



Cross-enterprise Basic eReferral Workflow Definition (XBeR-WD)

Brief Profile Proposal for 2011/12
presented to the
PCC Technical Committee

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Effort Estimates

The work effort for profiling the XBeR-WD has been estimated **medium**.

The work requested to PCC is:

- definition of the clinical process (for the specific clinical process the effort is estimated low):
- definition of a common structure of a workflow definition profile. (effort estimate medium)
- definition of a common language to define a workflow definition profile. The world of definition profiles could need the use of specific words from workflow management world. There will be the necessity to analyze the common understanding of the language by the IHE users. (effort estimate medium/high)

The Problem

This profile proposal born as development of the **ITI XDW profile** to manage the Cross Enterprise Basic eReferral Workflow.

The management of the workflow related to the eReferral is involved in many clinical and organizational.

Without an **instrument which manage its workflow**, the eReferral is only an order without any information about the status of the order itself. The definition of a workflow with **fix rules and task** is needed in a scenario cross enterprise in which many actors are involved in the same process

We have estimated that only in the Veneto Region the introduction of the use of digital referral (eReferral) will entail a **saving of about 56 million Euro** thanks to:

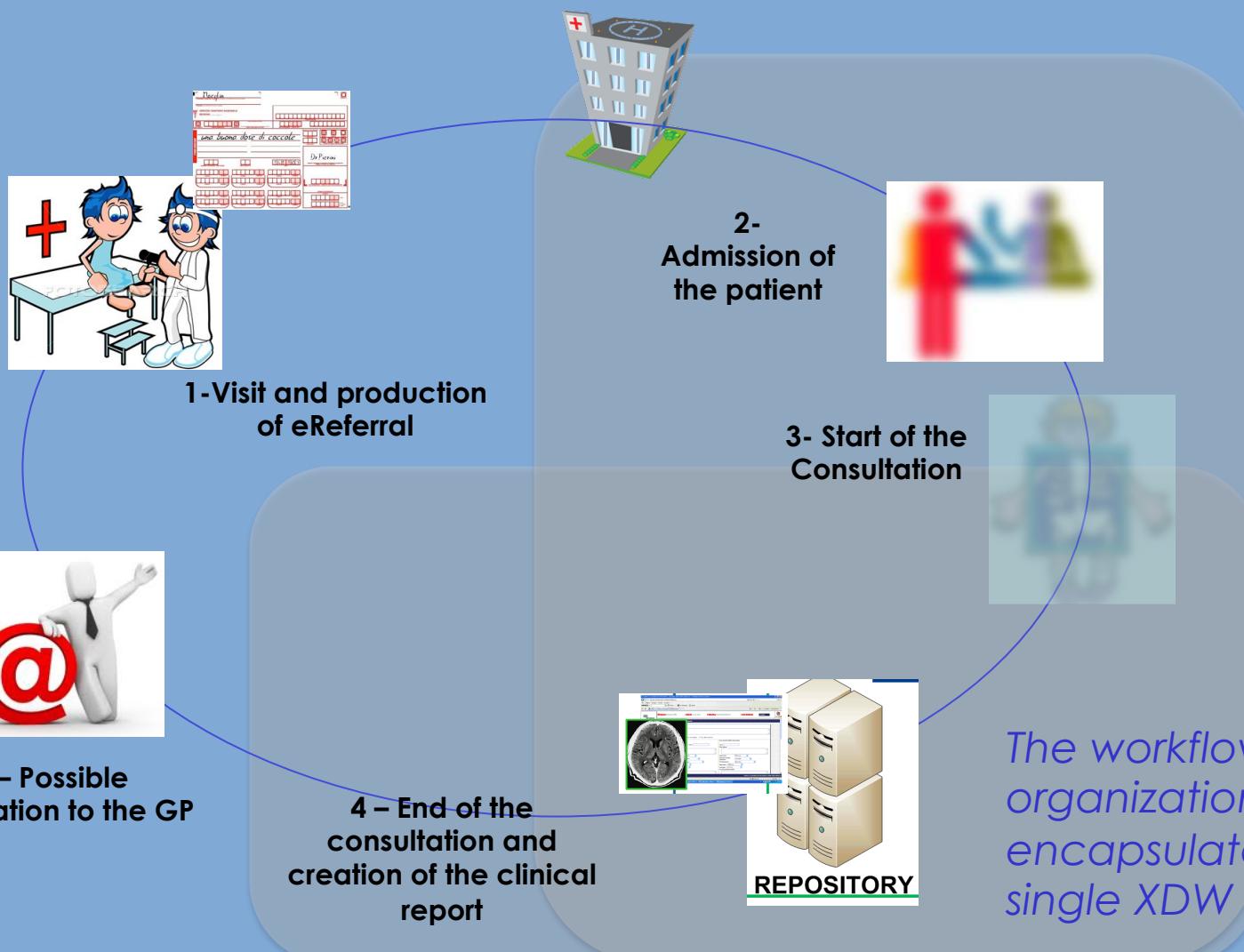
- a better **quality control** of the process
- the reduction of the errors in the management of all clinical documents and related workflows
- the increasing of the **efficiency** of the process itself.

XDW profile and Workflow Definition profile

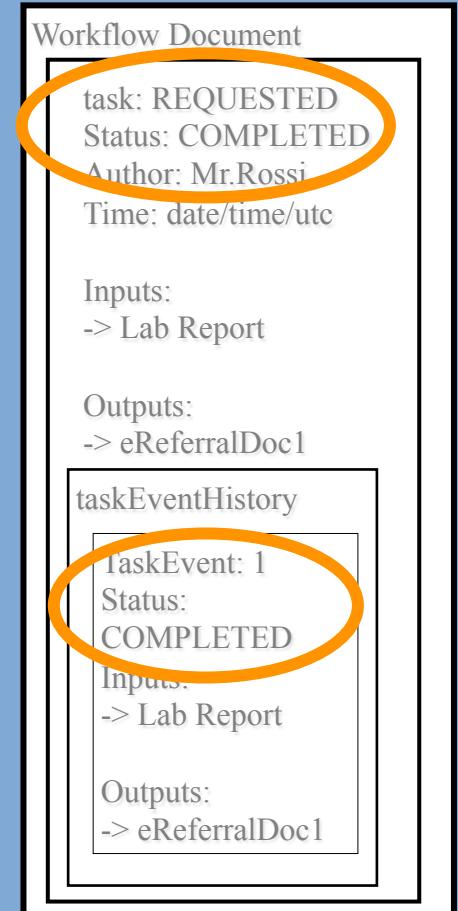
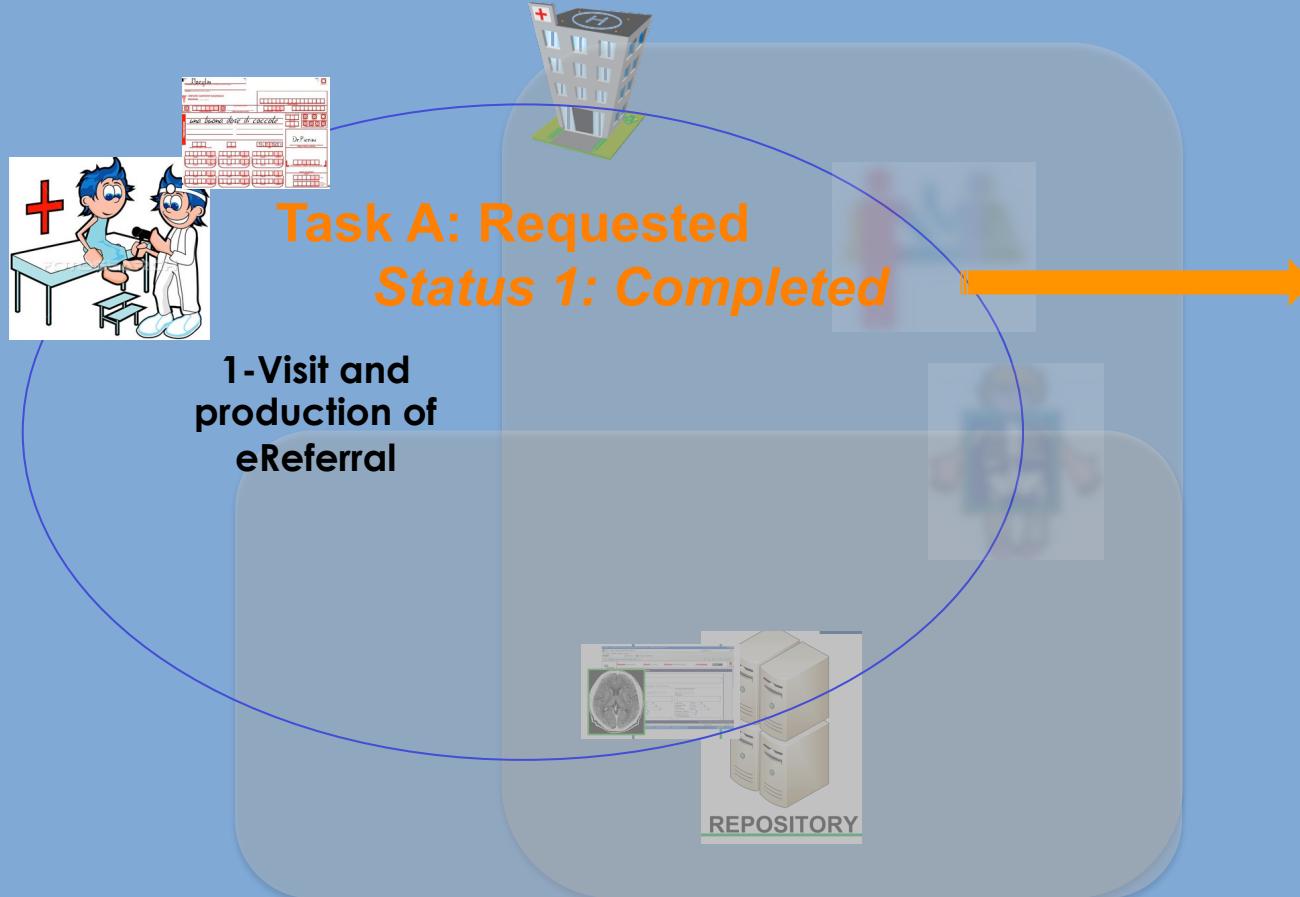
- ◆ Cross Enterprise Document Workflow is:
 - a **framework** to manage workflows
 - a platform upon which a wide range of specific workflows can be defined **with minimal specification and implementation efforts**
 - workflow **independent**
 - applicable on different document sharing infrastructures

- ◆ Workflow Definition Profile is:
 - the definition of a specific clinical **process**
 - a set of rules and task definition which characterize the process
 - the definition of the actors involved in the process and their roles

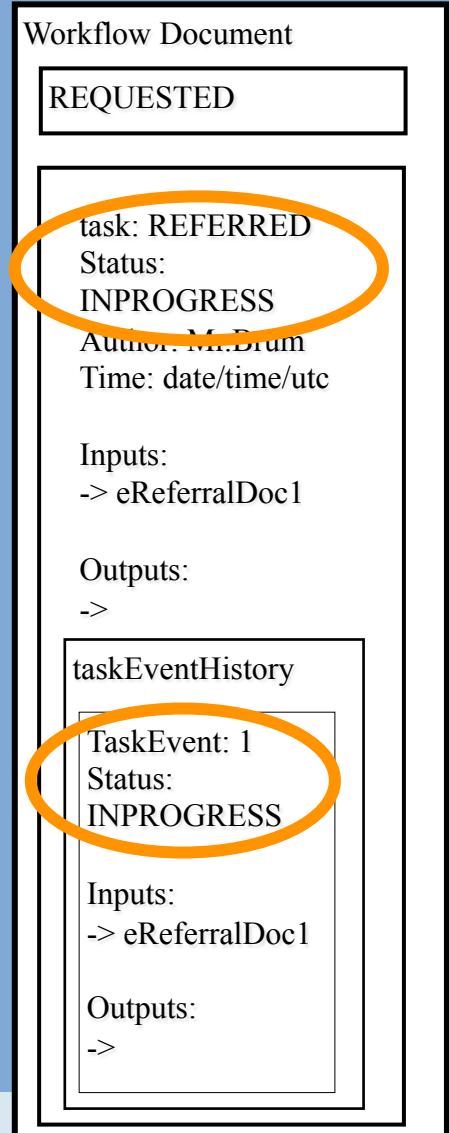
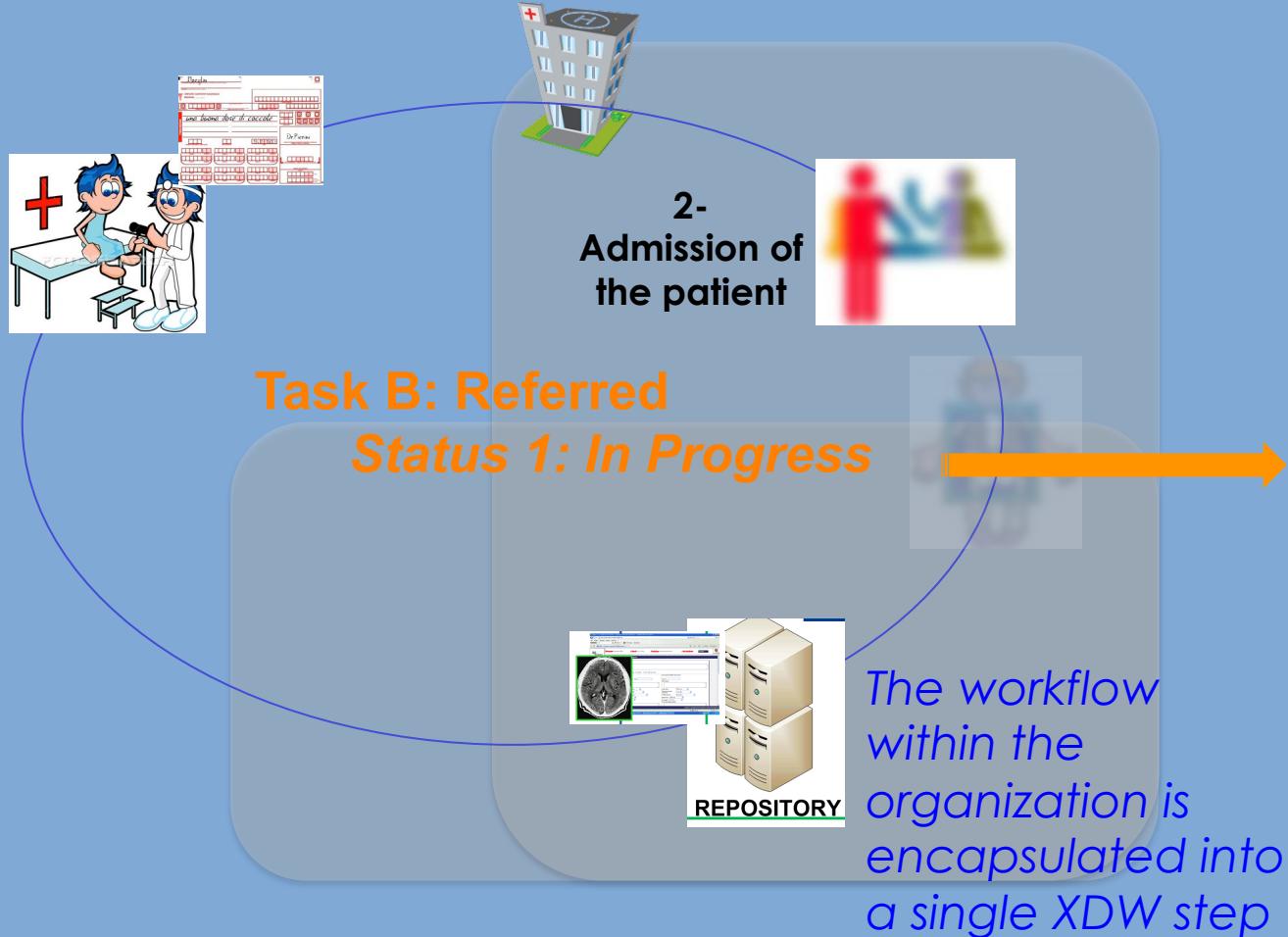
Use Case: an example of eReferral workflow



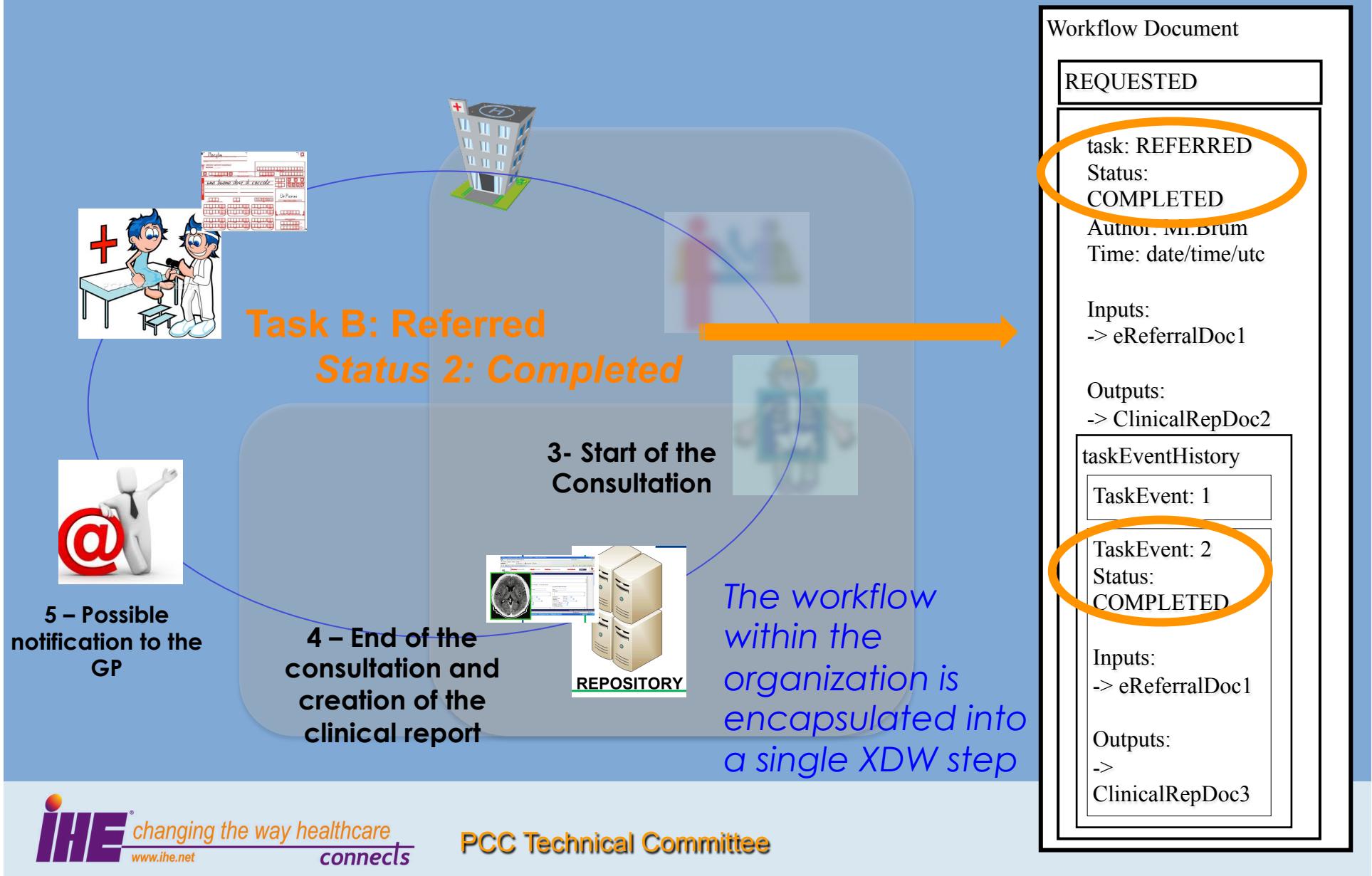
Use Case: an example of eReferral workflow



Use Case: an example of eReferral workflow



Use Case: an example of eReferral workflow

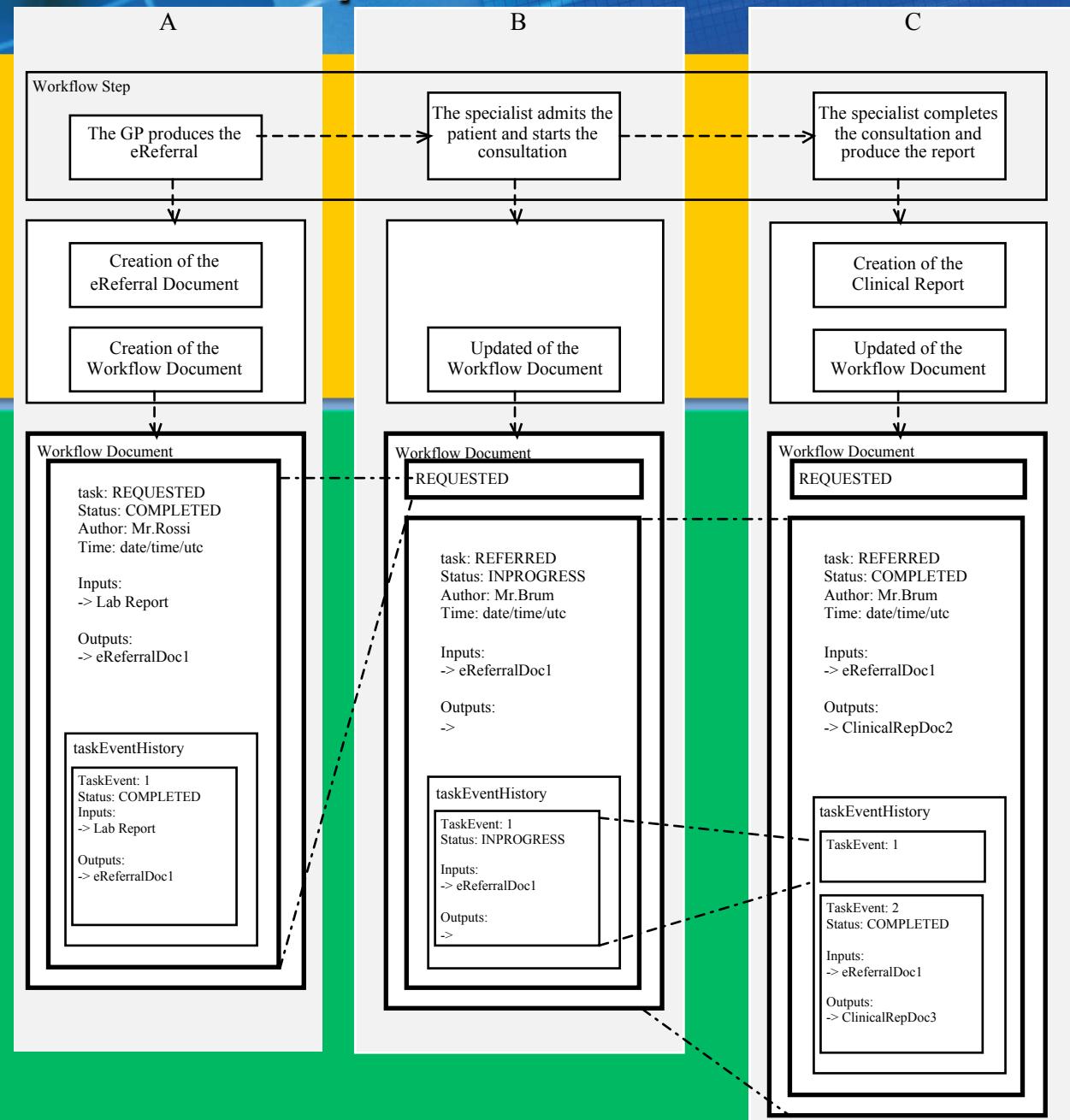


Use Case: an example of eReferral workflow(2)

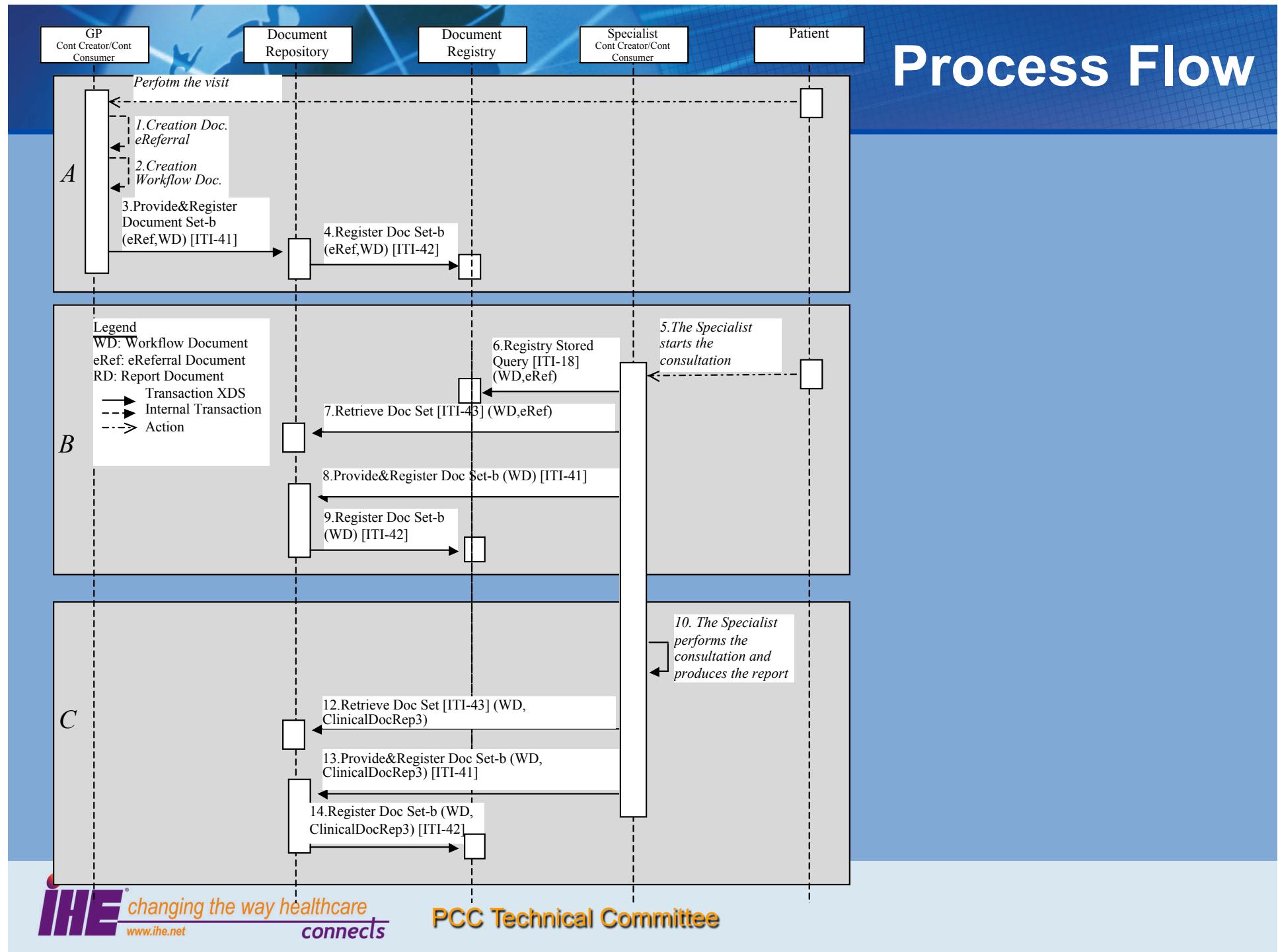
Workflow Description

XDW

*Evolution
of shared
Workflow
Document*



Process Flow



Proposed Standards & Systems

- **Afferent IHE Domains**
 - IT Infrastructure, Patient Care Coordinator
- **Afferent IHE Profiles:**
 - XDW, XDS.b, XDM, XDR, DSUB, NAV, XCA, BPPC, ATNA, XUA
- **Other standards items:**
 - OASIS HumanTask
- **Stability and robustness:**
 - No new transaction are introduced
 - No XDS Metadata extension expected, but specific rules about Metadata content for the workflow Document

Technical Approach

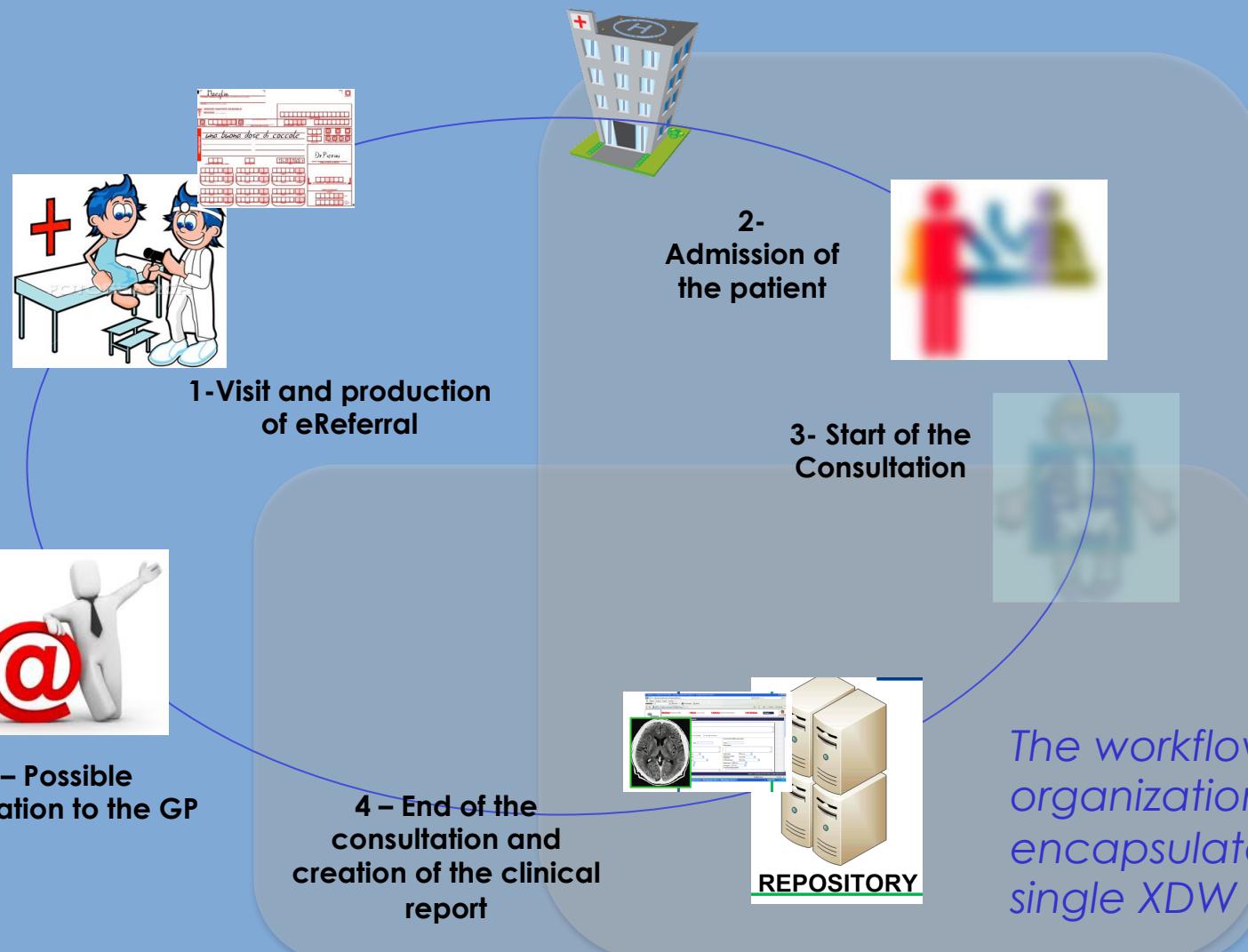
- XDW is a framework to manage workflows
- XDW needs to be specified through the use of Workflow Definition profiles on the different workflow by the specific domains
- Why PCC should profile XBeR-WD?
 - XBeR involves a clinical process based on the patient
 - XBeR is a first simple example of clinical process management
 - PCC is focused on the Patient Care Coordination and so it has the competence to analyze and define the process in which are involved many actors (as a process related to eReferral)
 - PCC thanks to his competence in Patient Care Coordination is the best candidate to write the first Workflow Definition Profile



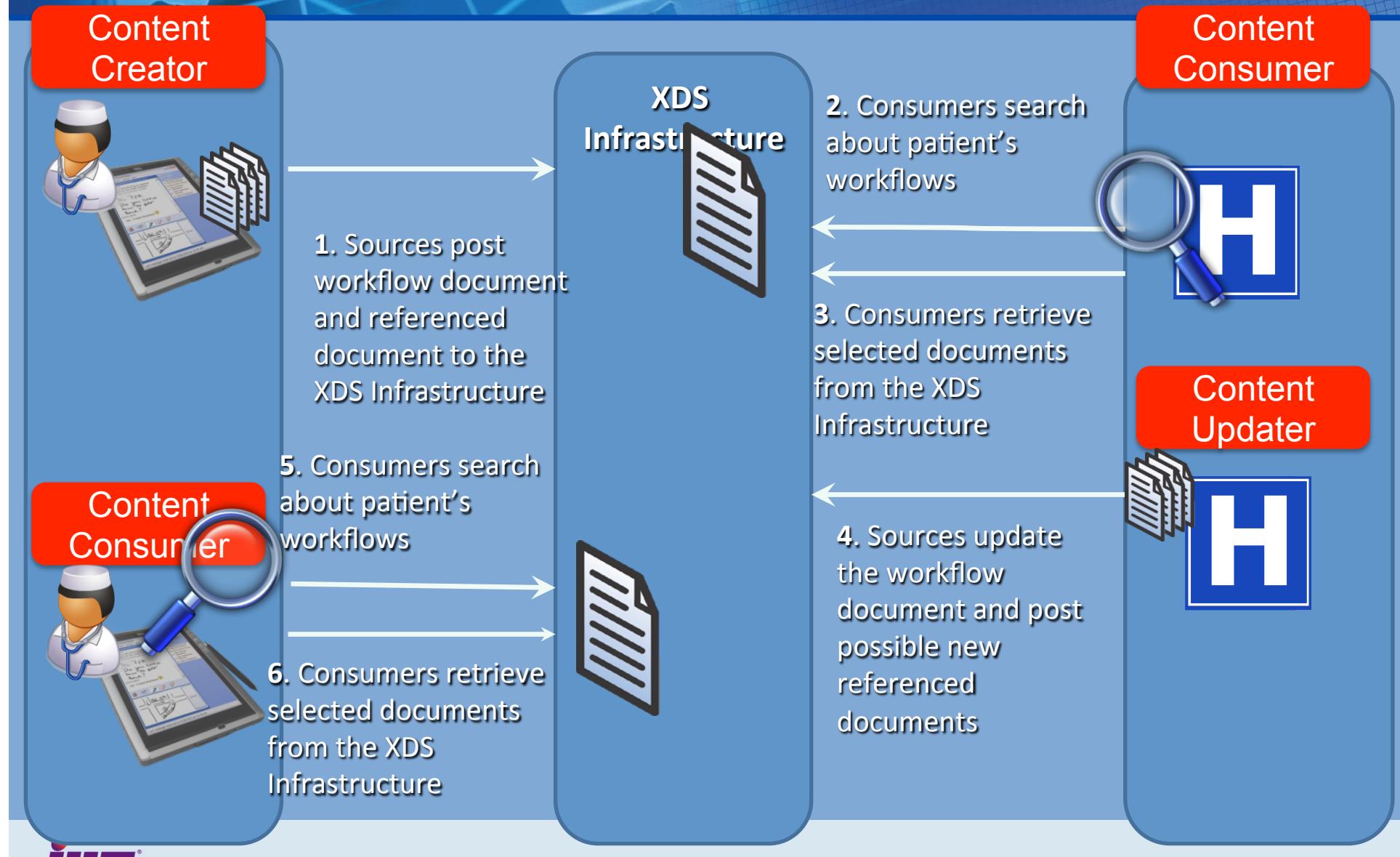
Technical Approach

- The work requested to PCC is on the definition of the process:
 - Definition of the **tasks**
 - **Sequence** the tasks and their relation
 - **Actors** involved in the process
 - **Rules** of the process
 -
- Structure of a Workflow Definition profile need to be defined
- No work to define the structure of the Workflow Document is requested
- No new transactions or actors are requested

Workflow Definition



XDS Flow and Interactions



Example of XDW taskData element

```
<ns3:taskData>
  <ns2:taskDetails>
    <ns2:id>1</ns2:id>
    <ns2:taskType>Requested</ns2:taskType>
    <ns2:name>ReferralRequested</ns2:name>
    <ns2:status>COMPLETED</ns2:status>
    <ns2:createdTime>2006-05-04T18:13:51.0Z</ns2:createdTime>
    <ns2:lastModifiedTime>2006-05-04T18:13:51.0Z</ns2:lastModifiedTime>
    <ns2:renderingMethodExists>false</ns2:renderingMethodExists>
  </ns2:taskDetails>
  <ns2:description></ns2:description>
  <ns2:input>
    <ns2:part name="xdw">
      <reference uid="urn:oid:1.2.3.4.4.3.2.2.3"/> <!-- LabReport -->
    </ns2:part>
  </ns2:input>
  <ns2:output>
    <ns2:part name="xdw">
      <reference uid="urn:oid:1.2.3.4.4.4"/> <!-- eReferralDoc1 -->
    </ns2:part>
  </ns2:output>
</ns3:taskData>
```

XDW Security/Privacy and XBeR-WD risks

- XDW relies on the security controls in the **underlining transport** (e.g. XDS)
- In order to adhere to the principle of least privilege organizations want to prevent clinical documents from being replaced by other organizations, while allowing XDW Workflow Documents to be replaced (**exception based on classCode**)
- When a Workflow Description Profile is created a **risk assessment** following the Security Cookbook may result in additional security considerations beyond those for the usual clinical report
- This profile proposal **does not have particular risk**. The difficulties that can be find during the work of profiling could be on the **standardization of the process** itself which could have some variances in the different country. However, it is sufficient **simple and similar in the different country** to find a common workflow.

Discussion

The value statement of this proposal is:

- the **standardization of the workflow** for eReferrals and of its management;
- the use of an instrument, the ITI XDW profile, which provides a **shared solution with different process** which guarantees the interoperability between the different workflows and their management.

The specification of **Workflow Definitions** is distinct from the XDW Profile, out of the scope of the ITI Domain and is currently best handled with a natural language expression, it **is specific duty of each domain** to define the workflow definition profile to manage the different specific workflow.

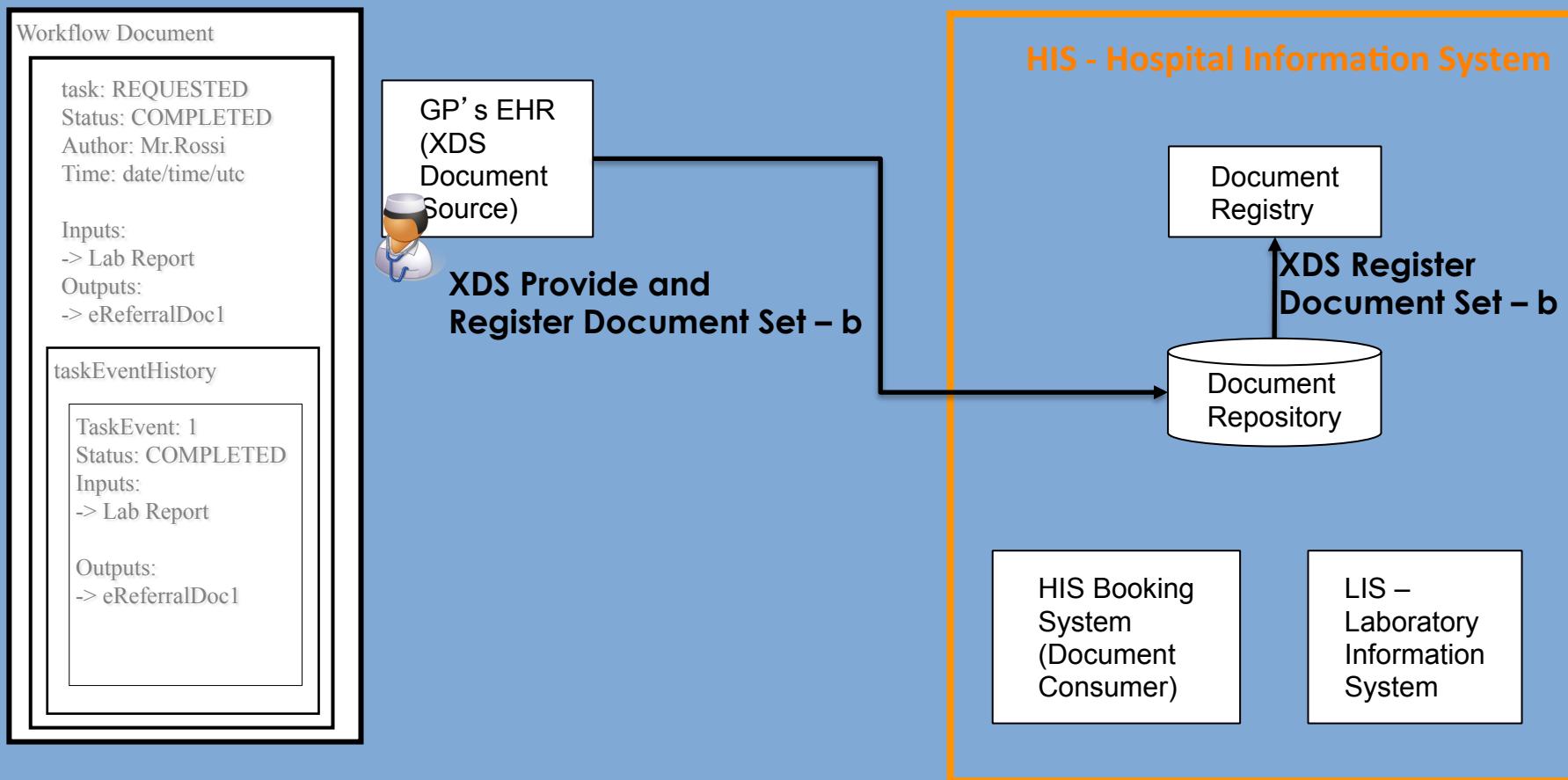
This is a simple process which can provide the basis to the definitions of other more complex clinical workflows.

Effort Estimates

- The work effort (in term of documentation) for profiling the XBeR-WD is low/medium because there aren't new transactions and the new actor and the structure of the document is defined by ITI.
- The work will be focused only on the definition of the process and its rules.
- Profile editors:
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 - Organization: Arsenàl.IT, www.consortioarsenal.it

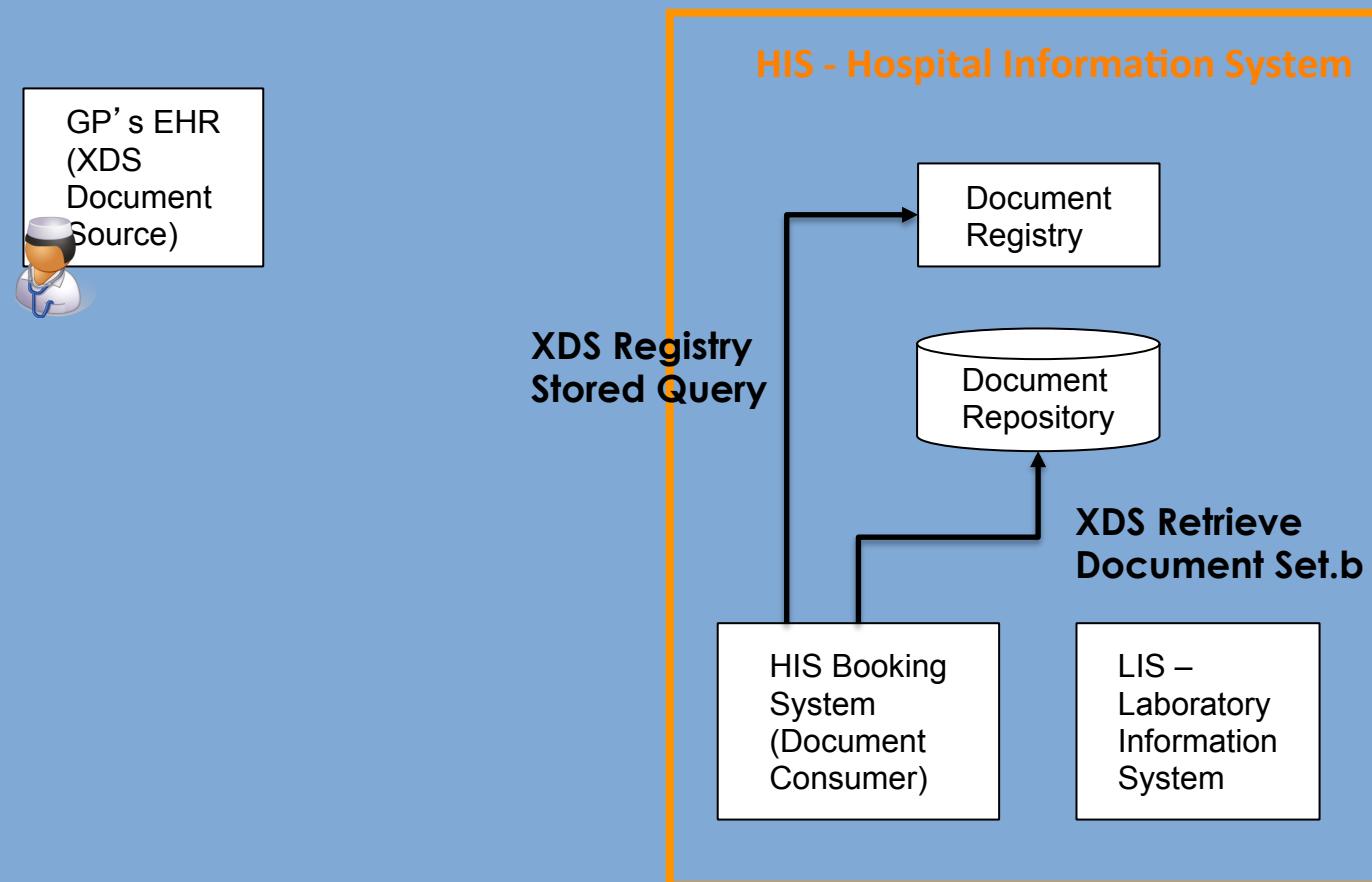
Application of XDW in the Veneto Region

1. Publication of both Referral Request and Workflow Document by GP's EHR



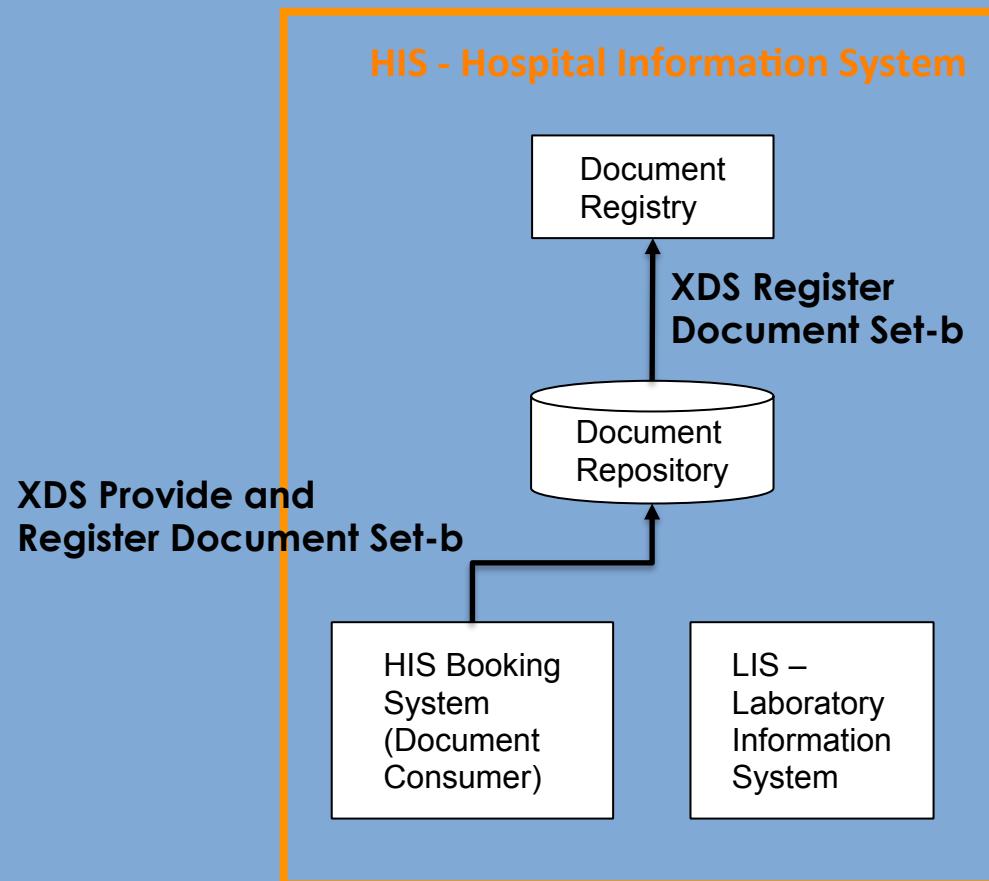
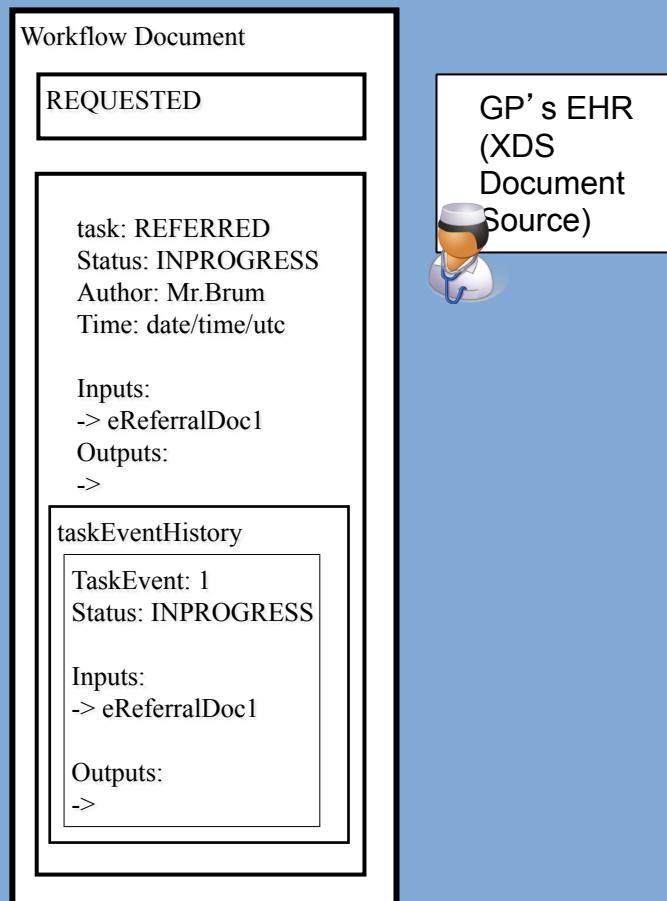
Application of XDW in the Veneto Region

2. Retrieve of Workflow Document by HIS, check of the status of the process and retrieve of the eReferral



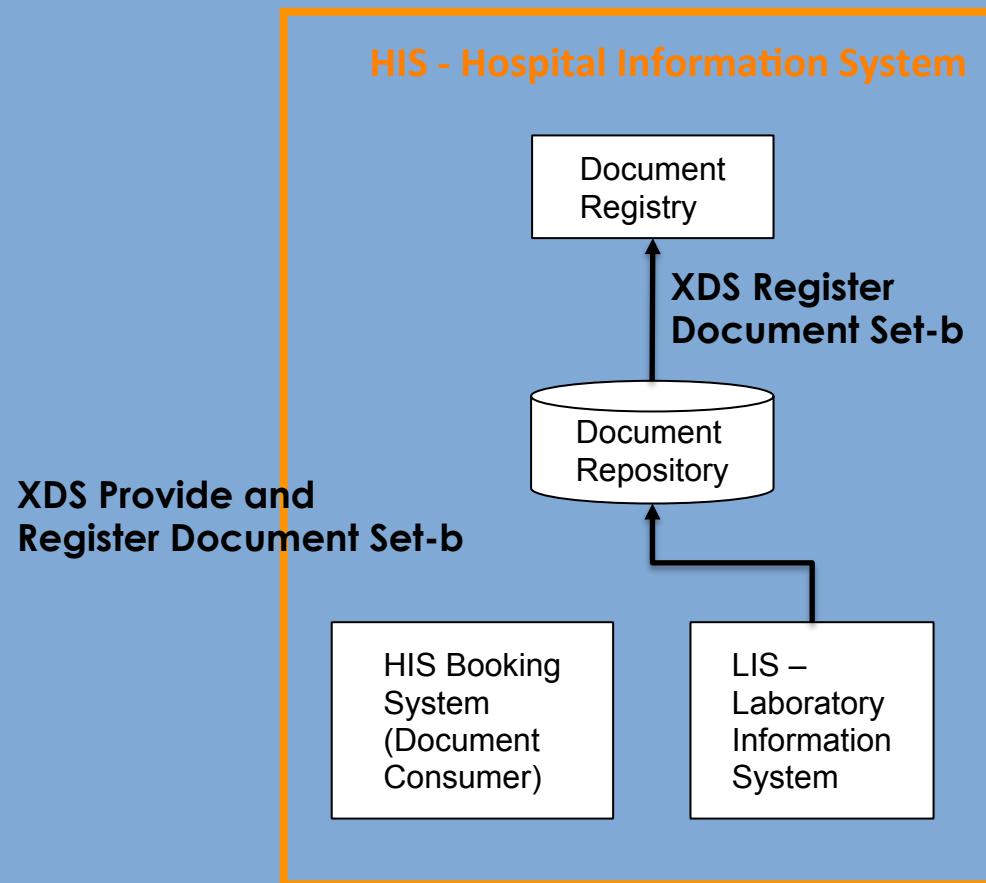
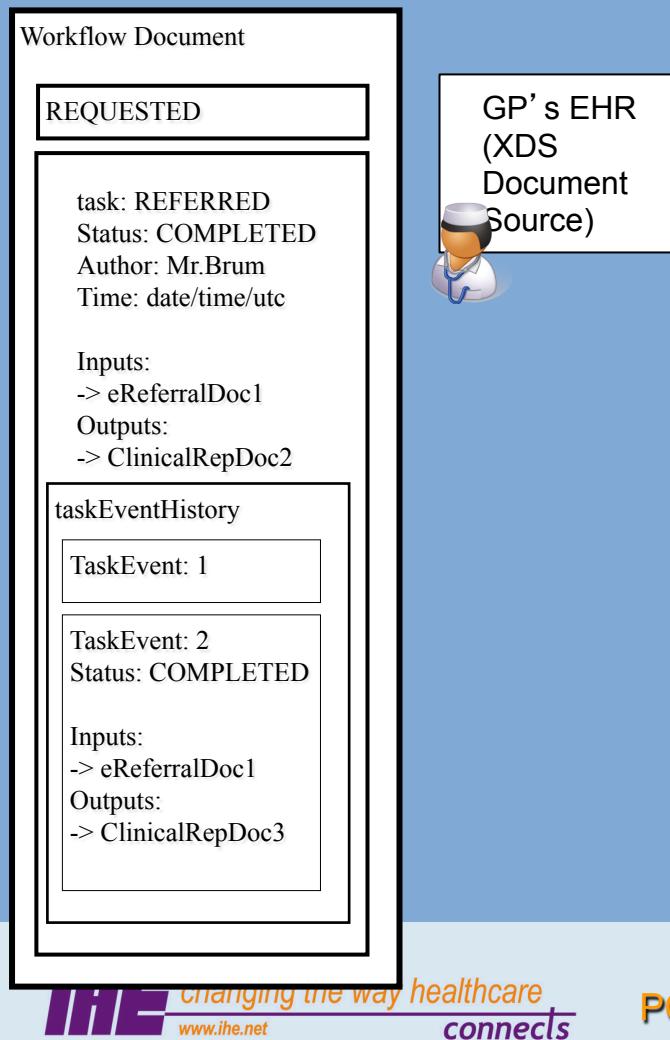
Application of XDW in the Veneto Region

3. Update and publication of the Workflow Document



Application of XDW in the Veneto Region

4. Update and publication of the Workflow Document, publication of the Laboratory report



Application of XDW in the Veneto Region

5. Retrieve of Workflow Document by the GP, check of the status of the process and retrieve of reports if available

