



IHE Profile Proposal Anatomic Pathology Opinion Request (APOR)

Paris

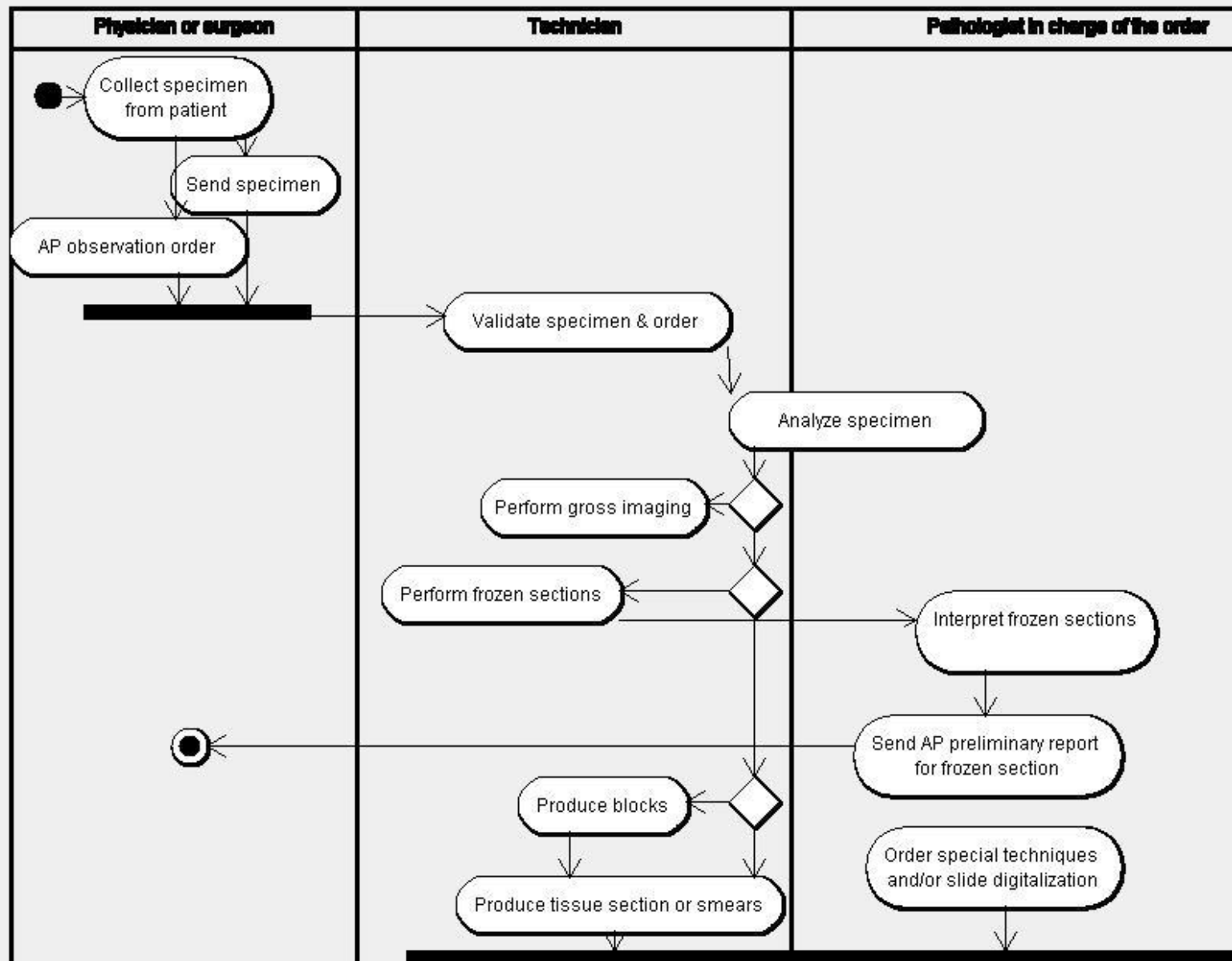
June 1, 2012

E.Cordonnier, C.Daniel, F.Macary

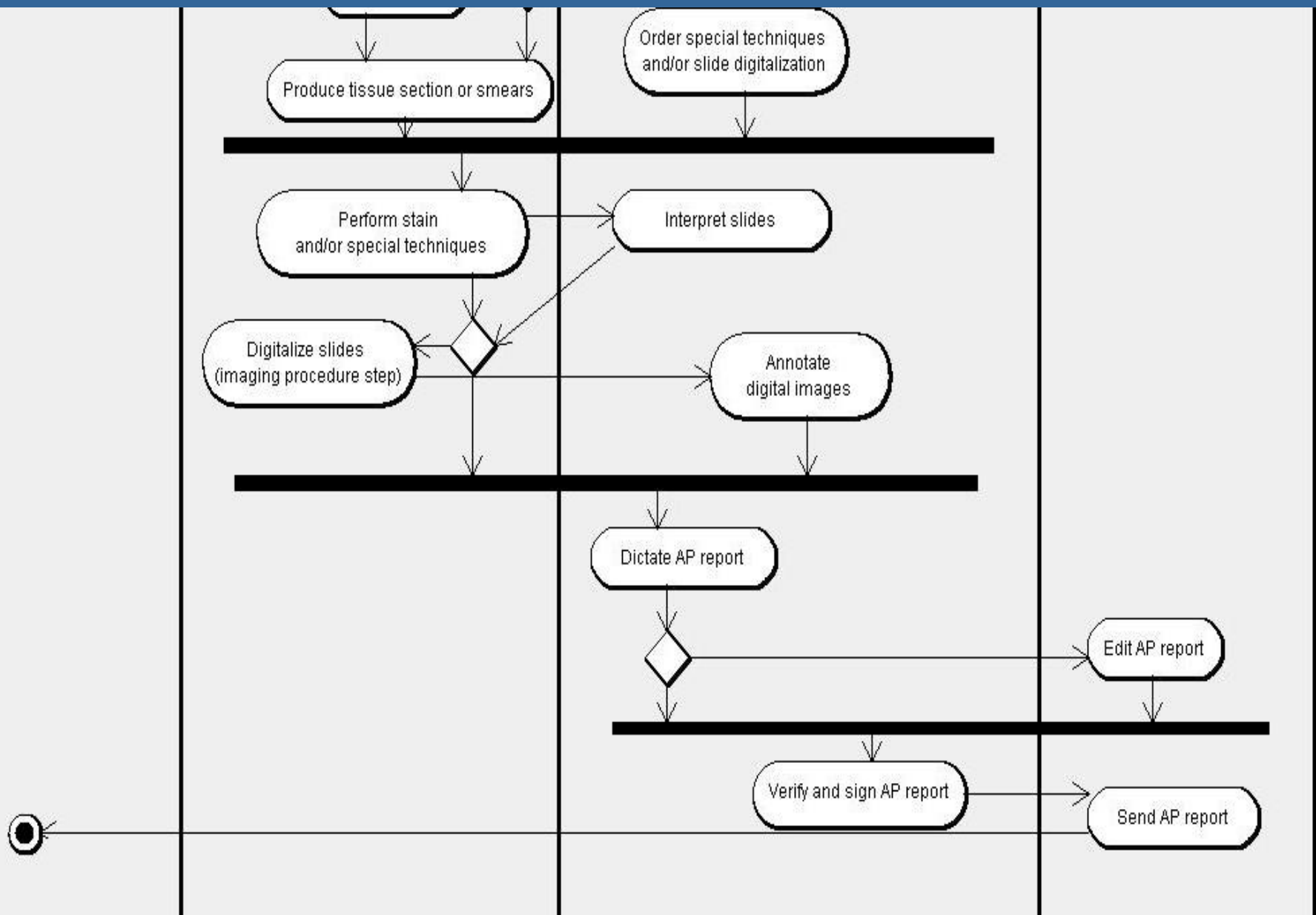


Specimen/order reception & gross observation

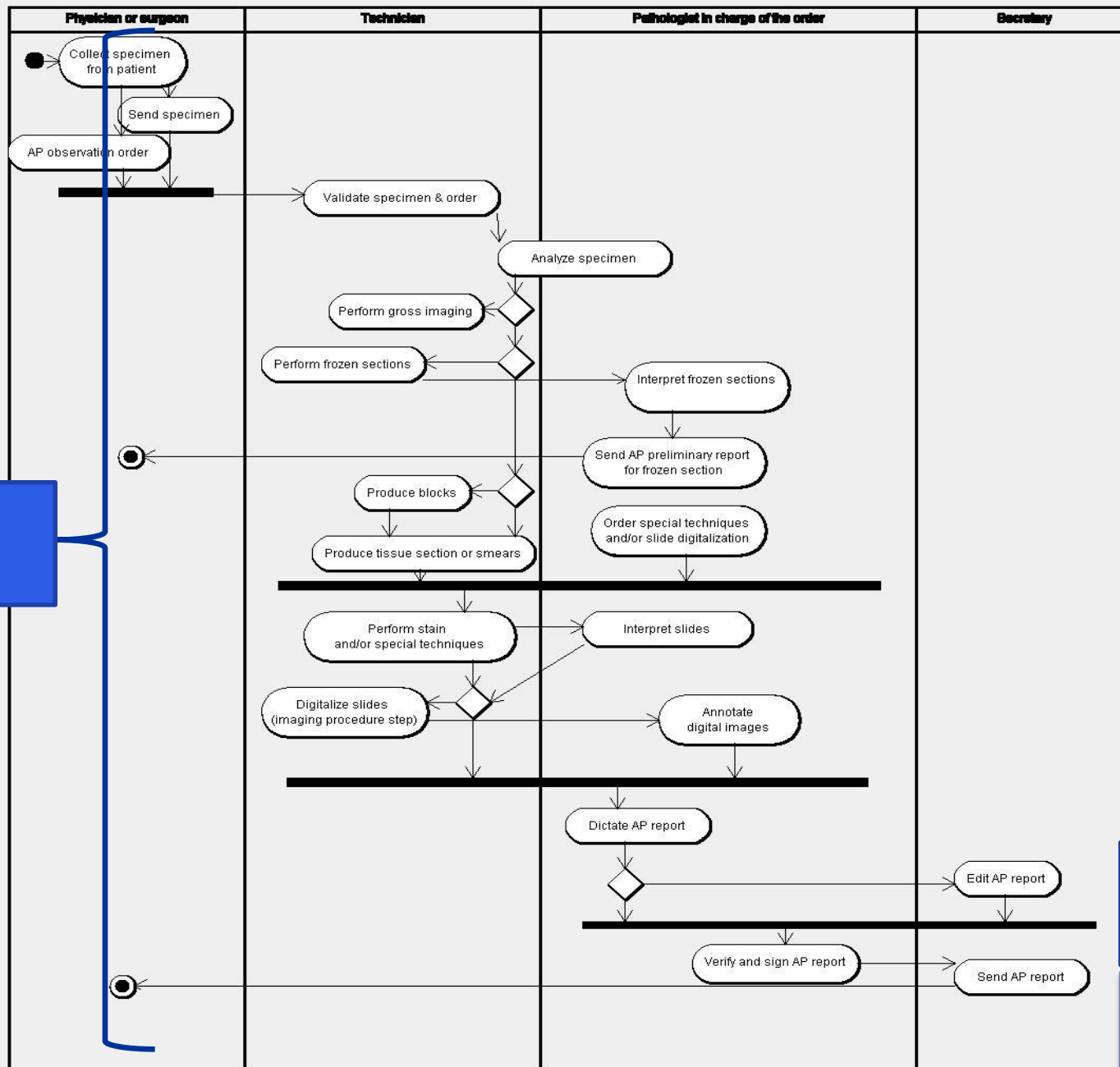
It must be possible to add or link rough drawings, photographs (gross imaging) or vocal messages to an order.



Microscopic observation & report



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APW

ARPH

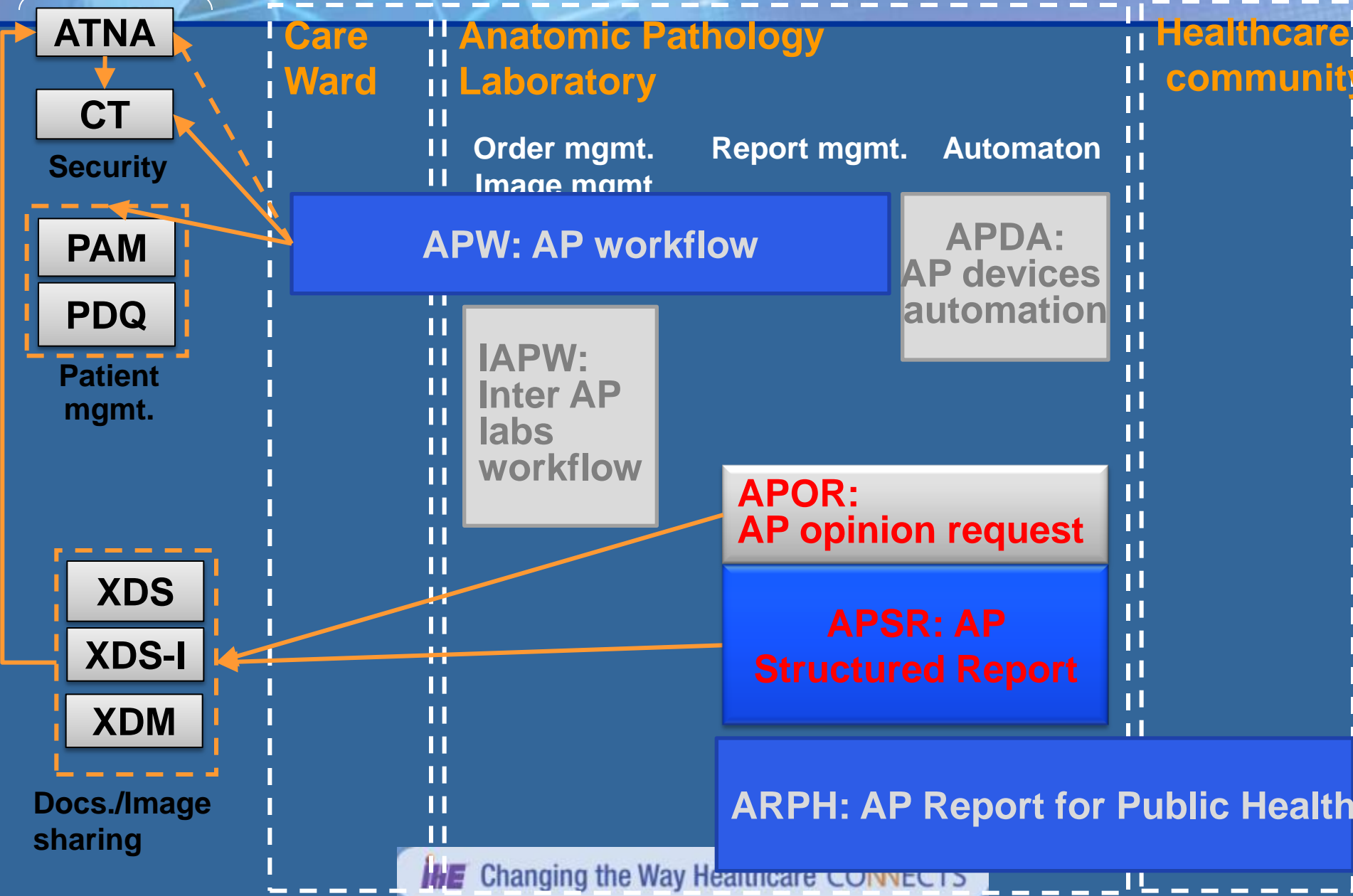
APSR

Each AP order may contain several Requested Procedures. The Order Filler translates the received Orders into Requested Procedure(s) identified by Order Filler Numbers and automatically assigns Study Accession Numbers. For Anatomic Pathology, like in Radiology, the Accession Number may correspond to the Order Filler Number, as specified in HL7 v2.x. Order: "AP examination of Breast biopsy" Requested procedure (e.g. "Imaging of AP examination of Breast biopsy" (at the patient level) = ACCESSION NUMBER = OrderFillerID) differs from (Imaging) procedure step (e.g. "scanning Slide DP07110-A-5-1") at the specimen/derived specimen level.

IT Infrastructure profiles

IHE Anatomic Pathology profiles

Healthcare community



Challenges of telepathology

Role of Virtual Slides (VS)

- Access to medical expertise
 - Patient care
 - Decrease of medical experts & unequal geographic distribution
 - Increase of demand
 - Second opinion, emergency diagnoses (infectious disease, etc)
 - Education and research
 - Consensus & development of new diagnostic standards, e.g. TNM system, WHO terminology, new tumor classifications
 - Education and teaching, distribution of new diagnostic standards
- Virtual slides “new” solution for telepathology

Benefits of VS (/still images)

- Increase of acquisition speed
- Decrease of selection bias
- Specific new DICOM format (DICOM supp 145)
 - Integrating VS to standard information flows defined by IHE (exchange or sharing of VS)

Challenges of VS (/radiology)

● Image size

- Storing, sharing, exchanging big images (several Gb) (also in radiology!)
- Identifying needs and selection processes (relevant images & ROI)

● Specific new DICOM format (DICOM supp 145)

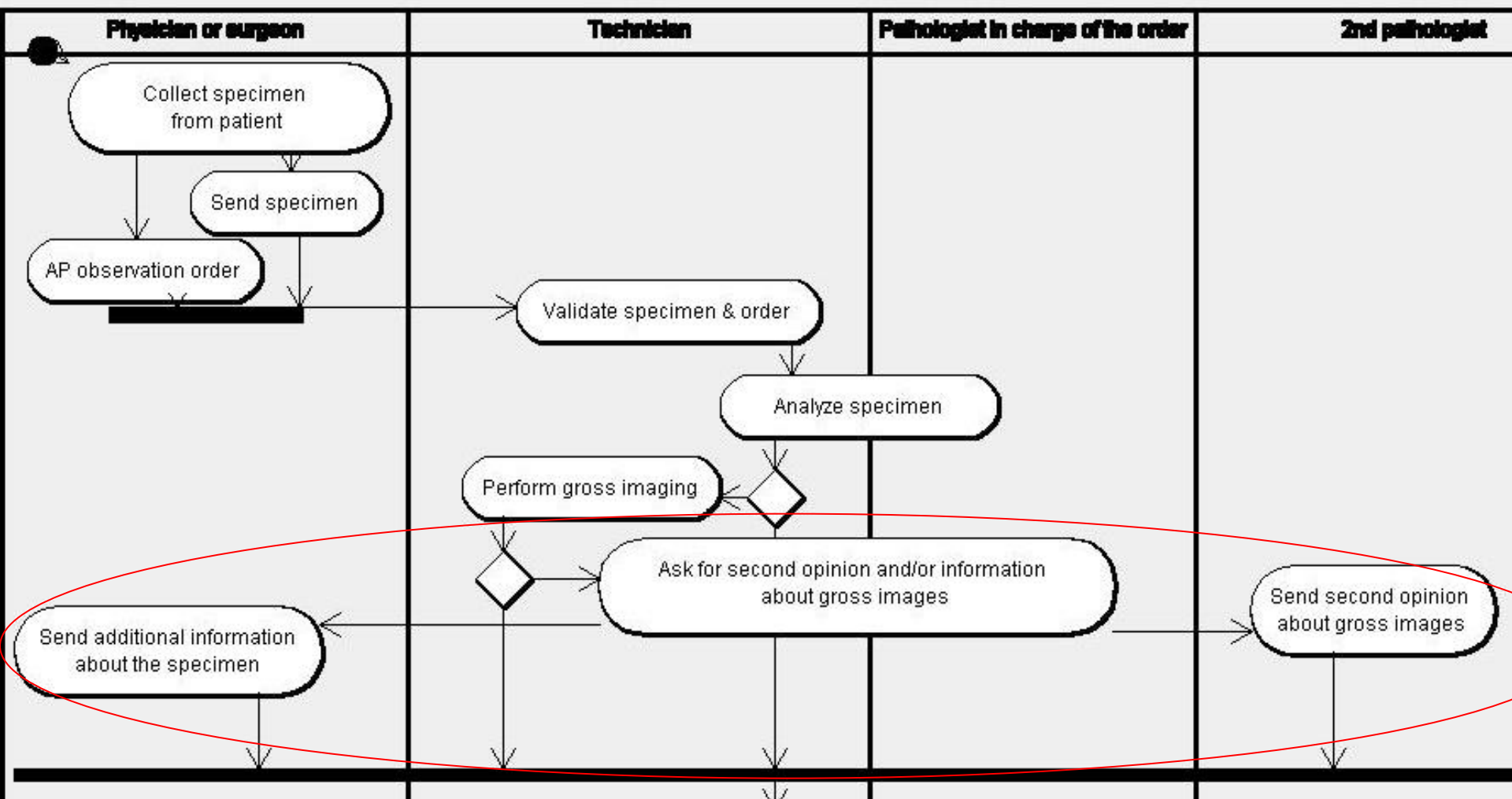
- No trial implementation yet

Users' needs

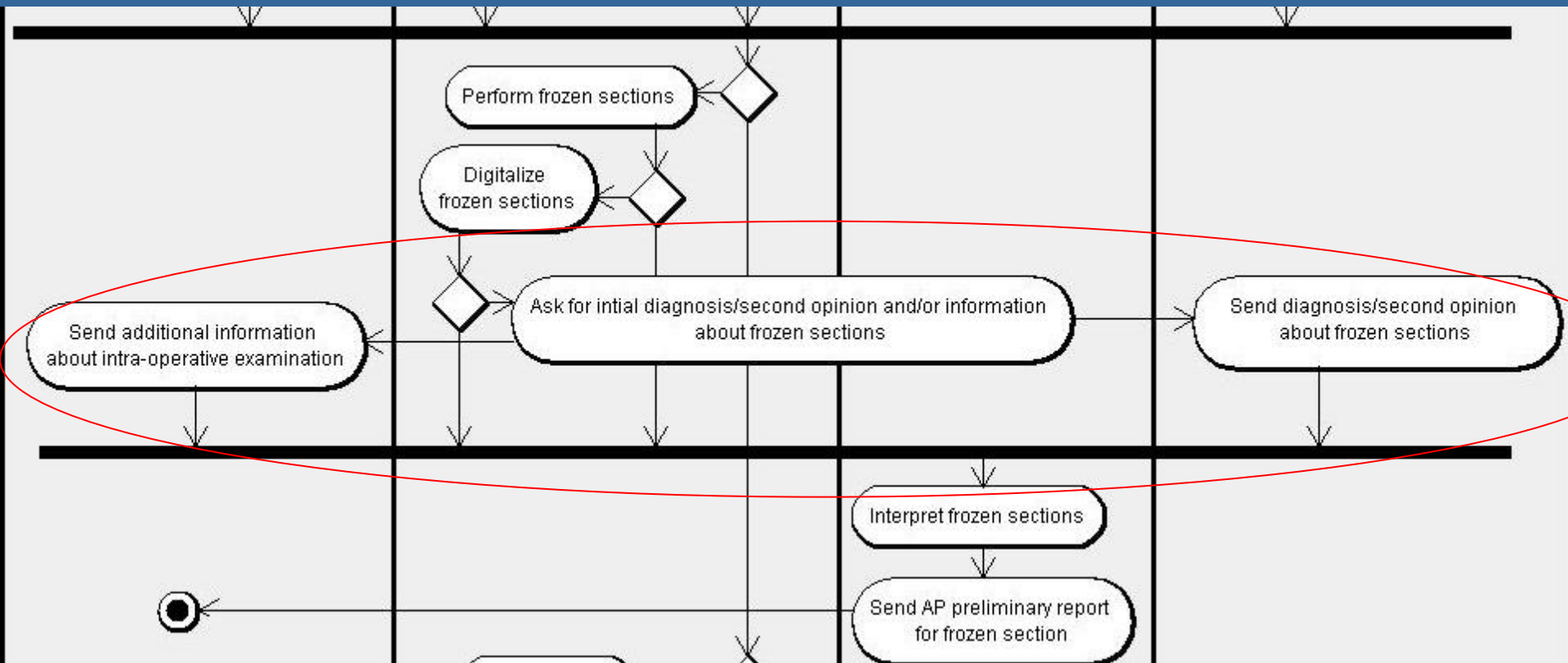
● Use cases

- Tele expertise (second opinion)
 - Spontaneous (about 5% of cases)
 - Required by cancer institutes
 - E.g in France : sarcomas, endocrine tumors, mesotheliomas, lymphomas, etc)
- Tele diagnosis
 - Intra operative processes
 - Emergency
 - Infectious diseases, grafts, etc
- Multi disciplinary meetings

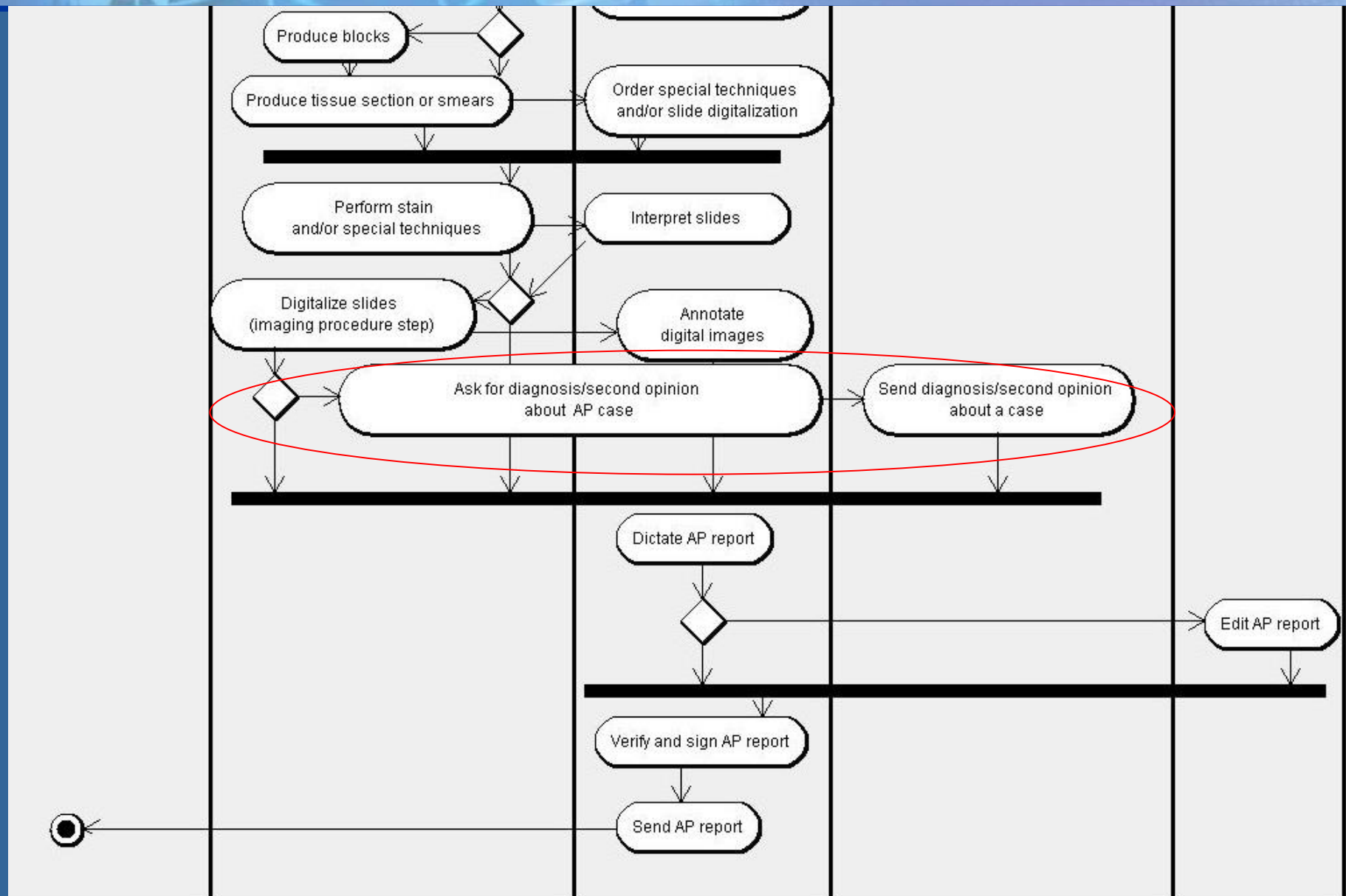
Specimen/order reception & gross observation



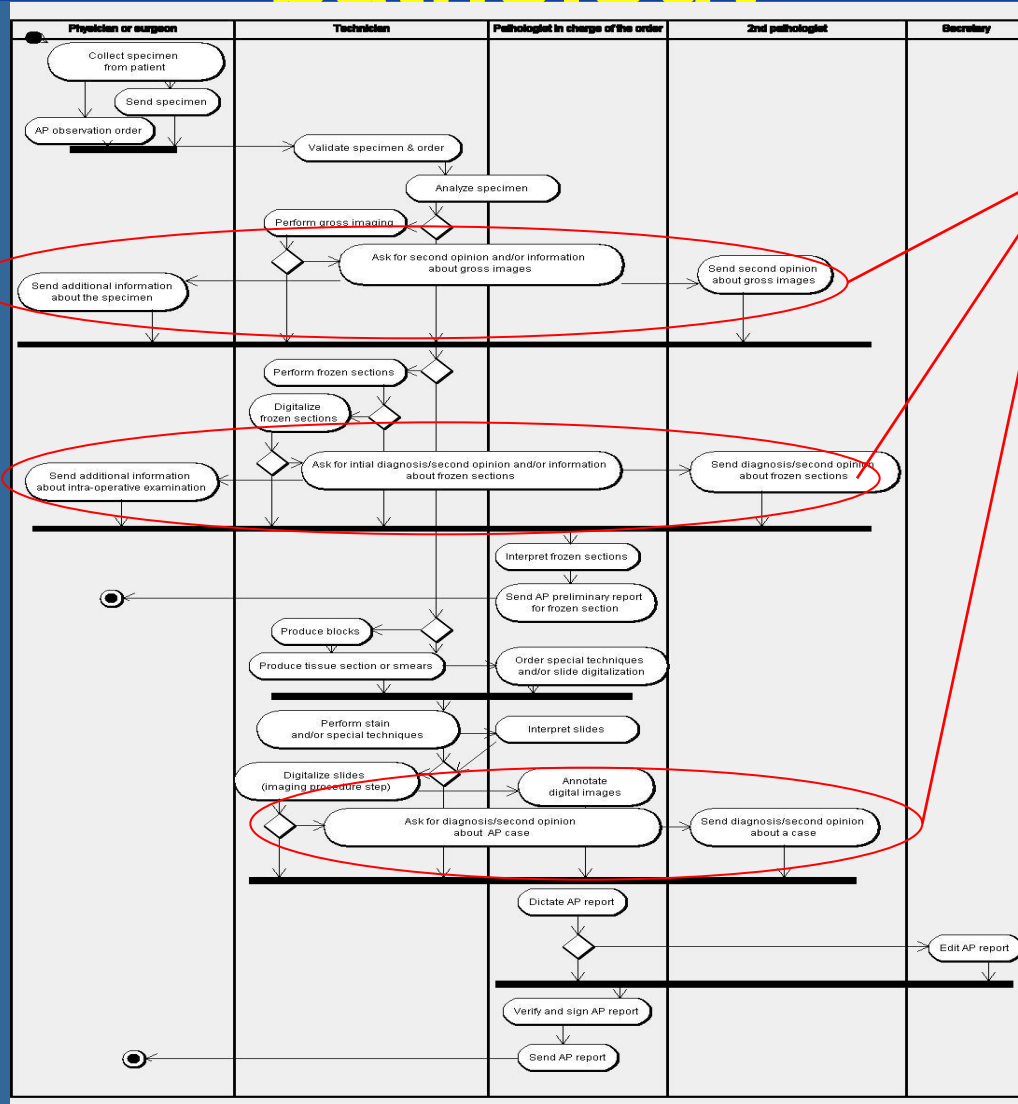
Intraoperative observation



Microscopic observation & report



IHE AP IP for collaborative digital pathology



APOR:
AP advice
request

XDS

XDS-I

XDM

**Docs./Image
sharing**

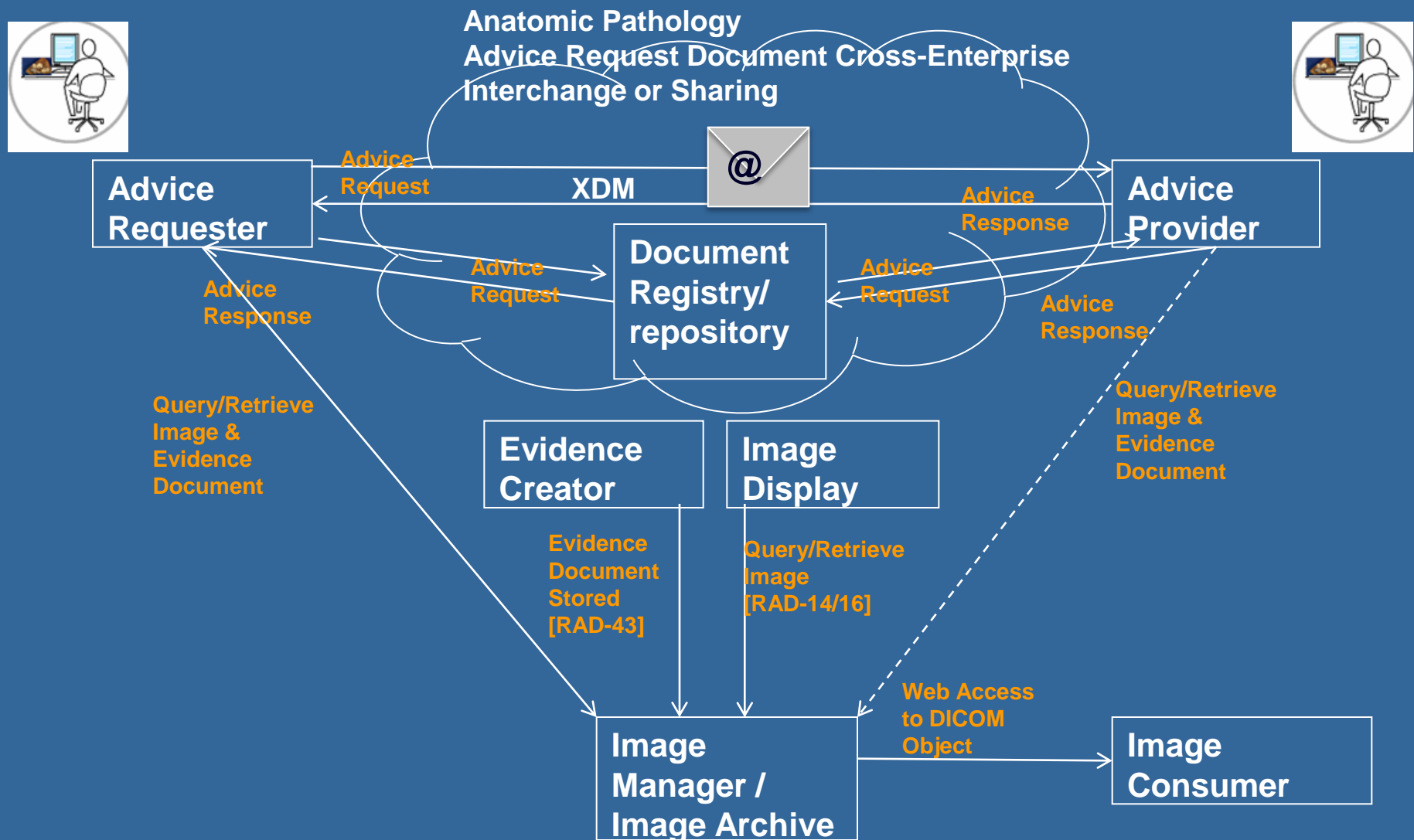
AP Opinion Request Use Case

- A requesting pathologist ask a remote expert pathologist or network of expert pathologists for second opinion on specimen
- The specimen is sent to this remote site
 - Physically (blocks, slides)
 - Virtually (gross images, histological images including VS)
 - In that case, a “Manifest” document is sent, referencing the images that were either sent previously or made accessible remotely
- In every case the Opinion Request and Response are communicated through IT
 - Asynchronous or synchronous communication is possible
- All the documents are managed in the context of the Anatomic pathology Workflow, from both sides

AP Opinion Request Context

- The Opinion Request in Anatomic Pathology (APOR) is not different per se than other kind of Medical Imaging based Advice Request (primary diagnosis, therapeutic advice or second opinion)
- So it has to be described as a « content » profile of a more generic « Imaging Opinion Request »
- The WSI (huge images) introduces some constraints that are emerging in other imaging use cases (CT, MR studies...)

AP Opinion Request Diagram

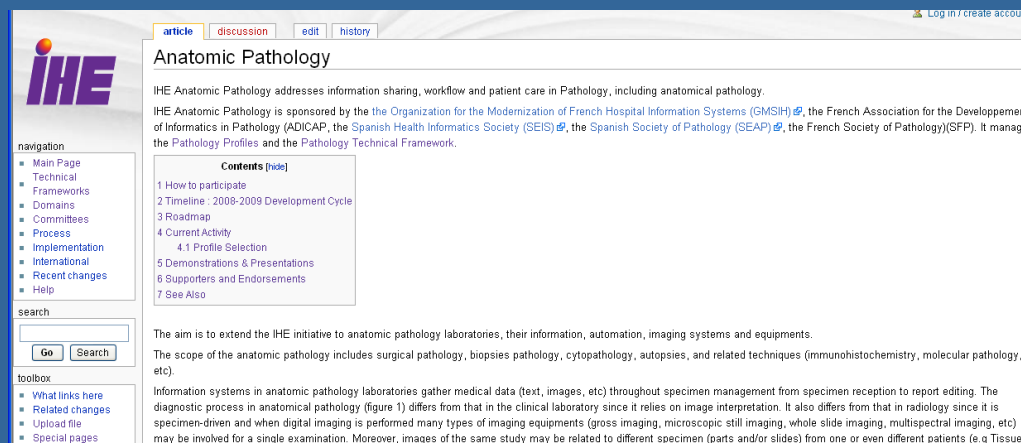


More information

● Googlegroup : ihe-anatomic-pathology-committee@googlegroups.com

● Wiki:

➤ http://wiki.ihe.net/index.php?title=Anatomic_Pathology



The screenshot shows the IHE Anatomic Pathology wiki page. The page has a navigation sidebar on the left with links like Main Page, Technical Frameworks, Domains, Committees, Process, Implementation, International, Recent changes, and Help. The main content area is titled 'Anatomic Pathology' and includes a description of the initiative, a table of contents, and a search box. The table of contents lists sections such as 'How to participate', 'Timeline', 'Roadmap', 'Current Activity', 'Profile Selection', 'Demonstrations & Presentations', 'Supporters and Endorsements', and 'See Also'. The page also features a 'Log in / create account' link in the top right corner.