The DRIM-M Project

Data Radiologie Imagerie Médicale & Médecine Nucléaire

Sponsored by

Mathieu Bajat – eHealth Interoperability Expert

Summary

Agence du Numérique en Santé (ANS)
The French eHealth Agency

Created in 2009, ANS has the responsibility of **promoting the development of shared information systems** and digital technologies in the health field in the national-wide.
ANS contributes to the **reinforcement of the efficiency of health policies** and to the **improvement of coordination, efficiency and quality of care.**

The Agency is a member of IHE int., HL7 int. and IHE France

Our 3 main roles:

- We regulate eHealth in France, improving digital performance through common regulatory and information-sharing standards.
- We operate major national e-programmes to make the public health service more efficient and cohesive.
- We promote and valorize all eHealth initiatives through stimulation, evaluation and support.

Slide 4

2. What is CI-SIS?
Interoperability Framework of Health Information Systems.

CI-SIS includes interoperability specifications with a nation-wide scope. These specifications set constitute a standard in order to exchange information in France
The CI-SIS is a set of specifications structured around a series of specific use cases.
CI-SIS : https://esante.gouv.fr/offres-services/ci-sis/espace-publication
CI-SIS has 3 layers :

- **Professionnal layer,** specifies exchangeable Health professionnal content and concepts.
- **Service layer**, specifies the data exchanges of the Professionnal Layer
- **Transport layer,** specifies the transport of information in support of the Service Layer

The CI-SIS contains for each layer :

- **Functional spec** : Study of the need, business concepts of the use case. They are not constrained by the standards & profiles selection.
- **Study of profiles and standards :** study and selection of the most suitable standards
- **Technical Spec**: Explains how the technical spec uses selected standards for the identified use case

The program « Digital SEGUR » was created with the objective to **generalize a smooth and secure transfer of Health Data between health professionnals and patients** in order to better prevent and better cure.

This program supports **Mon espace santé,** which allows **each citizen to oversee his health history** and be the main actor of his health

Mon Espace Santé, is a digital health record.

Historic funding	**A giant leap**
Historic Investment of 2 billions euros	From 10 millions to… 250 millions documents exchanged every year via the « DMP » (Shared Medical Record) and « MSSanté » (Secure Health e-mail) was reached at the end of 2023.
▪ **1,4 billion** dedicated to the transfer of Health Data (across 3 years)	
▪ **600 millions** dedicated to the medico-social sector (across 5 years)	
100% financed by the European resiliency and stimulus package.	

The DRIM-M Project objective is achieve the sharing of Medical Images produced by over 1000 PACS in France

The DRIM-M Project is supported all the main professional actors in Radiology and Nuclear Medicine in France.

Sponsors du projet Diffusion d'Imagerie Médicales

<u>Focus on the DRIM-M Project:</u>

This project focusses on the centralized access to image pointers (XDS-I and DICOM KOS) in order to **locate and view imaging exams from Source PACS** by Medical Professional's health records software through a standized interface.

This gateway functionnality called « **DRIMBox** »: **may be implemented by an independant software in front of the PACS or directly by the PACS**. Each vendor choose the best way to implement a compliant « DRIMbox interface » on its product,

but sellers must meet all requirements made.

Such a DRIMbox has several functions :

- Feed the DMP (national shared repository and registry) with a DICOM Manifest (KOS) built from information coming from the PACS and the RIS (triggerred by Report approval)

- Provide access to the PACS source imaging data by supporting image retrieve (DICOM WADO-RS) from the Consuming DRIMbox

- Provide a viewer DICOM (hosted on the Source DRIMbox) to be accessed by any remote with an URL positioned on the Radiology Report

Two Main Use Cases :

For patients:

- Be able to consult images through the national platform « Mon Espace Santé », anytime, anywhere from a URL link placed on the Radiology Report
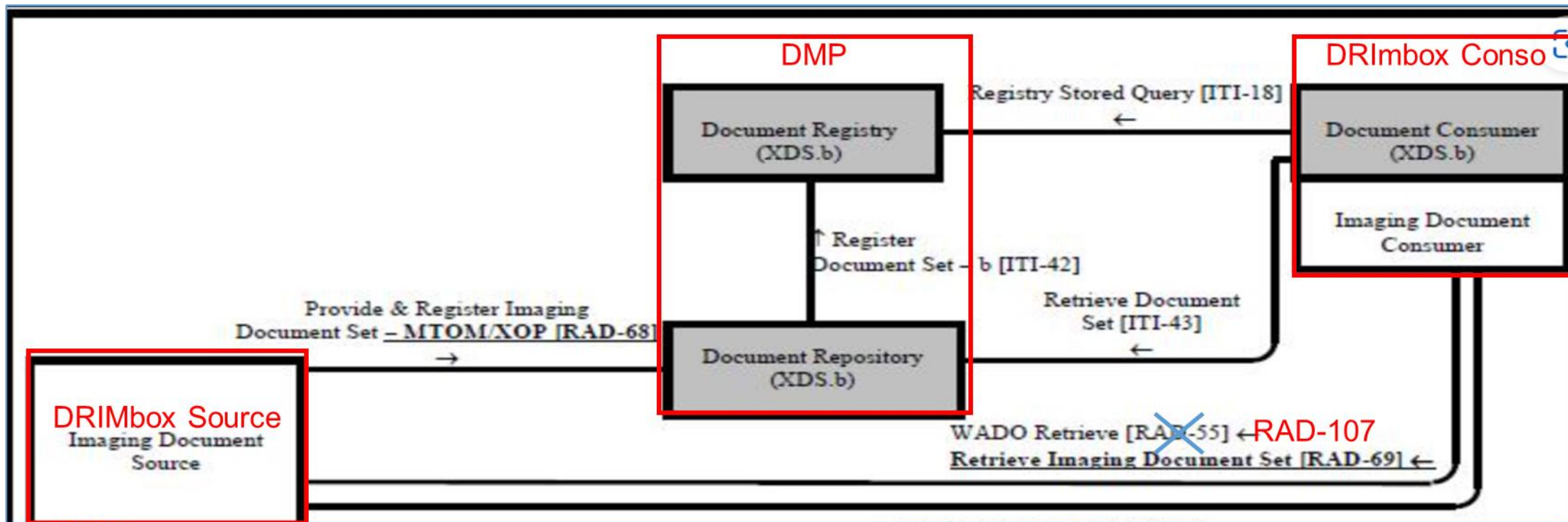
For Health Professionnals:

- Enable Professionnals to consult past exams for a patient with a specific use case : :
- <u>For the radiologist, nuclear doctors and imaging specialists:</u> import the exam in his DICOM environnement and make comparaisons and post-treatment
- <u>For the General Practitionner:</u> visualise an exam linked to an imaging medical report from a link integrated within the report.
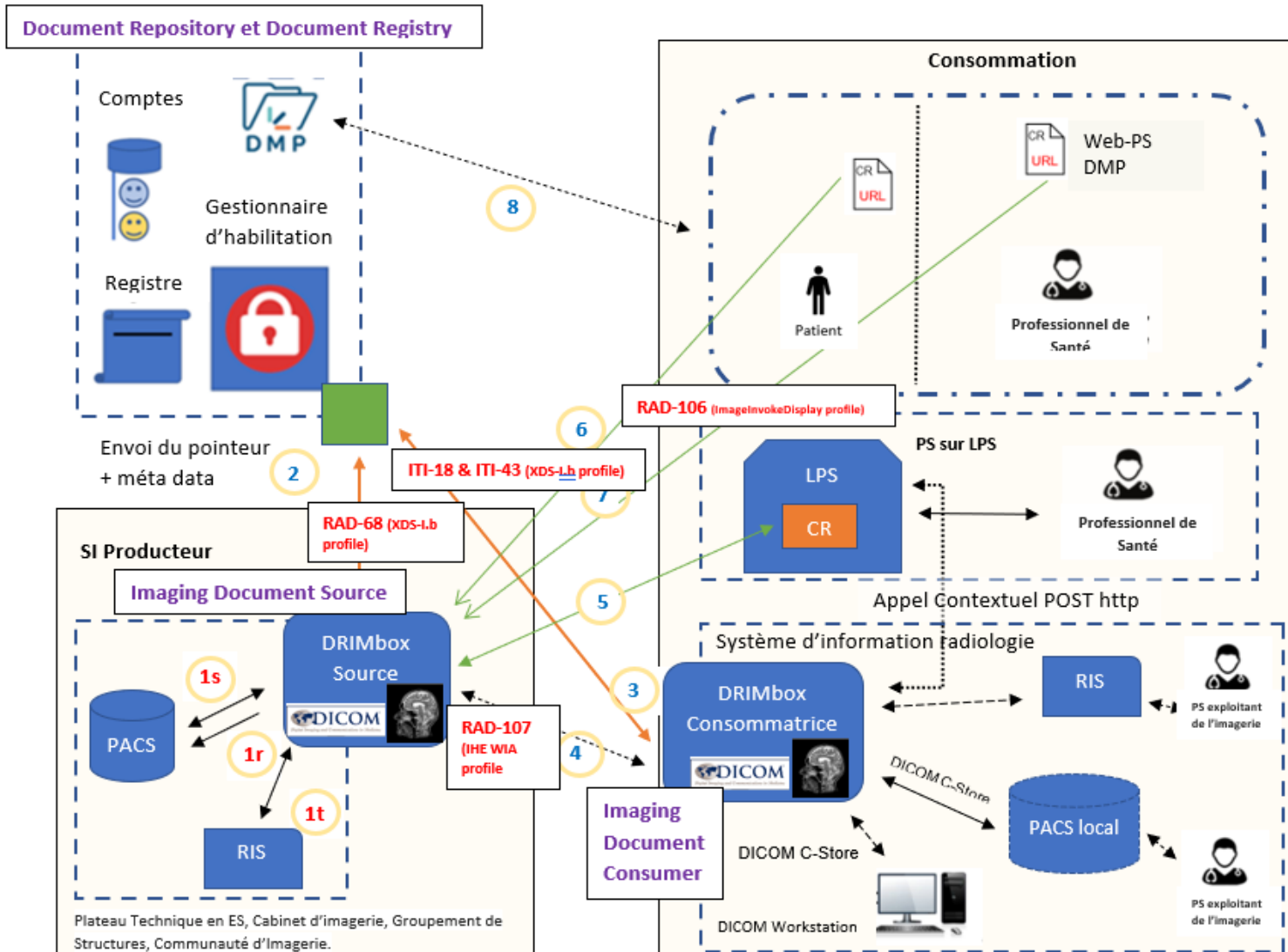
The RESTFUL RAD-55 transaction, called "WADO Retrieve" for accessing images that relies on DICOM WADO-URI has been replaced by a "DICOM WADO-RS" transaction RAD-107. These two variants of DICOM Web Access to DICOM Objects are functionally similar. WADO-RS was preferred because it was more flexible and promised wider adoption than WADO-URI. This deviation has been submitted to the IHE Radiology Committee

IHE-Europe EXPERIENCE DAYS 2024

For Imaging Specialists

Visualisation and/or importation one or many examinations in its imaging environment in order to carry out **comparisons and post-treatment**
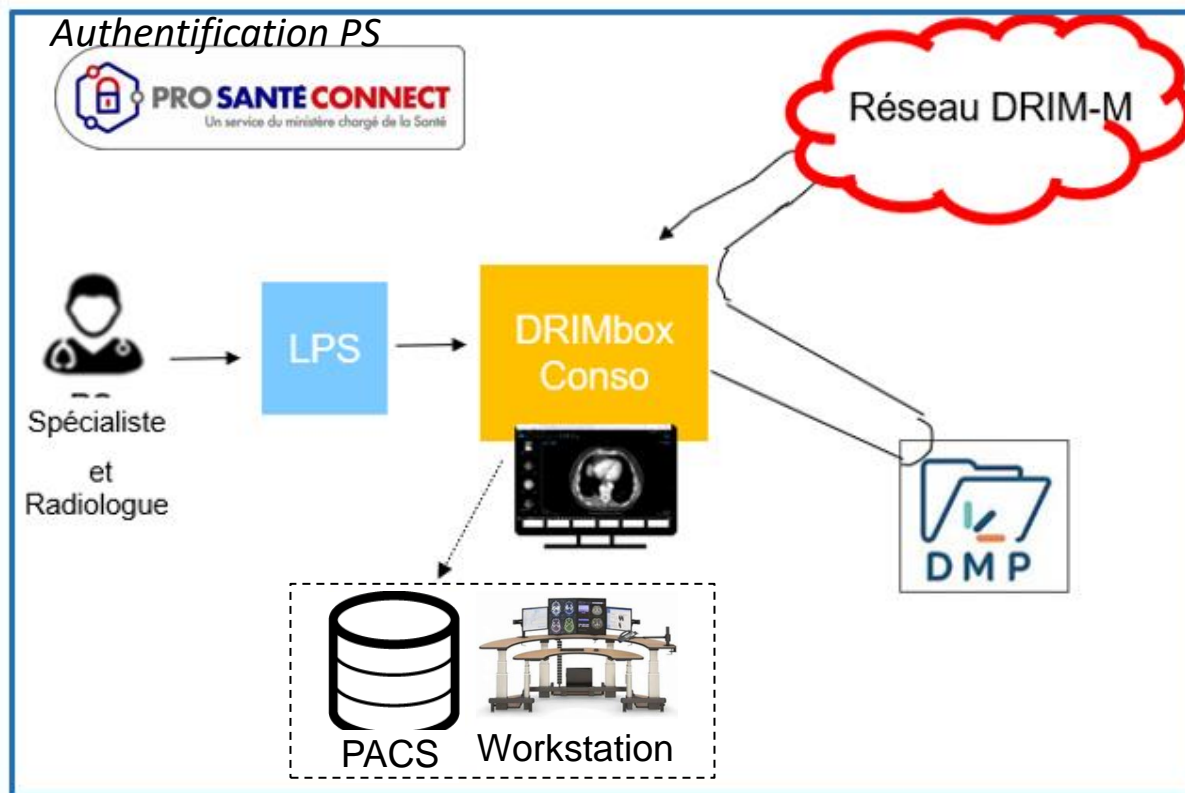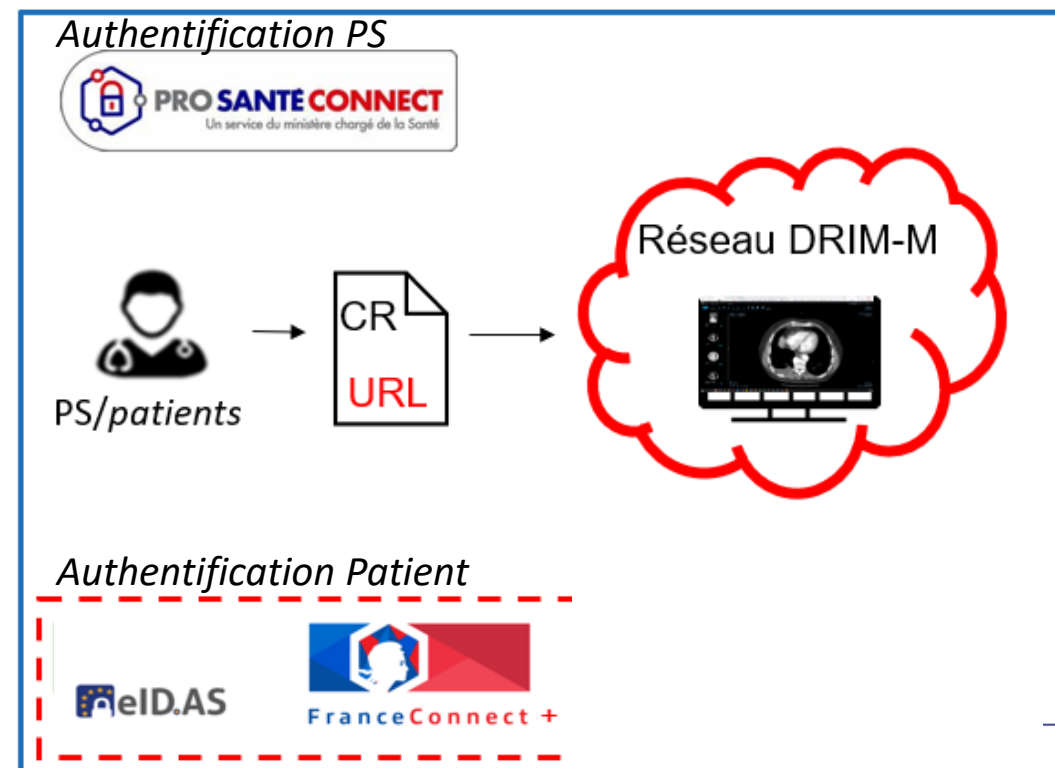

LPS: Logiciel des Prof. de Santé

For GPS/patients consulting the examination report

Visualisation of an examination from a link in the imaging medical report.
No need of a DRIMbox on the Consumption side

In order to secure the sharing of images between the Source and Consumer DRIMboxes, the DRIM-M project proposes the creation of a **Trusted Space**. It contains:

- a National Identification **'Registry of Source DRIMboxes'** whose role is to assign FQDNs to deployed DRIMboxes. Unique, perennial, trusted URLs distributed by the ANS are therefore assigned to each DRIMbox.

- a '**Whitelist'** signed by the ANS and listing the trusted DRIMboxes

- a '**DRIMbox Services Weather Report**' that will inform the ecosystem of the operational status of the DRIMboxes.

The **DRIMbox Trusted Space** allows you to :

- Secure the exchange of imaging examinations between DRIMboxes

- Identify DRIMboxes and Operators

- Guarantee a minimum operational level in the exchange of imaging examinations

- Guarantee the confidentiality of data exchanged within a closed space

- Guarantee the compliance of DRIMboxes with the clauses of the contract of integration into the Trusted Space
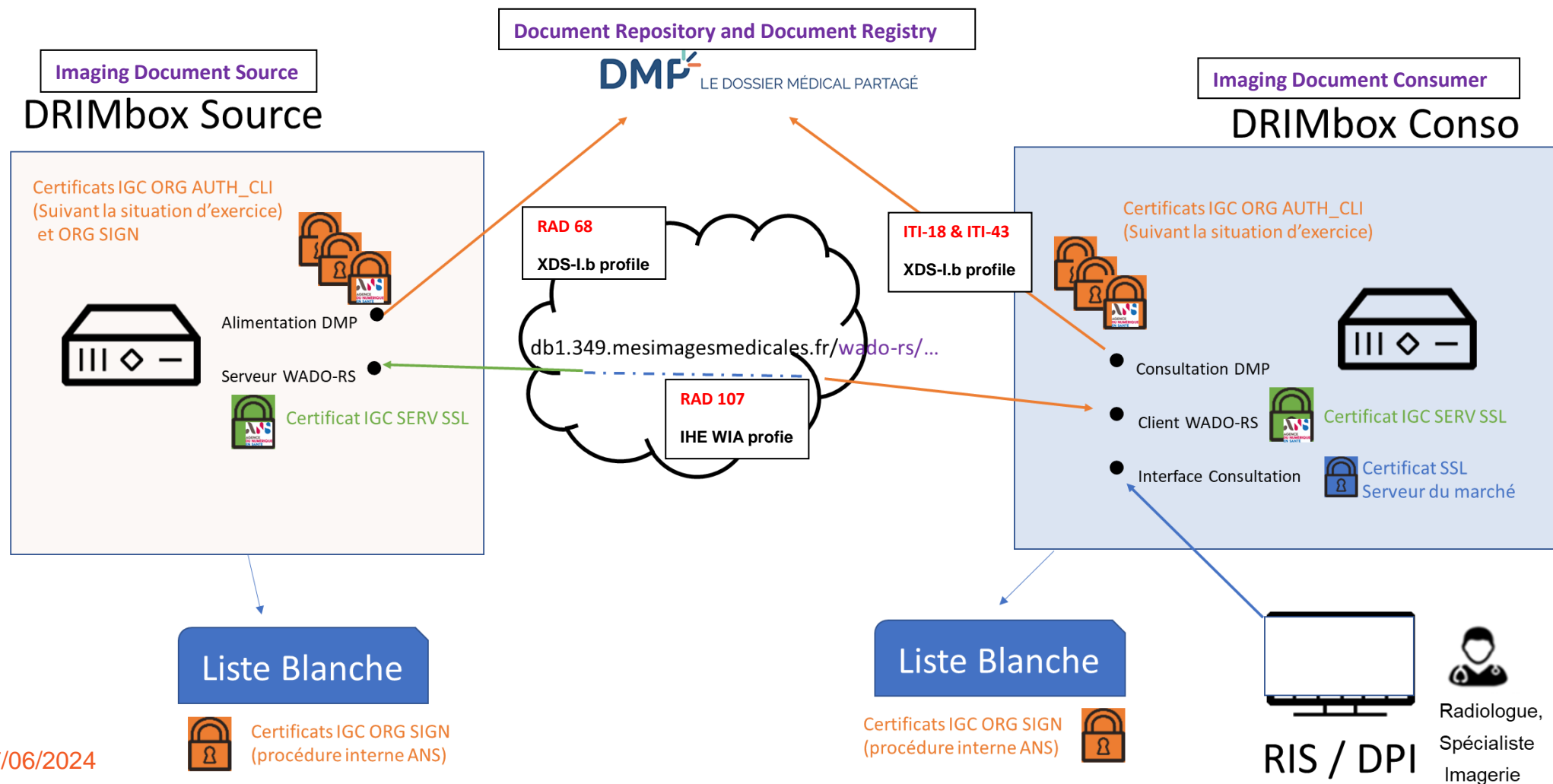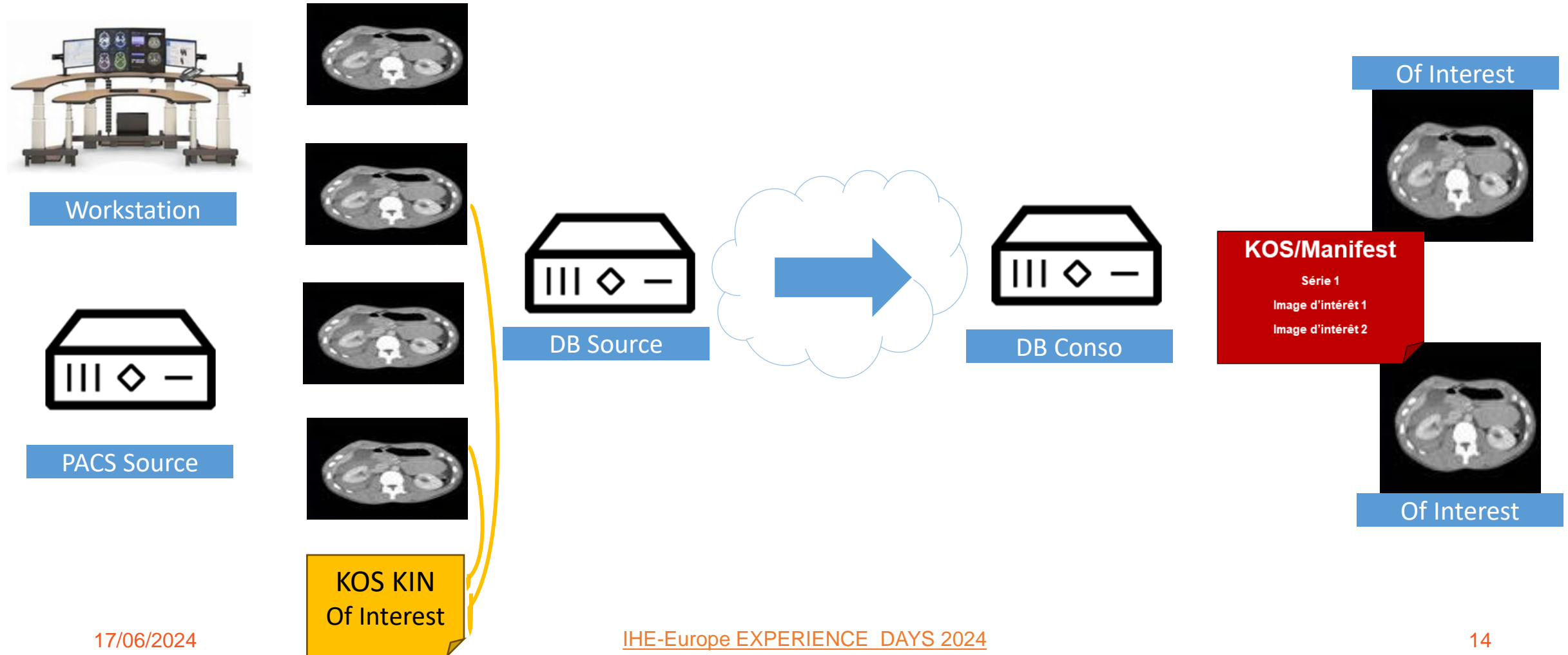
Following discussions with radiologists and software editors, **the need for DRIMboxes to take Key Images into account was confirmed**.

it is **important for a Source DRIMbox to implement Key Images** since the audience accessing images via an URL in report is most likely interested to focus first on key images.

This implementation is **essential for a Conso DRIMbox** as much more professionals

KIN = Specialization of a KOS object defined by the IHE Key Image Note integration profile

The KIN is a DICOM KOS object inserted within a specific series (Modality: KO) present in an imaging examination.
It should not be confused with the KOS/Manifest generated by the Source DRIMbox which acts as a description of a shared exam in the DMP. Unlike KOS/KIN, KOS/Manifest remains external to the imaging examination.

Workstation

PACS Source

DB Source

DB Conso

KOS/Manifest

Série 1

Image d'intérêt 1

Image d'intérêt 2

Of Interest

Of Interest

KOS KIN
Of Interest

Thank you for your attention

Should you have any question, you may contact us

DRIM-M@esante.gouv.fr