

Image Exchange Portal (IEP)

Dear Colleague

The attached information describes the functionality, development timetable and costs of the recently procured Image Exchange Portal. This service was procured by the Department of Health (DH) and is currently being implemented by a joint DH/Connecting for Health Team.

The service provides an opportunity to implement a common system for exchanging images across organisations. The system has been designed to offer the opportunity to enhance the benefits of PACS systems and compliment existing systems.

Should Trusts and PCTs wish to adopt the service they should contact either:

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Yours sincerely



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IEP Briefing

Background

IEP is a DH procured solution under the ISHP programme and is to be delivered in 2 main phases primarily to eliminate the use of CD's for image transfer and introduce a controlled and secure service for the transfer of diagnostic information to support patient care. The IEP service is being delivered in 2 Phases:

- Phase 1 has completed all assurance and will be available for general roll out late July 09 and enables secure routing of DICOM images supported by NHSMail communications to recipients.
- Phase 2 introduces a web interface, available over N3 on the nww domain, and facilitates simple workflow to support the requesting of images from other sites. This will be ready for use by early adopters in Sept 09 and further roll out to all commencing by Oct 09.

The system requires no IEP specific local hardware or software to be installed on site.

With the introduction for operation of Phase 2, connected trusts will be able to use the same workflows to facilitate the transfer images to any other connected trusts. A list of the key functionalities is attached.

IEP is a joint venture between DH & CFH and all releases are assured for both clinical safety and IG compliance by CFH, including review by the PACS clinical leads. In using this service trust Chief Executives can be confident that the system has been assured as clinically safe by the national programme Clinical Safety Group and that any risks associated with complying with the care record guarantee have been appropriately mitigated. In addition IEP, unlike many other image sharing solutions, is supported on a managed Quality of Service (QoS) within N3. So there is a guaranteed level of service regardless of local web and application traffic.

This service is being provided at no cost, on a 'first come, first served' basis, to 120 trusts and 10 ISHPs via DH funding; costs for additional trust connection beyond the DH funding are attached. Initially funded for 2 years, a continuation funding model will be developed dependant on take up of the service.

DH initially funded IEP to support the image volumes associated with MRI, Fast Track & PET/CT. Since the OJEU was written, the volume of ISHP to Trust imaging has changed meaning that the contracted image volume from ISHP to trust will be reduced. Whilst the effect of image router on N3 will need ongoing monitoring and management, it is expected that trust-to-trust transfer of images via IEP will be made available at the same time Phase 2 achieves full roll out approval.

The IEP web interface will also support smartcards, and their use is strongly encouraged, however they are not a prerequisite of using the IEP services, provided the organisation's SIRO has conducted the appropriate risk analyses in line with government policies; more details are available on request.

Technically IEP is able to connect to trusts in Wales, Scotland, IOM and NI; as well as the MOD and other organisations with N3 gateways. All Home Countries have completed IGSoC allowing them to connect to N3.

Further Development

In advance of the National Sharing Solution, and with a number of trusts and healthcare communities wishing to introduce local image sharing at the earliest opportunity it has been recognised that the IEP could meet this requirement for a significant number of scenarios. To this end, and based on requirements provided by a number of SHAs a further development phase has been proposed. This will focus specifically on trust-to-trust transfer, including functions such as MDT and the needs of health communities such as the Stroke Network.

The service is currently a resilient service which is hosted in a single data centre and supported with a help desk during office hours. SHAs and clinical stakeholder are being approached for their views on whether this is suitable for services supporting stroke and other emergency transfers and if deemed appropriate then funding will be sought to implement an increase in service support to 24/7 and install a second resilient data centre to improve overall system resilience and availability.

An overview of the Phase 3 functionality is attached and is now demonstrable on request. Further development of the system is currently under discussion and the intent is to enhance functionality, over the life of the product, based on the clinical needs of the user base.

Phase 3 functionality will be available to all trusts through the IEP web portal but will be enabled on an individual trust basis. The functionality will be purchased on a trust by trust basis if the demand is forthcoming following SHA and Trust consideration of the service. The costs for implementing IEP Phase 3 are attached.

In purchasing the service the trusts will be guaranteed:

- All functionality delivered will be assured for clinical safety by the Clinical Safety Group.
- Any risks to the care record guarantee will be appropriately mitigated within the system and/or IG approved guidance will be issued to allow organisations to mitigate any risks, which are not able to be mitigated technically.

- The service storage and N3 capacity will be monitored and managed to ensure appropriate service levels are maintained during the growth of the service.
- Once the National Sharing solution is available a suitable migration path from IEP will be provided.

Current Situation

Phase 1 is operational, Phase 2 comes on line end of July and Phase 3 will be ready for Trust use September. The enhanced functionality of Phase 3 has been demonstrated to the NE SHA and other interested parties should either contact me (andrew.syme@nhs.net) or John Sidman at DH (john.sidman@dh.gsi.gov.uk).

IEP Functionality Overview

Phase 1

Functionality provided:

- Sending system adds routing information
- DICOM push only
- Image Router pick up routing information as DICOM studies come and routes to pre-integrated destination.
- E-mail alerts
- Single workflow - DICOM Push to IEP using NACS Code in Header for routing

Phase 2

Functionality provided:

- Authenticated log in (either Smart Card or Strong Password)
- IEP Web client
- Users dashboard
- Pre-population of searches from request data
- Support for one Node per institution
- User audit logging
- One worklist per institution
- NHS Number Harmonisation in DICOM Header
- Option to enter Patient ID and Accession Number before delivery from worklist
- Support for HL7 reports from RIS where supported (pushed from RIS)
- Support for HL7 Outbound Report Messages and Dicomisation of reports
- Electronic request to Initiate e-mail and support routing - Place request via IEP web interface, which sends an e-mail to the image source. The source sends the images directly to IEP, IEP matches the images to the request and routes them to the requestor.
- Pre-authorized transfer – Via the IEP web interface, request screen allows authorised users to search their own PACS, select a study and send to selected destination.
- User roles and functions: standard list
- Phase 2 includes ½ days on site training.

Phase 3

Functionality provided:

- 2D Web viewer
- Support for multiple studies per transactions
- Personalised alerts and notifications
- DICOM Header Harmonisation
- Support for multiple Nodes per institution (licence required)
- Support for multiple worklists per institution (Virtual Nodes) (licence required)
- Ability to Attach Documents/Files
- Ability to add messages per transaction
- Automatic report retrieval from RIS using HL7 (where supported by RIS Supplier)
- User roles and functions: configurable by institution administrators
- Phase 3 includes 2 days on site training and integration. Additional days will be charged separately

IEP Costing Model

Phase 3 Costs for DH funded Phase 1 & 2 sites	Capital	Annual
Phase 3 Implementation (without Viewer)	£ 3500.00	£ 2000.00
Phase 3 Implementation (with Viewer)	£ 4500.00	£ 3000.00
Costs for additional sites	Capital	Annual
Phase 1, 2 & 3 Implementation (without Viewer)	£ 7500.00	£ 5000.00
Phase 1, 2 & 3 Implementation (with Viewer)	£ 8500.00	£ 6000.00
Options available on Phase 3 Only		
Additional Node Licence	£ 500.00	£ 150.00
Additional Worklist Licence	£ 500.00	£ 150.00
Additional Integration Days (exclusive of expenses)	£ 500.00	