

The Process of Innovation in Local Government

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## I. Introduction

Many governments all over the world are exerting efforts in various ways to overcome inefficiency that has become to be perceived as a chronic illness of the public sector. For local governments, the challenge to meet the diversifying citizens' demands for public services in face of serious fiscal constraints, imposes a greater pressure than ever to find ways to reform and innovate. Reflecting this need, studies dealing with public sector innovation and alternative service delivery that can improve over the traditional methods are being generated in increasing number (Ostrom & Bish, 1977; Merritt & Merritt, 1985; The Urban Institute, 1989; Stein, 1990; Osborne & Gaebler, 1992; Thompson, 1993; Halachmi & Bouckaert, 1995; and others).

These studies promote understanding of various innovative measures in the public sector but they do not account for how or why the innovation gets to be adopted or diffused in the first place. Knowing about innovative measures is one thing but actually adopting them is quite another matter. Questions such as under what circumstances a government unit contemplates innovation, how a particular innovation is decided, and what kind of actions and changes take place in implementing the innovation, are as important in understanding the ways government innovate as the innovations themselves.

The purpose of this study is to analyze the adoption/diffusion process of innovation in local government by looking into why, by whom, and how an innovation was adopted and implemented. The analysis deals with three related aspects: the organizational characteristics of innovative governments, the process of innovation the local governments underwent, and the system of innovation diffusion for local governments. This study focuses on the experiences of local governments that were recognized for the most successful innovations. For this purpose the winners of the Innovation in American Government Award conducted by the Harvard University and the Ford Foundation are used as study cases.

In the following section findings from previous studies on innovation adoption/diffusion are discussed, and based on these, framework for analysis for this study is developed. In Section III empirical analysis of the characteristics of innovative governments, the process of innovation and the system of innovation diffusion are discussed. Section IV is the conclusion drawn from this study.

## II. Theoretical Background and Analytical Framework

### 1. Concept of Innovation and Adoption/Diffusion of Innovation.

The term "innovation" is defined in various ways by different scholars. Rogers (1992), who defines innovation as "any idea perceived as new by a person or by a system," and Downs Jr. and Mohr (1976), who define it as "adoption of means or ends that are new to the adopting unit," emphasize the concept of novelty. Time factor is emphasized by Bingham (1976) who accepts the definition of innovation as "the first or early use of a set of organizations with similar goals."

Altshuler and Zegan (1990) stress the action oriented aspect by defining innovation as "novelty in action." According to Fennell's (1984) study of administrative innovation, adoption of innovation is "a political process through which decisions are made to commit slack resources to new programs."

In synthesizing these definitions, innovation - whether it is an idea, means or ends, or an action - has to be novel, where novelty can be measured by a time stick or perceived subjectively by the adopting entity. In addition, innovation possesses investment and political aspects as well.

Studies that deal with "diffusion" or "adoption" of innovation usually do not distinguish diffusion from adoption and treat the two as different sides of the same coin. Strictly speaking, the entity that diffuses an innovation may be different from the entity that adopts the innovation. However, from a general point of view, diffusion and adoption are seen as one since whenever innovation gets diffused it is being adopted at the same time. Therefore, in this study, as in many others, "diffusion" and "adoption" are used interchangeably unless otherwise specified.

Earlier studies on innovation adoption or diffusion were limited to the individual and the findings related to individuals were simply applied to understanding innovation in organizations. However, from the 1970's studies on innovation in organizations took a different perspective from that on individuals. The characteristics of organizations adopting innovations, or innovative variables, became the focus of these studies, and in later years, the process of innovations in organizations, rather than organizational characteristics, became a more meaningful subject of study (Rogers, 1995).

## 2. Variables of Innovativeness and the Process of Innovation.

The purpose of studies on variables of innovation is to identify characteristics of organizations that exhibit innovativeness. Bingham (1976), who studied the adoption of innovation by local governments, categorizes variables of innovativeness into three groups: they are those related to community environment, to organizational environment, and to organizational characteristics. In the first group are city size, socioeconomic factors, political values and such. Assistance from upper level government, close proximity to other cities that adopted innovation, degree of professionalism in local government, slack resources, vendor activity, and reformed structure are some of the variables related to the organizational environment of the local government. Organizational characteristics are variables such as degrees of formality and centralization of decision-making structure, size, number of professionals, and whether decision makers are elected or appointed.

Similarly, Rogers (1995) categorizes the innovative variables into individual characteristics, internal characteristics of organization, and external characteristics of organization. An example of the first is attitude toward change of organization's head or other members assuming leadership roles. The degree of openness of the organization is cited as an external characteristic. Degrees of centralization, formality, complexity, interconnectedness, organizational slack, and size are internal characteristics of an organization.

Theoretically, one may be able to hypothesize about whether these variables would have negative or positive relations to the innovativeness of organizations. However, in empirical studies the size and direction of their effects do not seem consistent (Downs Jr. & Mohr, 1976). Therefore, analyzing innovative variables alone is not sufficient for understanding in depth the adoption of innovation by organizations.

Studies focusing on the process of innovation that appeared since the late 1970's examine the process by stages in time sequence. These studies emphasize qualitative rather than quantitative aspects and analyze the innovation process over a time period rather than at one point in time.

In analyzing technological innovations, Meyer and Goes (1988) divide the innovation process into knowledge-awareness, evaluation-choice, and adoption-implementation stages. On the other

hand, Rogers (1995), based on various previous studies, derives five stages of innovation process: agenda-setting, matching, redefining/restructuring, clarifying, and routinizing.

In comparing these two studies, one can say that they are similar in that both view the process of innovation as basically going through awareness, evaluation/adjustment, and implementation stages. While Meyer and Goes (1988) focused on technological innovations, Rogers (1995) emphasizes the relationship between organizations and innovations, regardless of the type of innovation. Since the types of innovations adopted by local governments are quite diverse this study analyzes the process of innovation of local governments based on the stages identified by Rogers (1995).

Depending on the major features of the process of innovation, Rogers (1992, 1995) derives three types of diffusion system: they are, centralized, hybrid, and decentralized systems. The diffusions of early scientific innovations exhibit features that belong to the centralized system of diffusion, while the more recent adoptions of innovations, especially those by local governments, can be described by the decentralized system. Compared to the centralized system, in the decentralized system innovation is diffused through horizontal networks among peers, rather than in a top-down manner by experts in R&D. In the decentralized system, decisions about innovations are made by local units based on informal evaluation, while in the centralized system they are made by top administrators and technical experts. Other characteristics of the decentralized system are that adoption takes place spontaneously without systematic planning and that there is a high degree of local adaptation and reinvention of the original innovation. In the hybrid system one can see characteristics of both the centralized and the decentralized systems.

### 3. Framework of Analysis

Based on the above discussion on the previous studies on innovation by organizations, analytical framework is derived for this study, the purpose of which is to identify the innovative variables and to analyze the process of innovation by local governments. As for the variables of innovativeness this study synthesizes those mentioned in Bingham (1976) and in Rogers (1995) in examining which variables can be particularly associated with the local governments that adopted innovations. In Table 1 innovative variables are divided into those related to the internal and to the external environments of an organization.

It is hypothesized that, the bigger the size of the organization, the higher the chance for adopting innovation successfully, and that the higher the degrees of centralization and of formality in decision-making structure, the lower the chance for innovation. Centralization means decision making power and control are concentrated in a few individuals while formality is the degree to which an organization emphasizes following rules and procedures in the role performance of its members. Complexity, which reflects the degree of expertise, interconnectedness, which is the

<Table 1> Variables of Innovativeness

1. Organization's Internal Environment	2. Organization's External Environment
1) Size (+)	1) City size (+)
2) Centralization (-)	2) System openness (+)
3) Formality (-)	3) Proximity to other innovative cities (+)
4) Complexity (+)	
5) Interconnectedness (+)	
6) Slack resources (+)	
7) Assistance from upper level governments (+)	
8) Attitude toward change (+)	

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degree of linkage among the different units in an organization, and availability of uncommitted resources are positively related to innovativeness, as are assistance from upper level governments and positive attitude toward change.

Variables related to the external environment of the organization such as city size, system openness and close proximity to other cities that adopted innovation, are all considered to be positively related to innovativeness. System openness is the degree to which an organization is linked with those external to the system, and in this study it is defined as a local government's degree of interaction with the private sector such as business, non-profit organizations and citizens.

As for the analysis of the process of innovation, this study utilizes the stages in the process of innovation diffusion suggested by Rogers (1995). Based on Rogers' discussion of each stage, major aspects to be examined for each stage were derived, and they are shown in Table 2. The agenda-setting stage is when an organization perceives a need for innovation because of some problems it faces. In this stage the organization identifies and prioritizes its needs and problems (Rogers, 1995:391). The perceived problem can be a "performance gap" or even a crisis. As a means to cope with or solve the problem, the organization seeks an innovation as a solution. On the other hand an innovation as a solution can precede problem identification, in which case a problem to which the innovation is applicable is sought. This study attempts to analyze the agenda-setting stage in the process of innovation of local governments by examining the nature and the seriousness of the local government's problem, who identified the problem or brought it to

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<Table 2> Process of Innovation

< Initiation>

1. Agenda Setting Stage

performance gap/crisis  
who identified the problem  
problem ->solution or solution ->problem

2. Matching Stage

comprehensive/strategic plan  
program development  
incrementally evolved  
legislation  
citizen/client consultation  
replicate public sector practice  
replicate non-profit sector practice  
replicate business sector practice  
consultant  
pilot program

<Implementation>

3. Redefining / Restructuring Stage

whether/how redefined  
type of organization in charge  
whether/how restructured  
innovation from inside or outside  
amount of knowledge  
uncertainty (technical, financial, social)  
champions

4. Clarifying Stage

whether use widespread  
side effects / obstacles  
how members affected

5. Routinizing Stage

when routinized  
on-going or terminated  
diffused/replicated to other organization

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attention, and whether problem preceded solution or vice versa

In the matching stage the problem is fit with an innovation (Rogers, 1995: 394) through

numerous activities such as information gathering, planning, consultation and others. In addition innovations that match the problems can be found from other organizations' practices or could have evolved incrementally. This study looks into the kinds of activities local governments undertook in finding the most appropriate innovation. The list under matching stage in Table 2 is a modified version of Borins' (1997) 'mode of analysis.' Agenda-setting and matching stages are initiation stages in which the decision to adopt an innovation is made. The remaining three stages are implementation stages in which the innovation is actually put into use (Rogers, 1995: 394).

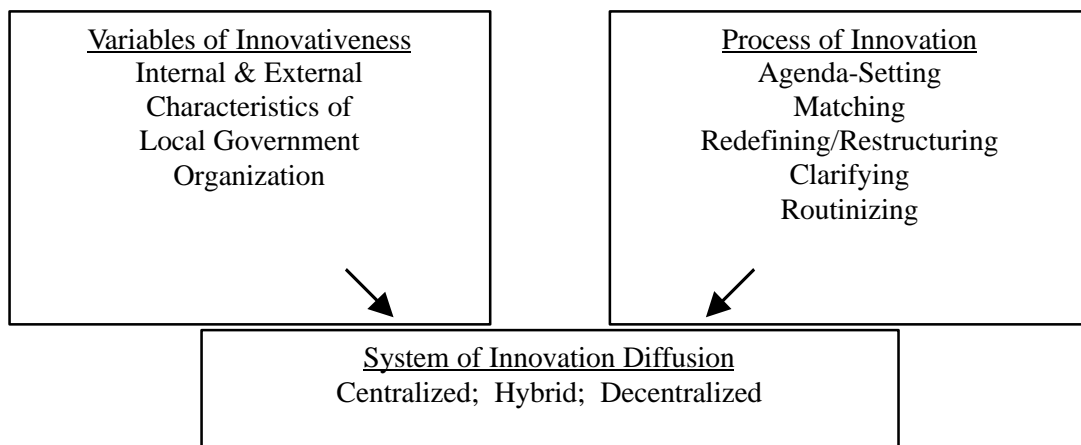
The first of the implementation stage is redefining/restructuring stage in which "the innovation is reinvented to accommodate the organization's needs and structure more closely, and the organization's structure is modified to fit with the innovation" (Rogers, 1995: 394). In analyzing this stage one has to look into whether and how the innovation was redefined, any structural changes in the organization, and the kinds of uncertainty involved. Degree of uncertainty involved in putting an innovation into use depends on whether the innovation came from inside or outside the organization and the amount of knowledge required. In addition, innovation champions, or particular individuals who are most committed to the innovation and thereby contribute to the success of innovation, can be identified in this stage.

In the clarifying stage the innovation is put into more widespread use and becomes imbedded in the organizational structure. In order to understand the clarifying stage, one has to look into how widespread the innovation became, any side effects, and how the members of the organization were affected.

Finally the innovation gets routinized when it has been incorporated into the regular activities of the organization. In this sense the innovation is no longer a novelty and thus the process is complete. It either becomes an on-going activity or is terminated. Successful innovations are likely to be diffused to other organizations which, in replicating the innovation, begins to go through the innovation process. In this study these aspects of the routinizing stage will be examined for local governments.

Based on the organizational characteristics and the details of each stage in the process of innovation, this study attempts to identify a system of innovation diffusion that best fit local governments' experience based on the three systems described by Rogers (1992, 1995). The overall framework of analysis in this study is depicted in Table 3.

<Table 3> Framework of Analysis



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### III. Case Analysis

#### 1. The Data

In examining the organizational characteristics of innovative local governments and the process of innovation, this study uses the winners of the Innovation in American Government Award conducted annually since 1986 by the Harvard University and the Ford Foundation.<sup>1</sup> Out of about 1,500 government organizations that submit the preliminary application forms, 75-100 are selected as semi-finalists. They then submit a detailed semi-finalist's application form which requests information on the innovation such as the purpose, clients, program activities, how and by whom the innovation was conceived, obstacles, budget, chronology of events, etc.<sup>2</sup> The semi-finalists are visited by experts to verify the content of their detailed application and to observe additional important aspects of the innovations. Out of the semi-finalists 10 are given the Award as finalists each year.

This study utilizes the information in the semi-finalists' applications and the site visit reports, for they contain information most appropriate in examining the process of innovation. The contents of these materials relevant to the framework of analysis in this study were coded by the author alone to assure consistency. In order to focus on more recent innovations and on urban government services, cities and counties with predominantly urban character that were finalists from 1990 to 1996 were selected for analysis. The 37 innovation cases selected in this study cover a wide range of policy areas - 5 in education, 5 in job training and labor, 6 in health, 4 in welfare, 6 in community development, 3 in protective services, 6 in environment and resources, and 2 in administration and management.

#### 2. Types of Innovations and Partnerships

Local governments awarded for the most innovative programs include those that undertook bold and big changes such as the New York City's Sanitation Department, which implemented an overall restructuring in order to facilitate decision-making by front-line workers, and Los Angeles' Transportation Department which installed Automated Traffic Surveillance and Control System. However, the majority of the cases were those that achieved successful innovation through relatively small but creative changes. For example, there were a case where crime rate was dramatically reduced by providing housing loans to police officers who agreed to live in crime-prone neighborhoods, a case where workers in utility companies and post offices were used as volunteers to identify elderly people who most need services, and a case where an incubator was provided for small artist groups and thereby established the town as a flourishing art center.

Whether small or big, the innovations adopted and implemented by the award winning governments have in common that they brought about efficiency, transparency, effectiveness, and accountability in service provision through fresh and creative ideas and a strong sense of

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<sup>1</sup> For a more detailed explanation of the Award Program, see Altshuler & Zegans (1990) and Borins (1997).

<sup>2</sup> There are several studies with different purposes using the Award Program's cases, such as Jenkins (1989), Barzelay (1992), Borins (1993, 1997), Wheeler (1993), Golden (1990), Levin and Sanger (1994).

commitment.

The types of innovations undertaken in the local governments are shown in Table 4. The most frequently found were innovations taking a comprehensive or integrated

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<Table 4 > Types of Innovation (%)

Comprehensive/integrated approach to services	35.1
Reconceptualization/reinvention of role	27.0
Client oriented /community based	21.6
Outcome/goal oriented	13.5
Citizen participation/volunteers/self-help	18.9
Devolution/empowering	13.5
Other	24.3

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approach<sup>3</sup> to service provision, which accounted for 35% of the cases. 27% of the cases involved reconceptualization of public services or government agencies' roles and goals. Bringing client orientation in service provision through client outreach or community based services accounted for 21.6%. In 18.9% of the cases innovations involved co-production through participation of grassroots and community organizations or self-help.

Innovating by empowerment or devolution giving greater decision-making authority to front-line workers or to non-profit organizations made up 13.5%. Other cases involved installing high-tech equipment and information technology, incorporating competition in the public sector, utilizing economic incentives, or publicization (as opposed to privatization). Thus, the most successful innovations in local governments covered a wide range of approaches and types, rather than being limited to particular types.

Almost 90% of the cases formed some kinds of partnerships in adopting and implementing innovations. As shown in Table 5, 21.6% had partnerships with the business sector, 13.5% with non-profit or social interest groups. 21.6% formed partnerships with other governmental units at the same or different levels and 8.1% had partnerships with citizens. In fact, 24.3% of the cases

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<Table 5> Types of Partnerships in Service Delivery (%)

With business sector	21.6
With non-profits/social interest groups	13.5
With other government units	21.6
With citizens	8.1
Combination of above	24.3
Not applicable	10.8

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<sup>3</sup> Comprehensive or integrated approach to service means integrating several services which were formerly provided separately or providing services in packages for comprehensiveness, and thereby enhance client satisfaction. Examples in the cases are integrating welfare and education services by providing welfare service in schools, and bringing more comprehensiveness to protective service by creating a system in which arresting criminals and providing care to victims can be better done.

had several types of partnerships, or a mixture of the types mentioned above. Partnerships were formed through contracts, collaborations, free provision of resources, relegation of authority, and other various methods.

### 3. Characteristic of Innovative Local Governments

Organizational characteristics of the winners of the Innovation Award were examined to see which of the variables of innovativeness in Table 1 are more associated than others with the most innovative local governments. To start with organizational size, the winning government agencies ranged from very large organizations such as the city governments of New York, Los Angeles and Philadelphia, to a housing authority of a very small town. Similarly, city or county sizes of the winners were as diverse. This shows that neither organizational size nor city size is important for local government innovativeness.

As for degrees of centralization<sup>4</sup> and formality,<sup>5</sup> most of the local governments had low to medium degrees as shown in Table 6. Although there were some agencies with high degrees of centralization and/or formality and still carried out innovations successfully, one can say that

<Table 6> Organizational Characteristics (%)

	High	Middle	Low	
Centralization		21.6	16.2	62.2
Formality		8.1	48.6	43.2
Complexity		8.1	83.6	8.1
Interconnectedness		64.9	10.8	24.3
Attitude toward change		62.2	37.8	0.0
System openness		59.5	21.6	18.9

innovative governments, more likely than not, tend to have relatively low centralization and formality in their decision-making structures.

In more than 3/4 of the cases, innovation was conceived and carried out by government employees with certain amount of professionalism in their respective departments. Only a handful of cases involved highly technical people or general citizens. Thus, in terms of complexity,<sup>6</sup> the majority belonged to medium category, and less than 10% each in high and low categories.

The majority or 65% of the winners of the Innovation Award exhibited a high degree of interconnectedness,<sup>7</sup> collaborating with a number of other departments in their local governments and/or in state or federal governments. 10.8% could be considered to have a medium degree of interconnectedness while 24.3% did not have any interdepartmental or inter-governmental

<sup>4</sup> Centralization was coded as high if decisions regarding innovation was mainly done by agency head or local council, as medium if decisions were made by general government employees in a horizontal manner, and as low if citizens, clients, private sector groups were involved in decision-making.

<sup>5</sup> Formality was coded as high if there were many rules and procedures regarding client eligibility, evaluation, etc., as medium if these were few and simple, and as low if much flexibility was given to front-line workers.

<sup>6</sup> Complexity was coded as high if innovation was designed mainly by scholars, researchers and/or professional consultants, as medium if mainly by government employees, and as low if mainly by citizens and community groups.

<sup>7</sup> Interconnectedness was coded as high if collaboration or cooperation for innovation involved 2 or more other governmental units, as medium if 1 other, and as low if none.

collaboration for the innovation. Since all the cases in this study were awarded for being most innovative, one can safely assume that the key members involved had a highly positive or open-minded attitude toward change. However, 37.8% of the cases initiated innovation in response to a crisis or as an implementation of legislation of upper level governments. These cases can be evaluated as having medium degrees of positive attitude toward change. Consequently, none could be seen as having negative attitudes toward change on the part of the leading members of innovative governments.

Most of the local governments exerted efforts in many directions to obtain funding for their innovations. Only 18.9% mentioned having some slack resources, contrary to the commonly held notion that innovation is possible only when resources are abundant. 43.2% did not have any financial assistance from upper level governments for the innovations. 18.9% had state or federal funding as less than 25% of the budget, 16.2% had between 25-50% of the budget, 8.1% between 50-75%, and 13.5% had over 75% of the budget funded by state or federal government. This diversity in funding shows that assistance from upper level government is not so crucial for success in innovation. In fact one could see that many local governments actively sought funding from the private sector and 43.2% of the cases had some financial contribution or grants from business sector or private foundations. In other words, rather than relying on upper government funding alone, local governments that carried out innovations successfully sought funding from various sources quite aggressively and creatively.

To what extent private sector groups and citizen participated in conceiving, adopting and implementing innovation was examined to evaluate the system openness of local governments. Those that could be evaluated as having a high degree of system openness<sup>8</sup> made up 59.5 % of the cases, 21.6% were in the middle level and 18.9% had low degree of system openness or no participation from the private sector. This shows that successful innovation in local government is more likely to be associated with a variety of interactions with private sector participants.

Regarding close proximity to other cities that adopted innovation, only 10.8% of the cases mentioned so, while others did not provide any information. Therefore the importance of this factor could not be evaluated from the case material.

#### 4. The Process of Innovation

##### 1) Agenda-setting

The problem of the local government agencies, leading to their perception of the need for innovation, varied in nature and in seriousness. Most of the problems involved insufficiency, ineffectiveness and/or inefficiency in services. Out of all the cases 21.6% were serious enough to be a crisis. In 70.3% of the cases the problems were identified by government, in 18.9% by non-profit or business organizations and in 10.8% they were identified by citizen groups.

Problems preceded innovations as solutions in more than 2/3 of the cases while in 29.7% it was the other way round. Innovation programs developed or suggested by some external groups and legislation requiring some innovative measures enacted before the government agency in charge perceived the need for innovation are situations of solutions preceding problems.

As can be seen from a good majority of the cases, it doesn't require a crisis or a pressure from private groups with problem awareness for the public sector to be innovative. Most of these government agencies recognized their own problems and took the initiative for innovations.

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<sup>8</sup> System openness was coded as high if various private sector groups and citizens were involved in innovation, as medium if private groups only in the same service category were involved, and as low if no private sector groups were involved.

## 2) Matching

In finding an innovation that match the problem, about 2/3 of the local governments used at least two different methods. As shown in Table 7, those that developed the innovation as a part of comprehensive or strategic plan<sup>9</sup> amounted to 13.5%. The most frequently found were cases

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<Table 7> Activities Undertaken for Matching Stage (%)

	Total	
Comprehensive / strategic plan		13.5
Program development	43.2	
Incrementally evolved	18.9	
Legislation	29.7	
Citizen / client consultation		5.4
Replicate public sector practice		13.5
Replicate non-profit sector practice	2.7	
Replicate business sector practice		10.8
Consultant	8.1	
Pilot program	29.7	

Note: As there were cases with more than one method the total is more than 100%.

where program development activities were undertaken for the innovations (43.2%). As these activities also involve planning, one can see that more than half or 56.7% undertook some kind of planning for adopting the innovations.

On the other hand, in 18.9% of the cases the innovations were incrementally developed or evolved over time. Therefore, innovations in local governments are adopted through planning, more often than not, although only a few belong to comprehensive planning.

In about a third of the cases there were legislation related to the innovations, enacted before or after the innovation programs were adopted. The same proportion conducted pilot programs before formally implementing the innovations. For 13.5% innovations that match the problems were found by replicating programs or practices in other governments, and for the same percentages they were found by replicating those in private sector organizations. Very few involved using consultants or consulting citizens or program clients in the matching stage.

The time it took from the initial conception of the innovation to full implementation were one year for 32.4%, two years for 29.7%, three years for 13.5%, four years for 10.8%, and more than five years for 13.5%. This shows that the majority of innovations got implemented within 2 years since the time of conception.

## 3) Redefining/restructuring

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<sup>9</sup> These are cases where general plans, such as comprehensive, strategic and master plans, for wider policy areas pre-existed or were formulated for the innovations. Examples in the cases are a comprehensive housing plan, a master plan for waste management, etc.

As the innovations the local governments found matching their problems are put into implementation, they were partially redefined according to organizational needs in about 65% of the cases. In examining how the innovations were redefined, additional services were added or service delivery methods were modified in a third of those that redefined the innovations. In 20.8% of them there were changes in service areas or agencies delivering the service. 16.7% were redefined by diversifying the service clients and the rest were redefined in other various ways.

The agencies in charge of the innovations were line agencies of the government (62.2%), central government agencies (16.2%), non-profit organizations (13.5%), and interdepartmental or interagency networks (8.1%).

In almost all the cases some organizational restructuring took place to fit with the innovations. Setting up a new unit such as a department, a division, or an office for the innovative programs pertained to 54.1%. Various committees - advisory, management, planning - were set up in 29.7% of all the cases. Task forces, coalitions and collaborating teams were created in another 18.9%, and non-profit organizations were created in 8.1%. 10.8% had overall restructuring of the organization while 8.1% did not have any restructuring.

Whether the source of the innovation was inside or outside the organization in question affects the amount of difficulty and uncertainty in implementing the innovation (Rogers, 1995). For local government innovations in this study, 70.3% had innovations come from within the government organization, 16.2% from outside and 13.5% had both inside and outside sources of innovations.

As for the uncertainties,<sup>10</sup> the majority of the cases had low or medium degrees of technical uncertainty and only 10.8% faced a high degree as can be seen in Table 8. Innovations with high degrees of financial uncertainty made up a bigger proportion, 37.8%, but still the majority had medium or low level of financial uncertainty. On the other hand, the greatest uncertainty involving the innovations was social uncertainty. It includes general social prejudice, resistance from employees, clients' negative attitudes, and lack of cooperation from other governmental units. High degrees of social uncertainty stemming from these kinds of situations pertained to 64.9% while only 2.7% were free of social uncertainty.

These aspects combined, indicate that most of the innovations in local governments were not so radical as to require highly technical knowledge or sweeping changes. However, these most innovative governments had to struggle for financial backing and above all for overcoming social resistance.

The champions of innovation who made major contribution to overcoming the difficulties

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<Table 8> Degree of Uncertainties (%)

	High	Medium	Low	
Technical Uncertainty	10.8	27.0	62.2	
Financial Uncertainty	37.8	27.1	35.1	
Social Uncertainty	64.9	32.4	2.7	

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and obstacles and bringing the innovations to success are shown in Table 9. Only in 8.1% of the

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<sup>10</sup> Types and degrees of uncertainties were based on the responses regarding difficulties and obstacles in adopting the innovations. The three types of uncertainties were coded as high if they were mentioned as major obstacles, as medium if as some difficulties, and as low if not mentioned.

cases there were no notable champions. Those who played the role of champions most frequently were heads of governmental units (32.4%) like departments or divisions in the local government. Other government employees and people in non-profit organizations accounted for 29.7% each. Politicians or elected officials such as mayors, governors, and council members made up 24.3%. There were a few cases where citizen groups or clients of the program assumed the role of champions.

#### 4) Clarifying

As the innovations were being implemented, most local governments expected some further adjustments and modifications would be needed but they were not specific enough to be codified. The duration of implementation up to the respective years the innovations received the Award were one year for 10.8%, two years for 27%, and three years for 18.9%. The remaining 43.3% had been implemented for more than three years. Based on the duration of implementation and the proportion of clients served out of potential clients, one could assume that in about a half of the cases, the use of innovation has become widespread enough. In other words, about a half of the cases could be considered as having entered the clarifying stage.

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<Table 9> Innovation Champions (%)

Politician / Elected official	24.3		
Agency head	32.4		
Other public employee		29.7	
Non-profit /community organization			29.7
Citizens	8.1		
Clients of program		8.1	
Other	2.7		
None		8.1	

Note: As there were cases with more than one champion the total is more than 100%.

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The most frequently cited side effects or obstacles of the innovations were financial factors (37.8%), attitudes of government employees, clients, and citizens (32.4%), and constraints of existing regulations (13.5%).

Regarding how the innovations affected the members of the organizations, most mentioned positive effects such as enhancements in job performance, cooperation, authority, pride and accountability. In several cases there were changes in organizational culture due to the innovations. However, as there were also a number of cases in which middle level managers were eliminated, innovations could bring negative effects to particular members of the local government.

#### 5) Routinizing

In the routinizing stage an innovation has become incorporated into the regular activities of the organization and thus is no longer considered a novelty. In this sense one can say that none of the innovations in this study have entered the routinizing stage since they were recognized as the most innovative programs in the 1990's. All of the local government innovations in this study are still on-going and none have been terminated. In 48.6% of the cases their innovations have been replicated by governments in other localities. Of those that were replicated 77.8% were diffused to

cities within the same state or other nearby localities, indicating that proximity is important in diffusion. In about a third of all the cases, although their innovations were not replicated by other organizations, many requests for information were being received and much interest was being expressed about the innovations. Thus, whether replicated or not, almost all of the award winning local governments are forerunners not only in adopting innovations but also in diffusing them as well.

## 5. System of Innovation Diffusion in Local Government

Based on the above examination of the characteristics of innovative local governments and their process of innovation, one can ascribe the system of innovation diffusion for local governments. In addition, each case was scored in terms of whether the innovation was adopted through a horizontal network of peers, whether local units made most of the decisions, whether it was a problem centered approach, whether there was reinvention of the original innovation, whether it was unplanned, and whether non-experts were mainly involved. These are the major features of the decentralized system of innovation diffusion according to Rogers (1995).

Based on the range of scores about 45.9% of the cases could be evaluated as having a decentralized system of diffusion and 54.1% as having a hybrid system. None could be seen as a centralized system of innovation diffusion. In a purely centralized system, the adoption of an innovation developed by researchers and technical experts is decided by top administrators who then instruct a comprehensive plan to be formulated for the innovation.

In most of the cases one could see that the public servants consulted one another, searched for an innovation to solve the problems they identified, and made decisions regarding the adoption of innovation. As the innovation got implemented, more often than not, it was reinvented according to organizational needs. Although formulating a comprehensive plan for the innovation was rare some kind of planning took place for program development, indicating that adoption of innovation is usually planned rather than unplanned. Thus, more than half of the cases belonged to the hybrid system, possessing some features of the decentralized system as well as those of the centralized system. A little less than half of the local governments exhibited a typical decentralized system of innovation diffusion. It is clear that the system of innovation diffusion in successful local governments is far from the traditional centralized system.

## IV. Conclusion

From this study on the organizational characteristics and the process of innovation in local governments that were honored for their success, some important implications for public sector innovation can be drawn. To be able to bring innovation in public services the government organization does not have to be big in size or abundant in resources. Moreover technical expertise or advanced knowledge is not a necessity either. On the other hand it is important to have flexibility in role performance, rather than a strict compliance to rules and procedures, and a horizontal or bottom-up structure in decision making.

The successful local governments bring about innovation to public services by taking a comprehensive or integrated approach to services, reconceptualizing or reinventing the existing government roles, having a client and/or outcome orientation, incorporating citizen participation or by devolution and empowering. Most of them form multiple partnerships with various groups in the private sector and other government agencies.

The process of innovation in local governments shows that initially innovations are sought to solve the problems usually identified by the government agencies themselves and that a number of different methods or routes are taken to formulate the innovations. Adopting an innovation through comprehensive planning is as rare as adopting it without any plan and most of the times some planning activities are undertaken for program development.

Innovations so developed usually get modified and readjusted in some ways when they are put into implementation. At the same time organizational restructuring takes place to adjust to the innovation, the most frequent being creation of a new unit in the government. The majority of innovations in local government come from within the government organization rather than from without. In adopting and implementing the innovations difficulties related to social factors are much greater than those related to technical or financial factors. In overcoming these difficulties and bringing success to innovation, those who assume the role of champions are usually people in the government - agency heads, other public servants, elected officials, in order of frequency.

Even in the stage where an innovation is put into widespread use, the local government continues to face financial constraints and social resistance, which need to be addressed continuously. The innovative governments are making active contribution to the diffusion of innovation they adopted by providing information and assistance for the innovation to get replicated in other government organizations. Overall, the characteristics of innovative local governments and their process of innovation indicate that the system of innovation diffusion is a decentralized or a hybrid system rather than a centralized system.

In summary successful innovation in local government can be achieved through fresh and novel ideas with flexibility and a sense of commitment to change in organizational culture. The most outstanding innovations in local government are not necessarily those that involve radical and bold changes with high risks. Rather, the majority of them are small but creative ideas that could bring about substantial positive effects such as efficiency, accountability, client satisfaction and quality assurance to public services. Cases in this study demonstrate that there are numerous ways the public sector can solve its deeply imbedded problems other than by totally transferring the service to the private sector. They also demonstrate that adopting innovations successfully does not necessarily require huge investments and sweeping changes as is commonly thought. Breaking away from such commonly but mistakenly held idea is a beginning for innovation.

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