

Spain and the Information Society: Plans or Policies?[‡]

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1 Introduction

This article starts with a fact: Internet penetration levels in Spain are extremely low compared with other European countries. In the nineties this situation was justified by the relative delay in the adoption of public and private initiatives, oriented towards the development of the Information Society (IS). However, data in 2003 show that the gap still holds or even tends to increase with the rest of the evaluated areas.

Spain is 14 points below the European mean in households with Internet connection (30% vs. 44%), which is similar to the gap that exists in the percentage of on-line buyers (9% vs. 24%, compared to the total Internet users), or with general users (44% vs. 54%). Nevertheless, a first overview of the public initiative shows that in recent years there were a plethora of actions to promote the incorporation of the new technologies of Information and Communications (ICTs).

In Spain there were many plans and actions, and oriented towards all sectors. They started with the first initiatives oriented towards the administrative modernization. Then moved onto more than three hundred initiatives in the first strategic plan of development of the IS¹. Then it came finally another strategic

plan (España.es).

These examples suggest that one of the reasons for the insufficient public action to the development of IS may come from the lack of efficacy and/or efficiency of the designed policies. Our hypothesis is that there have been plans and actions, but not policies, understood in the strict sense of a coordinated and integrated design that has a definite objective. On the contrary, we suppose that the policy was conceived as a sum of actions without any connection or integrated objectives. The plans have not produced positive results in general, and those that have some sort of success have achieved it without a general idea that coordinates and motivates the diffusion of the IS in the state. The following research aims to analyze the main public actions of promotions of the IS and link the conclusions with the analysis of public policy in this area.

To sum up, our objective is to analyze the main public policies of promotion of ICTs in order to understand the variables that explain their efficacy-efficiency in the design and implementation. In order to do so, we will cover the strategic plans that have been done in Spain:

- First, we will study InfoXXI. The plan was fully developed in 2000-2003, which allows us for an evaluation of its results, both the design or implementation.
- Second, we will analyze the main characteristics of España.es (2003-2005), baring in mind especially its similarities and differences with InfoXXI. Given that this plan has just been released, we will center our efforts on the design of the new

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¹The IS has been defined as the attribute of a specific form of social organization in which, due to the new technological conditions, the generation, processing and transmission of informa-

tion are converted into fundamental sources of productivity and power (Castells 1997, 47). Inside the IS, Internet is the most relevant topic, since it shows the highest potential for political, social and economical transformation (Castells 1997, Castells 2001, Lyon 1988, Dutton Ed, Dutton 1999, Cebrián 1998, Mounier 2002)

strategic action and its reference documents. This will allow us to suggest the possible evolution of the development and consequences of España.es.

We will begin with a quick review of the context in which public policies of Information Society promotion are embodied in Spain, keeping in mind their relationships with the main lines of the European Commission. We will frame the Spanish development in this field by recurring to different indicators. And afterwards we will analyze the two strategic planning initiatives.

2 Public Policy to reach the Information Society

The origins of the of Internet are in the United States, first in partnership with the Defense and afterwards with academic centers. Europe joined the promotion of the Information Society in the nineties (Mounier 2002). The liberalization of telecommunications and the entrance of private enterprises in the Internet, parallel with the use of the ICTs for administrative reform, economic promotion or education, convert the area in a relevant space for public intervention. In relation to this, we can mention documents as the Europea (1993), that proposed, in contrast with the North-American model centered on the digital economy, “to defend a social European model that allows at the same time to invest and modernize the economy, avoiding social fractions”. Or the report entitled Europea (1994), known as the *Bangemann Report*, whose main lines were oriented towards the creation of networks of universities and research centers, the implementation of telematic services on small and medium enterprises, the control of airspace and roads, the creation of networks of health care and a network of public European administration, amongst other objectives.

Despite those initiatives, Europe was far behind the United States and Japan (Werle 2001). At the end of the decade the first European plan of strategic action in the area of Information Society, the eEurope (1998), was designed. The European Commission proposed the achievement of common objectives (number of computers per school pupil, rate of Internet use, security in digital exchanges, etc) that every state should develop. The objectives have been updated accordingly and the Commission has been in charge of its evaluation, while member states care about the con-

crete action plans. However, the direct comparison amongst states was an intense stimulus to impulse governments to develop their policies (Jordana, Sancho, Fernández, Welp & Puig 2003).

Soon after the launch of eEurope and, related with the objectives of the European Commission, the InfoXXI was approved in Spain. While it started in 2000, its actions were extended for a period of 3 years. However, prior to InfoXXI some other sectoral initiatives were carried out, which were especially oriented towards administrative modernization (Jordana, Sancho, Fernández, Welp & Puig 2003). As we will see in the next section, this sectoral logic will be constant also in the design of the strategic plan, and will explain part of the failures. Despite the previous sectoral actions, the actions in InfoXXI and the constant participation of regional governments (Comunidades Autónomas)², data shows, in 2003, that Spain was still at the bottom of the European Union (EU-15) in almost all indicators of IS development.

As it can be seen in table 1, the percentage of Internet users reached 44% in Spain, while the European mean is 10 points above with (54%). It is the same situation in regards to connectivity: only 7% have access both at home and work, 14% only at home and 5% only at work. The European mean is higher in the 3 items, with 16% (home and work), 20% (home only) and 6% (work only). The differences increase in the development of electronic commerce, where only 9% of individuals in Spain are regular on-line buyers and 8% occasional, while the European mean is 24% and 16%, respectively.

Now, while public intervention in Internet is increasing in all the world, it must be asked whether the plans are efficient as promoters of IS or, on the contrary, whether there are other variables that explain their development. The first research shows that there are many variables to take into account to explain Internet diffusion and, amongst them, there is a link between Internet rates with economic development (OECD 2001, Hargittai 1999, Guillén 2001). But, on the other hand, many studies have shown that even if wealth has a central effect on Internet diffusion,

²At the regional level the first strategic plans were developed in 1996-97, in Murcia and Extremadura, under the impulse of the RISI program (Regional Information Society Initiative) of the European Union. Also Valencia developed a strategic plan oriented towards administrative modernization. Catalonia started its own strategic plan also before InfoXXI, in 1998. Many other regional governments developed sectoral policies in education, administrative modernization or in the economic sector.

Country	Internet users		Use by location				eCommerce users	
	Regular	Occasional	Home and work	Home	Work	Other	Regular	Occasional
Germany	53	8	19	22	6	5	31	17
Austria	54	5	17	21	9	6	22	19
Belgium	45	8	15	17	9	4	15	7
Denmark	68	9	34	23	6	6	30	25
Spain	35	9	7	14	5	9	9	8
Finland	63	7	27	22	10	5	28	26
France	36	6	9	17	6	4	20	21
Greece	24	10	5	7	7	5	17	15
Netherlands	63	10	25	33	2	3	10	8
Ireland	51	14	14	23	12	3	23	19
Italy	37	8	11	17	6	3	18	28
Luxembourg	52	6	16	22	7	6	15	13
Portugal	28	6	5	11	5	7	24	13
United Kingdom	61	9	24	24	9	3	10	10
Sweden	66	8	28	28	6	4	37	17
EU 15	46	8	16	20	6	5	24	16

Table 1: Internet users, Usage by location, eCommerce users (in % over the population)

Source: SIBIS: 2003

this variable is not enough to understand differences between countries with similar developments. Also some variables are needed to understand why countries and/or regions that are less developed show better results than richer countries and/or regions (Milner 2002, Castells & Himanen 2002, Gibbs, Kraemer & Dedrick 2003, Jordana, Fernández-i-Marín, Sancho & Welp 2005).

This and other research point to the fact that Internet expansion in Spain is slower than its GDP per capita would predict (Guillén 2001), which allow us to center our focus on public policy. In this sense, we can not establish a linear causal relationship between public policy and Internet adoption, but we can point out explanatory elements of the low IS diffusion in Spain. The state is not the single actor in the impulse to the IS. The private sector has a fundamental paper in the promotion, even though states play a key role in framing competence rules, that have a relevant effect on the impulse of Internet in areas such as connection or electronic commerce. We can see, hence, that the relationship between public and private power, and in this sense the role of the public sector as promoter of exchange conditions that favor the development of the Internet, is central to explaining the way in which IS is applied in a determined context.

From the previous notes, we start by supposing that public policies can be an efficient instrument of IS promotion (Jordana, Sancho, Fernández, Welp & Puig 2003, Jordana, Sancho & Welp 2003). But to do that, they have had certain conditions. Planning, by itself, does not bring better results.

It is worth mentioning that regarding the results,

other alternatives exist. To be precise, we are referring to the gap that can be produced between the availability of infrastructures and its effective use, and even between its use and the process to get more efficiency. For example, Spain is amongst the leaders in the world in the area of public services on-line, as well as in the percentage of connected computers by student or schools with Internet connection. However, those measures should be contrasted with other aspects. Basically, the use of the Internet by citizens and public officials on the one hand, and by teachers and students on the other. As some reports have explained, the use of technologies has not been so widespread as the need to form teachers and bureaucracies in order to increase the efficiency in the use of the Internet (Auna 2002, Telefonica 2002, Gallup/Comisión Europea 2002b, Gallup/Comisión Europea 2002a).

3 Efficacy vs. rhetoric: planning for what?

In order to analyze the InfoXXI Plan we have collected the information that the Ministry of Science and Technology offers on the website of the plan (infoxxi.es), that has been active from the beginning of the plan until 2004, is constantly updated. The last date from which we have collected information is 17 February 2004. That is, one month and a half after the official end of the InfoXXI⁴.

⁴The available information included the following items: whether it is emblematic or not, date of the last update, expected date of beginning and end. It also allowed, for every year, to know the total amount of planned budget, own budget, additional budget

Country	GDP per capita (2004, EU=100)	Internet rate-1 (2003)	Internet rate-2 (2003) ³	e-Gov (2001)	Index
EU-15	100	45.3	54		
Luxembourg	183.63	36	58	2.2	
Ireland	117.41	32.8	65	2.16	
Denmark	110.53	62.5	77	2.47	
Austria	108.51	41.6	59	2.14	
United Kingdom	108.16	58.8	70	2.52	
Netherlands	106.02	66	73	2.51	
Belgium	104.31	36.4	53	2.39	
Sweden	102.21	76.9	74	2.45	
France	101.39	37.3	42	2.33	
Finland	99.14	50.7	70	2.33	
Germany	96.81	54.3	61	2.46	
Italy	95.64	35.4	45	2.21	
Spain	86.27	32.5	44	2.3	
Greece	73.79	15.2	34	1.77	
Portugal	66.52	19.2	34	2.15	

Table 2: GDP per capita, Internet penetration and e-Government index in Europe-15. Data in %.

Sources: europa.eu.int; internetworldstats.com/stats4.htm; SIBIS 2003; United Nations. Division for Public Economics and Public Administration

Apart from the information for the citizen on the website, we have classified the actions of InfoXXI regarding the criteria *impact-relevance of the initiative*. Keeping in mind the complexity of the initiative, its innovative power, the human resources needed to implement it and its impact, we establish two types of actions:

Low impact-relevance They can serve as a basis for a real transformation, a merely informative web page, or an intranet without management possibilities. They are simply an adaptation of existing forms of interaction. For example, buying computers or the creation of web pages, creation of intranets that do not allow management⁵.

Medium-High impact-relevance High level of complexity, required resources and expected impact on the IS, in relative or absolute terms. Initiatives needed to create critical mass capable of sustaining the development of the ICTs and

and the real execution.

⁵Given the advances in the objectives in the frame of the European Union, we consider of low relevance all those actions that were in the first and second levels of interaction in public administration (access to information and download of forms). We include amongst the medium-high relevance group the projects with levels 3-4 (full interaction and transactions).

reach the European parameters, in which Spain is at the bottom. For example, formation initiatives, development of complex infrastructures, creation of web pages in value added contexts, relevant content creation. Then we divide the high-medium relevance projects according to the sector to which they belong:

Infrastructures and complex operating systems

We include the development of networks, that require a substantive amount of investment of time and that can be the required step to allow access in all the territory. We also include the design of interactive systems between administrations and citizens that allow the on-line services, electronic certificates, etc.

e-Society It includes the projects oriented towards society such as teaching workers or professionals or the creation of contents, promotion of e-commerce, R+D funding, etc.

e-Administration We include here those projects of e-government services in levels 3 or 4. That is, in the levels that allow the citizen to do on-line transactions

with the administration, administrative simplification, etc.

Other There is an additional category to include everything that can not be contained in the previous categories. The numeric importance of this category is a sign of the first problems with the plan. Initiatives in this category are very diverse, and include activities that were working prior to the launch of the plan (the possibility of doing, via electronic means, passports in the Kiev consulate, which has been active since 1997), norms, proposals of formative creation... and other initiatives enumerated by some departments (having an on-line board of the labour demands for the Ministry of Defense, or on-line price indicators of the Ministry of Economy) that are simply an update of contents in web pages.

It is worth mentioning that the data of every initiative are easily accessible from the Ministry web page, and they are updated. The InfoXXI plan is a collection of 290 initiatives, each one assigned to a concrete Ministry, according to the following distribution:

Data relative to the update process of the information show that, apart from a core of 50 initiatives that have not been updated during the last year, the greatest majority of them have been updated recently. Hence, we can say that the concern for keeping the information on the webpage up to date is acceptable.

3.1 Most relevant projects of InfoXXI

In order to sort through the nearly 300 initiatives during the elaboration of the plan, they were divided as being “emblematic” or not. We ignore the criteria that were used to decide which ones were candidates for being “emblematic” or not, or what the label means. It is not clear, for example, if the “urgency” criterion is used to help differentiate the emblematic or not. But it is plausible to suppose that those with more specific weight (either in funds, political importance, social support) would be the ones selected to be classified as “emblematic”.

In absolute terms, 22 initiatives were considered emblematic (7.5%). 19 of them we have considered to be of medium-high relevance, and 2 of low relevance. The latest ones are the historical heritage in the net (Ministry of Education, Culture and Sports) and the web portal of tourism in Spain, from the Ministry of Economy.

Another characteristic of the emblematic initiatives is that all the ministries have at least one of their initiatives classified as “emblematic”. Except for the Ministry of the Spokesperson. The Ministries of Science and Technology, Economy and Work and Social Affairs have three each.

The analysis of the budget of every initiative can be done through the four components in which this section in the Ministry of Science and Technology is divided: planned budget, own budget (the one that is provided by the ministry which is responsible), additional budget (provisions of Science and Technology Ministry and regional governments) and executed budget. Moreover, for every category there is information divided by the three years of execution of the plan: 2001 to 2003.

In figure 1 we present the distribution of planned budget and executed budget, according to whether the initiative is emblematic or not⁶. In both cases the emblematic initiatives show higher means. However, in general, the range of variation is lower. That means that there are actions that have a systematically bigger budget than any of the emblematic initiatives. Amongst the 15 initiatives with the biggest planned budget, only 5 were emblematic, and 4 had bigger budget than the first emblematic. As a consequence, the argument of the budget to be the relevant to choose the initiatives does not seem plausible.

Given that there exists at least one emblematic initiative from the Ministry, and that it is not clearly related with the planned budget neither with more or less relevance, it is logical to conclude that emblematic initiatives were chosen according to representative criteria. That is, each Ministry choose the initiative that was considered the most important. If things were that way, this kind of decision would not have helped to convert the most necessary or relevant initiatives to be the most visible. However, it is difficult to formulate a hypothesis really founded on the criterion that was used to divide the initiatives between “emblematic” or “not emblematic”.

⁶Only the initiatives with planned and executed budget over 0 euros have been considered. As a consequence, they do not appear those that do not have anything assigned or simply 0 euros. Moreover, and in order to facilitate the readability of the plot, the scale has been modified (log), and so the numbers are not indicative.

Number of initiatives	Type
111	Low impact
24	Medium-High impact (infrastructures)
60	Medium-High impact (e-Society)
57	Medium-High impact (e-administration)
38	Other

Table 3: Number of initiatives in InfoXXI according to their relevance/impact.
Source: own elaboration

Number of initiatives	Ministry
4	Justice
6	Defense
6	Spokesmen
6	Public Administrations
7	Foreign Affairs
7	Health and Consume
8	Agriculture, Fishind and Food
11	Environment
14	Infrastructures
17	Treasury
17	Security
20	Educations, Culture and Sports
23	Economy
26	Presidency
58	Work and Social Affairs
60	Science and Technology

Table 4: Number of initiatives of IS promotion in InfoXXI, by Ministry
Source: own elaboration, with data from `infoxxi.es`

3.2 Temporal duration is an analysis element

The InfoXXI plan was conceived to be executed between 2001 and 2003. The information offered by every initiative allows us to track its development. The projects have assigned dates of the beginning and end. However, to be precise, not all do, as there are 90 initiatives that do not have at least one of the dates. 2001 is the year in which the majority of the initiatives (188) were started. Even if we emphasize that the temporal distribution of InfoXXI begins in 2001, there are 14 initiatives that have an assigned start date prior to 2001, even as far back as 1997. Most of those belong to the PISTA initiative. In particular, 6 out of the 17 initiatives of the Treasury Ministry began before 2001, and all of them refer to systems to connect citizens to the administration.

As it can be seen in table 2, one of the few sec-

tors where the Spanish general administration is at the same level as other European administrations (or even in the top), is in the Treasury and the tax return using Internet. Hence, it does not seem a mere coincidence that the single Ministry without direct responsibilities on technology that has started to use ICTs with the citizens prior to the Plan, is the one that has comparable indicators amongst European countries. There are two possible answers to explain this. It can be simply due to having started before, the effects are perceived before. But it can also be understood that the bureaucrats in the Treasury Ministry took a clear decision to use new technologies, before the Science and Technology Ministry asked them to elaborate a list of suitable projects to be considered for InfoXXI. We will see more evidence before arriving at this conclusion.

It is surprising that for the 90 initiatives that lack one of the dates, the criterion to interpret “similar” initiatives is not always the same. For example, the

Number of initiatives	Month of the last update
54	March 2003
2	July 2003
3	November 2003
7	December 2003
192	January 2004
32	February 2004

Table 5: Last month of web page update of the initiatives

Source: own elaboration, with data from `infoxxi.es`

initiatives that are executed in a concrete moment of time but, for their own nature, are not completed. We are referring to the creation of web portals or services with information to the citizen. Those initiatives were developed in a concrete moment, but once the portal is on-line it is not reasonable to think that its execution is delayed on time. But amongst this group we find either initiatives without start or end dates (passports in Moskov consulate, traffic information, ...) and others that do have initial date but not end date (passports in Kiev, software to tax return).

When we link the relevance criteria of every initiative with the predicted duration of every initiative, we see that for the medium-high relevance category, its initiatives last between 2 and 3 years, while for the majority of low relevance and other, their duration is mainly not determined. In this case, thus, initiatives that we have considered as more relevant are also those which need more time to develop.

3.3 Budget

The analysis of how the budget is assigned and executed would need a whole article. Probably it is due to a very unusual fact amongst bureaucracies: the projects of InfoXXI present information for every year of the budget previously assigned and the budget really spent. The effort is noticeable in this point, even though transparency in budgets is something that "should be" the rule in public administration. In any case, the analysis of this data gives an uncomfortable conclusion about how the InfoXXI was designed and how it has been executed. And it gives some clues on why the result of the plan can not be considered successful.

With an initial perspective, it is surprising that almost a quarter of the projects (70) do not have, for any year, any quantity assigned (that is: either it is not

available or 0 euros). We should recall that this data has been obtained at the end of the plan, so we are not talking about resources that are assigned as the plan is developed.

There are few initiatives where the budget is financed by more than the origin Ministry. 96.5% of the planned budget of the initiatives belongs to the Ministries in charge of the initiatives. And only the other 3.5% to Science and Technology Ministry and regional governments. In fact, only 16 initiatives in 2001 have budgets that consider shared financing. And most of them do not contribute by more than 20%. This concrete aspect of financing proves that cooperation with other Ministries or other administrations (regional governments) is not important. Hence, initiatives are lonely islands that could be more effective if they were not alone.

The number of initiatives that have not spent any money in 2001 or 2002 is 93. So almost one third of the initiatives were not executed in any aspect during the first two years of the plan. This includes either initiatives that didn't have any specific assigned budget or initiatives with 0 euros. On the other hand, however, there are many initiatives that, without any planned budget, they spent some money. The correlation coefficient between the planned budget and the executed budget for 2001 and 2002 is very stable: .709 and .686, respectively.

If we took the global money managed in InfoXXI, we can see that from the 2,577,768,000 euros that were planned to be spent, only 2,126,880,000 euros were actually spent. It is 82.5%. It is not a low execution rate, that shows that the low success of the plan has not been according to money not spent. However, if we look at the numbers with more detail we will see that this 82.5% is a very diverse reality. As we have written before, there are initiatives that did not have any assigned budget, but some money was spent, and others

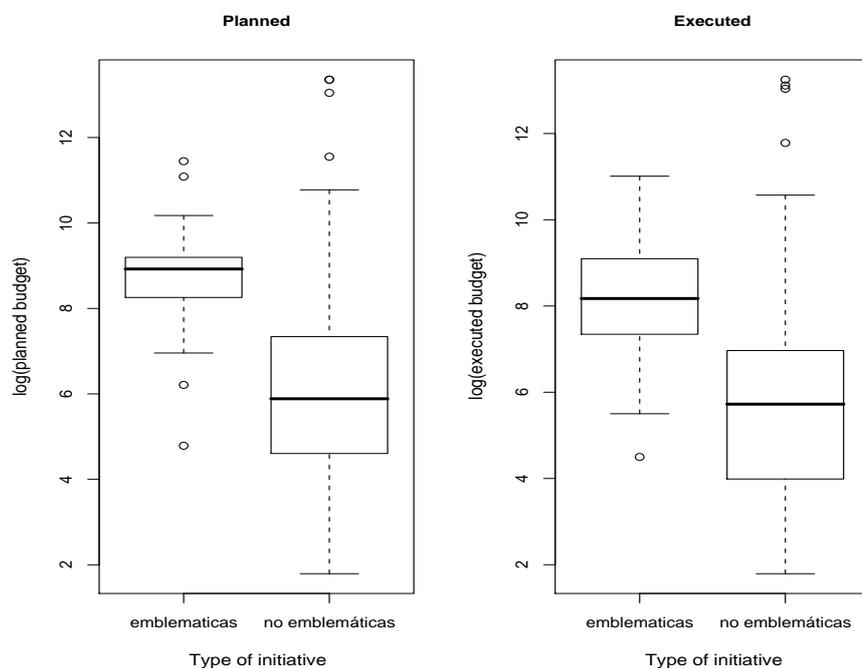


Figure 1: Planned and Executed budget for InfoXXI, according to type of initiative (2001–2003).
Source: own elaboration with data from `infoxxi.es`

that were originally heavily funded have not been executed. This fact, along with the detail that any criteria of why some initiatives are executed and why some are not, make us think that the execution has been heavily rooted in sectoral logic. The impression is that every Ministry has been developing initiatives as a function of their own necessities, without having in mind that the initiative was a part of a broader plan of IS development.

In table 6 the relationship between the planned budget and the amount spent on every initiative can be observed by departments. The first three rows show, respectively, the sum of money that the Ministry was planning for its initiatives, the sum that was actually executed and the percentage of the execution. According to those numbers, the most reliable Ministry was Defense, which spent exactly what it was planning to spend. The least responsible Ministry was the Ministry of Foreign Affairs, that spent only the 30% of what was planned. And finally the most responsible Ministry was the Treasury, which has spent 114% of

what planned at the beginning.

The last four columns in table 6 provide more information. The sum of the over spent represents the amount of money that the Ministry spent above the plan for each initiative. The under executed is exactly the same, but on the other side. The deviation is the addition of what was over spent and under spent. And finally the last column is the percentage of deviation with respect to the total amount of money initially planned by the ministry. Having disaggregated the data allows us to see subtle details that are out of the focus when we look at the data at a global level. We can see that the Ministries of Infrastructures and Security were the least responsible. The most responsible were Justice, Work, Social Affairs, Budget and the Spokesman Ministries.

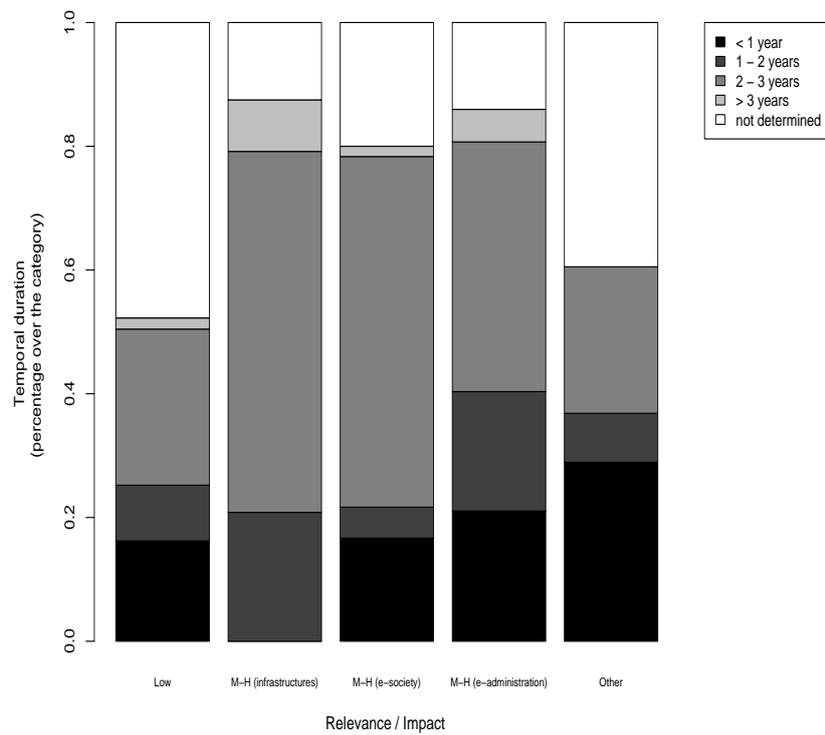


Figure 2: Duration of the initiatives and relevance.

Source: own elaboration with data from infoxxi.es

Ministry	Planned	Executed	% Executed	Σ overspent	Σ under-spent	Deviation	Deviation %
Public Administrations	22,101	16,902	76.48	712	5,911	6,623	29.97
Agriculture, Fishing and Food	7,098	5,360	75.51	1,261	2,999	4,260	60.02
Foreign Affairs	15,989	5,339	33.39	0	10,650	10,650	66.61
Science and Technology	943,601	886,292	93.93	164,136	221,445	385,581	40.86
Defense	9,559	9,559	100	0	0	0	0
Economy	58,527	40,554	69.29	1,359	19,332	20,691	35.35
Education, Culture and Sports	32,488	21,207	65.28	3,701	14,982	18,683	57.51
Infrastructures	13,795	854	6.19	0	12,941	12,941	93.81
Treasury	15,439	17,630	114.19	3,006	815	3,821	24.75
Security	37,960	5,555	14.63	304	32,709	33,013	86.97
Justice	53,245	43,187	81.11	0	10,058	10,058	18.89
Presidency	2,371	993	41.88	0	1,378	1,378	58.12
Environment	5,486	1,794	32.7	48	3,740	3,788	69.05
Spokesman	792	594	75	0	198	198	25
Health and Consume	7,162	6,385	89.15	728	1,505	2,233	31.18
Work and Social Affairs	1,352,155	1,096,074	81.06	8,356	264,437	272,793	20.17

Table 6: Execution of the initiatives of InfoXXI, by Ministries
Source: own elaboration, with data from infoxxi.es. Data in thousands of euros.

We can say, thus, that the Foreign Affairs, Infrastructures, Justice and Spokesman Ministries have been non attending their initiatives, under spending systematically. This is especially severe in the Justice and Infrastructure Ministries. Moreover, both had relatively high budgets. The Ministry of Economy shows more than half a dozen initiatives under spent and a half correctly spent. Treasury and Education, Culture and Sports, on the other hand, have executed initiatives that didn't have a planned budget at the beginning of the plan. In any case, they also demonstrate that the execution of the plan has varied a lot amongst Ministries. There has been, thus, very different aims to reach the compromises of InfoXXI by departments.

If we take a look at the effective spent criterion and its forecast, with relation to the criterion of relevance, we found answers to the errors and successes of the development of the plan. The case of the initiatives related to infrastructures is especially significant. It can be seen that the two initiatives that were more demanding in terms of resources—and with difference—, have been very far from its execution. Initiatives related with e-administration show the greatest level of accomplishment.

The difference that we observe would allow us to understand why Spain is amongst the leaders in Europe in the provision of on-line services, while it is on the tail regarding infrastructures.

Fortunately, of the initiatives that we have considered as being of low relevance, only seven have spent more than what they were expected to, while the majority of them have been under spent.

With all those numbers we can conclude that there have been severe differences derived from the design and development of the plan that have hindered its capacity to reverse the low indicators of development of the IS in Spain. Maybe the greatest inconvenience is that the plan was not conceived as such, but as the addition of initiatives that the Science and Technology Ministry asked other ministries to design or propose. The result is that each ministry understood different things about what would be considered an initiative. But it is necessary to note the fact that the planned budget to develop the initiatives was not defined for a quarter of the initiatives at the end of the plan, or the fact that a third of the initiatives have not received any money.

4 Learning or path dependence: the new plan

At the end of 2002, the failure of the general objectives of InfoXXI was evident. Moreover, there was a necessity to design a new strategy to impulse the Information Society. It was with those ideas in mind that under a proposal of the Science and Technology Ministry a commission was formed. It was the Special Commission to Study the Development of the Information Society in Spain (CDSI). Its final report was presented in April 2003 as "Improving the opportunity of the Information Society in Spain". The Soto Commission (as it was known) was formed with relevant personalities of business and government⁷, and even if all social sectors were consulted, it was criticized as not having taken into account the voices of Internet user associations, representatives of the research centers, public universities or regional governments representatives.

The report of the Commission organized its criticisms around the following areas:

Public Administration The report remarks that the supply of services is acceptable, but the use of ICTs by the citizens is very low, and so are the benefits. For example, the rate of PCs in the state bureaucracy is 74%, 52% in regional bureaucracies and 44% in local administration⁸. The ratio of computers by public employees (13% for the state level) is lower than in the private sector (37%). The use of services is high when looking for information (41% of the users vs. 37% for Europe), but the use for transactions is lower (only 14% vs. 27% in Europe).

Small and Medium enterprises In this sector there

⁷The Commission was formed with representatives of different entities. Its president was Juan Soto Serrano (Honor President of Hewlett Packard Spain), the Vice president Jesús Banegas Nuñez (President of the National Association of Electronic Industry, ANIEL). The vocals were Belén Amatriaín Corbi (President and Counsellor of Telefónica Publicidad and Information), Juan Arena de la Mora (President of Bankinter), Lluís Bassat Coen (President of Bassat Ogilvy Iberia), Gabriel Ferraté i Pascual (Universitat Oberta de Catalunya), Juan Pi Llorens (Vicepresident of IBM division for financial services in Europe, Middle East and Africa), José Manuel Serra Peris (Public Prosecutor and Counsellor of Auna Telecomunicaciones), Jon Zulueta (Counsellor of Sanitas), and the Secretary was Leopoldo González Echenique and Castellano de Uabo (General Director for the development of Information Society in the Science and Technology Ministry).

⁸The highest level of PC penetration in an administration measures the ratio of computers by public employee.

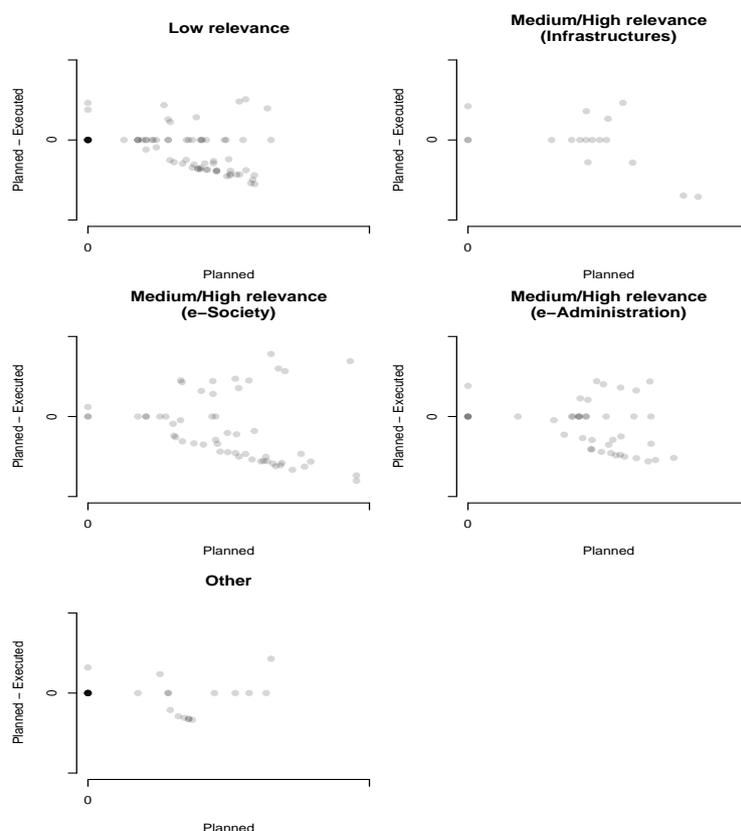


Figure 3: Relationship between the planned budget and the money under or over spend for every initiative, according to the relevance.

Source: own elaboration with data from infoxxi.es

are a great variety of scenarios, especially linked to the size of the enterprise. Hence, all big business (more than 250 employees) have Internet access, but inside them only 49% do use computers. 88% of those firms have web page, but the possibility to carry complete transactions is very low. The majority of the firms consider that their technological development is low, which is observed in the percentage of enterprises connected with providers or clients (7% against 26% in Europe). The presence of firms in Internet is very low (30% in Spain, against 80% in the United Kingdom). Also only 5% of Spanish firms sell in the net.

Households Low development is especially severe in the rate of computer users (17% opposed to 25% in Europe). Also frightening are the number of

connected households, as we stated in the beginning of section 2. In contrast, the expansion of the broadband is amongst the highest in Europe. When users are compared, there are great differences for age and income, and it is especially oriented towards looking for information on the Internet (only 14% buys using Internet). In the report this is linked with the low number of services and contents, as the low number of hosts connected and secured web server also suggests (13 hosts per 1000 inhabitants, against 33.3% in Europe).

Education The report states that there is an acceptable development in ICTs, with 7.3 pupils connected by computers, versus 6.3 in Europe, and better quality connections, with higher rates of broadband (45% against 29% in Germany or 14%

in Italy). However, the potential of this infrastructure has not been developed. This is observed in the scarce quantity of schools that have intranets (37% against 53% in Europe). Regarding the use, while in Spain the time devoted to ICTs is .4 hours per week, it is .7 in Europe).

Health There exists a high potential to extend the use of ICTs to value added services for patients. Amongst the main hospitals, only 6% have a web presence with personalized contents. The rest simply present general information without any kind of transactional characteristics. And the number of doctors that use a PC is 70% versus 82% of the European mean.

Justice In this field there is also great potential of development, specially significative given the severe use of paper in its processes and the low level of satisfaction of citizens, who perceive the justice services as slow and inefficient. The limited migration of print to digital support can be observed by comparing the number of computers connected to intranets in the Ministry of Justice (16%) against the mean in the state level administration (59%).

With this diagnosis, the main recommendation of the report is pointed towards a change in the management of Information Society. For this to happen it was necessary to (1) elaborate a new plan, (2) give enough political impulse to the plan, (3) provide a private approach to the management of the plan, with organization and clear budget and (4), wide communication to the society (Comisión Especial de Estudio para el Desarrollo de la Sociedad de la Información 2003, 7).

Criticisms are in agreement with many of our results of the analysis of InfoXXI. All those elements suggest that the InfoXXI was quickly organized with low references in mind to achieve results in terms of public policy. The CDSI mentioned that “it is necessary to elaborate a realistic plan with measurable objectives, clear responsibilities, enough resources assigned, structured around concrete actions, effective mechanisms of control and taking into account different horizons for initiatives” (Comisión Especial de Estudio para el Desarrollo de la Sociedad de la Información 2003, 8).

We will now analyze the design of España.es, taking into account the following items: number of initiatives

and relevance, participation of different public administrations and institutions of civil society in the design process, covered sectors, level of detail of the initiatives, budget and relationship and coordination with other public policies.

Even if we have said that the InfoXXI was a model to follow regarding the detailed description of budget —what allows us to know exactly how much money was planned for each initiative, and how much was executed at the end—, the España.es plan was born with a serious deficit in this matter. Even if it is announced in the own text of the plan, the economic memo has not been yet elaborated. In fact, this is also one of the main criticisms that it has received. InfoXXI was a failure, but at least we can know what was intended to be achieved and what was really done. Without an economic memo, and without the detail of the initiatives, we can not really know whether España.es will improve. The only data regarding economic investment is the one shown in table 7.

The contrast of numbers is huge: 2,555,768,000 euros planned for InfoXXI and 1,029,000,000 euros for España.es. España.es is planning to spend only 40% of what was planned for InfoXXI. However, the lack of economic memory as well as a substantial cut in the budget are hiding another reality: the idea of a memorandum of individual initiatives of each department has been abandoned in favor of a more coherent logic of design.

Another of the innovations of España.es is the one that defines the sources of resources. InfoXXI distinguishes which ministry is for the financing. España.es adds the private sector (11% of the planned budget) and the rest of Spanish public administrations (25%). The lack of economic details does not allow us to know other details about budget, and whether numbers in table 7 is money yet compromised, an estimation or a guess.

According to the division that we have done of InfoXXI initiatives, the e-government results summed to 153 million of euros, whereas in the new plan there are 180 million. So, for the best indicators of IS in Spain the budget has increased, even if the general tendency is to cut down the money. Moreover, and posterior to España.es, there has been published a document about the impulse of electronic administration in Spain 2003 (Ministerio de Ciencia y Tecnología & Ministerio de Administraciones Públicas (2003)).

As in España.es, the document does not include any type of budget, only a figure that explains how the

<i>Vertical initiatives</i>	553
administration	180
education	249
small and medium firms	132
<i>Horizontal initiatives</i>	476
web surfing	240
contents	220
communication	16
<i>Total</i>	1029
State level administration	63% (649)
Regional and local administration	26% (270)
Private Sector	11% (110)

Table 7: Budget distribution of the España.es.

Source: own elaboration, with data from España.es.infoxxi.es. Data in millions of euros.

money will be spent by departments. Although España.es represents in some aspects a melioration compared to InfoXXI (rational structure of initiatives according to concrete objectives, and not a structure based on departments), the fact that it forgets some of the virtues of the second allows us to be skeptical about its success. It will be necessary to wait until the development is finished in order to analyse whether it has been a significant advance or not.

Along with the main lines of España.es, other concrete initiatives will be held inside the governmental organization Red.es. These are big initiatives focused on the strategic aspects of the IS: education (Internet on the school, better library coordination, new services and tools for libraries) and infrastructures (rural Internet, network of public access points in all libraries). The budget for those initiatives is: Internet in the school, 272M euros; Internet in libraries, 38M euros; rural Internet, 30M euros and Patrimonio.es (heritage) 200M euros.

The last aspect to consider is about participation in the design of the plan. As other experiences show, the intervention of other representative entities of civil society and the regional representation are good measures to help other actors join the development of planning on one side, and on the other side, to help those actors detect problems and offer solutions (Jordana, Sancho, Fernández, Welp & Puig 2003, Jordana, Sancho & Welp 2003). In Spain the promotion of Internet is done by both the state level and regional level bureaucracies, equally to what happens in many public policies. The characteristics of those interventions produce sometimes problems of coordination be-

tween different levels of government (Auna 2002, Jordana, Sancho, Fernández, Welp & Puig 2003). What the analyzed planning efforts show is a lack of coordination between levels of government, even if this is a new topic in public policy that could have been addressed jointly by the state and the regional government. This tendency, along with the fact that it is a constant friction for political reasons, can end up as a waste of resources or double planning efforts.

The concept of *path dependency* is defined as the influence of a concrete institutional configuration over the results of public policy. The concept is referred to as the establishment of particular paths of action that once introduced are very different to change (Powell 1991). In this sense, and as our analysis highlights, the dynamic that was started in the planning of Information Society reproduces problems in the policy elaboration process in regional coordination. And this is contrary to the European tendency that seems to favour wide and flexible designs.

5 Conclusions

Public programs to develop the Information Society at the state level in Spain have not been able to generate the desired advances in the indicators proposed by the European Union. As we have seen, there have been different plans and initiatives, but they have limitations that have restrained their full development.

InfoXXI, apart from the lack of political support, was a concrete plan, but with few possibilities to promote the Information Society and its development, due to the sectoral logic in which it was designed. It

<i>Internet in school</i>	272
red.es	136
regional governments	121
Science and Technology Ministry	0.6
Education, Culture and Sports Ministry	14
<i>Internet in libraries (2003–2005)</i>	38
<i>Rural Internet (2002–2005)</i>	30
red.es	11.3
Ministry of Public Administrations MAPyA	4
Ministry of Science and Technology	0.6
local governments	14
<i>Patrimonio.es (heritage) (2003–2010)</i>	200

Table 8: Additional initiatives from Red.es.

Source: own elaboration, with data from Red.es. Data in millions of euros.

was this logic that explained which ministries were more and less responsible for the dates and executions, without any formal mechanisms to stimulate the general development of the plan. Is this logic that is based on the sum of initiatives which helps us explain why completely different initiatives coexist in InfoXXI, in the budget and in relevance. There were departments that understood that to elaborate a list of projects related with the IS meant something very different from what other departments understood. It was, precisely, in those indicators in which Spain is better, where the responsible ministries have used the ICTs prior to InfoXXI.

After the analysis and the recommendations of the Soto Commission, we can not say that the España.es were really to solve the problems detected in InfoXXI. While it is true that some problems were solved, España.es lacks a fundamental tool that distinguished InfoXXI: a concrete budget, that can be used to assign responsibilities to ministries, and with annual compromises of execution. And, what is perhaps the most significant, is that the information was publicly available and constantly updated. España.es links to an economic memo that has not been yet published. It is true that, however, the sectoral logic and the division of initiatives according to ministries has disappeared.

To sum up, the state level bureaucracy does not seem to be effective in the design and implementation the plans and initiatives set aside to the development of the Information Society, although there have been successive trials and even the existence of independent commissions that have reoriented the plans. One of the major challenges up to this point is to as-

certain with more detail which successes and failures are responsible for the low indicators of IS in Spain compared to the rest of European countries. The recent ampliation of the European Union with countries that, in many cases, show higher IS indicators than Spain, shows us to which point it is necessary the implication of the public administration in the development of the IS in order to be able to reduce differences with the most advanced countries in the European environment.

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