**Request for Proposal (RFP)**

DS01-[215]

Appendix E

Existing HFEA Products

# Existing HFEA products

As part of this programme we are seeking to develop the following HFEA products:

## Website

The website is the HFEA’s main public communications channel. The site was launched in 2009 and has seen an increase year-on-year in unique user traffic since 2009. Between 1 January and 31 December 2014 we received 1.2 million unique visitors.

In line with wider online trends, many of the users of our existing externally facing elements are accessing the HFEA site through mobile and tablet devices (+95% and +50% respectively for Jan – Dec 2014 compared to the previous year). Our current website does not allow us to cater appropriately for these devices and their audiences.

The current platform is not stable, has slow publishing times, intermittent CMS errors, and site outages. As the CMS is end-of-life, the developer no longer invests in bug fixing on this product irrespective of a paid for service support contract.

Our ability to modify and adapt the existing website is very limited. As the RedDot CMS is developed in a proprietary coding language it means that new developments to the site cannot be made. Developer resource also cannot easily be brought in due to the obsolescence of this product/knowledge base.

The HFEA website provides information for patients about treatment options, legal requirements and points users to sources of additional support and information. The HFEA site also publishes information for donors about how to donate and what the implications are, guidance is also published for donor-conceived people and their parents about what information they can get about their donor. We aim to improve the information, so that it is more user-friendly and written in a more compassionate tone.

The website also publishes information and guidance for clinics and researchers, media information and corporate/governance information regarding our committees, senior team and non-executive members.

The site hosts a microsite called Choose a Fertility Clinic, which provides information about individual clinics (see separate lot below).

### Website audiences

The HFEA website has a broad range of users. Primary users are:

* prospective and current patients of fertility treatment in the UK
* prospective and current egg, sperm and embryo donors
* licensed clinics and research centres
* donor-conceived people looking for information about their donor or potential siblings
* Patients/parents of children conceived through fertility treatment.

The user needs of different stakeholders and user groups are provided as a series of user profiles in the appendices provided separately to this document.

### Website volumetrics

| Ref. | Description | 2014 |
| --- | --- | --- |
|  | Unique users to the HFEA website | 1,255,862 |
|  | Proportion of users accessing via a desktop PC/laptop  | 44% |
|  | Proportion of users accessing via a tablet device | 15% |
|  | Proportion of users accessing via a mobile device | 41% |
|  | Most visited page (rank 1) – hfea.gov.uk/IUI.htm | 215,678 |
|  | Most visited page (rank 2) – hfea.gov.uk/IVF.htm | 197,739 |
|  | Most visited page (rank 3) – hfea.gov.uk/I [homepage] | 159,461 |
|  | Average page duration per user visit | 1min 50sec |
|  | Number of unique page views | 3,160,001 |

### Current website technologies and languages

The existing CMS the website is built on (RedDot) is no longer supported by the developer (Open Text). We pay a fee for support but, due to the end-of-life status, we do not have tailored help for our particular product.

The coding language that RedDot uses is a proprietary one. In line with the Government Digital Services preference we are seeking an open source solution that the supplier should recommend in its proposed solution.

## Choose a Fertility Clinic (CaFC)

**Choose a Fertility Clinic** (<http://guide.hfea.gov.uk/guide/>) has been designed so patients can easily find the latest and most complete information about each licensed UK fertility clinic, helping them decide which clinic best suits their treatment needs. Receiving 166,000 unique visitors each year, it is the primary user tool for patients and clinics in getting impartial, unbiased information about clinics, the treatments they offer and how successful they are. The key purpose of CaFC is to enable potential patients to make an informed choice about where they go for treatment.

The current tool enables them to find out a wide range of information including:

* the treatments and services clinics offer, including any specialist areas
* statistics on all types of fertility treatment on a national level and for each individual clinic
* Inspection reports and records of licensing decisions relating to each clinic.

Our search lets users look for clinics in their area offering the treatments and services they choose. Searches can be for specific requirements, such as clinics that treat older patients.

Each clinic has an overview page that gives contact details and information about the treatments on offer and how the clinic’s success rates compare to the national average.

The information presented is supplied by clinics currently via EDI and Clinic Portal. It also presents inspection reports surfaced via an in-house document management tool (Epicentre).

### CaFC audiences

Primary users:

* patients
* potential patients
* donors.

The user needs of different stakeholders and user groups are provided as a series of user persona profiles in the appendices provided separately to this document.

### CaFC volumetrics

| Ref. | Description | 2014 |
| --- | --- | --- |
|  | Unique users to the CaFC search tool | 175,692 |
|  | Proportion of users accessing via a desktop PC/laptop  | 40% |
|  | Proportion of users accessing via a tablet device | 23% |
|  | Proportion of users accessing via a mobile device | 37% |
|  | Most visited page - /guide/AdvancedSearch.aspx | 3205,420 (13.54%) |
|  | Average page duration per user visit | 4mins 14secs |
|  | Number of unique page views | 1,039,235 |

### Current CaFC technologies and languages

The Choose a Fertility Clinic search tool is a bespoke search engine built in-house by HFEA IT developers. It has been ‘skinned’ to be visually consistent with the main HFEA website which was last designed in 2009. The site itself sits on a different subdomain due to the level of security required to protect the data.

The HFEA IT team includes a number of developers. Their coding skill-set is mainly DotNet.

## Clinic Portal and EDI

Clinic Portal is an extranet which provides a secure method for licensed clinics to submit licence application forms and application fees to the HFEA. It also allows clinics to update their clinic page on CaFC with current patient services and non-licensed activities (there is currently a 24 hour delay before information appears live on CaFC).

Currently clinics ‘verify’ data every six months on Clinic Portal and EDI before it is published on Choose a Fertility Clinic (CaFC). They find this verification process cumbersome as it means trailing through six months’ worth of historical records. In some countries this is undertaken monthly and this has been found to improve data quality. However, historically the HFEA also did this more frequently (quarterly) and some in the sector felt that was too often and ‘burdensome’.

Clinic Portal provides:

* a secure method for licensed centres to submit licence application forms and other forms based data to the HFEA (e.g., self-assessment questionnaires and annual returns etc.)
* a way for clinics to monitor performance
* clinics with a way to view fee invoices raised by the HFEA and billing information
* an interface for clinics to update their clinic page on CaFC with patient services and non-licensed activities
* a mechanism to manage clinic staff on the licence
* information about the clinic
* access to clinic reports (i.e. submitted form counts)
* HFEA Alerts (general alerts rather than relating to potential clinical governance incidents specific to the clinic)
* access to the Risk Based Assessment Tool (RBAT) which shows the particular clinic’s own performance against key indicators
* access to HFEA contact information
* access to the status of the particular clinic’s submitted Register data (data quality reports)
* clinics with a way to manage the Clinic Portal admin.

Currently, clinic interactions with the HFEA can be cumbersome as clinic staff are required to shift between systems (Clinic Portal and EDI) and there can be disparities between the information on the systems.

Originally, information was provided by clinics to the HFEA using paper forms. In 2006 these forms were converted to an electronic version of the forms that is called EDI. EDI was developed as a standalone application, located on clinic premises.

There are currently about 40 clinics that submit data via EDI. Other clinics have their own clinic software that provides the extensive functionality required by clinics and also provide information to the HFEA through the use of a locally installed integration service. These systems are referred to as ‘Integrator’ systems (also known as EPRS [Electronic Patient Registration Systems]). There are currently seven suppliers of these systems providing information to the HFEA which are used by an additional 50 clinics.

EDI is also used by some integrator systems (as well as EDI users) to fix data errors that are not correctable by the integrators’ own systems and to provide access to HFEA reports that the integrators are unable to surface. There is some user frustration that it is not possible to drill down from summary KPI (key performance indicator) information surfaced in the Clinic Portal to the underlying data. That is, the user needs to go from Clinic Portal to EDI to fix a problem identified in Clinic Portal. This issue affects both standalone EDI and Integrator system users. Reports in Clinic Portal are not live so the user cannot see whether they have fixed the issue until the reports are refreshed the next day. The majority of errors, for instance those not directly relating to the KPIs, are surfaced in reports in the EDI or EPRS Systems themselves, for correction in the respective systems.

Clinics complain that data looks different depending upon which system they are looking at (Clinic Portal, integrator systems or EDI) and this undermines their confidence in the data that we hold. Users also feel that they lose access to the data after they submit it because they cannot use it or report on it in ways they would like to. Particularly annoying to them is the inability to drill down from error reports to the appropriate record to resolve it. EDI contains some validation at the front-end of but a clinic can still provide incorrect information. For example, submitting treatment data before a registration record has successfully been entered in the system. To minimise this, around 500 rules have been created to trap errors and to notify the supplying clinic by way of reports in the Clinic Portal.

Once raw data from clinics is received, it undergoes a series of rules and transformation (an extract, transform and load (ETL) process) to put the data into the Register and to create a more normalised version of the data in the data warehouse (albeit structured around treatment cycles rather than being a person-centric structure based around patients and donors).

We will be seeking to significantly improve the process and experience of Clinic Portal users as part of this programme. Suppliers will be expected to identify opportunities for these improvements throughout the programme delivery.

A key process within a clinic is preparation for inspections which clinics do using a self-assessment questionnaire, which is, in essence, a form. Clinics also use up to 31 other forms to modify licences or make changes or interact with the HFEA. It is felt that this process too could be significantly improved. We will be seeking supplier input in this area.

### Clinic Portal and EDI users

Primary users

* Clinic users (External)
* Clinic admin staff
* The ‘person responsible’
* Clinic staff involved in treatments
* Clinic staff involved in billings
* Clinic staff involved in inspections
* Clinic staff involved in audit
* Clinic staff involved in data quality

Secondary users

* Business Support; Inspection Team; Register Team; Finance (HFEA Internal staff)

### Clinic Portal volumetrics

Volumetrics – Clinic Portal (Current submissions and applications forms)

| Ref. | Description | Quantity (approximate) |
| --- | --- | --- |
|  | No of clinics | 120 |
|  | Self-assessment questionnaires submissions per annum  | 60 |
|  | Initial licence applications per annum | 10 |
|  | PGD Applications per annum | 35 |
|  | Special Directions per annum | 10 |
|  | IUI and GIFT Annual Returns | 25 |

Volumetrics – Other (Planned future submissions via the portal)

| **Ref.** | **Description** | **Quantity (approximate)** |
| --- | --- | --- |
|  | Donor Registration forms (pen portrait, goodwill message) per annum | 2,500 |
|  | Research Project progress updates per annum | 40 |

### Current technologies and languages

As outlined above:

* the existing CMS is based on RedDot
* Other systems are mainly based on Microsoft technologies
* C#.NET is the main development language
* The Epicentre system is based on Microsoft SharePoint

##

## Internal systems

### The Register

The data from EDI and integrators is stored in the Register. The Register is a database of information relevant to treatments licensed by the HFEA, provided by clinics. The Register stores information about the donors, patients, the treatments and the outcome of treatments. We also store additional information about the movement of human sperm and eggs (gametes).

The dataset for the Register consists of about 2,000 data items. This is the historic content and a separate project to define a prospective minimal data set is currently in progress. The content and definition of what has been collected in those fields has evolved continuously over the past 20 years. The new dataset is likely to be fewer than 200 data fields.

The Register is structured around the original paper forms and is not a relational database. The database is based on SQL Server 2005.

Where a clinic needs to change treatment information or add information to previously provided treatment information it will do this using further EDI forms (or via integrator applications). Sometimes these additional submissions or error corrections create data quality issues (such as surfacing new errors in previously submitted information).A Register record therefore is currently the sum of the original form information plus any changes or modifications to that record made through subsequently submitted forms.

NB: A new dataset has been defined for data provided by clinics. The dataset consists of ~ data items. The dataset is going through an approval process by the Standardisation Committee for Care Information (SCCI) and may change slightly as a result of the approval process over the next 12 months.

### Volumetrics – Register data submission

(Not part of the current Clinic Portal)

| **Ref.** | **Description** | **Quantity (approximate)** |
| --- | --- | --- |
|  | No of clinics using the HFEA’s EDI standalone solution to submit data | 40 |
|  | No of clinics that use a 3rd party integrated EDI solution | 50 |
|  | Number of rows of data in the Register | Circa 13 Million |
|  | Number of validation rules | 1,100 |
|  | Number of potential ad-hoc report users within the HFEA | 12 |
|  | Number of users within clinics that use EDI | Up to 1,000 |
|  | Number of Enterprise reports  | Up to 100 |
|  | Number of data items in the Register | Circa 200 |
|  | No of treatment cycles per annum submitted to HFEA | 60,000 |
|  | No of transactions | 380,000 |

### Other HFEA Systems

Although we are not planning to redevelop the following HFEA systems, the redeveloped products will need to integrate with a number of other existing and newly defined HFEA systems and processes, including:

**Epicentre**

* To manage the licensing and compliance functions, an application called ‘Epicentre’ was developed internally.
* Epicentre uses workflows to track key licensing and compliance processes.

**Image Store**

* We also store images of information such as pen-portraits from donors and images of the paper forms used to submit data to the HFEA before EDI was developed.
* Over the years we have developed new functionality and tools to address specific problems such as data quality, performance and risk (such as RBAT).

A full list of the current HFEA systems is in the appendices provided separately to this document.