



# **Commonwealth Secretariat Youth Division YDI website designer specification**

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## 1 YOUTH SYSTEM OVERVIEW

The Youth Development Index (YDI) was successfully launched in 2013 and represents the world's first attempt at capturing the multidimensional properties that indicate progress in youth development at the country level. The YDI offers an inter-country comparison of the environment for young people, aged 15 to 29, across five key areas: education, health, employment, civic participation, and political participation.

The Commonwealth Plan of Action for Youth Empowerment 2007-2015, and the Commonwealth Eminent Persons Group in its Report issued in 2011, recommend the development of a tool for monitoring progress on youth development in the Commonwealth; the YDI was designed to respond to those policy recommendations.

The YDI is a comprehensive attempt to aggregate global data on young people; the index was formulated to help governments, decision-makers and stakeholders identify and learn from areas of success, pinpoint priority areas for investment, and track progress over time. The methodology was developed by a team of independent academic experts convened from across the Commonwealth, in conjunction with the Institute for Economics and Peace (IEP).

The YDI establishes a valuable monitoring framework on youth development and empowerment. The tool has ignited a global debate on the importance of gathering youth-specific data, especially for the post-2015 development framework and calls for a data revolution. As they see their achievements and needs ranked globally and regionally through the YDI, member countries in the Commonwealth are increasingly interested in investing in key elements of youth development and the development of national youth development indices, and are increasing their collection of youth-specific data. The YDI sets a baseline and is sufficiently flexible and adaptable to allow continuing development of the framework with the addition of new metrics as data becomes available.

The YDI was designed to focus on the Commonwealth nations but also covered over 170 countries, a broad country coverage encompassing more than 99 per cent of the world's population.

The initial YDI project developed by IEP had three key outputs:

1. The research and development of the YDI itself
2. A report summarizing the key results and methodology
3. A web visualisation communicating the basic results

Since 2013, there have been other notable attempts to measure youth wellbeing, such as the Youth Wellbeing Index developed by the International Youth Foundation. Aside from the added conceptual learning from these other projects, since this time developments in new data availability and the broader global debates around SDG/post-2015 development agenda provide numerous entry points for an updated project to value-add to the existing work.

In order to incorporate these new aspects within the YDI website and to create a space for engagement and interaction with stakeholders using the YDI resources developed, an update of the current website has been proposed.

Alongside the above proposals, various improvements to the websites functionality have been proposed. In many ways this is a critical aspect of the process as it will allow for the YDI and the related resources to be easily accessible to key youth development stakeholders and policy makers across the Commonwealth.

### 1.1 Key Objective

The key objective of this project is to have a fully updated YDI website up and running for the launch of the next YDI report at the beginning of April.

### 1.2 Technical Assumptions

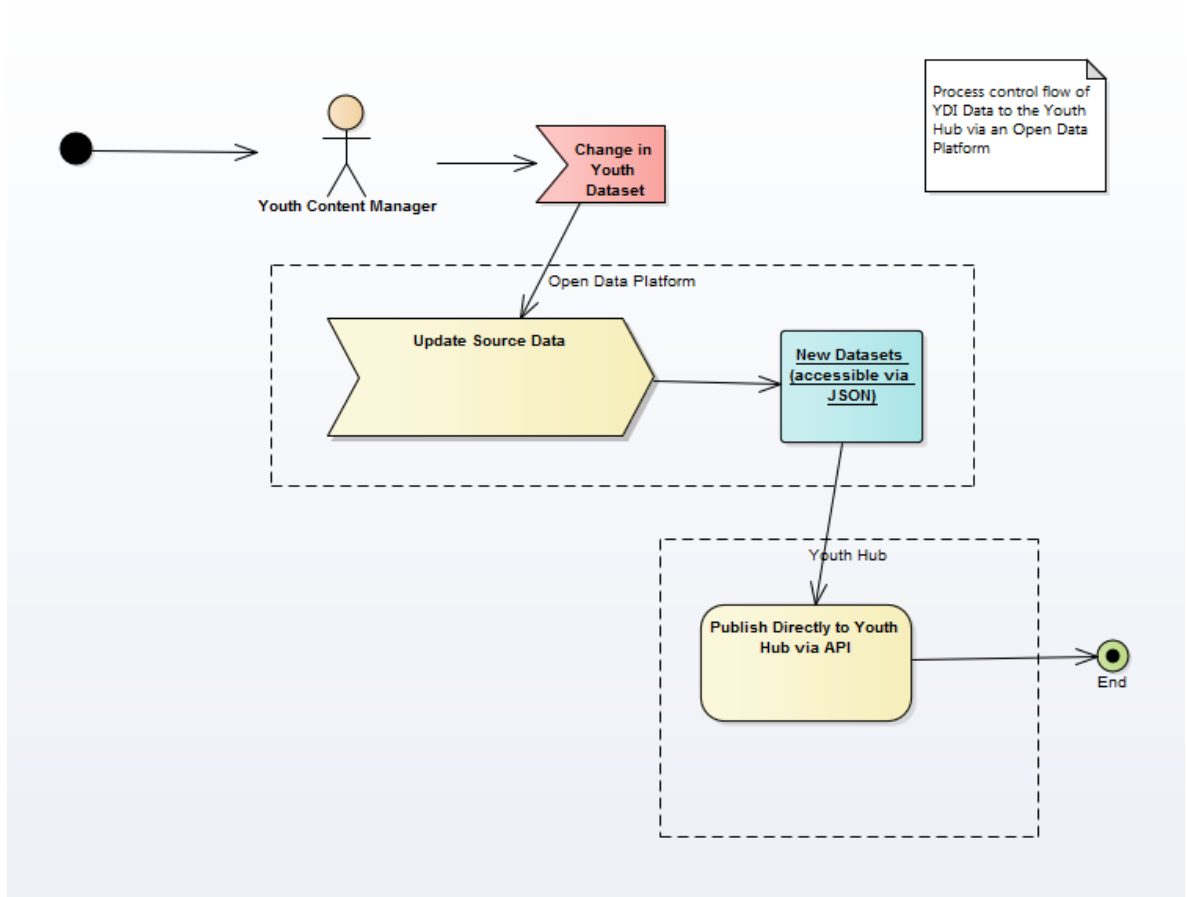
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- The system will have an open and published API
- The system will have the capabilities to Publish, Discover, Contextualize, and Distribute
- The system should be specifically designed for the open data objectives
- The system must be available 24/7
- The system must support the following data formats:
  - CSV
  - Excel
  - TSV
  - Shapefiles
  - KML
  - KMZ
  - XML
- The system must use open data architecture - Open Data Protocol
- The system must support CRUD - Create, Read, Update and Delete
- The system must support KML - Keyhole Mark-up Language, XML notation representing geographic annotations used for presenting data on maps in browsers.

### 1.3 Technologies

The functionality will be built using (where required):

- .Net based CMS (e.g. Kentico, Umbraco, dotNetNuke)
  - Blog Commenting Hosting Service (e.g. Disqus, Discourse, BlogEngine.net)
  - ASP.NET 4.5
  - SQL Server 2012 SP2
  - HTML5
  - CSS3
  - JQuery
  - XML
  - MSSQL
  - JSON
  - Open Data Platform(Fig. 1)
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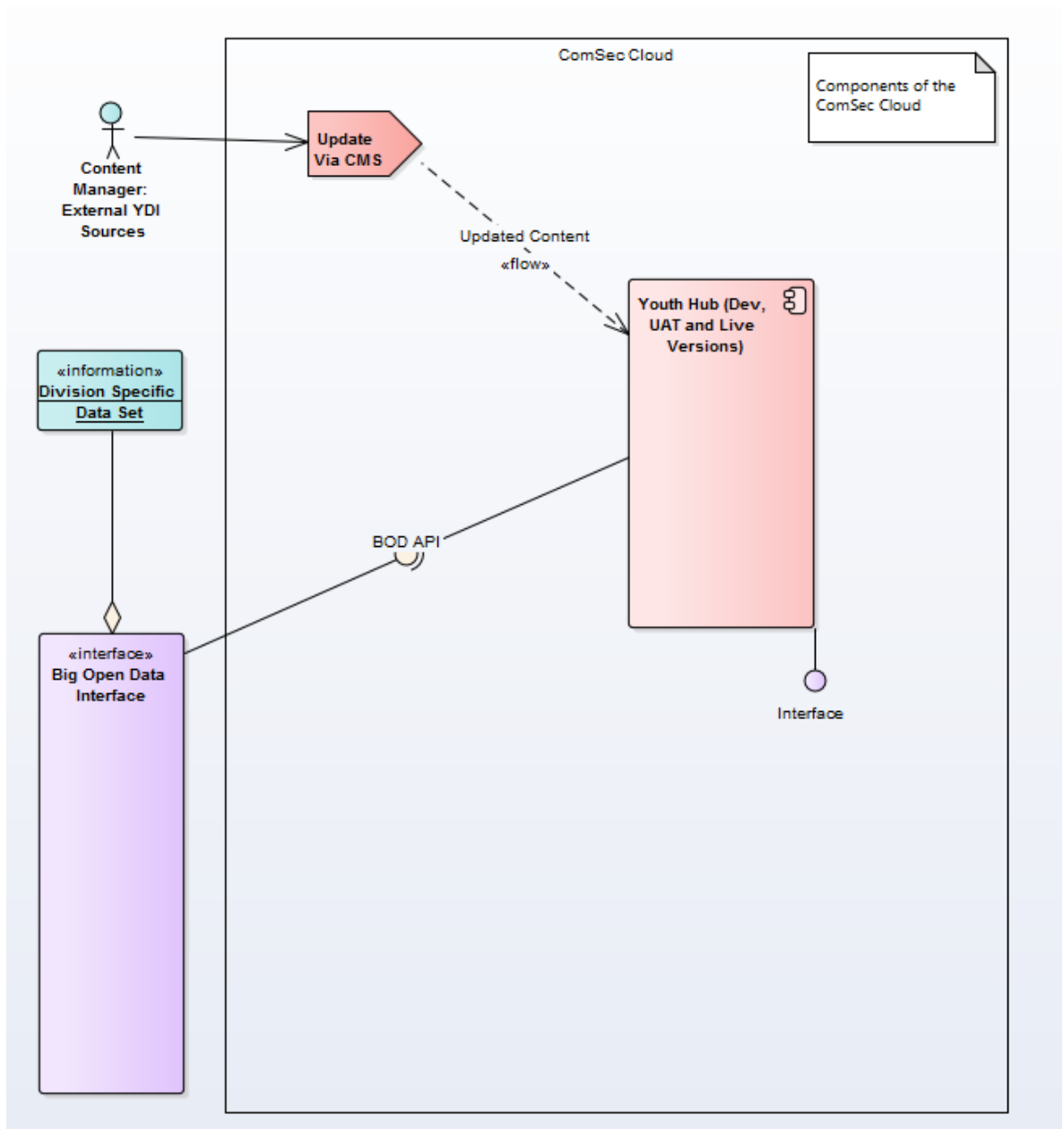
**Figure 1 Open Data Interface with the Youth Hub**

#### 1.4 Technical Architecture

The Hub's application architecture will consist of:

- A browser based CMS application, allowing authenticated users to manage content to be displayed on the site
- Development and UAT versions of the site hosted by the Commonwealth Secretariat in an appropriate Azure cloud-based based environment (or a hosting platform that is agreed by the Commonwealth Secretariat).
- Staging and production versions of the site hosted at the Commonwealth Secretariat in an appropriate Azure cloud-based based environment (or a hosting platform that is agreed by the Commonwealth Secretariat).

Fig. 2



**Figure 2 Component View**

#### 1.4.1 Data Architecture goals and philosophy

This development will be supported by a centralised data platform being developed by the Commonwealth Secretariat to provide and serve data content for their knowledge delivery projects.

Our goal is to build a robust, accessible, scalable, open data platform for use by projects throughout the Commonwealth Secretariat. This platform will provide a centralised data centre for all data driven projects yielding the following benefits:

- Availability of relevant Open Data that anyone can access, use and share
- Benefits the Commonwealth as an Organisation

- Increased transparency, better availability and improved accessibility of data about the performance of the Secretariat, e.g. budgetary or public contracts data, specialised project data sets: health, oceans, education, etc.
- Engender improved public relations and attitudes towards the Secretariat and better inform Commonwealth Stakeholders about its actions. This will help to build trust, understanding and inform the general attitude of all associated citizens and organizations.
- Increased reputation of the civil society initiatives and publications of the Commonwealth, allowing greater openness and transparency within and about our institution.
- Better understanding and management of data within the Secretariat.
- The cataloguing, collection, analysis and publication of maintained data sets to promote better understanding of data assets for related projects.
- Support of data reuse
- The work funded produces outputs and results - an open data platform will promote re-use of knowledge assets, Increasing value of the data
- New value can stem from the re-use

#### **1.4.2 Hosting**

Appropriate Cloud hosting in Azure will be provided by the Commonwealth Secretariat or a hosting platform that is agreed by the Commonwealth Secretariat.

#### **1.4.3 Search**

Search capabilities must be incorporated into the website as well as the data and document repositories. The Commonwealth Secretariat may provide a Google Enterprise Appliance for this purpose.

#### **1.4.4 Tracking**

Detailed site analytics must be configured within the Azure Environment (or approved hosted platform).

#### **1.4.5 Java Script**

Any use of Java script will have to be approved by the Commonwealth Secretariat in context.

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## 2 KEY CONCEPTS

### 2.1 Content

The main aspect of the content will be the interactive YDI map showing the assembled youth development data along with various other tools as outlined below. There will also be pages for:

1. Explanation of the YDI
2. Downloading the YDI report
3. Case studies
4. Information about the Commonwealth Youth Programme
5. Information hub
6. Toolkit

The tools required on the YDI map page are:

1. Responsive web design - to make it accessible by tablets and smartphones
2. Plug in to the open data platform which would allow for the rendering of rich interactive Maps - that allow filtering for:
3. Large heat map visualizing YDI index
  - a. Ability to drag the map and zoom in and out
  - b. Timeline functionality to see index over time
  - c. View by region
  - d. View by Country (by clicking on a country or selecting country from a list of all)
  - e. Hover tooltip with country name and rank
  - f. On-click scorecard with more detailed scores across regions
  - g. Compare countries functionality - allow to see multiple countries' ranks and regional scores
  - h. Rankings by overall rank and by regions
  - i. National YDI maps for individual countries - Australia to be included in the scope. Other national maps are out of scope.
  - j. Map filter to display Commonwealth / Non-commonwealth countries and other regions, eg. Southeast Asia, Africa, North America, etc.
4. Information Hub - To include such items as research articles, news and blogs.
5. Toolkit - content pages describing what Youth Development is, how to measure it, how to create own index and how to use it etc.
6. Content Management System - backend tool allowing ComSec to create and manage the content of the site including texts, images, files, videos.
7. Social sharing capabilities - To enable pages to be shared on major social media sites.
8. Website tracking via Google Analytics - Allowing ComSec to better monitor YDI impact

### 2.2 Site user types

Functionally the website will have the following user types. A specific user can belong to one or more of these roles:

- **Standard user:** No access to content management.
  - **Editor:** Permission to create and edit pages below the first navigation tier but not publish.
  - **Approver:** An Editor with permission to approve all content created by editors, as well as moderation permission for comments on blogs and other message boards.
  - **Site owner:** Approver with permission to edit and publish content on Home and main landing pages.
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### **2.3 Other functionality**

The following functionality will be available:

- Print Page
- PDF reports
- Bookmark a page
- Share with a colleague
- Site Map
- Post to social media

*This functionality is outlined in section 3, below.*

### **2.4 Page and navigation management**

All specified pages, based on standard templates, are able to have content updated through the content management system.



### 3 WEBSITE FUNCTIONALITY

#### 3.1 Site Wide Functionality

##### 3.1.1 Header




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Home   About   Download the Reports   Case Studies   Commonwealth Youth Programme

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The header will appear at the top of every page and will contain the following elements:

- **The YDI Logo:** this will also act as a link back to the homepage from all pages
- **Primary Navigation:** see Section 3.1.2
- **Site Search;** this search function will allow site content, discussion board postings and documents uploaded (by logged in users) to be searched
- **Tabs for the following pages:**
  - Home
  - Explanation of the YDI
  - Downloading the YDI report
  - Case studies
  - Information about the Commonwealth Youth Programme

##### 3.1.2 Navigation

###### 3.1.2.1 Primary Navigation

The primary navigation will be populated automatically from the CMS according to the main site structure.

###### 3.1.2.2 Secondary Navigation

Secondary navigation will appear automatically underneath the primary navigation as a stylised full width dropdown.

###### 3.1.2.3 Tertiary Navigation

A tertiary navigation will appear on the main menu and via in-page widgets that are controlled by site editors. This will provide additional orientation and contextual navigation once users are deeper in the website.

##### 3.1.3 Breadcrumbs

Breadcrumbs will show at the top of all pages below homepage and be positioned immediately below the search bar. These will be auto-populated from page titles assigned in the CMS.

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### 3.1.4 Search

Search capabilities must be incorporated into the website as well as all data and document repositories. The Commonwealth Secretariat may provide a Google Enterprise Appliance for this purpose.

Search will be made up of the following default search functionalities:

- Searches all content; can filter by exact phrase, any word, all words, or synonym
- Can search just for one content type (e.g. news; blogs; events)
- Returns based on relevance
- Fuzzy search - allows for spelling mistakes and variations in spelling

The search box and filter will appear constantly through the whole site below the header. This will enable users to perform a simple search which will return results in order of relevance.

#### Search results

The following fields will be displayed:

- Keyword searched for (in the search box)
- Title
- Summary - the meta description property of the content




Up to 15 results will be automatically displayed per page, but the user will have the flexibility to change the number of results displayed per page, with choices of up to 200 results per page (e.g. 50 per page; 200 per page). If there are more results found than the number displayed on one page (i.e. 15, 50, or 200), the user will be able to navigate between results pages using next and previous buttons.

The title and summary details for each search result will be displayed, with the title linking to the full content page.

We are providing two dedicated searches:

1. **Content search** (main search bar): This will allow users to search across all content within the site (pages and documents), with the exception of downloadable documents. This will search all content within the site, with results ordered by relevance. The search results page will provide the ability to filter by content type, and will list People results in a separate panel.
2. **Aggregated search:** Located in the tools and resources section, the search functionality must search other accessible repositories as required (such as the Google custom search).

### 3.1.5 Footer

Follow us	Menu	Visit us	Contact us
  	<a href="#">About</a> <a href="#">Download the Reports</a> <a href="#">Case Studies</a>	<a href="#">Commonwealth Youth Programme</a> <a href="#">Commonwealth Secretariat</a> Marlborough House, Pall Mall London SW1Y 5HX, UK	Tel: +44 (0)20 7747 6462/6456 Fax: +44 (0)20 7747 6549 <a href="mailto:o.said@commonwealth.int">o.said@commonwealth.int</a>
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The footer will appear on every page with hyperlinks to the following pages:

- **Contact Us**

- **Quick Links** [This will link to settings page for users to amend their personal details]
- **Visit us** - links to other commonwealth sites
- **Follow us** - Links to other commonwealth youth programme social media

These will all be editable, but any changes will affect the footer across the whole site.

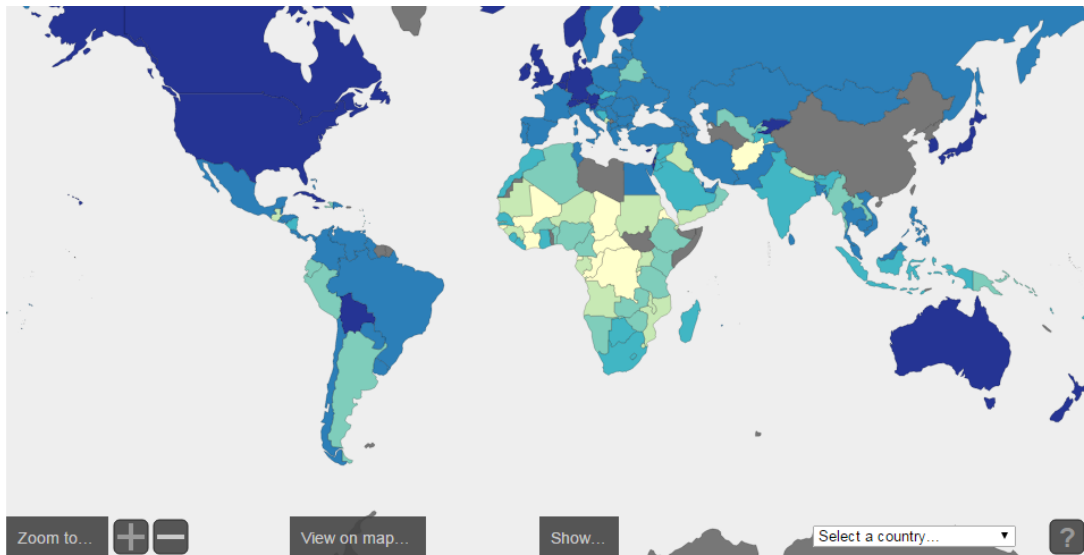
## 3.2 Page Functionality

### 3.2.1 Home Page Functionality

Required on the homepage:

- Large heat map visualizing YDI index along with the various tools mentioned earlier
- Links to the various other pages outlined in 2.1.





The Commonwealth Youth Development Index (YDI) measures the status of 15-29 year-olds in 170 countries according to five key domains: Education, Health and Well-being, Employment, Civic Participation and Political Participation. YDI scores range from 0-1, 0 being the lowest youth development and 1 the highest.



The YDI is not just about presenting data, but also collecting it. One of the key findings of the YDI is the lack of available data on youth development. If you have relevant data please contact us.

#### Follow us



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### 3.2.2 Information Hub Functionality

- The information hub will be a page on which the youth division will be able to post such items as research articles, news and blogs in a timeline format as with the Facebook homepage.
- There will also be the option to comment on anything which is posted on this page so as to encourage discussion around any news, articles etc.
- A search bar will be needed to look through older posts.

### **3.2.3 Toolkit Page Functionality**

The toolkit page will be a text based page describing what Youth Development is, how to measure it, how to create own index and how to use it etc. The page will also contain some downloadable content to assist with creating your own index etc.

### **3.2.4 Page Printing and Resource Exporting**

An option to “Print Page” should be included on all content pages. Selecting this will display a preview of the page to be printed together with a link to print. This functionality will allow users to print website pages on an A4 printer. This should format the content of every page into a size accepted by A4 printers and place it within a print specific header and footer.

An additional “Print to PDF” functionality should be included for all reports and discussion posts.

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## 4 TECHNICAL REQUIREMENTS

### 4.1 Hosting and availability

The production site will be hosted in Azure provided by the Commonwealth Secretariat or a hosting platform that is agreed by the Commonwealth Secretariat.

- The solution must provide 99.9% availability over a month
- The solution must have no single point of failure
- The solution must be optimised for low bandwidth in remote areas/remote access
- Any solution design would need to highlight any network latency
- Complete disaster recovery for system within 24 hours
- Warm failover on all services within three hours

### 4.2 Reliability

The system must be stable in functional, operational and database related areas. It must be able to operate without failing on the environment as described below.

### 4.3 Performance

The system must operate on current platforms. Any additional requirements or modifications to the current infrastructure must be clearly specified indicating the likely costs. The system must not suffer from adverse performance speeds or response times from concurrent access.

All pages should be optimised to ensure that page download speed is minimal. Average page loading time for should not exceed 1 second for 80% of pages, with a maximum of page loading time of 3 seconds.

The system must cater to accessing via low bandwidth connections and DSL communications without experiencing performance degradation. Any foreseen issues must be highlighted in the proposed solution.

### 4.4 Maintainability

The system must be able to run on a clustered environment enabling live-servicing and 24/7 access without any performance issues. If applicable, fail over processes in order to carry out essential maintenance must be mentioned.

The system must require minimum maintenance interventions. Any issues with database, operating systems, application module software and Microsoft updates, service packs must be mentioned.

### 4.5 Scalability

The proposed solution must be highly scalable to support possible expansion requirements of the user base and any supplier imposed constraints should be explained.

The proposed solution must provide uniform scalability of performance under increasing workloads.

### 4.6 Backup and recovery

The database and the application must be adequately backed-up using industry standard backup technology. The proposal must indicate measures need to be taken to ensure a safe backup and recovery process.

### 4.7 Client technology

The main devices used will be desktop, laptops, tablets but also smart mobile devices so we require adaptive and responsive design.

The solution will need to support the following browsers:

- IE >= 10
  - Safari >= 8
  - Firefox >= 35
  - Chrome
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**4.8 Secure architecture**

As a leading international affairs organisation, the Commonwealth Secretariat has a strong reputation to protect. Security must adhere to Commonwealth Secretariat standards which are in line with ISO 27001: Information security management systems, and ISO 27002: Information security - code of practice for information security practice.

**4.9 Maintenance and support**

The Supplier shall provide maintenance and support as well as ongoing development throughout the contract period.

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## 5 REQUIREMENTS

Companies are invited to submit quotations to perform the following:

1. Needs analysis and technical services design for the overall system;
2. Skills transfer for system administrators and in-house developers;
3. Development, testing and provision of the services as outlined in this document;
4. A warrantee on the functionality of the system;
5. Provision of all un-compiled code with annotations and system documentation;
6. Annual service level agreement (SLA) for system support including any license costs (including annual renewals). The quote for the SLA must be separate from the quote for development.
7. The needs analysis may be conducted via email and online conferencing.
8. All aspects of the site customisation must be fully available to in-house staff to customise and adapt. Copyright for all new code developed resides with the Commonwealth Secretariat. Full documentation must be provided prior to final payment is released.

Timeline: An initial launch of the platform is required by end February 2016 with all services completed by end April 2016.

Reporting: We require weekly status meetings with both the Commonwealth business users and technical staff.

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