let ourselves be fooled by the establishment or lulled into the comfort of sub-optimisation without thinking about the big picture. Through ITEA, the SEAS and M2MGrids projects are allowing us to experiment and see what could be the structure that could emerge in the energy ecosystem while supporting and encouraging future business models and novel energy communities. Then we can share not only the energy on the roof but the value of behavioural knowledge, access to shared resources and active allocation of infrastructure. That will allow us to say: "I have tried the future, and it works." That, in my mind, is what European advancement is about.

Clustering strengths

Systematic Paris Region

In an Open Innovation environment, Clusters are becoming more important day by day. Having a good combination of multiple players with various types of partners, like SMEs, industry, academia, which work specifically on a vertical industry or on a common subject, like software, is key to a successful Cluster. In ITEA, we have a very strong community with various profiles from more than 20 countries yet it is always valuable to be in touch and to collaborate with other successful Clusters like Systematic Paris Region Cluster, which also has strong community with an international dimension. We share many common purposes such as transnational collaboration on innovation and commercialisation of research activities. Therefore, in this issue, ITEA Chairwoman Zeynep Sarilar invites Jean-Luc Beylat, President of Systematic Paris Region, to tell the ITEA community about this Cluster, one that, like ITEA, is both a product and a shaper of the digital transformation. So, as you might expect, not only are there several similarities but also prospects for closer collaboration in future.

Digital revolution

Firstly, Jean-Luc provides a bit of background on this 'pôle de compétitivité'. "As we all know, electronics and software are the drivers behind a spreading and growing revolution: the digital revolution. Those technologies have not only transformed telecommunications, television and games but have also spawned the digital economy. Today, the digital revolution is branching out into other areas, like health, security and the automotive industry. Tomorrow, the smart home will give engineers increasingly powerful design and simulation tools enabling them to create ever-more advanced products and systems. And it is this digital technology that is spearheading France's economic growth."

Three key priorities

Systematic has three key priorities in its efforts to boost the economy and employment through innovation, training and partnerships: to consolidate the major integrators' leadership in order to secure the sustainability of their R&D activities in the Paris region; to foster the emergence of start-ups and the growth of technological SMEs with global ambitions; and to strengthen the Paris Region's attractiveness by developing its image on an international scale in order to attract new global companies' R&D departments. The aim is to optimise conditions for the development of innovative international SMEs as well as improve the attractiveness and visibility of the Paris region by structuring relationships and partnerships with national and European ICT clusters, like ITEA.

Ecosystem for growth

"The Systematic Paris Region Cluster brings together around a thousand key players at the intersection between eight technological markets with a strong social dimension and two areas of technology," Jean-Luc says (see figure). These market segments bear a striking resemblance to the challenges identified by ITEA. "So far, we have facilitated nearly 460 R&D projects, representing an overall R&D investment of approximately 2.5 billion euros and a total of 820 million euros in subsidies from the French State, development agencies, FEDER, bpifrance and territorial bodies. Ultimately, we want to develop an ecosystem for growth that brings together more than 800 SMEs, accounting for more than 35,000 jobs in the Software, Systems, Optics and Electronics sectors."

As evident from its name, Systematic Paris Region is committed to increasing the attractiveness of the region, the Cluster, its area of specialisation and its key players to foreign investors in order to attract skills and companies, encourage and support export initiatives by member SMEs and ensure that the Cluster and its members play a key role in developments at European level. This is where the value of strategic collaboration with ITEA could lie for Systematic Paris Region, and with SMEs taking on an increasingly influential role in ITEA projects, there is certainly value for ITEA in exploring this collaboration.

"SMEs are powerful innovation drivers that play a leading role in our ecosystem"

For the coming years, Systematic is committed not only to developing new R&D projects but also to increasing productivity and to creating new businesses within the Cluster specially for SMEs. Jean-Luc: "Our aim is for these SMEs to emerge as global leaders so we create optimal conditions for the development of innovative, international SMEs. Our focus is on connecting SMEs to their future key accounts, helping SMEs to raise funds, assisting SMEs to grow in export markets, helping SMEs to recruit, train, manage and adapt skills, and enhancing their innovation strategy and improving their competitiveness."

Melting pot of innovation

The statement of Jean-Luc on SMEs strikes a real chord with Zeynep since in ITEA, SMEs are an important ingredient in the mix of small and large, industry and academia, research and application all coming together in a melting pot of innovation. This has been the successful ITEA credo since its beginning, one that pays rich dividends (and was very evident in the DIF 2017 event in May – *see page 4 in this issue*). Both Zeynep and Jean-Luc see grounds to further explore the possibilities of strengthening the collaborative relationship, even formalising it, one that could be a "win-win" for both organisations so that their common purpose of creating innovation through transnational partnerships and a fruitful meeting point for SMEs, industry and research centres for collaboration and the commercialisation of R&D projects.

ITEA Project Outline Preparation Days 2017

Tips and Tricks from the ITEA Community to optimise your participation!

Each year ITEA launches a Call for innovative R&D projects on Software Innovation. This year ITEA 3 Call 4 will open on 12 September in conjunction with the ITEA Project Outline (PO) Preparation Days on 12 and 13 September 2017 in Berlin. During this event you will be able to jump-start your Project Outline (PO) preparations, so block these dates in your calendar and register now via https://itea3.org/podays2017/index.html.

Who can better tell you why the PO Days are the perfect place to prepare your innovative project proposals than some of our experienced and valued project partners themselves? So we let Andy De Mets (Barco), Patrick Chombart (Dassault Systèmes), Frank van der Linden (Philips), Özer Aydemir (IOTIQ), Frank Golatowski (University of Rostock) and Marius Bilasco (Lille 1 University) explain why it is important to be there!

> *The PO Days offer the opportunity to strengthen project proposal consortia or to join proposals of others. Together with these possible partners the objectives of the project proposals are improved.*
>
> Frank van der Linden - Philips

The PO Days will enable you to:

- Present your project idea(s) and/or learn about other project ideas in a poster session and during parallel project idea pitch sessions.
- Discuss and work on your project ideas in workgroup sessions.
- Meet companies and potential partners from all over Europe and beyond.
- Meet Public Authorities to discuss your idea(s) and learn more about the specific funding rules in your country well in advance.
- Learn from presented ITEA best practices and see how the ITEA Office can support you during the full project lifetime.

The ITEA PO days are an excellent networking event. There is a real spirit of open innovation and collaboration. Having discussions with peers can lead to interesting results for all concerned. Some proposed project ideas which at first seemed to be out of scope for us turned out to be a perfect opportunity to match our needs with the needs of others.

Andy De Mets - Barco

My personal experience is that the format that ITEA is offering is very efficient to initiate projects. With format I mean the procedure how to reach a successful project description.
It's actually like being on a train station and the PO Days prepare the departure of the train. There are several wagons in which you can ride. Once the train has started rolling, you can still climb in, but it becomes increasingly difficult.

Frank Golatowski – University of Rostock

The PO Days bring potential topics for my company. Next to that, it helps to maintain my network and it is an opportunity to catch new contacts which can evolve in cooperation. The fact that you meet people face-to-face, facilitates the future collaboration in my opinion.

Patrick Chombart – Dassault Systèmes

The PO Days help me to strengthen and extend my network and give me the opportunity to contribute to exciting POs.

Marius Bilasco – Lille 1 University

If you attend the ITEA PO Days regularly, you see how ideas are evolving to products in some years. And afterwards the ITEA PO Days are not only days to participate in R&D projects but also days for visioning a future world.

Özer Aydemir - IOTIQ

Tips and Tricks for the PO Days form our experienced project partners
- Make sure to have a clear overview of the programme and identify the most important elements (and project ideas) for you.
- Identify some participants you intend to contact prior to the event.
- Use the ITEA 3 Project idea tool extensively. It allows you to identify the project ideas that are in your field of interest. You can already get in touch with partners and start building the PO even before the opening of the Call.
- Keep an open mind and think broad enough. Projects should have a mutual "backbone", so do not try to find a dedicated project that targets your specific problem, but find overlapping problems and topics on which you can work with others.
- Have a clear innovation step, be result-oriented and make sure to have business impact (short, medium or long term).
- Remember that your project team is at least as important as your project Idea for the success of your project. Meeting people face-to-face will often facilitate future collaboration.
- During the PO days, it can be a bit confusing at the beginning as projects often merge. It will not be possible to follow-up the evolution of all the projects that you had an eye on. Focus on the one or two that fit your interest best.

PO Days in figures
- Over the past years nearly 75% of the submitted project outlines were presented first at the PO Days event.
- During the PO Days of 2016, 72 project ideas were presented during the poster session, 66 project ideas were presented during the pitch sessions.
- In 2016, 296 participants from 16 different countries participated to the event.

- Keep in mind that funding is subject to local regulations. Make sure to learn about these local regulations and contact the Public Authorities at an early stage. Several PAs will be present at the PO Days.

Jump-start your project proposal now
You don't have to wait until 12 September to start preparing for this Call. You can already visit the ITEA website at https://itea3.org/getting-started.html now and use the Project idea tool, the partner search and message board. It is highly recommended to start shaping project idea(s) and identifying potential partners in advance to optimise your preparation period.

Register now
If you plan to participate in the ITEA PO Days 2017, do not miss this opportunity and register now! Availability is limited and each year this 2-day brokerage event is fully booked weeks before it takes place.
Visit https://itea3.org/podays2017/index.html for more information and registration.
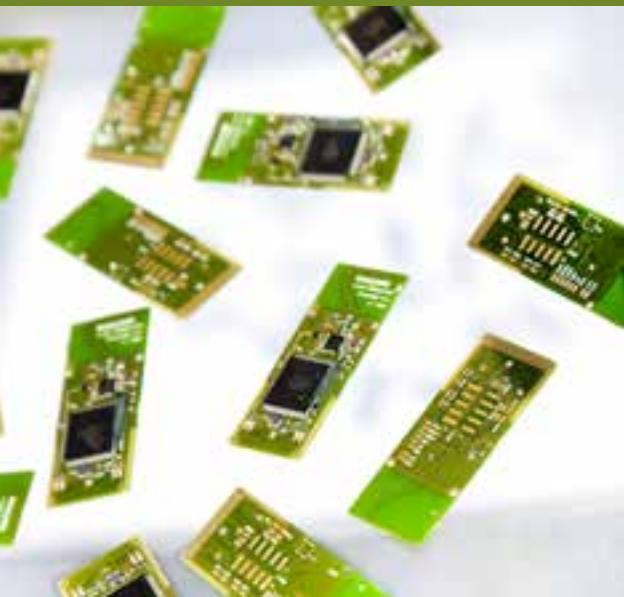
PRO-HEAL

The sum of the whole is (greater than) the sum of its parts

For many software systems deployed in dynamically changing environments, such as smart buildings, healthcare systems, disaster management, etc., there is an increasing demand for self-managing properties (like self-configuration, self-optimisation, self-protection and self-healing). Systems must be able to easily adapt at runtime in response to changes in their user preferences, requirements, computing infrastructure and surrounding physical environment. Why? Because self-management capabilities are expected to result in a longer lifetime of services and systems, a clear reduction in operational and maintenance costs, and greater reliability and trustworthiness from an end-user perspective.

Enter PRO-HEAL, an ITEA project whose vision can be summed up as the development of self-management functionalities to provide a means to considerably reduce the need for manual interventions to keep services functioning and reliable as well as to increase their lifetime. With a specific focus on enabling the elderly to live independently, improving both customer satisfaction and user experience, and on reducing the costs of maintenance and operation, what has already been achieved and what impact can we expect from the results as PRO-HEAL approaches its final phase?

Inspired by nature

Lex van Gijsel, PRO-HEAL's coordinator and managing director of DevLab, which is leading the project, explains how it all began. "We already started looking into wireless sensor networks and IoT even before Internet of Things became 'hot' if you like, and DevLab is an umbrella of SMEs that have been researching this and related fields for quite a few years." The idea is not to work for profit but for the partners to profit from the knowledge that is developed and for companies to use the results for their development and commercial goals. Essentially,

Project details
12007 PRO-HEAL

Partners
Netherlands
DevLab
Eindhoven University of Technology

Republic of Korea
WareValley

Start date
January 2014

End date
June 2017

Website
http://proheal.eu

the flow of knowledge enables national and international business opportunities in the long term. The PRO-HEAL project was inspired by nature, which is full of all kinds of complex systems in which the separate elements behave individually yet reveal 'emerging' behaviour when acting as a system, like a flock of birds or cells in a body. "So we wanted to create a platform in which individual devices could play their own roles, without a boss, and come together in response to the needs of the system, then you can control the complexity of the networks or systems in a completely different way to the traditional hierarchical approach. But, of course, with so many devices in your network or system, how can you mitigate the problem of a device malfunctioning or breaking down. This was indeed the crux of the problem addressed by the project in the beginning. So wouldn't it be nice if the system had an immune system, like nature, and be able to heal such problems. Hence the name PRO-HEAL."

Community of smart sensors
Project partner and TU/e assistant professor Tanir Ozcelebi underlines the need to solve the complexity issue because while companies are able to deploy and employ wireless networks for their smart building solutions, it is still a highly complex matter to program, install, deploy, maintain, replace such a vast array of devices for wider application within a community, for example. This is the IoT dilemma. "And this can

be a real showstopper to widespread adoption. It's a matter of cost. But by controlling the complexity at source, as it were, we can control the costs of deployment and maintenance. A first key hurdle we overcame in trying to develop the self-healing solution was the use of data analytics to identify faulty behaviour irrespective of the application. Secondly, we had to solve the subsequent issue of mitigating the effect of faulty behaviour if it occurs." Drawing the analogy with nature again, the system continues to function when a few of the parts break down because it is able to adapt to changing circumstances. "And that's what we have been trying to do in the project. A sensor that is able to detect that its trust value falls below a certain threshold can remove itself and request maintenance, so the system can still continue to function. And this community of smart individual sensors communicates to confirm behaviour and trust, whether positive or negative."

Marc van Mierlo, owner of the local intelligent electronics engineering firm of the same name, echoes the problems faced in the area of smart buildings where low-capacity sensor and actuator nodes play an important role as a bridge between the digital world and the physical world. "These sensor nodes tend to be small, wireless, battery-powered nodes that can be prone to faults due to internal and external influences, such as low battery and memory, poor calibration, hardware/software faults, environmental interferences and sensor ageing. So it is necessary to detect and recover faults at runtime to minimise manual interventions." His company is actually putting the theory into practice in demonstrating the PRO-HEAL concept in an intelligent-lighting application.

Universal principle for global application
In terms of the projects aims, "we are there," claims Tanir Ozcelebi. "We have proof of concept." Referring to the Van Mierlo lighting application, Tanir says that "the norm that sensors recognise and by which they operate will not change whatever the building type even though the different buildings may be very different. So once you have the norm, you can release the devices with the software and they will work in every kind of building all over the world." And in Marc van Mierlo's case, he is already feeling the benefits at home. "The findings of this project have given us the possibility to go up a level in our smart environment. I have installed twelve nodes in my house. It took just half an hour and they work perfectly. And whether it's twelve or twelve thousand nodes, the principle is the same. We are actually applying the proof of concept now in real systems."

"It was not the purpose of the project to deliver an actual product," Lex van Gijsel concludes, "but to generate knowledge and insights that can be adopted by industry, as Van Mierlo is doing, for instance. Importantly, the work we have been doing has solved some significant hurdles to mass adoption and sales of IoT applications and devices. You offer something to the market and see what happens next." Will the proof of concept become the proof of the pudding? It's all in the eating.

SRDC
Building software solutions

SRDC stands for Software Research Development & Consultancy. This Turkish SME performs R&D for solutions in a number of business areas, from eHealth and eGovernment to big data & data analytics and mobile design & development. Anil Sinaci has a PhD in computer science and is lead software architect and senior researcher at SRDC in Ankara, Turkey. He takes time out to talk about this dynamic SME, which he helped to spin off some ten years ago.

Keeping up with the challenges

The company is a mix of university graduates and engineers from the business world whose primary work is building software and, in addition, provides consultancy services related to software systems integration and interoperability. "Software is really the be all and end all for us. It has always governed the work we do and will continue to do so," Anil says. This level of specialisation and mix of the academic and industrial mindsets are at the heart of the company's success and of particular value to the increasingly digitalised and personalised healthcare sector. "Of course, if I look at the application of software, I do see changes and shifts of emphasis over the past ten years. When we started, we focused mainly on pre-clinical data in hospitals but then gradually the significance of data analytics and machine learning grew as eHealth became a firmer concept in the healthcare sector. So, in a sense, we are trying to keep up with these trends and ensure that we can provide solutions to the software challenges."

Big Data Platform

One of the recent ITEA projects in which SRDC has been involved is Medolution (Medical Care Evolution), which aims to establish an open, widely accessible system of systems to provide relevant information to support patients and healthcare professionals in their decision making on diagnosis, treatment and further monitoring; from reactive to preventive actions.

"The involvement of partners from industry ensures that the project objectives are always closer to the market"

"Medolution wants to reduce the cost of healthcare yet improve the quality of life of patients at the same time," Anil explains. Medolution builds upon the results of a previous ITEA project, MEDUSA, which provides collaborative cloud access to medical information relevant in critical situations. "Our involvement in the project is down to the medical-device integration through international standards and data analytics expertise we can offer. Wearables, novel appliances and social networks all generate a large amount of data but currently this data is not being fully exploited and converted into useful information for professional care givers and patients. When it comes to the large data sizes of medical images, it is vital to get the right information into the workflow at the right moment."

So SRDC has two main roles in the project. Anil explains. "Firstly, we are leading the Requirement Analysis work package, and so we will be in close cooperation with the end-user sites to document the *as-is*, or current, landscape descriptions, and *to-be*, or future, scenarios and to elicit the formal requirements. We will also be providing templates and guiding the end-user sites to gather the functional and non-functional pilot requirements. Secondly, we will develop a Health Data Ingestion Stack. In other words, data streamed in real time or ingested in batches whereby data items are imported in discrete chunks at periodic intervals of time. This enables the data extracted from sensor data streams, real-time activity tracking devices, medical events from Healthcare Information Systems and historical medical summaries to be fed into the Big Data Platform served by the Medolution Core."

Another dimension
With an excellent reputation as a data exploitation 'conduit', SRDC is involved in a number of European (Horizon 2020, ITEA) and national (TÜBİTAK) programmes. However, as Anil points out, in the ITEA projects, time to market is much shorter because they are geared to making an impact on a specific industry, organisation, sector or community. "The involvement of partners from industry ensures that the project objectives are always closer to the market. We already started to take part in ITEA in 2008. One of our reasons for doing so was this bottom-up approach, a chance to collaborate with industrial partners as well as other partners from other countries

and cultures, to exchange knowledge. This gave us an opportunity to understand the European mindset, the behaviour if you like. It brought us another dimension. Furthermore, we are involved in developing solutions for real needs. We want to see our research have an impact on people's lives so, in that sense, we are on the same wavelength as ITEA."

"I think SMEs are increasingly finding their way to ITEA projects – there is huge potential for SMEs in working with large companies and academia – but I still think ITEA could do more to attract SMEs to this arena. SMEs are very agile and I think that in short-term, results-oriented projects SMEs could have a valuable role to play in boosting the competitiveness of large players, especially in terms of innovation. And large companies can also help SMEs get to market. So maybe ITEA could also help push the big players to see this potential. All the events, which bring people together and encourage networking, are a help in this respect, and personally I find the workshops a very useful vehicle to gain insight into technology, market, funding and other topics."

Open for business
"As I mentioned earlier, we are involved in several European programmes and projects – in fact, we are the most successful Turkish SME in this scope. International research programmes are very important for Turkey, especially from knowledge gathering and innovation insights, but they also help our profiling in Europe. They can act as a kind of business gateway when direct business-to-business contacts may not be so self-evident. Of course, we benefit from the funding from such programmes – our national funding programmes, too. We are also grateful to our own public authority for providing both funds, in the way of grants, and resources, right down to the highly practical provision of meeting rooms in Brussels. Turkey really does support promising companies and research initiatives with an international dimension. I would say that we operate in a very positive and dynamic environment. We are, as they say, open for business!"

ITEA 3 Call 3 Projects
'Smart' proposals for real problems

Vice-chairman's summary
The 3rd Call of ITEA 3 delivered 24 submitted FPPs out of 27 invited. On 14 March 2017, 18 projects were labelled with a total effort of 2330 Person Years, involving 20 countries. Because of withdrawal of one of the core countries in the consortium, BALI decided not to proceed the project although it was labelled. Additionally, also the iCardio project was cancelled, despite of its labelling. Call 3 therefore continues with 17 projects with a total effort of 2028 Person Years.

Again, there is a good balance in the participation of SMEs, industrial and academic partners, with the SMEs taking the lead in terms of effort, as has increasingly been the case in recent years.

This Call shows the impact of the international customer workshops that ITEA is organising to steer proposals around solving the actual problems of customers through ITEA R&D projects.

The main themes arising from this Call are:
- Smart cities
- Smart health
- Smart manufacturing
- Smart engineering

We received seven proposals on **smart cities** four of which eventually have the ITEA label:
- **BIMy -** an open collaborative platform for sharing, storing and filtering Building Information Modelling (BIM) among different BIM owners/users.
- **IntelliMariPal -** an intermediary communication platform to increase the interoperability and data exchange between different users/systems in the maritime domain (port level, multi-port level, regional, national, worldwide) for efficient movement of ships to port and from port to next destination.

- **ProSe -** Proximity Services Framework that allows users to intuitively interact with the surrounding IoT enabled environment. Proximity services adapt their behaviour to the surrounding context and interact with the IoT devices in proximity.
- **SPEAR -** a flexible optimisation platform that helps to improve a broad spectrum of industrial production processes in terms of energy-related aspects. Hence, a focus within the project is the energy optimisation of plants' production processes, production lines and (industrial) buildings.

We have four proposals on **smart health** with an important tele-monitoring trend:
- **BUDDY -** tele-monitoring of patients by hospitals, combined with social patient selfmanagement, is critical to alleviate over-burdened health systems around the world. This is specifically true for urban areas. The current medical IT infrastructure is not equipped to tele-monitor massive volumes of patients in parallel.

PROJECT OVERVIEW

THEMES	Call 3 Projects
Smart cities	BIMy, IntelliMariPal, ProSe, SPEAR
Smart health	BUDDY, PARTNER, Personal Health Empowerment, STARLIT
Smart manufacturing	OPTIMUM, VMAP
Smart engineering	COMPACT, DevOpsKit, HybridMDE, PAPUD, QUANTEX, TESTOMAT

of quantum algorithms for the purpose of investigation and verification.

- **TESTOMAT -** modern software teams seek a delicate balance between two opposing forces: striving for reliability and striving for agility. The project will result in a Test Automation Improvement Model, which will define key improvement areas in test automation, with the focus on measurable improvement steps.

- **PARTNER -** optimal patient journey for chronic diseases through the health system for appropriate personalised care.
- **Personal Health Empowerment -** empowering people to monitor and improve their health using personal data and digital coaching.
- **STARLIT -** radiation oncology to improve the quality of life for cancer survivors by improving treatment accuracy and minimising unintended doses to healthy tissue in image-guided radiation therapy.

Our next international customer workshop on **smart manufacturing** is already supported by the interest of our community with three FPPs submitted and two projects labelled:

- **OPTIMUM -** enhancing the aspects of distributed control, adaptation of IoT technologies to industrial needs, enhancement of control and applications by context and location awareness as well as application design and common-model based 3D engineering and supervision.
- **VMAP -** interoperable definitions for virtual material models in CAE to establish an open and vendor-neutral 'Material Data Exchange Interface Standard' community which will carry on the standardisation efforts into the future.
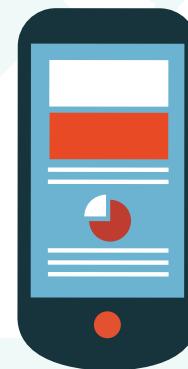
And finally, **smart engineering** remains a key topic in ITEA as the complexity and the level of quality and safety required by our new digital infrastructure are becoming more and more sophisticated with continuous pressure on the

development cost and deployment delays. We observed a trend around agility mastering. We received nine innovative proposals on this topic, six of which were labelled:

- **COMPACT -** novel solutions for the application-specific and customer-oriented realisation of ultra-small IoT nodes with a focus on software generation for IoT nodes with ultra-small memory footprints and ultra-low power consumption.
- **DevOpsKit -** DevOps approach and toolset that can be automatically customised and evolved to the development situation at hand and ultimately be applied right out-of-the-box at low effort.
- **HybridMDE -** solution for the semi-automatic generation and management of fully-fledged hybrid modelling environments from Domain-Specific Modelling Languages (DSMLs), which support the development of complex multi-domain systems by enabling seamless textual and graphical collaborative modelling.
- **PAPUD -** universal model for data analytics that is executed on a proposed set of technologies that fit best to the data provided.
- **QUANTEX -** a quantum computing stack including specification language, libraries and optimisation/verification tools will be built upon a well-defined mathematical framework mixing classical and quantum computation. Such an environment will be dedicated to support the expression

BIMy – 16026
BIM in the City
Project leader: *NETAŞ (Turkey)*

Building Information Modelling (BIM) is a digital representation of a construction project that is increasingly used by the Architect, Engineering and Construction industry. The BIMy project aims at providing an open collaborative platform for sharing, storing and filtering BIM among different BIM owners/ users and integrating and visualising them in their built and natural environment. BIMy can be seen as an open, generic and secure intermediary vehicle that enables interactions between existing and new applications through a standardised open API platform.

BUDDY – 16034
High Volume, Personalised Tele-monitoring of Remote Patients
Project leader: *Sopheon (Netherlands)*

Tele-monitoring of patients by hospitals, combined with social patient self-management, is critical to alleviate over-burdened health systems around the world. This is specifically true for urban areas. The current medical IT infrastructure is not equipped to tele-monitor massive volumes of patients in parallel. The objective of this project is to develop and validate a cross-functional, generic set of services that is able to address this need on a global scale, as an export product, with a focus on large cities and urban areas.

COMPACT – 16018
Cost-Efficient Smart System Software Synthesis
Project leader: *Infineon (Germany)*

Due to the very limited resources provided by Internet-of-Things (IoT) nodes, today's commonly used design approach to trade off development time with software efficiency is not competitive any longer. Therefore, an industry-wide effort is needed to provide measures for fast and efficient IoT software development. The main goal of the COMPACT project is to provide novel solutions for the application-specific and customer-oriented realisation of ultra-small IoT nodes with a focus on software generation for IoT nodes with ultra-small memory footprints and ultra-low power consumption.

DevOpsKit – 16044
DevOps Toolbox for enhancing Engineering of Complex Distributed Software Systems
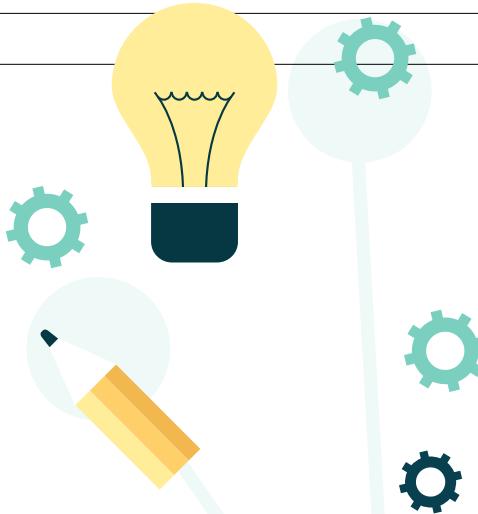**Project leader:** *General Technologies Consulting, S.L (Spain)*

DevOps is a popular software development methodology which connects development, quality assurance and technical operations personnel, in order to create a pipeline for the effective production of high-quality software systems. DevOps requires software companies, in particular SMEs, to compose and integrate their own toolset, which represents a big obstacle in applying DevOps. DevOpsKit will provide a DevOps approach and toolset that can be automatically customised and evolved to the development situation at hand and ultimately be applied right out-of-the-box at low effort.

HybridMDE – 16008
Automated Support for Hybrid (Meta) modelling Environments in Model-Driven Engineering
Project leader: *Alten (Sweden)*

Mature solutions for textual and graphical modelling exist. However no well-defined, reference, industrial-grade technology and tool that enables a fully-fledged hybrid modelling environment allowing end users to seamlessly switch back and forth between graphical and textual notations, which are always in sync both locally and distributed, is currently available. HybridMDE will provide a solution for the automatic generation and management of fully-fledged hybrid modelling environments from Domain-Specific Modelling Languages and support the development of complex multi-domain systems by enabling seamless textual and graphical collaborative modelling.

PARTNER – 16017
Patient-care Advancement with Responsive Technologies aNd Engagement togetheR
Project leader: Barco (Belgium)

The PARTNER project offers solutions to support the optimal patient journey for chronic diseases through the health system for appropriate personalised care. Data and information collection will be continuous, seamless and patient-centric. Extension of data collection beyond the walls of hospitals will enhance the capture of the full depth of patient data to more accurately reflect their states of wellness and health. Fast collaborative workflows of interpreted and harmonised data representations will increase the productivity of the caregivers and better justify the patient-centric decisions.

OPTIMUM – 16043
OPTimised Industrial IoT and Distributed Control Platform for Manufacturing and Material Handling
Project leader: TEREX-MHPS (Germany)

Today's control of industrial processes is done in a highly centralised and hierarchical manner. Future concepts like component based and collaborative automation require much more distributed control functionalities. To support this development, OPTIMUM addresses enhancing the aspects of distributed control, adaptation of IoT technologies to industrial needs, enhancement of control and assistance applications by context and location awareness as well as common-model based 3D engineering and supervision. Thus it will support partners and industry in general to get ready for Industry 4.0 challenges.

Personal Health Empowerment – 16040
Empowering people to monitor and improve their health using personal data and digital coaching
Project leader: VTT Technical Research Centre of Finland (Finland)

Current care provision is reactive and process driven, treating patients according to predefined pathways with limited possibilities to take into account the individual needs or abilities. Health authorities and care providers are finally noticing the one resource that had remained unused, the person or patient him/ herself! Significant cost reductions can be achieved by preventive solutions to help the person adopt a healthy lifestyle. The Personal Health Empowerment project aims to achieve this goal by empowering people to monitor and improve their health using personal data and digital coaching.

IntelliMariPal - 16024
Intelligent Maritime Exchange Platform
Project leader: VTEK (Turkey)

The aim of the IntelliMariPal Project is to develop an intermediary communication platform to increase the interoperability and data exchange between different users/ systems in the maritime domain (port level, multi-port level, regional, national, worldwide) as well as create the interfaces with port facilities for the efficient movement of ships to port and from port to the next destination. IntelliMariPal interfaces and cloud-based architecture will allow ports to bring their operations in line with the latest developments at IMO, EU/EMSA with the capability of being able to effectively plan for their future developments.

PAPUD – 16037
Profiling and Analysis Platform Using Deep Learning
Project leader: ATOS (France)

Businesses are currently having to deal with a data set that is more than they can handle. Today's necessity is not the usage of data analytics, it is the utilisation of combined technologies in which data analytics are executed to make sense out of the data. The scope of the project is to build a universal model for data analytics using Deep Learning on a proposed set of technologies including HPDA environment that fit best to the data provided.

ProSe – 16031
Proximity Services Framework
Project leader: *IMEC (Netherlands)*

The goal of the ProSe project is the design of a software-intensive system to support the development, deployment and execution of proximity services, which are applications that allow users to intuitively interact with the surrounding IoT enabled environment. Proximity services are automatically deployed when the user is at a specific location. Services are deployed and executed on a generic proximity app without the need for an additional explicit download. Proximity services adapt their behaviour to the surrounding context and interact with the IoT devices in proximity.

QUANTEX – 16054
Quantum Simulation and Emulation
Project leader: *ATOS (France)*

The lack of quantum computers leads to the development of a variety of software-based simulators to assist in the research and development of quantum algorithms. This proposal focuses on the development of a combined software-based and hardware-accelerated toolbox for quantum computation. A quantum computing stack including specification language, libraries and optimisation/execution tools will be built upon a well-defined mathematical framework mixing classical and quantum computation. Such an environment will be dedicated to support the expression of quantum algorithms for the purpose of investigation and verification.

SPEAR – 16001
Smart Prognosis of Energy with Allocation of Resources
Project leader: *EKS InTec GmbH (Germany)*

SPEAR aims to develop a flexible optimization platform that helps to improve a broad spectrum of industrial production processes in terms of energy-related aspects. Hence, a focus within the project is the energy optimization of plants' production processes, production lines and (industrial) buildings. The platform will be used to optimize the energy consumption of existing and new production plants, and the method will be applicable to both virtual commissioning as well as running production systems.

STARLIT - 16016
System Technologies for Adaptive Real-time MR Image-guided Therapies
Project leader: *Philips (Netherlands)*

STARLIT will develop technologies in radiation oncology to improve the quality of life for cancer survivors by improving treatment accuracy and minimising unintended doses to healthy tissue in image-guided radiation therapy. This will be done by using magnetic resonance imaging for 4D anatomy assessment to enable on-line treatment planning, real-time 4D dose accumulation, target tracking, and plan adaptation based on concurrent imaging of anatomy and biomarkers.

TESTOMAT - 16032
The Next Level of Test Automation
Project leader: *Ericsson (Sweden)*

Nowadays, quality software has come to mean "easy to adapt" because of the constant pressure to change. Consequently, modern software teams seek a delicate balance between two opposing forces: striving for reliability and striving for agility. The TESTOMAT project will support software teams to strike the right balance by increasing the development speed without sacrificing quality. The project will ultimately result in a Test Automation Improvement Model, which will define key improvement areas in test automation, with the focus on measurable improvement steps.

VMAP – 16010
A new Interface Standard for Integrated Virtual Material Modelling in Manufacturing Industry
Project leader: *Fraunhofer SCAI (Germany)*

Currently, the exchange of local material information in a Computer-aided engineering (CAE) software workflow is not standardised and raises a lot of manual and case-by-case implementation efforts and costs. For a holistic design of manufacturing processes and product functionality, the knowledge of the detailed and local material behaviour is required. The project VMAP therefore aims to gain a common understanding and interoperable definitions for virtual material models in CAE and to establish an open and vendor-neutral 'Material Data Exchange Interface Standard' community which will carry on the standardisation efforts into the future.

Open EUREKA Innovation Week 2017
Sharing Technology

From 15 to 19 May, the Spanish EUREKA Chairmanship (2016-2017) organised the open EUREKA Innovation Week in the Centre de Convencions Internacional de Barcelona (CCIB). This year's theme was 'Sharing Technology'. Around 1,000 participants shared ideas and experiences in an open way on smart technologies, such as Clean Tech, Digital Society, ICT, Industry 4.0 and more.

The main programme started on Tuesday 15 May with the open EUREKA Day. EUREKA High-Level Group Chairman Francisco Marín welcomed the audience. After the opening session, an inspiring round table was held that included Huub Rutten, Sopheon's Vice President of Product Research and Design and ITEA project leader. This session was followed by the presentation of the EUREKA Innovation Awards 2017. A winning project was announced for each of the three categories 'Competitiveness', 'Added Value' and 'Innovators of tomorrow'. This year, ITEA 2 project ADAX on Cybersecurity won the EUREKA Innovation Award 2017 in the category 'Competitiveness'. ADAX project leader Adrien Philippe Bécue of Airbus Cybersecurity pitched the project during the plenary session in the morning of 16 May.

Wednesday 17 May was Eurostars Day followed by the Cluster Day on Thursday 18 May, which started with a panel discussion between representatives of all EUREKA Clusters and moderated by Intercluster spokesperson and PENTA Director Peter Connock. After the break, a lively, interactive "Clusters game" was presented by ITEA Vice-chairman Philippe Letellier. The audience was invited to provide the topics for games on the Clusters' value chain, innovation and impact. All chairpersons of the Clusters were challenged to react to these topics within 30 seconds, creating an energetic ambience.

Apart from an interesting programme, there were plenty of networking possibilities during the B2B meetings that were organised from 16 to 18 May. Furthermore, at the exhibition, participants were able to visit the 50 stands all addressing innovation, including the ITEA Project ADAX as the EUREKA Innovation Award winner, the recently finished ITEA project ACCELERATE and current ITEA projects ReVaMP² and AMALTHEA4Public. ITEA was represented as well in the InterCluster booth together with CelticPlus, EURIPIDES², EUROGIA²⁰²⁰, Metallury en Penta.

ITEA3	12-13 September	ITEA PO Days 2017	Berlin, Germany	https://itea3.org/
	2 November	Submission deadline ITEA 3 Call 4 Project outlines		
Celtic-Plus	16 October	Submission deadline Autumn Call 2017		www.celticplus.eu
EURIPIDES²	20 September	Project outline submission deadline - Autumn Call 2017		www.euripides-eureka.eu
eurogia²⁰²⁰	22 September	Next Cut-off date		www.eurogia.com

Colophon