EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

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Front-end standards for EMA and Telematics websites

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1. About this document

This document defines the front-end standards and guidelines for the design, development, testing and deployment of European Medicines Agency (EMA) and Telematics websites and other online interfaces including applications[1].

It intends to improve the quality of EMA's online publishing by:

- delivering content and functionality to the largest possible audience in the most effective manner;
- ensuring consistent presentation;
- simplifying code production and reducing maintenance effort;
- ensuring functionality as browsers and devices evolve over time.

Ultimately its purpose is to improve the experience of all users of our websites and other online services.

The Online and Corporate Design Service within the Communication Department owns and maintains this document.

Scope and target audience

This document is for use by any supplier[2], EMA staff member or other person developing or supplying systems that output online content or application interfaces on behalf of EMA and forming part of EMA's official online presence. The document is specifically directed to business owners, programme managers and accountable executives of projects that are developing an online interface.

It applies to the development of new websites, as well as upgrades to existing websites.

It covers not only EMA-branded websites but also 'co-branded' websites, which EMA develops and maintains but strategically oversees with other partner organisations, such as the Heads of Medicines Agencies (HMA).

Please contact the Online and Corporate Design Service by emailing webteam@ema.europa.eu for help with these standards or to discuss any aspect of their implementation.

Under the Online Programme, all online interfaces are set to become integrated into four main online communication channels: the corporate website, extranet, intranet and European medicines web portal. The standards in this document therefore apply as an interim measure to present a consistent EMA brand across many separate websites, until these four main websites are launched and incorporate the other EMA websites.

Chapter 5 provides guidance on style, design and branding for different types of website aimed at fundamentally distinct user populations. The guidance in that chapter does not necessarily cover websites hosted by EMA on behalf of other organisations. Their owners may choose to reflect some of these design and branding principles into their website designs, in line with their own communication strategies.

[1] EMA-managed websites and other online interfaces are referred to as 'EMA websites' throughout the remainder of this document.
[2] EMA staff providing this document to suppliers should also provide access to the following documents: EMA editorial style guide, EMA corporate identity guidelines and Communications materials guidance. See the references in the relevant sections of this document.

Note that usability and editorial principles can be applied to individual pages of an existing website, while other principles, such as design, apply to websites as a whole.

Roles and responsibilities

The main roles involved in applying these guidelines are business owners, programme managers and accountable executives of projects which have an online presence.

The starting assumption is that all content and application interfaces will adopt and adhere to all of the defined standards and guidelines.

However, this may not always be possible, so a simple classification scheme and exception process exist.

If a project is unable to meet a defined standard, an exception may be requested and, if appropriate, granted. Requests for exceptions should be sent to the Head of Communication (copying the Head of Online and Corporate Design) for approval.

Exception requests can be made at any time, e.g. during the initial project or during an upgrade to a website.

Exception requests should contain:

- the standard(s) for which an exception is being requested;
- the reasons for not being able to meet the standard(s).

Maintenance cycle of the guidance document

This is a living document, owned and managed by the Online and Corporate Design Service. The Service keeps this document updated as best practices and technologies evolve, by reviewing and updating its content at least once a year.

Online and Corporate Design Service will gather feedback from business owners annually and will revise the guidance.

Updates to the guidance will be submitted for review to the IT Directors Executive Committee (IT DEC), IT Directors' group, Telematics Management Board, Heads of Medicines Agencies and EMA Management Board.

2. Assessing the need for a new website

In line with the goals of the Online Programme, the Agency should strive towards reducing the overall number of websites and the objective of assessing the need for a new website is to ascertain if there is a need for a new website or if the new content to be published can be incorporated into an existing EMA website.

Before embarking on a project to develop a new EMA website, please contact Online and Corporate Design Service to discuss the business and user need for a new website against adding functionality to an existing EMA website, such as the corporate website or the intranet.

The outcome of the discussion will help in considering project and maintenance resources.

If you are responsible for delivering a new EMA system or database, you should not assume that external users will access these via a new web page or website that is not structurally part of the EMA corporate website or another existing EMA website.

You should assess the communication needs for your online presence against those of the Agency's existing websites and attempt to identify a solution that would involve an upgrade or addition to one or more of these. This assessment should be done at the start of the project, and following the strategy and research phase or design phase of any ongoing project.

All decisions regarding upgrades to existing websites and development of new websites should be discussed and agreed with the Head of Communication (copying the Head of Online and Corporate Design) before development work begins.

See also:

Appendix 2: Checklist for assessing the need for a new website

3. Front-end design process

Following a best practice front-end design process ensures that the final website is high quality, user friendly, complies with EMA website style and has an agreed monitoring and maintenance cycle in place.

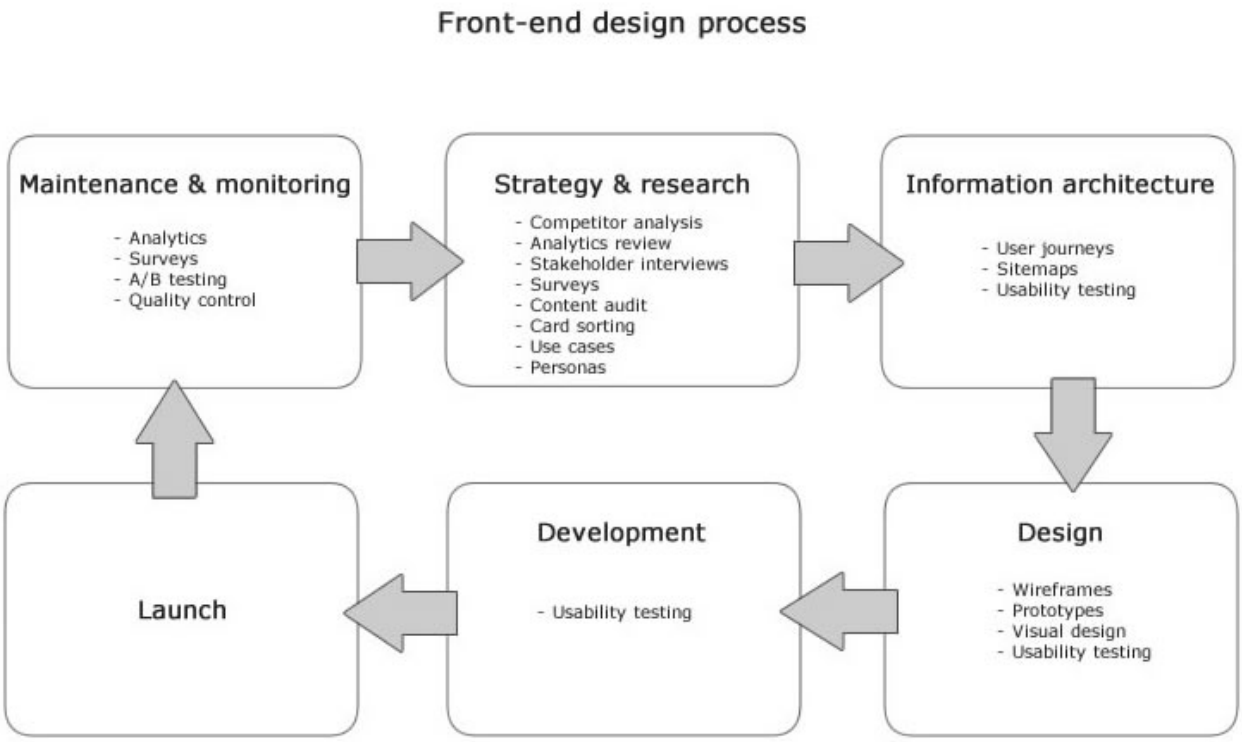
Once you have confirmed the need for a new EMA website, you should follow a best practice approach to ensuring a high standard of final product, as set out in the schema below.

The schema indicates the phases that should be followed in the creation and development of a website and the major activities at each stage. The earlier work starts on the development of such a website, the better the outcomes will be.

All phases are necessary but the amount of work done at each phase depends on the project's budget and reputational issues that would arise if left unattended. For example, if inadequate usability testing is carried out, the website may receive poor acceptance, which could reflect negatively on the Agency.

The timelines for the individual phases are flexible and are for the project team to set.

If at any stage of the process it becomes clear that no new website is in fact necessary, or you require help with these standards or want to discuss any aspect of their implementation, please consult the Online and Corporate Design Service by emailing webteam@ema.europa.eu.



4. Web usability and web usability testing

Web usability refers to how easy user interfaces are to use, and the methods applied in the design process for improving ease of use.

The objective of usability assessment and testing is to bring up issues that will prohibit users from successfully using the website and completing the tasks that they are assigned to complete. Usability testing allows these issues to be fixed before a website goes live, increasing user satisfaction and the Agency's reputation while decreasing the number of complaints or questions received from the users about an unclear or buggy interface.

Web usability

Web usability consists of the following components:

- intuitiveness: how easy it is for users to accomplish basic tasks the first time they encounter the design;
- learnability: how easy it is for users learn to accomplish basic tasks;
- efficiency: once users have learned the design, how quickly they can perform tasks;
- memorability: when users return to the design after a period of not using it, how easily they can re-establish proficiency;
- errors: how many errors users make, how severe these errors are, and how easily they can recover from the errors;
- satisfaction: how pleasant it is to use the design.

All EMA websites should be designed, planned and written based on thorough user research, examining the needs, expectations and online behaviour of the main user groups they are aimed at.

They should also undergo usability testing at various stages of development, with any shortcomings addressed before launch.

Upgrades to existing EMA websites should also be based on user research and usability testing.

The essentials of user research and usability testing are outlined below. For more information, see resources such as Nielsen Norman Group.

Background research and user research

The first step in designing a usable website is to conduct background research and user research. You should carry out one or more user research activities before the information architecture (navigation structure) and design process can start. However, you can also conduct further research during later stages of the project if necessary.

The most commonly used **background research methods** are:

- analysing the sites of competitors (or partners);
- reviewing analytics of existing sites or platforms;
- stakeholder interviews;
- surveys;
- content audits;
- card sorting (to help organise content based on other findings).

The most commonly used **user research methods** are:

- observational studies
- contextual interviews
- usability testing of existing website
- search analytics

Based on the findings of background research and user research, the following can be produced:

- **use cases:** written descriptions of how users will perform tasks on the website. A use case outlines, from a user's point of view, a system's behaviour as it responds to a request. Each use case is represented as a sequence of simple steps, beginning with a user's goal and ending when that goal is fulfilled.
- **user personas:** reliable and realistic representations of your key audience segments, for reference. These representations should be based on qualitative and some quantitative user research (http://www.usability.gov/what-and-why/user-research.html) and web analytics (http://www.usability.gov/what-and-why/web-analytics.html). Effective personas represent a major user group for your website, express and focus on the major needs and expectations of the most important user groups, give a clear picture of the user's expectations and how they're likely to use the site and describe real people with names, careers, backgrounds, goals and values.

Usability testing

Usability testing allows the design and development teams to identify and address problems with a website's design before they are coded. It should start once the research and analysis stages have been completed and sitemaps, wireframes[3] or a basic prototype has been created.

Usability testing allows you to identify issues and have them fixed early, reducing the cost and effort involved in fixing issues that would occur later in development or after your website has gone live.

A simple usability testing has the following components:

1. Get hold of 3-5 real representative users of your website. Do not recruit people to pretend to be real users or to 'think in their shoes'.
2. Ask these users to perform one or more pre-defined representative tasks with the wireframe or basic prototype (e.g. find a specific report or find out a piece of information). Test users individually and let them solve problems on their own without helping or giving hints.
3. Observe what the users do, where they succeed and where they have difficulties with the user interface.
4. Identify any key recurring issues experienced by the users and address these by updating the design.
5. Refine the design ideas that test best through multiple iterations, gradually moving from low-fidelity prototyping with wireframes to high-fidelity representations that run on the computer.
6. After deciding on and implementing the final design, test it again. Subtle usability problems always creep in during implementation. Testing with fewer participants frequently (e.g. during weeks 3, 6 and 9 of the project) is more valuable than testing with more participants only at the end (e.g. at week 9).

Please contact the Online and Corporate Design Service by emailing webteam@ema.europa.eu for help with these standards or to discuss any aspect of their implementation.

5. Style and visual design

All EMA-managed websites must be developed using the design elements described and shown below. This ensures that the main functionality and layout on EMA websites remain similar, to ensure consistent user experience.

Individual interface designs should only deviate from one another insofar as to ensure that visitors can easily identify that they are on different sites, yet that the site belongs to the EMA 'family'. This will present a coordinated, in-control image to users, reflecting positively on the Agency's reputation as a coordinated in-control organisation.

The designs are aligned with the Agency's identity guidelines to ensure a harmonised visual identity across all communication activities. See Guidance on corporate identity.

[3] Wireframe is a visual guide that represents the skeletal framework of a **website**.

Style guide

All EMA managed websites should follow the style and functionality described in detail in the 'Online style guide for EMA and Telematics websites':

> Online style guide for EMA and Telematics websites
> EMA/396237/2016
> https://docs.eudra.org/webtop/drl/objectId/090142b2833d2ef8

It is acknowledged that it may not always be possible to implement the style guide in its entirety, mostly due to limitations in the customisability of some online interfaces.

It is, however, recommended that all websites use the following common elements, with the style and functionality as described in detail in the style guide linked above:

- Size and type of fonts[4]
- Header[5]
- Main navigation (megamenu is not necessary if the site has a small number of pages, a simple drop-down menu will work in those instances)
- Left hand side subnavigation
- Footer

Colour variants and branding

There are **three colour scheme variants** presented in the online style guide. The choice of colour scheme depends upon the viewer permissions set up for the site.

Viewing permission	Colour scheme
Restricted to EMA staff only, e.g. EMA intranet	Light blue 'intranet' colour scheme
Restricted to EMA staff, regulatory partners and other authorised users only, e.g. Eudra Portal	Blue-green 'extranet' colour scheme
No restriction (viewable by any member of the public)[6]	White 'corporate website' colour scheme

There are **two branding options** presented in the online style guide. The choice of branding is determined by the nature of the strategic (rather than operational) ownership of the site and its content.

Strategic ownership	Branding
EMA	EMA branding
EMA and HMA	EMA and Heads of Medicines Agencies co-branding

The table below shows the **six possible combinations of colour scheme and branding**. For examples of the colour scheme and branding on EMA websites, see the annex.

[4] Applications requiring a large amount of text on a full screen may need to reduce the size of fonts. Please contact Online and Corporate Design Service if this is applicable.
[5] Applications requiring a full screen may need to reduce the header height. Please contact Online and Corporate Design Service if this is applicable.
[6] This includes websites that require login to access their main content and features but whose use is not restricted to any particular user group i.e. in principle they could be used by any member of the public (e.g. the clinical data website).

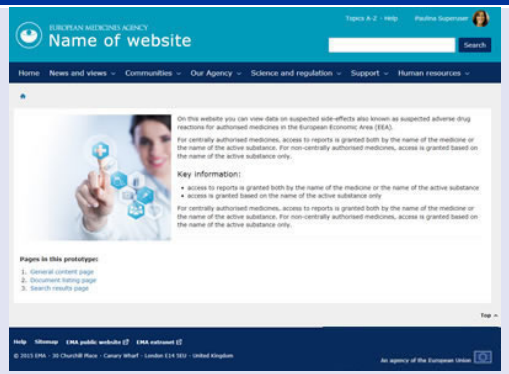
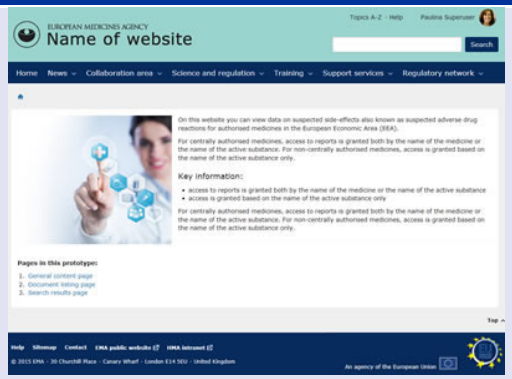
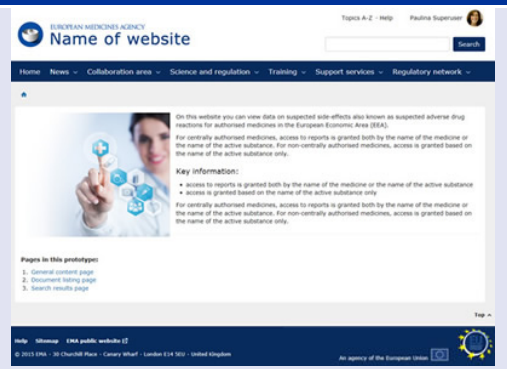
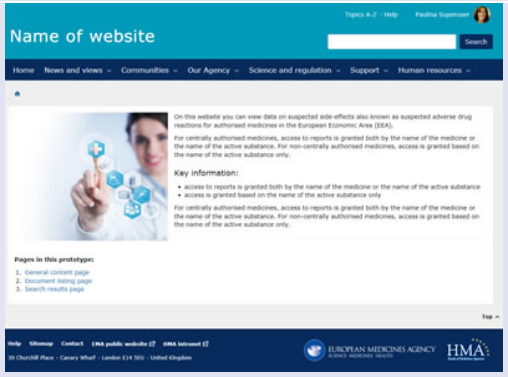
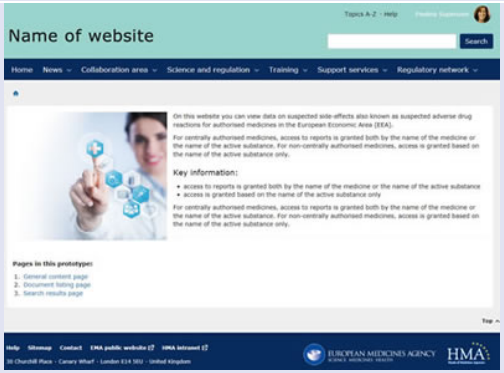
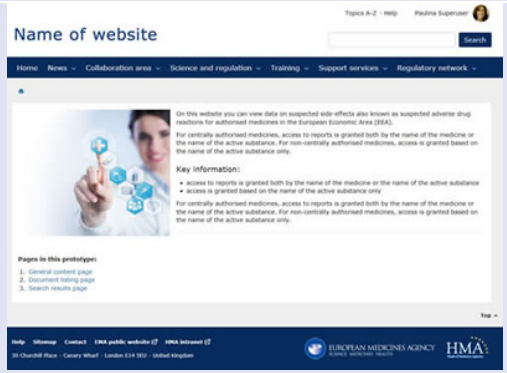
The choice of branding should be made as early as possible in the development of the website.

Visual HTML / CSS templates for the following standard content pages are available for use at G:\External Information Draft\SIGN OFF\Webteam\CompliancePack\index.htm:

- Home page
- Content page
- Search page
- Document listing page

Contact the Online and Corporate Design Service by emailing webteam@ema.europa.eu for advice on which template to choose and how to incorporate these templates into your website.

Colour schemes and branding for EMA- and EMA/HMA-owned websites

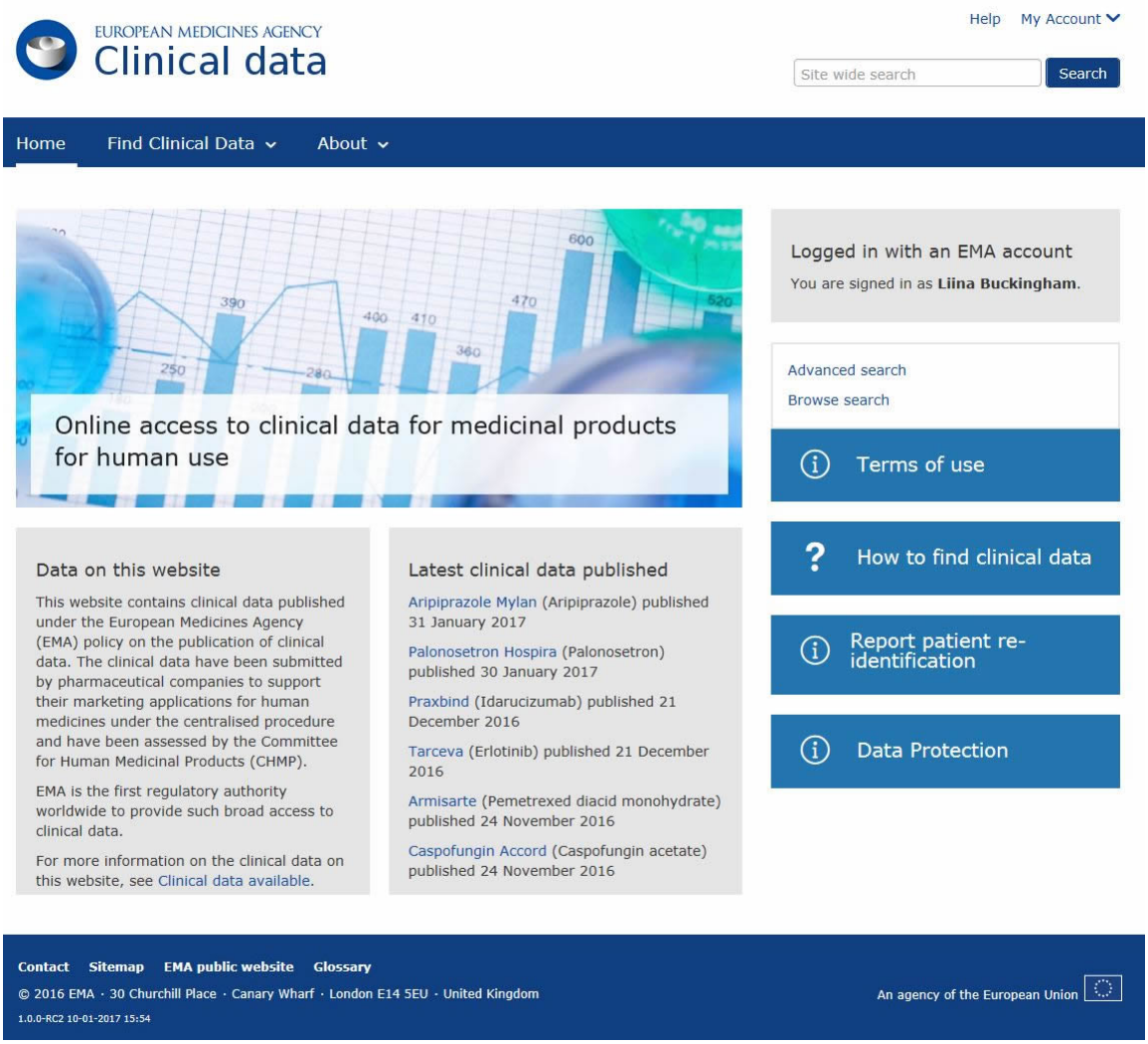
Site ownership	Viewing permission		
	EMA staff only	EMA staff, regulatory partners and other authorised users only	Public
EMA			
EMA and HMA			

EMA-managed websites already following the guidance set out in this document include[7]:

- ESVAC interactive database (https://bi.ema.europa.eu/analyticsSOAP/saw.dll?PortalPages)

[7] Note the use of common elements and style when possible, and deviating from guidance when necessary (e.g. not all sites require a horizontal main menu, content area can be one column or two-columns, etc.).

- Clinical data (https://clinicaldata.ema.europa.eu/web/cdp/home)



Site maintenance pages

For planned website maintenance or for unexpected site down instances, a holding page needs to be presented to the user that is a static one page file with all design elements incorporated into it. That means images linked from another website that is likely to be live at the time of the outage and CSS styles embedded within the HTML page and not in a separate CSS file.

Please see the example linked at:

G:\External Information Draft\SIGN OFF\Webteam\CompliancePack\index.htm

Error messages

For error message pages, please use the following text and add links to 'homepage' and 'send a question to us' as relevant for your site:

> **Page not found**
>
> We are sorry but this page has been moved. You may be able to find it through search or by browsing from the homepage.

For more help, send us a question.

Document styles

Documents published on EMA websites must follow the Agency's corporate identity rules and be based on official EMA templates, including the rules on co-branding where appropriate.

For full instructions, see Guidance on communication materials.

Publication of documents in other styles may be necessary in some circumstances, e.g. publication of a letter from or a presentation slide deck produced by another organisation. This should be duly justified before publication.

In case of doubt, contact the Online and Corporate Design Service by emailing webteam@ema.europa.eu.

6. Accessibility

All official websites of EU institutions should follow international guidelines for accessible web content. This means that texts, images, forms, sounds and other elements should be accessible and understandable by as many people as possible without discrimination.

The term 'accessibility' does not only apply to people with visual disturbances and other disabilities. Even a healthy person can be 'contextually disabled', for example when browsing the web in bright sunlight or in a moving vehicle.

The European Commission's Information Provider's Guide (IPG) lists 10 rules in accessible web design:

1. Provide text alternatives;
2. Structure content;
3. Avoid dependence on a single sense;
4. Make all functionalities keyboard-accessible;
5. Give users enough time;
6. Avoid interferences;
7. Identify hyperlinks and contents;
8. Make navigation interfaces consistent
9. Help users avoid mistakes
10. Ensure compatibility

Level of compliance

All EMA websites should conform to at least level AA of Web Content Accessibility Guidelines (WCAG) 2.0, with the exception of providing alternatives to video or audio only content, e.g transcripts, captions, audio descriptions. Note that if providing alternatives is possible, it should be provided.

In general, the WCAG guidelines prescribe that an accessible alternative should be provided to any potentially inaccessible content, including all multimedia elements, navigation elements and forms, unless this can be proven to be technically or practically impossible.

Accessibility guidelines take Article 21, Chapter III, on 'Non-Discrimination' of the Charter of Fundamental Rights of the European Union into account.

Regular monitoring should be set up to ensure accessibility standards are being met accordingly. There are tools available to carry out this task, please contact Online and Corporate Design Service for more information.

For full details, see:

- WCAG 2.0 http://www.w3.org/WAI/intro/wcag
- WCAG level A and AA conformance checklist https://www.wuhcag.com/wcag-checklist/
- 10 golden rules in accessible web design http://ec.europa.eu/ipg/standards/accessibility/10_rules/index_en.htm
- European Commission's Information Provider's Guide (IPG) http://ec.europa.eu/ipg/index_en.htm

Directive (EU) 2016/2102

Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies entered into force on 22 December 2016 and Member States have until 23 September 2018 to transpose the text into national legislation.

The Directive refers to the standards to make websites and mobile apps more accessible, with all public sector bodies' websites having to comply by 23 September 2020. In addition, the Directive also requires regular monitoring and reporting of public sector websites and mobile apps by Member States.

For full details see:

- Digital single market – Web accessibility https://ec.europa.eu/digital-single-market/en/web-accessibility
- Directive (EU) 2016/2102 http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.327.01.0001.01.ENG&toc=OJ:L:2016:327:TOC

7. Technical development

EMA has a set of technical standards that must be adhered to when producing websites and other online interfaces.

Browsers, devices and operating systems

The designs of EMA managed websites should be responsive to screen size. The same content should be available on mobile devices via mobile browsers as on desktop browsers.

This standard can be waived if there is clearly no business requirement for viewing on mobile devices due to the nature of the website or application.

For more information, please see I Division's technical documentation[8].

Character encoding

Character encoding should use UTF-8, because all EMA online interfaces have to be able to support the characters of all official EU languages.

HTML

- EMA websites must use HTML5.

HTML5 provides a means of conveying structure and meaning through the appropriate use of its elements. This semantic mark-up is about using the most appropriate HTML element for the content at hand, and not selecting an HTML element to achieve a particular visual effect.

CSS

- EMA websites must use CSS for all presentational formatting of HTML5.
- All CSS should be contained in external style sheets. If this is not possible, embedded style sheets may be used, but only when no other option exists.
- Inline styling should only be used for syndicated and other content where the classes and ids contained within it are not sufficient to achieve the required styling.

External style sheets should be linked to using the link element, which must appear in the head element of the page. Alternatively, they may be imported within the style element.

JavaScript

- Script code should be in a separate .js file unless there is a compelling technical case to do otherwise.
- Interfering with normal browser behaviour (e.g. disabling the back button) must be avoided.
- Websites and application interfaces must be fully navigable using only a keyboard and new windows must not open without warning the users first.
- Web interface development should use the following framework technologies to implement JavaScript functionality, unless there is a compelling technical case to do otherwise:
  - AngularJS for developing JavaScript;
  - Bootstrap CSS as a framework to develop CSS.
- For more information, please see I Division's technical documentation[9] and http://sdlc.ema.europa.eu/confluence/display/IDVSOL/Standard+libraries.

Progressive enhancement

Visitors to EMA websites should have the best possible experience. Observe the principles of progressive enhancement to achieve this:

[8] To be finalised.
[9] To be finalised.

- Basic content should be accessible to all browsers.
- Basic functionality should be accessible to all browsers.
- Sparse, semantic mark-up contains all content.
- Enhanced layout is provided by externally linked CSS.
- Enhanced behaviour is provided by unobtrusive, externally linked JavaScript.
- End-user browser preferences are respected.

In short, content and functionality should be built using basic, accessible technologies, and enhanced using JavaScript where appropriate to provide a richer experience for capable browsers and users.

Cookies

A cookie is a small piece of data that a website asks your browser to store on your computer or mobile device. The cookie allows the website to 'remember' your actions or preferences.

Most browsers support cookies, but users can set their browsers to decline them and can delete them whenever they like.

Third-party cookies must not be used on EMA websites, as the data collected may be transferred beyond the EU's legal jurisdiction.

Decide if other cookies are essential on a website, i.e. when there is no better alternative for a given functionality.

If a cookie is essential, determine the following: what data does each cookie hold? Is it linked to other information held about the user? Is its lifespan appropriate to its purpose? What type of cookie is it? Is it a first or a third-party setting the cookie? Who controls the data? What happens to the website functionality if the user turns cookies off or doesn't give consent?

Evaluate for each cookie if informed consent is required or not:

- first-party **session cookies** do not require informed consent;
- first-party **persistent cookies** require informed consent. The expiry period must not exceed one year.

Before storing first-party cookies:

1. gain informed consent from the users if needed, by implementing a **cookie banner** on all pages of any website using such cookies;
2. inform users about the use of cookies in a dedicated **'cookie notice' page** (linked from the cookie banner).

The cookie notice page should explain:

- why cookies are being used;
- if the cookies are essential for the website or a functionality to work OR if they aim to enhance the performance of the website;
- the types of cookies used;
- who controls/accesses cookie related information;

- that the cookie will not be used for any purpose other than the one stated;
- how users can withdraw consent.

A standard cookie notice template is available from the EU Internet Handbook, part of the European Commission's Information Providers Guide: http://ec.europa.eu/ipg/.

If a site does not use any cookies, it should still contain a dedicated 'cookie notice' stating this, using the template text from the Commission. No cookie banner is needed.

For more information, see the European Commission's Cookie consent kit.

For EMA specific questions about cookies or development of sites where cookies are essential, contact the EMA Data Protection Officer.

Domain names

Choosing meaningful domain names (web addresses) improves user experience and enhances search engine rankings.

Domain names for EMA websites should be based on either:

- a recognisable brand name, or;
- the primary keyword for the website.

The primary keyword should be chosen on the basis of the terms users are expected to use to search for the content of the site – this should be the actual terms that people use based on research, rather than guesswork. This helps search engines to associate the website with the topic in question. A good tool to use to find out what terms people really search for is Google AdWords Keyword Planner.

Domain names for public EMA websites should have the format below:

[keyword].ema.europa.eu (e.g. clinicaldata.ema.europa.eu)

Domain names for public Telematics websites should have the format below:

[keyword].eu (e.g. clinicaltrials.eu)

Domain names for EudraNet websites are in the format of [keyword].eudra.org (e.g. docs.eudra.org) but they will be replaced in the future by the extranet. Domain names for internal websites are in the format of [keyword].emea.eu.int (e.g. emeaplus.emea.eu.int) but they will be replaced in the future by the new intranet.

All elements in web addresses after the domain name should also be based on meaningful words as far as possible, even to users who are not already familiar with the context. This means that they should include recognisable words that are related to the content on the webpage or its location in the navigation structure, e.g.:

www.ema.europa.eu/ema/human_regulatory/post_authorisation/advanced_therapies...

All domain name design strategies should be sent to the Head of Communication (copying the Head of Online and Corporate Design) to check before they are implemented.

8. Editorial guidelines

The text and images used on EMA websites should be presented following best practice so that they enable users to identify the subject matter of the page quickly and gather the information they need easily.

Subject-matter experts should draft text for EMA websites (except the EMA corporate website) following the web-writing tips outlined below. Before launch, send the text to the Online and Corporate Design Service with at least one month's notice, so that the Services editors can check the text and edit it as necessary. This should ensure that EMA's website text is optimised for reading online, can be understood by target audiences and is consistent with other websites in terms of style and tone of voice.

The Online and Corporate Design Service can also advise on information architecture (navigation structure) and standard content elements (e.g. how to describe website ownership and copyright). Please contact the editorial team at webteam@ema.europa.eu as early as possible in development for advice.

All text on EMA websites should also follow the EMA editorial style guide. See Guidance on editorial style.

Note that there is a different editorial process for maintaining the EMA corporate website. This is described on the EMA Intranet under Agency corporate website.

Tips for web writing

The tips below explain how to prepare good quality web text.

- **Write for one audience**: identify who the page is written for and write for that person. Note that the 'general' public does not exist: be specific about who the page is for.
- **Simplify**: keep the text as clear and simple as possible, with short sentences, the active voice, short paragraphs and no jargon.
- **Frontload**: make sure the most important information is in the first few sentences. This helps the reader know exactly what is on each page. Ideally, the first paragraph should be a summary of the page's content, entirely in bold.
- **Signpost**: use subheadings to divide the text into manageable sections. Assume the reader is impatient and scans the page for the information he/she wants. Readers do not start at the top and read down line by line.
- **Include links**: include as many internal and external links as possible without cluttering the text. This is particularly important when mentioning the names of other organisations (e.g. Food and Drug Administration), projects and documents. The names of links should match the title of the target page or document. Never use the word 'here' as a link.
- **Bulleted lists**: break up heavy paragraphs with bulleted lists wherever possible.
- **Highlight key words**: use bold text to indicate the most important words or phrases.
- **Use of symbols**: You should only use symbols (e.g. < or >) in content for their semantic use (rather than, for example, using >> as a link to the next page in a series.

- **Avoid acronyms**: spell out any acronyms at first use on each page. Spell out the full name 'European Medicines Agency' at first use on *each page*. Thereafter, use 'the Agency' or 'EMA' as appropriate.
- **Pointers to more information**: add links to pages or documents with more information, e.g. by using text such as 'For more information, see <link>.'
- **Add links to related information**: include links to similar or related documents and pages. Assume that the reader has not arrived on the correct page and needs pointers to the information he/she really wants. The link should be the same words as the title of the destination page if possible.
- **Make sure the page is attractive:** the first impression the user has is important. If the page is visually appealing, the reader is more likely to stay on the page and read the content.
- **Embellish the text:** use pictures, videos and slide shows wherever possible to provide alternative ways of messaging. Do not use images as headings or images and videos as the ONLY source of content.
- **Make pages evergreen:** write the page so that its text is valid indefinitely. Avoid including date cues referring to the future (e.g. 'the Agency will update this guidance in September 2024'). If dates are unavoidable, make sure that the text is updated *as soon as* the date has passed – add an Outlook reminder if necessary.
- **Keep pages up to date:** make sure that the text is kept up to date with developments. Updates stemming from news publication should be made at the same time as the corresponding press release or news is published. Make sure the text of the page itself is updated and do not simply add links to press releases or news items. Make sure updated or added text is identified clearly on the page, such as by enclosing it in a box marked 'Update'.

Web page titles

Web page titles should use sentence case. Sentence case puts all words in lower case except the first letter of the first word, names, proper nouns, abbreviations and acronyms.

Titles need to be short, maximum of five words if possible.

For frequently asked questions (FAQs) - write the phrase out and put the abbreviation in brackets. No apostrophe is required.

PDF vs. HTML

Content on websites should be rendered as HTML wherever possible. A print-friendly version should be provided either via CSS or a separate PDF document.

PDF documents should be used in addition to HTML if there is a clear business case with evidence demonstrating that users need to print the document for reading offline.

Providing content only in PDF is acceptable only if there is a clear business case with evidence demonstrating that users prefer to print the document for reading offline and do not require reading on screen.

Multilingualism

EMA websites must have a language policy published explaining (in all official EU languages) which content and documents are available in which languages.

If a site is to be multilingual, ideally all elements are to be multilingual. This includes content as well as documents, navigation labels, error messages, tables, holding pages, images, search etc. It should be simple for users to switch between different language versions from anywhere within the site.

When planning a new multilingual website, keep in mind the following:

- Define a method for understanding and replying to incoming communication from the site (feedback or complaints), which may be in any language.
- Define navigation policy for languages.
- Describe the language choice in the “About this site” section, with a reference to the general language-coverage page.
- In the design phase, keep in mind that adjustments might be necessary, depending on the language.
- If images contain text, they must be translated.
- Follow language-related Information Provider’s Guide (IPG) recommendations on URLs, file naming policy, site names, procedure for requesting a URL, etc.
- When choosing the templates for your site, keep in mind all the relevant multilingual elements: keywords, metadata, character encoding, etc.
- When planning the promotion of the site, define all language aspects related to both the site itself and the promotional tools.
- Agree on what happens when a user attempts to navigate from one part of a site to another part that is only available in different language(s). Options include displaying the new content in a different or default language following a warning message in the original language, e.g. “the content you are requesting is not available in English. Would you like to view it in French? Yes / No / Cancel.”

Managing images

Images should be used for design purposes or for illustrating specific aspects of content. Images should not contain content that is not available in web text or in a document.

Image sizes

Technically there is no limitation to the size of an image on a web page, but some built-in characteristics in the design of a website (e.g. specific grid column widths) coupled with a need for consistency of style mean that restrictions on image size must be applied.

Image resizing must not take place using HTML height and width attributes, images must be prepared in the correct size before including them on web pages.

Image formats

Digital image formats are numerous, but the formats developed over the years for specific application to websites belong to a relatively small group listed here:

Bitmapped image formats for the web

- **.GIF** (Graphics Interchange Format): Best used for images containing areas of flat continuous colour
- **.JPEG** (Joint Photographic Experts Group): Best used for images with graduated tones and especially suited therefore to imagery of a photographic nature
- **.PNG** (Portable Network Graphics): Developed as an improvement upon the GIF format and designed specifically with the internet in mind. It supports 24 bit colour, greater transparency options and, with the exception of really small images, has a smaller file size than the GIF format. Best used for flat-colour graphic images.

Vector-based image formats for the web

- **.SVG** (Scalable Vector Graphics): An xml defined format describing two-dimensional vector graphics for both static and dynamic scenarios. The most obvious visual quality is that it will scale without loss of definition and because it can be xml tagged it enhances searchability. Only supported by the latest of browsers.

Image resolution

It is important to keep image file sizes to a minimum for website presentations to facilitate a faster upload to the browser for display. The file size increases dramatically the higher the resolution of the image.

The standard resolution for images for web display is recognised as **72 dpi** (dots per inch).

Multilingual images

Note that for sites that are multilingual, all images containing text must be translated.

Hyperlinks and referencing

- All internal links (within the same website) must open in the same browser window/tab.
- All external links must open in a new browser window/tab.
- Email addresses should be written all in lower case.

9. Search engine optimisation

Optimising web pages for search engines can help content reach many more people than it otherwise might. In order to reach people who are not already familiar with the website, pages have to be designed so they are findable via search engines.

All EMA websites should follow the best practice in how to optimise their content for search engines.

This section explains the standard EMA guidelines for search engine optimisation (SEO), and to help avoid some of the most common mistakes. It is intended as a quick reference tool and is by no means exhaustive. For detailed guidance, see:

- Optimise access to content (European Commission);
- Search Engine Optimization Starter Guide (Google)
- Bing Webmaster Guidelines;
- Yahoo's SEO guidance.

These guidelines should be read in conjunction with the European Commission's Information Provider's Guide (IPG).

There are four main components to SEO: content optimisation (text and metadata content), website structure, technical requirements and content promotion.

Content optimisation

The Online and Corporate Design Service is looking into software to check website quality. Further information will be added here once software has been installed.

- **Keywords**
  Relevant keywords should be used, especially in: page title tags '<title>'; <title>, headings (H1, H2, H3); internal links (link text) and menus; and also in the main body text. Use Google AdWords Keyword Planner and Google Trends to identify keywords for pages.
- **Text**
  Text on web pages should be kept short so that the keywords account for a higher share. Search engines rank pages as more relevant if keywords account for 2.5-3% of the total text.
  The use of headings (H1, H2, H3) within text should be to highlight bocks of relevant content.
- **Glossary function**
  A glossary should be included on the website to overcome the issue of having to include footnotes or extra explanatory text, creating long sentences. Ensure that the spelling of EMA specific terms matches the glossary.

  To achieve this, the online glossary of the EMA corporate website should be integrated into the website to ensure consistency of definitions and completeness. This online glossary is kept routinely updated by EMA's Online and Corporate Design Service.
- **Link text**
  Link text should use the title of the target page or document that it links to.
- **Pages**
  Pages should have meaningful metadata, with unique title tags <title> (up to 70 characters) and a short summary (one sentence, preferably) in the 'description' meta tag.
  All PDFs should have a proper 'Title', 'Author' and 'Keywords' filled-in in the document properties (Ctr+D).
- **Images and multimedia elements**
  Use caption and ALT tags on images and multimedia components. See more in

Website structure

The Online and Corporate Design Service is looking into software to check website quality. Further information will be added here once software has been installed.

Sitemap
A link to a sitemap should be added on the home page.

Internal links
Links to other internal pages should be used to guide visitors to different content on the website. Search engines get the information on other relevant content and this increases the page ranking on search results.

Image directory
Images should be consolidated in one single directory (www.example.com/images).

Technical requirements

- **404 pages (page non-existent, broken link)**
  Ensure 404 pages are not indexed by search engines.
- **Sitemap**
  An XML sitemap should be created and submitted to search engines (major ones like Google, Yahoo!, Bing).
- **Performance, speed and quality assurance monitoring**
  Regular monitoring of performance, speed and quality assurance of the website should be set up to detect and correct any major defects that may be impeding the website from displaying at the top of search results. There are several tools available, please contact the Online and Corporate Design Service by emailing webteam@ema.europa.eu for more information.
- **Mobile devices**
  Ensure the website is optimised and coded for mobile devices so that search engines can recognise it as mobile-friendly.

Content promotion

- **Inbound links**
  Add 'email me' and social media buttons to pages simplify the sharing of content and increase the opportunity of having reputable / popular websites linking back to the website.

10. Website maintenance and monitoring

The Online and Corporate Design Service is looking into software to carry out web analytics, quality control (e.g. checking for broken links) and live A/B testing. Further information will be added here once software has been installed.

11. Annex 1: References

EMA reference documents	
List of all EMA and Telematics websites	*To be finalised*
IT reference document	*To be finalised*
Online style guide for EMA and Telematics websites	https://docs.eudra.org/webtop/drl/objectId/090142b2833d2ef8
EMA icon images	G:\SharedAreas\Resources\Icons
Mock up pages for visual reference	G:\External Information Draft\SIGN OFF\Webteam\CompliancePack\index.htm
Guidance on document templates and communication materials	http://emeaplus/EMEAPlus_WebsiteNew/Communication/html/Commsmats_guidance.htm
Standard libraries	http://sdlc.ema.europa.eu/confluence/display/IDVSOL/Standard+libraries
Guidance on editorial style	http://emeaplus/EMEAPlus_WebsiteNew/Communication/html/Editorial_style.htm
EMA glossary	http://www.ema.europa.eu/ema/index.jsp?curl=pages/document_library/landing/glossary.jsp&mid=

European Commission reference documents	
Information Providers Guide	http://ec.europa.eu/ipg/index_en.htm
Information Providers Guide – Optimise access to content	http://ec.europa.eu/ipg/content/optimise/index_en.htm
Information Providers Guide - Cookie consent kit	https://webgate.ec.europa.eu/cas/login?loginRequestId=ECAS_LR-1100425-QuEYGJzOGL51UNmZ7ec2YvraZYjPFmRrv56kL28cksXANeVGSNqaZs8gb8UWzGflzghnOjMCd28JSDJfBYO63Pm-PHslUMVSXYCrIb4xCKvKyK-2bEGN6hOllZvLOeNJBHisASCNWE4Y171o8lSdLOQTUy
Information Providers Guide – Cookie notice template	http://ec.europa.eu/ipg/docs/cookie-notice-template.zip
DG DIGIT eUI (usability guidelines and technical framework)	https://webgate.ec.europa.eu/fpfis/wikis/display/DIGITUX/Design+Guidelines
10 golden rules in accessible web design	http://ec.europa.eu/ipg/standards/accessibility/10_rules/index_en.htm

European Commission reference documents	
Digital single market – Web accessibility	https://ec.europa.eu/digital-single-market/en/web-accessibility
Directive (EU) 2016/2102 (accessibility)	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.327.01.0001.01.ENG&toc=OJ:L:2016:327:TOC

External best practice guidance	
Nielsen Norman Group (usability)	https://www.nngroup.com/
Web Content Accessibility Guidelines (WCAG)	http://www.w3.org/WAI/intro/wcag
WCAG level A and AA conformance checklist	https://www.wuhcag.com/wcag-checklist/
Google Search Engine Optimization Starter Guide	http://www.google.co.uk/webmasters/docs/search-engine-optimization-starter-guide.pdf
Bing Webmaster guidelines	http://www.bing.com/webmaster/help/webmaster-guidelines-30fba23a
Yahoo's SEO guidance	https://help.yahoo.com/kb/SLN2216.html
Google AdWords keyword planner	https://adwords.google.com/KeywordPlanner
Google Trends	http://www.google.com/trends/

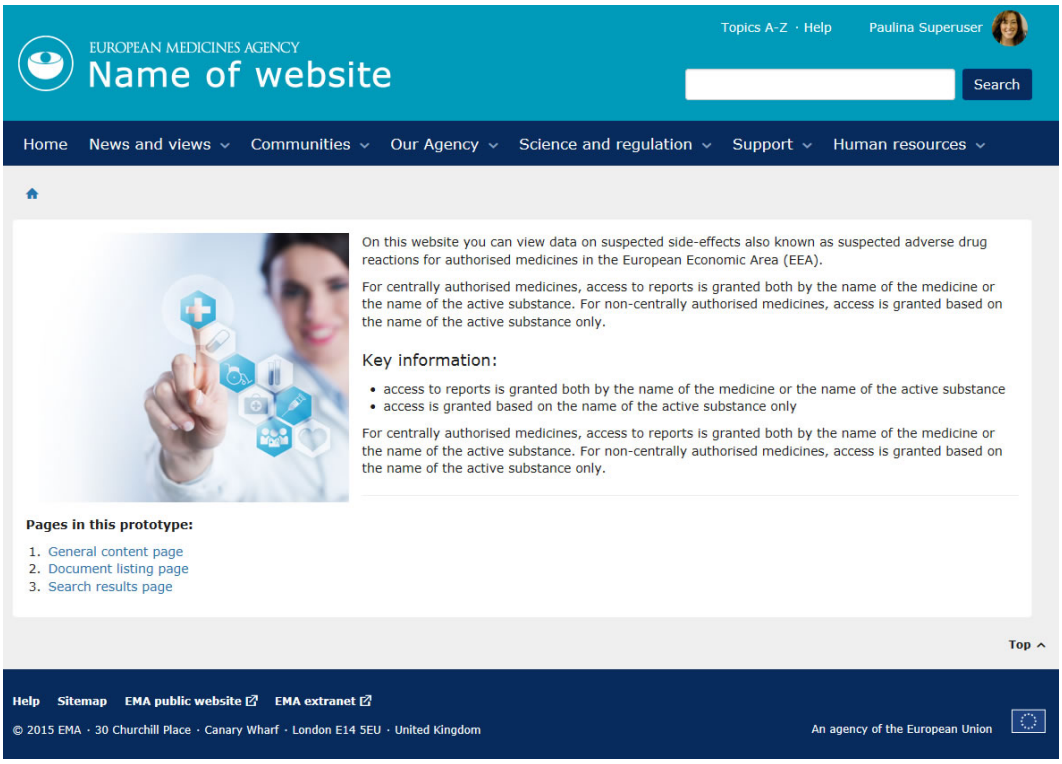
12. Annex 2: Checklist for assessing the need for a new website

Before discussing the need for a new website with the Online and Corporate Design Service, please consider the following question:

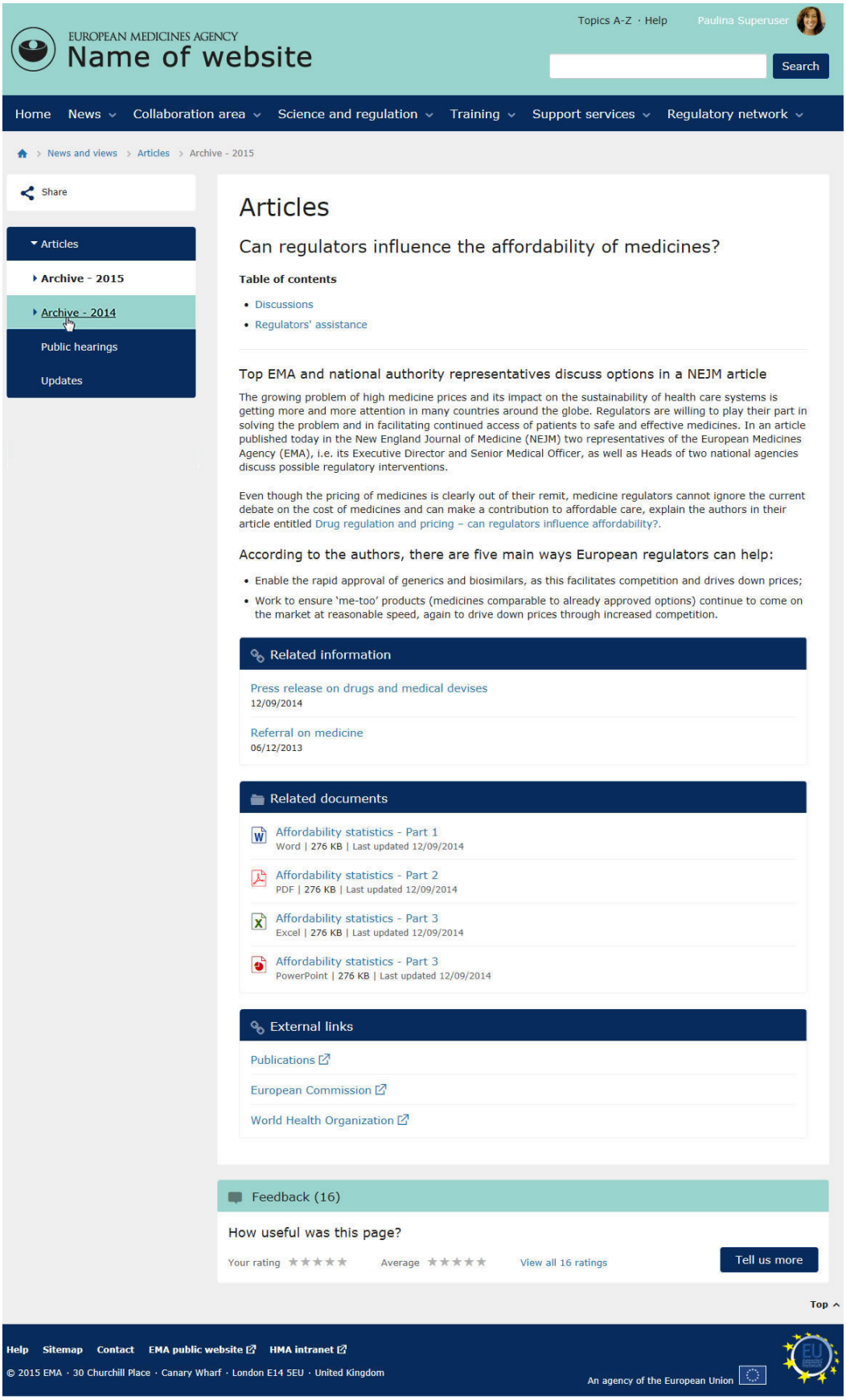
1. Who is a typical user of the website?
2. What do you know about this type of user already?
3. What will this user come to the website to do?
4. How would a new website help this user?
5. When is the website needed?
6. Which organisations are in charge of the development and upkeep of the website?
7. Have you discussed the need for a new website with your Communication Focal Point?

13. Annex 3: Example screen shots

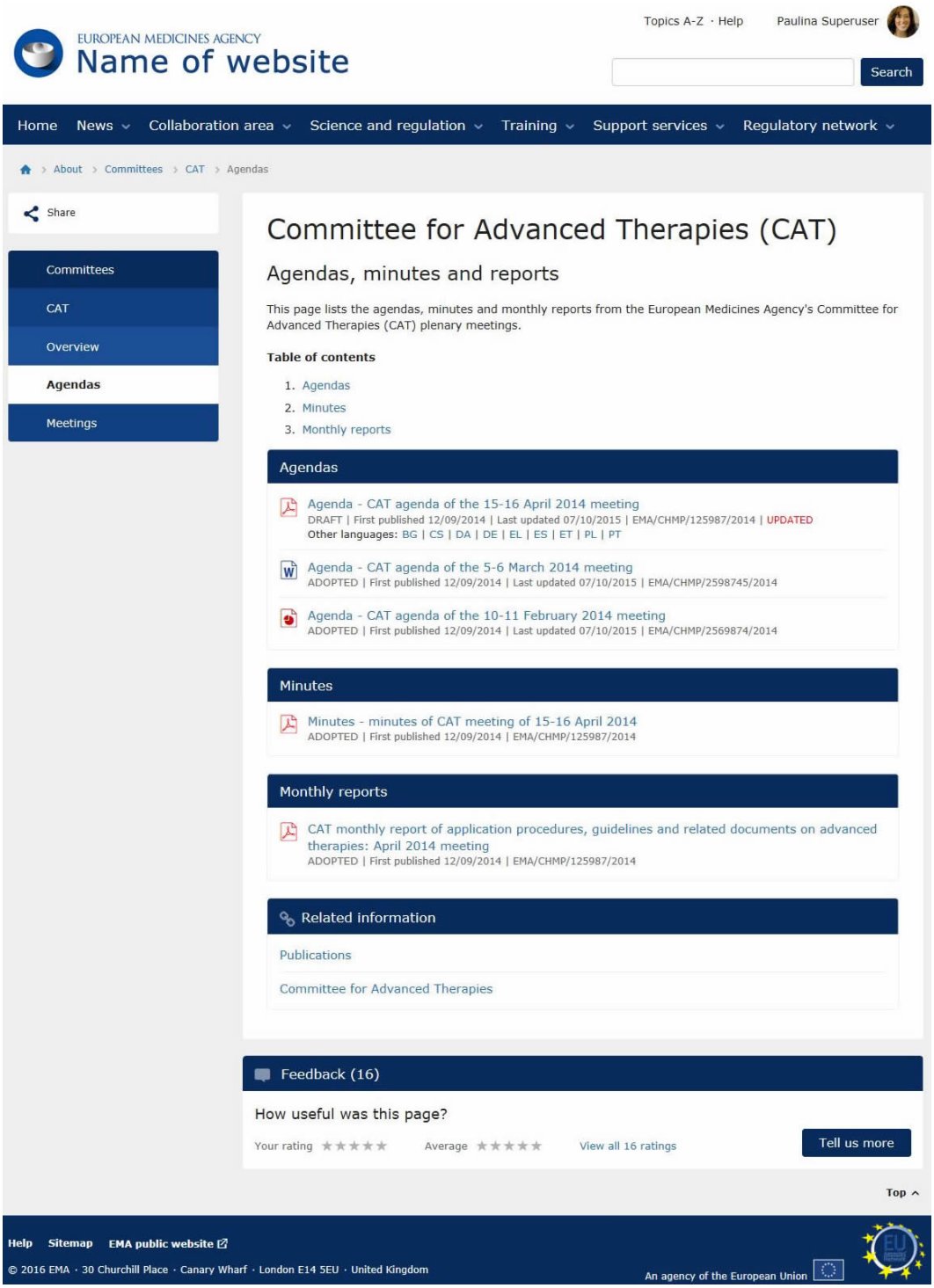
Homepage - Intranet colour scheme - EMA-only branding



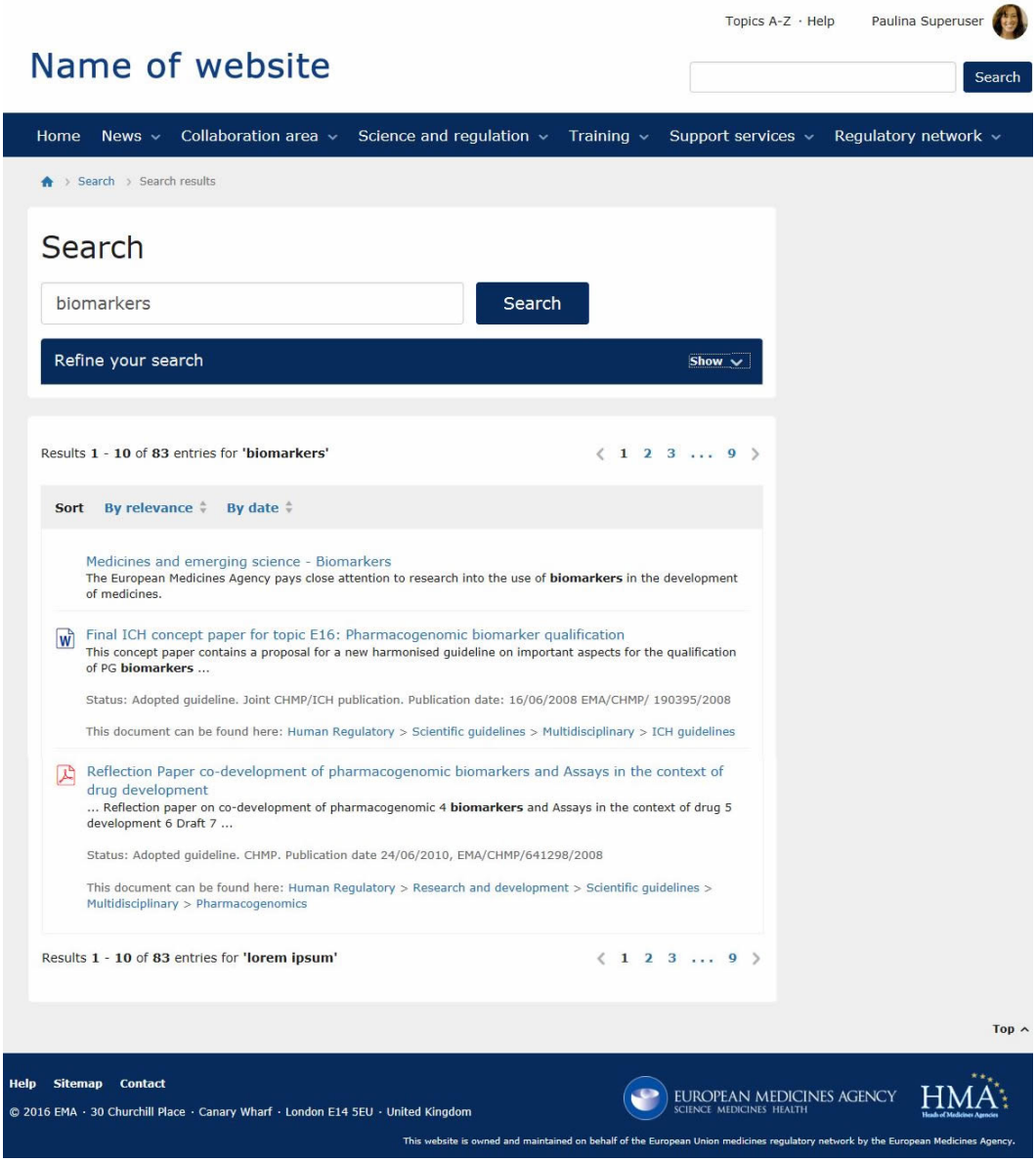
Content page - Extranet colour scheme - EMA-only branding



Document listing page – Corporate website colour scheme – EMA-only branding



Search page - Corporate website colour scheme - Co-branded with HMA



14. Document history

Version	Who	Date	What
1.0	Catalin Rolea	28/08/2015	First draft created
1.7	Estela Francisco	11/09/2015	Review
1.9	Liina Buckingham	14/09/2015	Updated section 3, Usability, and section 9, Methodology.
1.12	Christopher Gadd	28/09/2015	Edited and updated in entirety
1.13	Marius Sirbu	29/09/2015	Reviewed and included information on browsers, operating systems and JavaScript

Version	Who	Date	What
1.14	Christopher Gadd	09/10/2015	Reviewed and added information on PDF vs. HTML
1.18	Liina Buckingham	19/10/2015	Updated 7.1.2 Colour variants and 10. Front-end design process
1.20	Liina Buckingham	06/06/0216	Included screenshots of website variants and links to style guide and page templates on G drive
1.21	Liina Buckingham	12/09/2016	Updated browser standards section and cookie compliance section
1.22	Daniel Glanville	23/11/2016	Editorial review
1.23	Liina Buckingham	10/02/2017	Updated sections on multilingualism and page templates
1.16	Christopher Gadd	17/02/2017	Editorial review
1.17	Liina Buckingham	12/05/2017	Updates following comments from staff and Gartner
1.18	Christopher Gadd	09/06/2017	Editorial review
1.19	Liina Buckingham	12/06/2017	Editorial review and updated accessibility section

15. Document approval

Date	Version	Approved by
18 May 2017	1.17	EMA Architecture Board (EAB)
28 June 2017	1.19	Portfolio Board (submitted for information)
20 July	1.19	EMA Executive Board (EXB)