THE AXELERA NETWORK

INNOVATION: PROJECTS AND SUCCESS STORIES

RESULTS

Indium
Nobelium
Vanadium
Astatine
Iodine
Oxygen
Nitrogen
Axelera’s 2016 Activity Report represents a departure from previous years. The format has been overhauled and the document has been given a new title: SUCCESS STORIES.

Our ambition is to highlight the concrete impacts of Axelera programs for our members. Inside you will find testimonials, the results of Axelera-certified R&D projects, and measurable business impacts ranging from international expansion to the acquisition of new know-how, training, and network-building.

Our programs create true value for many of our members and for our local economy—precisely the purpose of our future-oriented “product factory” strategy. Our move to the Axel’One Processes Platform in Chemical Valley south of Lyon is also evidence of our sharp focus on the market. Chemical Valley is home to world-class research and manufacturing spanning the chemical and environmental sectors.

I hope you enjoy the 2016 edition of Axelera’s Success Stories.
AMBITION
Support the development of innovative, competitiveness-enhancing technologies with the capacity to add value to industrial projects at the crossroads of the chemical, environmental, and energy sectors and build a broad international network from a strong foundation in the Auvergne-Rhône-Alpes region, a major European center for industry.

IN SHORT
AXELERA
MEMBER SERVICES
- INNOVATION support
- BUSINESS support
- EDUCATION & TRAINING
- NETWORKING

MISSION
Help our members grow in France and internationally by:
- DRIVING innovation
- CREATING opportunities
- FACILITATING synergies
- PROMOTING member know-how and activities

5 STRATEGIC RESEARCH AREAS
1 - Renewable RAW MATERIALS
2 - Eco-efficient FACTORIES
3 - CHEMICALS AND MATERIALS for manufacturing industries
4 - RECYCLING AND RECYCLABILITY
5 - PRESERVATION AND RESTORATION of natural and urban areas

THE AXELERA NETWORK IN 2016

SERVING OUR MEMBERS

OUR MEMBERS BY GEOGRAPHICAL LOCATION

345 MEMBERS including 67 new members in 2016
286 PROJECTS certified and financed
€800 M IN FINANCING including €350 M in public funding

OUR MEMBERS’ KNOW-HOW

Founding MEMBERS

Arkema
Engie
Solvay
Suez

Financing PARTNERS

DGE
Hauts-de-France
Grand Lyon
La Région Auvergne-Rhône-Alpes

51 startups
15 financiers
60 R&D centers
8 training centers
7 R&D and training centers
21 corporations
32 corporate subsidiaries
32 mid-sized businesses
117 small businesses
270 Auvergne-Rhône-Alpes
42 Greater Paris
33 Other Regions

Chemical and environmental sector laboratories and technical centers
Materials, chemicals, and finished-product manufacturers
Environmental services like water, air, and ground pollution and other waste management
Equipment and systems manufacturers and integrators
Industrial services like process engineering, energy efficiency, and regulatory compliance
Education and training for the chemical and environmental sectors
PROJECTS CERTIFIED AND FINANCED IN 2016

RENEWABLE RAW MATERIALS

PROJECT FOCUS: POLYWOOD - FUI 13

Bio-based polymides from the paper and pulp industry

Duration: October 2012–October 2016
Budget: €61 M, including €18 M in public funding
Certified by: Axlera, co-certified by: Pôle Fibres.
Partners: 7 manufacturing companies (Solvay, lead, Schneider Electric, Fibres Excellence, Novasep, Clextral, Patei, AD Majois), 1 industrial technical center (CTP), 5 laboratories (Grenoble Institute of Technology-Pagora/LSIP2, RECELLYON, IME, ICBMS, ISA).
Project housed at Axel’One PMI.

Results

The research completed confirmed the viability of producing wood-sugar liquor and obtaining pure cellulose of good quality. The research also led to the development of potential processes for producing bio-based monomers. Finally, other potential uses of the materials in the furniture industry were identified.

Initial impacts

1 permanent job created at project completion
2 patents
5 temporary jobs during the project
14 scientific journal articles published

SUCCESS STORY: ECOCAT

Olivier Choulet, CEO

An Axlera member since 2012, Ecocat is an SMB that specializes in the development and manufacturing of high-performance bio-based polymer resins for paints and varnishes.

In 2013, Ecocat came to Axlera for support with business development on the Chinese market and with raw-materials sourcing. Axlera’s China office manager provided shared services to three Axlera members, including Ecocat, to promote their knowledge how to major Chinese paint manufacturers. The campaign led to negotiations in 2015 between Ecocat and Chinese conglomerate Variedle. In late 2016, the decision was made to set up a manufacturing joint venture between Ecocat and Vanlead subsidiary Pearl River. The joint venture become official in March 2017.

The joint venture will give Ecocat inroads into the Chinese—and, more broadly—Korean and Southeast Asian markets, and position the company to open a plant in China and to sell its products under the Ecocat and Pearl River brand names.

Outlook

The project is expected to generate not only positive environmental impacts, but also major value-creating industrial impacts, including:

- The development of new bio-based polymides offering new levels of performance;
- Access to an abundantly-available raw material and, therefore, a more secure supply;
- A strategic positioning for the project partners on an emerging market driven by the transition from fossil-based carbon to biomass-based carbon;
- The project partners will benefit from more environmentally-friendly products and France’s paper and pulp mills will align with a new business model based on recycling a byproduct for sale on a high-added-value market.

RESEARCH PROJECTS CERTIFIED AND FINANCED IN 2016

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¹ANR: Agence nationale de la recherche (French National Research Agency)
²ADEME: Agence pour l’efficacité énergétique (French National Energy Agency)
⁴INNOVIR: Innovative industrial research program.
⁵French Région Ile de France regional innovation program.
⁶Revised 2016 Activity Report — #AxeleraSuccessStories

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2016 Activity Report
ECO-EFFICIENT FACTORIES

PROJECT FOCUS: PARC - FUI 15

Agglomeration and compaction processes for recycling

Duration: July 2013–June 2017
Budget: €4.4 M, including €1.6 M in public funding.
Certified by: Axelera, co-certified by Mont-Blanc Industries.
Partners: 1 large company (Kerneos - lead), 3 SMBs (Quadra, Medelpharm, Itasca), 2 laboratories (SPIN-Mines de St-Étienne, CEMTH).

Objectives and challenges
The objective of the PARC project was to investigate and develop a new technology for compacting fine materials. The challenge was to agglomerate fine materials from manufacturing byproducts to produce materials that are robust and resistant to compression and erosion for use in hot and cold processes.

Results
- An operational industrial-scale agglomeration demonstrator was developed, leveraging a technology that delivers compacted material of very good quality with high production yields.
- Techniques for modelling the internal porosity of the agglomerates to predict outcomes.
- A deeper understanding of the behavior, at hot and cold temperatures, of the aggregates produced.

Initial impacts
- KERNEOS: a deeper understanding of the initial output of the agglomeration process; development of a new product (agglomeration binders); creation of three permanent jobs.
- QUADRA: Development of an innovative new industrial fine-material compaction technology that generated an additional €2.5 million in revenue for the company; diversification and internationalization of the company’s markets.

SUCCESS STORY: BGENE GENETICS

Marie-Gabrielle Jouan, CEO
An Axelera member since 2015, Bgene Genetics is a startup specializing in synthetic biology; a field that encompasses all of the technologies required to produce molecules from microorganisms using renewable resources.

Since we joined the cluster in early 2015, Axelera has provided us with effective support with our development strategy. We are partners on the Axelera-certified BIOCATAROM (FUI 21) project, which focuses on the development of biocatalytic production processes for aromatic compounds. And, again, with the cluster’s support, we won the BiFrance Concours Mondial de l’Innovation in 2016 for our FERCELLY project on plant-based proteins and plant-based chemistry.

The project aims to develop a bacterial cellulose oxidation process to replace the current chemical processes for the formation of cellulose microtubules. And, last but not least, we received Axelera’s support raising capital. We secured the Innovative Cluster Company seal in 2016, which helped us to raise €360 K in 2016.

6 scientific journal articles forthcoming in 2017
2 IP filings under sealed cover
3 patent applications filed
2 PhD position created
3 post-doc positions created
1 IP filings under sealed cover
1 patent applications filed
3 post-doc positions created
2 PhD position created
3 industrial applications
2 scientific journal articles forthcoming in 2017
2 patent applications filed
3 post-doc positions created
2 PhD position created
1 IP filings under sealed cover

CHEMICALS AND MATERIALS FOR MANUFACTURING INDUSTRIES

PROJECT FOCUS: ECOSILAC - FUI 15

Enviro-friendly acrylates to bring new physical properties to sensitive materials

Duration: September 2013–February 2018
Budget: €5.2 M, including €1.6 M in public funding.
Certified by: Axelera, co-certified by Techtera.
Partners: 1 corporation (Bluestar Silicones, lead), 2 large companies (Granger Frères, Celliose), 1 SMB, 3 laboratories: IMP, LSCIE (Lyon University and INSA Lyon), LPM (Haute-Alsace University).

Objectives and challenges
This project is focusing on using eco-designed silicone acrylates and eco-efficient (low-energy) processes to bring new surface properties to sensitive plastic-type materials (films, bottles, glass, and textiles). Silicone acrylate polymers are used, after UV reticulation, to form anti-adhesive and water-resistant coatings, for example, or to give surfaces enhanced sliding performance and brilliance. Today, these coatings present several major environmental challenges due to chrome catalyst residues generated during the synthesis of silicone acrylates and the use of photo-initiators suspected to be reprotoxic.

Results
- Development of the raw materials:
  • Industrial scale-up of silicone acrylate production process using new catalysts; synthesis at the pre-industrial scale
  • Photo-initiators selected in lab conditions; synthesis at pre-industrial scale completed
- Industrial applications:
  • User validation of formulations in test production conditions; TRL 6; industrial-scale investigations started
  • Recycling research on silicone-coated PE and PP films
- Environmental study including end-of-lifecycle management of the silicone acrylate polymers and the materials they are used to coat (for anti-adhesive films).

Initial impacts
- 10 jobs created by project partners
An Axeleria member since 2014, Ecobatec is an innovative industrial startup that specializes in battery characterization and regeneration. The company was founded in 2012 by Seydina Diédhiou and Gilles Mourier, and rapidly laid the foundations for an innovative, environmentally-friendly project to collect, remanufacture, and sell used automotive batteries, giving them a second life.

During its first phase, the project, called “Battery Rock,” received the INNOVR 2013 seal and total financing of €200 K from French environmental and energy agency ADEME, nonprofit organization Jessica France, Biopfrance, and the Rhône-Alpes regional government. Ecobatec developed the BatTriBac®, professional-grade smart collection point terminal, a technology unlike anything else available worldwide. BatTriBac® can instantly identify, test, and sort batteries at the source. The solution ensures full traceability of the batteries collected and real-time tracking via a remote management platform. Eligible batteries are sent to a plant for remanufacturing, and then resold at lower prices than new batteries.

Axeleria granted the Innovative Cluster Company, seal to Ecobatec in 2015. Today, the company is leveraging its technology portfolio to develop a comprehensive product lineup, setting new subsidiaries and initiating the “Digital Act” project to develop digital tools to support the digital transformation of the remanufactured battery industry. The project, which received the INNOVR 2016 seal, is financed by the Auvergne-Rhône-Alpes regional government and Biopfrance via an ERDF loan of €150 K.

The operation of fourteen collection points equipped with the BatTriBac® smart terminal and the sale of more than 5,000 remanufactured batteries generated revenue of €100 K in 2016. Today, 35 collection points are equipped with the BatTriBac® terminal, and the concept and business model have been proven effective. Ecobatec, which currently employs six people, aims to carve out a position on France’s €270 million replacement battery and €145 million recycling markets and is very optimistic about its short-term revenue growth and recruitment.

**SUCCESS STORY: RYB**

Marc Palomares, VP Innovation

An Axeleria member since 2014, RYB was founded in 1962 and, in a half-century, has become a leading manufacturer of extruded polyethylene piping and sheaths. In 2016 RYB manufactured 50,000 km of piping and sheaths, reported revenue of €65 million, and employed 180 people.

In early 2016 Axeleria told us about the ORPLAST project, which focuses on recycling plastic materials. The project was initiated by the French Ministry of the Environment, Energy, and Maritime Affairs as part of the nation’s Energy Transition for Green Growth Act to provide financial support for R&D that will help the manufacturers of plastics and products containing plastics to integrate recycled plastics into their processes. We decided to submit a proposal and our project was one of 48 selected nationwide.

We also took part in a breakfast meeting on integrating recycled plastics into manufactured products organized in February 2016 by Axeleria in partnership with Elastopole, Plastipolis, 2ACR (a chemical industry recycling nonprofit), and Allizé Plasturgie. The meeting gave us an opportunity to get the latest information on the plastics recycling value chain, recent industry events, and support programs for French environmental and energy agency ADEME-backed R&D projects.

Some of the plastic raw materials we use today are recycled.

**SUCCESS STORY: SUEZ**

Pascal Dauthuille, R&D Coordinator

Suez is one of the world’s key stakeholders in the circular economy for sustainable resource management and is one of Axeleria’s founding members.

As early as 2005, Suez benefited from Axeleria’s support engineering and managing R&D projects focusing on micropollutants (heavy metals, pharmaceutical substances, organic substances, pesticides, and endocrine disruptors) in surface water, residual urban and industrial water, and polluted soils and sediments. These projects included AMPERES (priority and emerging micropollutant testing in water and surface water), RHODANOS (shared comprehensive management of urban and industrial wastewater and catchments), and PCBALEXELRA (treatment of water, soil, and sediments contaminated by PCB and other pollutants).

Serving as the lead on these projects gave Suez an opportunity to acquire new know-how that has enabled the company to offer micropollutant management as part of its drinking water production, residual water treatment, and water management activities and has positioned the company as a leader in the treatment of these micropollutants.
In 2016, Axlera ran a variety of technical events covering the cluster's five strategic research areas, rolled out a number of initiatives, and developed synergies at the regional, national, and international levels.

EUROPEAN PROJECTS
- Closing conference for the SCOT (Smart CO₂ Transformation) project (Brussels, June 29): Proposals to form a European carbon capture and use nonprofit, build pilot transformation plants and testing centers, and create a carbon transformation JU (Joint Undertaking) were presented.
- Kick-off of the GreenCap project (December), financed by the European Commission’s INTERREG MED instrument to transfer the knowledge produced under six research projects on rural and island environments in the Mediterranean region. Axlera is heading the knowledge-transfer component of the project.
- Support for Axlera members with their EU project submissions via the EuroTech European Technology Partnership Program: 20 member SMEs learned about EU project financing at special Infodays; three received audits; one was awarded funding under an EU project.

RENEWABLE RAW MATERIALS - CHEMICALS AND MATERIALS FOR MANUFACTURING INDUSTRIES
Activities
- 5th Sustainable Construction Forum organized by clusters Axlera, Teneridis, and Innovations Constructives (March 7 & 8): 300 participants (including 100 at the business exchange).
- Axlera at JEC World (Paris, March 8–10).
- Seminar on the organization of the biomass for energy industry organized by ANCRE and clusters Axlera and Teneridis (March 17): 130 participants.
- Technical conference on ionic liquids and materials organized at the initiative of ionic liquids and polymers research consortium GDR LIPS in partnership with cluster Trimater (April 4): 47 participants.
- Inter-industry meeting on architectured materials for the chemical, environmental, mechanical engineering, and metallurgy industries (September 28): 50 participants.

ECO-EFFICIENT FACTORIES
Activities
- Technical conference on process intensification (January 19): 95 participants.
- Attendance at PittCon trade show (Atlanta, March 6–10).
- Opening remarks at the PCH Meetings business convention, in partnership with members Atanor and Processium (March 23–24).
- Co-organized PEXE energy efficiency conference (May 30).
- Technical conference on the energy transition and impacts on high-temperature technologies and processes (December 6): 50 participants.

Innovation

REGIONAL AND NATIONWIDE SYNERGIES
- Co-ordinator of bio-based materials and bioproduction working group under the Auvergne-Rhône-Alpes region’s innovation and smart specialization strategy.
- Seat on the biopolymers working group of the French plant-based chemistry association.
- Member of the French Ministry of the Environment, Energy, and Maritime Affairs Sustainable Construction Network.

National, regional, and European synergies
- Participation in process engineering working group under the Auvergne-Rhône-Alpes region’s innovation and smart specialization strategy, industrial processes and eco-efficient factories.
- Co-organization of the process engineering event Les Assises Sud-Est du Génie des Procédés (November 6).
- Attendance at FP7 SPRe brokerage event (June 15).
- Participation in regional intercluster meeting on the industry of the future with eight clusters: overview of high-level technologies available in the region, facilitated workshop at H2020 First day (June 15).
- Member of the Alliance pour l’Industrie du Futur (on behalf of the French association of clusters), seat on working group for regional rollout: SMB evaluations, identification of use cases, etc.
- Seat on the transformation plant of the future working group.
- Seat on the Axel’One 2020 working group (processes component).

RECYCLING AND RECYCLABILITY
Activities
- Technical conference on liquid foams (November 13): 50 participants.
- Technical conference on elastomer recycling co-organized by Elastopollie and Axlera (March 9): 40 participants.

Soil depollution activities
- Axlera a partner of the 10Fiches industrial brownfield rehabilitation project.
- Workshop on transforming brownfields from problems into opportunities (January 7): 90 participants.
- Technical conference on securing depollution projects (April 4): 80 participants.
- Participation in inter-network working group, coordinated with the support of French environmental and energy agency ADEME on diagnostics (toolkit for polluted site and soil diagnostics).
- Contribution to organizing the AquaConso 2017 conference in Lyon: 700 attendees expected.

Air treatment activities
- Technical conference on airborne particles (on behalf of the French association of clusters), seat on working group for regional rollout: SMB evaluations, identification of use cases, etc.
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Water treatment activities
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National and regional synergies
- Contribution to CReCof (French composites recycling organization) and ZACR (a chemical-industry recycling nonprofit) network-building activities.
- Member of the French Ministry for the Environment, Energy, and Maritime Affairs ecotechnology cluster network; presentation of the ecotechnology network at a national cluster event in Paris (March 3).

PRESERVATION AND RESTORATION OF NATURAL AND URBAN AREAS
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In 2016 Axelera supported its members’ growth and international development through targeted initiatives focusing on business development and fundraising, as well as by participating in prospecting and fact-finding missions with partner organizations and to trade shows.

**JOINT DEVELOPMENT MISSION**

Axelera and Trimitec cooperated on a mission to China (October 24–November 3) financed in part by the French Directorate General for Enterprise, sponsored by Total Development Regional, and administered by Business France.


**Axelera INVEST CLUB**

- Axelera Invest Club selection committee: support plan for an innovative SMB presented and approved.
- Fundraising support for three participating member SMBs: CFD Numerics, Deltalys, and Tecis.
- Axelera coaching for five members: Deltalys, Enoveo, Lactips, Naturokam, and Tecis.
- Axelera Invest Club certification committee: Innovative Cluster Company seal granted to member SMB Avenisense.
- Participation in five roadshow events: 21 member SMBs involved.

**VISITS FROM foreign delegations**

- Brazil, China, Japan, Russia, South Korea, Thailand, Vietnam.

**MARKET INTELLIGENCE**

- Tech/market intelligence launched for China and Brazil.
- Tech intelligence mission to Switzerland on the management of micropollutants in water (September 13–14): 6 members participated: Agence Eidel, Colas Environment, ISTEA, ISA, Solvay, and Veolia.
- Participation in a tech/market intelligence trip to Morocco on waste management organized by the Auvergne-Rhône-Alpes regional government (October 17–19): 1 participating member.
- Participation with the Auvergne-Rhône-Alpes regional government at the Assises de la coopération décentralisée franco-marocaine in Marrakech, Morocco (December 8–9).

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**TRADE SHOWS**

- Member SMBs: Avenisense, EFM Air Process, Rescoll, and Viewpoint trained on how to prepare for an international trade show.
- Axelera joint exhibit booth at Pittcon (Atlanta, March 5–10) with 4 member SMBs exhibiting: Apix Analytics, Avenisense, JDEEL, and IVEA Solution.
- Participation in joint exhibit booth at Composites Rhône-Alpes with clusters Plastipolis and Techtera at JEC World (Paris, March 8–10): 10 co-exhibitors, including Axelera member CT2MC.
- Axelera joint exhibit booth in partnership with Business France at Achemasia (Beijing, May 9–12) with 5 member SMBs co-exhibiting: Apix Analytics, Avenisense, IVEA, Provademse, and UV RER.
- Two joint exhibit booths at Pollutec Lyon, November 29–December 2:
  - Axelera joint exhibit booth: 10 members: Atanor, Bio2E, Cogebio, Enervis, Ethera, Inevo Technologies, INSA Lyon, Odotech, Provademse, and UV RER.

**BUSINESS CLUB**

- Axelera and Trimatec cooperated on a mission to China (October 24–November 3) financed in part by the French Directorate General for Enterprise, sponsored by Total Development Regional, and administered by Business France.
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Axelera’s working group on education/training and skills development pursued its work in 2016. At the same time, the cluster contributed to the Rhône-Alpes regional chemical and environmental industry training plan and kicked off three major initiatives.

**EMPLOYER ALLIANCE for the chemical and environmental sectors**

- The employer alliance project was introduced and is run by clusters Axelera and Lyonbiopôle. It is co-financed by the Auvergne-Rhône-Alpes regional government and supported by regional chemical-industry federation UIC Rhône-Alpes and pharmaceutical-industry federation LEEM (Les Entreprises du Médicament).
- **Purpose**: create an employer alliance or partner with an existing employer alliance to give members of both clusters access to support staff on a shared basis.
- A needs assessment was conducted in 2014–2015; an additional two crucial steps were completed in 2016:
  - Preliminary studies and interviews with stakeholders in existing employer alliances and expressions of interest from member companies of the two clusters.
  - A feasibility study based on questionnaires and interviews with member companies.

**HANDBOOK for PhD dissertation supervisors**

- The Handbook for PhD Dissertation Supervisors will address three key points:
  - **Determining organizational needs**: needs analysis (academic and/or industrial) and the supervisor’s management style and methods.
  - **Candidate selection**: PhD candidate recruitment worksheet, interview tips.
  - **Supervising the dissertation**: integrating the PhD candidate into the team, supporting the PhD candidate (progress on behavioral competencies), supporting a successful career plan, managing relationships.

**AXELERA, ACTIVE PARTNER IN THE CIRCULAR VALUE MOOC**

- This innovative MOOC (Massive Open Online Course) covers the circular economy in several seasons, giving learners the foundations of this collaborative model so that they can play an active role in this new movement and integrate it into their business practices.

**CIRCULAR VALUE MOOC**

- Axelera held a launch party for the release of season 1 on March 21. The event was attended by more than 100 people.

**KEY FIGURES**

- 7 partners
- 26 lecturers
- 6 modules
- 69 videos
- 1,426 enrolled
- 42% women, 58% men
- 44.4% college students
- 35.6% working professionals
- 13.9% college students
- 11.1% entrepreneurs
- 11.1% job seekers

**LEARNERS’ EVALUATION OF THE MOOC**

- 97% felt the course was useful
- 77.8% earned a certificate
- 91.7% would recommend the MOOC to coworkers
- 41.7% completed 1 or 2 quizzes
- 19.4% have used their new knowledge on the job

- Lecturers from industry made it easier for my company to take the concepts on board.
- The MOOC helped me improve my knowledge of the circular economy from several angles.
- Teaching us about different environmental assessment methods was an excellent idea.
EXPLORAIR

EXPERT IN REAL-TIME IN SITU AND LABORATORY TESTING OF GASES: VOCS, BIOGAS, SULFUR COMPOUNDS, PERMANENT GASES.

An Axelera member since 2011, Explorair has taken part in a collaborative project backed by the French Single Interministerial Fund, and has been an active participant in many Axelera activities:

• The company exhibited at the Axelera group exhibit booth at Pollutec Paris 2011 and 2013.
• We have attended Axelera Thursday and Axelera Business Club meetings and technical presentations.
• The networking and promotional opportunities Axelera has brought us have sped up our business development.
• Requests for specific know-how sent to Axelera were directed to Explorair, leading to new business relationships (15% additional revenue in 2016).
• Explorair has had opportunities to give presentations at Axelera Thursday meetings and technical presentations, leading directly to two contracts for very-high-added-value gas analysis services.

Networking was a pillar of Axelera’s actions in 2016, whether it concerned the international networks in which the cluster participates actively, networking events, regular informational and awareness-raising meetings and campaigns, or the digital communications tools developed to meet members’ needs.

Our membership has helped us expand our network, promote our know-how, and form R&D and business partnerships. The cluster also gives us access to other networks. From intellectual property to legal advice, you get the kind of support that is crucial to the strategy of any innovative company.

Karim Medimagh, CEO, EXPLORAIR

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EUROPEAN NETWORKS

• The inter-cluster partnerships with ERA and Belgium’s GreenWin continued in 2016 with:
  • Co-ordination of the EU SCOT (Smart CO2 Transformation) project.
  • Joint activities that included a workshop at the Green Chemistry & White Biotech congress held by GreenWin in Brussels (May 12–13).
  • Meetings with Belgium’s FISH and Norway’s EYDE clusters (November 3).
• Participation in partner events organized by international networks:
  • SPRE (Sustainable Process Industry through Resource and Energy Efficiency), annual meeting (February 17–18), brokerage event (June 15).
  • SusChem Europe: brokerage event (September 13).

DIGITAL NETWORKING TOOLS

Online

• Axelera’s new website, www.axelera.org (French version) and the new Members’ Area went live in January; the English version of the website went live in May.

Digital marketing

• 11 issues of the monthly e-newsletter sent to 2,902 subscribers.

Video

• New video of Axelera’s joint exhibit booth at Pollutec Lyon released on Axelera’s YouTube channel (December).

In 2016

| 30,465 | website visits |
| 407 | followers at end-2016 |
| 603 | subscribers at end-2016 |

MEDIA

• 2 press conferences:
  • Club de la Presse (July 7): 9 journalists attended.
  • Pollutec Lyon, Axelera exhibit booth (December 1): 8 journalists attended.

• 5 press releases.

• 14 interviews.

• 157 mentions of Axelera in the local, regional national and industry-specific (chemical, environmental, business).

“A taste for communication” series (November): 10 members participated.

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AWARENESS-RAISING MEETINGS

“A Taste for Communication” series November 2016

| 7 | sessions |
| 43 | participating members |

“Protecting your assets”

Industrial property training in partnership with the French Industrial Property Institute and cluster Lyonbiopôle (January 7)

| 1 | session |
| 25 | participating members |

“A taste for communication”

How to communicate effectively about your innovations to the press (November 16)

| 1 | session |
| 10 | participating members |
## 2016 Results

### Innovation

- **28** R&D projects certified by the cluster and financed
- **13** Technical meetings, more than 850 participants
- **7** A Taste for Innovation sessions, co-organized: 43 participating members

### Eurotech Program

- **4** SMBs received support in the form of an audit
- **1** SMB funded by a European program
- **20** SMBs received information about EU financing instruments (Infodays)

### SMB

- **1** Member participated in a fact-finding mission to Morocco on waste management
- **4** Members attended international scientific conferences
- **7** Members participated in a fact-finding mission to Switzerland on the management of micropollutants

### Business

- **8** Member companies received the Innovative Cluster Company seal or received support: six of them raised funds for a total of €8.8 M
- **21** Members benefited from Axelera promotion at roadshows
- **8** Members, including 5 SMBs, received support penetrating the Chinese market

### Networking

- **3** Axelera Thursday meetings: 264 participants, 21 new member pitches, 40 speed networking sessions
- **67** New members in 2016
- **3** Site tours: 90 participants
- **30,465** website visits at www.axelera.org

### Press Releases

- **5** press releases: 67 mentions in the local, regional, national, and industry-specific (chemical, environmental) press

### Other

- **2,902** subscribers to the monthly newsletter
- **407** followers on Twitter
- **603** subscribers on LinkedIn

**#AxeleraSuccessStories**
AT DEC. 31, 2016

345 MEMBERS

33 corporate subsidiaries

32 large corporations

21 corporations

15 institutional and nonprofit

7 training centers

1 financial