

## ACRONYMS AND SIGNS

- **3G** Third generation (of developments in wireless technology, especially mobile communications)
- **ADSL** Asynchronous DSL (Digital Subscriber Line)
- **DSL** Digital Subscriber Line
- **FAQ's** Frequent Asked Questions
- **GPRS** General Packet Radio Service
- **GSM** Global System for Mobile Communications (initially, Groupe Special Mobile)
- **ISDN** Integrated Services Digital Network
- **Kb/s** Kilobit per second
- **PDA** Personal digital assistant
- **ICT** Information and Communication Technologies
- **PDM** Municipal Master Plan
- **Mb/s** Megabit per second
- **NUTS** Nomenclature of Territorial Units for Statistics
- **R. A.** Autonomous region (*Região Autónoma*)
- **SDSL** Synchronous DSL (Digital Subscriber Line)
- **shttp** Secure Hypertext Transfer Protocol
- **UMIC** Knowledge Society Agency (UMIC)
- **UMTS** Universal Mobile Telecommunications System
- **xDSL** Generic term used to refer to the family of DSL (Digital Subscriber Line) technologies
- ... Confidential data
- o Less than half of the unit used (<0,5)
- x Not available
- - Null
- % Percentage
- . Not collected
- ⊥ Series break

1 - Access to and Use of Information and Communication Technologies - 2003-2017

Unit: %

	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>-1</sup>	2012	2013	2014	2015	2016	2017
Organizations by ICT equipment used:															
E-mail	92	95	92	96	97	98	98	98	98	100	100	100	100	Rc 100	100
Local Area Network (LAN)	89	87	90	94	94	93	93	95	81	89	91	87	83	73	81
Intranet	78	67	80	76	78	77	84	87	79	78	75	75	77	73	70
Virtual Private Network (VPN)	x	x	x	x	37	39	55	51	44	56	53	53	60	65	57
Wireless LAN	x	9	20	24	33	38	40	38	49	48	45	43	53	65	79
Wide Area Network (WAN)	30	42	41	49	52	55	55	55	42	43	40	40	40	41	40
Video-conference	3	4	4	11	11	5	6	11	12	17	21	25	21	37	40
Extranet	22	33	33	38	38	38	42	44	21	20	19	19	19	20	19
Organizations by type of Internet Protocol available															
IPv4 Devices	x	x	x	x	x	x	x	x	x	x	x	x	87	84	98
IPv4 Applications	x	x	x	x	x	x	x	x	x	x	x	x	68	65	89
IPv6 Devices	x	x	x	x	x	x	x	x	x	x	x	x	13	14	19
IPv6 Applications	x	x	x	x	x	x	x	x	x	x	x	x	9	8	6
Organizations by type of digital activities performed:															
Exchange of files and other information	70	66	90	92	90	88	93	86	91	93	94	96	96	98	96
Information collection / reception	57	60	69	67	73	71	75	67	72	80	79	83	83	92	91
Financial and administrative management	62	80	80	82	81	82	86	82	79	83	79	79	92	86	91
Information recording	65	71	73	74	78	77	78	76	77	89	87	94	94	98	89
Information processing and handling	54	60	71	71	75	75	75	75	77	81	81	85	92	94	89
Information diffusion	54	49	49	61	57	61	69	69	79	83	81	83	89	92	89
Human resources management	54	53	68	65	67	70	76	71	72	72	74	74	79	78	89
Internal communication	49	51	61	59	62	66	73	73	68	70	70	74	81	86	85
Information organization in databases	51	58	65	68	73	71	73	64	72	80	79	79	85	86	83
Document management / documents center	35	31	33	39	46	54	60	56	53	65	66	75	77	78	81
Stock management	30	33	39	32	40	46	42	40	33	46	51	49	49	51	64
Activities planning and scheduling	27	26	33	30	30	38	47	38	37	44	40	43	51	55	55
Project design	19	20	26	20	21	25	38	27	30	26	32	28	42	43	49
Organizations by type of open source software used															
Open source software for Internet servers	x	x	x	x	21	14	24	31	49	56	55	55	66	57	53
Open source software for the operating systems	x	x	x	x	19	21	24	20	37	37	42	43	38	35	32
Open source software for other type of applications	x	x	x	x	22	29	35	36	26	15	11	8	11	10	9
Organizations by security applications used:															
Anti-virus software	84	89	92	89	94	98	98	95	95	94	96	94	96	96	96
Firewall	62	73	80	89	87	88	91	89	93	89	89	89	92	92	96
Anti-spam filters	x	x	37	41	44	61	64	62	75	78	74	74	75	78	81
Backup of information in a location external to the organization	x	x	31	30	32	34	49	51	42	43	47	51	47	59	77
Secure servers (e.g. using shttp protocol)	x	x	18	29	25	23	31	33	28	35	28	36	47	51	55
Organizations that detected security problems															
Organizations that detected security problems	x	x	x	x	x	x	x	x	x	x	x	x	13	20	15
Destruction or corruption of data due to attack or unexpected incidents	x	x	x	x	x	x	x	x	x	x	x	x	71	60	86
Unavailability of ICT services due to external attacks	x	x	x	x	x	x	x	x	x	x	x	x	14	50	29
Disclosure of confidential data due to intrusion attacks (eg. Pharming or phishing)	x	x	x	x	x	x	x	x	x	x	x	x	14	-	14
Others	x	x	x	x	x	x	x	x	x	x	x	x	14	-	14

### 1 - Access to and Use of Information and Communication Technologies - 2003-2017

Unit: %

	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>1</sup>	2012	2013	2014	2015	2016	2017
Organizations by difficulties/problems experienced in ICT implementation:															
Financial resources shortage	x	67	79	82	86	96	83	96	93	86	91	100	94	89	x
Lack of training programmes	x	48	59	49	50	35	33	50	68	50	50	61	75	68	x
Lack of informatics technicians	x	71	62	67	61	58	67	50	54	27	45	56	63	58	x
Resistance to change	x	24	28	23	28	42	38	42	29	36	27	39	69	42	x
Management problems	x	10	17	21	25	27	21	27	36	64	45	39	38	21	x

Source: UMIC, Survey on ICT usage in Regional Public Administration; DGEEC, Survey on ICT usage in Regional Public Administration (from 2012, inclusive).

<https://estatistica.madeira.gov.pt/>

Note: <sup>1</sup> - Break in the series; in 2011, the Universe of Central and Regional Public Administration organizations has been revised. The Universe is now based on the list, prepared by Statistics Portugal (INE), of entities belonging to Institutional Government Sector in 2010 (S .13, under the European System of National and Regional Accounts - ESA 95).

**Conventional signs:**

x - Value not available

- Null value

Rc - Rectified value.

2 - Access to and Use of Internet - 2003-2017

Unit: %

	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>1</sup>	2012	2013	2014	2015	2016	2017
Organizations with Internet connection and with Internet connection speed ≥ 2 Mb/s:															
Internet connection	97	98	100	100	100	100	100	100	100	100	100	100	Rc 100	Rc 100	100
Internet connection speed ≥ 2 Mb/s	0	15	20	30	52	59	62	78	91	91	92	92	94	96	96
Computers with Internet connection in the organizations															
Computers with Internet connection	x	x	77	86	94	93	93	96	89	82	88	95	94	98	98
Organizations by type of Internet connection available <sup>1</sup> -2															
Fixed connection															
Modem or RDIS	x	x	x	x	x	x	x	x	x	7	6	8	11	6	4
DSL	x	x	x	x	x	x	x	x	x	48	45	43	40	33	32
Other fixed connection wired or wireless	x	x	x	x	x	x	x	x	x	85	89	89	91	92	91
Mobile connection															
Broadband by portable computer with 3G technology or superior	x	x	x	x	x	x	x	x	x	26	26	28	32	35	-
Broadband by smartphone or PDA with 3G technology or superior	x	x	x	x	x	x	x	x	x	15	21	25	34	37	-
Mobile broadband connection through mobile devices using 3G technology or higher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	38
Narrowband by mobile phone	x	x	x	x	x	x	x	x	x	6	8	8	9	10	26
Organizations by Internet connection speed *															
<b>&lt;2 Mb/s</b>	<b>89</b>	<b>81</b>	<b>75</b>	<b>69</b>	<b>46</b>	<b>41</b>	<b>38</b>	<b>20</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>2</b>
<128 Kb/s	14	13	6	9	6	7	6	.	.	.	.	.	.	.	.
≥128 Kb/s and <256 Kb/s	16	4	8	9	3	5	6	.	.	.	.	.	.	.	.
≥256 Kb/s and <512 Kb/s	24	24	18	12	13	11	6	.	.	.	.	.	.	.	.
≥512Kb/s and <2 Mb/s	35	40	43	39	24	18	20	.	.	.	.	.	.	.	.
<b>≥2 Mb/s</b>	<b>-</b>	<b>15</b>	<b>20</b>	<b>30</b>	<b>52</b>	<b>59</b>	<b>62</b>	<b>78</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>92</b>	<b>94</b>	<b>96</b>	<b>96</b>
≥ 2 Mb/s and<4 Mb/s	.	.	.	.	.	.	.	31	16	13	13	26	21	16	4
≥ 4 Mb/s and<8 Mb/s	.	.	.	.	.	.	.	7	25	19	11	19	21	10	13
≥ 8 Mb/s and<16 Mb/s	.	.	.	.	.	.	.	16	23	28	30	25	23	18	23
≥ 16 Mb/s and<32 Mb/s	.	.	.	.	.	.	.	7	12	11	8	23	30	51	55
≥ 32 Mb/s and<64 Mb/s	.	.	.	.	.	.	.	2	-	2	9	.	.	.	.
≥ 64 Mb/s and<128 Mb/s	.	.	.	.	.	.	.	7	9	11	13	.	.	.	.
≥ 128 Mb/s	.	.	.	.	.	.	.	7	5	7	8	.	.	.	.
<b>Does not know / Does not answer</b>	<b>11</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>2</b>
Organizations by activities performed on the Internet															
E-mail	.	.	.	.	.	.	.	.	98	89	94	96	96	96	98
Search of information and documentation	70	71	75	77	97	98	100	100	97	98	98	98	94	94	96
Electronic exchange of files	.	.	.	.	.	.	.	.	88	98	94	94	94	94	94
Communication with other departments	32	31	41	41	78	77	73	82	81	89	87	87	91	92	94
Communication with Public Administration organizations of other ministries	27	27	35	38	92	84	89	89	88	87	94	91	92	96	91
Databases access	35	40	33	11	86	82	86	87	83	89	87	91	83	84	89
Communication with enterprises	16	9	22	15	78	79	78	84	83	83	85	91	85	82	87
Promotion of services	.	.	.	.	.	.	.	.	74	72	75	77	75	80	85
Communication with citizens	14	9	22	20	76	79	76	84	84	81	83	81	81	80	81
Bureaucracy simplification	.	.	.	.	.	.	.	.	54	63	64	68	74	71	72

## 2 - Access to and Use of Internet - 2003-2017

	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>1</sup>	2012	2013	2014	2015	2016	2017	Unit: %
Interface with the citizen	.	.	.	.	.	.	.	.	70	59	60	58	64	67	68	
Purchase catalogue consultation	11	13	12	11	54	52	49	53	44	44	55	57	53	55	57	
Electronic orders	.	.	.	.	.	.	.	.	18	15	19	26	17	24	21	
Sale of products (goods and services)	.	.	.	.	.	.	.	.	12	7	8	13	11	16	21	

Source: UMIC, Survey on ICT usage in Regional Public Administration; DGEEC, Survey on ICT usage in Regional Public Administration (from 2012, inclusive).

<https://estatistica.madeira.gov.pt/>

### Notes:

<sup>1</sup> - Break in the series: in 2011, the Universe of Central and Regional Public Administration organizations has been revised. The Universe is now based on the list, prepared by Statistics Portugal (INE), of entities belonging to Institutional Government Sector in 2010 (S.13, under the European System of National and Regional Accounts - ESA 95).

<sup>2</sup> - Break in the series: in 2012, the type of Internet connection available has been revised.

\* From 2010 onwards, only levels equal or greater than 2 Mb/s will be isolated

\*\*From 2014 onwards, the levels of internet connection speed were revised.

### Conventional signs:

x - Value not available

.

- Value not collected

- Null value

Rc - Rectified value.

### 3 - Web Presence - 2003-2017

Unit: %

	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>↓1</sup>	2012	2013	2014	2015	2016	2017
Organizations with web presence															
Organizations with web presence	89	86	86	83	87	91	93	93	100	94	92	89	89	94	100
Organizations by services or functionalities offered in the website															
E-mail address in order to receive messages and information requests	81	73	82	83	83	88	87	91	91	94	92	89	85	92	98
Institutional information about the organization	87	82	84	80	83	91	93	93	90	91	87	81	83	90	94
Information on services rendered by the organization	81	76	80	79	79	84	84	84	86	81	81	79	77	86	89
Legislation	x	60	71	74	70	79	82	82	79	81	85	83	83	84	85
Activity plans and reports	.	.	.	.	.	.	.	.	.	59	51	57	66	78	79
Forms for download	30	40	57	47	49	61	58	58	61	61	55	49	57	61	64
Access to databases	30	20	26	21	35	34	33	33	35	33	30	30	42	51	57
Online free distribution of services or goods in digital format	32	4	43	38	41	55	51	51	49	41	45	45	47	51	53
Forms to fill up and submit online	14	16	20	21	30	23	29	31	26	31	30	36	47	47	51
Calendar of Events	.	.	.	.	.	.	.	.	49	50	53	51	53	49	49
Employment opportunities	5	6	6	6	5	11	13	18	37	22	25	26	36	41	49
User support (Helpdesk, FAQ's, etc.)	x	x	12	18	27	25	26	29	25	33	25	32	38	45	45
Public consultation processes	.	.	.	.	.	.	.	.	.	33	28	25	28	41	36
Contacts and curricula of the main body responsible	.	.	.	.	.	.	.	.	33	22	28	26	30	33	36
User satisfaction assessment	3	13	2	3	10	13	15	16	12	15	11	21	28	20	32
Geographic information systems	.	.	.	.	.	.	.	.	.	9	9	13	17	24	30
Surveys to the citizens	.	.	.	.	.	.	.	.	25	17	13	19	21	18	26
Online payments (Reception of)	x	13	8	8	18	23	18	16	21	17	15	11	11	14	23
Online library services	.	.	.	.	.	.	.	.	.	11	9	9	13	16	17
Capacity to guarantee secured transactions	.	.	.	.	.	.	.	.	7	7	8	8	11	14	23
Video conference transmission	.	.	.	.	.	.	.	.	.	6	8	11	13	12	11
Online Service to the public (eg. Virtual service desk)	.	.	.	.	.	.	.	.	7	7	8	6	6	10	17
Discussion forums between the organism and citizens	.	.	.	.	.	.	.	.	.	7	8	8	8	8	4
Organizations by level of conformity with the W3C* accessibility guidelines															
Website complying with the rules of accessibility to citizens with special needs **	11	18	26	24	14	7	16	16	33	39	40	38	40	41	40
Level A	.	.	.	.	.	5	9	9	21	28	26	26	26	20	17
Level AA	.	.	.	.	.	2	4	6	7	7	9	8	9	16	15
Level AAA	.	.	.	.	.	.	4	2	5	4	4	4	4	4	9
Website not complying with the rules of accessibility	.	.	.	.	.	16	26	20	61	56	53	51	47	53	57
With no web presence	11	15	14	17	13	9	7	7	5	6	8	11	13	6	2
Does not know / Does not answer	.	.	.	.	.	68	51	56	.	.	.	.	.	.	.

Source: UMIC, Survey on ICT usage in Regional Public Administration; DGEEC, Survey on ICT usage in Regional Public Administration (from 2012, inclusive).

<https://estatistica.madeira.gov.pt/>

**Notes:**

↓1 - Break in the series: in 2011, the Universe of Central and Regional Public Administration organizations has been revised. The Universe is now based on the list, prepared by Statistics Portugal (INE), of entities belonging to Institutional Government Sector in 2010 (S.13, under the European System of National and Regional Accounts - ESA 95).

\* W3C - World Wide Web Consortium.

\*\* From 2008 onwards, data refer to organizations whose website complies with the rules of the W3C accessibility for citizens with special needs.

**Conventional signs:**

x - Value not available

.



#### 4 - Electronic Commerce - 2004-2017

	2004	2005	2006	2007	2008	2009 <sup>1</sup>	2010	2011 <sup>2</sup>	2012	2013
Organizations that make online payments for goods or services ordered using electronic commerce	.	-	-	...	...	40	25	57	29	33
Organizations by the most important reason considered for non-use of electronic commerce for ordering goods and/or services										
Not adjusted to the organization profile	.	.	21	19	22	18	16	22	32	30
Too bureaucratic / complicated process	.	.	13	10	15	18	24	20	15	10
Not advantageous	.	.	-	9	11	10	8	14	15	14
The goods or services needed cannot be ordered through the Internet	.	.	5	5	6	4	2	6	9	8
Lack of appropriate legislation	.	.	29	27	16	22	20	20	21	20
Preference for traditional forms of commerce	.	.	7	10	11	2	4	10	2	4
Other	.	.	15	8	7	6	6	-	2	8
Uncertainty about security	.	.	3	-	4	6	4	-	-	2
Uncertainty about the means of payment	.	.	5	7	7	8	12	2	2	2
Uncertainty about the contracts, terms of delivery and guarantees	.	.	3	2	2	2	4	2	2	-
Lack of specialized personnel	.	.	-	3	-	2	2	-	-	-
Uncertainty about privacy	.	.	-	-	-	-	-	-	-	2

Source: UMIC, Survey on ICT usage in Regional Public Administration; DGEEC, Survey on ICT usage in Regional Public Administration (from 2012, inclusive).

<https://estatistica.madeira.gov.pt/>

#### Notes:

As numbers are rounded up or down, totals may not always match the sum of the parts.

<sup>1</sup> - From 2009 onwards, in addition to ordering goods or services over the Internet, orders placed through other electronic networks are also considered.

<sup>2</sup> - Break in the series: in 2011, the Universe of Central and Regional Public Administration organizations has been revised. The Universe is now based on the list, prepared by Statistics Portugal (INE), of entities belonging to Institutional Government Sector in 2010 (S.13, t.95).

#### Conventional signs:

- Null value

. Value not collected

... Confidential value



Unit: %

	2014	2015	2016	2017
Organizations using electronic commerce to order goods or services				
Organizations using electronic commerce to order goods or services	8	9	8	4
Organizations using electronic commerce to order goods or services, by value of such orders in the total value of orders done				
< 1%	75	20	50	50
≥ 1% and < 10%	-	20	-	-
≥ 10%	25	60	50	50
Organizations using electronic commerce to order goods or services, by types of products ordered				
Telecommunications and data transfer services	50	60	50	50
Travels	-	20	25	50
Other	25	-	25	50
Software, hardware	25	80	25	-
Informatic / computing services	25	60	25	-
Informatic consumables	-	60	25	-
Internal stock products	-	40	25	-
Contracts / Construction works	25	20	25	-
Financial services / Insurance	-	20	-	-
Books	-	20	-	-
Vehicles and support services for vehicles	-	-	-	-
Meals (eg, for social canteens)	-	-	-	-
Organizations using electronic commerce to order goods or services, by types of platforms used to make such orders				
Central government procurement / Central government purchasing office	50	40	50	50
Other	50	20	50	50
Suppliers catalogues	25	20	25	50
E-mail	-	60	50	-
E-marketplaces	25	20	-	-
Auctions	-	-	-	-
Public contracting platform certified by IMPIC / GNS	.	.	.	-
Organizations that make online payments for goods or services ordered using electronic commerce				

	Unit: %			
	2014	2015	2016	2017
Organizations that make online payments for goods or services ordered using electronic commerce	25	20	-	50
Organizations by the most important reason considered for non-use of electronic commerce for ordering goods and/or services				
Not adjusted to the organization profile	31	31	36	25
Too bureaucratic / complicated process	8	13	16	23
Not advantageous	10	15	9	16
The goods or services needed cannot be ordered through the Internet	10	10	11	11
Lack of appropriate legislation	18	13	14	9
Preference for traditional forms of commerce	6	13	7	7
Other	6	4	5	5
Uncertainty about security	2	2	2	5
Uncertainty about the means of payment	6	-	-	-
Uncertainty about the contracts, terms of delivery and guarantees	-	-	-	-
Lack of specialized personnel	-	-	-	-
Uncertainty about privacy	2	-	-	-

**Source:** UMIC, Survey on ICT usage in Regional Public Administration; DGEEC, Survey on ICT us

<https://estatistica.madeira.gov.pt/>

**Notes:**

As numbers are rounded up or down, totals may not always match the sum of the parts.

<sup>1</sup> - From 2009 onwards, in addition to ordering goods or services over the Internet, orders placed

<sup>2</sup> - Break in the series: in 2011, the Universe of Central and Regional Public Administration orgarunder the European System of National and Regional Accounts - ESA 95).

**Conventional signs:**

- Null value

. Value not collected

... Confidential value

5 - Human Resources in Information and Communication Technologies - 2003-2017

Unit: %

	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>1</sup>	2012	2013	2014	2015	2016	2017
Organizations claiming need of ICT personnel															
Organizations claiming need of ICT personnel	30	53	52	42	44	32	42	29	23	24	17	21	45	45	47
Organizations claiming that need of ICT personnel negatively affect the development of its activities	38	40	45	44	38	34	40	35	62	62	56	64	75	86	77
Organizations that recruited or try to recruit specialist staff in ICT															
Organizations that recruited or try to recruit specialist staff in ICT	.	.	.	.	.	.	.	.	.	.	.	.	8	12	15
Organizations that experienced difficulties in filling specialist staff jobs in ICT	.	.	.	.	.	.	.	.	.	.	.	.	75	67	71
Organizations by type of ICT functions performed only by internal resources															
Support to web applications (eg. Keeping site content)	.	.	.	.	.	.	.	.	.	.	.	.	47	47	43
Support to software / management systems	.	.	.	.	.	.	.	.	.	.	.	.	47	35	43
ICT infrastructure maintenance	.	.	.	.	.	.	.	.	.	.	.	.	40	35	36
Security and data protection	.	.	.	.	.	.	.	.	.	.	.	.	42	35	34
Software development / management systems	.	.	.	.	.	.	.	.	.	.	.	.	38	31	28
Development of web applications (eg. Implementation of the website)	.	.	.	.	.	.	.	.	.	.	.	.	26	31	21
Organizations that promoted training in ICT															
For specialist ICT workers	.	.	.	.	.	.	.	.	.	.	.	.	13	12	19
For other workers categories	.	.	.	.	.	.	.	.	.	.	.	.	40	35	43

Source: UMIC, Survey on ICT usage in Regional Public Administration; DGEEC, Survey on ICT usage in Regional Public Administration (from 2012, inclusive).

<https://estatistica.madeira.gov.pt/>

Note: <sup>1</sup> - Break in the series: in 2011, the Universe of Central and Regional Public Administration organizations has been revised. The Universe is now based on the list, prepared by Statistics Portugal (INE), of entities belonging to Institutional Government Sector in 2010 (S.13, under the European System of National and Regional Accounts - ESA95).

Conventional sign:

. Value not collected

## 6 - Cloud computing through the internet - 2014-2017

Unit: %

	2014	2015	2016	2017
Organizations that bought cloud computing services on the Internet				
Organizations that bought cloud computing services on the Internet	2	4	12	15
Organizations by type of cloud computing services acquired				
File Storage	100	-	67	57
E-mail	-	-	50	57
Organization database file	-	-	17	43
Office Software	-	-	67	29
Other(s)	100	50	17	29
Accounting or finance software application	-	50	33	-
Organizations by type of servers used to buy cloud computing services				
Shared servers with service providers	100	50	50	57
Servers from service providers exclusively reserved to the organization	-	50	50	43
Organizations by type of factors that limit the use of acquired cloud computing services				
Uncertainty about the location of data	100	-	50	14
Security violation risk	100	-	33	14
Uncertainty about the applicable law, jurisdiction and the dispute settlement mechanism	100	-	33	14
Signature cancellation difficulties or service provider change	-	-	33	14
Data or software accessing problems	-	-	17	14
High costs of acquisition of cloud computing services	-	-	17	14
Insufficient knowledge of cloud computing services	-	-	-	-
Organizations by type of benefits generated by the use of cloud computing services, ranked with the high degree of importance				
Reduction of costs related to ICT	-	50	17	14
Resulting flexibility of cloud computing services make possible adapting the capacity of the servers needs	-	-	-	57
Easy and fast deployment of solutions based on cloud computing	-	-	17	29
Organizations, by type factors that hamper the deployment of paid cloud computing services				
High costs of acquisition of cloud computing services	46	51	40	33
Uncertainty about the applicable law, jurisdiction and the dispute settlement mechanism	42	39	30	28
Other(s)	21	20	30	28
Security violation risk	37	35	28	18
Insufficient knowledge of cloud computing services	31	27	19	13
Uncertainty about the location of data	31	25	14	13

Source: DGEEC, Survey on ICT usage in Regional Public Administration.

<https://estatistica.madeira.gov.pt/>

Conventional sign:

- Null value

## 7- Big Data - 2017

Unit: %

	2016	2017
Organizations which analysed Big Data		
Organizations that performed Big Data analysis	10	9
Organizations by type of data source used for Big Data analysis		
Data generated from digital media (social media)	40	50
Device data from smart devices or sensors	60	50
Other sources of Big Data	-	-
Organizations by type of who performed the Big Data analysis		
Organization staff	100	100
External suppliers	-	-

**Source:** DGEEC, Survey on ICT usage in Regional Public Administration.

<https://estatistica.madeira.gov.pt/>

**Conventional sign:**

- Null value

## 8 - Digital Transformation - 2017

Unit: %

	2017
Organizations which each year draw up an ICT operational and / or investment plan	
Organizations that drew up an ICT operational and/or investment plan	38
Organizations which incorporate in its activity the ICT Sector Plan of its governmental area	
Organizations which incorporate in its activity the ICT Sector Plan of its governmental area	4
Organizations whose digital information systems share information with systems of other Public Administration Organizations	
Organizations whose digital information systems share information	53
Organizations that use data center services provided by other Public Administration organizations	
Organizations that use data center services provided by other Public Administration organizations	86
Organizations that provide services that are used with a cloud computing component by other Public Administration Organizations	
Organizations that provide services that are used with a cloud computing component by other Public Administration Organizations	14
Organizations using the Public Administration Interoperability Platform (iAP)	
Organizations using iAP	-
Organizations intending to implement document management interoperability with other Public Administration Bodies	
Organizations intending to implement document management interoperability	26
Organizations by type of difficulty found in the application of the national digital interoperability regulation (RNID)	
Organizations which apply RNID	6
Need for communication and training of employees	33
Compatibility with existing systems	33
The available technology does not support the requirements	33
Negative impact on productivity	33
Other(s)	-
Organizations that have defined a strategy for information security	
Organizations that have defined a strategy for information security	30
Organizations that have an information security strategy implemented in accordance with the General Regulation on Data Protection (RGPD)	
Already in accordance with the RGPD	-
It is under review in order to incorporate the RGPD	86
Organizations that provide virtual workstations incorporating the concept of Bring Your Own Device (BOYD)	
Organizations that provide virtual workstations	2
Organizations that provide mobile and / or home-based forms of work	
Organismos que disponibilizam formas de trabalho móveis	15
Organismos por tipo de permissão dos meios ou serviços de identificação eletrónica disponibilizados	
Organismos que disponibilizam meios ou serviços de identificação eletrónica	33
Aceitação documentos electrónicos	79
Utilização de certificados digitais	79
Assinatura através de SCAP	43
Chave móvel digital	29
Organizations that make available and / or use information for public access through the website data.gov.pt	
Organizations that make available and / or use information through the website portal dados.gov.pt	4

## 8 - Digital Transformation - 2017

Unit: %

	2017
Organizations that provide instruments that facilitate citizens' participation in public decision-making processes	
Organizations that provide instruments that facilitate citizens' participation in public decision-making processes	11
Organizations that provide non-presential attendance processes	
Organizations that provide non-presential attendance processes	26
Organizations by type of component integrated in non-presence processes that integrate the user experience (User Experience)	
Organizations that integrate the user experience in the non-presential attendance processes which are provided	33
Sharing the status of ongoing processes	100
Identification of the history of requests and processes in progress	100
Evaluation of the service provided by the citizen	75
Organizations that provide mobile applications to the user	
Organizations that provide mobile applications to the user	6
Organizations using common communications networks	
Organizations using common communications networks	83
Organizations that develop Open Source solutions that can be reused and shared with other Public Administration Organizations	
Organizations developing open-source solutions that can be shared	13
Organizations by type of need to reinforce ICT skills, classified with the degree of high importance	
Safety	23
Data privacy policy	21
Development of new applications	19
Project management	19
Support for users ( <i>helpdesk</i> )	17
Application maintenance	15
Testing and certification	11
Business management relationship	11
Infrastructure management	9
Data Science	6
Business architecture definition	2

**Source:** DGEEC. Survey on ICT usage in Regional Public Administration.

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**Conventional sign:**

- Null value

## 9 - ICT Expenditures in the organizations of the Regional Public Administration - 2016

Unit: Thousands of Euros

2016

ICT Capital Expenditures<sup>1</sup> in the Organizations of the Regional Public Administration, by type of expenditure

Total of ITC Capital Expenditures	1 606,2
Acquisition of equipment	329,1
Software Licensing	1 185,0
Acquisition of networks and communication circuits	92,1
Acquisition and provision of data centers and technical rooms	-
Migrating to Cloud Services	-
Hiring of other ICT services	-

ICT Current Expenditures<sup>1</sup> in the Organizations of the Regional Public Administration, by type of expenditure

ICT Current Expenditures	451,2
Support and maintenance of equipment	45,0
Software licensing support and maintenance	86,7
Maintenance of networks, communication consumptions and rental of communications circuits	81,3
Rental, maintenance and service of data centers and technical rooms	0,0
Costs with Cloud Services	89,4
Hiring of other ICT services	148,9

**Source:** DGEEC, Survey on ICT usage in Regional Public Administration.

<https://estatistica.madeira.gov.pt/>

**Conventional sign:**

- Null value