



Economic Information Observatory
a regional cooperation project between
Atlantic Canada and **Saint-Pierre and Miquelon, France**

Innovation: The New Business Model



Atlantic Canada (p. 1-4)

Saint-Pierre and Miquelon, France (p. 5-8)



Innovation: The New Business Model in Atlantic Canada

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In a context of widespread uncertainty marked by a global economy in which productivity and growth have remained tentative and slow to achieve full recovery (global growth forecast of 3.5% in 2017 versus 3.2% in 2016), **innovation** continues to be a key component of revitalization. Ranked regularly as one of the best countries in which to do business, Canada boasts a solid banking sector, very low inflation and a highly advantageous tax and administrative system for entrepreneurs. From the mobile Internet to ICTs, automation of knowledge work, innovative solutions in energy and natural resource management, companies and startups throughout Atlantic Canada stand out for their dynamic approach and inventiveness. Startup accelerators and incubators are helping to redesign the economy of tomorrow.

Innovation in Canada based on type, method of acquisition for advanced technologies and quality management practices (data of 2014, released in 2016)

All innovation types in Canada	54.8 %
Process innovation	33.2 %
Organizational innovation	33.2 %
Product innovation	32.2 %
Marketing innovation	30.7 %
No innovation	45.2 %

Innovation through various acquisition methods for advanced technologies

Purchasing off-the-shelf advanced technology	58.3 %
Licensing advanced technology	20.9 %
Customizing or significantly modifying existing advanced technology	18.9 %
Leasing off-the-shelf advanced technology	15.8 %
Developing new advanced technologies in-house	11.9 %
Other method	10.7 %
Sharing agreement	5.7 %
Partnering with the private sector	5.0 %
Partnering with the academic/R&D communities	1.9 %
Acquiring advanced technology through business merger or acquisition	1.4 %

Note : Percentages do not add up to 100. Some responding enterprises implement more than one innovation type or the different categories are not mutually exclusive.

Innovation through quality management practices

Continuous improvement	16.0 %
Business certification	11.5 %
Quality management system	10.5 %
Statistical process control	2.0 %
Six Sigma	1.9 %
Quality function deployment	1.0 %

Innovation in business activity

1. Maintaining or optimizing business activities 2. Introducing new or significantly improved business activities

(data released in 2014)	1	2
Products (goods or services)	71.4 %	21.2 %
Organizational or management practices (long term)	65.0 %	29.3 %
Operational activities (long term)	60.2 %	34.4 %
Marketing practices or methods (long term)	53.6 %	33.5 %

Sources and useful links: Atlantic Venture Forum, <http://atlanticventureforum.ca/>; Conseil économique du NB, <http://cenb.com/>; NB Innovation Foundation, <http://nbif.ca/en/>; International Monetary Fund, <https://www.imf.org/>; Innovacorp, <https://innovacorp.ca/>; Innovation PEI, <http://www.innovationpei.com/>; Industry Canada, <https://www.ic.gc.ca/>; NL Innovation Strategy, <http://www.btcrd.gov.nl.ca/innovation/>; OECD, <http://www.oecd.org/>; Canada Business Network, <http://www.canadabusiness.ca/>; Statistics Canada, <http://www.statcan.gc.ca/>; We're In, <http://www.werein.ca/>.

Selected Innovation Support Programs in Atlantic Canada

National / Regional

- ▶ Atlantic Canada Opportunities Agency
 - Atlantic Innovation Fund
 - Business Development Program
 - Support for the development and commercialization of innovative products and services
- ▶ Business Development Bank of Canada
- ▶ Canadian Business Development Corporation (CBDC)
 - Network of 41 corporations across Atlantic Canada serving rural and semi-rural communities
 - Financing opportunities through guaranteed loans of up to \$150,000
- ▶ GrowthWorks Atlantic Venture Fund (technology sector)
- ▶ Springboard Atlantic
 - Service enterprise supporting research commercialization and connecting skilled professionals
- ▶ Canada Small Business Financing Program
- ▶ Canada Business Network

Prince Edward Island

- ▶ Innovation PEI
Development and Commercialization Fund
 - Support for emerging SMEs and existing companies in the final stages of developing new products, services or processes and bringing them to market
- Graduate Students and Post-Doctoral Fellowship Fund
 - Assists students demonstrating a high level of academic achievement and working on industry-relevant research projects in strategic sectors
- Ignition Fund
 - Competition to award financing to startups
- Pilot and Discovery Fund
 - Financial support for emerging SMEs and existing companies in the preliminary stages of developing new and innovative products in strategic sectors
- ▶ Invest PEI
 - Support service matching startups with potential investors
 - Access to the various programs offered by all three levels of government and the various eligible tax credits
- ▶ Launch Pad PEI
 - Assistance, support, facilitated access to venture capital and matching with investors for startups and emerging innovative SMEs
- ▶ Start-Up Charlottetown
 - Network and community of practice for startups in Charlottetown

New Brunswick (see also p. 4)

- ▶ Atlantic Agriculture Research and Innovation Initiative
 - Financial aid for research and development projects in the agriculture and agri-food sectors
- ▶ NB Innovation Foundation
 - Equity capital for new ventures through acquisition of a stake in the companies, and provision of business support and networking services
 - Research Innovation Fund / Innovation Voucher Fund / Startup Investment Fund / Venture Capital Fund
- ▶ Research and Development Tax Credit

Nova Scotia

- ▶ Small Business Development Program
 - Financial support to help grow small and medium-sized enterprises
- ▶ Small Business Loan Guarantee Program
 - Joint initiative by the Nova Scotia Cooperative Council, Atlantic Central, local credit unions and the Nova Scotia government to offer funding for startups and small business expansion projects in the form of guaranteed term loans of up to \$500,000
- ▶ Creative Industries Fund
 - Financing opportunities for the creative industries sector
- ▶ Digital Media Tax Credit
 - Qualifying companies in the video game and interactive media sector are able to claim the lesser of 50% of eligible costs or 25% of total costs
- ▶ Digital Animation Tax Credit
 - Refundable tax credit for costs relating to digital animation development in Nova Scotia
- ▶ Innovacorp
 - Venture capital and incubation for startups and emerging SMEs
- ▶ First Angel Network Association
 - Network of angel investors bringing together innovative entrepreneurs and capital
- ▶ Nova Scotia Research and Innovation Trust (NSRIT)
 - Funding for research infrastructure projects awarded under the Canada Foundation for Innovation
- ▶ *Growing Forward 2/*Homegrown Success Program
 - Five-year (2013-2018) initiative to encourage innovation, competitiveness and increased industry capacity in the agricultural sector
- ▶ Centre d'aide en affaires et en entrepreneuriat (CAAE)
 - Support and expertise for new businesses

Newfoundland and Labrador

- ▶ The Newfoundland Department of Business, Tourism, Culture and Rural Development oversees the three main business and innovation support programs at the provincial level
- ▶ Development of strategic industrial sectors (aerospace and defence; agri-food; arts and crafts; biotechnology; environment; manufacturing; ocean technology; ICT)
- ▶ Business Investment Program
 - Repayable term loans to a maximum of \$500,000
 - Equity funding in the form of redeemable preferred shares to a maximum of \$500,000 per project for a maximum aggregate of \$1 million
- ▶ Business Development Support Program
 - Non-repayable contributions based on 50% of eligible costs to a maximum of \$100,000 per government fiscal year
- ▶ NL Innovation Strategy
- ▶ NL Environmental Industry Association (NEIA)
 - Innovation Supports Program
 - Innovation Fund
 - Concierge Service for businesses

Examples of Innovative Companies, Startups and Success Stories

Airbly Inc.

<https://airbly.com/>

- ▶ Develops and markets an innovative flight data recorder to facilitate communication and monitoring
- ▶ Support technology for aircraft management in the aviation and aerospace industries

Frontier Power Systems Inc.

<http://frontierpower.com/>

- ▶ Specialists in engines and power generation products
- ▶ Develops innovative technologies for power systems adapted to the Arctic and cold-weather regions combining modified wind turbines, variable speed diesel generators and advanced power storage systems

Island Water Technologies Inc.

<http://www.islandwatertech.com/>

- ▶ Develops modular solar-powered wastewater treatment systems
- ▶ Creates specialized bioinformatic technologies for application in wastewater treatment and enabling real-time analysis of the biological components of treated water, for domestic or industrial use

Nautilus Biosciences Canada Inc.

<http://www.nautilusbiosci.net/>

- ▶ Explores and develops marine-derived natural products and bioactive

PEI

Acadian Seaplants Ltd.

<http://www.acadianseaplants.com>

- ▶ Leader in the processing of seaweed and marine plants
- ▶ Conducts ongoing R&D to develop technologies and processes with applications in the food, agri-food, agrochemical and biochemical industries

Perennia Innovation Centre

<http://www.perennia.ca/innovation-centre/>

- ▶ Business incubator in the agriculture and aquaculture sectors driving the development of innovative new products

REDspace

<https://www.redspace.com/>

- ▶ Key player in development of digital media and interactive content
- ▶ Creates websites, mobile apps, games and other digital experiences

The Efficiency Store

(partnership with NS Community College [NSCC])

- ▶ Designs customized software to analyze energy use and help reduce power consumption

Volta Effect

<http://www.voltaeffect.com/>

- ▶ ICT business incubator active in the Halifax area

Entrevestor

<http://entrevestor.com/>

- ▶ Collects and analyzes data on startups

NS

Cooke Aquaculture

<http://www.cookeaquaculture.com/>

- ▶ Producer and distributor of aquaculture products active in Atlantic Canada and internationally
- ▶ Develops technologies and processes to eliminate parasites from farmed fish production

Corruven Canada Inc.

<http://corruven.com/>

- ▶ Designs and manufactures lightweight composite structural panels with innovative mechanical properties and a broad range of industrial applications

Omera Shells Inc.

- ▶ Converts seafood waste and extracts value-added by-products from crustacean shells for export to international markets
- ▶ Applications in the agricultural, biomedical and industrial sectors

Business and startup incubators

Propel ICT, <http://www.propelict.com/>

Planet Hatch, <http://planethatch.com/>

Startup Fredericton, <http://www.startupfredericton.ca/>

NB

Dynamic Air Shelters

<http://www.dynamicairshelters.com/>

- ▶ Custom designs and manufactures portable inflatable shelters for military, industrial and commercial applications

Notus Electronics Ltd.

<http://www.notus.ca/>

- ▶ Designs and manufactures advanced monitoring systems used in the commercial fishing industry
- ▶ Develops innovative wireless sensors to facilitate identification of dredging sites

Resource Innovations Inc.

<http://www.resourceinnovations.ca/>

- ▶ Consulting services in sustainable forest and ecosystem management, forestry and sustainable development

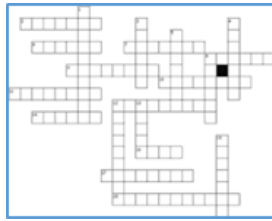
Verafin

<https://verafin.com/>

- ▶ Designs and develops specialized software solutions for use in fraud detection and embezzlement and money laundering prevention

NL

Innovation in New Brunswick



New Brunswick, Rich in Innovation and Invention

New Brunswick has a rich history of innovation and invention. Fired by adversity, necessity or just pure imagination, the province is home to **designs** and **patents** that have changed the course of people's lives and the way business is done.

You probably already know that...

Snow-blowers, SCUBA tanks, sardine cans, crossword puzzles, candy bars (and lolly-pops), dump-trucks, variable pitch propellers, combined hot and cold faucets, vortex flushing toilets, fish ladders, ice cream cones, compound steam engines, railroad snow plows, motor vehicle stabilizer bars, partitioned concrete sidewalks, roof ventilators, thermal pane windows, and weather-stripping – were ALL invented in New Brunswick.

A new business model for the Province...

New Brunswick became the first province in Canada to develop a comprehensive strategy on **cybersecurity** and **cyber innovation**. Our province already has a world-class cybersecurity cluster with leading researchers, academics and global businesses like IBM all contributing. With room for growth, excitement is building around this opportunity. Cybersecurity violations around the world cost about \$500 billion annually. By collaborating even more, the cybersecurity ecosystem in New Brunswick will be strengthened and will be able to provide solutions to this global threat.

CyberNB is a strategic economic development initiative spearheaded by Opportunities NB. The strategy was developed with industry leaders, academia and the government. It is a deliberate growth strategy aimed at creating high-value jobs and having a positive impact on New Brunswick's GDP over the next five years.

About Opportunities NB

Opportunities NB is the lead business development corporation driving economic growth and job creation for New Brunswick. Opportunities NB is proud to assist companies in advancing innovation and business development in New Brunswick. For more information on ONB, visit ONBCanada.ca.

Intro to Learn Business Model Canvas
Connexion Works / Saint John, NB
November 2, 2016

Research Connector: Advanced Manufacturing
Wu Conf. Centre, UNB / Fredericton, NB
November 15, 2016

Startup Weekend NB 2016
Venn Centre / Moncton, NB
November 18, 2016

Starting Point Student Entr. Conference
Saint Mary's University / Halifax, NS
February 21, 2017

Femmes en affaires
Convention Centre / Edmundston, NB
September 21, 2016

Business over Breakfast
Tips & Tricks from NS Start-Up CEOs
Technology Innov. Centre / Dartmouth, NS
September 23, 2016

Face2Face NL Conference
Terra Nova Resort / Port Blandford, NL
September 25-27, 2016

Invest Atlantic
Delta Beauséjour / Moncton, NB
October 5-6, 2016

EY Entrepreneur of the Year
Atlantic Awards Gala
Halifax Marriott Harbourfront / Halifax, NS
October 6, 2016

Big Data Congress
Delta Brunswick / Saint John, NB
October 17-19, 2016

2016 Celebration of Innovation Symposium
Innovacorp Enterprise Centre / Halifax, NS
October 19, 2016

Reinvent Atlantic Canada,
1st Int'l Leadership Conf. in Atlantic Canada
Convention Centre / Fredericton, NB
October 18-19, 2016

Arctic Technology Conference
Convention Centre / St. John's, NL
October 24, 2016

Bio Innovation Challenge
Marriott Harbourfront Hotel / Halifax, NS
October 25, 2016

Upcoming Events

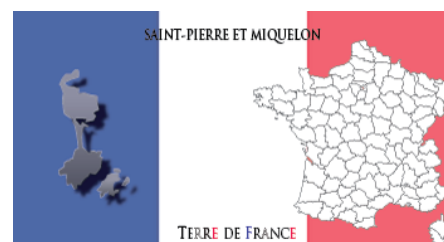
Recent Events

Observatoire d'information économique

Intell-Echo

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Saint-Pierre
Miquelon
France métro-
politaine



Dans ce numéro:

Financing innovation ⑤

France and innovation ⑥

Assistance and advice ⑦

SPM and innovation ⑧

A business model describes the aims, the business development goals and the means to achieve them, while maintaining a margin. There are many business models and four interdependent key principles for value creation: innovation, synergy, efficiency and customer loyalty. With respect to innovation, it is customary to identify four types: innovation in products or services, innovations in process, production or distribution, marketing innovations and organizational innovations. In order to succeed, a company must determine its business model and, depending on its resources, innovate its structure or governance. The design and structuring of business models are therefore important for its future development, helping them see beyond the traditional partners, competitors and customers. Innovation in its broadest sense becomes essential, especially when the company must define its digital transition strategy and integrate breakthrough innovations such as cloud computing, 3D printing or predictive marketing into its business activities.

Sources principales: BpiFrance ; CCI.fr ; les-aides.fr ; pmefinance.org

Financing innovation New business models



« The challenge is to innovate or to suffer : the issue of financing innovation and growth of innovative companies also comes into play ».

André Marcon, président of CCI France

Through public stakeholders—the French government, local authorities and the European Union. Today in France there are no fewer than 62 national mechanisms for innovation support, compared to 30 in 2000.

MAIN AID AND INDUCEMENT FOR INNOVATION:

- **The Research Tax Credit (CIR)** is tax assistance meant to encourage the efforts of companies in R&D.
- **The Innovation Tax Credit (CII)** aims to assist SMEs which incur specific expenses in innovating.
- **The status of Young Innovative Company (JEI)**: allows a company to benefit from a reduction in taxes and social security contributions.
- **Grants and loans from Bpi France** (Public Investment Bank).
- **The future investment programme (PIA)** : managed by Bpi France, the PIA supports the structuring of ecosystems of business financing, with tools such as the national start-up fund (FNA) or the French Tech Acceleration Fund. It also aims to implement priority public policies that support transitions that have a high impact on the economy.
- **The Horizon2020 Program** aims to support research and innovation. A European project, it provides a budget of 500 million euros a year to France.
- **The National Research Agency (ANR)** provides funding, monitoring and support of the “projects of the future”.
- **Crowdfunding**, or participatory financing is today at the core of the financing for innovation and allows everyone to help.
- **The innovation competition** : a support system for entrepreneurs.
- **Labels for innovative companies** : provides guidance for investors.

FINTECH: new business model and the revolution of financing ?

Fintechs perform the same function as banks (security of the system of payment and loans from deposits). The Blockchain technology, which is currently used to support the bitcoin, is today at the core of this new business model.

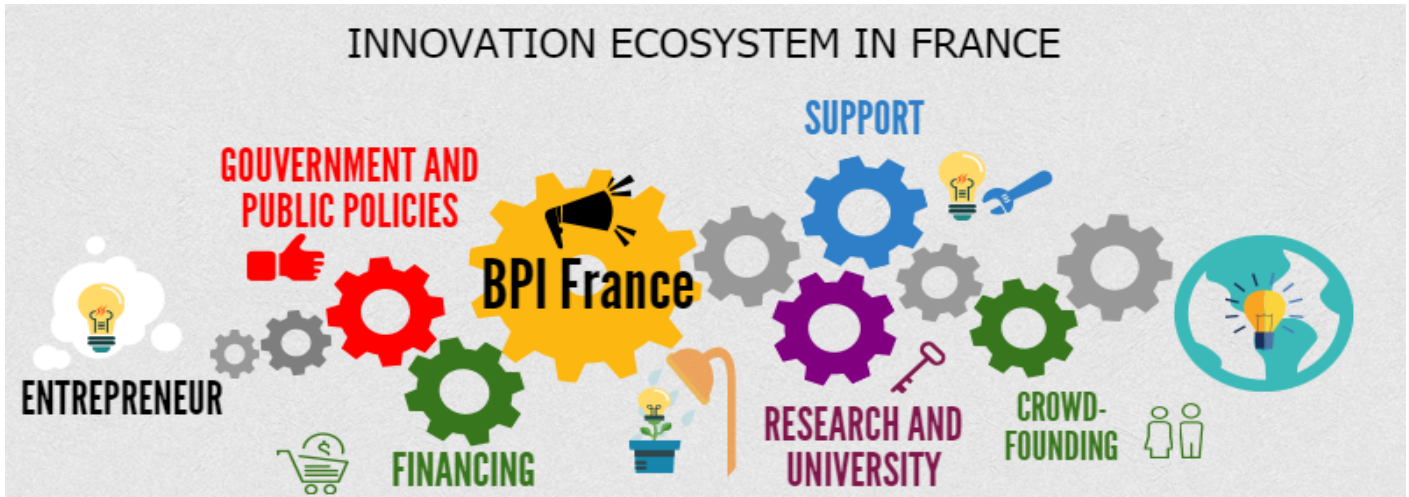
Technology capable of drastically reducing transaction costs by creating an alternative transaction system, this digital innovation also helps reduce information asymmetry.

Innovation, French ecosystem



A genuine public policy

France is the 3rd most innovative country in Europe and the 6th in the world, in terms of the success rate of the patents issued, their international scope and their influence.



List of major players in French innovation :

GOVERNANCE :

- **Sector Strategic Committees (CSF)**
- **Alliance for the Industry of the Future** (<http://exemples-aif.industrie-dufutur.org>)
- **National Council of Industry**
- **BPI France (public investment bank)**

FACILITATING AGENCIES :

- **Technology Transfer Acceleration Company (SATT)** : regional structures for the industrialization of innovations related to research.
- **BPI Innovation's Carnot Institutes** : research network for technology transfer and partnerships with businesses.
- **Technological research institutes (IRT).**
- **FAB LAB** : laboratories providing materials and equipment to businesses.
- **Incubators**: support the creation of innovative companies.
- **Enterprise Europe Network** (information on page 7).
- **University research.**

AGENCIES:

- **Competitiveness Clusters**: network of public and private stakeholders that work together to develop collaborative projects.
- **Technological Research Institute**: enables collaboration between private and public research.
- **Public or private business incubators** : structures for start-up support.
- **Clusters** : consortium of companies.
- **The National Research Agency (ANR)**
- **The Chambers of Commerce and Industry (CCI)**, daily support. The CCI network in France has developed a site listing various funding programs for companies www.les-aides.fr
- **French Institute for Research in Computer Science and Automation (INRIA)**
- **The Atomic Energy Commission (CEA)**

Start-ups, major players in innovation

"French Tech", which refers to all of those who work in or for the French start-ups in France or abroad, spends 15 million euros a year in leading action in the world for the growth of start-up.

France's position in terms of innovation is mainly due to the large number of start-up businesses active on its territory. There were more than 10,000 in January 2016.

Young innovative companies, start-ups are supported and helped by numerous grants and awards, thus encouraging young researchers to revolutionize science.

Sources principales: nest-com, gouvernement français, Les Echos, OEB,

Assistance and advice



Businesses helping others



Enterprise Europe Network, a member of the European Commission's official network of business support, assists companies with their development

and innovation projects by providing benefits adapted to the needs of the markets, in terms of financing, business opportunities, standards and regulations and consultation:

- **Financing** : two main support programs
 - **Horizon 2020** : supports projects throughout the innovation chain, and streamlines funding to encourage growth.
 - **Eurostars Programme** : developed by EUREKA and the European Commission, this program supports innovative SMEs involved in collaborative European projects, that are market-focused and have high-growth potential.
- **Business opportunities** : with 570 contact points in nearly 50 countries, the Enterprise Europe Network is a source of assistance and support for growing a business in Europe.
- **Standards and regulations** : help to anticipate, understand and apply the requirements of European regulations.
- **Consulting** : Enterprise Europe Network is positioning itself as an intermediary between SMEs and European agencies.



Innovation consulting
Entreprise SASSON Consulting

Michel SASSON
Consultant in innovation management

Upon the initiative of CACIMA, Mr. Sasson will be in the archipelago in 2017 to provide input on issues related to innovation, in order to assist local SMEs with their projects. A player on the ground listening to entrepreneurs, Mr. Sasson will organize his visit so that he can meet with each interested company, with the aim of identifying and understanding each entrepreneur's business ecosystem, in order to meet the needs regarding innovation in the archipelago.

"Reinventing an economic model is within the reach of all SMEs. Engaging in a process of questioning about a company's activity is of paramount importance. Mapping partners and external stakeholders and identifying resources related to the business environment, helps to identify levers of innovation, of differentiation. My role is to advise entrepreneurs in their reflection, help them identify their needs and find solutions".

Mr. Sasson will be involved in innovation consultancy on two major axes:

- Assisting in the implementation of an innovative project or service that has already been tested or used elsewhere.
- Reinventing a business or a business model that is in decline.

More Information : alexandre.baridon@cacima.fr

Industry of the Future : using digital technologies and innovation to transform the industrial model

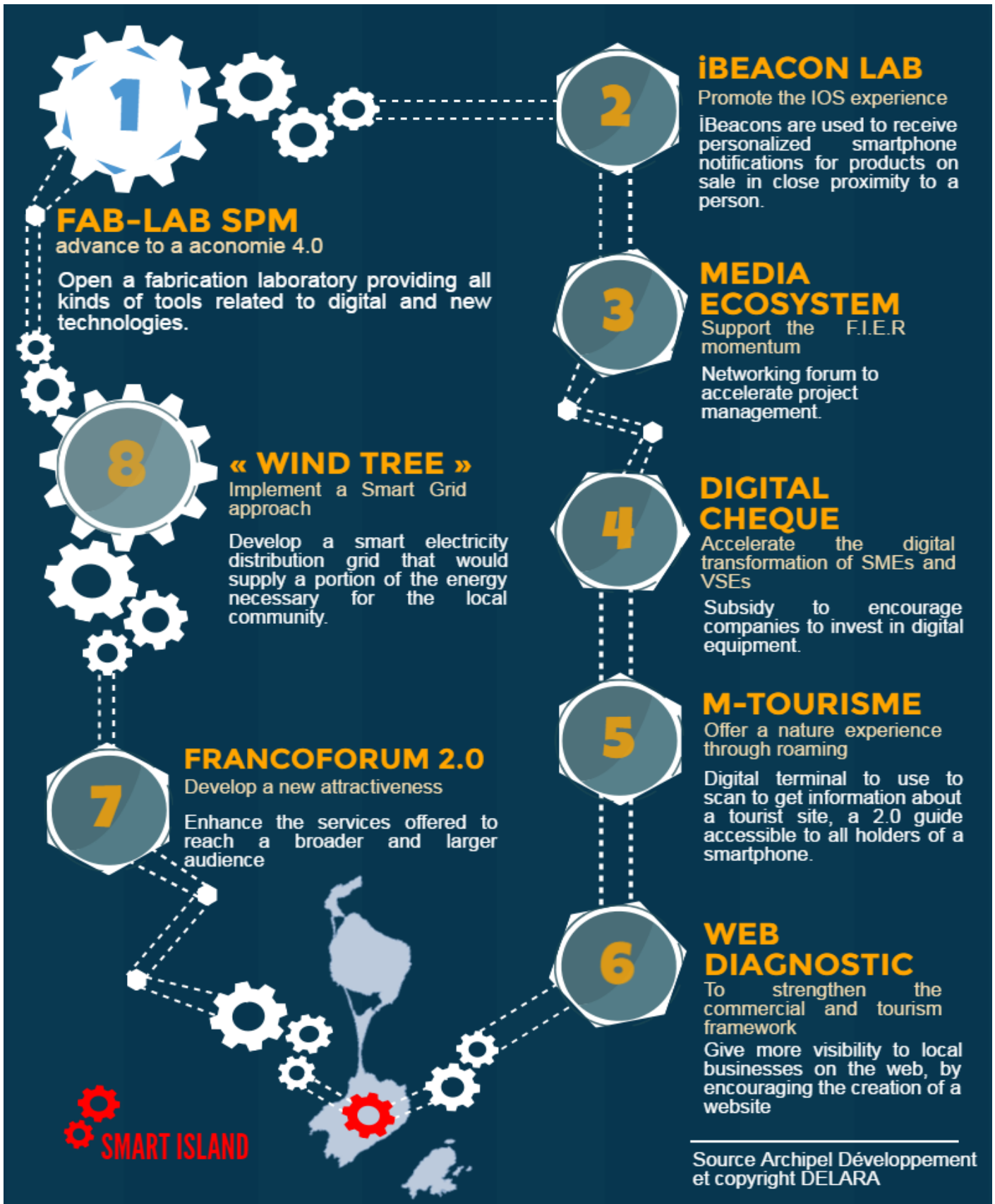
On October 11, 2015, Christophe Sirugue, Secretary of State in charge of industry, brought together the steering committee of the Industry of the Future program at the Cité des Sciences et de l'Industrie de La Villette. He announced his desire to strengthen the programme of modernisation of the productive fabric of France, led by the Alliance for the Industry of the Future, focusing in particular on SMEs and ETIs (mid-tier companies).

The goal of this assistance program is to double the number of beneficiaries by the end of 2016, then increase to 4,300 businesses that are supported by the end of 2017, in all industrial sectors. This desire for new momentum is embedded in regional plans for economic development, innovation and internationalisation of the regions. There are thirteen ambassadors, appointed by the Alliance for the Industry of the Future, whose mission is to meet with business leaders to raise awareness of the challenges in industry of the future. The other major priority is to prepare for the evolution of careers and skills, by adapting initial and continuing training in order to better prepare young people for employment.

Saint-Pierre et Miquelon A SMART ISLAND



ICT Expertise Mission (ETS 023) - 2016 Recommendations for the Archipelago
Eight innovative projects from Archipel Développement



INTELL-ECHO



Are you seeking business opportunities in this sector?
CACIMA and FCCC-AN can facilitate your business prospection process and help with establishing new partnerships
(targeted information and network contacts)

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