



**AN INTEGRATIVE MODEL OF THE INNOVATION  
PROCESS IN PUBLIC ORGANIZATIONS**

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**Abstract**

The main research question guiding this study is how and why innovation in the area of sustainable development begins, develops, is implemented, and (perhaps) ends in a municipality. It requires identifying both the external and the internal factors that influence the adoption and the implementation of a process of municipal innovation.

To achieve this, we analyzed, using 13 case studies, the particular situation regarding sustainable development in Andalusia (Spain) and the implementation of the Local Agenda 21 in the different municipalities that joined City 21 Program. We focus first on the research design, secondly on the data collection, and thirdly on the data analysis.

We hope that the proposed model helps town councils to develop management by and for sustainability, according to the repercussions that their decisions can have for future generations. The main contribution is the integrative model that we propose, defining a set of variables that influence an innovation process, the implementation of the LA21.



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## 1. Introduction to Agenda 21 and City 21 Program

In recent decades, environmental issues have awakened great interest and concern. Due to this, organizations are facing increasing pressures to adopt new practices. One of these practices is the Local Agenda 21 (LA21), a sustainable practice that since 1992 is being implemented by local councils around the world. In Spain, the greatest impulse to become involved in this effort has come from the autonomous communities, which have played a relevant role in promoting the adoption of the LA21 in their town councils. In Andalusia through the specific Program for Urban Environmental Sustainability “City 21.”

The scholarly literature on innovation was for a long time not very voluminous, but this is now rapidly changing (Fagerberg and Verspagen, 2009), and we can find, in the last years, new research about innovation within a regional context (Coronado, Acosta and Fernández, 2008, Galia and Legros, 2004, Howells, 2005). We want to contribute to develop this emerging field. In this paper, the organizations under study will be the Andalusian local councils that belong to the City 21 Program and the innovation under study will be the LA21.

The main research question guiding this study is how and why innovation in the area of sustainable development begins, develops, is implemented, and (perhaps) ends in a municipality. This question requires studying the sequence of decisions and actions related to the adoption and the implementation of the innovation. It means to respond what factors foster innovation in an organization. Further, it requires identifying both the external and the internal factors that influence the implementation of the LA21 programs.

To achieve this, we analyzed, using case studies, the particular situation regarding sustainable development in Andalusia and the implementation of the LA21s in the different municipalities that joined City 21 Program. We hope to learn why specific actions were taken in relation to the adoption of LA21, where and for whom they were taken, how they were and continue to be implemented, if the concept of *empowerment* stimulates and manages the innovation process, what changes are being produced and with what results. In other words, our goal is to study a process of municipal innovation during the whole of the life cycle of the innovation.

To achieve this goal, we begin by defining the LA21 and the City Program 21 and how were created. Next, we explain the methodology: We focus first on the research design, secondly on the data collection, and thirdly on the data analysis. Next, we present the main results through nine propositions based on the innovation process and the organizational and institutional factors we observed to influence the process of implementation of the LA21 in the town councils. We then present an integrative model that includes the set of variables that define and condition the innovation process. Finally, the main conclusions are presented.

As organizations under study, the town councils operate in an institutional context with general pressures to change in general. Specially, the pressure is toward activities directed to protecting the environment and achieving sustainability. Because town councils are one of the organizations closest to the people, they have been forced to respond to these new demands by considering a series of conditioning factors that direct them to new behaviours expressed in new practices such as the LA21.

Based on this premise, we choose case studies as methodology, because, according to Yin (1989, p. 13), “case studies are the best research strategy when “how” and “why” are the



questions formulated, when the researcher has little or no control over the events and when interest focuses on an everyday phenomenon in some real-life context”.

## 2. Research Methodology

### 2.1. Research Design: Case Study Approach

Case study is a methodology that enables the researcher to study a topic as a dynamic and not a static process (Chetty, 1996). Further, as Gummesson (1988, p. 78) argues, “conventional research methods are hardly applicable to studies of processes for change in companies”. The design of our research takes into account the two concerns expressed in the previous paragraphs; the whole picture and time, using what Yin (1984, p.53) describes as a “multiple case design”. According to Eisenhardt (1991, p. 620) “multiple cases are a powerful means to create theory because they permit replication and extension among individual cases”. Taking these considerations into account, we will now explain the specific focus of the research performed.

The study started from the assumption that adopting the LA21 means incorporating a new and thus an innovative practice for the specific context of each town council. This is a premise congruent with the definition of innovation offered by King (1992, p. 90). In the context of the current study, we can define the LA21 as an innovation introduced into a specific social reality, the town council, an innovation whose implementation requires a series of actions intended to help the municipality.

Following the definition of the innovation process provided by researchers Schroeder, Van de Ven, Scudder and Polley (1989), we have adopted the five concepts that guided the data collection in their study: ideas, people, transactions, context and results. The concepts were selected because they constitute central factors of interest for innovation managers (Van de Ven, 1986), insofar as “the innovation process consists of motivating and coordinating people to develop and implement new ideas, by engaging in transactions (or relationships) with others and making the adaptations needed to achieve desired outcomes within changing institutional and organizational contexts” (Van de Ven & Poole, 1989, p. 317). The context in which the development of an innovation will take place will affect the success of its implementation. That is, one cannot separate an innovation from the context in which it is generated and performed.

Table 1

#### Number of inhabitants of municipalities visited

Fuente de Piedra:	2146	Granada:	236982	Motril:	56605
Arahal:	18655	Villacarrillo:	10902	Vícar:	19830
El Viso de Alcor:	17194	San Roque:	25548	Montilla:	23391
Cartaya:	15480	Jerez de la Frontera:	196275	Montoro:	9583
Punta Umbría:	13736				

Source: Andalusia Institute for Statistics on Municipalities in Andalusia: Basic Data 2007 ([www.juntadeandalucia.es/iea/](http://www.juntadeandalucia.es/iea/))



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Our study included 13 town councils belonging to City 21 Program in Andalusia. We used theoretical sampling to determine our number of cases. Our goal was to choose cases which were likely to replicate or extend the emergent theory, and we stopped adding cases when our incremental learning diminished (Eisenhardt, 1989). All 8 provinces of Andalusia were represented in the thirteen town councils visited. These town councils also represent municipalities of different size and number of inhabitants (Table 1).

## 2.2. Data Collection

We will now describe the stages of the data collection procedure. The *first phase* consisted of compiling and analyzing information from a large number of source documents in order to start from the actual state of City 21 Program. The *second phase* consisted of performing an exploratory investigation *in situ*. We investigated the state of development of the LA21 in thirteen city governments (Table 1). We first had to develop the script of the in-depth personal interview addressed to those responsible for the program in the different town councils chosen. The interviews were backed up with direct observation and the study of documents (diagnosis documents, participation plans, meetings proceedings, brochures about the LA21, general and specific reports, etc.).

## 2.3. Data Analysis

The analysis procedure was carried out by means of discussion groups. First, the four researchers exchanged analysis and searched for patterns in the data; second, the researchers had meetings with the Technical Secretary of City 21 Program in order to obtain a greater consensus regarding the implementation of innovation by the different town councils.

After looking for similarities and differences between the cases, the process that follows is highly iterative, since it consists of systematically comparing the emerging structure with the evidence from each case. The aim is that the researchers should continuously compare the theory and the data, interacting towards a theory that will closely fit the data (Eisenhardt, 1989). After much iteration between data and propositions, we used comparisons with the existing literature to highlight our results. “Tying the emergent theory to existing literature enhances the internal validity, the possibility of generalization, and the theoretical level of theory building from case study research” (Eisenhardt, 1989, p. 545).

## 1. Results and Discussion: Presentation of Propositions

The research enables us to identify a group of propositions based on the innovation process and the organizational and institutional factors that we observed to influence the process of implementation of the LA21 in the town councils.

*Proposition 1: The empowerment given to the town council’s employees in City 21 Program has a positive influence on the adoption of the LA21.*

*Empowerment* is a concept that seeks to explain the importance of delegating power and authority to subordinates by conferring on them a feeling of the importance of their work, thereby generating a “culture of contribution” (Fisher, 2004) among all of the organization’s members and levels. In the process of the LA21, this culture is crucial for ensuring that all of



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the councils are involved in the process from the beginning and that the workers in each of them perceive that their role is crucial to the implementation of this innovative practice.

According to Thomas and Velthouse (1990), the concept of *empowerment* has multiple facets that can be summarized in four concepts that reflect an individual's orientation to the role he or she performs in the workplace. These are: *meaning*, such as the value of the objective or goal of the work relative to the individual's own ideals or standards; *competence*, that is, the individual's belief in his or her ability to perform tasks skilfully; *self-determination*, or the individual's sense of making his or her own choices in initiating and controlling his or her actions; and *impact*, or the degree to which the individual can influence the results through his or her work, whether these results are strategic, administrative or operative.

As to empowerment, the people interviewed expressed the importance that their work has for them personally, the value of the activities that they perform and the great value that their work has for them, illustrating the importance of the idea expressed by empowerment. Regarding the second concept, competence, the people interviewed showed great confidence in their preparation and abilities to perform their tasks, as well as their possession of the technical knowledge needed to perform their work. Regarding self-determination, most stated that they were granted the autonomy to do their work and were allowed great independence and freedom in deciding how to perform it. The perceived impact of their work on what happened in their department was also substantial. Finally, as to the impact of their work, most say that they have great control and influence over what happens in their departments. This shows that the leadership team of the town council actively supported the initiative of adopting the LA21 to make it a success.

*Proposition 2: Receptiveness to the change in the town councils in City 21 Program positively supports the implementation of innovation.*

As Beckhard and Harris (1987) indicate, resistance to change is a normal part of the process of change. One of the principal obstacles for local and regional governments is their unreceptive attitude to proposed changes (Coronado, Acosta and Fernández, 2008). Organizations are "stabilizing forces" (Klein & Knight, 2005). However, organizations can differ in the extent to which they are open to change and value it as a goal (Holahan *et al.*, 2004). Following these authors, the current study has included the variable of receptiveness to change, as "organizations high on receptivity toward change value change, experimentation, and doing things differently".

As indicated above, the town councils studied are all in the implementation phase of the LA21, a phase characterized by the resistance that most hinders change (Pardo del Val & Martínez, 2005, p. 47).

In our study, receptiveness to change was defined according to the views that the person interviewed held on issues related to the extent to which the LA21 was adopted without resistance. The town council was perceived as flexible and open to change. Most of the people interviewed stated that the members of the town council did not strongly resist adoption of the LA21 but rather accepted and supported it with great enthusiasm, showing the town council to be flexible and to adapt to continual change.

To overcome resistance to change, it is advisable to invest in developing a positive climate surrounding the innovation. "Climate is the atmosphere that employees perceive is created in their organizations by practices, procedures, and rewards. These perceptions are developed on a day-to-day basis. They are not based on what management, the company



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newsletter, or the annual report proclaim – rather, the perceptions are based on executives behaviour and the actions they reward” (Schneider *et al.* 1994, p. 18). Those in charge of an organization create a specific climate through what they *do*, not what they say. As a result of our observations according to the climate of implementation of the innovation in the different town councils studied, we were able to make the following proposal:

*Proposition 3: The climate of implementation of the innovation in the town councils in City 21 Program will have a positive influence on the success of the implementation of the LA21.*

The climate of implementation was defined according to a series of the interviewee’s perceptions about issues related to the priority, effort, commitment and motivation shown by their town council. From those interviewed, we could confirm the perception that implementation of the LA21 was considered to have high priority in the town council and that one of the town council’s goals was to use the LA21 effectively, showing that it was concerned with the success of this practice.

On the other hand, support for the implementation is a variable related to the climate of implementation, given that much support from the team leading the town council should help to create a better climate for implementation of the innovation.

The literature on organizational change and innovation (Angle & Van de Ven, 1989; Beer, 1988; Klein & Sorra, 1996; Nadler & Tushman, 1989) suggests that the main antecedent of climate favourable to implementation in an organization is precisely the leadership team’s support for the innovation. Yet despite leadership support, it is clear that in many cases the team fails to give its own support. In our case, as a result of our observations, we were able to make the following proposal:

*Proposition 4: Support for the implementation of the LA21 by the leadership team of the town council will improve the climate for implementation of LA21 in the town councils.*

A concept closely related to an organization’s climate is the concept of culture. Culture is farther-reaching and deeper than climate and includes “beliefs, expectations and fundamental or basic principles shared by the members of an organization” (Leal, 1990, p. 19). According to Burnside (1990, p. 27), the climate is defined as “what we are doing,” whereas culture is “why we are doing what we’re doing.” That is, there is a “why” behind the actions performed by the highest officials of an organization like the municipality. By observing and interpreting these actions, the employees in city hall can explain to themselves why things are the way they are and why their town council focuses on certain priorities. Culture, then, comes from the employees’ interpretations of the beliefs, expectations and principles that produce the climate that they experience (Schneider *et al.*, 1994). We can understand the fundamental role that the highest official in the town council has in creating the culture and climate of his or her organization. As a result of our observations according to the role of the sustainable beliefs and principles in the different town councils studied, we were able to make the following proposal:

*Proposition 5: The continued success of the LA21 requires a culture attuned to its precepts.*

Furthermore, given that it is a variable considered consistently for its relation to innovation, we studied the size of the town councils. As we have indicated, the sample represents municipalities of different sizes. We do not observe significant differences in the



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town councils and processes of adopting the LA21 based on the size of the town. From this we are able to formulate the following proposal:

*Proposition 6: The size of the town councils in City 21 Program does not affect the decision to adopt the innovation.*

As we have explained, a supporting organization allowed to the innovation to proceed successfully. Furthermore, we are able to observe how the institutional context explained the motives to adopt the LA21 in the town councils. Institutional theory analyzes the pressures of the institutional context that organizations must face and to which they must respond. Through these coercive, normative, and mimetic pressures, organizations adopt certain structures, programs, policies and procedures (DiMaggio & Powell, 1983; Greenwood *et al.*, 2002; Meyer & Rowan, 1977; Scott, 1987). Institutional change plays an important role in the generation of opportunities for entrepreneurial activity, yet relatively little research has examined this relationship (Sine and David, 2003, p. 185).

Town councils that have not adopted the LA21 have been able to become familiar with it and begin to know about it from other town councils that have adopted it. This knowledge can be a factor that motivates adoption of the measure. These pressures can have a positive effect on the adoption of innovations. The evidence obtained allows us to formulate the following proposal:

*Proposition 7: The coercive, normative and mimetic pressures of the institutional context of the town councils in City 21 Program influence them in the process of adopting the innovation.*

Town councils show that they know about the successful experiences of other town governments. Communications media also do important work in this area. City 21 Program receives a lot of publicity, which makes town councils take as models other town councils that already form part of or are implementing a LA21. Even so, we believe that, as the number of town councils forming part of this program increases, the mimetic pressure will increase and a greater number of town councils will decide to adopt the LA21 due to this kind of pressure. This will mean that the practice is perceived as the right way to act and has become fully institutionalized (Tolbert & Zucker, 1996).

According to our observations, the previous propositions describe the organizational and institutional context that favoured the adoption and implementation of LA21 in the town councils. Then, if we look at the process of implementation of the innovation a little closer we are able to observe what makes it to progress successfully in its day by day. The following propositions describe our observations.

*Proposition 8: The implementation of the LA21 requires communication and coordination within the town council so that it does not function as an isolated task but as a task that permeates the entire town government.*

On the other hand, all interviewees agreed that better coordination between departments in the implementation of LA21 must include the strategic and long-term planning of the town council. Further, the town council's highest official must be greatly involved, not only in pushing the initiative but also giving it legitimacy and moderating when necessary, as well as creating incentives for the change. Motivation for the innovation requires attention. The integration of LA21 in the organizational structure and strategic plan of the town council would help to integrate the meaning of the agenda into the town government. As one of the



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interviewees put it, “The agenda is technical work plus political support”. As we can see from our conversations with those in charge of the agenda:

*Proposition 9: The absence of interest group participation makes it harder to perform the innovation successfully.*

People related to the implementation of LA21 can be classified into two groups: those whose main task it is to implement LA21, or the “LA21 team”, and those who influence or are affected by the program, that is, “interest groups” or “stakeholders”.

Within these interest groups, we find professional, research and entrepreneurial associations; unions and associations of ecologists and neighbours; citizens, the education sector, NGOs, the different administrations and any other specific actor in the municipality. As the researchers observed, these interest groups play an important role in the successful implementation of LA21, as the program requires their support in transforming the principles of sustainability that define LA21 into practice in the municipality.

The following figure shows the variables and the model that describe our observations in the study of the implementation of the LA21 as innovation in the town councils.

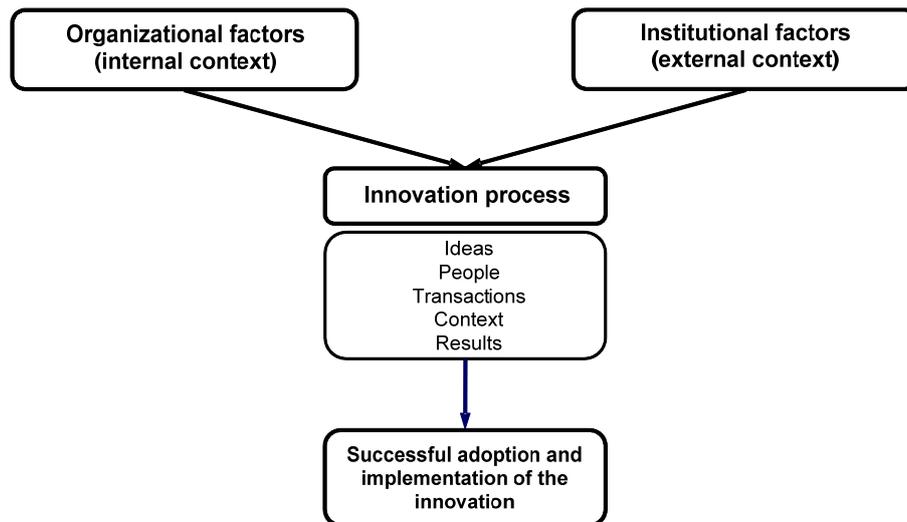


Figure 1. Proposed model of the innovation process

## Conclusions

This research enables us to enter into and understand in greater depth the current state of the LA21s in Andalusian municipalities. It used the strategy of case study research, which allowed us to get to know personally those responsible for the implementation of the Agendas in thirteen town councils selected. The main contribution is the integrative model that we propose, defining a set of variables that influence an innovation process, the implementation of the LA21. It requires identifying both the internal and external factors that affect its adoption.



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Internal factors such as the empowerment given to the town council's employees, the receptiveness to the change in the town councils, the climate of implementation of the innovation, the support for the implementation of the LA21, the organizational culture, the size of the town councils, the participation of stakeholders and the communication and coordination within the local councils, affect the innovation process.

External factors, from the institutional context in which these organizations are embedded, also influence the innovation process. We think that institutional theory is the theoretical frame to analyze the institutional pressures that organizations must face and to which they must respond. Coercive, normative and mimetic pressures influence the process of adopting the innovation.

These town councils that have adopted and are implementing the LA21 are aware that, in a world like the present one, there is a need for continual renewal. Therefore, the incorporation of the LA21 in the town council management can be a beneficial, appropriate and coherent instrument for achieving renewal and adapting to society's new demands, which require attention and responses from the most local authorities. We hope that the proposed model helps town councils to develop management by and for sustainability, according to the repercussions that their decisions can have for future generations. At the same time, we hope to advance regional studies of innovation.

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