

INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE PUBLIC ADMINISTRATION

IRIA Report 2014

Executive summary



GOBIERNO
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INTRODUCTION

In compliance with the clauses of Royal Decree 589/2005, of 20 May, the High Council of E-Government should, among other functions, 'act as an Observatory of E-Government, understanding its evolution and situation and suggesting adequate corrective measures whenever necessary.' In order to perform this task, the Council's Standing Committee collects 'information on the technology, human, economic and procurement resources in information technologies' and publishes regular reports on the results of its surveys on the E-Government Portal (PAe, after name in Spanish).

http://administracionelectronica.gob.es/pae_Home/pae_OBSAE/pae_Informes.html

In line with this, a new IRIA Report is being issued, analysing the most significant indicators of the current situation and use of Information and communication technologies and systems in the Public Administration, as well as of the development of e-Government.

The IRIA Report covers the General State Administration and local governments, being a thorough study for the General State Administration and a sample analysis for local governments, including information on provincial governments, island councils and townships with more than 500 inhabitants.

STATE ADMINISTRATION

ICT EXPENDITURE

In 2013, €1,420 million were **spent** in the General State Administration in **ICT**, i.e. 2% less than in 2012.

Telecommunications accounted for 24% of total expenditure, while the remaining 76% corresponded to IT.

Breaking expenditure down by ministries, only three accounted for 30% total expenditure in telecommunications: Home Affairs (54%), Foreign Affairs and Cooperation (32%) and Development (32%).

The **share of IT expenditure in the total budget** (Chapters 1, 2 and 6) was 3.83%, quite similar to that of 2012. The Ministries with the highest shares were Industry, Energy and Tourism, and Labour and Social Security (+10% for each).

Breaking **IT expenditure** by items, we can see that hardware and software procurement went up, at the expense of IT services.

Hardware accounted for 11%, considering both investment and equipment rental. The same share went for **software**, including the investment in system software and application packages but not custom applications. **IT services** took 45%, while **staff expenses** remained quite stable at 31%. Finally, **consumables** and miscellaneous expenditure ('Others') were estimated at 3% of the total expenditure in hardware, software and IT services.

As to **suppliers**, IBM kept its leading position at 10% (28% in software). It was followed again by Indra, the main supplier of IT services (11% in this item). Hewlett-Packard and Fujitsu also kept their shares, the former being the leader in hardware supplies.

The total **investment** in hardware in 2013 was €113 million. 56% of this went to devices; 25%, to PCs and 19%, to multi-user systems.

Broken down by ministries, Home Affairs made a significant investment, reaching a share of 29% of the total investment. Together, this ministry, Labour and Social Security, and Finance and Public Administration accounted for 60%.

Regarding **software**, the expenditure is as diversified as usual, with 27% in operating systems, 22% in information management systems and 14% in communications systems.

Investment in **IT services** totalled €489 million in 2013, going down by 3% from 2012. While the Ministry of Education, Culture and Sports significantly raised investment in this item (over 50%), the Ministry of Defence reduced it (over 30%). Item distribution is similar to previous years. Application development and maintenance accounted for 47% total expenditure, while software and hardware support and maintenance hovered at 31%. The outsourcing budget – housing, hosting and user service, data transcription and digitisation – kept its 6% share. Finally, consulting services (organisation, technology, security) only accounted for 4% of the total expenditure in IT services, while training represented just 1%.

Regarding expenditure structure by ministries, most of them – with the exception of Food, Agriculture and Environment, Defence, and Home Affairs – spent the largest share in application development and maintenance.

The total expenditure on **telecommunication services** was €340 million, 9% less than in 2012.

As in previous years, more than 50% of the total amount corresponded to the Ministry of Home Affairs, whose budget was, in absolute terms, slightly smaller than in 2012. The other ministry with a significant share (more than 10%) is Labour and Social Security.

Broken down by type of services, these were landline phones (23%), data transmission (32%), mobile phones (7%) and others (37%). It was often quite difficult to break down costs by type of services, so they were usually considered under the service with the highest share.

The leading supplier was Grupo Telefónica, with a market share of 83%, followed far behind by BT España, which increased its share to 8%. All the other suppliers held shares below 1%.

ICT expenditure

2013

In thousands of euros

Ministry	IT expenditure					Telecommunication expenses	Total	
	Hardware	Software	IT services	Staff	Others		Total	%V
Food, Agriculture and Environment	4,579	6,924	19,132	11,871	919	4,057	47,481	3%
Foreign Affairs and Cooperation	2,720	3,883	13,889	4,337	615	11,980	37,425	3%
Defence	6,603	8,262	26,126	62,672	1,230	25,060	129,952	9%
Economy and Competitiveness	13,255	9,797	37,081	19,340	1,804	8,023	89,299	6%
Education, Culture and Sports	2,684	1,546	13,866	6,807	543	3,006	28,452	2%
Labour and Social Security	18,702	12,183	134,881	48,390	4,973	36,168	255,297	18%
Development	8,472	6,832	23,313	8,058	1,159	23,253	71,087	5%
Finance and Public Administration	15,902	47,958	79,535	84,453	4,302	28,312	260,462	18%
Industry, Energy and Tourism	3,836	1,835	23,448	5,512	874	2,364	37,869	3%
Home Affairs	33,101	11,744	40,085	66,200	2,548	182,043	335,720	24%
Justice	3,626	2,670	52,054	6,320	1,750	9,868	76,288	5%
Presidency	1,061	803	2,904	5,345	143	1,777	12,032	1%
Health, Social Policy and Equality	3,771	2,941	23,086	4,016	894	4,156	38,864	3%
Total	118,314	117,377	489,399	333,320	21,753	340,065	1,420,228	100%

%V Vertical percentage

IT EQUIPMENT

As at 1 January 2014, the **total number of equipments** installed in the General State Administration was 492,129, with an average age of 5.2 years.

The Ministry of Defence had 22% of the total equipment installed in the General State Administration. It was followed by the Ministry of Home Affairs, the Ministry of Finance and Public Administration, and the Ministry of Labour and Social Security.

In terms of type of systems, almost 50% **mainframe computers** were to be found in the Ministry of Labour and Social Security and the Ministry of Home Affairs, while 53% **servers** corresponded to the Ministry of Labour and Social Security, the Ministry of Economy and Competitiveness, and the Ministry of Defence.

Regarding **personal computers**, 86% were desktop computers, 11% were laptops and 3% were mobile terminals. 30% laptops were in the Ministry of Defence. As to the distribution of desktop computers, it was similar to that of PCs as a whole. Finally, the Ministry of Home Affairs had 27% mobile terminals.

As to **brands**, 35% mainframe computers were from IBM; 27% were Sun and 20%, Fujitsu. The only equipment installed in 2013 was IBM (cf. Chart 3.11, Installed IT equipment). Servers were mostly supplied by Hewlett-Packard (44%), followed by Dell (12%) and IBM (8%). Hewlett-Packard was also the leading supplier of small systems (66%) and PCs (46%); 75% PCs installed in the General State Administration in 2013), Dell being the second largest PC supplier (14%).

Installed IT equipment (evolution)

	Number of units				
	01/01/2010	01/01/2011	01/01/2012	01/01/2013	01/01/2014
Mainframe computers	84	80	45	45	51
Servers	21,631	23,104	22,690	22,766	23,892
Personal computers	431,453	452,126	450,012	450,178	468,186
Total	453,168	475,310	472,747	472,989	492,129

Equipment by ministries

01/01/2014

Ministry	Mainframe computers		Servers		Personal computers		Total	
	Number	%V	Number	%V	Number	%V	Number	%V
Defence	4	8%	3,310	14%	103,702	22%	107,016	22%
Home Affairs	12	24%	1,696	7%	80,552	17%	82,260	17%
Finance and Public Administration	9	18%	2,560	11%	72,680	16%	75,249	15%
Labour and Social Security	12	24%	5,795	24%	59,763	13%	65,570	13%
Economy and Competitiveness	3	6%	3,583	15%	45,814	10%	49,400	10%
Development	6	12%	2,252	9%	30,930	7%	33,188	7%
Justice			902	4%	18,816	4%	19,718	4%
Food, Agriculture and Environment	5	10%	699	3%	14,892	3%	15,596	3%
Foreign Affairs and Cooperation			860	4%	13,035	3%	13,895	3%
Education, Culture and Sports			855	4%	9,734	2%	10,589	2%
Health, Social Policy and Equality			571	2%	8,400	2%	8,971	2%
Industry, Energy and Tourism			592	2%	6,464	1%	7,056	1%
Presidency			217	1%	3,404	1%	3,621	1%
Total	51	100%	23,892	100%	468,186	100%	492,129	100%

%V.: Vertical percentage

OPERATING SYSTEMS

The only mainframe computer installed in 2013 ran a z/OS operating system. Likewise, 51% of the servers installed last year had Windows OS; 12% relied on virtualisation and 8% had Linux.

The distribution of PCs per operating system is quite similar to that of 2012, 98% of them running Windows OS (67% Windows 7, 13% Windows 8 and 6% Windows XP).

ICT STAFF

The **global number of employees** performing ICT-related tasks in the General State Administration as at 1 January 2014 was 11,487. 94% of them were career civil servants, while the remaining 6% were contract staff. In this report, the number of ICT-related staff for the Ministry of Defence was significantly lower, since it only includes the staff performing tasks related with the general purpose network, in line with the guidelines for the rest of the report. 23% worked in the Ministry of Economy and Finance, followed by the Ministry of Defence (18%). Thus, the 8% fall in the global number comes to 4% when the Ministry of Defence is not taken into account.

24% these employees worked in the Ministry of Finance and Public Administration; 21%, in the Ministry of Home Affairs and 19%, in the Ministry of Defence. All other ministries accounted for less than 15% individually.

The **ICT staff/total staff ratio** was 2.09% globally, which means it was slightly lower than in 2012.

ICT/total staff ratio

01/01/2014

Ministry	ICT staff	Total staff	ICT/total staff ratio
Finance and Public Administration	2,756	48,536	5.68%
Presidency	173	3,341	5.18%
Industry, Energy and Tourism	170	3,692	4.60%
Food, Agriculture and Environment	429	10,418	4.12%
Labour and Social Security	1,663	45,090	3.69%
Economy and Competitiveness	689	24,703	2.79%
Health, Social Policy and Equality	142	6,724	2.11%
Foreign Affairs and Cooperation	158	7,535	2.10%
Education, Culture and Sports	241	14,228	1.69%
Defence	2,192	145,717	1.50%
Home Affairs	2,393	182,594	1.31%
Development	281	30,437	0.92%
Justice	200	27,224	0.73%
Total	11,487	550,239	2.09%

NETWORK ADMINISTRATION

Analysis of the indicators showing the use of ICTs in the General State Administration.

As at 1 January 2014, there were **85 computers every 100 public servants** in the General State Administration as a whole, a ratio 5% higher than in the previous edition of this report.

In the case of administrative workers (excluding security forces, teachers and health professionals), the number was 171 computers every 100 public servants. This had to do with the fact that the equipment included computers in workers' offices and training facilities, as well as laptops and mobile devices.

90% **personal computers** were connected **to the Intranet**, a figure similar to that in the past report. As to **PCs connected to the Internet**, their percentage remained stable at 86%. In several ministries, almost every PC was connected to the Internet.

The number of **computers connected to the Internet every 100 public employees** rose slightly to 73. As to the number of **computers connected to the Intranet** rose more sharply, 3 points, to **76 every 100 public employees**.

A new aspect analysed in this report is the distribution of **mailboxes** per ministry and the software used. The total number of mailboxes (both own use and lent to third parties), was 611,165. The Exchange technology was the most commonly used in all ministries.

The total number of public servants who had an **e-signature** was 350,838, i.e. 64% of all workers. This number is 8% higher than the total for the previous two-year period. Most ministries saw increases in this item, with Industry, Energy and Tourism reaching 100%, and Finance and Public Administration being close to it (98%).

For the analysis of **telecommuting**, only those employees working part- or full-time out of the office and accessing the information systems of the Public Administration were taken into account. This work arrangement is not really widespread in the General State Administration: only 4,663 workers, i.e. almost the same as in the past report and less than 1% of the total workforce.

LOCAL GOVERNMENTS

ICT EXPENDITURE

The total ICT expenditure for local governments was €813 million, almost 5% less than in 2011. When discussing absolute figures, it must be borne in mind that this edition of the report includes the three Provincial Governments of the Basque Country (included only in part in 2011). Since their competencies are significantly different from those of other provincial governments, their expenditure was higher. As a result, the global absolute expenditure for provincial governments, councils and island authorities was 8% higher than in 2011. On the other hand, the total expenditure at the level of townships went down by almost 9%.

23% expenditure (a little over €180 million) went to **telecommunications**; the remaining 77% was **IT expenditure**. Telecommunication services included voice and data transmission but no communication hardware, which was part of IT expenditure.

As in past editions, stratified expenditure showed that small townships spent a larger share of their ICT budget on telecommunications than large townships or provincial governments.

The **indicator reflecting the ICT expenditure share in the total budget** of local governments (Chapters 1, 2, 6) was 1.97%, a 0.13% increase over 2011. This slight increase can be associated to the shrinking of total budgets in all strata. This indicator performed irregularly at the various categories, without showing significant variation in any of them.

The global ICT expenditure/population ratio was €13.53/inhabitant on average, 8% less than in the previous report. In fact, this indicator decreased in all strata. Variation between categories sharpened.

In 2013, the total **IT expenditure** by local governments was €629 million, i.e. 2.8% less than in 2011. Investment in software went moderately up, while hardware expenditure decreased considerably. As to ICT staff, the shares remained stable, whereas IT service expenses rose significantly.

Regarding the **evolution** of IT expenditure in the past few years, steady growth until 2007 was followed by a downward trend showing a 16% fall in the 2007-2013 period.

The fall since 2011 could be observed in all township categories, although they were not as sharp as in the past report.

ICT expenditure

2013

In thousands of euros

Local governments	IT expenditure					Telecommunication expenses	Total	
	Hardware	Software	IT services	Staff	Others			
Provincial governments, councils and island authorities	16,571	16,791	79,663	44,115	3,391	25,833	186,364	
TOWNSHIPS	> 500,000 inhabitants	9,781	13,633	47,879	56,975	2,139	16,659	147,067
	100,000-500,000 inhabitants	13,176	11,280	39,939	54,271	1,932	29,228	149,826
	30,000-100,000 inhabitants	9,548	7,493	24,264	41,672	1,239	32,356	116,572
	10,000-30,000 inhabitants	10,330	7,173	20,275	35,739	1,133	30,464	105,115
	5,000-10,000 inhabitants	3,928	2,244	8,736	10,532	447	16,908	42,794
	2,000-5,000 inhabitants	2,999	2,223	4,739	10,521	299	16,817	37,598
	1,000-2,000 inhabitants	1,557	489	1,908	2,710	119	9,075	15,857
	500-1,000 inhabitants	684	490	2,945	1,413	124	6,299	11,954
Total	68,574	61,816	230,349	257,948	10,822	183,639	813,148	

IT EQUIPMENT

With regard to the availability of **IT equipment** by type and township categories, the global number of mainframe computers dropped, whereas the number of medium-scale systems rose. As to the number of servers and personal computers, it decreased slightly. The number of equipments went down in all township categories except for townships with 10,000 to 100,000 inhabitants.

IT equipment

01/01/2014

Local governments	Mainframe computers	Medium-scale systems	Servers	Personal computers	
Provincial governments, councils and island authorities	9	85	3,413	43,443	
TOWNSHIPS	> 500,000 inhabitants	2	19	903	40,290
	100,000-500,000 inhabitants	3	101	2,492	61,400
	30,000-100,000 inhabitants	2	58	3,611	63,340
	10,000-30,000 inhabitants		40	2,946	57,337
	1,000-10,000 inhabitants		125	3,489	59,438
	500-1,000 inhabitants			545	7,189
Total	17	429	17,399	332,438	

Regarding **access to broadband at the workplace**, the figures were similar to those in the past edition of this report. About 94% to 97% workplaces in the three upper categories had access to broadband. In townships with 10,000 to 100,000 inhabitants, the percentage was about 90%, while for the two lowest categories it was about 55%. (Broadband: speed of at least 1,024KB/sec.)

Percentage of workplaces with broadband access

01/01/2014

Local governments		% workplaces with broadband access
Provincial governments, councils and island authorities		94
T O W N S H I P S	> 500,000 inhabitants	97
	100,000-500,000 inhabitants	97
	30,000-100,000 inhabitants	90
	10,000-30,000 inhabitants	89
	1,000-10,000 inhabitants	56
	500-1,000 inhabitants	55

OPEN-SOURCE SOFTWARE

The report analysed the **percentage of use of open-source software** in multi-user systems and PCs taking two elements into account: operating systems and installed applications.

About 25% **multi-user systems** used open-source software in both applications and operating systems. The highest percentage in this respect corresponded to provincial governments. As to **personal computers**, this percentage went up to 41% for applications (up to 86% in larger townships) and down to 8% for operating systems.

ICT STAFF

The global number of **employees doing ICT-related tasks** in local governments, considering civil servants, contract staff and employees of public sector companies remained similar to the 2011 figure. In the case of provincial governments, councils and island authorities, the number rose by 10%, in part due to the inclusion of all Basque provincial governments. It also increased for townships with 30,000 to 500,000 inhabitants. The costs of state-owned corporation employees appeared under IT services rather than staff expenditure.

The ICT staff/total staff ratio rose slightly by 0.07, going down in all township categories with less than 30,000 inhabitants and up in all other strata.

ICT staff

01/01/2014

Local governments		ICT staff	ICT/total staff ratio
Provincial governments, councils and island authorities		1,952	3.82%
T O W N S H I P S	> 500,000 inhabitants	1,091	2,01%
	100,000-500,000 inhabitants	1,505	1,71%
	30,000-100,000 inhabitants	1,211	1,46%
	10,000-30,000 inhabitants	1,063	1,05%
	1,000-10,000 inhabitants	1,150	1,10%
	500-1,000 inhabitants	74	0,77%
Total		8,046	1.64%

As to the **number of personal computers every 100 public employees**, it remained at 68, with increases in all the upper categories and slight falls for the two lowest categories, more sensitive to sample size.

NETWORK ADMINISTRATION

At the level of local government, 96% **personal computers** were **connected to the Internet** – 6% more than in 2011. All categories showed a positive evolution of this indicator.

As for **personal computers connected to the Intranet**, their number was 2% higher than in 2011. This indicator performed positively in all categories except in townships with 10,000 to 30,000 inhabitants.

A total 88,403 **employees** used an **e-signature for the exercise of their functions**. They accounted for 18% staff (+4%). Their number grew in all categories but in smaller townships, with a sharper increase in the upper levels.

Finally, only 1.31% **public employees**, i.e. 6,429 globally, were reported to use **telecommuting**. The percentage continued to be very low both globally and per categories.

E-GOVERNMENT

Already in 2011, almost 100% townships with more than 10,000 inhabitants had their own **web portals**. The upward trend continued for small townships.

All townships with more than 500,000 inhabitants and 80% townships with 100,000 to 500,000 had their own **e-offices** and **e-registries**.

About 65% provincial governments, councils and island authorities were reported to offer **administrative procedures** that could be **fully processed online**. This meant significant progress over 2011. 100% large townships offered census registration online. Other services offered were payments of property tax and vehicle tax. The smaller the township, the lower degree of implementation of these services. However, figures showed progress in all categories.

Finally, the number of **centres with public Internet access every 10,000 inhabitants** was 2.65, while the number of **Internet access points every 10,000 inhabitants** was 12.54.