



XNAT Platform: Image De-Identification

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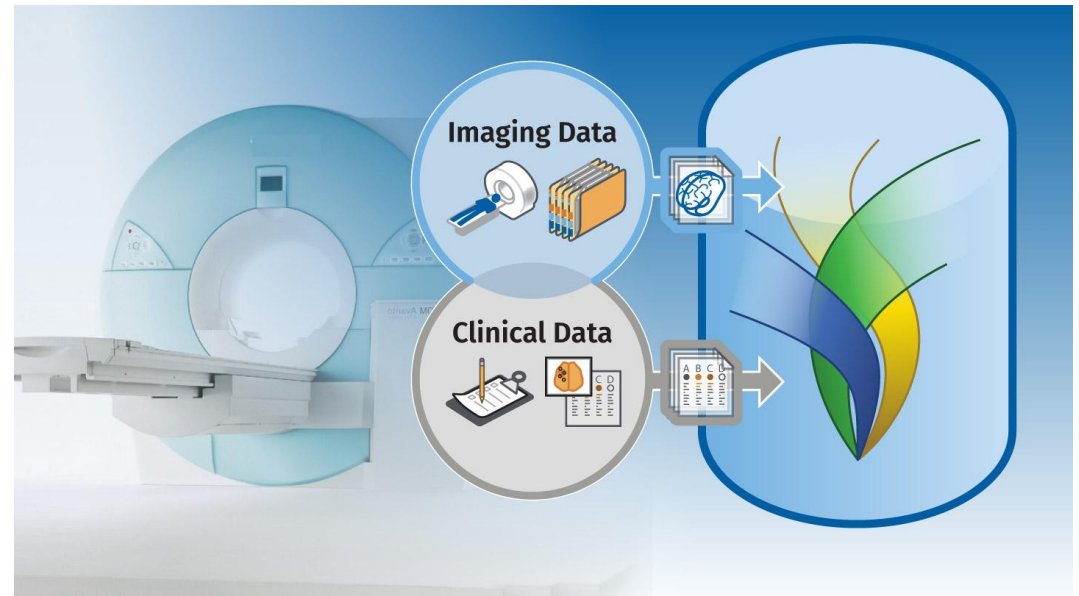
Computational Imaging Research Center
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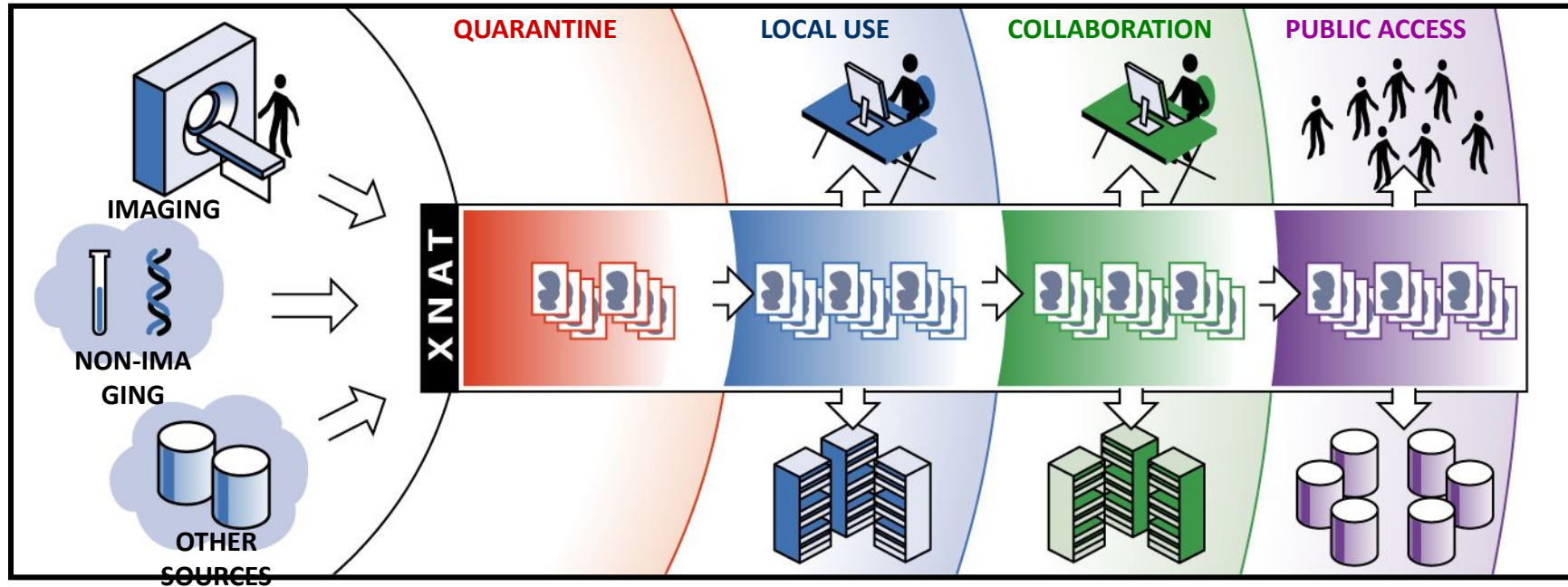
XNAT Is

“an open-source imaging informatics software platform dedicated to helping you perform imaging-based research.

XNAT’s core functions manage importing, archiving, processing and securely distributing imaging and related study data.”



XNAT Workflow



The type/level of removing identifying information depends on your use of XNAT

See next slide

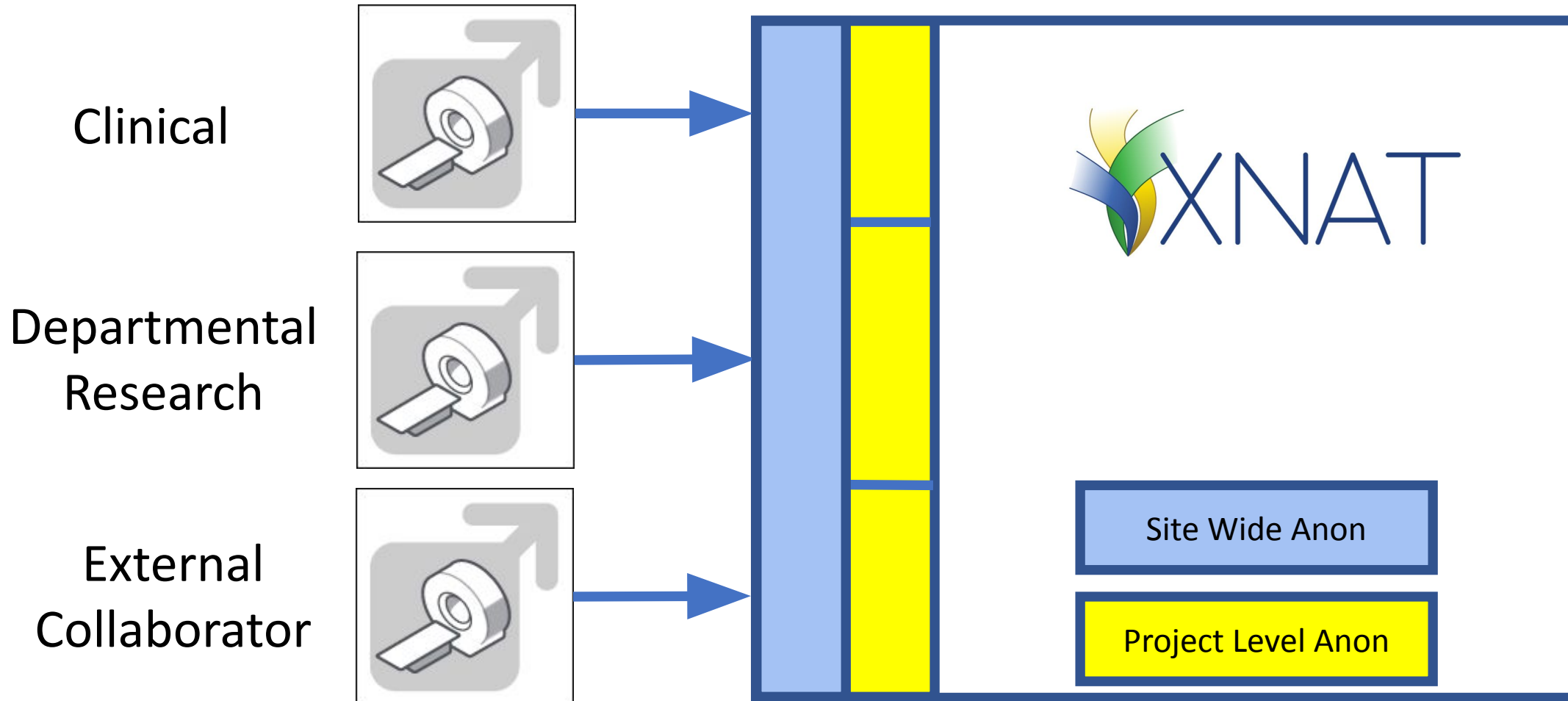
XNAT Sizing Chart

Owner	Size	De-Identification Needs
Investigator	Small	?
Laboratory	Medium	?
Department	Large	?
Federation	X-Large	?

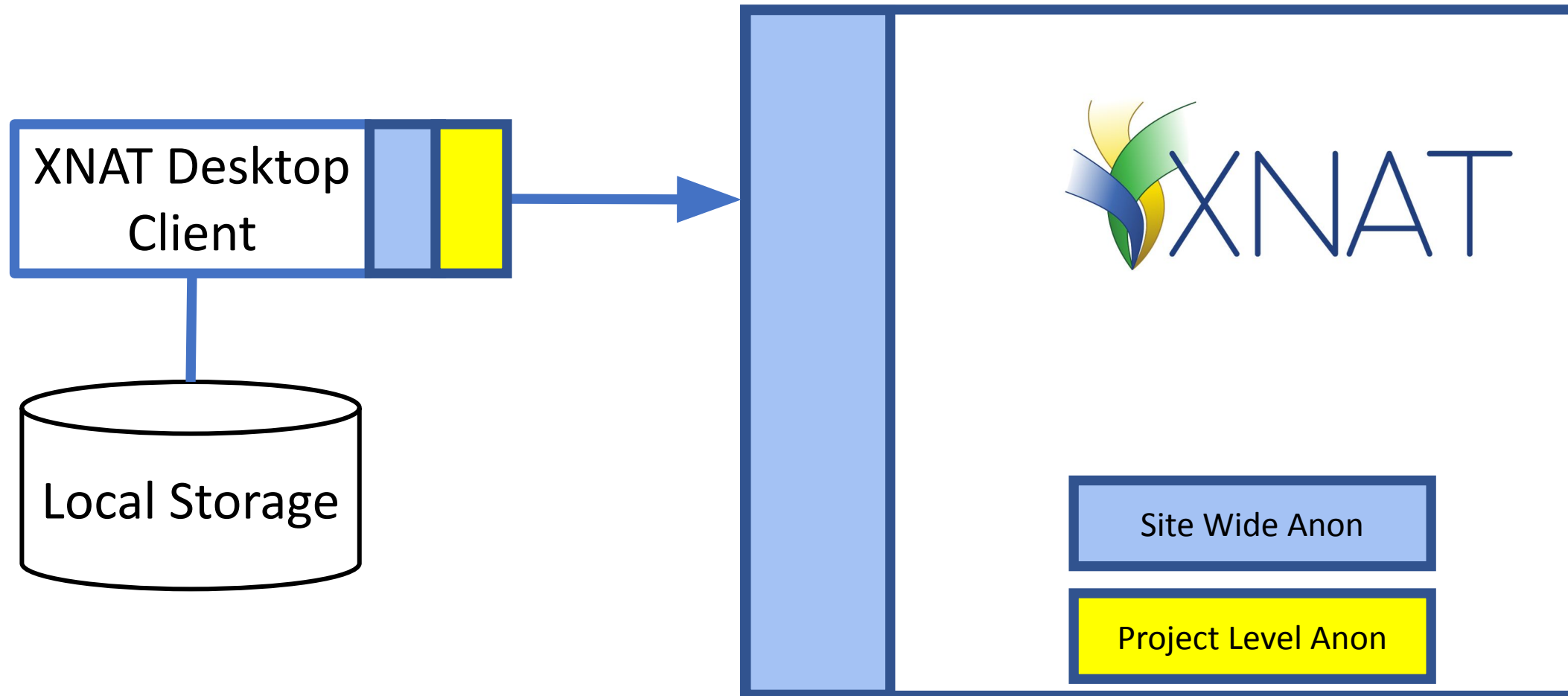
XNAT is a platform and not:

- An online service
- The Cancer Imaging Archive (TCIA)
- Imaging Data Commons (IDC)

XNAT Accepting DICOM C-Store or ZIP Upload



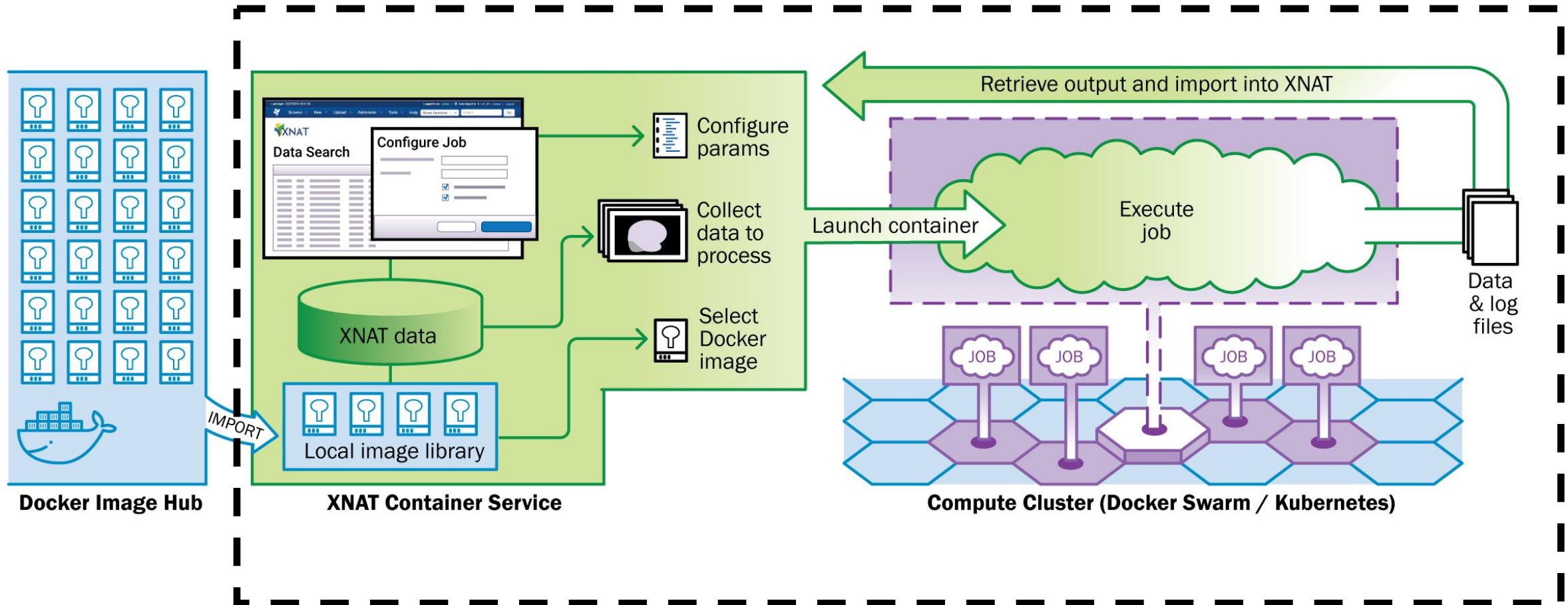
Filter PHI at the Origin



DICOM Edit Tool in XNAT

- Script based tool that scrubs and remaps DICOM metadata
- Can remove rectangular patches of pixel data
- The same software can run
 - XNAT Desktop Client; XNAT itself never sees PHI
 - XNAT boundary: A script can be defined for the entire XNAT site
 - XNAT boundary: A script can be defined for an individual project
 - Inside XNAT: Triggered by a user action

Docker Containers in XNAT



101 Uses for a Container in XNAT

- Your favorite ML algorithm
- Matlab program
- FreeSurfer
- Small Animal Imaging: Split DICOM images for individual subjects
- **Deface Images**

Summary

- XNAT is a platform and not a service
 - The nature and level of de-identification is defined by site administrators and project owners
- XNAT provides different tools to support these needs
- Washington University has both public and private instances with different practices