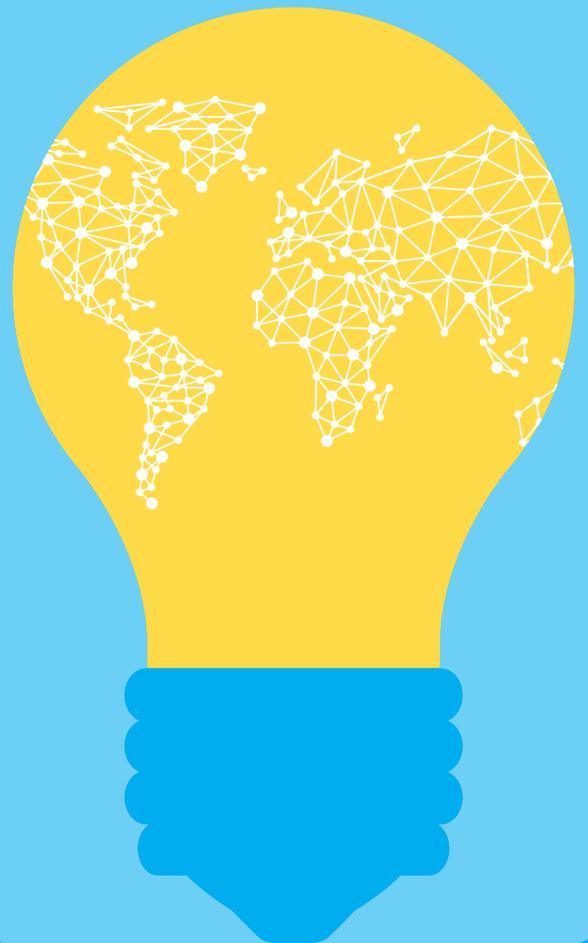


INNOVATION

Priorities and Practices in Cooperatives

Eric Brat, Inmaculada Buendía Martínez, Nabila Ouchene



INNOVATION

Priorities and Practices in Cooperatives

Eric Brat

Inmaculada Buendía Martínez

Nabila Ouchene

October 2016

Acknowledgements

A study of this kind would not have been possible without the support and cooperation of many individuals and institutions. Our gratitude goes to Mrs. Monique F. Leroux, President of the International Summit of Cooperatives, Mr. Stéphane Bertrand, Executive Director of the Summit, and all the Summit teams for their financial and operational support.

We would also like to thank the Senior Management and Elected Officials of the cooperatives and mutuals that have participated in this study, either by responding to the survey or by sharing the key innovation practices of their institutions.

We are grateful to the following business leaders for their participation in our discussions:

- Mr. Marco Aurélio Borges de Almada Abreu, Director-President, Banco Cooperativo do Brasil S.A. – Bancoob, SICOOB Group (Brazil).
- Mrs. Angela Carulli, Director of Commercial Strategy, Banco Credicoop Cooperativo Limitado (Argentina).
- Mr. Claudio Cauzillo, Head of Innovation, Banco Credicoop Cooperativo Limitado (Argentina).
- Mr. Fernando Caviedes, Corporate Director of Technology and Computer Services, Coomeva (Colombia).
- Mr. Jon Emaldi Abasolo, Head of Quality and Management Model, Laboral Kutxa, Mondragon Group (Spain).
- Mrs. Isabelle Ferrand, Director, Financial Management, Crédit Mutuel Group (France).
- Mr. Olivier Gombert-Gillman, Director of Innovation and the Collaborative Economy, MAIF (France).
- Mr. Rudolf J. Kurtz, Director, RAItec Lab, Raiffeisen (Switzerland).
- Mr. Cyril Le Touzé, Director, Group Risk, Groupe CM 11, Crédit Mutuel Group (France).
- Mr. Serge Magdeleine, Director, Group and Digital Marketing, Crédit Agricole Group (France).
- Mr. Jean Marie Malherbe, Deputy Director General, FNCA – in charge of Client Relations and Innovation, Crédit Agricole Group (France).
- Mr. Thierry Martel, Executive Director, Le Groupe Groupama (France).
- Mrs. Diana Monsalve, Corporate Director of Organizational Design, Coomeva (Colombia).
- Mr. Federico Puebla, Director, Technology Innovation, Leader Desjardins Lab, Desjardins Group (Canada).

- Mr. Harrie Vollaard, Director, Innovation, Rabobank Group (Netherlands).
- Mr. Franz Welter, Director, Vice President Innovation and Digitalization, DZ Bank AG (Germany).

We would also like to thank the international cooperative movement, in particular the International Co-operative Alliance, for their assistance in the distribution of our survey to the cooperatives. A list of institutions that helped distribute the survey can be found in Appendix 1. In addition, we thank the Boston Consulting Group for the comparative data from the study: “The Most Innovative Companies 2015. Four Factors That Differentiate Leaders”.

Finally, our thanks go to the entire team at the Alphonse and Dorimène Desjardins International Institute for Cooperatives, notably Professor Rym Ayadi, Director of the Institute and Professor Benoit Tremblay, as well as Thuy Seran and Clélia Cépède for their guidance and relevant comments regarding the study, and also to the departments at HEC Montréal that assisted with the editing and publication of this document, and finally Rob Attree for the editing.

Executive summary

This study has been conducted by the Alphonse and Dorimène Desjardins International Institute for Cooperatives. As part of the Institute's expertise and transfer activities, the research deals with the priorities and practices of cooperatives in the area of innovation. Based on an online survey sent to cooperatives around the world and on interviews conducted with financial cooperatives and mutuals, the study has two objectives: firstly, to rank the innovation priorities of cooperatives and compare them to financial cooperatives and non-cooperatives; secondly, to map the key innovations of financial cooperatives and mutuals.

Key innovation priorities expressed by cooperatives

Of the 236 cooperatives that responded to the survey – mostly from North and South America and Europe – almost 70% place innovation among their top three priorities. Over the next three to five years, cooperatives will prioritize the expansion of new services (91%), the development of capacity in innovation (84%), technology platforms (83%), and speed of adopting new technologies (81%). Cooperatives pursue innovation in order to take advantage of new opportunities (85%), as well as to counter threats (81%). However, they face a number of challenges in terms of generating ideas, as well as selecting and funding innovation projects.

With financial cooperatives representing 41% of survey respondents, we decided to compare the financial cooperatives with cooperatives in general. This showed that financial cooperatives have a greater number of priorities and that they tend to focus on additional aspects of innovation, such as distribution channels (93%), mobile applications (90%), and speed of adopting new technologies (90%). These results confirm the need to rethink many aspects of the business models of financial cooperatives.

Finally, we compared cooperatives with non-cooperatives, referencing a 2015 Boston Consulting Group study on innovation in business. This comparison showed that the proportion of cooperatives placing innovation amongst their top three priorities was slightly lower than non-cooperatives – 69% versus 79%. Moreover, cooperatives placed additional importance on specific areas of innovation compared with non-cooperatives. This was due to their cooperative model and social role, such as: renewing member relationships (89%), supporting the social economy (89%), and improving sustainable development (87%). In consideration of innovation management, 44% of cooperatives relied on decentralized or coordinated organizations, compared with 33% of non-cooperatives.

Innovation practices of financial cooperatives and mutuals

In addition to the survey, we detailed 12 case studies of financial cooperatives and mutuals in the Americas and Europe. We chose to conduct interviews in this sector for two reasons: firstly, as indicated previously, financial cooperatives and mutuals represent 41% of the survey sample, confirming their importance within the cooperative movement; secondly, innovation is especially timely in this sector, due to current technological shifts and the need to review business models, following the 2007 financial crisis.

Innovation practices were categorized using two criteria: 1) the objective of the innovation and 2) the organizational models supporting the innovation. From these criteria, four logics of innovation emerged:

- **Reinvention:** Launching innovations aimed at transforming the business model and based on internal organizational structures.
- **Extension:** Development of products and services connected to the existing business model. This category includes initiatives aimed at expanding the business model, based on internal organizational structures.
- **Seeding:** Investment in external structures to support the development of new initiatives. This category includes innovations aimed at the development of the business model and based on external organizational structures. At a later stage, some external structures may gradually be integrated, especially through acquisition, due to their growing importance.
- **Open Innovation:** Participation in the development of technological innovations likely to have a significant impact on existing business models. This category encompasses innovation aimed at transforming the business model, based on external organizational structures.

Overview

The importance of innovation from both macroeconomic and microeconomic standpoints cannot be overstated. Our results confirm that innovation is a priority for all companies, cooperatives included. However, cooperatives have a greater number of priorities and tend to focus on additional aspects of innovation. Moreover, sector-based particularities impose distinct challenges, which is the case for the financial sector. Indeed, the survey shows that financial cooperatives and mutuals would have more pressing priorities and challenges than cooperatives as a whole.

With this study, we were able to categorize innovation into four distinct logics. The most common are **Reinvention initiatives** that take into account technological, socioeconomic and demographic trends to transform the business model. Next, **Seeding** practices have multiplied in recent years, and cooperatives are playing a proactive role in the emergence of new business models and in supporting local and cooperative entrepreneurship. **Extension** innovations, some of which have been in place for many years, are activities aimed at broadening the scope of action and guiding members towards more social issues or towards value-added services. Finally, **Open Innovation** illustrates the participation of cooperatives in local initiatives and their experimentation with less mature technologies that have the potential to transform business models.

A number of organizational issues have also been raised:

- “Think local, act global”: innovations frequently emerge from local initiatives, which correspond to the territorial roots of financial cooperatives and mutuals. The challenge for some cooperatives is to identify innovations that are broadly relevant and to systematically roll them out. Moreover, certain innovations may need to be adapted to the specific requirements of each territory, as they are rolled out in a “glocalization” process.
- Innovation in member involvement: some of the groups interviewed look for innovative approaches regarding the democratic aspects of their cooperatives, and their capacity to renew the involvement of members.
- Reconciling agility, efficiency, and proximity: cooperative groups have frequently consolidated their information systems within shared entities. Since innovation requires a high degree of agility and proximity to users, innovation departments are often faced with the challenge of mobilization between their regional entities, operations departments, and shared IT departments.

These topics pave the way for future studies on innovation within cooperatives.

Table of Contents

ACKNOWLEDGEMENTS	3
EXECUTIVE SUMMARY	4
Introduction.	8
1 Objectives and methodology	10
2 Innovation priorities and challenges of cooperatives	12
2.1 Cooperatives	12
2.2 Financial cooperatives versus cooperatives.	14
2.3 Cooperatives versus non-cooperatives	15
3 Financial cooperatives' innovation practices	17
3.1 Analytical model of key innovation practices	17
3.2 Illustrations of the four types of innovation: reinvention, extension, seeding, open innovation	19
Conclusion	26
Appendix I. – List of collaborating institutions	27
Appendix II. – Map of key innovations in financial cooperatives and mutuals.	28
References	34

Introduction

Innovation is recognized as one of the mechanisms that drives economic growth and entrepreneurial activity (Galindo and Mendez-Picazo, 2014, 2013; OECD, 2014). However, there is no consensus on how the term “innovation” should be defined. Indeed, although quantitative and qualitative research have contributed to the emergence of many different theories, approaches and terminologies, the concept of innovation remains complex.

At the macroeconomic level, international initiatives have been put in place to foster a better understanding of the process of innovation and its economic impact (OECD and Eurostat, 2005). Innovation is also a major factor in development for governments, which tend to promote innovation through national measures, designed to achieve more inclusive and sustainable growth (OECD, 2015; OECD and World Bank, 2014). At the microeconomic level, studies on innovation focus on companies, but there is still a lack of research on cooperatives. However, cooperatives have always been key players in innovation within their communities. After all, cooperatives were borne out of the desire to find new solutions to meet their members’ underserved needs.

There has been insufficient study of the cooperative sector in the academic community, despite its economic and social contributions. Indeed, according to the International Co-operative Alliance (ICA, 2015), the revenues of the 300 largest cooperatives and mutual organizations have risen by 11.6% over the past three years (2010-2012), reaching \$2.2 trillion USD in 2012. There are 176,461 cooperative institutions in Europe, numbering 141 million members, which represents a penetration rate of about 20% (Cooperatives Europe, 2016). This sector generates 2.1% of jobs – an increase of 32% between 2008 and 2013 (Monzón Campos and Chaves-Avila, 2012; Monzón Campos, 2013). In Canada, cooperatives play an important role in many sectors of the economy. The 8,500 existing cooperatives and credit unions have more than 17 million members, with assets of approximately \$330 billion CAD (Chambre des communes, 2012).

The literature on innovation, on one hand, has given rise to some metatheories, notably vertically integrated innovation (Bogers and West, 2010, 2012; Chandler, 1977, 1990), open innovation and user innovation. However, since the structure of cooperatives is only partially integrated (Nilsson, 2011), vertically integrated innovation is neither appropriate nor efficient for cooperatives (Borgen and Aarst, 2016). The emerging domain of distributive innovation has recently opened the door to various alternatives to the vertically integrated innovation model (West *et al.*, 2014).

Thus, participatory innovation could prove to be a distinct model for innovation, corresponding to the cooperative business

model (Borgen and Aarst, 2016). Participatory innovation focuses on the conditions under which individuals and/or communities of member-users, can play a role and participate in innovation. When it works efficiently, it generates a multiplier-effect that enables each member-user to benefit, which would not have been possible without a collective organization of this type (Cook and Plunkett, 2006; Plunkett, Chaddad and Cook, 2010).

On the other hand, the literature suggests three main models for transforming clusters into systems for innovation: 1) the private model; 2) the public model (Cooke, 2003); and 3) the cooperative model (Gallego-Bono and Chaves-Avila, 2015). Indeed, the cooperative model is characterized by a system that promotes change through collective entrepreneurship. However, the cooperative innovation route still does not explain how the coordination of innovation mechanisms can restore stability in a territorial system (Dopfer and Potts, 2008). In addition, it does not explain how to reduce the effects of “disorganization” associated with the process of “destructive creation” that emerges from meso-economic change (Gallego-Bono and Chaves-Avila, 2016). To face up to the globalization of markets, clusters need to formalize methods for learning and cooperation, in order to stimulate the competitive advantages required to boost the capacity for innovation (Carbonara, 2004).

Furthermore, the structural heterogeneity that is typical of companies also requires the existence of intermediaries (market leaders, entrepreneurial associations, etc.). These intermediaries help companies to even out internal imbalances and also to initiate a change of vision, business strategy and collective action (Howells, 2006). To overcome these limitations, Gallego-Bono and Chaves-Avila (2016) attempt to show that the cooperatives, present in innovation systems, are capable of stimulating innovation in a business community. They are also able to develop abstract rules to move beyond imbalances that may emerge from the innovation process. Cooperatives can overcome these obstacles due to their role in connecting the different levels of institutional structure involved in change.

Finally, there is no generic answer to the question of how cooperatives can innovate effectively. This empirical question requires more specific knowledge based on empirical studies of cooperatives. This methodology could allow managers and researchers to explore cases of cooperatives that have, to a significant extent, managed, to innovate successfully, over a long period of time (Borgen and Aarst, 2016).

In that context, this study is designed to highlight and document current priorities for innovation in cooperatives, supported by a methodology that is primarily qualitative. Based on an online survey distributed to cooperatives around the

world and on interviews with financial and mutual cooperatives, this study has two objectives: (1) to measure the innovation priorities expressed by cooperatives in general, comparing them to financial cooperatives and non-cooperatives; and (2) to map key innovation practices identified within financial cooperatives and mutuals.

Of the 236 cooperative respondents to the survey, 41% of the survey sample come from the financial sector. This provides a more in-depth result for financial institutions compared to other cooperatives. We observe that cooperatives overall have the same types of priorities and challenges, while the innovation priorities of financial cooperatives are more numerous and intense. We also compare the innovation priorities of cooperatives to those of non-cooperatives, based on a study by the Boston Consulting Group (BCG) 2015 (Ringel, Taylor and Zablit, 2015). This enables us to appreciate the divergences between cooperatives and non-cooperatives.

In addition to the survey results, we also conducted case studies on innovation practices of the cooperative financial sector in North and South America, as well as in Europe. This type of analysis approaches the topic of innovation by reviewing the initiatives and practices of 12 financial cooperatives and mutuals. We chose to conduct interviews within this sector for two reasons: firstly, as indicated previously, financial cooperatives and mutuals represent 41% of the survey sample; and secondly, the need for innovation is especially timely in this sector, due to current technological shifts and implications following the 2007 financial crisis.

Following different logical approaches, a typology composed of four categories structures the review of innovation practices, thus: reinvention, extension, seeding, and open innovation. These logics of innovation are associated to several issues related to the organizational structure, to members and to the cooperative governance. These topics could be explored in future studies on innovation in cooperatives.

1 Objectives and methodology

This study has two objectives: (1) to measure the innovation priorities expressed by cooperatives in general, and compare them to financial cooperatives and non-cooperatives; and (2) to map key innovation practices identified within financial cooperatives and mutuals. We used two methodologies to achieve these objectives.

a) Online survey

An online survey was designed to measure innovation-related priorities and challenges for cooperatives. The questionnaire was partially based on a BCG study on innovation in companies from 2015 (Ringel, Taylor and Zablitz, 2015) in order to ensure that our results for cooperatives would be comparable to non-cooperatives when needed. Our questionnaire was drafted in four languages, French, English, Spanish and Portuguese, and published on the SurveyMonkey web application. There were 14 questions: seven descriptive questions on the profile of cooperatives and seven questions on innovation priorities. In terms of measurement scales of variables, the configuration of seven questions was based on a nominal scale, five questions were based on a categorical verbal scale using the Likert scale, and two questions were open-ended.

The sampling process was non-probabilistic and survey results were processed by univariate analysis. Further analyses could be conducted as part of more in-depth research. Finally, we decided to collaborate with the partners listed below to assist in the distribution of the survey, in order to maximize the response rate, given their international visibility

and connection to a global network of cooperatives. The sampling was collated, based on distribution platforms of the following partners:

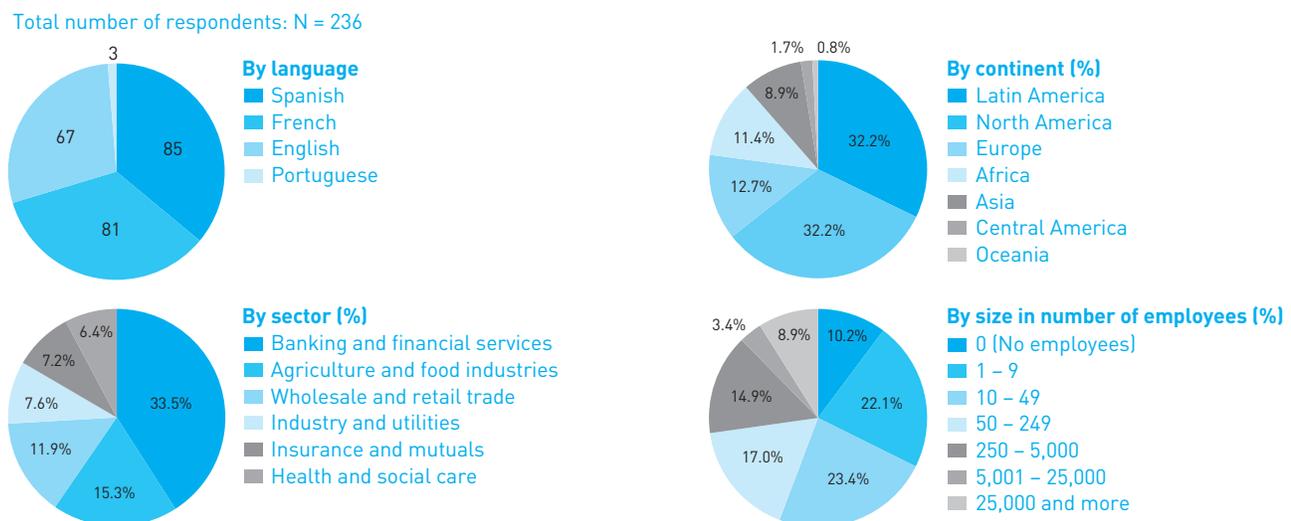
- The International Summit of Cooperatives shared the survey link on its website and emailed the link to a contact base of cooperatives around the world, as well as via a newsletter.
- The International Co-operative Alliance put the link of the survey on its website.
- The survey was published on the website of the Alphonse and Dorimène Desjardins International Institute for Cooperatives.
- Groups of cooperatives distributed the survey to their members using various modes of communication (see Appendix 1).

The online survey was conducted from April to June 2016. During that period, 236 cooperatives responded to the survey. Figure 1 profiles the respondents, based on four criteria: language, continent, sector and size of the cooperative, as measured by the number of employees.

b) Monographs and interviews

In drafting the monographs, the objective was to list key innovation practices of 12 financial cooperatives and mutuals. As part of that methodology, we first conducted qualitative research on each institution and their key innovation practices. Data came from public sources, press articles, institution websites and annual reports.

FIGURE 1 – Profile of survey respondents



Source: Authors elaboration (2016)

We then interviewed senior business leaders in charge of innovation at each financial cooperative and mutual. These individual interviews helped to confirm the innovation practices identified and also to explore further the topic of innovation. An interview guide was sent to each participant before the interview. We used the results to define a typology, categorizing the structural logics of innovation.

2 Innovation priorities and challenges of cooperatives

This section presents the results of the survey related to innovation priorities, objectives and challenges, as well as to obstacles. We explore the overall results for cooperatives. Then, we compare the cooperatives with financial cooperatives and, finally, with non-cooperatives.

2.1 Cooperatives

We established the typology of innovation priorities based on selected questions from the BCG study on innovation in companies of 2015 (Ringel, Taylor and Zablit, 2015) in order to ensure that the results for cooperatives would be comparable to non-cooperatives from the BCG study. We also added priorities specific to cooperatives: renewing relationships with members and fostering social innovation.

Future innovation priorities

Firstly, one should note that all the listed priorities receive a positive score of above 60%, indicating that systematically more than 6 out of 10 cooperatives consider the importance of each priority highly or very highly. This shows that the field of innovation is vast and of great importance. As part of this vast set of priorities, cooperatives consider new services to be central over the next three to five years, as shown in Figure 2.

Indeed, new services are the top priority for cooperatives, followed by extension of existing services. Next come supporting capabilities and technology platforms, along with speed of

adopting new technologies. This reflects the perceived need to strengthen “tools and methods” of innovation systematically within cooperatives. On the other hand, more targeted or tactical aspects of innovation, such as digital design or data analytics, receive lower rankings, although these still exceed 60%.

Main objectives of innovation

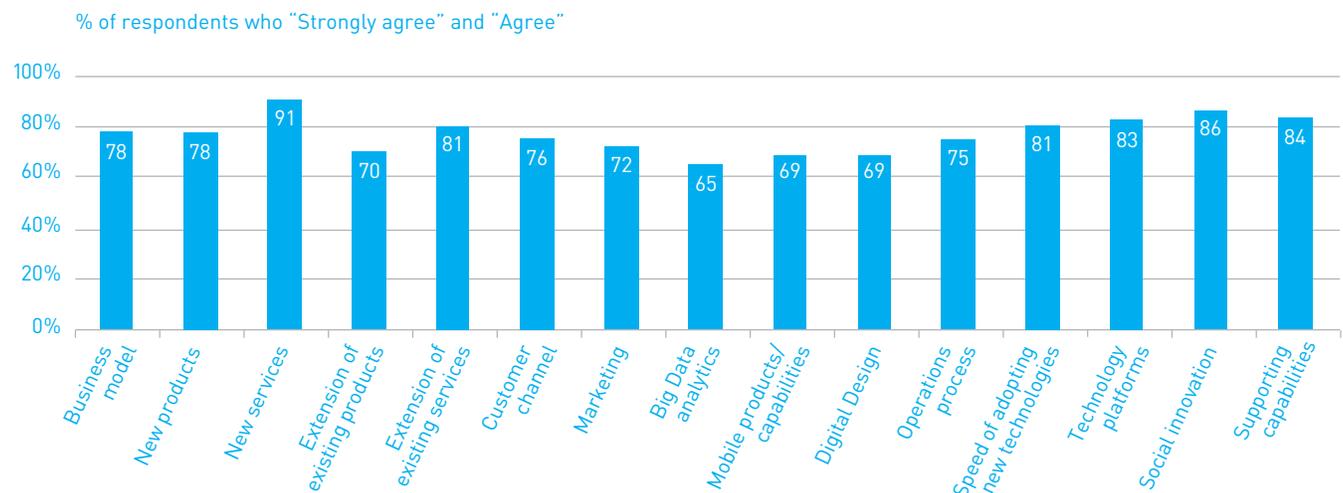
As shown in Figure 3, innovation in cooperatives has two main objectives: to meet unmet needs and to respond to threats. Cooperatives seem to innovate in a proactive way, both to anticipate new needs and to respond to a more competitive environment.

Only 17% of cooperatives are not planning to pursue any business model innovation, suggesting that 83% of cooperatives are planning to pursue such innovation. In summary, cooperatives have to respond in a proactive way to new needs while they face threats and the competition. In addition, this suggests that cooperatives need to prepare themselves in order to review their business models.

Obstacles to innovation

As shown in Figure 4, the three major obstacles listed relate to the innovation process, to business culture and specifically to delays in development, selecting the right ideas and having a risk-averse culture. They correspond to previously mentioned priorities. Indeed, effective innovation capabilities and high-performance technology platforms would greatly contribute to

FIGURE 2 – Innovation priorities over the next three to five years



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

shorter development periods and efficient selection processes of ideas. The third obstacle mentioned, a risk-averse culture, points to a cultural issue specific to cooperatives. The culture of cooperatives is usually focused on proximity and service to members, but not necessarily on innovation and risk-taking.

Key challenges in driving innovation

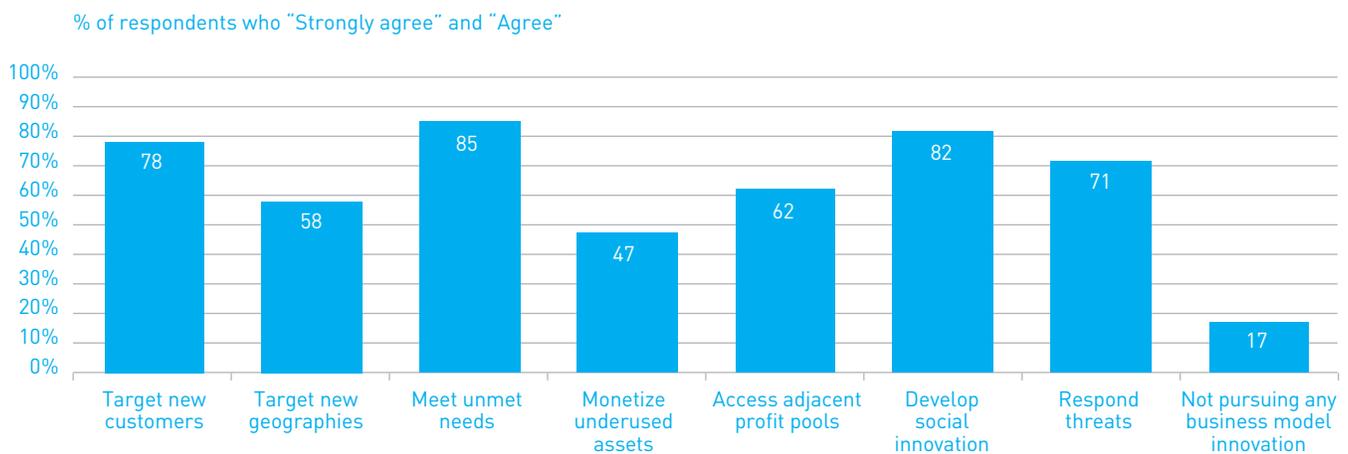
The major challenges highlighted by cooperatives in driving innovation over the next five years are prioritizing the right ideas, developing ideas and funding the right ideas. Figure 5 shows the challenges listed by respondents.

The three major challenges relate to a previously identified obstacle – prioritizing the right ideas. This underlines the importance of having a rigorous innovation process – from generating ideas to selecting the right ideas and funding them.

Another challenge identified by cooperatives is managing external collaborations. This can be explained by the decentralized form of their organization. Therefore, in order to achieve innovation, cooperatives rely on partnership, both internally and with external partners.

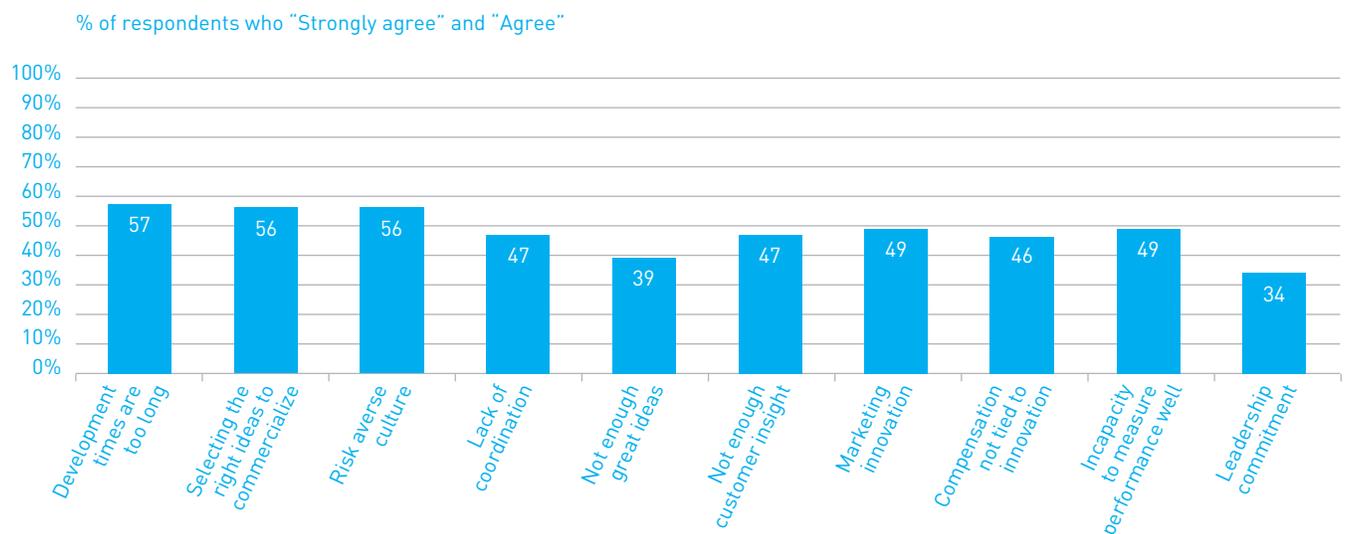
On the contrary, in most cases, the access to senior leadership support seems to be a given.

FIGURE 3 – Objectives of business model innovation



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

FIGURE 4 – Obstacles to innovation



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

2.2 Financial cooperatives versus cooperatives

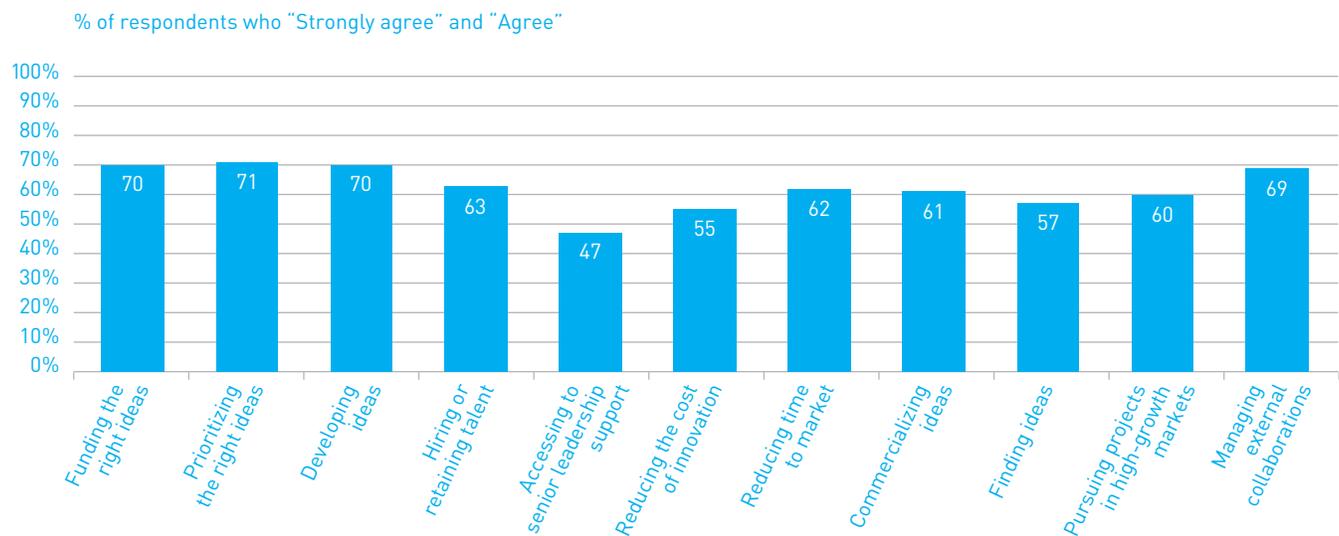
This section takes a closer look at the survey results for the “Banks and financial services” and “Insurance and mutuals” sectors. They represent nearly 40% of the total sample. The need for innovation is particularly acute in this sector, in particular due to the evolution of technology and the need to adapt their business models, following the 2007 financial crisis.

In terms of innovation priorities over the next three to five years, in line with all cooperatives, new services are also

central to innovation for financial cooperatives (Figure 6). Indeed, new services are the top priority for 95% of financial cooperatives, compared to 91% of cooperatives.

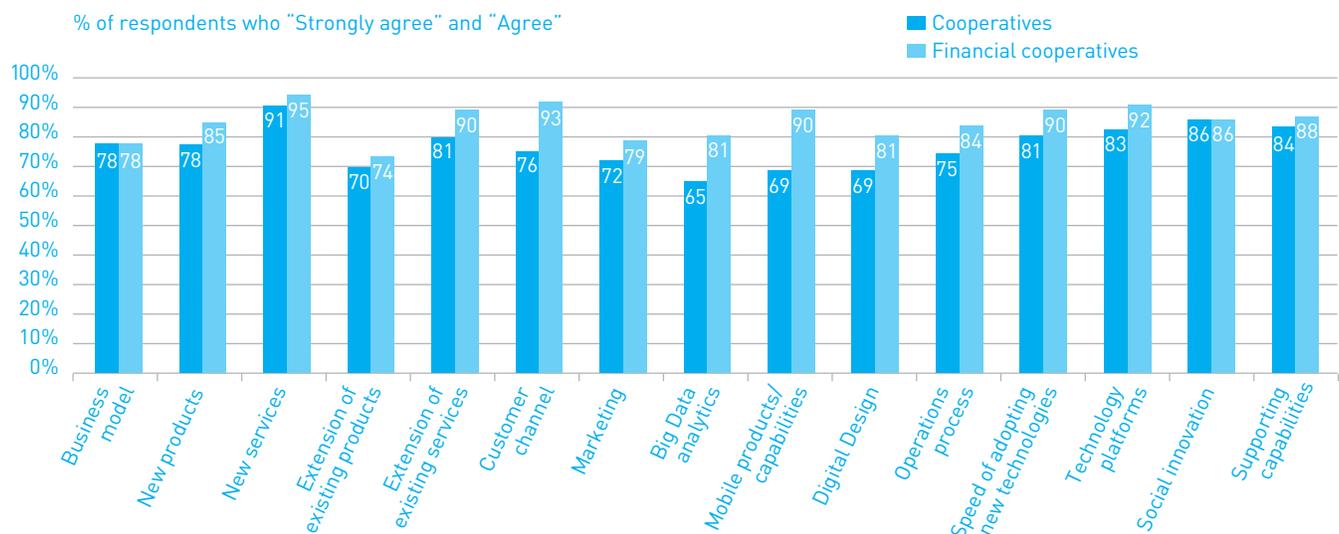
However, for financial cooperatives, additional priorities emerge, such as technology platforms, distribution channels, extension of existing services, mobile applications, data analysis and speed of adopting new technologies. These results confirm the need to evolve many aspects of the financial cooperative business model.

FIGURE 5 – Challenges for cooperatives in driving innovation over the next five years



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

FIGURE 6 – Innovation priorities: financial cooperatives vs. cooperatives



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

The major future challenges for financial cooperatives are prioritizing the right ideas and managing external collaborations. Reducing time to market is also a specific challenge for financial cooperatives (Figure 7). Indeed, this challenge is related to the priority of the speed of adopting new technologies as indicated in figure 6, which necessitates reducing the time to market.

In summary, financial cooperatives have more sector-specific priorities than cooperatives. They also have more challenges to overcome. This probably reflects the changing context of this sector, which is subject to the emergence of new players, such as financial technology companies.

2.3 Cooperatives versus non-cooperatives

In this section, we compare the priorities of cooperatives to non-cooperatives. We compare the responses from our survey,

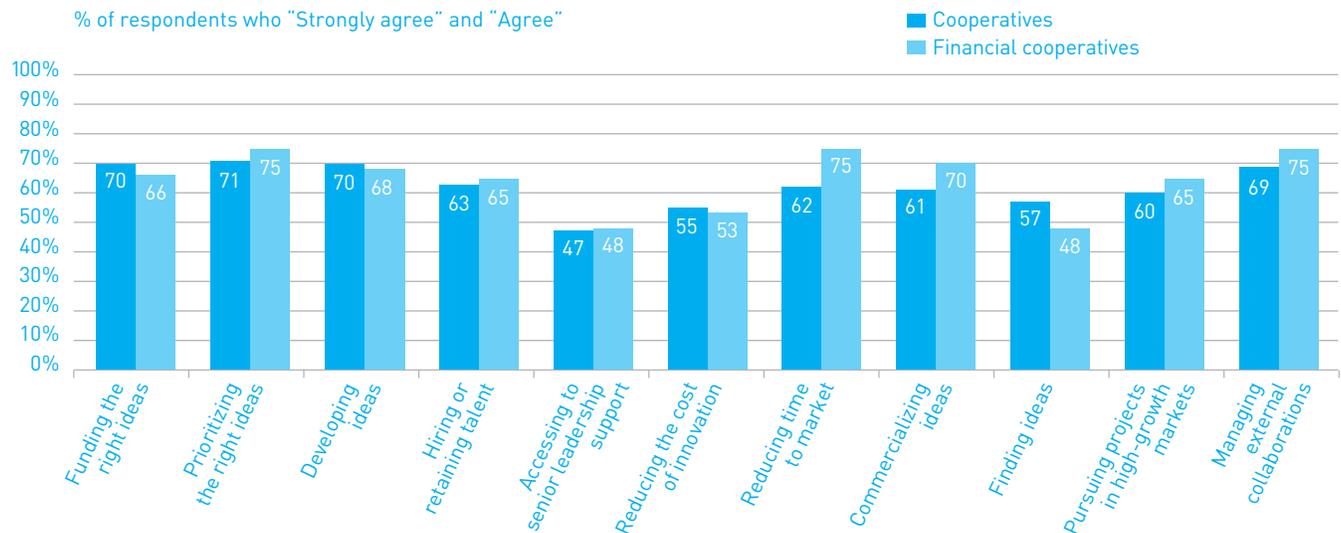
with selected observations mentioned in the BCG 2015 study on innovation (Ringel, Taylor and Zablitz, 2015).

Cooperatives rank innovation at a slightly lower level of importance than non-cooperatives do. Indeed, 79% of non-cooperatives rank innovation among their top three priorities, compared to 69% for cooperatives (Figure 8).

Cooperatives also have more numerous and diversified innovation priorities than non-cooperatives. Additional priorities of innovation for cooperatives are renewing relationships with members and supporting the social economy or improving sustainability, as shown in Figure 9.

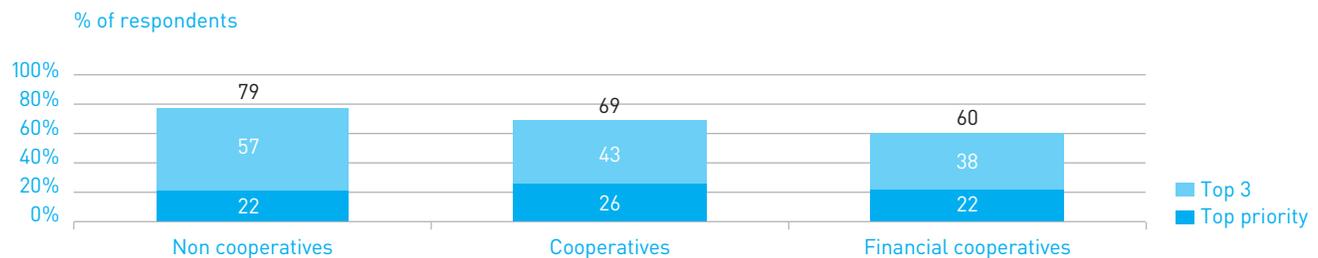
Cooperatives also set themselves apart when it comes to organizational structure. For innovation, cooperatives typically rely more on decentralized organizations, as shown in Figure 10. Business units drive innovation at 44% for cooperatives, versus 33% for non-cooperatives.

FIGURE 7 – Innovation challenges: financial cooperatives vs. cooperatives



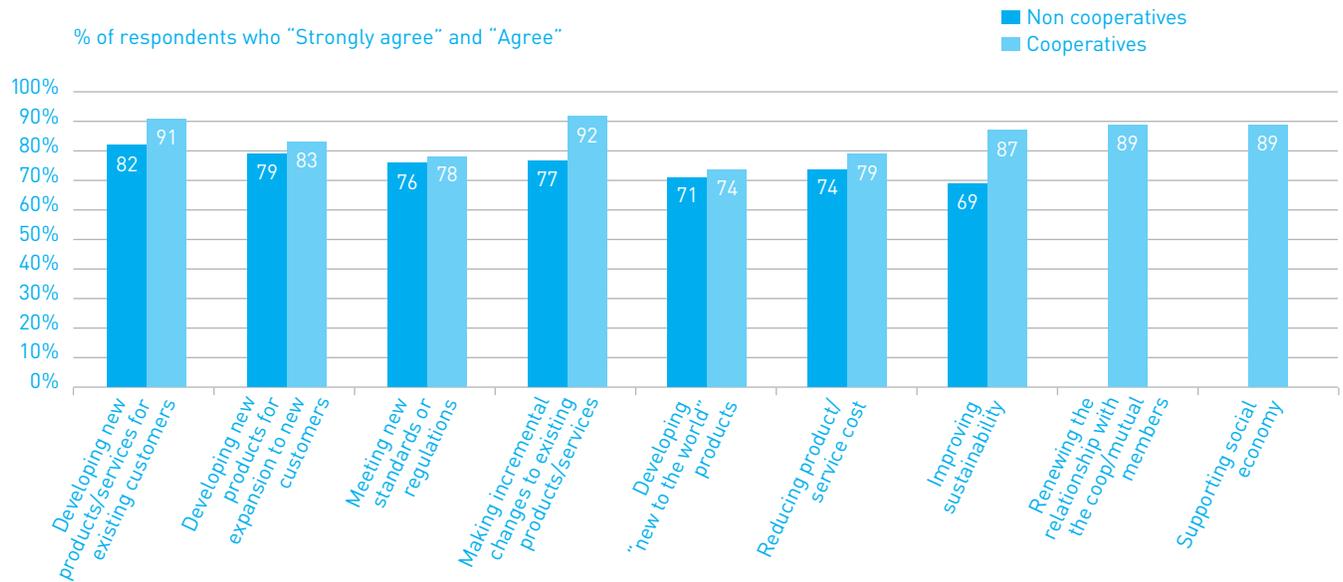
Source: Ringel, Taylor and Zablitz (2015); Authors elaboration (2016)

FIGURE 8 – Innovation priorities: cooperatives (2016) vs. non-cooperatives (2015)



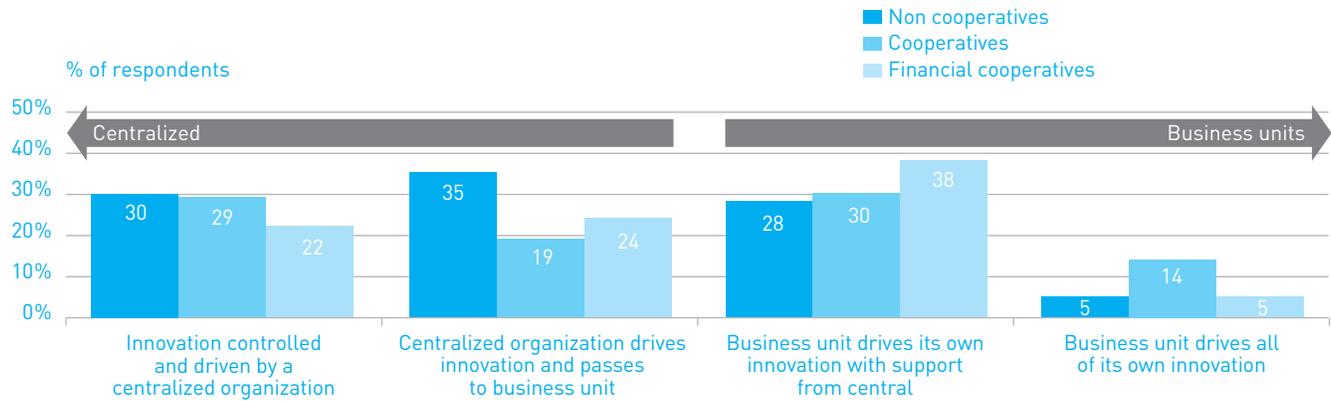
Source: Ringel, Taylor and Zablitz (2015); Authors elaboration (2016)

FIGURE 9 – Innovation priorities: cooperatives (2016) vs. non-cooperatives (2015)



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

FIGURE 10 – Organizational structure of innovation: cooperatives (2016) vs. non-cooperatives (2015)



Source: Ringel, Taylor and Zablit (2015); Authors elaboration (2016)

3 Financial cooperatives' innovation practices

Financial cooperatives and mutuals play an important role, both in the cooperative movement and within the financial industry. Many financial cooperatives fill the needs of the communities they serve with a specific approach focused on member services. They are focused on their local communities and take an active social role. This leads to a number of practices that set them apart: equalization in favour of branches in remote regions, less focus on customer selection based on financial capacity, and a local strategic flexibility (Malo and Tremblay, 2004).

The financial crisis of 2007 demonstrated the cooperative model's ability to cushion the negative effects of the downturn, revealing a strong resilience and flexibility. Financial cooperatives were not only able to maintain and create employment, but also to strengthen economic, social and regional cohesion (Birchall, 2013; Birchall and Ketilson 2009; Parlement Européen, 2013). In addition, credit unions help spread diversity in the banking sector, in terms of business models and property structures, strongly contributing to the resilience of

the financial system (Ayadi *and al.*, 2010, 2015). The contributions of the cooperative financial sector are due, in great part, to its innovation capability, enabling it to adapt to evolving economic and social environments, as well as adjusting to various local situations.

In this context, we explore the key innovation practices of financial cooperatives and mutuals. We present innovation practices of 12 financial cooperatives and mutuals in North and South America, as well as in Europe. Figure 11 profiles the participating financial institutions. Based on this analysis, we created a typology of innovations.

3.1 Analytical model of key innovation practices

Two dimensions used to map key innovations: objective and organizational model

The key innovation practices were mapped based on two dimensions: the objectives and the organizational model supporting the innovation. These dimensions are presented in the diagrams below (see Figure 12).

FIGURE 11 – Participating financial cooperatives and mutuals



The left-hand diagram presents the objective of the innovation, in terms of impact on the cooperative business model. An innovation can target the transformation of the existing business model to better serve existing members, or to expand the business model towards new members or new services. This dimension is consistent with the priorities expressed in the survey presented in Chapter 2. Indeed, cooperatives tend to focus innovation primarily on launching new services and on adapting existing services.

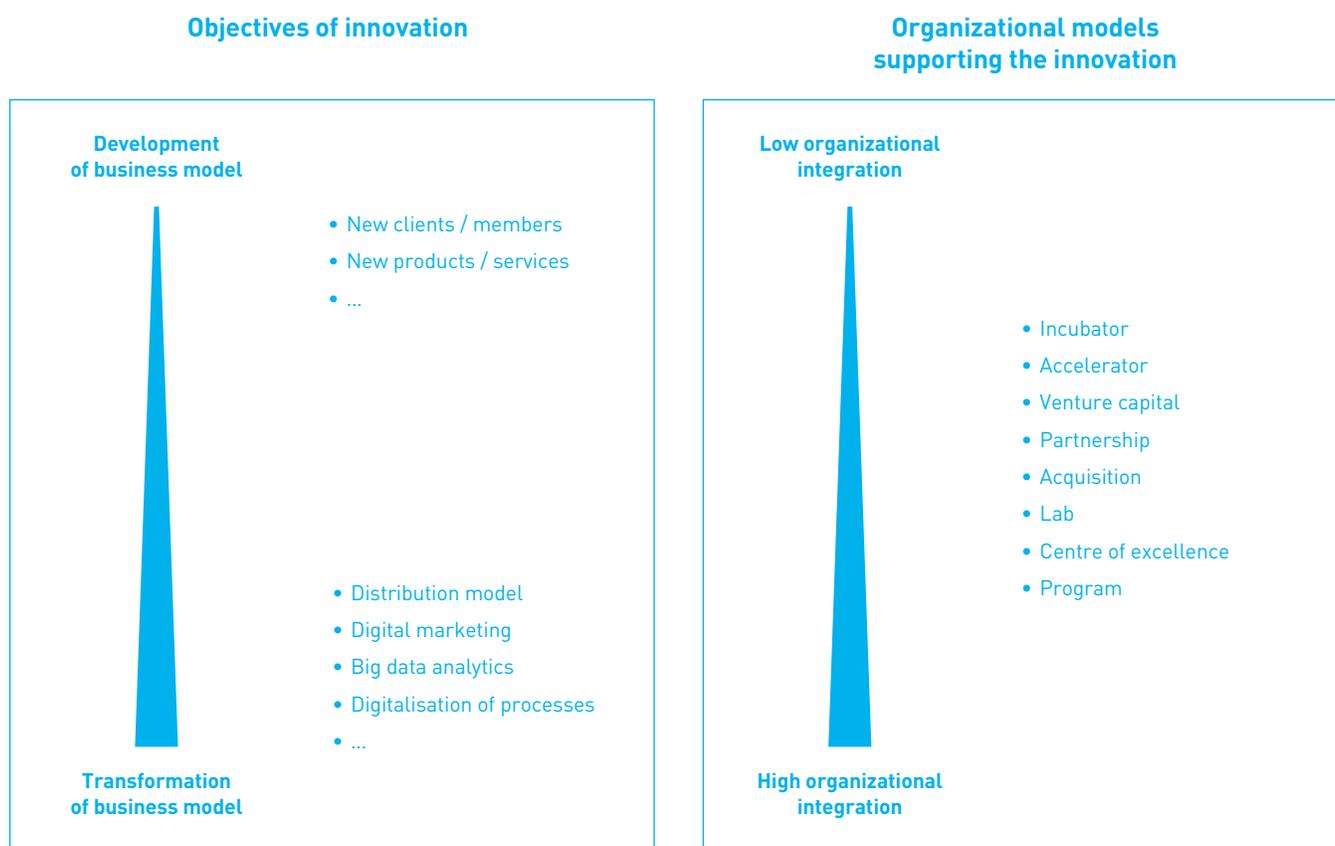
The right-hand diagram presents the organizational models supporting innovation. The models are ranked according to their degree of integration within the organization of the cooperative or mutual. From an organizational standpoint, an innovation can be managed internally, relying on internal resources and structures. On the other hand, some initiatives rely more on external mechanisms, such as incubators and accelerators. This mapping dimension is consistent with the concerns raised in Chapter 2 regarding innovation capacity building.

Four innovation logics

We have defined four innovation logics (see Figure 13), based on the two dimensions described above.

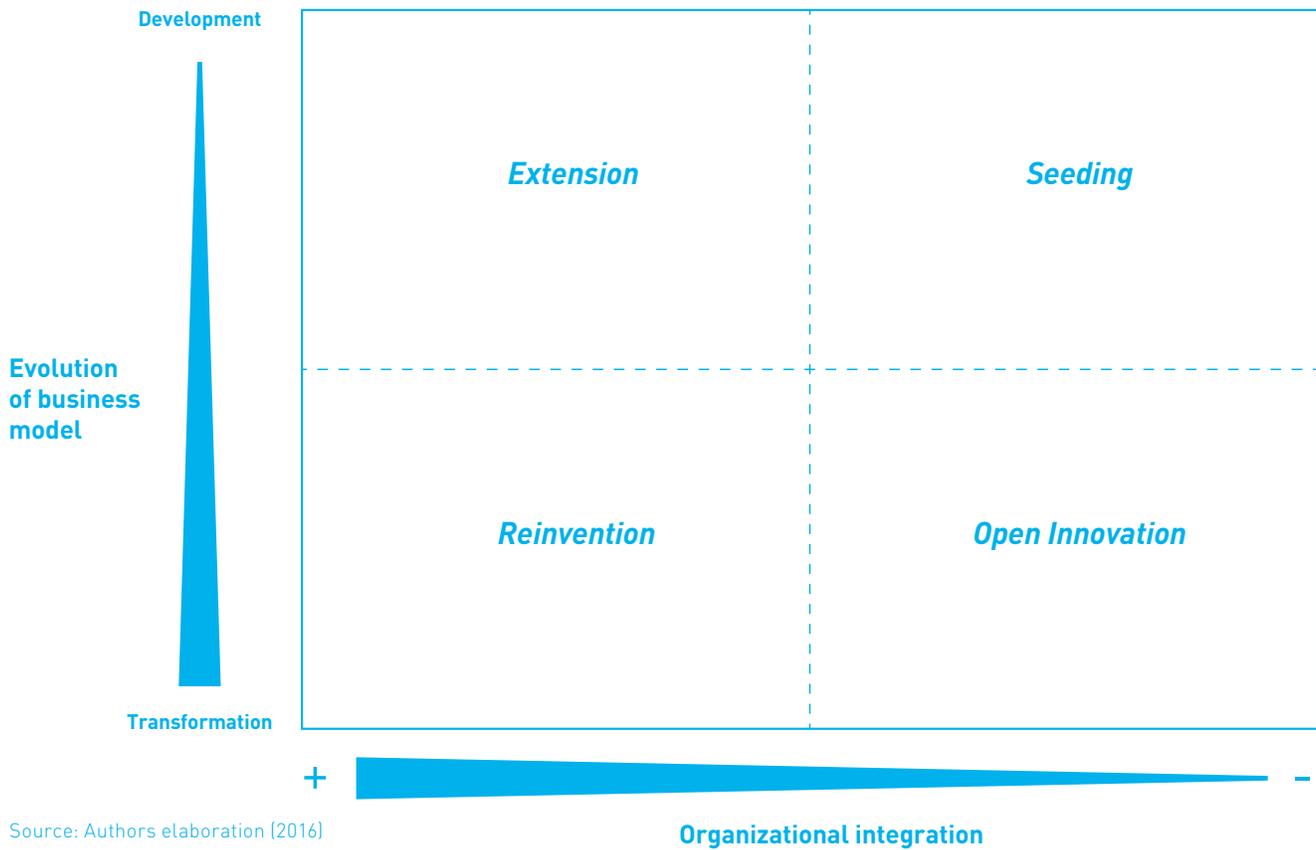
- **Reinvention:** Launching innovations aimed at transforming the business model and based on internal organizational structures.
- **Extension:** Development of products and services connected to the existing business model. This category includes initiatives aimed at expanding the business model, based on internal organizational structures.
- **Seeding:** Investment in external structures to support the development of new initiatives. This category includes innovations aimed at the development of the business model and based on external organizational structures. At a later stage, some external structures may gradually be integrated, especially through acquisition, due to their growing importance.
- **Open Innovation:** Participation in the development of technological innovations likely to have a significant impact on existing business models. This category encompasses innovation aimed at transforming the business model, based on external organizational structures.

FIGURE 12 – Objectives and organizational models supporting innovation



Source: Authors elaboration (2016)

FIGURE 13 – Four innovation logics



Source: Authors elaboration (2016)

3.2 Illustrations of the four types of innovation: reinvention, extension, seeding, open innovation

A map of key innovations has been developed for each participating financial cooperative or mutual, presented in Appendix 2. We can also consolidate key innovation practices according to our four categories and, hence, provide a more tangible understanding of the proposed innovation typology.

Reinvention

All the financial institutions interviewed are actively re-inventing their business models. Several types of initiatives have been mentioned, such as to establish a department in charge of mobilization and innovation coordination; to set-up an innovation pipeline from idea generation to implementation; to manage technology-based innovation management platforms; to launch creativity and digital transformation programs.

Some financial cooperatives have also adapted their innovation processes on unique aspects of the cooperative model, such as facilitating a decentralized innovation process, thereby creating collective momentum based on strong local autonomy; involving members proactively in both the cooperative management, as well as the definition of specific innovation projects.

In addition, reinvention initiatives are frequently based on the development of specific tools or organizations, for instance:

- Virtual innovation network: internal discussion websites where participants can propose, support, and follow innovation initiatives;
- Living labs: spaces for creativity and experimentation available to employees, members and even third parties;
- Concept stores: new spaces where the services are offered in different ways, sometimes to different target audiences.

Table 1 presents several key innovation practices of reinvention.

TABLE 1 – Examples of innovation in the reinvention category

Institution	Examples	Description
	<ul style="list-style-type: none"> Integral model management (2014) CRM – Customer relationship management with members – GCA (2014) 	<ul style="list-style-type: none"> New managerial model involving members, management and employees aimed at providing long-lasting superior quality at a low cost Integrated platform (commercial and institutional) with members. Functionalities: appointments calendar, events and campaigns
	<ul style="list-style-type: none"> Dual card Coomeva (2015) EcoMicro Facility (2016) Integral Model Management Coomeva Digital Project (2016) Business intelligence 	<ul style="list-style-type: none"> First banking card combining debit and credit payments in Colombia Green finance product designed by Fundacion Coomeva to allow SMEs to acquire energy efficiency/renewable energy Optimization of the management of executive leadership including a system of the management of executives Online platform in order to commercialize products and services on the Web Market segmentation using data mining and analysis
	<ul style="list-style-type: none"> Marketing group and digital department (2015) CA Store (2013) Technolab (2010) 	<ul style="list-style-type: none"> Management team in charge of guidance and mobilisation App store for applications developed by the CA group Initial experience with a space dedicated to creativity
	<ul style="list-style-type: none"> Fivory (2014) Eurinov (2011) and TIPMA (2016) Communities management Geolocation – iBeacon (2014) 	<ul style="list-style-type: none"> Universal, multi-channel mobile payment solution for retailers Solutions to support collaborative innovation and initiatives among Credit Mutuel's collaborators Current experimentations in order to validate the concept and its benefits for internal use Geolocation solution for members at the branch entrance
	<ul style="list-style-type: none"> Desjardins Lab (2015) I3 Desjardins (2013) ExcentriQ (2011) Ajusto (2013) 	<ul style="list-style-type: none"> Space for experimentation and creativity Creativity program based on design thinking Partner connection and innovation monitoring network Program of bonuses and rewards for drivers who drive responsibly
	<ul style="list-style-type: none"> Department of innovation and digitalisation (2016) EasyCreditHouse – Teambank (2014) 	<ul style="list-style-type: none"> Managing group in charge of steering and mobilization New TeamBank head office designed and organized according to a digitalization logic
	<ul style="list-style-type: none"> Digital transformation department (2015) Groupama Supports et Services innovation hub (2012) 	<ul style="list-style-type: none"> Management group in charge of steering and mobilization Centre to demonstrate the new arrangements possible when operations are reinvented
	<ul style="list-style-type: none"> Integrated quality management model Delegation of decision-making 	<ul style="list-style-type: none"> Management models aimed at service excellence and rapid decision-making

TABLE 1 – Examples of innovation in the reinvention category (continued)

Institution	Examples	Description
	<ul style="list-style-type: none"> • Innovation department (2015) • MAIF concept (2016) 	<ul style="list-style-type: none"> • Management group in charge of steering and mobilization • Space for experimentation and creativity
	<ul style="list-style-type: none"> • Innovation department (2015) • Moonshot campaign (2015) 	<ul style="list-style-type: none"> • Management group in charge of steering and mobilization • Internal innovation campaign centered on fintech applications
	<ul style="list-style-type: none"> • RaiTecLab (2015) • Dialog Plus (2015) 	<ul style="list-style-type: none"> • Space for experimentation and creativity • Strategic planning and mobilization program
	<ul style="list-style-type: none"> • SicoobCard • Sicoob Mobile Banking • Sicoob My Finance • Cabal's Benefits 	<ul style="list-style-type: none"> • Application allowing 100% of payments to be managed by members • 2015 Banking Report Award in the Self-Service category • Application to manage personal finances • Application to check credit balance and localize where the Cabal card is accepted

Source: Authors elaboration (2016)

Extension

In addition to reinvention initiatives, the cooperatives and mutuels interviewed are also involved in extension initiatives, focused on acquiring new members, offering new services, or creating new distribution channels. These developments are at the center of the vocation of cooperatives, i.e. broadening the range of services available to the communities, which they serve. Several initiatives were mentioned, such as launching digital services to attract new types of members, or developing services to complement the range of available financial services.

Such extensions can also deal with more socially focused needs, such as supporting cooperative development, especially on the international stage plus assisting financially vulnerable members. Depending on how closely related they are to the existing business model, these extensions are led internally, through partnerships or through strategic acquisitions. Table 2 presents examples of extension innovations.

TABLE 2 – Examples of innovation in the extension category

Institution	Examples	Description
	<ul style="list-style-type: none"> • Credicoop Mobile (2016) • Mpos (2016) • TodoPago (2016) • One-to-one transfer (2016) • Digital wallet (2016) • Coop shops (2015) • Remote check deposit (2014) 	<ul style="list-style-type: none"> • Banking mobile: ranked in the top 5 of Google Store for best financial apps in Argentina • Gateway of mobile payments in partnership with PRISMA/VISA • Gateway of web payments with all operational debit and credit cards in Argentina – In partnership with PRISMA/VISA • Payments services between persons – In partnership with PRISMA/VISA • Virtual integration of all active debit and credit cards in Argentina. The user selects the card which he wants to pay with – in partnership with PRISMA/VISA • Online commercial portal (expositions, selling, payment gateway and delivery of products) • Win-win: businesses deposit checks without leaving their offices by using a check scanner; the bank improves the operations of its branches

TABLE 2 – Examples of innovation in the extension category (continued)

Institution	Examples	Description
	<ul style="list-style-type: none"> • Medicina Prepagada (1973) • Conecta Salud (2012) • Tecnomcom partnership • Conectamos Financiera (2012) 	<ul style="list-style-type: none"> • Health care insurance services offered in addition to international health care services • Company that contributes to improve technological processes for Coomeva companies in the health care sector • Provide electronic payments through primary card system • Company that contributes to improve technological processes for the Coomeva companies in the solidarity sector
	<ul style="list-style-type: none"> • Point Passerelle (2007) 	<ul style="list-style-type: none"> • Assistance services for members / customers in difficult financial circumstances
	<ul style="list-style-type: none"> • Crédit Mutuel Mobile (2006) • Crédit Mutuel Auto (2015) • EPS (1986) 	<ul style="list-style-type: none"> • Mobile telephony service offered though the bank branch • New vehicle sales service • Services of alarm systems and surveillance cameras for residential and professional clients
	<ul style="list-style-type: none"> • Desjardins Développement International • StateFarm (2015) 	<ul style="list-style-type: none"> • Services to assist the development of financial cooperatives internationally • Acquisition of StateFarm Canada operations in general and life insurance
	<ul style="list-style-type: none"> • VisualVest (2015) 	<ul style="list-style-type: none"> • Digital savings account and banking services for digital natives
	<ul style="list-style-type: none"> • Services hub (jecommande.com, capsauto, granvillage, wefarmup, fourmiverte) • Predict (2015) 	<ul style="list-style-type: none"> • Value-added services offered in addition to insurance services • Predictive data service for city halls
	<ul style="list-style-type: none"> • Partnership with National Cooperative Bank (2014) • Integration of the insurance network of Seguros Lagun Aro (2013) 	<ul style="list-style-type: none"> • Partnership aimed at developing cooperatives within local economies throughout the United-States • New branch format. Improvement of customer care in insurance and bank products
	<ul style="list-style-type: none"> • Nestor (2016) 	<ul style="list-style-type: none"> • Account and financial services aggregation product
	<ul style="list-style-type: none"> • MyOrder (2012) • Collin Crowdfund and OnePlanetCrowd (2016) 	<ul style="list-style-type: none"> • Investment in an order and payment system • Commercial agreements with crowd-funding companies
	<ul style="list-style-type: none"> • PayMit (2015) • Mobile Voucher 	<ul style="list-style-type: none"> • Peer-to-peer payment service in partnership with 6 other establishments • Prepaid mobile phone reloading service at automatic teller machines
	<ul style="list-style-type: none"> • Firstdata partnership • Cabal partnership • Ponta Consortium • Sicoob Insurance 	<ul style="list-style-type: none"> • Provide electronic payments through the primary card system (MasterCard, Visa, Cabal Credit, debit, and prepaid cards) • Partnership to launch the Cabal debit/credit card • Company acquisition in order to provide members special services through consortiums • Insurance company created in order to develop insurance portfolio of the bank

Source: Authors elaboration (2016)

Seeding

Cooperatives also innovate by supporting more entrepreneurial initiatives together with more long-term perspectives. These initiatives often have a significant local or collaborative dimension, contributing to the creation or the consolidation of ecosystems. This strengthens the position of cooperatives within the communities they serve. To support seeding initia-

tives, dedicated organizational mechanisms are often involved, frequently in partnership, such as incubators, accelerators, investment funds, hackathons, etc...

Over time, some projects can also contribute to the development of cooperatives, either through an acquisition or, as they grow into a sizable company, by using their financial services.

TABLE 3 – Examples of innovation in the seeding category

Institution	Examples	Description
	<ul style="list-style-type: none"> Fundacion Banco Credicoop (1999) 	<ul style="list-style-type: none"> Promote the development of small and medium-sized businesses and organization in social economy using training programs and technical assistance, aiming at international markets expansion
	<ul style="list-style-type: none"> Fundacion Coomeva (1989) Acelera X2 (2013) 	<ul style="list-style-type: none"> Programs to support the creation and development of SMEs members of Coomeva Accelerator founded by Fundacion Coomeva and 3 other partners to support technological SMEs development in Colombia
	<ul style="list-style-type: none"> Linxo (2015) Le Village by CA (2014) Capital Innovation (2016) 	<ul style="list-style-type: none"> Stake in an account aggregator “Ecosystem of innovation” by connecting start-ups, partnership groups, and banking consultants Two investment funds of which one is dedicated to growth; and the other one to Fintech/Insurance Tech
	<ul style="list-style-type: none"> Blablacar (2012) Limonetik (2009) 	<ul style="list-style-type: none"> Stake in a start-up specialized in car sharing Stake in an online platform start-up for digital payments
	<ul style="list-style-type: none"> Innocité MTL (2014) and Hacking Health Accelerator (2014) Desjardins Innovatech (2015) 	<ul style="list-style-type: none"> Partnership aimed at working with the community to find solutions Technology investment fund
	<ul style="list-style-type: none"> SpinLab HHL Accelerator (2015) 	<ul style="list-style-type: none"> Stake in an accelerator
	<ul style="list-style-type: none"> Groupama-Orange Banque (2016) 	<ul style="list-style-type: none"> Joint-venture launch of an online bank
	<ul style="list-style-type: none"> Gaztenpresa (2002) 	<ul style="list-style-type: none"> Creation, development and support of small enterprises and micro SMEs
	<ul style="list-style-type: none"> Incubator and social economy: Numa, Guestoguest, Koolicar, Sharingcity MAIF Avenir 	<ul style="list-style-type: none"> Stake acquisition in companies; incubator focused on the social economy Investment fund dedicated to the social economy
	<ul style="list-style-type: none"> Wehelpen (2012) DutchOpenHackathon (2014) 	<ul style="list-style-type: none"> Cooperative aimed at offering informal support services to people Stimulation of creativity and technological innovation in the Netherlands
	<ul style="list-style-type: none"> Digital Zurich 2025 (2014) 	<ul style="list-style-type: none"> Development of Zurich as a European leader in digital innovation

Source: Authors elaboration (2016)

Open Innovation

Lastly, eager to stay at the cutting edge of innovation, cooperatives play active roles in various exploratory ventures affecting their business model. Their participation can take many forms, from involvement in marketplace initiatives on a specific technology (e.g., blockchain) to targeted experimentation with technologies likely to transform their business model. The technologies most often cited are APIs¹, blockchain², cyber security, artificial intelligence, connected objects or things³, and data protection.

Financial cooperatives have the flexibility to explore without setting a fixed timeframe for return on investment and, thus, play a key role in supporting the development of less mature technologies. Table 4 presents some examples of open innovation.

-
1. Application Programming Interface: a programming interface through which an application provides services to other programs, a library that provides a solution to a computer independent of its operation.
 2. An information storage and transmission technology that is transparent, secure and decentralized. By extension, a *blockchain* is a database that contains the transaction histories of users.
 3. Also known as “the Internet of things”: a network of networks that uses standardized and unified electronic identification systems, along with mobile devices, to directly and unambiguously identify digital and physical objects.

TABLE 4 – Examples of innovation in the open innovation category

Institution	Examples	Description
	<ul style="list-style-type: none"> • IBM, Oracle, Microsoft and SAP – Big data • Connected things; Augmented and virtual reality 	<ul style="list-style-type: none"> • Exploration initiatives applying Big data analysis in order to determine the causes of loss of members or to retain members • Testing of emerging technologies such as connected things, augmented and virtual reality applied to services provided by the businesses of the Group
	<ul style="list-style-type: none"> • Xbrain (2016) • Connected things, cyber security • Mobile Banking Factory (2014) • Smart Home Challenge (2015) 	<ul style="list-style-type: none"> • Development agreement with an artificial intelligence specialist • Hackathon of 2 months in order to create mobile applications for the CA Store • Hackathon in order to create digital services and connected things aiming housing revolution
	<ul style="list-style-type: none"> • Artificial intelligence • Blockchain • Connected things • BOT (as in Robot) 	<ul style="list-style-type: none"> • Agreement with IBM Watson to optimize customer communication operations for advisers • Experimentation pilot for blockchain technology with the Bank of France, for the ICS Place repository • Commercialized offers of camera surveillance and home automation • A software agent that responds automatically and interacts with clients; experimentation on mobiles services for clients
	<ul style="list-style-type: none"> • Connected things • Innovation Challenge (2015) 	<ul style="list-style-type: none"> • Analysis of driver behavior • Hackathon focused on digital solutions for prevention and promotion in health care
	<ul style="list-style-type: none"> • GenoHackathon (2016) 	<ul style="list-style-type: none"> • Joint initiative of DZ Bank, National Association of German Cooperative Banks, and Fiducia & GAD IT AG
	<ul style="list-style-type: none"> • Artificial intelligence 	
	<ul style="list-style-type: none"> • Caisse des Dépôts et Consignation • Connected things, cyber security 	<ul style="list-style-type: none"> • Stake in a blockchain marketplace initiative
	<ul style="list-style-type: none"> • Dutch Fintech Hackathon (2014) • IA, API 	<ul style="list-style-type: none"> • 1st Fintech Hackathon
	<ul style="list-style-type: none"> • Swiss Fintech Innovations (2016) 	<ul style="list-style-type: none"> • Development of Switzerland as a leading and international centre of digitalization and innovation
	<ul style="list-style-type: none"> • CIBP Hackathon (2016) 	<ul style="list-style-type: none"> • Participation to the CIBP GRACE16 – Global Research on Augmented Collaborative Economy 2016

Source: Authors elaboration (2016)

Conclusion

The online survey conducted for this study allowed us to review the innovation priorities expressed by cooperatives overall, comparing them with financial cooperatives and non-cooperatives and to map the key innovation practices of 12 cooperatives and mutuals.

The survey results reveal that 70% of the 236 cooperatives that participated, mainly from North and South America, as well as Europe, consider innovation to be among their top three priorities. Over the next three to five years, the priorities for cooperatives are the extension of new services, the development of innovation capacities, the development of technology platforms and the speed of adopting new technologies. They are pursuing these innovations both to seize new opportunities and to counter threats. However, they still face various challenges when it comes to their innovation processes regarding the generation, selection and funding of ideas.

Since financial cooperatives represent 41% of the responses to our survey, we compared cooperatives to financial cooperatives. Financial cooperatives report a greater number of priorities. They also identify priorities in additional fields, such as distribution channels, mobile applications and the speed of adopting new technologies. These results confirm the need to adapt many areas of the business model relating to financial cooperatives. Financial cooperatives also face more challenges than cooperatives, in areas such as the management of partnerships and reducing time to market.

Finally, we compared cooperatives with non-cooperatives, based on a study on innovation in companies conducted by the Boston Consulting Group in 2015. The share of cooperatives that rank innovation among their top three priorities is slightly less than compared to non-cooperatives, at 69% versus 79% respectively. In addition, cooperatives have additional innovation priorities due to their cooperative model and social role: renewing relationships with members, fostering social economy and improving sustainability. When it comes to the organization of innovation, cooperatives rely on decentralized or coordinated organizations at 44% versus 33% for non-cooperatives.

These results reveal that innovation is indeed a priority, both for cooperatives and for other companies. However, cooperatives have more numerous and diversified innovation priorities. In addition, industry specificities impose particular challenges, like in the financial sector, where cooperatives have more numerous and pressing priorities and challenges than cooperatives overall.

Given their long-term perspective, which facilitates long-term investment and their decentralized organization, enabling them to stay close to the needs of their members and communities, cooperatives are in a unique position to benefit from the current wave of innovation.

To complement these results, we conducted case studies and interviews with 12 financial cooperatives and mutuals in North and South America, as well as in Europe. The key innovation practices were classified according to two dimensions: their objectives and the organizational models for supporting innovation. This allowed us to map and group the practices in four innovation logics.

The most common are **Reinvention** initiatives that take into account technological, socioeconomic and demographic trends in order to transform the business model. Next, **Seeding** practices have increased in recent years and cooperatives are playing a proactive role in the emergence of new business models and in supporting local and cooperative entrepreneurship. **Extension** innovations, some of which have been in place for many years, are activities aimed at broadening the scope of action and guiding members towards more social issues or towards value-added services. Finally, **Open Innovation** illustrates the participation of cooperatives in local initiatives and their experimentation with less mature technologies that have the potential to transform business models.

A number of organizational issues are associated with these innovation categories:

“Think local, act global”: innovations frequently emerge from local initiatives, which correspond to the territorial roots of financial cooperatives and mutuals. The challenge for some cooperatives is to identify innovations that are broadly relevant and to then systematically roll them out. Moreover, certain innovations may need to be adapted to the specific requirements of each territory, as they are rolled out in a “glocalization” process.

Innovation that reaches out to members: some of the groups interviewed look for innovative approaches regarding the democratic aspects of their cooperatives and their capacity to renew the involvement of members.

Reconciling agility, efficiency and proximity: cooperative groups have frequently consolidated their information systems within shared entities. Since innovation requires a high degree of agility and proximity to users, innovation departments are often faced with the challenge of mobilization between regional entities, operations departments and shared IT departments.

This study also allows us to identify themes that could merit further evaluation. Such topics would include a focus on a certain type of innovation (reinvention, extension, seeding, open innovation), a review of innovation organization and processes within cooperatives, based on the “Think local, act global” approach. A study on innovative approaches to renewing relationships with members, discussions of innovation in the social economy, or a review of innovation priorities and practices targeting other sectors or geographical areas, could be also given consideration.

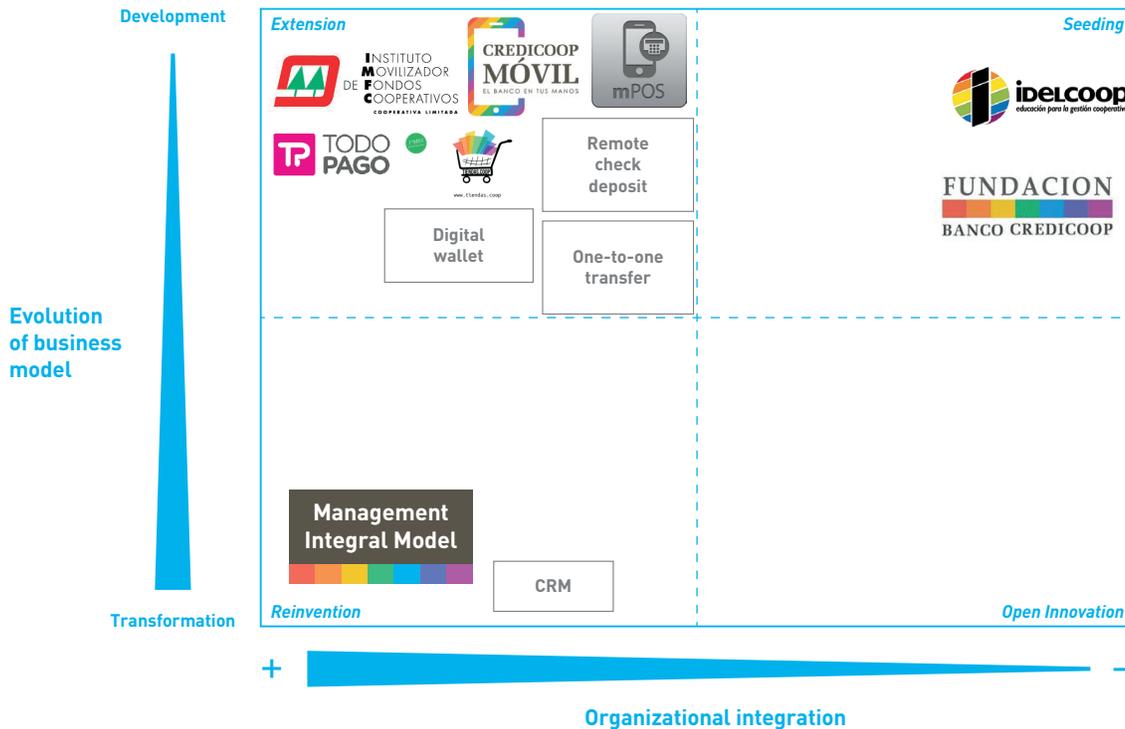
Appendix I. List of collaborating institutions

We wish to thank the following institutions for their assistance in distributing the survey:

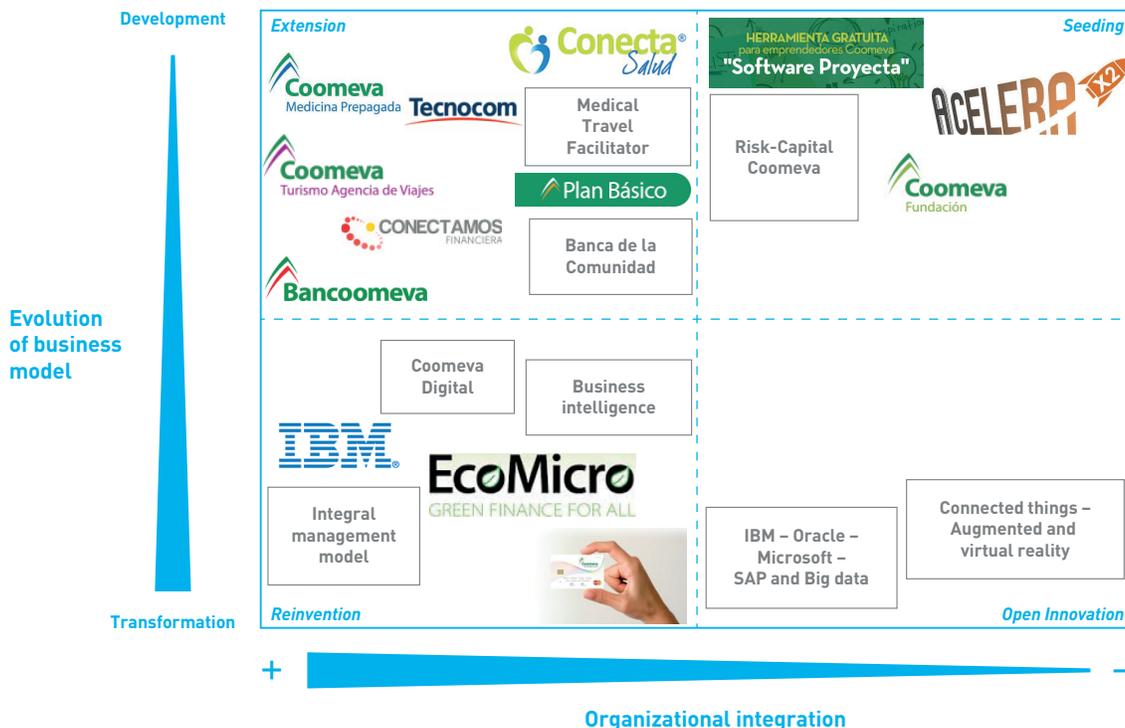
- Banco Credicoop Cooperativo Limitado, Argentina
- Centro Internacional de Economía Social y Cooperativa (CIESCOOP), Facultad de Administración y Economía, Universidad de Santiago de Chile, Chile
- Confederação Brasileira das Cooperativas de Crédito (CONFEBRAS), Brazil
- Confederación de Cooperativas de Cataluña (CoopCat), Spain
- Confederación de Cooperativas de Colombia (CONFECOOP), Colombia
- Confederación de Cooperativas de Valencia (CONCOVAL), Spain
- Confederación de Cooperativas del Caribe, Centro y Suramérica (CCC-CA)
- Confederación de Entidades para la Economía Social de Navarra (CEPES NAVARRA), Spain
- Confederación de Entidades para la Economía Social y Autónomos de Extremadura (CEPES EXTREMADURA), Spain
- Confederación Empresarial Española de la Economía Social (CEPES), Spain
- Confederación Española de Cooperativas de Consumidores y Usuarios (HISPACOOP), Spain
- Confederación Española de Cooperativas de Trabajo Asociado (COCETA), Spain
- Confederación Española de Mutualidades (CNEPS), Spain
- Confederación Latinoamericana de Cooperativas de Ahorro y Crédito (COLAC)
- Confederación Nacional Cooperativa de Actividades Diversas de la República Mexicana, Mexico
- Confederación Nacional de Cooperativas del Perú (CONFENACOOP), Peru
- Confederación Paraguaya de Cooperativas (CONPACOOP), Paraguay
- Confederación Uruguay de Entidades Cooperativas (CUDECOOP), Uruguay
- Cooperativa Obrera, Argentina
- Cooperativas Agro-Alimentarias de España, Spain
- Cooperativas de las Américas
- Corporación Mondragón, Spain
- Federación Argentina de Cooperativas de Trabajo de Tecnología, Innovación y Conocimiento (FACTTIC), Argentina
- Federación Chilena de Cooperativas de Ahorro y Crédito (FECRECOOP), Chile
- Federación de Cooperativas Agrarias de Cataluña (FCAC), Spain
- Federación de Cooperativas de Corrientes (FEDECOOP), Argentina
- Federación de Cooperativas Eléctricas (FACE), Argentina
- Federación de Cooperativas Madrileñas (FECOMA), Spain
- Federación de Cooperativas Vitivinícolas (FECOVITA), Argentina
- Federación de Cooperativas y Mutuales de la Red Federal de Turismo (FEDETUR), Argentina
- Federación Nacional de Cooperativas de Ahorro y Crédito del Perú (FENACREP), Peru
- International Co-operative Alliance (ICA)
- International Summit of Cooperatives
- Instituto Nacional de Cooperativismo (INACOOP), Uruguay
- Instituto Nacional de Fomento Cooperativo (INFOCOOP), Costa Rica
- La Segunda, Argentina
- Liga de Cooperativas de Puerto Rico, Puerto Rico
- Organização das Cooperativas Brasileiras (OCB), Brazil
- Rio Uruguay Seguros, Argentina
- Sistema MICOOPE, Guatemala
- Superintendencia de la Economía Popular y Solidaria (SEPS), Ecuador
- Unión Española de Cooperativas de Enseñanza (UECOE), Spain
- Unión Nacional de Cooperativas de Mar de España (UNACOMAR), Spain

Appendix II. Map of key innovations in financial cooperatives and mutuals

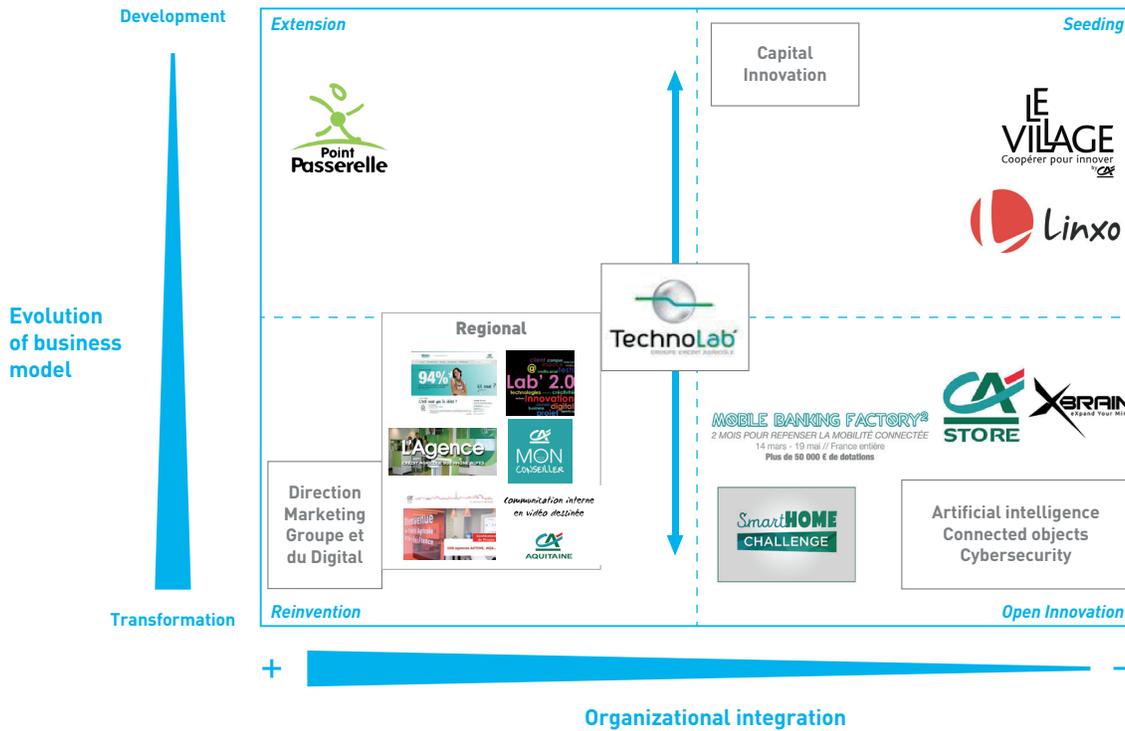
Map of key innovations of Banco Credicoop



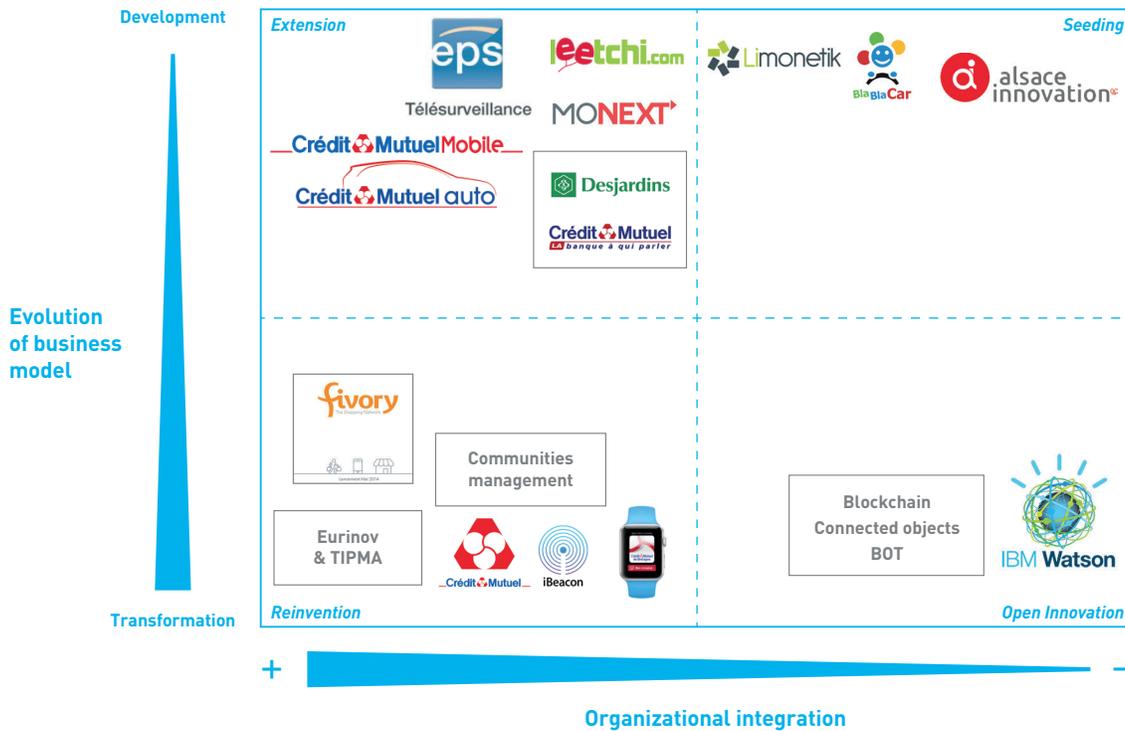
Map of key innovations of Coomeva



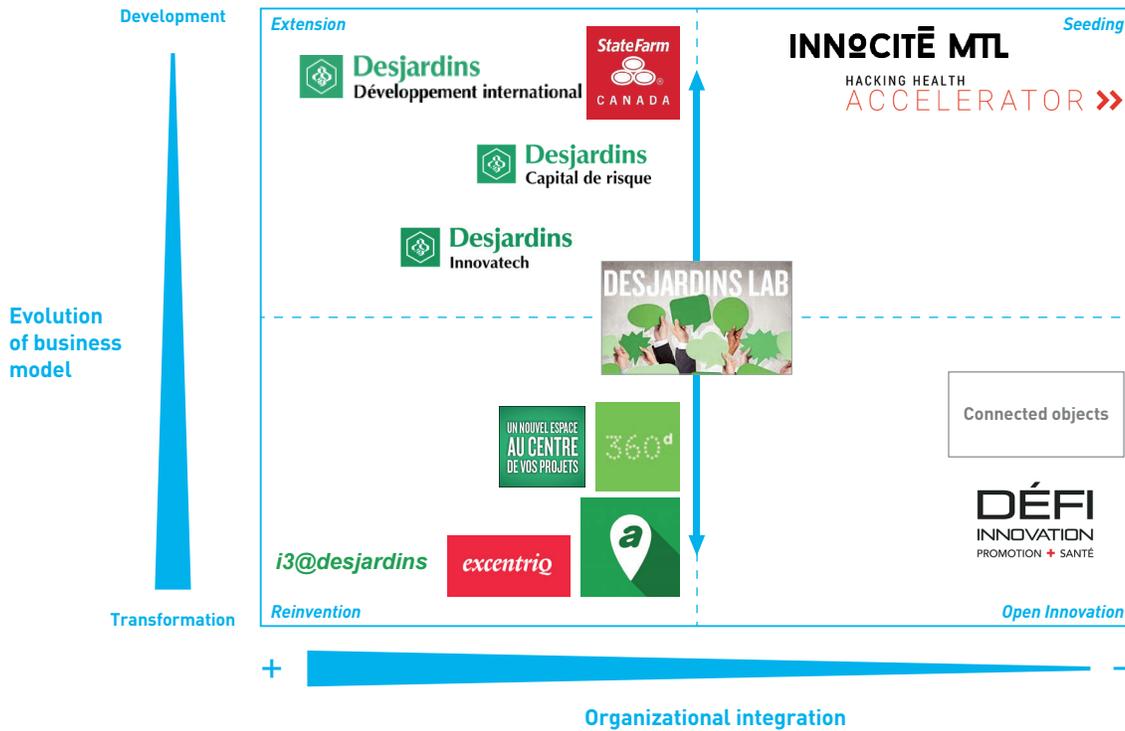
Map of key innovations of Group Credit Agricole



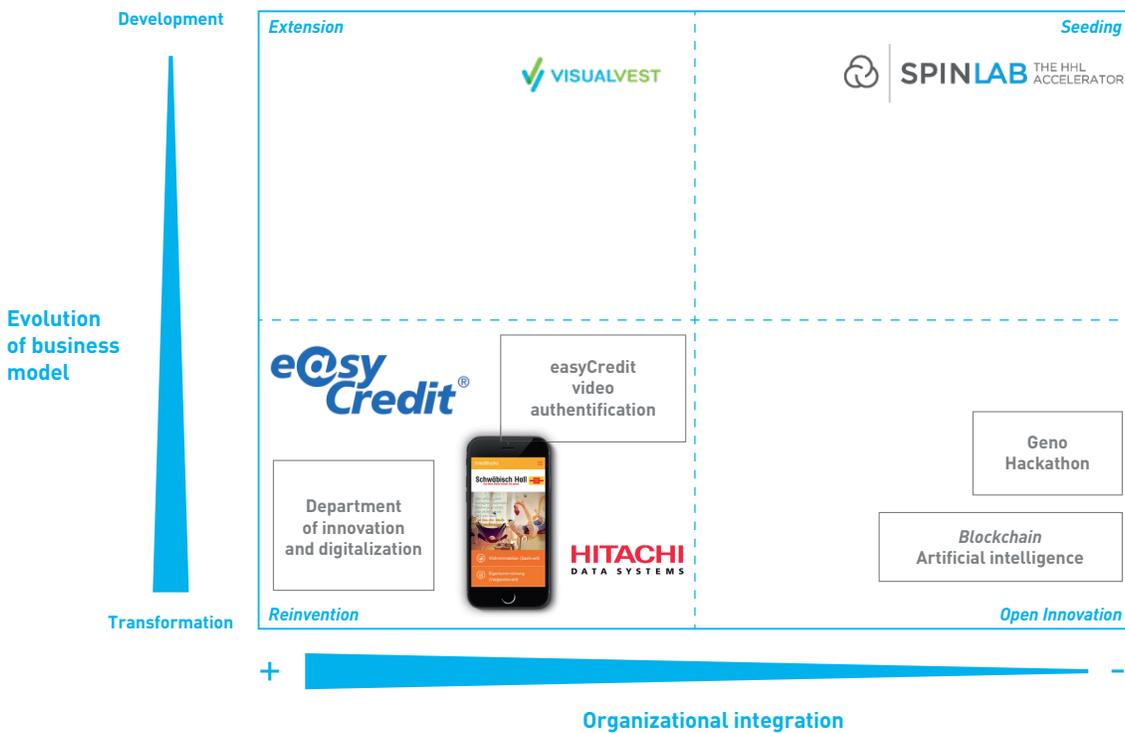
Map of key innovations of Group Credit Mutuel



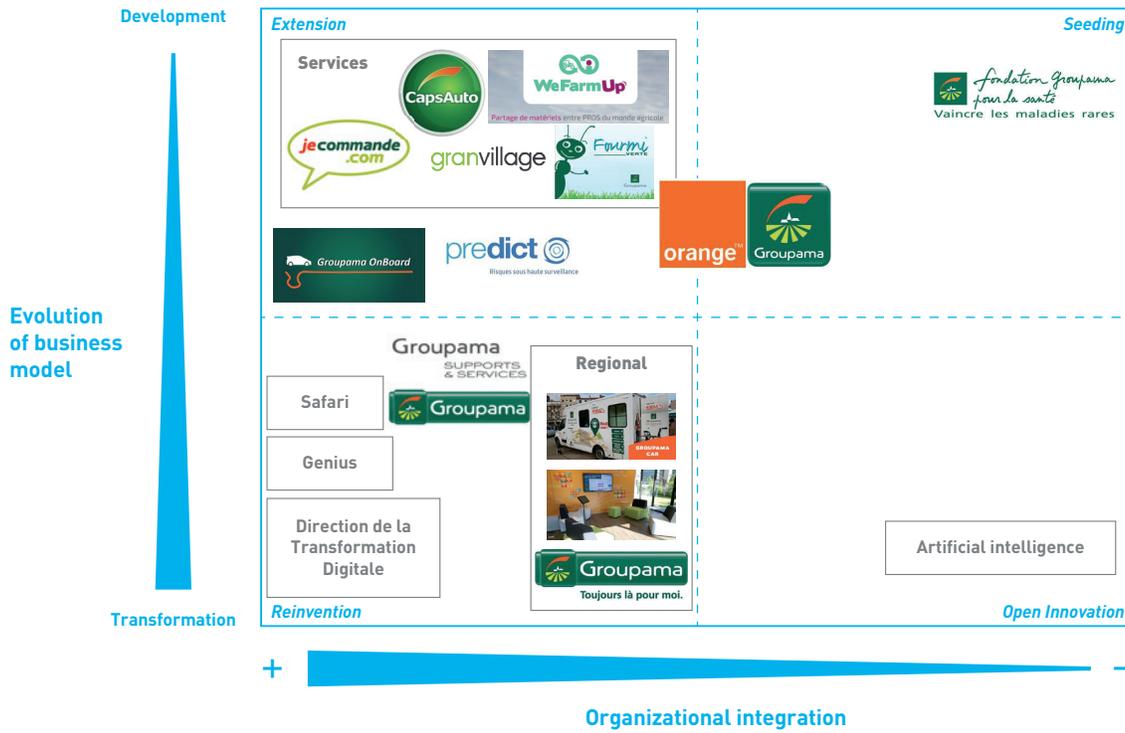
Map of key innovations of Group Desjardins



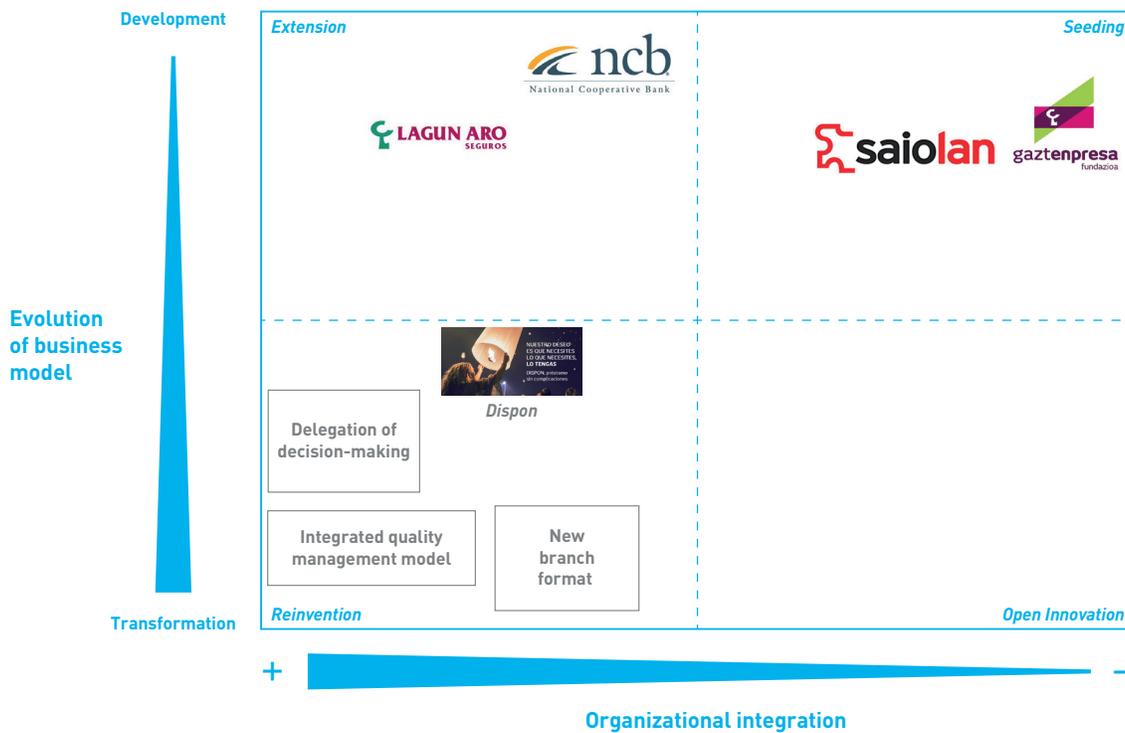
Map of key innovations of DZ Bank



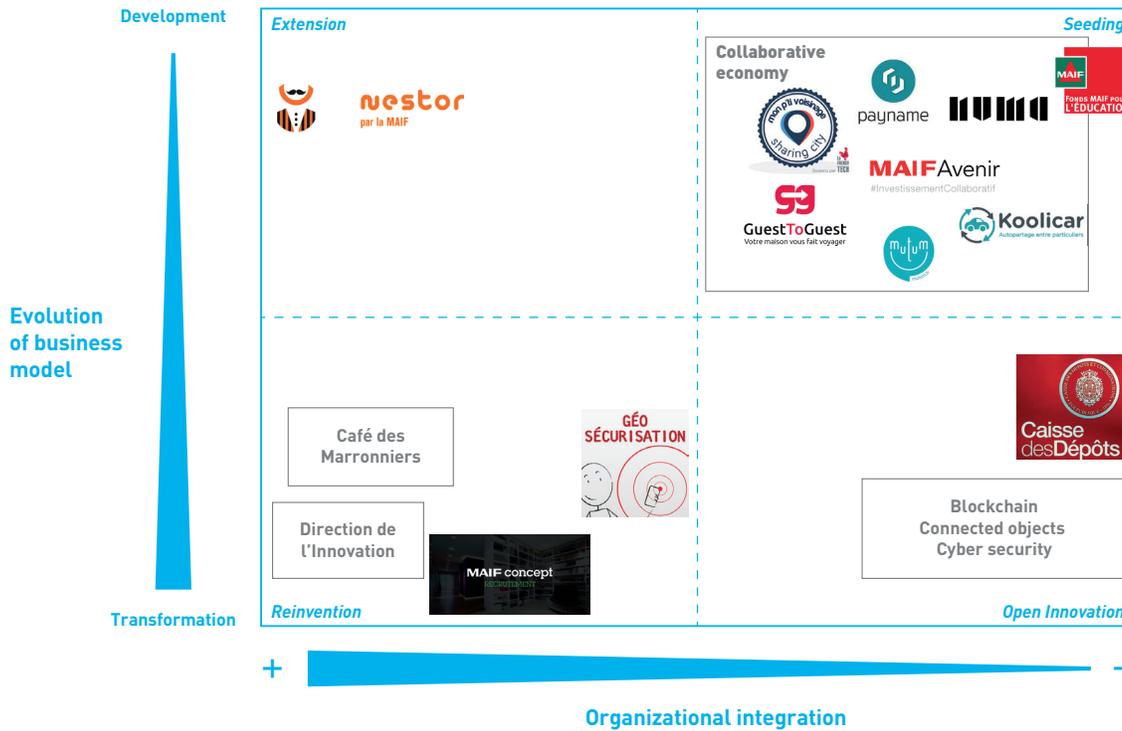
Map of key innovations of Groupama



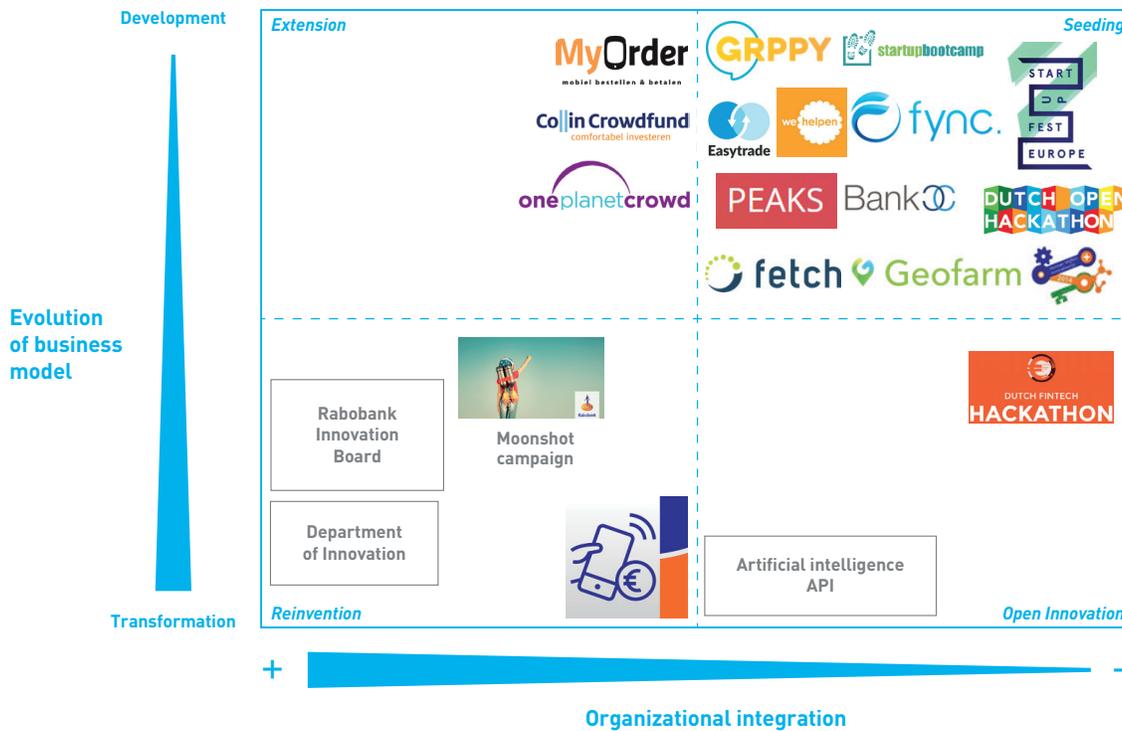
Map of key innovations of Laboral Kutxa



Map of key innovations of MAIF



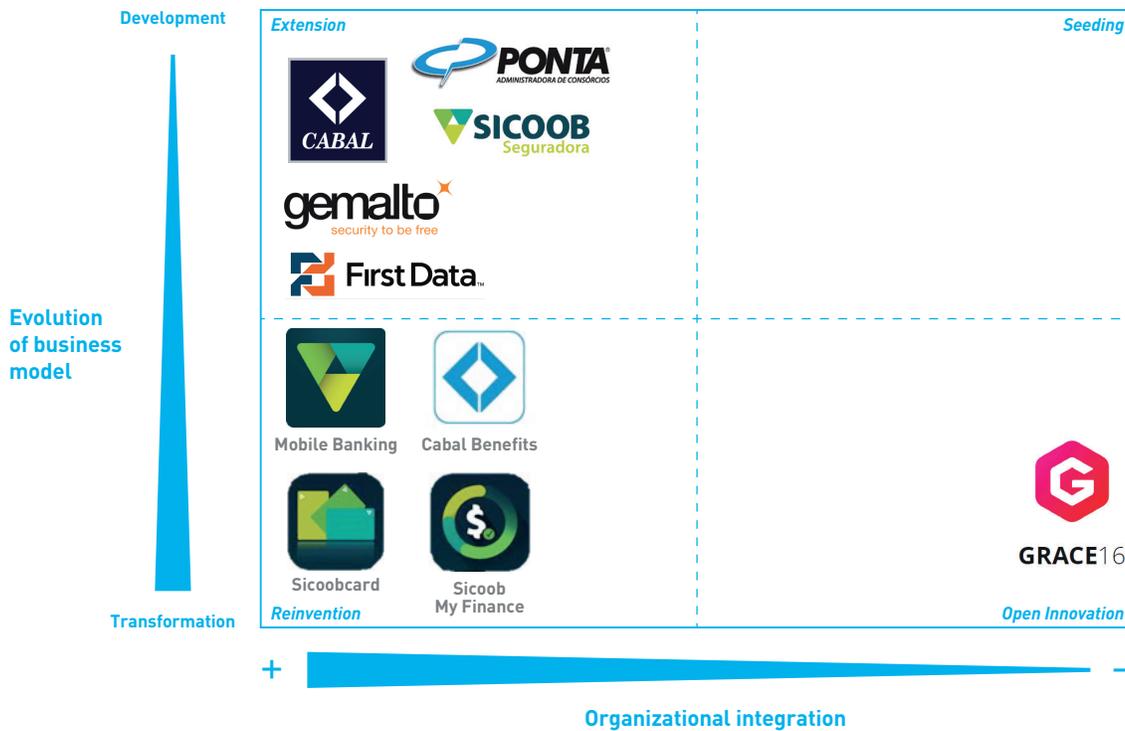
Map of key innovations of Rabobank



Map of key innovations of Raiffeisen Switzerland



Map of key innovations of Sicoob



References

- Ayadi, R. *and al.* (2010). "Investigating Diversity in the Banking Sector in Europe: Key Developments, Performance and Role of Cooperative Banks", Centre for European Policy Studies, Brussels.
- Ayadi, R. *and al.* (2015). *Banking Business Models Monitor 2015 Europe*, HEC Montréal, Montréal, 125 p.
- Birchall, J. (2013). "Resilience in a Downturn the Power of Financial Cooperatives", International Labour Office, Geneva.
- Birchall, J. and Ketilson, L.H. (2009). "Resilience of the Cooperative Business Model in Time of Crisis", International Labour Office, Geneva.
- Bogers, M. and West, J. (2010). "Contrasting Innovation Creation and Commercialization within Open, user and Cumulative Innovation", Academy of Management Conference, Technology and Innovation Management Division.
- Bogers, M. and West, J. (2012). "Managing Distributed Innovation: Strategic Utilization of Open and User Innovation", *Creat. Innov. Manag.* 21, 61-75.
- Borgen, S.O. and Aarst, B. (2016). "Participatory Innovation: Lessons from Breeding Cooperatives", *Agricultural Systems*, 145 (2016), p. 99-105.
- Carbonara, N. (2004). "Innovation Process within Geographical Clusters: A Cognitive Approach", *Technovation*, 24(1), 17-28.
- Chambre des Communes. (2012). *Situation des coopératives au Canada. Rapport du comité spécial sur les coopératives*, Ottawa: Les Éditions et Services de dépôt Travaux publics et services gouvernementaux Canada.
- Chandler, A.D. (1977). *The Visible Hand: The Managerial Revolution in American Business*, Belknap Press, Cambridge, Mass, 608 p.
- Chandler, A.D. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism*, Belknap Press, Cambridge, Mass, 860 p.
- Cook, M.L. and Plunkett, B. (2006). "Collective Entrepreneurship: An Emerging Phenomenon in Producer-Owned Organizations", *J. Agric. Appl. Econ.* 38, 421-428.
- Cooke, P. (2003). "The Regional Development Agency in the Knowledge Economy: Boundary Crossing for Innovation Systems", European Regional Science Association Annual Conference, Jyväskylä, Finland, 27-30 August.
- Cooperatives Europe (2016). "The Power of Cooperation. Cooperatives Europe Key Figures 2015", Brussels: Cooperatives Europe.
- Dopfer, K. and Potts, J. (2008). *The General Theory of Economic Evolution*, London: Routledge, 152 p.
- Galindo, M-A. and Mendez-Picazo, M.T. (2013). "Innovation, Entrepreneurship and Economic Growth", *Management Decision*, 51(3): 501-514.
- Galindo, M-A. and Mendez-Picazo, M.T. (2014). "Entrepreneurship, Economic Growth, and Innovation: are feedback effects at work?", *Journal of Business Research*, 67(5): 825-829.
- Gallego-Bono, J. R. and Chaves-Avila, R. (2015). "The Cooperative Model of Agri-food Innovation Systems: ANECOOP and the Valencian Citrus Industry System", *ITEA*, 111(4), 366-383.
- Gallego-Bono, J.R. and Chaves-Avila, R. (2016). "Innovation Cooperative Systems and Structural Change: An Evolutionary Analysis of Anecoop and Mondragon Cases", *Journal of Business Research*, [online], <http://dx.doi.org/10.1016/j.jbusres.2016.04.051>
- Howells, J. (2006). "Intermediation and the Role of Intermediaries in Innovation", *Research Policy*, 35(5), 715-728.
- ICA (2015). "Facts and figures", International Co-operative Alliance, [online], <http://ica.coop/fr/node/10663>
- Malo, M.-C. and Tremblay, B. (2004). « Coopératives financières et solidarités », *Finance et Bien Commun*, 20: pp. 66-73.
- Monzón Campos, J.L. and Chaves-Ávila, R. (2012). "La Economía Social en la Unión Europea", Bruselas: Comité Económico y Social Europeo.
- Monzón Campos, J.L. (2013). "Empresas Sociales y Economía Social: Perímetro y Propuestas Metodológicas para la Medición de su Impacto Socioeconómico en la UE", *Revista de Economía Mundial*, 35, 151-164.
- Nilsson, J. (2011). "Organisational Principles for Co-operative Firms", *Scand. J. Manag.* 17, 329-356.
- OECD (2014). *OECD Science, Technology and Industry Outlook*, Paris: OECD.
- OECD (2015). *The Innovation Imperative. Contributing to Productivity, Growth and Well-being*, Paris: OECD.
- OECD and Eurostat (2005). *Oslo Manual. Guidelines for Collecting and Interpreting Innovation Data*, Paris: OECD and Eurostat.
- OECD and World Bank (2014). *Making Innovation Policy Work: Learning from Experimentation*. OECD and World Bank.
- Parlement Européen (2013). « Résolution du Parlement européen du 2 juillet 2013 sur la contribution des coopératives à la sortie de la crise », Procédure d'initiative 2012/2321(INI), [online], <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2013-0301+0+DOC+XML+V0//FR>
- Plunkett, B., Chaddad, F.R. and Cook, M.L. (2010). "Ownership Structure and Incentives to Invest: Dual-Structured Irrigation Cooperatives in Australia", *J. Inst. Econ.* 6, 261-280.
- Ringel, M., Taylor, A. and Zablitz, H. (2015). "The Most Innovative Companies 2015. Four Factors That Differentiate Leaders", The Boston Consulting Group (December), 26 p.
- West, J., Salter, A., Vanhaverbeke, W. and Chesbrough, H.W. (2014). "Open Innovation: the Next Decade Introduction", *Research Policy*, 43, 805-811.

The Alphonse and Dorimène Desjardins International Institute for Cooperatives of HEC Montréal aims to understand and communicate the place and role of cooperatives in economies and societies throughout the world and, in doing so, to shed more light on management practices, policies and actions to be taken in order to preserve cooperatives' identity and further their development.

HEC Montréal is a French-language institution solidly rooted in its community and open to the world. It is an international-calibre university business school that contributes to our society's prosperity by providing leadership in all its spheres of activity, i.e. teaching at all levels, research and serving the community.

ALPHONSE AND DORIMÈNE DESJARDINS INTERNATIONAL INSTITUTE FOR COOPERATIVES

HEC Montréal: 3000, chemin de la Côte-Sainte-Catherine, Montréal (Québec) H3T 2A7
Telephone: 514-340-6982 Fax: 514-340-6995
institutcoop@hec.ca | institutcoop.hec.ca

Alphonse and Dorimène Desjardins
International Institute
for Cooperatives
HEC MONTRÉAL

