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Observatorio de Accesibilidad

DRAFT METHODOLOGY FOR SIMPLIFIED MONITORING UNE-EN 301549:2019

Observatorio de Accesibilidad

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1. INTRODUCTION

On 20 September 2018, most of the provisions of the new Royal Decree 1112/2018 of 7 September on the accessibility of websites and applications for public sector mobile devices[1], which transposes Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of websites and applications for public sector bodies' mobile devices,[2]entered into force.

Among the new provisions implemented, the need to establish a policy for monitoring and reporting on the state of compliance developed by virtue of chapter III on control, review, monitoring and reporting of the aforementioned Royal Decree stands out. Specifically, the Ministry of Territorial Policy and Public Function, through the General Secretariat of Digital Administration, within the framework of the Web Accessibility Observatory, will be in charge of coordinating and carrying out these actions.

The Implementing Decision (EU) 2018/1524[3], derived from the European Directive, **establishes the monitoring methodology and reporting provisions** that Member States will have to comply with in order to monitor at national level compliance with the requirements of the Directive and to report periodically every 3 years to the European Commission. It therefore directly affects the monitoring and reporting functions to be carried out.

The European Commission has established 2 review methods to be applied by the Member States, the simplified method and the in-depth method.

This document will detail and develop **the methodology that the Spanish state is going to apply for simplified monitoring and that will allow a review of the degree of compliance in terms of accessibility of their websites**. It will also allow us to know how it evolves over time and identify the most common problems.

This methodology is developed on the basis of the Spanish standard UNE-EN 301549:2019[4] "Accessibility requirements for ICT products and services", which is the Spanish translation of the standard "EN 301 549 V2.1.2 (2018-08).

[1] https://www.boe.es/buscar/act.php?id=BOE-A-2018-12699
[2] http://eur-lex.europa.eu/legal-content/ES/TXT/?uri=uriserv:OJ.L_.2016.327.01.0001.01.SPAoc=OJ:L:2016:327:FULL
[3] https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=uriserv:OJ.L_.2018.256.01.0108.01.SPAoc=OJ:L:2018:256:FULL
[4] http://administracionelectronica.gob.es/PAe/accesibilidad/une-en-301549-2019.pdf

Accessibility requirements for ICT products and services[5]". This is the harmonised standard declared by the European Commission in Implementing Decision (EU) 2018/2048[6]. These standards are in turn aligned with WCAG 2.1 of the W3C.

This methodology has been approved within the ICT Management Committee of the General Administration of the State (AGE) and in the Sectorial Commission for Electronic Administration with the participation of the Spanish Federation of Municipalities and Provinces (FEMP) and the Conference of Rectors of the Spanish University (CRUE).

1.1. HISTORY

In 2010, the then Ministry of the Presidency, through the Directorate General responsible for e-government matters, launched the Web Accessibility Observatory[7] initiative. During all these years, different services have been provided aimed at helping public administrations to comply with the accessibility requirements in force at any given time and, of course, to obtain information on the compliance and monitoring situation.

The existence of this previous activity has allowed a very high alignment with the provisions of Directive (EU) 2016/2102 to be achieved and the implementation of the simplified monitoring method, required by the Commission, to be developed in Spain by reusing the Observatory's previously existing work.

However, it is essential to update the methodology to adapt to the new standard and to adapt to the sample selection requirements imposed by the European Commission.

[5] https://www.etsi.org/deliver/etsi_en/301500_301599/301549/02.01.02_60/en_301549v020102p.pdf
[6] https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=uriserv:OJ.L_.2018.327.01.0084.01.SPAoc=OJ:L:2018:327:TOC
[7] http://administracionelectronica.gob.es/pae_Home/pae_Estrategias/pae_Accesibilidad/pae_observatorio_accesibilidad_eng.html

2. METHODOLOGY

The methodology of the **Accessibility Observatory** is based on the experience of accessibility experts and on the findings of different preliminary observatories.

The analysis of the pages is carried out automatically and an important effort has been made to ensure that the verification conducted on each page does not only consist of those that are purely automatic; instead, via different algorithms and metrics, an important number of checks, which have traditionally been reviewed manually, have been automated through estimates.

This way the range of analysed verifications has been widened, allowing to analyse practically all of the most representative accessibility requirements of a website based on standard EN 301 549 V2.1.2 (2018-08) and its corresponding technical transposition to Spain through standard UNE-EN 301549:2019[8].

The most important aspects of this methodology are explained and listed below.

2.1. SELECTION OF SAMPLE WEBSITES

The selection of websites should comply with the requirements included in the **Implementing Decision (EU) 2018/1524** which states that the sampling of websites should be representative in aspects such as **government level, subject matter and geographical distribution**.

This monitoring methodology for the member states also establishes **rotation** ratios **in the websites analysed**, obliging a sample of fixed websites to be maintained above 10% and a variable sample with a minimum of 50%, which in the case of the Spanish observatory is specified as **a fixed sample (FIXED series)** of around 50%, whose websites will be validated in all executions of the observatory in the same area, and **two variable series (EVEN series and ODD series)** that represent approximately the other 50%, which will be verified in alternate editions. The EVEN series will be analysed in even years and the ODD series in odd years (the first period 2020-2021 will be considered ODD).

Another aspect to take into account is the **number of websites** that must be analysed taking into account the population of the country, which in the Spanish case establishes a range of approximately 1000 websites during periods 1 and 2 (2020-2021 and 2022), increasing to 1500 from period 3 and following, which involves a range of approximately 2250 websites taking into account the fixed series and the two variables. To make this possible, it will be necessary to

[8] https://administracionelectronica.gob.es/PAe/accesibilidad/une-en-301549-2019.pdf

incorporate new segments and/or expand the existing segments with new websites.

The study is carried out in 4 fully differentiated action scopes, taking into account the set of bodies that make up the public sector at state, regional and local level: the state scope, the regional scope, the local scope and others.

In the **case of the state scope**, the study encompasses most of the websites belonging to the General Administration of the State, from the websites of the Ministries to the smaller electronic offices and smaller sized web sites. For the purpose of obtaining comparable results between the same types of websites, a categorisation thereof has been carried out based on their level of importance within the administration, their type of content or the purpose for which they were created. By this means six groups of websites are obtained:

- **Segment I. Main websites.** The main websites of Ministries and other websites managed by public entities with greater access or impact on society.
- **Segment II. Bodies and administrative units** Websites of ministries' bodies, centres or administrative units.
- **Segment III. Institutional Public Sector.** Selection of websites from the group of entities that make up the state institutional public sector with the exception of non-transferred public universities, which will be analysed in the "Other" area of action, within the "Universities" segment to obtain an overview of the university sector as a whole.
- **Segment IV. Thematic websites.** A selection of websites managed by the General Administration of the State but that are not identified with any specific organisation: promotional websites, those providing specific information about specific aspects, of services, data collection, etc.
- **Segment V. Main Offices.** Electronic offices of websites included in the segment of the Main website.
- **Segment VI. Other Offices.** Electronic offices not included in the "Main Offices" segment.

The segments that will form part of the FIXED series are the following:

- Segment I. Main websites.
- Segment II. Bodies and administrative units
- Segment V. Main Offices.

The websites of the segments listed below will be divided into 2 series (EVEN and ODD):

- Segment III. Institutional Public Sector
- Segment IV. Thematic websites.

- Segment VI. Other Offices.

In **the case of the regional scope**, the study covers a set of websites of the Regional Administration. In this case, we have opted for a division into thematic segments that allow us to get to know the situation in these specific areas and allow comparability between Regional Governments regardless of the type of administrative unit that performs such task. In addition, it should be borne in mind that the Regional Governments Observatory has a variable number of segments depending on the specific areas of analysis included in the odd variable series and the even variable series. Each segment will have the same type of website of each Regional Government:

- **Segment I. Main websites.** Main website of each Regional Government.
- **Segment II. Official gazettes.** Website of the Official Gazette of each Regional Government.
- **Segment III. Electronic offices.** Electronic Offices or On-line Offices in cases where a main office does not exist (only one per Regional Government).
- **Segment IV. Education.** Main educational website of each Regional Government.
- **Segment V. Employment.** Main website dedicated to employment policies of each Regional Government.
- **Segment VI. Health.** Main website dedicated to the provision of health services in each Regional Government.
- **Segment VII. Taxes.** Main website dedicated to the management and collection of taxes in each Regional Government.
- **Segment VIII. Tourism.** Main website dedicated to the promotion of tourism and information of each Regional Government.
- **Segment IX. Transparency.** Transparency website of each Regional Government.
- **Segment X.** Housing, Social Protection or Environment Websites. (Two to be chosen)
- **Segment XI**. Housing, Social Protection or Environment Websites. (Two to be chosen)
- **Segment XII. Health Centres.** (To be included from 2022). Selection of websites belonging to health centres.
- **Segment XIII. Non-university educational centres** (to be included from 2023). Selection of websites belonging to non-university educational centres.
- **Segment XIV. Other services.** Selection of specific websites for the provision of any other regional service that does not belong to any of the above segments.

The segments that shall form part of the FIXED series are the following:

- Segment I. Main websites.
- Segment II. Official gazettes.
- Segment III. Electronic offices.
- Segment IV. Education.
- Segment V. Employment.
- Segment VI. Health.
- Segment VII. Taxes.

The segments detailed below will form part of the ODD series:

- Segment VIII. Tourism.
- Segment IX. Transparency.
- Segment XIII. Non-university educational centres (from 2023)

The segments listed below will be part of the EVEN series:

- Segment X. Housing, Social Protection or Environment Websites.
- Segment XI. Housing, Social Protection or Environment Websites.
- Segment XII. Health Centres (from 2022)

The segment "Segment XIV. Other services" will be divided into 2 series (EVEN and ODD).

In the **case of the local scope**, the study covers a set of websites of the Local Administration. In this case, in order to achieve a homogeneous geographical distribution, provincial divisions have been taken into account. For the purpose of obtaining comparable results between the same type of websites in each one of the Provinces, a categorisation thereof has been carried out based on the characteristics of each local entity. Based on this, the sample has been divided into six groups of websites, where each one contains the same type of website from each province:

- **Segment I. Councils.** The main website of all Provincial Councils, Councils and Councils of the Islands. In the case of single-province Regional Governments, there will be no website of the Council.
- **Segment II. Provincial Capitals.** Website of the city council of all provincial capitals.
- **Segment III. The most populated towns.** Municipality websites of municipalities with a population of more than 20,000 inhabitants (excluding the capital).
- **Segment IV. Middle-sized towns.** Selection of websites of town councils of municipalities with a population of between 5,000 and 20,000 inhabitants in each province.

- **Segment V. Small towns.** Selection of websites of town councils of municipalities with a population of between 2,500 and 3,500 inhabitants in each province.
- **Segment VI. Other services.** Websites that do not belong to any of the previous segments.

The segments that will form part of the FIXED series are the following:

- Segment I. Councils.
- Segment II. Provincial Capitals.

The websites of the segments listed below will be divided into 2 series (EVEN and ODD):

- Segment III. The most populated municipalities. All municipalities will be divided into 2 analysis groups.
- Segment IV. Middle-sized towns.
- Segment V. Small towns.
- Segment VI. Other services.

For the local entities section and based on their population, the latest demographic data published by the National Statistics Institute, as of 01 January 2018, has been used as a reference. The figure of 20,000 inhabitants is determined by Law 7/1985, regulating the Basis of Local Regimes, which states, among other functions of the Provincial Councils, "the provision of electronic administration services... in municipalities with a population of less than 20,000 inhabitants". Therefore, municipalities with more than 20,000 inhabitants are outside the scope of action of the provincial councils in the case of e-government services, having autonomy for the management of their ICT services, including compliance with standards on accessibility to websites and mobile applications. The figure of between 5,000 and 20,000 inhabitants groups together municipalities that, although they are under the scope of action of provincial councils (if they exist) with regard to e-government services, may be large enough to carry out specific ICT management actions themselves or have their own staff when developing their own ICT services. The figure of between 2,500 and 3,500 inhabitants refers to small municipalities which, as far as e-government services are concerned, the vast majority depend on the action of provincial councils (if any). It should be noted that all the above, as far as Provincial Councils are concerned, also extends to the equivalent entities existing on the Canary and Balearic Islands, see Councils of the Islands, in accordance with Article 141.4 of the Spanish Constitution and Articles 41.1 and 41.3 of LBRL 7/85.

Finally, a **new area of action called "Others**" is included, encompassing a group of entities not included in the previous areas, which is organised into the following segments:

- **Segment I. Constitutional and regulatory bodies**[9]. This segment includes all major websites of constitutional bodies and constitutional relevance organs, as well as other significant structures integrated therein and regulatory bodies. It also includes a selection of the counterpart organisations existing in the autonomous area.

- **Segment II. Judiciary**. This segment includes the websites of the General Council of the Judiciary, the main Courts and Tribunals, and the administration of justice (the organisation that serves Judges and Tribunals), covering both those of regional governments with such competences and those served at the national level. The Public Prosecutor's Office is not included in this segment but as a body of constitutional significance in "Segment I. Constitutional bodies".

- **Segment III. Universities**. Websites of non-transferred public universities and transferred public universities.

The segments that will form part of the FIXED series are:

- Segment I. Constitutional bodies. Only those at state level.
- Segment II. Judiciary.
- Segment III. Universities. Only the main website.

The websites of the segments listed below will be divided into 2 series (EVEN and ODD):

- Segment I. Constitutional bodies. For those of regional scope, a selection will be made considering the same type of institution (ombudsmen, courts of auditors, etc.) so that each EVEN or ODD series includes all websites of the same type of institution.
- Segment III. Universities. From 2023, the university segment will increase with other university websites (such as electronic offices, faculty websites, etc.) that will be distributed in the 2 series of analyses.

It should also be borne in mind that the scope of RD 1112/2018, in terms of obligated entities, is broader than that of the directive. Since the report is linked

9 Public law entities that, with functional independence or with a special autonomy recognized by law, have attributions functions of regulation or supervision of an external nature over a given sector or activity indicated

to the directive and its conditions, only websites affected by the directive will be included in the sample.

On the other hand, the definition of the sample **will take into account the contributions made by associations of people with disabilities** with respect to websites that may arouse greater interest, greater impact or be accessed more frequently.

2.2. SAMPLE OF PAGES

The sample is defined as the **set of pages** that are to be reviewed during the analysis of each website. The number of pages to analyse in each website will be variable and **will depend on the estimated size and complexity of the website,** so that each website will be categorised within one of the following 3 levels of complexity:

- **Low**, with a 17-page sample. Depth 4 and breadth 4
- **Medium**, with a 33-page sample. Depth 4 and breadth 8
- **High**, with a 51-page sample. Depth 5 and breadth 10

The selection of the sample is carried out automatically through a random process in which the total number of pages corresponding to different levels in the website navigation structure is selected according to the degree of complexity. In addition, the sample always contains the main page of the website.

Due to its automatic nature, the sample **will only include pages that are directly accessible via the Internet for which no prior identification or a specific manual action is required**.

As an exception, it is possible that the tracker will not be able to obtain 33 pages, either because sufficient links cannot be obtained or because the website does not reach the specified number of pages. In this case, the sample of pages analysed on the website will be lower.

For the automatic tracking of pages, an initial URL is used as the seed, which corresponds to the website's homepage. From this seed, a trace is performed with the values of depth and breadth that establish the complexity of the site.

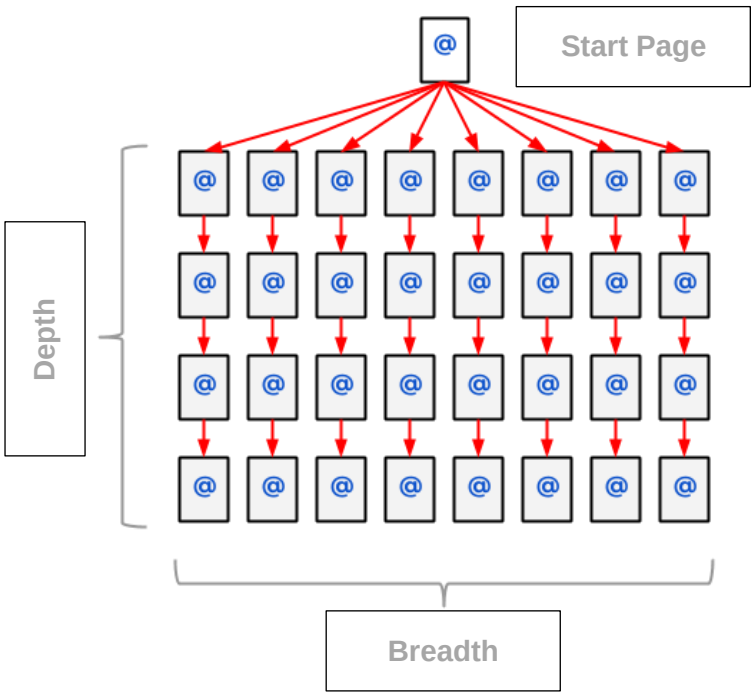
To properly understand this tracking, the depth and breadth concepts are defined below:

- **Depth.** This value is used to define the degree of depth that is reached by the tracking within the website's navigation structure. The reached depth does not necessarily correspond to the depth inside the content hierarchy

of the website, instead it refers to the depth of navigation; in other words, the number of clicks required to reach the page. This way a page of depth 4 is one where four links had to be followed in order to reach it from the homepage.

- **Breadth.** This parameter refers to the number of pages analysed in each depth level; in other words, for each level the tracker enters inside the website, the number of pages selected are those defined in the breadth.

A graph representing the tracking carried out by the observatory is provided below based on the depth and breadth values defined for average complexity cases.



The automatic selection of the sample incorporates algorithms so that the final selection of the pages is as representative as possible of the different content typologies of the pages of the websites. To do this, the system, whenever possible, performs a discrimination process to select:

- Pages with different types of content, such as tables or forms.
- Pages of different sections and/or directories of the website.

If the Main Segment websites are in the state and regional government area, the sample of pages is carried out manually to ensure the inclusion of different pages and templates. This selection contains some of the following types of pages:

- Pages from the Press Office section. Two different type of pages will be selected from this section.
- Page/s from the search engine.
- Website Map.
- Pages in a language other than Spanish.
- Pages from the most visited sections of the website.
- First level pages.
- Interior level pages (second and third level).

2.3. VERIFICATION LISTS

When conducting an accessibility analysis of each page of a website, we are checking the adequacy of a finite set of verifications that are defined based on a **level of adequacy**.

- **Level A**: is the minimum level of adequacy included in the WCAG 2.1 guidelines as a result of aggregating all level A verifications where its character is only operational and progressive, rather than regulatory at UNE-EN 301549:2019 level.
- **Level AA**: is the level of regulatory compliance established in standard UNE-EN 301549:2019 (level AA WCAG 2.1) resulting from the aggregation of level A and AA verifications.

Each verification is defined by a series of elements:

- **Verification identifier**: This is the unique identifier of each verification. It is comprised of two digits separated by points that indicate the adequacy level and the sequence number of the verification. It provides a unique reference to a verification.
- **Verification name**: Indicates the element or characteristic to be evaluated.
- **Question**: This is a specific question that specifies how the verification must be evaluated.
- **Answers**: Possible responses to the question formulated for each verification.
- **Value**: Indicates the degree of compliance of a response with respect to the verification and represents the quantitative measure of the verification. This is a numeric value indicating if the minimum degree of quality has been reached for the verification. The possible values are 0, 0.5, 1 or Not Applicable (from now on, we will refer to it as N/A). When a

page does not contain the elements evaluated in the verification (for example a verification of the data tables in a page that does not have data tables) a value of N/A will be assigned; a value of 1 will be assigned when a page exceeds the minimum values required by the verification; otherwise, a value of 0 will be assigned; if the minimum level is not reached but it is considered that the verification is partially passed, the value 0.5 will be assigned (only in certain verifications); otherwise, the value 0 will be assigned.

- **Modality**: Indicates the accessibility adequacy of a specific response. This element represents the qualitative measure of the verification, which indicates whether or not a verification complies with the accessibility. The possible values are Pass (represented by a green check mark indicating that the verification is complied with) and Failure (represented by a red X indicating that the verification is not valid). In a verification, a "N/A" value is always a Passing score due to the fact that no elements of this type exist on the page and therefore this condition does not represent an accessibility problem.

The observatory consists of a total of **20 verifications** distributed in the previously explained adequacy levels. These verifications consider the main aspects of accessibility that a website must comply with.

For each one of the verifications, a variable number of unitary checks are carried out, which combination of results generates the response to the verification along with its value and modality. All these checks are carried out automatically, including the analysis of several manual review requirements, which have been automated via several algorithms with a very high degree of reliability.

When choosing the verifications, **attention and efforts were focused on those automated requirements** contained in the UNE-EN 301549:2019 standard, taking into account their impact on the final accessibility of the website, attempting to cover all those possible by means of automated metrics.

While the purpose of an in depth accessibility analysis is to obtain detailed results about the accessibility of a website, including all the possible inadequacies of the website with respect to the accessibility requirements of standard UNE-EN 301549:2019, the object of the Accessibility Observatory is to obtain an **overall view** of the degree of accessibility that is present in a set of websites.

2.4. OBTAINED RESULTS

The execution of an iteration of the Observatory brings about a large amount of numbers and values, and consequently generates a series of **graphs and statistical values**, which provide a schematic representation of the obtained results.

With the aim of having aggregate indicators that show the status of the different websites based on the proposed verifications, three types of average scores have been devised: Average Page Score (PMP), Average Website Score (PMSW) and Average Verification Score (PMV). All initials in brackets derive from the Spanish.

Also, adequacy indicators are obtained for each verification, page and website.

2.4.1. Average scores

The **Average Page Score** is obtained by adding the score obtained in the 20 verifications of the methodology and dividing this result by the number of scored verifications on the page, obtaining a value between 0 and 1 and finally, this value is multiplied by 10.

$$PMP = \frac{SRV}{NVPU} \times 10$$

PMP: Average Page Score

SRV: Sum of the results of all the verifications on a page

NVPU: No. of scored verifications on the same page

By adding the scores of the pages we obtain the **Average Website Score** by calculating the mean of the average scores of all pages on the website:

$$PMSW = \frac{SPMP}{NP}$$

PMSW: Average Website Score

SPMP: Sum of the average scores of the pages

NP: Number of pages (Depending on the website complexity)

The **Average Verification Score** shows the overall score of a specific verification on a website. To calculate this value, we take into account the sum of all the points obtained in the given verification for each page of the website as well as the number of pages where the verification has obtained a different value of "N/A". This way the Average Verification Score is obtained using the following formula:

$$PMV = \frac{SR}{NPPU} \times 10$$

PMV: Average Verification Score

SR: Sum of the results of the verification on each page

NPPU: No. of scored pages

All these average score values **oscillate between 0 and 10**, allowing to easily compare the results between the different websites. In the event that verification does not apply on any of the pages of the website then their average score value will also be **"**N/A**"**.

2.4.2. Estimated level of adequacy

In order to obtain an estimated overview of the degree of accessibility of a website, an **estimate** is generated **of the level of adequacy** (Not Valid, Level A or Level AA) for the different observatory metrics: verification, page and website.

The adequacy levels of verification, page and website are an estimate based on automatic checks. An expert manual review is ALWAYS necessary complementing all the requirements of UNE-EN 301 549:2019 to determine the REAL level of adequacy of the website.

To facilitate the understanding of this score, we divide the 20 verifications into two groups[10] (one with 14 verifications and the other with 6):

- Level A: 14 verifications
- Level AA: 6 verifications

[10] Although the UNE-EN 301549:2019 standard does not distinguish between compliance levels, WCAG 2.1 levels A and AA will be used to provide progress information.

First, we obtain the level of **adequacy of a verification (modality)** in accordance with the methodology tables described in the next point (3. Methodology Tables).

From the adjustment of the different verifications, the **estimated adequacy of the page** is obtained in accordance with the following rules:

- **Level AA**. Obtained when there are:
  - **Up to 2** verifications with a "Red" (**Failure**) modality between the **Level A** verifications
  - **Up to 1** verification with a "Red" (**Failure**) modality between the **Level AA** verifications
- **Level A**. Obtained when there are:
  - **Up to 2** verifications with a "Red" (**Failure**) modality between the **Level A** verifications
  - **2 or more** verifications with a "Red" (**Failure**) modality between the **Level AA** verifications
- **Not Valid**. Obtained when there are:
  - **3 or more** verifications with a "Red" (**Failure**) modality between the **Level A** verifications

Finally, the **estimated level of adequacy of a website** is obtained based on the adequacy of each page and a mathematical formula.

Once the adequacy of each page is obtained, a numeric value is assigned to each one based on the following rule:

- If it has **Not valid**, **0 points** will be assigned.
- If it has a **Level A**, **5 points** will be assigned.
- If it has a **Level AA**, **10 points** will be assigned.

Then the points assigned to each page is divided by the number of pages, obtaining a numeric value for the website that is between 0 and 10.

$$VNSW = \frac{SVNP}{NP}$$

VNSW: Website Numerical Value

SVNP: Sum of the Numerical Values of the pages

NP: Number of pages (According to complexity)

Based on the numeric value of the website, the level of adequacy will be assigned as follows:

- If the value is lower than **3.5**, the level will be **Not valid.**
- If the value is greater or equal to **3.5** and less than **8**, it will be **Level A**.
- If the value is greater than or equal to **8**, it will be **Level AA**.

2.4.3. Estimated compliance status

Implementing Decision (EU) 2018/1523[11], derived from the European Directive, **establishes a model accessibility statement** to be used by public sector bodies in the Member States in relation to the adequacy of their websites with the requirements of Directive (EU) 2016/1012.

The results of the observatory provide a possible **estimate of the compliance status of the website,** in terms consistent with these statements.

The compliance status of the website is only an estimate based on automatic checks. An expert manual review is ALWAYS necessary to complement all the requirements of UNE-EN 301 549:2019 to determine the REAL compliance status of the website.

This estimate of the compliance status is obtained from the **Average Verification Score (PMV)** of the web site pages commented on in the previous section. In the first place, and based on this average score, the **compliance of each Verification** is determined **at website level** with a different value of "N/A", according to the following criteria:

- **Compliant Verification**: if the PMV is greater than or equal to 9.

  PMV >= 9

- **Non-Compliant Verification**: If the PMV is less than 9.

  PMV < 9

The compliance status of the website is then **estimated** according to the following rules:

- The website **is deemed to be "fully compliant"** when all verifications other than "N/A" are assessed as "Compliant". That is to say, there is no verification evaluated as "Not Compliant".

[11] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1568632275341&uri=CELEX:32018D1523

No. of Non-Compliant Verifications = 0

- The website is **deemed to be "partially compliant"** when the number of compliant verifications is greater than the number of non-compliant verifications.

  No. of Compliant Verifications > No. of Non-Compliant Verifications

- The website is **deemed "not compliant"** when the number of compliant verifications is less than or equal to the number of non-compliant verifications.

  No. of Compliant Verifications <= No. of Non-Compliant Verifications

3. METHODOLOGY TABLES

Summary tables of the verifications carried out in the Observatory are provided below as well as the detailed tables, which contain more accurate information about the different checks that are carried out on each page for each verification or requirement.

Likewise, the following paragraph more accurately describes each unitary check of the accessibility analyser that is involved in the evaluation of each verification.

Table 1. Verification points definition for adequacy level A

Identifier	Name	Question	Answer	Value (N/A = Not Applicable)	Modality
1.1	**Existence of textual alternatives**	Do the non-textual elements have an alternative text which is not incorrect?	Non-textual elements available Yes No	**N/A** **1** **0**	☑ ☑ ☒
1.2	**Use of headers**	Are headers used to show the structure of the document in an acceptable manner?	Yes Yes, but there are not enough No	**1** **0.5** **0**	☑ ☑ ☒
1.3	**Use of lists**	Are the lists properly marked?	No lists available Yes No	**N/A** **1** **0**	☑ ☑ ☒
1.4	**Data tables**	Do data tables have headers, adequate summary information and association of cells when these are complex and do their data cells have content?	No data tables used Yes No	**N/A** **1** **0**	☑ ☑ ☒
1.5	**Structural grouping**	Are the text paragraphs properly marked?	Yes No	**1** **0**	☑ ☒
1.6	**Separation of content and presentation**	Is the content of the presentation properly separated without using styles for transmitting information or structural elements only for displaying purposes?	Yes No	**1** **0**	☑ ☒

Identifier	Name	Question	Answer	Value (N/A = Not Applicable)	Modality
1.7	**Identification of the main language**	Is the main language properly identified?	Yes No	**1** **0**	☑ ☒
1.8	**Navigation with JavaScript accessible and User Control**	Is JavaScript used regardless of the device? And, can the user control blinks, redirections and updates correctly?	Yes No	**1** **0**	☑ ☒
1.9	**Forms and labels**	Are all form controls labelled correctly and are the mandatory fields identified on the forms?	No forms available Yes No	**N/A** **1** **0**	☑ ☑ ☒
1.10	**Forms and structure**	Are all the controls and other elements of the form related between them grouped?	No forms available Yes Yes, but there is a moderate number of fields that are not grouped up No	**N/A** **1** **0.5** **0**	☑ ☑ ☑ ☒
1.11	**Page title and frames**	Does the page and the frames have a significant title that identifies its content?	Yes, valid page title and without frames Yes, valid page title and frames with title No, without a	**1** **0.5** **0**	☑ ☑ ☒

Identifier	Name	Question	Answer	Value (N/A = Not Applicable)	Modality
			page title or without frame titles		
1.12	**Descriptive links**	Do the links have a suitable text?	No links included Yes No	**N/A** **1** **0**	☑ ☑ ☒
1.13	**Changes of context**	Are the changes in context carried out properly?	Yes No	**1** **0**	☑ ☒
1.14	**Compatibility**	Can the code be processed?	Yes No	**1** **0**	☑ ☒

Table 2. Verification points definition for adequacy level AA

Identifier	Name	Question	Answer	Value (N/A = Not Applicable)	Modality
2.1	**Identification of the language changes**	Are the changes in language properly identified?	Yes No	**1** **0**	☑ ☒
2.2	**Legibility and Contrast**	Is the contrast between text colour and background colour sufficient with proper use of in-line styles for spacing properties?	Yes No	**1** **0**	☑ ☒
2.3	**Adaptive layout**	Is the layout of the website correctly adapted to different window or zoom sizes?	Yes No	**1** **0**	☑ ☒
2.4	**Multiple navigation routes**	Is a Web map or a search engine available?	Yes No	**1** **0**	☑ ☒
2.5	**Device independence**	Is the visibility and order of the keyboard focus, device orientation, and correct auto-completion values on forms respected?	Yes Yes, with a moderate use of tab index No	**1** **0.5** **0**	☑ ☑ ☒
2.6	**Consistent navigation**	Is the use of links consistent and does it meet user expectations?	No links included Yes Yes, with at least one broken link No	**N/A** **1** **0.5** **0**	☑ ☑ ☑ ☒

3.1. DETAILED TABLE OF ADEQUACY LEVEL A

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
1.1- Existence of textual alternatives	– It is verified that all "area" elements have an alternative associated text. – It is verified that if an "area" element has a "href" attribute, it also has an alternative non-empty text. It is verified that if any image type input is available, it has an alternative non-empty text. – It is verified that all "applet" elements have a non-empty textual alternative. – It is verified that image elements do not have as an alternative the name of a file or a filler text. – It is verified that image elements with no alternative text are correctly marked as decorative images that are transparent for the screen readers. – It is verified that images with empty alternative text are correctly marked as decorative images that are transparent for screen readers. – It is verified that images with non-empty alt don't have a role attribute that marks them as decorative. – It is verified that small images that cannot provide visual information are declared as decorative and are transparent for the screen readers. – It is verified that the value of all "longdesc" attributes is correct. – It is verified that the alternative text of the images is not too long. – It is verified that aria-described by attributes reference existent elements (id) on the page and with textual content.	a. Evaluated elements not available b. There are elements and all of them have a valid alternative (they pass the validations) c. Elements without an alternative are present, at least one element has the name of the file or a filler text as an alternative, decorative images that are not transparent for the screen reader are present, incorrect URLs are present for long descriptions, there are alternative texts which are too long or reference is made to non-existent descriptive texts (WAI-ARIA).	a. N/A b. 1 c. 0	a. Pass b. Pass c. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
1.2.- Use of headers	– It is verified that the document has no missing headers – It is verified that first level headers are present in any position. – It is verified that no empty headers are present. – It is verified that two headers of the same level (or higher) are not present without content between them. – It is verified that no jumps occur in the levels of headers. – It is verified that headers are properly structured for structuring the content (more than one header if there are at least 15 lines of text).	a. All the header verifications are correct b. Headers are used but not enough for structuring the content or without the presence of a first level header c. At least one header verification is incorrect	a. 1 b. 0.5 c. 0	a. Pass b. Pass c. Fail
1.3.- Use of lists	– It is verified that each "li" element is an offspring of "ul" or "ol". – It is verified that the definition lists are properly structured. – It is verified that each "dt" element is an offspring of "dl". – It is verified that each "dd" element is an offspring of "dl". – It is verified that there is no type of list directly placed under another ordered list, without it being a part of said list. – It is verified that there is no type of list directly placed under another list that is out of order, without it being a part of said list. – It is verified that all offspring of an ordered list are "li". – It is verified that all offspring of a list that is out of order are "li". – It is verified that paragraphs are not used to simulate unnumbered lists (3 or more sequential lines beginning with "-" or "- " or "*"). – It is verified that there are not 3 or more lines separated by BR beginning with "-" or "- " or "*". – It is verified that if there are not paragraphs used to simulate	a. The page does not have any lists b. The page has lists and all are correct c. The page has lists and at least one is not correct	a. N/A b. 1 c. 0	a. Pass b. Pass c. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	numbered lists (3 or more consecutive lines beginning with "x" or "x " or "x." or "xº" or "xª", "x)", "x-", "x.-" where 'x' belongs to a sequence of numbers, letters, Roman numerals.). – It is verified that there are not 3 or more lines separated by BR and beginning with patterns of consecutive letters or numbers ("x" or "x " or "x." or "xº" or "xª", "x)", "x-", "x.-" where 'x' belongs to a sequence of letters, numbers or Roman numerals and start with the unit). – It is verified that there are not 3 or more disordered list elements that begin with patterns of consecutive letters or numbers ("x" or "x " or "x." or "xº" or "xª", "x)", "x-", "x.-" where 'x' belongs to a sequence of letters, numbers or Roman numerals and starting with the unit. – It is verified that there are not 3 or more consecutive paragraphs that begin with an image used as a bullet list (dimensions equal to or less than 10 * 10) – It is verified that there are not 3 or more lines separated by BR that begin with an image used as a bullet list (dimensions equal to or less than 10 * 10). – It is verified that there are no single column layout tables to simulate lists. there are no empty lists, without any list item.			
1.4.- Data tables	Note: header = TH, TD with "scope", or cell with WAI-ARIA "rowheader" or "columnheader" attributes. Locate data tables: those that do not have any TABLE element under them are not formed by a single row or column, do not have more than 150 characters of text in any of its cells and at least 70% of the cells have text (or, otherwise, all cells with contents from the first row and/or first column are headers). In these cases, the following	a. No data tables are present b. Data tables with content are included and all have proper headers and if used or required,	a. N/A b. 1 c. 0	a. Pass b. Pass c. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	will be valued: – It is verified that there is at least one table header element present (in the outside rows or columns). – It is verified that the headers are properly marked in the simple data tables. It is verified that the data table must have headers (all the elements are headers) in the first row or the first column with the exception of elements with empty text. In other words, a fault is generated if there are no headers in the first row or in the first column or if there is at least one header cell and at least one data cell with text. – It is verified that the headers are properly marked in the complex data tables. It is verified that if a table with more than one level of headers is present (in other words, if TH elements are present in two rows or in two columns) and no id attributes are present in the TH elements and headers in the TD elements. Also, the following is verified when we find a table with headers in the first file and first column and upper left cell empty. If the table has the first cell empty (TD) and the rest of cells with text marked as headers (TH), then it will be checked that all the cells of the first column (that have text) are headers; otherwise, a fault will be generated. This rule is also conversely applicable; in other words, if the upper left cell is empty and the fists column are headers, then the first row must also be headers. – It is verified that the value of the "scope" attributes is valid. – It is verified that the value of the "headers" and "axis" attributes corresponds with the actual identifiers that are used in headers of the same table. – It is verified that the title of the table is not simulated via a header cell that occupies the entire width of the table.	associations between cells and proper summary information are also included. c. Tables are included and at least one header is not marked; the associations between cells are incorrect or are not used when required; the summary information is not properly provided; or the data table is mostly empty.		

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	– It is verified that no table headers are simulated using page headers – It is verified that tables of higher complexity have summary information ("summary", "aria-describedby" attributes or paragraph within the same FIGURE element.). – It is verified that the title and summary of the data tables are not duplicated – It is verified that mostly empty data tables do not exist.			
1.5 - Structural grouping	– It is verified that paragraphs are not being simulated by the BR element (sequences of two or more sequential BRs inside a P with more than 150 characters of text). – It is verified that paragraphs are not being simulated by the DIV element (DIV elements containing over 150 characters of text as a direct offspring). – It is verified that no more than 10 BR elements are being used on the page.	a. None of the checks have failed b. At least one of the checks has failed	a. 1 b. 0	a. Pass b. Fail
1.6 - Separation of content and presentation	Locate layout tables: those that have a nested TABLE element, role="presentation", have a cell with more than 150 text characters, or less than 70% of the cells have text (provided that if in the first row or first column there is a header, there is also a data cell with content in the same row or column). In these cases, the following will be valued: – It is verified that no formatting tables are included that use elements or attributes of the data tables themselves. – It is verified that non-recommended presentation elements are not used – It is verified that content is not included which transmits information from the style sheets with pseudonyms: before or:	a. None of the assessed cases are present. b. At least one of the assessed cases occurs where the content and the presentation are not properly separated.	a. 1 b. 0	a. Pass b. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	after.			
1.7.- Identification of the main language	– It is verified that the document properly specifies a language via the LAG attribute. – It is verified that the language of the page coincides with the language that is identified	a. The languages are properly identified b. The languages are not properly identified	a. 1 b. 0	a. Pass b. Fail
1.8 - Navigation with JavaScript accessible and user control	– It is verified that if events dependent on a device are used, that these are replicated (with the exception of "onclick"). – It is verified that the elements with event managers are standard interaction elements or that the "Do" and "role" attributes are used to make them accessible and compatible with the screen readers. – It is verified that tags that generate automatic content movement ("blink" or "marquee") are not used. – It is verified that page redirections are not used that are not transparent to users ("meta" and the attribute "http-equiv" with time> 0). – It is verified that the page is not updated automatically with the element "meta" (and the attribute "http-equiv", regardless of the defined time). – It is verified that the CSS property 'text-decoration: blink' is not used.	a. Elements with scripted interaction are accessible with a keyboard and the user has control over content movements, flashes, updates and page redirections b. Elements with scripted interaction are not accessible by keyboard or the user has no control over content movements, flickers, updates or page redirection	a. 1 b. 0	a. Pass b. Fail
1.9 Forms and labels	Note: A <label> (with text) is considered a label that is explicitly associated; "aria-labelledby" with an "id" corresponding to an element with textual content; "aria-label" or "title" with content. – It is verified that all the input elements used for entering data have an associated label.	a. The page does not have form controls b. The page has controls and they are labelled correctly	a. N/A b. 1 c. 0	a. Pass b. Pas c. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	– It is verified that all form controls of type "select" have an associated label. – It is verified that all "textarea" type form controls have an associated tag. – It is verified that the "for" attributes of a tag corresponds to some form control. – It is verified that "label" elements associated explicitly, being the only associated label, are not hidden with CSS. – It is verified that in forms with more than 5 fields of data entry the mandatory fields are identified (presence of the text "mandatory", "optional" or equivalent). – It is verified that the name accessible through the attributes aria-"label" and "aria-labeledby" is the same or contains the visible label of the field	c. The page has controls but not all are labelled correctly		
1.10 Forms and structure	– It is verified that if there are several groups of radio buttons or check boxes in a form they are properly grouped and identified. – It is verified that header elements are not used to group the form controls instead of using the "fieldset" element. – It is verified that form control groups are used when a form has 8 or more text entry fields. – It is verified that every "fieldset" has its corresponding "legend" label. – It is verified that every group of form controls defined by WAI-ARIA has its corresponding label. – It is verified that in the "select" with more than 24 options (100 in the case of consecutive numbers), the "optgroup" element is used. – It is verified that there is no "select" with filler options that	a. The page does not have form controls b. The page has controls and its structure is correct c. The page has controls, the options in the select are grouped correctly, but there are 8 or more and less than 12 fields of data entry without a <fieldset> that groups them.	a. N/A b. 1 c. 0.5 d. 0	a. Pass b. Pass c. Pass d. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	simulate groupings instead of "optgroup". – It is verified that the "optgroup" elements have a "label" attribute with content	d. The page has controls and the options in the select are not grouped correctly or there are 12 or more data entry fields without a fieldset that groups them.		
1.11 - Page title and frames	– It is verified that the document has a title. – It is verified that the text in the title is valid (not the empty chain, nor the standard text such as "title", "untitled"). – It is verified that all the frames and iframens have a title. – It is verified that the text of the "title" attribute of the frames and iframes is not empty. – It is verified that the title is not identical as the rest of titles of the sample (for sample sizes >= 10).	a. The page has a valid page title and does not have any frames b. The page has a valid page title and frames are present with a title c. The page lacks a valid title or frames are present without a title	a. 1 b. 0.5 c. 0	a. Pass b. Pass c. Fail
1.12 - Descriptive links	– It is verified that there are no links with less descriptive texts (such as "here", "click here" "click here", "click here", "click here", "press here", "click here", "click here,"…"). – It is verified that no links are included with "href" without textual content inside them (In the form of text or as textual alternatives) and without a label that identifies its purpose (aria-label or aria-labelledby). – It is verified that if a link has more than 250 characters (except for exceptions).	a. The page does not have any links b. The page has links and all are correct c. The page has links and at least one is not correct	a. N/A b. 1 c. 0	a. Pass b. Pass c. Fails

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	Exceptions: cases where the link begins with Legal texts. With words such as: Constitución, Convención, Decreto, Decreto Foral, Decreto Foral Legislativo, Decreto Legislativo, Decreto-ley, Directiva, Enmienda, Estatuto, Instrumento de Aceptación, Instrumento de Adhesión, Instrumento de Aprobación, Instrumento de Ratificación, Ley, Ley Foral, Ley Orgánica, Nota Diplomática, Orden Foral, Posición Común, Real Decreto, Real Decreto Legislativo, Real Decreto-ley, Resolución-Circular. With acronyms such as: RD, R.D., R.D, RD-L (78) – It is verified that the textual alternative of the images included inside the links is not the same as the rest of textual content of the link. – It is verified that the links or buttons defined by WAI-ARIA have their corresponding label.			
1.13.- Changes in context	Change in context is defined as a new page, window, tab or application, or change in focus (window.location, window.history, window.open, window.focus, etc.). – It is verified that a change in context does not occur in the "onfocus" or "onblur" events. – It is verified that a change in context does not occur as soon as the page is loaded (onload). – It is verified that a change in context does not occur in the "onchange" event of the "select" elements.	a. The validations are correct b. At least one of the validations is incorrect	a. 1 b. 0	a. Pass b. Fail
1.14 - Compatibility	– It is verified that the document has a valid DTD. – It is verified that the HTML code does not have errors that affect	a. The document has a valid DTD and the HTML code as well as	a. 1 b. 0	a. Pass b. Fail

Identifier	Checks	Results	Value (N/A = Not Applicable)	Modality
	its correct processing by all browsers: – It is verified that the elements are nested correctly (correct opening and closing of labels) – It is verified that the same attribute is not repeated with a different value in the same element. – It is verified that the values of the attributes are placed between quotation marks. – It is verified that the value of the attributes that must have a unique value per page ("id", "accesskey") indeed have a unique value. – It is verified that the CSS code is parseable (properly formed, without syntax errors)	the CSS is processable (parseable) b. The document is missing a valid DTD, it has errors that affects its proper processing (parsing) or the style sheets are not syntactically correct		

3.2. DETAILED TABLE OF ADEQUACY LEVEL AA

Requirement	Checks	Results	Value (N/A = Not Applicable)	Modality
2.1 Identification of the language changes	– It is verified that all the languages specified by the elements are valid. – It is verified that the most common language changes (links to change the language of a Website) are properly marked. – It is verified that the English texts that are found in a document are properly marked.	a. The languages are properly identified b. The languages are not properly identified	a. 1 b. 0	a. Pass b. Fai
2.2.- Legibility and Contrast	– It is verified that the colour combinations of the foreground and the colour of the background in the same style sheet rule have sufficient contrast. – It is verified that the correct use of in-line styles is verified for the following text spacing properties: line-height, letter-spacing, word-spacing	a. The contrast is sufficient in all evaluable cases and in-line styles are not used for text spacing with iimportant b. Some element has insufficient contrast or in-line styles are used for important text spacing	a. 1. b. 0	a. Pass b. Fail
2.3- Adaptive layout	– It is verified that the possibility of zooming in the browser is not being blocked – It is verified that CSS features are being used to achieve an adaptive layout such as media-queries, CSS Grid or CSS Flexbox.	a. Some CSS features are used for adaptive layout and are not locked to zoom. b. No CSS feature is used for adaptive layout or the zoom is locked up.	a. 1 b. 0	a. Pass b. Fail
2.4.- Multiple navigation routes	– It is verified that a map of the site is provided or a search function within the Website.	a. The document includes a link to the Web map or a search function	a. 1 b. 0	a. Pass b. Fail

		b. The document lacks a link to a Web map as well as of a search function.		
2.5 - Device independence	– It is verified that the style sheets do not use the "outline" property with a value of "0" or "none" in interaction elements. – It is verified that the "tabindex" attribute is not being abused for modifying the default tabulation order – It is verified that the page content is not blocked with a specific orientation of the screen enabling the content to be operable in all orientations – It is verified that the autocomplete attributes are used properly according to the type of fields on the form.	a. Styles that eliminate the visual indicator of the keyboard focus are not used and the tabindex attribute (up to 3) is not abused to modify the tab order and in addition, @media rules are not used with orientation and the values of the autocomplete attribute are correct. b. Styles are not used that eliminate the indicator of the keyboard focus and between 4 and 10 tabindex attributes are used in addition to fulfilling the orientation and autocomplete conditions c. Styles are used to eliminate the visual indicator of the keyboard focus or more than 10 tabindex attributes are used to modify the default tabulation order or autocomplete or orientation conditions are breached.	a. 1 b. 0.5 c. 0	a. Pass b. Pass c. Fail
2.6 - Consistent navigation	– It is verified that the links are not broken (code 404 returned by the server). – It is verified that two adjacent links are not redirecting to the	a. No links are included b. The navigation is correct (all the verifications are	a. N/A b. 1 c. 0.5	a. Pass b. Pass c. Pass

	same destination. The adjacent links are those that are separated by a maximum of one character and/or set of blank spaces. If a label is present between both links, then they are not considered to be adjacent.	adequate) c. The navigation is correct although the page has no more than 1 broken link inside the domain or no more than 2 external links are broken d. The navigation is inconsistent	d. 0	d. Fail

3.3. CORRESPONDENCE WITH WCAG 2.1 AND UNE-EN 301549:2019

As previously mentioned, the verifications carried out by the observatory are a representative extract of the most relevant aspects of the accessibility that must be met by the Website, and therefore they are directly related with the requirements of WCAG 2.1 of W3C and also with Standard UNE 301549:2019 that applies the same requirements.

A diagram of the relationship that exists between the verifications of the observatory and the accessibility requirements of the WCAG 2.1 are provided below.

Relationship between Observatory verifications, WCAG 2.1 and UNE-EN 301549:2019

Verifications of the Observatory	Conformity Criteria WCAG 2.1	Requirement UNE-EN 301549:2019	Disability that benefits
1.1 Existence of textual alternatives	WCAG 1.1.1	9.1.1.1	No vision, Limited vision No hearing Limited hearing Limited cognitive ability Privacy
1.2 Use of headers	WCAG 1.3.1	9.1.3.1	No vision Limited vision Limited cognitive ability
1.3 Use of lists	WCAG 1.3.1	9.1.3.1	No vision Limited vision Limited

Verifications of the Observatory	Conformity Criteria WCAG 2.1	Requirement UNE-EN 301549:2019	Disability that benefits
			cognitive ability
1.4 Data tables	WCAG 1.3.1	9.1.3.1	No vision Limited vision Limited cognitive ability
1.5 Structural grouping	WCAG 1.3.1	9.1.3.1	No vision Limited vision Limited cognitive ability
1.6 Separation of content and presentation	WCAG 1.3.1	9.1.3.1	No vision Limited vision Limited cognitive ability
1.7 Identification of the main language	WCAG 3.1.1	9.3.1.1	No vision, Limited vision No hearing Limited hearing Limited cognitive ability
1.8 Navigation with JavaScript accessible and User Control	WCAG 2.1.1 WCAG 4.1.2 WCAG 2.2.1 WCAG 2.2.1 WCAG 2.3.1	9.2.1.1 9.4.1.2 9.2.2.1 9.2.2.1 9.2.3.1	No vision, Limited vision No hearing Limited hearing No vocal capacity Limited manipulation or

Verifications of the Observatory	Conformity Criteria WCAG 2.1	Requirement UNE-EN 301549:2019	Disability that benefits
			force Photosensitivity seizures
1.9 Forms and labels	WCAG 1.3.1 WCAG 3.3.2 WCAG 4.1.2 WCAG 2.5.3	9.1.3.1 9.3.3.2 9.4.1.2 9.2.5.3	No vision Limited vision No vocal capacity Limited manipulation or force Limited scope Limited cognitive ability
1.10 Forms and structure	WCAG 1.3.1 WCAG 4.1.2	9.1.3.1 9. 4.1.2	No vision Limited vision Limited manipulation or force Limited cognitive ability
1.11 Page title and frames	WCAG 2.4.1 WCAG 2.4.2 WCAG 4.1.2	9.2.4.1 9.2.4.2 9.4.1.2	No vision Limited vision No vocal capacity Limited manipulation or force Limited cognitive ability
1.12 Descriptive links	WCAG 2.4.4	9.2.4.4	No vision

Verifications of the Observatory	Conformity Criteria WCAG 2.1	Requirement UNE-EN 301549:2019	Disability that benefits
			Limited vision No vocal capacity Limited manipulation or force Limited cognitive ability
1.13 Context changes	WCAG 3.2.1 WCAG 3.2.2	9.3.2.1 9.3.2.2	No vision Limited vision Limited manipulation or force Limited cognitive ability
1.14 Compatibility	WCAG 4.1.1	9.4.1.1	No vision Limited vision
2.1 Identification of the language changes	WCAG 3.1.2	9.3.1.2	No vision, Limited vision No hearing Limited hearing Limited cognitive ability
2.2 Legibility and sufficient contrast	WCAG 1.4.3 WCAG 1.4.12	9.1.4.3 9.1.4.12	Limited vision No colour perception Limited cognitive ability
2.3 Adaptive layout	WCAG 01/04/2010	9.1.4.10	Limited vision

Verifications of the Observatory	Conformity Criteria WCAG 2.1	Requirement UNE-EN 301549:2019	Disability that benefits
2.4 Multiple navigation routes	WCAG 2.4.5	9.2.4.5	No vision, Limited vision No vocal capacity Limited manipulation or force Limited cognitive ability
2.5 Device independence	WCAG 1.3.4 WCAG 2.4.3 WCAG 2.4.7 WCAG 1.3.5	9.1.3.4 9.2.4.3 9.2.4.7 9.1.3.5	No vision, Limited vision No hearing No vocal capacity Limited manipulation or force Limited scope Limited cognitive ability
2.6 Consistent navigation	WCAG 3.2.3	9.3.2.3	No vision, Limited vision Limited cognitive ability