## GIANT HIGH LEVEL FORUM Leading Innovation Ecosystems

**HLF POST EVENT REPORT** 



2016 Grenoble, September 25-27, 2016 COLLABORATIVE CREATIVITY

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## 2016 High Level Forum

This year's High Level Forum in Grenoble welcomed 19 ecosystems, 90 delegation attendees and more than 100 guests from the GIANT campus. The forum opened with a joint message of support from the Mayor of Grenoble, the President of the Grenoble-Alps Metropolis and a Vice-President of the Auvergne-Rhônes-Alpes region. In addition, speeches by both the current and ex-Ministers of National Education, Higher Education and Research underlined strong national support for the forum.

### 2016 Theme:

## Collaborative Creativity

Each year, the forum focuses on a specific theme. In 2016, attendees discussed and developed their vision of collaborative creativity. A first set of speakers addressed this theme from the viewpoint of strategy, process and execution. The second session focused on collaborative creativity for smart industry purposes. To encourage in-depth exchanges, each session was followed by a roundtable discussion that included audience participation. From the

internationally renowned filmmaker Luc Jacquet to the current French Minister of Education Najat Vallaud-Belkacem, special guests provided attendees with an outsider's perspective on collaborative creativity.

#### DISCOVERING THE GIANT ECOSYSTEM

Informal exchange and connecting with the local ecosystem is one of the highlights of the High Level Forum. This year participants took part in several GIANT Tours to explore how fields such as education, arts & science or startups are also impacted by collaborative creativity. In addition, the tours allowed attendees to learn about the GIANT innovation ecosystem and the many technologies that have been developed on-site.



From left to right:

- Vannick Neuder
   Vice-President of the
   Auvergne-Rhône-Alpes
   region Higher Education,
   Research and innovation,
- Christophe Ferrari President of the Grenoble-Alps Metropolis
- Eric Piolle Mayor of Grenoble

# #HLF2016





#### STEPHANE SIEBERT

Director of Technological Research at the French Alternative Energies and Atomic Energy Commission (CEA)

#### INTERVIEW

## BUILDING A COMMUNITY OF INNOVATION ECOSYSTEMS

Before detailing the many speeches and discussions that marked this year's forum, we speak with Stéphane Siebert, the director of technological research at the French Alternative Energies and Atomic Energy Commission (CEA). He shares with us his vision of innovation ecosystems, collaborative creativity and the High Level Forum.

• The High Level Forum represents the first international community of innovation ecosystems. What motivations led GIANT to create an event specifically focused on innovation and ecosystems?

The key question is to understand where innovation is produced. Local ecosystems such as the GIANT Campus drive innovation worldwide. These campuses are generally quite small in terms of size, but they are very dense and bring together a wide variety of actors from research, higher education, industry and finance. As a result, they have a fundamental role to play in our economic development. It is incredible to see how much added value can be produced within the relatively small area occupied by an innovation ecosystem. With this in mind, it was a logical next step to create an event where innovation ecosystems could meet and exchange with each other.

Oreating an international community of ecosystems is sure to foster exchange. But what does the High Level Forum offer its participants in more concrete terms?

One of the aspects I would like to highlight is marketing. It might be less common to speak about territorial marketing, but it is in fact essential for a territory to communicate on its capacities. Each ecosystem has expertise in a variety of domains. However, a campus's international recognition is not always equivalent to its capacities. The High Level Forum is a great opportunity for innovation ecosystems to share their capacities with industry players and other ecosystems.

In addition, innovation is a complex and multidisciplinary challenge. In response, the forum's accent on high-level speeches and informal discussions makes it an excellent venue to share strategies and good practices for managing innovation. The forum currently gathers more than 20 leading innovation ecosystems. But in the future, we are preparing to involve both leading and developing ecosystems. In the world of innovation, you can learn as much from newcomers as they can learn from old-timers.

#### This year's theme was collaborative creativity. Why was this a relevant topic of discussion for the High Level Forum?

Whether it is the leaders of innovation ecosystems or the leaders of industry innovation, we have all come to agree on the importance of collaborative creativity. You have to realize that no matter where you are in the world, you cannot succeed alone. Modern innovation challenges require multidisciplinary approaches. This means not only combining a variety of technologies, but also merging expertise. You have to unite people in all areas of study, from engineers to sociologists, architects or historians. In a way, the theme of collaborative creativity was

perfect for this year's forum. Up until now, the forum has limited itself to exchanges that took place during the event. This allowed us to create a stable and reoccurring forum. However, this year we are opening the door to collaborative work in between each forum. For example, participants voiced interest in creating working groups on intellectual property or cybersecurity. We also have to consider developing a shared vision that the forum can communicate to the world. As a gathering of some of the world's most advanced innovation ecosystems, we have the potential to communicate a strong message to the worlds of research, industry and government.

## High Level Forum LEADING INNOVATION ECOSYSTEMS

Launched by GIANT in 2012, the High Level Forum is an international event that now attracts more than 20 innovation ecosystems. It welcomes decision-makers from higher education, research and industry as well as civic and political leaders. First hosted in Grenoble, the forum is held in a partner city every other year.

## CREATING A GLOBAL COMMUNITY OF INNOVATION ECOSYSTEMS

This event is a unique opportunity to strengthen international cooperation and develop common strategies to maximize the social and economic benefits of each ecosystem. By fostering ties between innovation ecosystems, the forum encourages a global ambition to promote research, multidisciplinary collaboration, innovation, science education and the transfer of technology. Thanks to joint initiatives, the forum encourages relationships between private and public players, startups and major corporations, and education, research and industrial actors.

## SHARING EXPERIENCES AND BEST PRACTICES

One of the key advantages of uniting an international community of innovation ecosystems is the opportunity to share experiences and best practices. By building on the experiences of their international counterparts, each ecosystem can improve its strategies and management of innovation in order to overcome the challenges of tomorrow.

#### **AN INTERNATIONAL VISION**

The forum initiates international debate on specific innovation topics while promoting global leadership and cooperation on research and innovation. A primary goal of the forum is to develop a World Innovation Forum. As delegation exchange with international counterparts, the High Level Forum helps develop the added value and local impact of each innovation ecosystem.

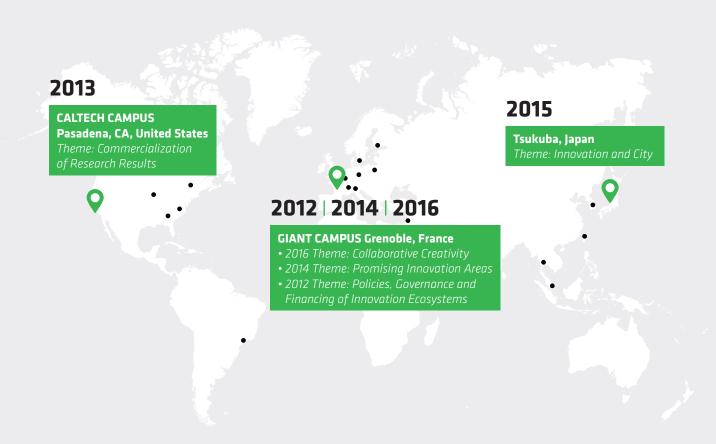


## **2016 HIGH LEVEL FORUM**

90 ATTENDEES

19 INNOVATION ECOSYSTEMS

#### **5 HIGH LEVEL FORUMS**



#### 21 DELEGATIONS since 2012

#### ASIA

Japan: Tsukuba Korea: Daejeon Taiwan: Hsinchu Thailand: Bangkok Singapore

#### AMERICAS

Argentine Brazil: Sao Paulo Canada: Montréal

USA:

Los Angeles (Caltech)
San Francisco (Stanford)
Atlanta (GIT)
Chicago (Argonne)
North Carolina (UNC)

#### EUROPE

France: Grenoble (GIANT) Switzerland: Lausanne

(EPFL)

UK: Harwell/Oxford Poland: Warsaw

Germany: Dresden (TUD) Italy: Milan (Politecnico) Finland: Helsinki (VTT) Sweden: Lund

Luxembourg

#### MIDDLE EAST

Israel: Haifa (Technion) Saudi Arabia: Thuwal (KAUST)

## — GIANT— AT A GLANCE

**340** COMPANIES on-site

More than 7,000
SCIENTIFIC PUBLICATIONS
per year

More than10,000RESEARCH JOBS

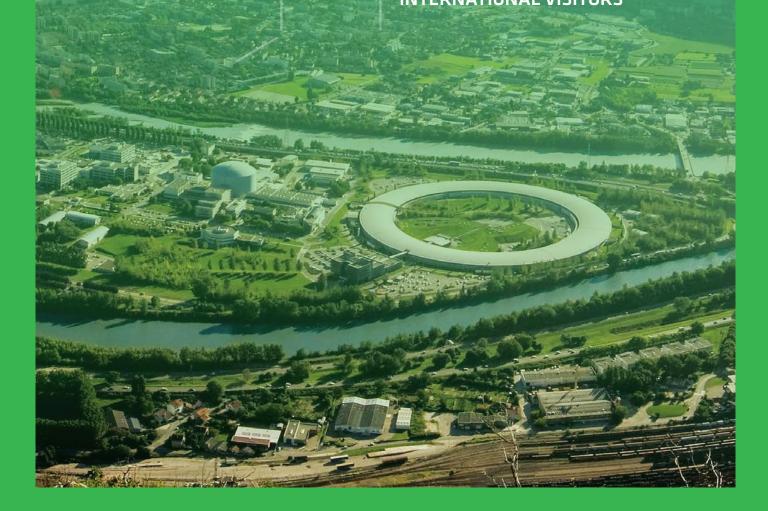
+ More than 10,000 STUDENTS

• More than **5,000**INDUSTRIAL JOBS

More than **700**PATENTS filed per year

Annual direct and indirect ECONOMIC IMPACT:
 €4,1 BILLION

More than 9,000
INTERNATIONAL VISITORS



**GIANT** (Grenoble Innovation for Advanced New Technologies) unites research, higher education and industry on a unique campus to overcome the major challenges of tomorrow.

Founding members: CEA, CNRS, EMBL, ESRF, GEM, ILL, Grenoble INP and UGA.











### SIX HUBS FOR EXCELLENCE

in science and academia



#### Major European Research Facilities

A campus that is unique worldwide in its access to high level equipment used to explore materials and living matter.

#### **Information Technology**

MINATEC: dedicated to innovation and technology transfer in the fields of micro and nanotechnology.

#### Fundamental Research

Essential support for research that advances knowledge and enables technological innovation.

#### Healthcare

A hub for medical, diagnostic and imaging technology with access to internationally recognized organizations.

#### Energy

Electrical networks, smart buildings, energy conversion and transfer, carbon-free energy sources and energy storage.

#### Innovation Management

Applied research and new business creation as well as innovation and industrial performance training for managers.

#### **SPECIAL GUEST**

#### **GENEVIÈVE FIORASO**

Member of French Parliament Representative of the First District of Isère Former Minister of Education, Higher Education and Research

Fostering collaborative creativity is a fundamental aspect of developing the space industry of the future. With the launch of Ariane 6, France has ensured its access to space. The question is how do we capitalize on our access to space in order to overcome the challenges of tomorrow. The primary issue is to encourage the

The development an 'open space' can only be made possible through collaborative creativity.

development of downstream applications, services and clients. This means supporting collaboration between a wide array of actors that cover the entire value chain from space access to concrete industry applications.

The amount of data collected from space is growing at a phenomenal rate. For example, 54 percent of the data used by the Intergovernmental Panel on Climate Change is provided by satellites. The combination of space digitalization and big data will force governments, industry and research to collaborate if they wish to find innovative solutions that capitalize on this revolution.

Space exploration is built on a culture of risk-taking and this is a mindset we must continue to grow in Europe. We are entering an era of open space. This does not only refer to an open access to space. It also underlines the need to break down boundaries and explore new forms of collaboration.

To achieve an open and collaborative space, we must develop three essential areas. First, the digitalization of space means we must diversify our talent. As is the case for most modern research, innovation in space requires multidisciplinary collaboration. Second, let us boost our communication with the general public. For example, the digitalization of space is an excellent opportunity to communicate on the practical applications of space data.

Finally, governments and innovation ecosystems have to support the entire space value chain. We can no longer focus on simply supporting technology and prototypes. New initiatives have to be geared towards developing potential space clients in sectors as diverse as the environment, agriculture, defense, border surveillance, telecoms, education, healthcare and culture. An open space is the epitome of a collaborative creativity that can unite an entire value chain.





Creativity is often seen as something magical you either have or do not have. But in our modern world, collaboration is the key to unlocking creativity. The spark that ignites creativity is most often found in informal situations that often involve coffee. In a way, the coffee machine has replaced Archimedes' bath or Newton's apple.

Three factors will allow us to foster collaborative creativity: (1) local innovation ecosystems, (2) national public policy and (3) international cooperation. Today's challenges are far too complex to approach from a single direction. The historic synergies the unite higher education, research and industry on the GIANT campus in Grenoble are a testament to the importance of collaboration in our innovation ecosystems.

National policy must support local action through multidisciplinary strategies that cover topics such as climate change and health care. Just as social sciences can no longer be separated from hard sciences, the arts must also be an integral part of this collaborative creativity. This is all the more obvious when you observe the power of art to teach skills such as teamwork, initiative and creativity.

Finally, collaborative creativity has no borders. European examples such as the Horizon 2020 Framework illustrate the power of international projects. Our government's support for Franco-Japanese exchanges between Ph.D. students is another example of how we can foster international collaboration. In the end, we are all in the same boat; collaboration is the only solution.

Collaboration is the key to unlocking creativity.

#### **KEYNOTE SPEAKER**



RICK BAHR
Stanford SystemX Alliance
Executive Director

Before serving as the executive director of Stanford's SystemX Alliance, Rick Bahr was senior vice president of engineering at Qualcomm. He integrated Qualcomm through the acquisition of Atheros Communications, which he joined in 2000 as head of engineering.

He has held leadership positions at HP, Prime, Apollo and SGI. The first two decades of his career were devoted to processor design and architecture, the last decade and a half to communications. He holds a BS and an MS in electrical engineering from MIT.

## THOUGHTS ON CREATIVE COLLABORATION

There are three essential ingredients for successful creative collaboration: (1) creative individuals, (2) a supportive setting, and (3) a common purpose. Whether it is in Silicon Valley or Boston/Route 128, the crucial factor for success has been a critical mass of talents, which often translates to a university being present.

Other important factors include a culture of risk taking and a supportive business environment. In particular, this includes the unfailing support of corporate executives, or in the case of startups, the trust given by the board of investors. This creates a supportive setting that allows for aggressive experimentation. If you are going to fail, you need the right support and setting in order to fail quickly and learn from your mistakes.

There are three key ingredients for successful collaborative creativity: creative individuals, a supportive setting and a common purpose.

The Apollo DN10000 workstation project illustrates the trifecta of creative individuals, a supportive setting and a common purpose. The project was essential for the company to survive and move beyond workstations. It united a local community of talent, a sheltered setting encouraged by the company's founder, and a common purpose to overcome growing competition. The SGI Origin 2000 scalable supercomputer project also united executive support, a mass of talent from Stanford and Silicon Valley, and a common purpose found in the opportunity to redefine supercomputing.

Atheros provides a third example. It was a startup founded by Teresa Meng and John Hennessy with the common purpose of combining a technological advance (CMOS technology for radio) and a regulatory change that opened unlicensed 5GHz UNII channels. In addition, there were many positive factors that enabled the startup's success. The founders had unflagging support for the team; there was venture capital support; the startup slipped right into an ecosystem that already existed; there was a critical mass of talents; and finally, there was a shared ethos to succeed or fail together.

When trying to implement collaborative creativity, there are many issues to consider if you want to enable a high performing team. Here are ten key factors that will help ensure success.

- 1. Unwavering support from above
- 2. Highly selective but deep risk taking
- 3. Convergence of multiple technological opportunities
- 4. Engineering pioneering (as opposed to business pioneering)
- 5. Highly adaptable and agile minds (the ability to stumble and then keep going)
- 6. A project leader that acts as a funnel or a coach
- 7. Internal pressure to succeed
- 8. External pressure to succeed
- 9. A pre-existing supply chain (inventing an entire business model is much more difficult)
- 10. Effective tools

#### **PERETZ LAVIE**

Technion, Israel Institute of Technology President



In 1974, Peretz Lavie received his Ph.D. in physiological psychology from the University of Florida. He continued his postdoctoral research at the University of California, San Diego. In 1975, he joined the Faculty of Medicine at Technion. He was dean of medicine (1993-1999) and the Technion vice president for resource development and external relations (2001-2008). He has been president of Technion since 2009. He has published more than 400 scientific articles as well as eight books on sleep research and sleep disorders.

## HOW UNIVERSITIES CAN ENHANCE COLLABORATIVE CREATIVITY?

What is the essence of creativity? It is rarely the result of an individual "Eureka!" moment. Instead it is a social process. Creativity occurs thanks to a collaboration of individuals who discover hidden connections, new perspectives or a bigger picture. The mere fact of having other individuals engaged in the same activity is enough to boost one's own creativity. As a result, cultural, institutional and interpersonal contexts are a key part of this process.

Cultural, institutional and interpersonal contexts are essential factors for collaborative creativity.

In addition, there are cultural differences to consider. For example, in Japan it is possible to give a speech to 1,000 students and not be asked a single question when you finish. This cultural difference is present in other countries such as China and Korea. We must account for these differences when fostering creativity.

So how can universities contribute to collaborative creativity? Universities enable a meeting of minds between students, faculty members, industrial players and cultures. The first level of interaction is a meeting of minds between students. The second level is the meeting of faculty and industry, which can be more complicated to foster.

Multidisciplinary events such as student competitions can be excellent tools to encourage collaborative creativity. For example, our annual BizTEC competition invites multidisciplinary teams of three to five students to present an unsolved problem or new idea. This year, 115 teams applied. Following a year long selection process, the three best teams are selected for funding and mentoring. The success of this approach is clear with the competition having produced 122 startups since 2005.

In addition to local ecosystem events, Technion also encourages students to participate in numerous international competitions. As a result, the university has created an ecosystem in which students feel the need to compete, create and innovate.

When considering how to support collaborative creativity at the faculty level, it is important to remember that research evolved considerably. It used to be two chemists sitting in a three square meter room with \$50,000 worth of equipment. Nowadays, although research does not always require massive investments, it has certainly become more complex. New frontiers require a multidisciplinary approach.

In response, the university has created a virtual research center that brings together institutes in various fields of research such as space, water, nanotechnology, life sciences and engineering, energy, and autonomous systems. The creation of international campuses in New York and Guangdong is also an important example of how to promote multidisciplinary exchange between innovation ecosystems and foster collaborative creativity.

#### **TIMOTHY WHITE**

Nanyang Technological University
Director in the President's Office, Research Strategy and Coordination Unit



Timothy White is a director in the Nanyang Technological University President's Office, the deputy director of the Energy Research Institute, and a professor of materials science and engineering. His previous affiliations include the Australian Atomic Energy Commission, the Australian National University, and the Agency for Science Technology and Research.

He served as president of the Australian Microscopy and Microanalysis Society, and secretary of the Materials Research Society of Singapore. His current research is focused on thermoelectric materials and hybrid perovskites for photovoltaic materials. He is also a pioneer of massive open online courses (MOOCs).

## COLLABORATING ACROSS DIVIDES - CREATING THE CONDITIONS FOR RESEARCH INNOVATION EXCELLENCE

Singapore is a small 50-year-old nation with a population of only five million. Despite its short history and small size, the country's university has achieved great success. By most measures, it is recognized as the most successful 50-year-old university in the world.

One of the key factors behind the university's success has been the desire and urgency to create partnerships with the best worldwide. For example, the Lee Kong Chian School of Medicine was launched in 2013 as a partnership between NTU Singapore and the Imperial College London.

With such a small population, the challenge has been to encourage everyone to be innovative, creative and productive. The strategy used is known as the three Ds: dream, do and deliver. In addition, we can add a fourth D, desist. Collaborative creativity is a great objective, but if a project is not working, then learn from it and move on quickly.

Another factor that has defined the country's success is the strength and unity of the Singaporean government. Thanks to a whole government approach, it is possible to harmonize the actions of all actors and create collaboration that will achieve the desired goal. This approach has caused universities to evolve from being fundamental research providers to providing applicable benefits. As a result, industries have also realized the benefits of collaborating with universities and are developing these partnerships as pipelines for talent.

One of the essential characteristics of collaborative creativity is that solutions can come from the most unexpected places. Therefore, it is essential to have uncommitted funding that can be easily diverted to new opportunities as they arise. Another ingredient for collaborative success is to take advantage of your innovation ecosystem's specific characteristics. Singapore boasts one of the only leading universities in the tropics and the country is also a point of convergence between East and West. This has enabled it to become a unique test bed for a variety of companies.

To further foster collaboration, a Singaporean solution has been to tie funding to multidisciplinary activities. Our innovation ecosystem is also home to top players because government policy strongly encourages organizations to import talent. As a result, 70% of students and 75% of faculty come from abroad. In addition, mobility is essential with 73% of undergraduate and 90% of graduate students participating in exchange programs.

## Collaborative creativity can open the door to unexpected ideas and partnerships.

The crucial point is that you have to collaborate across divides. You have to recognize that truly innovative ideas are not initially recognized as such. To be successful, you have to look for and engage in unexpected partnerships. You have to get people to work together even if they come from very different backgrounds and settings.



#### **ALEX Y.M. PENG**

Industrial Technology Research Institute (ITRI)
Vice President and General Director of Material and Chemical Research (MCL)

In addition to being the vice president and general director of MCL at ITRI, Alex Peng is currently president of the Material Research Society of Taiwan. He served as president of both the Taiwan Corrosion and Protection Association, and the Taiwan Battery Association. His research focuses on energy and electronic materials as well as strategic and R&D planning. With 26 patents to his name, he was a winner of the R&D 100 Award in 2009 for a high-safety STOBA lithium-ion battery.

## FROM INNOVATION TO COLLABORATION THE OPEN INNOVATION SYSTEM PLATFORM (OISP)

We often have a solution, but do not know the best way to apply it. Or, we have a problem with no solution. To overcome this, our innovation ecosystems require collaborative creativity to successfully design functionality, manufacturability and reliability.

Innovation is often the result of a crisis. Take for example the Giant company, which faced a major crisis 30 years ago. In response, innovation provided by ITRI tech

licenses enabled the company to work with designers and riders from around the world. In addition, the company developed a new business model. The result was Giant YouBike, a public bike sharing/renting service that completes Taiwan's public transportation system. These results were only made possible by collaboration between the various actors of our innovation ecosystem.

Another innovative solution to a major Taiwanese problem was the development of e-scooters. Our country has 14 million scooters for a population of 23 million. E-scooters were seen as a solution to overcome pollution challenges. The evolution towards e-scooters was supported by a development policy and incentive program that united companies, research institutes and government. ITRI was also asked to set

First, STOBA safe technology for Li-ion batteries countered the risk of battery fires and explosions. Second, we realized the importance of creating

up collaboration to develop and test batteries. The

results led to expected and unexpected innovations.

batteries small enough to be carried up to your apartment and re-charged. And if you cannot wait three to five hours for your battery to charge, the small battery size makes it easy to buy a second one at a convenience store. Finally, ITRI also set up standards for vehicle and battery testing. This collaborative effort continues as STOBA technology was transferred to a Taiwanese company that is promoting it worldwide.

Collaborative creativity is needed to design functionality, manufacturability and reliability.

Collaboration is also essential in semiconductor, biomass and water treatment industries. As a result, ITRI's innovation ecosystem has produced innovations in a variety of areas such as the use of recycled fibers for football jerseys and the QWater filtration system. Finally, it is important to remember that collaborative creativity can be found in the most unexpected places. Take for example Dongfang Meiren tea which is grown without pesticides. Allowing the proliferation of a bug known as the leafhopper is in fact what gives the tea its unique flavor.



#### ROUNDTABLE

## THE ADDED VALUE OF COLLABORATIVE CREATIVITY FOR INNOVATION ECOSYSTEMS

Moderated by: **ANJANA AHUJA** Freelance journalist and contributing writer for the Financial Times Participants: **YUKO HARAYAMA** Executive member of the Japanese Council for Science, Technology and Innovation | **JEAN-PAUL DE GAUDEMAR** CEO, Francophone University | **RICK BAHR** Executive director, Stanford SystemX Alliance | **PERETZ LAVIE** President, Technion | **TIMOTHY WHITE** Director, NTU President's Office | **ALEX PENG** VP and director general of material and chemical research, ITRI

#### O Do cultural differences impact collaborative creativity?

"In Japanese culture, students do not take the initiative and ask questions. But this does not mean there is a lack of creativity. You simply need to create an environment that allows them to break away from their rigid training and express themselves freely."

"Collaborative creativity emerges from a meeting of minds. It is the product of an alliance between universities, industry and government. The key is to find a common purpose that will unite even the most diverse actors."

"In Israeli, chutzpah refers to the willingness to speak one's mind. Minimal social distance allows people to express themselves freely. When this is lacking, you need top-down direction to initiate expression and creativity."

#### • How do you drive creativity?

"Creativity often stems from necessity. The desire to create a better world pushes us to innovate. But remember that creativity can come from the most unexpected places. Innovation ecosystems should avoid excluding any potential partner."

### ② Is collaborative creativity a short or long term process?

"Short term or long term, fundamental or applied research, both are two sides of the same coin. Patience is often what allows creativity to blossom."

#### • What interactions promote collaborative creativity within innovation ecosystems?

"Collaborative creativity is a social process that requires diversity."

"You need a relationship between universities and industry. Proximity encourages open exchange. Whether it is recruiting foreign talent or traveling abroad to bring back new knowledge, international exchange is also crucial."

#### • How can you overcome failure?

"Failure is as important as success. A failure highlights the difficulty and value of a project. With proper support from top management, a setback can be a springboard to success."

"The important principle is to find the right balance between risk and investment. The best way to do this is through partnerships that mix industry, university and research organizations."

Creativity can be driven by necessity and the desire for a better world.









and earned an Oscar for Best Documentary in 2006. His Once Upon a Forest project breaks away from conventional audiovisual narration in order to act as a science mediator with an artistic perspective.

The climate project, Ice and Sky, and the Antarctica project have enabled millions of people worldwide to share in the Wild-Touch adventure thanks to magnificent landscape images. The NGO continues its work with The Flow of Life, which is a global art and conservation project built around the seven major biomes.

The film industry is an excellent example of collaborative creativity. My own work is built on the desire to combine cinema and saving the planet. It requires the creative collaboration of film professionals, scientists and project managers, among many others. By fostering this collaborative creativity, we can bridge the gap between science and the general public.

The NGO Wild-Touch was created to break the frontier between science, technology and our emotions. Touching emotion through art requires creativity. Not only are these projects creative in terms of film production, but also in terms of organizing an NGO with large-scale projects. Each project is the fruit of multidisciplinary collaboration. In addition, whether it is the forest canopy or the study of air bubbles in antarctic ice, these projects are oriented towards education. It is a creative approach to teaching the general public about our vast planet.

Of course, there is also a lot of failure when trying to innovate. But even when a project fails, it can be a success. For example, we explored the idea of creating an exhibition for antarctic ice. Although the project was too costly, exploring the idea led to the design of a zero-impact building.

In a way, the film industry is an excellent example of both collaborative creativity and dealing with failure. Every film is like starting from scratch. No matter how good you are, you always have to justify yourself and the project. As a result, this makes it easier to keep starting again and again even after a failure. The hardest part is finding the motivation to keep going if people or society do not seem interested in your work.



The hardest part with failure is to find the motivation to keep trying again and again.





**KEYNOTE SPEAKER** 

#### **DETLEF NAGEL**

Infineon Technologies Vice President Frontend



Detlef Nagel, who is the vice president of frontend operations at Infineon Technologies, holds a degree in physics and a Ph.D. in electrical engineering. Before joining Infineon Technologies in 2014, he was the BiMOS factory manager for ABB. He has 20 years of experience in semiconductor operations and development for various markets and technologies.

## COLLABORATIVE INNOVATION IN THE SEMICONDUCTOR INDUSTRY

The semiconductor industry has played an important role in the evolution of businesses worldwide. However, this role has become all the more difficult as time to market requirements continue to shorten. With the digital transformation revolutionizing the business world, electronic components and devices have been developing at a phenomenal pace. Simply consider the lifecycle of your smartphone.

By decoupling innovation and production, we can overcome some of the challenges presented by fully automated production lines.

It is all the more difficult for us to meet shorter time to market requirements because semiconductor production is a very complex, nonlinear process with 600-1,200 steps. However, the result has been that semiconductor companies have implemented collaborative creativity as the cornerstone of their development. At Infineon Technologies, we have identified three essential factors that enable collaborative creativity: (1) the European innovation ecosystem, (2) innovation culture, and (3) company culture.

There is still work to be done in improving collaborative creativity for our industry. First, it is important to grow infrastructures for collaboration. Second, we have to simplify the collaborative process. And third, we have to remember that a key advantage of collaborative creativity is its potential to provide overall, integrated solutions. As a result, we need to encourage a big picture approach.

At Infineon, one solution to improve innovation culture and collaboration has been the creation of iCommunities. We created open spaces where selected experts can collaborate freely on topics of their choosing. The idea is to have a top-down roadmap that guides the overall innovation process, but also to encourage a bottom-up approach so experts can choose which topics to focus on. As the creative challenges of tomorrow are extremely complex, our iCommunities were created to include input from all areas such as IT, local R&D, Fab Labs, customers, suppliers, research institutes and universities. In the end, people are the essential component for successful innovation. You have to bring in everyone who can contribute.

Reduced time to market constraints have also presented us with another challenge in terms of company culture. We have been able to meet shorter production deadlines thanks to fully automated smart industry systems. However, before we had fully automated production lines, researchers could easily go on-site and ask an operator to test an idea. With a fully automated production line, testing an idea is more complicated. You might have to re-define and re-program an entire production process in order to test an innovation. As a result, there was a clash of cultures between automated systems and a researcher's traditional habits. To overcome this challenge, we are working to separate the innovation and production processes.



#### **MASAHARU SUMIKAWA**

Tsukuba Global Innovation Promotion Agency (TGI) Director General

In addition to his role as director general of TGI, Masaharu Sumikawa is the chairman of the TIA Executive Board and a senior advisor for Hitachi, Ltd. Prior to this, he served as CEO of Hitachi Plant Technologies, Ltd. (2006-2010) and board director of Hitachi Ltd. (2010-2012). He holds a Ph.D. in precision mechanical engineering from the University of Tokyo.

## NEW COLLABORATIONS OPEN HORIZONS

To foster an innovation ecosystem, the Tsukuba Science City was approved for construction in 1963. Collaborative creativity is at the heart of this model which brings together national institutes, universities, R&D companies and startups. At the government level, we foster collaborative creativity by supporting innovation from fundamental research all the way to practical application and commercialization.

Major R&D programs such as our COI, SIP and ImPACT programs are essential tools that provide top-down guidance to encourage innovation and collaboration. The Tsukuba Global Innovation Promotion Agency (TGI) was also established to create an innovation hub within the Tsukuba ecosystem. TGI provides our innovation ecosystem with the ability to assist in project planning and business development as well as create connections to solve technical problems.

Part of our top-down approach to supporting innovation has been the launch of eight major innovation projects that cover challenges of the future such as cancer therapy or robotics for medical devices. In every case, collaboration is the fundamental cornerstone that enables the success of an innovative project. For example, the successful creation and application of single-walled carbon nanotubes represents far more than a simple technological innovation. The production of this innovative material also requires smart industry processes for automated production lines. In addition, a variety of industrial actors have collaborated to explore practical applications for this material.

Another essential component of collaborative creativity is to link industry and research. Our KAKEHASHI Linking Bridge program was designed to launch large-scale projects that unite R&D and industry. The program fosters collaboration between TGI's five core organizations and invites companies to launch major collaborative projects.

The HAL® robot suit is an excellent example of collaborative creativity from fundamental research to practical application. Our vision is to fund high potential research that could provide the seeds of innovation. When a promising concept such as the HAL® robot suit emerges, we encourage collaboration with companies and investment funds in order to mature the technology and bring it to market. The profits from concret development provide funding for the next generation of innovative concepts.

Our vision of innovation begins with backcasting. By imagining an ideal outcome, we can then work backwards to identify the policies and partners required to overcome a challenge. Collaborative creativity is the glue that unites these actors under a single roof to achieve success. One of the essential priorities is to optimize teams in order to ensure rapid results.

Collaborative creativity is the glue that unites policies and various actors under a single roof to achieve success.

#### **PATRICK MAZEAU**

Xerox Research Center Europe Business Relations and Marketing Director



Patrick Mazeau currently manages business relations and market development for the Xerox Research Center Europe. He began as a software developer in 1989 before moving to technical coordination and project management for the French navy. After working for the telecommunications industry, he joined the newly created Xerox Research Center in 1996. He holds a master's degree in computer science from the Université de Technologie de Compiègne (France) and an MBA in marketing from the Lyon Business School (France).

Successful collaborative

technology and business

creativity requires

input from users,

## PERSPECTIVES ON COLLABORATIVE CREATIVITY IN INDUSTRIAL R&D

While Xerox is of course best known for its document management solutions, it has also become a leader in business process outsourcing for everything from parking lot management to healthcare services. In expanding its business to keep pace with current evolutions, Xerox has had to overcome several challenges in terms of corporate innovation

We used to work through a stage-gate process. First, you would start by exploring an idea. Once you could prove results, you would move on to incubation and partnering phases. However, this model has been completely disrupted by the evolution of global markets. It is no longer viable when faced with leading companies that are only an average of 18 years old. In addition, as the cost of

doing business diminishes, there has been a proliferation of startups and therefore new competitors.

The digital revolution and the advent of IoT has led us to an era of big data. Alongside this explosion of data, comes a revolution in terms of user experiences. Leading

companies such as Apple or Samsung have instilled slick designs as the norm. As a result, users now expect the same modern design for all of their devices.

To overcome these challenges, Xerox has had to combine its traditional long term vision of research with the need for immediate results. Our company carried out a study of more than 15 world-class companies and drew several key conclusions:

- · Have a focused vision
- · Act small but think big
- · Use design thinking with cross-competency teams
- · Ensure corporate level sponsorship

Following this overall vision, Xerox has implemented a long term technology roadmap and strategy. As these activities are carried out, research output can be analyzed in terms of its applications. The key is to quickly analyze feedback from evolving trends. Collaborative creativity combines business strategy and multidisciplinary teams in order to enable the company to either build on an innovative concept that receives positive feedback or use negative feedback to modify our long term vision.

Ticket vending machines sold by Xerox illustrate the benefits of using collaborative creativity to go beyond a single field of activity. When Xerox questioned the long term viability of these machines, current evolutions clearly indicated that over the next five to ten years

the machines would become obsolete. However, many of these machines are used to sell tickets for transportation purposes. This opened the door to exploring viable options to replace ticket machines in the transportation sector. As a result of this exploration, the company launched

an application that helps users navigate from point A to point B using all accessible modes of transportation. The entire development process took only 18 months and the company is now expanding this approach to find similar solutions for the healthcare industry.

In conclusion, technology, the user and business strategy are essential to shape ensure successful collaborative creativity. The evolution in user experiences means that UX design is now a gel that unites a variety of competencies and multidisciplinary teams. This is an opportunity to discover new ideas in unexpected places. Ensuring successful innovation and collaboration by multidisciplinary teams requires that team members be not only experts in their field, but also capable of working with and understanding other fields of activity.



#### **PAUL KEARNS**

U.S. Department of Energy (DOE) - Argonne National Laboratory Deputy Laboratory Director for Operations

Before joining the Argonne National Laboratory as chief operations officer, Paul Kearns served as president and general manager of Battelle Italia. He also worked with national laboratories in cooperation with Battelle Global Laboratory Operations to implement national security and nuclear energy initiatives. He started his career as a safety specialist for the DOE and continued as site office manager for the National Renewable Energy Laboratory. He then moved on to management positions for the Pacific Northwest National Laboratory and was the director of the Idaho National Engineering and Environmental Laboratory.

## CHICAGOLAND AND INDUSTRY EXPERIMENTS

The Argonne National Laboratory is one of 17 Department of Energy (DOE) national laboratories. Its innovation ecosystem covers a wide variety of research topics such as nuclear and particle physics, transportation and combustion, materials for energy, big data, and protein characterization. The laboratory's mission is to advance energy, environmental and national security issues by using discovery science and innovative technologies. To do so, it relies on a unique set of scientific and computing facilities as well as a mix of very specialized experts and researchers able to work transversally.

Overall, innovation in the larger Chicago regional ecosystem is chaotic and dynamic due to a population of more than ten million. The challenge for Chicagoland is to drive innovation with such a large and diverse population that includes investments funds, mentorship programs, incubators, accelerators, the illinois industry, the public sector, universities and laboratories.

In terms of the Argonne National Laboratory, one area of improvement is our commercialization results, which do not yet meet expectations. We have three frameworks to implement technology development and commercialization. The first framework focuses on commercializing innovation. However, traditional methods such as technology licensing, startup spinouts and startup licensing with equity generally lead to incremental outcomes. The second framework focuses on collaborative industry research through direct contracting, fees for the use of facilities and collaborative research contracting.

The third framework is directed at transitioning towards the smart industry. The goal of this framework is to create higher impact research collaborations. The DOE provides support through this framework to engage in experimental approaches and find new investment models. One of the aspects being developed is a one-stop concierge service.

We can examine four examples of DOE supported experiments designed to improve technology commercialization by national laboratories. The Lab-Corps provides specialized training to accelerate the transfer of technology. Small Business Vouchers open the door for SMEs to access lab capabilities. The Technologist in Residence program builds partnerships with industry by enabling industry researchers to integrate laboratories and vice versa. The Technology Commercialization Fund provides support for the development, demonstration and commercialization of technology. Argonne is also working to develop concierge services. The goal is to increase focus on customer needs. In light of this strategy, we have implemented three programs: ACCESS (storage solutions), Nano Design Works and Chain Reaction Innovations (energy).

To overcome the incremental outcomes offered by traditional research-industry partnerships, innovation ecosystems should focus on customer needs and concierge services.

To improve commercialization results, the laboratory has launched a new investment model by creating an independent company that will help identify, validate, develop and seed new technology. The company will develop research contracts with Argonne and possibly other national laboratories. In conclusion, given the incremental outcomes of traditional industry partnerships, we have increased our focus on customer needs and concierge services to improve impact and outcomes. New models are still needed to reduce risk and help technological breakthroughs reach maturity.



#### ROUNDTABLE

## APPLYING COLLABORATIVE CREATIVITY TO SMART INDUSTRY CHALLENGES

Moderated by: **ANJANA AHUJA** Freelance journalist and contributing writer for the Financial Times Participants: **JOSEPH SIFAKIS** 2007 Turing Award and full professor, EPFL | **DIDIER MIRATON**Consultant and professor, Collège des Ingénieurs | **PAUL KEARNS** COO, Argonne National Laboratory | **DETLEF NAGEL** VP frontend, Infineon Technologies | **PATRICK MAZEAU** Business relations and marketing director, Xerox Research Center Europe | **MASAHARU SUMIKAWA** director general, TGI

### • What challenges do people face when engaging in collaborative creativity?

"People are crucial for collaborative creativity. However, specialists and researchers can have trouble thinking beyond their recognized area of expertise. They do not always have the proper mindset to innovate. You have to enable them to think and contribute in a different manner."

#### What challenges do organizations face when engaging in collaborative creativity?

"We are in an era of agility. Like startups, all organizations have to adopt agile methods."

"You have to balance pragmatism and innovation. For example, smart industry production lines provide enormous gains in efficiency. But you have to balance this with the fact it is more difficult to experiment new ideas when using an automated system. There is a clash of cultures between traditional research and the smart industry of the future."

## • How do you implement collaborative creativity in organizations?

"You need rules to enforce and enable collaboration. People do not work together simply because you put them in the same room. You have to be an orchestra conductor."

"Open your organization to the fact creativity can happen downstream. Share innovative developments with the entire company. You will be surprised to see how other business units can creatively interpret and build on an initial innovation."

"Go beyond your comfort zone. For example, the disruption of industrial processes can be very expensive. But if you handle it well, you can create innovation while saving time."

#### O How fast can innovation happen?

"It all depends on the context. In the pharmaceutical industry, you can innovate almost as quickly as you can change regulations to market a new product. Sometimes universities innovate so fast that companies have trouble keeping up."

### • How does collaborative creativity impact the smart industry?

"The smart industry is a needs driven solution that must be adapted to fit your environment. Whether it is extremely flexible or fully automated, you always have a layer of human interaction. Therefore, it requires collaboration. Creativity enables the smart industry to overcome every challenge from reducing costs to producing disruptive innovation."

The smart industry is a needs driven solution that requires collaborative creativity to adapt to a specific environment.





## 2016 GIANT TOURS

The opportunity to discover the local ecosystem is an essential component of the High Level Forum. This year's participants were able to partake in five GIANT Tours. In addition, these events provided attendees with the opportunity to engage in informal discussions about a variety of topics.

#### **GIANT TOURS**

#### **EDUCATION**

During this tour, participants were welcomed by Sylvie Blanco, director of the Grenoble Ecole de Management Bis campus, and Yves Marechal, CEO of Grenoble INP-ENSE3. The education models presented by both schools underlined the importance of collaborative creativity. Learning by doing has become the predominant approach with students and faculty interacting through real-life challenges shared by partner companies. The next step in this evolution is the development of a collaborative platform-based approach that will further mix education, research and industry.

#### **GIANT**

Participants were introduced to the GIANT campus by Bill Stirling, director of the Institute Laue-Langevin. He underlined Grenoble's history of collaboration between engineering schools, business schools, research centers and facilities, and companies. The GIANT campus is evolving to host 10,000 inhabitants, 10,000 students and researchers, and 10,000 company employees. Participants visited the campus in an electric vehicle. In addition to seeing all the major sites, the tour also highlighted the abundance of green transportation services.

#### **STARTUP**

Participants were welcomed by Loïck Roche, dean of Grenoble Ecole de Management, and Regis Saleur, CEO of CEA Investments. Following this introduction to the local startup ecosystem, participants discovered several startups, including Arybelle (odor detection technology), Squadrone System (autonomous smart drones) and Bixi (touch-free smart remote). STMicroelectronics also presented its ecosystem. The company encourages internal competition among employees to stimulate innovation and this has led to the creation of several startups.

#### **SHOW TIME**

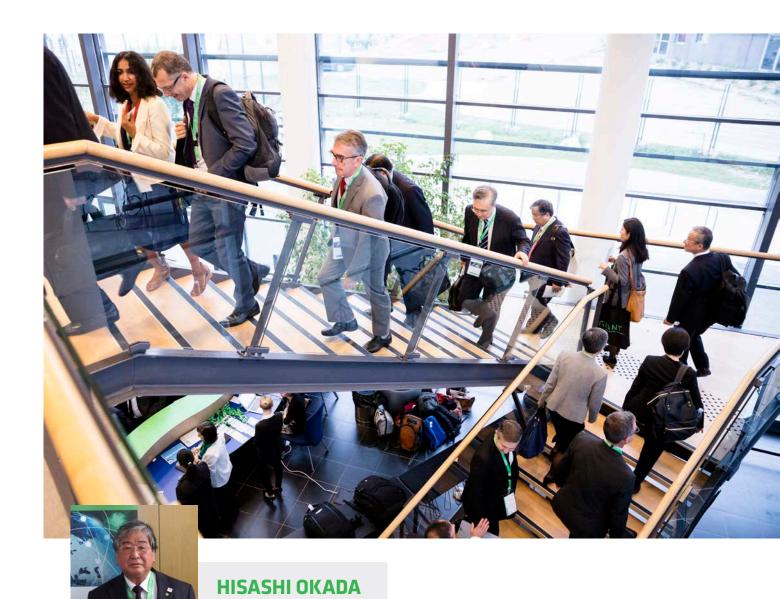
Participants visited the IDEAS laboratory, where they were welcomed by Pascale Berruyer, CEA Tech director of innovation and communication services, and Michel Ida, director of Open Labs. The tour was an opportunity to discover how the CEA Tech showroom is used to showcase technology prototypes in order to improve communication with existing and potential clients. The IDEAS laboratory was also presented as an industry-sponsored open-innovation consortium. It helps clients imagine disruptive products and services. Participants discovered various projects by the IDEAS laboratory such as a high-speed millimeter-wave communication link (G-Link) and the use of accelerometers for artistic expression (which led to the creation of the startup Movea).

#### **ARTS & SCIENCES**

This discussion was led by Antoine Conjard, head of the Hexagone theater, Eliane Sausse, director of the Arts & Sciences workshops, and Marie Brocca, in charge of CEA Tech partnerships. During this gathering, participants discovered how arts and sciences mix on the GIANT campus to produce innovation. The Arts & Science workshops invite artists to present their projects and develop them through science. For example, participants discovered a digital glove project that explores both the possibility of a revolutionary joystick and the use of augmented reality for dancers. The discussion also underlined the intense dialogue that can take place between researchers and artists. Both are sources of inspiration for each other's work.







#### INTERVIEW

### Why does Tsukuba participate in the High Level Forum?

The mayor of Tsukuba was invited to the first High Level Forum and the visit was an opportunity to continue developing collaboration between Grenoble and Tsukuba. He was very impressed by the similarity between Minatec and the Tsukuba Science City. Finally in November 2013, a joint decision was made for Tsukuba and Grenoble to become sister cities, thus underlining and reinforcing our collaborative spirit. Our delegation attends the High Level Forum every year in order to encourage conversation and exchange between our two cities. With the support of GIANT, we hosted the fourth High Level Forum last year. I believe it was one of the precursors that enabled our city to host last year's G7 Science and Technology Ministers' Meeting. This fifth High Level Forum provided me with the opportunity to share my appreciation for the collaborative relationship that unites our two cities.

Deputy Mayor of Tsukuba City

### • What is your perspective on collaborative creativity?

A multidisciplinary approach is what leads to new ideas. It is important for there to be collaboration between the various institutes in all fields of research. One person, one country cannot single-handedly achieve success and solve the challenges of the future. When I think of what has created Tsukuba's success, I remember we have a foundation built on the merger of six towns and villages as well as the existence of many institutes. It is a symbol of our collective spirit and today, we are harvesting the fruits of this collaboration.

### • What is the essential factor for collaborative creativity?

Promoting creativity and collaboration is a complex challenge, but having a common purpose, a shared vision is the guiding force that allows us to move forward.

## BEYOND COLLABORATIVE CREATIVITY

The High Level Forum unites two essential characteristics. First, it is a gathering of innovation ecosystems and second, it provides an informal setting for exchanges and networking. The forum's speeches and round table discussions on collaborative creativity provided space for in-depth and formal discussion. However, one of the richest parts of the forum is the informal networking that takes place throughout the event. To help spark connections, the High Level Forum organized events such as a gala dinner, a visit to the surrounding mountains and other opportunities for informal discussions.

#### **DISCUSSION ON CYBERSECURITY**

Jean-Daniel Tordjman, international advisor to CEA Tech, and Alain Astier, scientific advisor to the CEO of CEA Tech, organized an informal session for attendees to discuss the topic of cybersecurity. It was an opportunity to highlight the growing importance of cybersecurity. Attendees discussed many paths to develop innovation and collaboration on this topic. The discussion revealed the fact that cybersecurity is not discussed in the same manner in the U.S., Europe or the East. In addition, the topic is mostly addressed at a state level by national authorities. It remains to be seen if it is relevant to discuss this topic at the ecosystem level. The diversity of ideas on cybersecurity underlined the complexity of the issue and the need for further discussions amongst attendees.





STRATEGY, GOVERNANCE & PROGRAMS

As the fifth High Level Forum drew to a close, the last session provided participants with an opportunity to discuss the forum's evolution and strategy. First, Alain Astier invited the delegations to comment on the positive aspects of the forum over the past five years. Participants agreed upon four ways in which the High Level Forum has created added value.

- 1. It is the only forum dedicated to leading ecosystems that drive innovation.
- It unites an international community of executives who are passionate about innovation and work to support it through actions within education, research, industry and public authorities.
- 3. It provides a rich exchange of information about visions, strategies and good practices for inspiring and managing innovation.
- 4. It offers participants the opportunity to discover other ecosystems in depth (Grenoble, Pasadena, Tsukuba, and next year Montreal) and to deepen cross-ecosystem contacts and cooperation.

From year to year, the High Level Forum enriches its core and attracts new attendees from both well-established innovation ecosystems and developing ones. This year, the forum welcomed new representatives from Luxembourg, Argentina and Sweden (Lund). Delegations agreed on the fact that the High Level Forum must remain a truly international gathering. As a result, they underlined the importance of keeping a balance between all cultures: Europe, Asia, Americas and the Middle East. Everyone agreed upon the need to grow the number of participating innovation ecosystems. In the future, new delegations from areas such as Russia or Africa are expected joined.

The participants also voiced the need to define a shared vision to guide the forum's evolution. Several fundamental characteristics were highlighted.

- The forum brings together leading innovative ecosystems as opposed to individual organizations or national clusters.
- The setting is informal and provides a very favorable environment for high quality exchanges between top decision-makers and policy-makers.
- The forum must fuel ecosystems to develop their innovative excellence and, as a consequence, empower them to improve their local impact on territories.

The delegations agreed upon the need for communication and documentation, two important points that still require discussion. It was noted that the results of each High Level Forum must be documented. The continuity of exchanges year-to-year should be reinforced by some form of work carried out between each High Level Forum. In this regard, the High Level Forum's website will become an important platform. It was also mentioned that it is necessary to promote the High Level Forum to the various partners of our innovation ecosystems.

Finally, several options were proposed to support the evolution of the High Level Forum.

- The creation of an executive committee chaired by GIANT
- The nomination of a primary contact for each ecosystem to facilitate communication
- A conference call between primary contacts two to three times a year

In conclusion, participants agreed on the fact the forum should build on its previous successes in order to evolve. This discussion will continue in coming months in order to determine a future vision and strategy that is in accordance with the views of all participating ecosystems.

## 2016 High Level Forum **CONCLUSION**

#### STRONG SUPPORT FROM RESEARCH, GOVERNMENT AND... UNIVERSITY

The High Level Forum opened with strong support from research embodied by Stéphane Siebert, director of the CEA. Following his introduction, local politicians also welcomed forum attendees and voiced their support for innovation ecosystems. As a result, it seemed only natural for this year's closing speech to be delivered by Patrick Levy, president of Université Grenoble Alpes (UGA), thus completing the trifecta of research, government and university.



PATRICK LEVY
President
Université Grenoble Alpes

This event has underlined the team spirit that guides our innovation

ecosystems. It was a pleasure to see the participation of so many international counterparts in this unique event. We should also extend our sincere thanks to the forum's organizers. One of things I like about this forum is the fact it resembles a club instead of a conference. The High Level Forum is the perfect venue to address complex issues at the ecosystem level. It is no surprise it has become a recurring event in our agendas. The opportunity to exchange with top decision-makers from the Americas, Asia and Europe is indeed unique.

Without a doubt, this forum has reinforced the importance of collaborative creativity to prepare the future. Innovation fuels economic growth. But diversity and collaboration fuel innovation. It is a social process that requires us to be more than managers. We must espouse our roles as leaders and encourage a culture of risk taking. Collaborative creativity is a trial by error process. As in the smart industry, we have to remember that the user is our primary source of guidance.

To ensure success, research must evolve from producing academic papers to producing prototypes. Organizations must develop a startup mentality. Design thinking must combine a wide array of fields. And finally, top-level support must be the foundation that enables collaborative creativity.



#### **CONCLUSION**

#### What is the next step?

After three days of productive exchange and interaction, each of our innovation ecosystems will continue down the path of collaborative creativity. And of course, we look forward to meeting again in 2017 for the next High Level Forum, which will be hosted by Longueuil and Montréal.

THANK YOU FOR YOUR PARTICIPATION IN THE 2016 HIGH LEVEL FORUM.



**RICHARD DESCHAMPS** 

Municipal Councilor for the City of Montréal



#### **COLETTE ÉTHIER**

Municipal Councilor for the City of Longueuil

#### INTERVIEW

## LONGUEUIL AND MONTRÉAL INVESTED IN THE HIGH LEVEL FORUM

As Longueuil and Montréal prepare to host the 2017 High Level Forum, we speak with Colette Éthier and Richard Deschamps, municipal councilors for the cities of Longueuil and Montréal respectively.

### **(a)** Why does your ecosystem participate in the High Level Forum?

We have been invested in the High Level Forum since its beginning. It provides our innovative ecosystems with a unique opportunity to develop and exchange solutions to the challenges of tomorrow. The forum's informal setting provides us with a rich experience that allows us to discuss best practices and learn from other ecosystems. A distinguishing characteristic of the forum is the high level of its participants. This is a key point that helps guarantee the added value of each participant's insights.

### What did you appreciate about this year's High Level Forum?

Everything from the presentations to the overall organization was well carried out and interesting. We hope to do as well next year when we welcome the High Level Forum to our ecosystem. It was a great opportunity to meet with leaders from other innovation ecosystems. We were able to exchange with a Taiwanese leader, a Japanese one and of course local leaders in Grenoble such as Christophe Ferrari, the president of the Grenoble-Alps Metropolis. It was also interesting to discuss innovation from a social perspective.

### • How does collaborative creativity exist in the cities of Longueuil and Montréal?

Just in terms of the High Level Forum, it is important to note that both cities will be working hand in hand to organize the next forum. This is the first time our two cities will collaborate directly together to organize an event of this standing. The best way to uncover the collaborative and creative spirit in our two cities will be to participate in next year's High Level Forum. Participants will discover our many areas of expertise and multidisciplinary collaboration. We cover everything from finance to aluminum, fashion, film and entertainment, life sciences, smart transportation and logistics, clean technologies, aerospace, and ICT. Collaboration and the transfer of technology from university to industry is also a cornerstone of our ecosystem



## GIANT HIGH LEVEL FORUM Leading Innovation Ecosystems



As part of the 2016 High Level Forum conclusion, the Longueuil-Montréal delegation took to the stage in order to share their invitation to next year's forum. The **2017 High Level Forum** marks the first time the two cities will work hand in hand to host an event at this level.

AND THE 2017 HIGH LEVEL FORUM THEME IS...

## Innovation & Smart Living

#### An opportunity to discover innovation à la Quebecoise

In addition to presentations and conferences on the the theme of innovation and smart living, next year's forum participants will have the opportunity to explore the Longueuil and Montréal innovation ecosystems. Montréal boasts nine well-established industrial clusters in finance, aluminum, fashion, film and entertainment, life sciences, transportation and logistics, clean technologies, aerospace, and ICT. Longueuil has developed recognized expertise in the field of smart and sustainable transportation.

The city created the IVÉO technopole to drive innovation in transportation.

## GIANT HIGH LEVEL FORUM Leading Innovation Ecosystems

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