

## **Platform Cooperativism Holistic Characterization and Delimitation: 10 Cases of Barcelona Ecosystem**

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### **Abstract** (500 words)

The Collaborative Economy (CE), that is, the collaborative consumption and production of capital and labour among distributed groups supported by a digital platform, is growing rapidly and exponentially. However, it suffers from **diverse challenges**: (1) CE is creating high **sustainability expectations** for its potential to contribute to a sustainable development of society (Algar, 2007; Botsman & Rogers, 2010; Cohen & Kietzmann, 2014; Heinrichs, 2013), and for its potential to contribute to the commons and a democratization of economy (Fuster, 2016). Bryan Walsh in the Time Magazine dated March 2011 sees it as one of the ten ideas that will change the world, and a pronouncement of the European Union in January 2014 emphasizes the innovative economical and ecological role of CE. However, CE lacks a holistic framework for assessment of these sustainability and procommons qualities. (2) The disruptive impact of the best known CE model, that of corporations like Uber and Airbnb, is arousing huge controversy (Codagnone et al., 2016). Successful **alternative models** exist, such as open commons, and platform cooperativism, but these have received limited research attention.

Despite the lack of attention, some social economy and cooperative studies point to their growing diffusion and some of their social and economic sustainability qualities (Roelants et al., 2012; Birchall & Ketilson, 2009). The evidence on positive sustainability effects of social economy would suggest that platform cooperatives could be a more sustainable alternative for expansion in CE (Roelants et al., 2014).

The term **Platform cooperativism** was suggested as such and started gaining traction in 2015, after it was popularized by Scholz and Schneider (Scholz, 2016; Scholz & Schneider, 2016). However, due to its novelty, it remains still largely unstudied (with exceptions such as Como et al., 2015, 2016). Previous similar research on new forms of cooperativism such as "open cooperativism" (Bauwens, 2014) and also studies of how the digital environment opens up new possibilities for the cooperative tradition (De Peuter & Dyer-Witheyford, 2010; Murray, 2010) are of relevance in this relatively new field. Furthermore, Murray (2012) points to the potential of cooperativism and new forms of mutualism for public service reform. There is also a proliferation of relevant books and other contributions from a theoretical framework perspectives, but most lack empirical methodology.

Our paper will provide an analysis that contributes to explore this hypothesis, and investigate how far cooperative models like platform cooperativism (Scholz, 2016; Scholz & Schneider, 2016) might be a more sustainable model for CE than those unicorn models. The investigation has two main objectives: 1) **provide a framework to assess procommons qualities of collaborative economy initiatives**, and 2) **provide a framework of CE sustainability, assessing the potential and feasibility of platform cooperativism** for CE sustainability. The framework will be applied to 10 cases of platform cooperativism model of collaborative economy, in order to have a better understanding of this model, in contrast to the more known model of unicorn. The framework will also assess its qualities.

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To sum up, the paper will contribute to **expanding the empirical base of the analysis and also to expanding the geographical base of the literature**, the majority of which is based on cases in the USA (see study of CE literature by Codagnone et al., 2016), by providing an empirical analysis of Barcelona 10 case study. Indeed, Barcelona has a historical tradition of cooperativism, and social economy represents today the 7% of the city GDP (Fernández & Miró, 2016). Furthermore, the city has an alive scene of socio-economical innovation, and Barcelona City Council has a specific program to promote platform cooperativism in the city. All together point to Barcelona as a rich case to analyse platform cooperativism development and sustainability.

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## 1. Objectives

The Collaborative Economy (CE), that is, the collaborative consumption and production of capital and labour among distributed groups supported by a digital platform, is growing rapidly and exponentially. However, it suffers from **diverse challenges**: (1) CE is creating high **sustainability expectations** for its potential to contribute to a sustainable development of society (Algar, 2007; Botsman & Rogers, 2010; Cohen & Kietzmann, 2014; Heinrichs, 2013), and for its potential to contribute to the commons and a democratization of economy (Fuster, 2016). Bryan Walsh in the Time magazine dated March 2011 sees it as one of the ten ideas that will change the world and an pronouncement of the European Union in January 2014 emphasizes the innovative, economic and ecological role of CE. However, CE lacks a holistic framework for assessment of these sustainability and procommons qualities. (2) The disruptive impact of the best known CE model, that of corporations like Uber and Airbnb, is arousing huge controversy (Codagnone et al., 2016). Successful **alternative models** exist, such as open commons, and platform cooperativism, but these have received limited research attention.

In order to contribute to address these challenges, the paper will **provide a framework to assess procommons qualities of collaborative economy initiatives**. The framework will be applied to 10 cases of platform cooperativism model of collaborative economy, in order to have a better understanding of this model, in contrast to the more known model of unicorn. The framework will also assess its qualities.

Studies of social economy and cooperatives point to their growing diffusion and some of their social and economic sustainability qualities (Roelants et al., 2012; Birchall & Ketilson, 2009). The evidence on positive sustainability effects of social economy would suggest that cooperative platforms could be a more sustainable alternative for expansion in CE (Roelants et al., 2014). The paper will provide an analysis that contributes to explore this hypothesis, and it will investigate how far cooperative models

like platform cooperativism (Scholz, 2016; Scholz & Schneider, 2016) might be a more sustainable model for CE than those of unicorn models.

The term **Platform cooperativism** was suggested as such and started gaining traction in 2015 after it was popularized by Scholz and Schneider (Scholz, 2016; Scholz & Schneider, 2016). However, due to its novelty, it remains still largely unstudied (with exceptions such as Como et al., 2015, 2016). Previous similar research on new forms of cooperativism such as "open cooperativism" (Bauwens, 2014) and also studies of how the digital environment open up new possibilities for the cooperative tradition (De Peuter & Dyer-Witthof, 2010; Murray, 2010). Those studies are of relevance in this relatively new field. Furthermore, Murray (2012) points to the potential of cooperativism and new forms of mutualism for public service reform. There is also a proliferation of relevant books and other contributions from a theoretical framework perspective, but most lack empirical methodology.

The paper will contribute to **expanding the empirical base of the analysis and also to expanding the geographical base of the literature**, the majority of which is based on cases in the USA (see study of CE literature by Codagnone et al., 2016), by providing an empirical analysis of 10 Barcelona case studies. Barcelona has a historical tradition of cooperativism, and social economy represents today the 7% of the city GDP (Fernández & Miró, 2016). Furthermore, the city has an alive scene of socio-economical innovation, and Barcelona City Council has a specific program to promote platform cooperativism in the city. All together point to Barcelona as a rich case to analyse platform cooperativism development and sustainability. The methods will include mapping and typification of 10 platform cooperativism cases in the city, structured and indeep interviews, and a co-creation session.

The paper departs with a broad approach to cooperatives. Modalities of economic enterprises with democratic mechanisms and channels for value sharing, as well as the other seven principles of cooperation adopted by the International Cooperative Alliance, - which engage or are connected to collaborative production supported by a digital platform - , will be studied.

## 2. Previous attends to classify models of collaborative economy

There has been previous attempts to classify CE. The Spanish Association of the Digital Economy (Adigital) has carried out a study: "Collaborative models are on demand in digital platforms" (2017) to distinguish between activities from: 1) Collaborative economy: digital platform as an intermediary between equals, either between organizations or individuals, with or without economic consideration. 2) Economy on demand: digital platform as an intermediary between a professional and a user. 3) Service economy: a digital platform that, without disintermediation, places users at the service of the goods for their temporary use, adapting to the effective use time required by users and making the spatial location more flexible.

Anyway, if we focus attention on the first group we will see that this includes projects with highly disparate approaches as AirBnB (a vacational rental platform owned by a multinational) and Goteo (a crowdfunding platform based on commons principles owned by a Foundation). In fact, the interface or the platform design conditioned and predefine the social relations —related to the interaction mechanisms, regulation, profile information or promotion, for example—, among users (Gordo et al., 2016; Finkel et al., 2013; De Rivera et al. 2016).

Netnographic investigation (functionality and platform usability, confidence and virtual reputation, code of conduct and community footprint) of 55 collaborative consumption platforms in «The Triple Impact Assessment of P2P Collaborative Consumption in Europe» project investigation defines three types of collaborative consumption platforms: 1) Network oriented platforms (like Airbnb, Blablacar, TimeRepublic or Eatwith), where users have a lot of communication forms in order to

get digital reputation and show confidence to engage other users. 2) Transaction oriented platforms (Vibbo or Nolotiro), with less communication and interaction tools, focus on convenience and are more connected to the traditional consumer and provider roles. 3) Community oriented platforms (WWOPP voluntaries network, La Colmena que dice sí or CiroSel ) link to a social or environmental mission and to a good level of code of conduct. These platforms develop some collective rules beyond a self-management regulation based on the capacity of the individuals to manage their confidence networks. Investigation conclusions by Gordo, A., et al. (2016) determine the relevance of the transformation of the consumer as an entrepreneur or the new role of prosumer. In the end, in some platforms, users provide knowledge, properties or services and intermediaries are those who really earn money (Hernandez, 2015). At the same time, netnographic research highlights the necessity to precisely review «how» each platform initiative works and the social, economic and environmental impacts the platform has (Gordo et al., 2016).

In this context, where a critical and holistic review of the digital platforms that promote the collaborative economy is required, a new key concept emerges: "platform cooperativism" (Scholz, 2016). According to Scholz, digital platforms must be based on collective ownership; decent payment and security of income of its workers; the transparency and portability of the data created; appreciation and recognition of the value generated in the platform activity; collective decision-making; a protective legal framework; transferable protection of workers and the coverage of social benefits; protection against arbitrary conduct in the rating system; the rejection of excessive supervision in the workplace and, finally, the right of the workers to disconnect. In short, according to Scholz, on the one hand, the platforms must be shaped around the values of cooperativism and, on the other, digital tools must amplify the scalability and the social and economic impact of cooperative organizations. At the same time, Mayo Fuster (2017) means that the very construction of technology platforms is not a minor issue and that cooperative platforms should adopt open software and licenses. In short, to create a self-managed governance that allows the articulation of a community of development around the digital commons (Fuster, 2015) has to be approached as "open cooperativism" (Bauwens, 2014), as an antithesis of unicorn and corporate platforms.

From our point of view, attending the complexity of the classification of CE platforms, specific analysis are required in order to distinguish models. For example, in the case of Barcelona, during the last three years, a new type of agrofood consumer platform is spreading their activity in the city: La Colmena que dice sí. A recent investigation shows that, in spite of use a similar approach of cooperatives to engage their potential members (disintermediation between local producers and consumers), these organizations are far away of social and solidarity economic values (Espelt et al., 2017). Departing from this reflection, in this paper we provide a framework to characterise models of CE and visualize its qualities.

### **3. Analytical framework: the procommons qualities of collaborative economy**

The analytical framework of the procommons qualities of CE (Figure 1) takes advantage of the conceptual critical review of technological platforms. In other words, matching the commons and digital commons with a social and solidary economy cooperativism approach.

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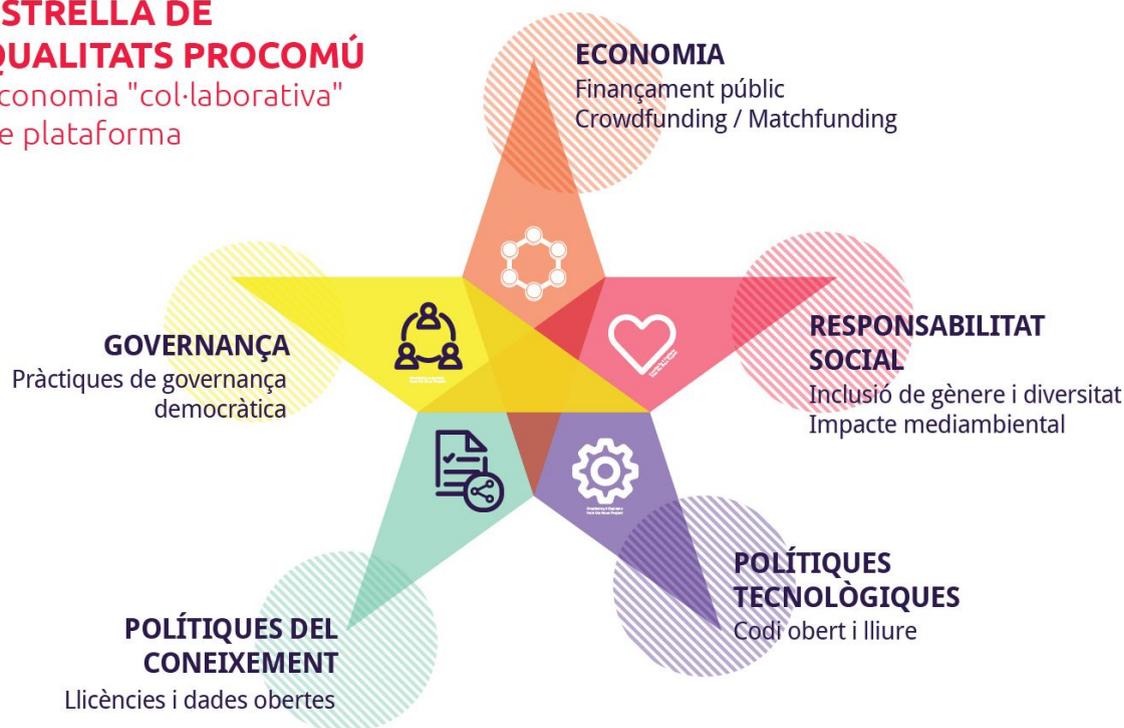


Figure 1. Procommons collaborative economy start framework.

The procommons qualities of the CE are articulate around 5 dimensions (see table 1 regarding the specific indicators connected to each dimension):

- **Governance:** Evaluating decision-making model of the organization; mechanisms and political rules of the digital platform participation and the user control of the digital profile.
- **Economic model:** Evaluating whether the project financing model is based on a private capital, an ethical finance, or a distributed found (crowdfunding or match-funding); the mechanisms of transparency and the profit or nonprofit plan.
- **Knowledge policy:** Evaluating the type of license used (creative commons or copyright); type data platform (open or not) and the ability to download data (and which formats).
- **Technological policy:** Evaluating the type of software used and its license (open or proprietary) and the model of technology architecture: distributed (using blockchain, for example) or centralized (cloud computing).
- **Social responsibility:** Evaluating the origin and production conditions of the goods and services they offer; minimizing resource management and recycling capacity; personal development of individuals that make up the initiative; equity payment and inclusive policies and the definition of gender.

Table I: Indicators of the five dimensions of procommons quality of CE

|            |                                   |  |
|------------|-----------------------------------|--|
| Governance | Type of economic enterprise       | Cooperative, foundations or SME with a system involving the community in contributing to the digital platform in the decision making |
|            | Open participation at the digital | Possibility to participate at the platform so as to contribute to the contents of the initiative                                     |

|                       |               |  |
|-----------------------|---------------|--|
|                       | platform      |  |
| Economic model        | Goal          | The main objective of the project and/or organization is not profitability                                     |
|                       | Transparency  | Everybody in the organization (or out of them) has economical information of it                                |
| Knowledge policy      | Copyleft      | Free license. The contents are able to be reuse it   |
|                       | Open data     | Open data licence. Everybody could get and use data platform   |
| Technological policy  | FLOSS         | The platform is developed in Free/Libre and Open Source Software   |
|                       | Decentralized | Software can be hosted in differents servers   |
| Social responsibility | Inclusion     | Project allows the inclusion of socially disadvantaged groups<br>Project has an active gender inclusion policy |
|                       | Green         | Initiative takes care and promote environmental impact reduction   |

## 4. Methodology

The methodology is based on 10 case study comparison. Data collection is based on digital ethnography (in order to collect indicators for the cases and get familiar with them), a co-creation sessions with the cases, and an interview with each of the cases. Data analysis combines statistical analysis of indicators and qualitative and visual analysis of data from co-creation sessions and interviews.

### *Sampling*

The empirical work departs from a mapping of 1000 cases of Collaborative Economy at Barcelona based on the P2Pvalue directory. From this resources, we selected 100 cases on the base of: 1) Projects with activity at Barcelona. 2) Projects based on collaborative production. 3) Projects with a significant level of activity, not in a very preliminary stage. 4) Projects with a social orientation, that is, closer to the cooperative platform than to the unicorn platform scope. In other words, that is, those projects which could be located as a Social and Solidary Economy activity rather than as a part of new forms of neoliberalism, with a clear economic profit approach and without taking into account the social impact of its activity.

From this sample of 100 cases, we did an analysis of the main features, and selected a resulting 10 key cases for an in-depth analysis. We selected the cases in order to assume diversity, and on the base of being significantly relevant cases.

### *Methods*

We did statistical analysis of some key features of the cases of the 100 sample, and a co-creation session and interview of the 10 cases. The statistical analysis is focused on type of license used (contents and software), conceptual initiative approach (individual or collectible), profile control, participation form, etc.

The co-creation session<sup>2</sup>, with the 10 cases chosen, is divided in three steps and has three main objectives: draw each project evolution, identify the position in each point of the procommons start and collectively manifest the challenges of collaborative procomun economy. In the first part, the participants indicate in a graph their evolution, highlight milestones and project their future evolution. In the second part, each platform actively shares how their approach to each point of procommons starts (economic model, social responsibility, knowledge and technological policy and governance model). Finally, during the last part, the all participants identify the challenges of collaborative procomun economy in terms of specific needs of the sector, technological demands and public policy recommendations.

## 5. Cases analysis

In this section, we present each of the cases and analyse them on the base of its performance of the start of procommons quality of the CE. See Figure 3 for a case comparison of the cases on their performance of each of the qualities.

Brief analysis of the cases:.

1. **El Recetario** <[www.el-recetario.net](http://www.el-recetario.net)> Introduction: A collaborative platform, born in 2007, focused on research, experimentation and reuse of waste for the construction of furniture and accessories, where the community of creators (700) share what they do and how they do it (through recipes, 450), learning from it and collaborating with others.
  - a. **Governance:** Voluntary open participation.
  - b. **Economic model:** Participated in a Universidad Internacional de Andalucia (UNIA) matchfunding Goteo campaign (2015), which allows to improve the project. In spite of that, a sustainable economical model is not already defined.
  - c. **Technological policy:** The technological platform is developed in Wordpress and, in spite of being planned, the whole platform code is not already open.
  - d. **Knowledge policy:** At the same time, the content is under a Creative Commons (BY-SA. 4.0 copyleft license).
  - e. **Social responsibility:** El Recetario is in the transition to become a consumer/producer cooperative platform.
  
2. **Smart IB** <<http://www.smart-ib.org>> Introduction: SMart is the abbreviation for the French expression “Société Mutuelle pour Artist”, a non-profit organization that was launched in Belgium in 1994 under the name of SMartBe. Through the ESempleo Program, founded by European sources and managed by CEPES Andalucía, SMartBe comes into contact in 2011 with a cooperative business group from Andalusia that brings together the social cooperatives AURA ETT, ACTÚA SERVICIOS and A2A Formación, among others. Finally, thanks to the new Law 14/2011 of Andalusian Cooperative Societies that introduces advanced societal models of social innovation, the legal scenario is definitively created so that SMart Ibérica can begin to operate in Spain in May 2013. Currently, the Spanish cooperative gets the economical support of Belgium cooperative. The project has a good expansion with 3.000 members in Spain and 800 in Catalonia.
  - a. **Governance:** A Governing board take the decisions of the cooperative and the users are invited once or twice a year to hold an assembly.
  - b. **Economic model:** Each member pay a 150 € initial share capital contribution and 7,5% services commission. With this capital, the organization pays money members' bills in advance.
  - c. **Technological policy:** There is not a technological platform running yet.
  - d. **Knowledge policy:** The knowledge generated is not open.
  - e. **Social responsibility:** The project promote cultural and artistic activity.

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<sup>2</sup> Held on 5 May 2017.

3. **Goteo** <[www.goteo.org](http://www.goteo.org)> Introduction: A crowd/matchfunding platform constituted as a Foundation. The project started through a collaborative founding investigation (2010) and the first version of the platform is launched in 2011. Currently, Goteo has more than 90.000 users, getting 4 millions of euros.
  - a. **Governance:** As a foundation, the decision making process is carried by a small group of people.
  - b. **Economic model:** Users pay a 4% of commission, but the promoters have the objective to arrive to 0%.
  - c. **Technological policy:** Software is subject Copyleft license (AGPL).
  - d. **Knowledge policy:** The platform data is freely downloadable in part.
  - e. **Social responsibility:** In terms of social impact, all the projects which participate in campaigns must be defined it.
  
4. **Katuma** <<http://www.katuma.org/>> Introduction: Agro-food consumption platform based on Procommon Collaborative Economy values. The project was just launched in 2017 and it is developed by Coopdevs, a non profit association which is focused on free and open software to promote Social and Solidarity Economy projects.
  - a. **Governance:** A membership cooperative governance is planned.
  - b. **Economic model:** The intention is to found the platform with membership fees.
  - c. **Technological policy:** The platform is developed with open software.
  - d. **Knowledge policy:** The contents are in Creative Commons (BY NC) license.
  - e. **Social responsibility:** The project is focused on connect producers and consumers in terms of social justice.
  
5. **Bdtonline** <<http://www.bdtonline.org>> Introduction: Platform of a time banking association [Associació pel Desenvolupament dels Bancs del Temps (ADBdT)] that uses TimeOverFlow software, also created by Coopdevs. Association and software were developed and raised in 2012. Currently, 47 organizations use this platform with 5.800 of users. One of the main goals of the organization is its usability independently of the characterisation of the organization.
  - a. **Governance:** Annual assembly, they use Loomio group as a framework of members participation.
  - b. **Economic model:** The whole economical information is published on the website. The project is founded by membership fees and a small number of monthly voluntary donations, which are not enough economical sources to invest in improving the project, this being just the developer's' task.
  - c. **Technological policy:** Public Domain license.
  - d. **Knowledge policy:** Wiki space under Public Domain license.
  - e. **Social responsibility:** Great number of organizations and users.
  
6. **FreeSound** <[www.freesound.org](http://www.freesound.org)> Introduction: The project, born in 2005, is promoted by Pompeu Fabra University and a it has a research group with the objective to gather free content for educational purposes and research. It was a success, winning prizes from the City Council (2005) and Google (2009). Currently, the platform, which is hosted in a central server, has more than 6 million registered users and over 400,000 registered sounds.
  - a. **Governance:** Open forum participation moderated by research members.
  - b. **Economic model:** Growth has been deliberately slow to avoid any financial problems, which could force to close the it. The majority of economic limited sources are from research. Promoters are studying new ways of funding based on different types of users or a Wikimedia donations model.
  - c. **Technological policy:** Open source platform.
  - d. **Knowledge policy:** Creative Commons license (CC BY) and data is open.
  - e. **Social responsibility:** Most creators or producers use FreeSound so as to find sound sources.
  
7. **XOBB** <<http://www.xobb.cat>> Introduction: The project, cooperative constituted, is the result of matching two research Universitat Autònoma de Barcelona (UAB) groups from different disciplines: sociology and technology. After the rejection of the national blind association,

- ONCE, the promoters, with the support of other associations of visually impaired, get resources from a Barcelona City Council grant to finance the first prototype in the Creu Coberta street.
- a. **Governance:** Periodic assembly meeting.
  - b. **Economic model:** Everybody could use it for free, but if somebody gets economic profit of the network, they must pay for it.
  - c. **Technological policy:** The project, based on open digital infrastructure, replicable, is just starting.
  - d. **Knowledge policy:** Open data.
  - e. **Social responsibility:** The main objective of the project is based on inclusion.
8. **eReuse** <[www.ereuse.org](http://www.ereuse.org)> Introduction: Computers today are just recycled, not reused. eReuse develops open-data and open-source tools and services to reduce the costs of refurbishing and reusing. It was created in 2015 by Pangea, an independent non-profit association, with 15 community organizations. eReuse launches a tool to trace the origin of the reused material and to see if the end of its life is just recycled.
- a. **Governance:** Decision making process of participation focus on local soberany and global federation.
  - b. **Economic model:** The possibility of agreement with Abacus, in 2017, has allowed the project to get a new dimension by introducing machine cooperative in the recycling circuit. In that sense, there is a good perspective of payment services growth (equipments redistribution, devices appraisal, reporting information...).
  - c. **Technological policy:** Based on a decentralized open source software
  - d. **Knowledge policy:** Open data.
  - e. **Social responsibility:** The project is based on the reuse to decrease unnecessary production impact.
9. **Sentilo** <<http://www.sentilo.io>> Introduction: Platform to collect data of sensors. It arises from Barcelona City Council in 2012 in the framework of the Internet of Things. The proposal is based on the escenario of exponential sensors growth, when a space, with structured information on each sensor system, will be needed. After that, other ten cities, like Terrassa, implemented it.
- a. **Governance:** The organization works like a foundation and the participation model is open.
  - b. **Economic model:** Some of proceedings are published on the website.
  - c. **Technological policy:** FLOSS (LGPL3).
  - d. **Knowledge policy:** Open data.
  - e. **Social responsibility:** One of the project objectives is avoid duplicate networks.
10. **Pam a Pam** <[www.pamapam.org](http://www.pamapam.org)> Introduction: The platform, born in 2012, is a Setem and XES (two organizations linked to SSE) project to promote responsible consumption. A community of voluntaries map the initiatives, through a qualitative questionnaire. Currently, the project is in a renewal phase with a revitalization plan to face with the difficulty of maintaining territorial community mobilization. At the same time, the promoters want to get a self-managed sustainability funding model, far from subsidies, and legal independence from Setem.
- a. **Governance:** Periodic members assemblies and open participation.
  - b. **Economic model:** A grant from Barcelona City Council, proposed by Setem, allowed the initial founding. In 2014, a European grant, permitted the incorporation of territorial facilitators and launched a new website more systematic and elaborated.
  - c. **Technological policy:** FLOSS.
  - d. **Knowledge policy:** Open data on demand. The new website will allow to download it.
  - e. **Social responsibility:** The whole projects are linked to the Social and Solidarity Economy.

## 6. Curve of growth and evolutionary stage of the cases

Regarding the stage of the evolution and the curve of growth, the 10 cases share the curve of growth represented in figure 2, with an initial kick-off, deep growth, maturation with stabilization and the renewal or gradient. However, the cases position themselves in diverse stages of this curve of growth. The majority of them, located in a positive development of their activity.

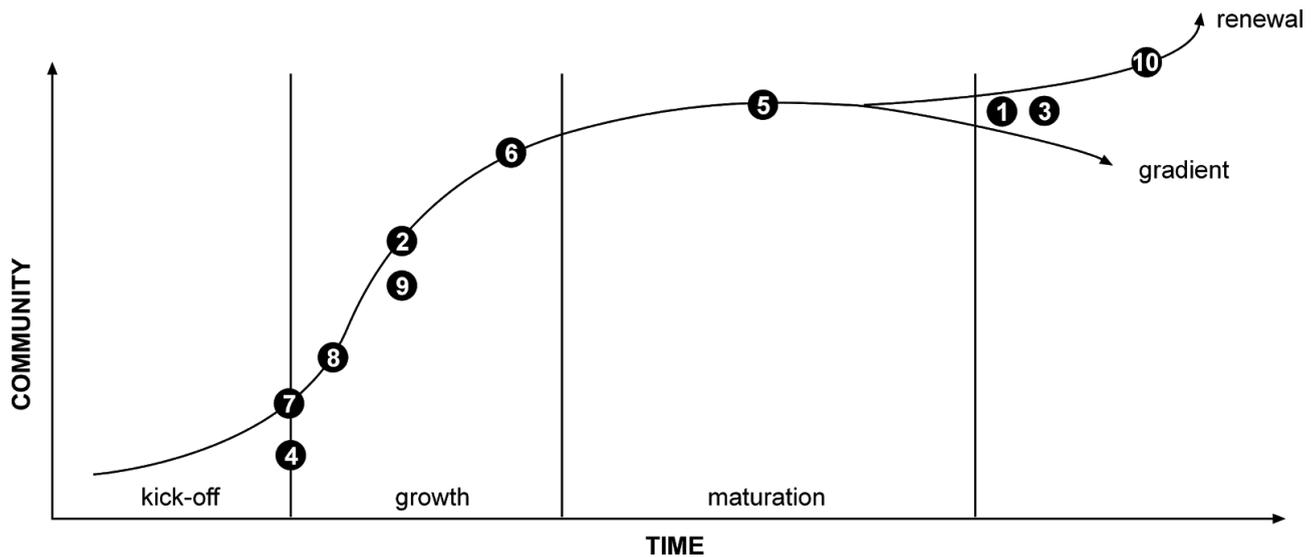


Figure 2. Summary of project stage evolution (The number correspond to the cases)

## 7. Case comparison analysis

According to the results (Figure 3), any of the cases fulfill the 100% all the 5 qualities. In spite of that, the majority of them accomplish in a good level the procommons start CE review. Some of the cases 3 (Goteo), 8 (eReuse) and, specially, 10 (Pam a Pam), achieve in a holistic approach the majority of procommons criterias. Two of these projects (Goteo and Pam a Pam) are in a post-maturation evolutionary stage.

The qualities linked to nonprofit of economic dimension and open participation in governance are the once which more cases fulfill. While technological decentralization, open data and inclusion indicators (in these order) seem to be the areas less fulfilled by the cases.

The governance and economical model get the best test evaluation but, open participation and non-profit organization have better valuation than cooperative governance and transparency, respectively.

On the whole, case 2 (SmartIB), which is in early platform development stage, and it has the less criterias' accomplishment.

Table II: Procomun start summary indicators stage of fulfillment

|     |                      | 1     | 2      | 3      | 4      | 5     | 6     | 7     | 8     | 9      | 10    |
|-----|----------------------|-------|--------|--------|--------|-------|-------|-------|-------|--------|-------|
| GOV | Type of organization | Green | Orange | Orange | Orange | Green | Red   | Green | Green | Orange | Green |
|     | Open participation   | Green | Orange | Green  | Green  | Green | Green | Green | Green | Green  | Green |

|       |               |        |        |        |       |        |        |        |        |        |        |
|-------|---------------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| ECON  | Goal          | Green  | Green  | Green  | Green | Green  | Green  | Green  | Green  | Green  | Green  |
|       | Transparency  | Orange | Orange | Green  | Green | Green  | Red    | Orange | Orange | Orange | Green  |
| TECH  | FLOSS         | Orange | Red    | Green  | Green | Orange | Green  | Green  | Green  | Green  | Green  |
|       | Decentralized | Red    | Red    | Red    | Green | Red    | Red    | Orange | Orange | Red    | Red    |
| KNOWL | Copyleft      | Green  | Red    | Green  | Green | Green  | Green  | Green  | Green  | Green  | Green  |
|       | Open data     | Red    | Red    | Green  | Red   | Red    | Green  | Green  | Green  | Green  | Orange |
| SOC   | Inclusion     | Green  | Green  | Green  | Red   | Orange | Orange | Green  | Red    | Red    | Green  |
|       | Green         | Green  | Green  | Orange | Green | Orange | Red    | Red    | Green  | Green  | Green  |

## 10. Conclusions

Platform cooperativism at Barcelona has an important ecosystemic dimension. That is, half of the cases are not platform coop per se. These complementary initiatives provide technological tools, design or networking, and they act as a infrastructure of the cases.

In spite of the strong ecosystem, the majority of initiatives are in a kick off or initial stage of growth and they are exploring sustainable economic forms.

The majority of the cases studied depart from a grant or public sources and have a grassroots character. The main problem is the project maintenance when the economical support finishes. At the time, a lot of them, are in that phase or have the intention to get another legal constitution.

Even though all the projects connect with our procommon start approach, few of them have enough maturation to extract tentative conclusions, which could help other emergent initiatives. The ten cases analysed show, in different levels, connections with Social and Solidarity Economy (SSE) and Digital Commons framework, and values. On the one hand, Goteo is the stronger project in the Digital Commons area. On the other hand, Pam a Pam is the most matured project of the SSE framework in terms of digital platform. All of these projects have a common characteristic: more than to develop or to offer a specific product or service, they focus on creating a strong ecosystem, through sharing knowledge, allowing founding and identifying, respectively.

To sum up, currently, Barcelona, with a great tradition of SSE and Digital Commons production, has an opportunity to spread a CE based on platform and open cooperativism approach. In that sense, a coming back to our procommon start, match funding (with the support of the project community and public sources) seems to be a good formula to help a grassroots initiatives, which want to spread another frame of social values, taking advantage of open and free softwares and licences, and with the will to promote democratic decision making process.

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