

The Open Microscopy Environment:

Priorities and Directions for 2013

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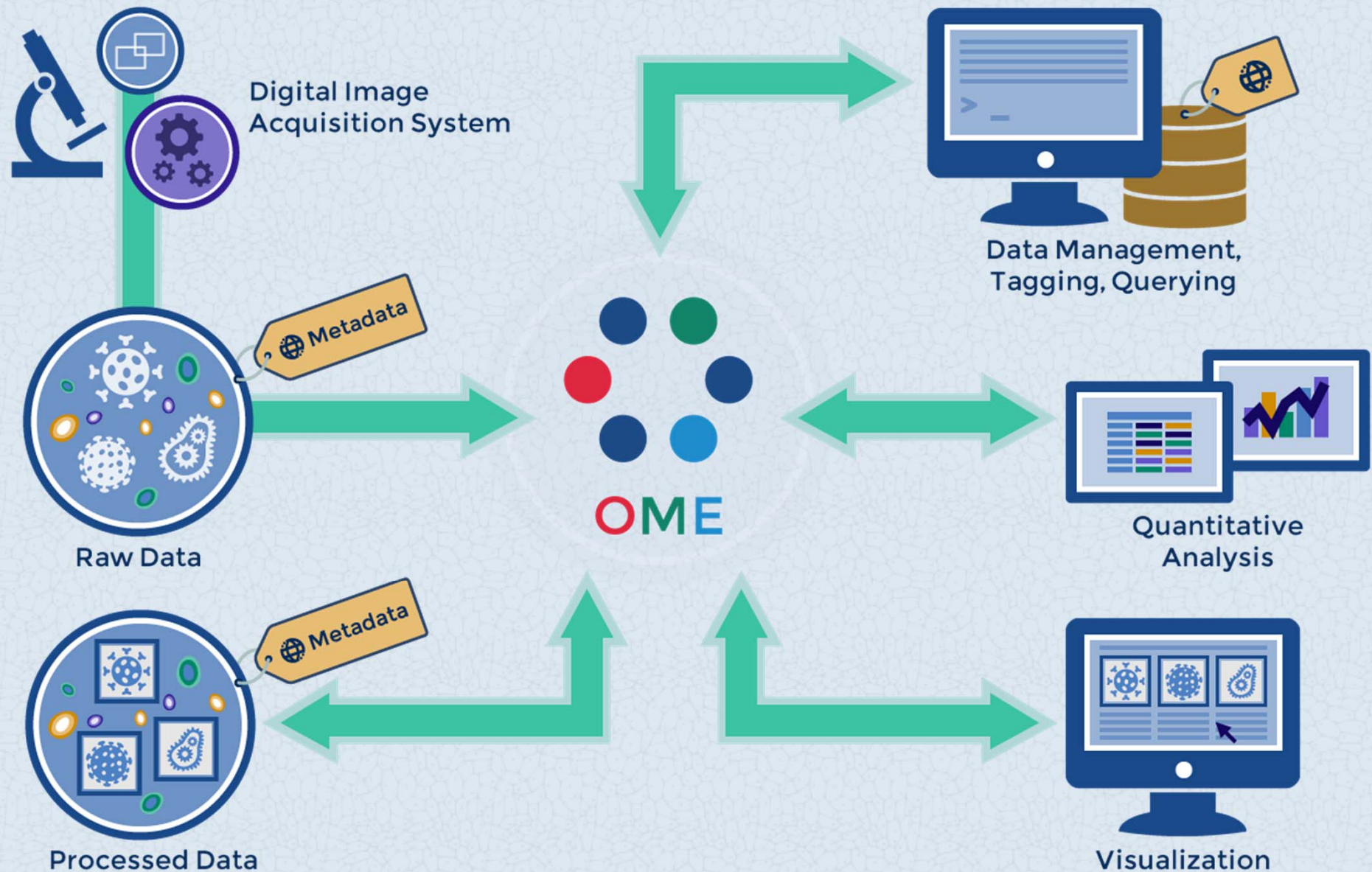


Talk Outline

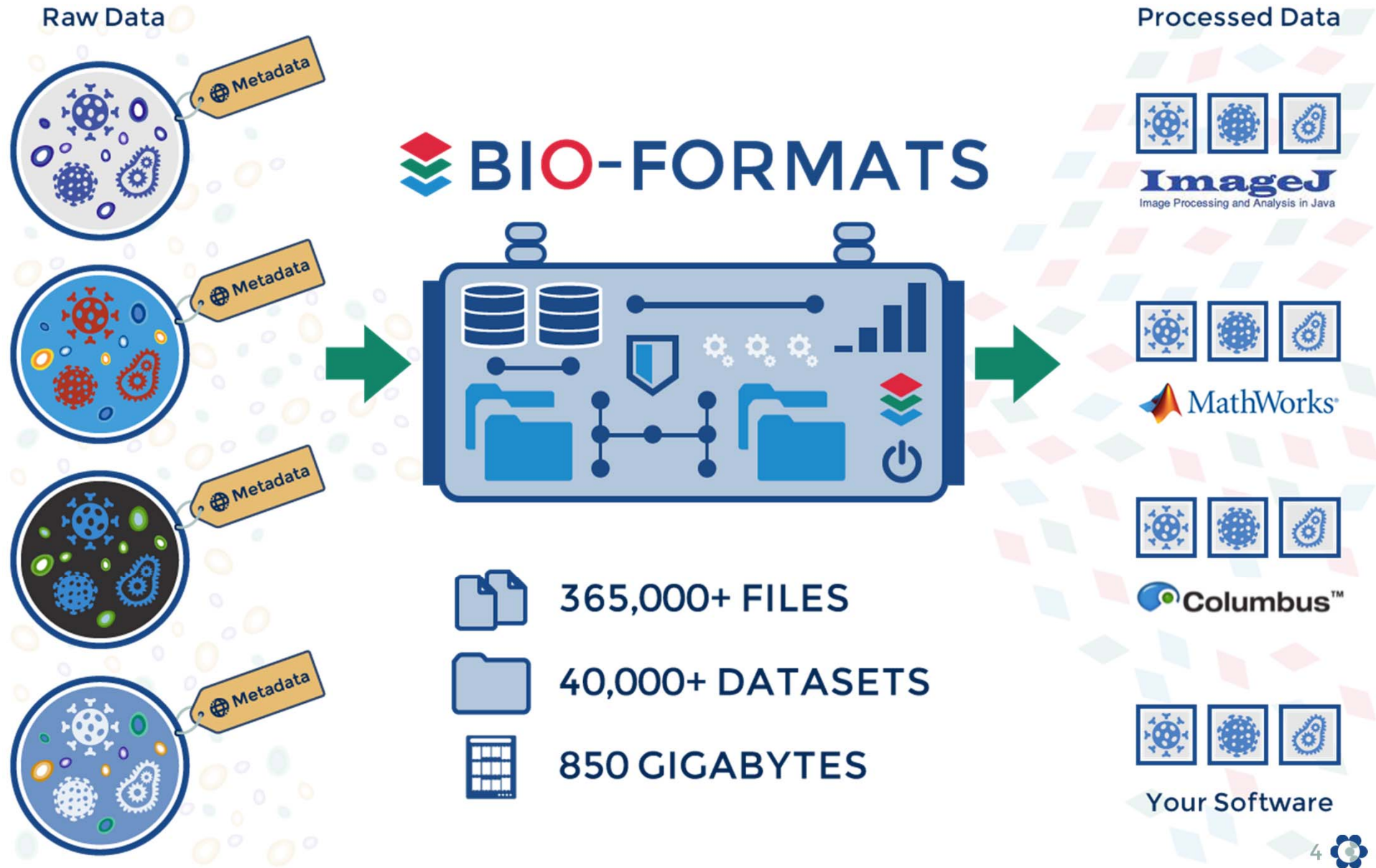
- Problem
- Progress
- Priorities
- Process
- Rapid Development & Stability
- OME & Whisky

THE PROBLEM

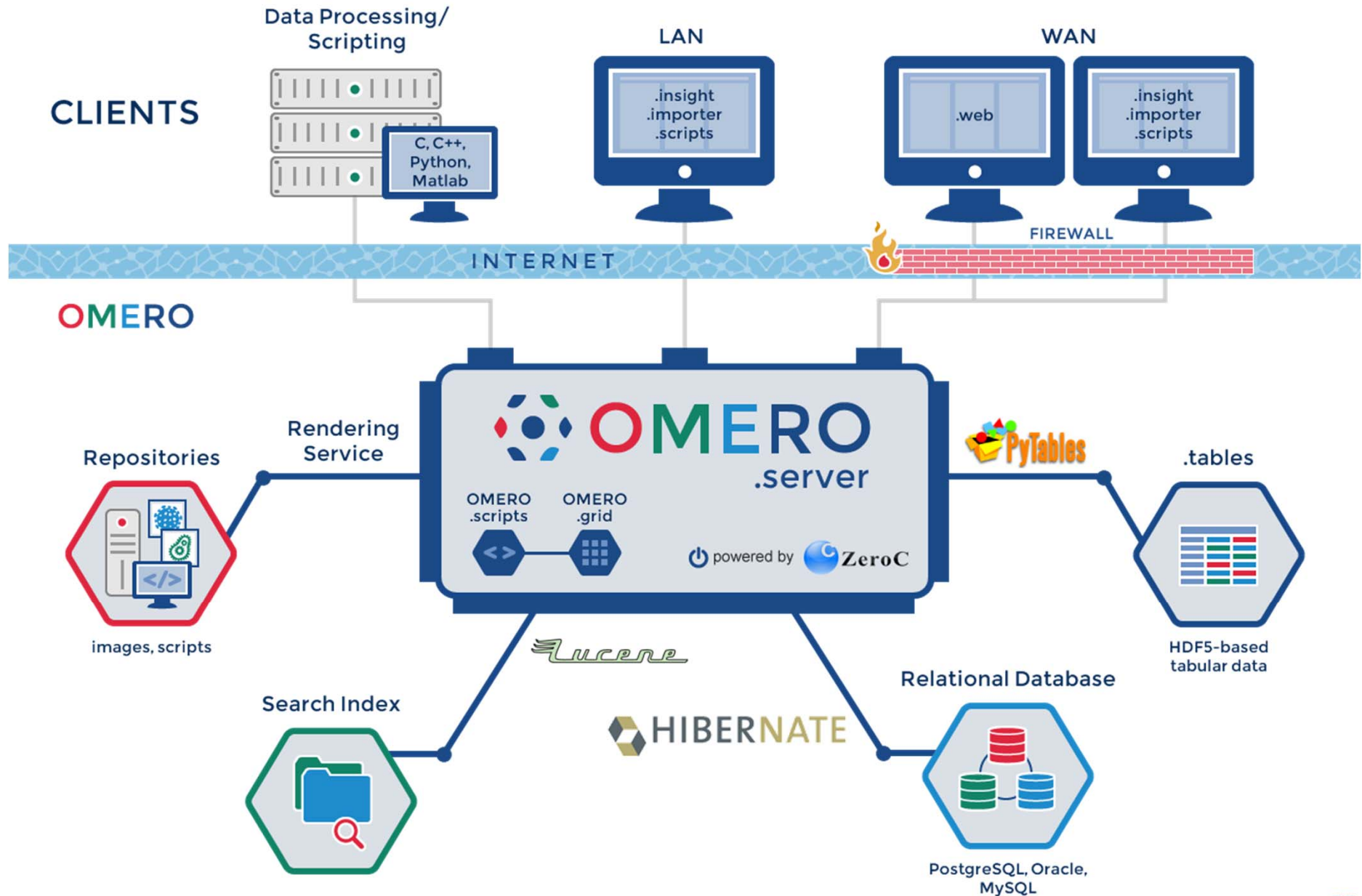
...Towards Image Informatics



BIO-FORMATS: Proprietary File Conversion



The OMERO Platform



OUR PROGRESS

OME : 2012 Progress

- **Report filed Jan 13**
 - OME Docs: OME_ProgressReport_Jan13_final
- **Software: A Pretty Good Year**
 - Massive Team Expansion
 - Development of Satellites Concepts and Teams
 - 4.4.x releases
 - Good adoption
 - >60k Bio-Formats
 - ~1900 server
 - ~3678 client (no stats for web, sorry)
 - ~880 ImageJ
- **Papers:**
 - OMERO Nature Methods
 - OMERO.searcher Nature Methods
 - Eliceiri et al Nature Methods
 - Cucurro et al at Galaxy Comm Conf
- **Several great external examples of our work**
 - Harvard LINCS
 - JCB DataViewer
 - EMDDataBank- 134 3D tomograms
 - Stowers ODR
 - PFelts Histology Teaching
 - ???

welcome**trust**

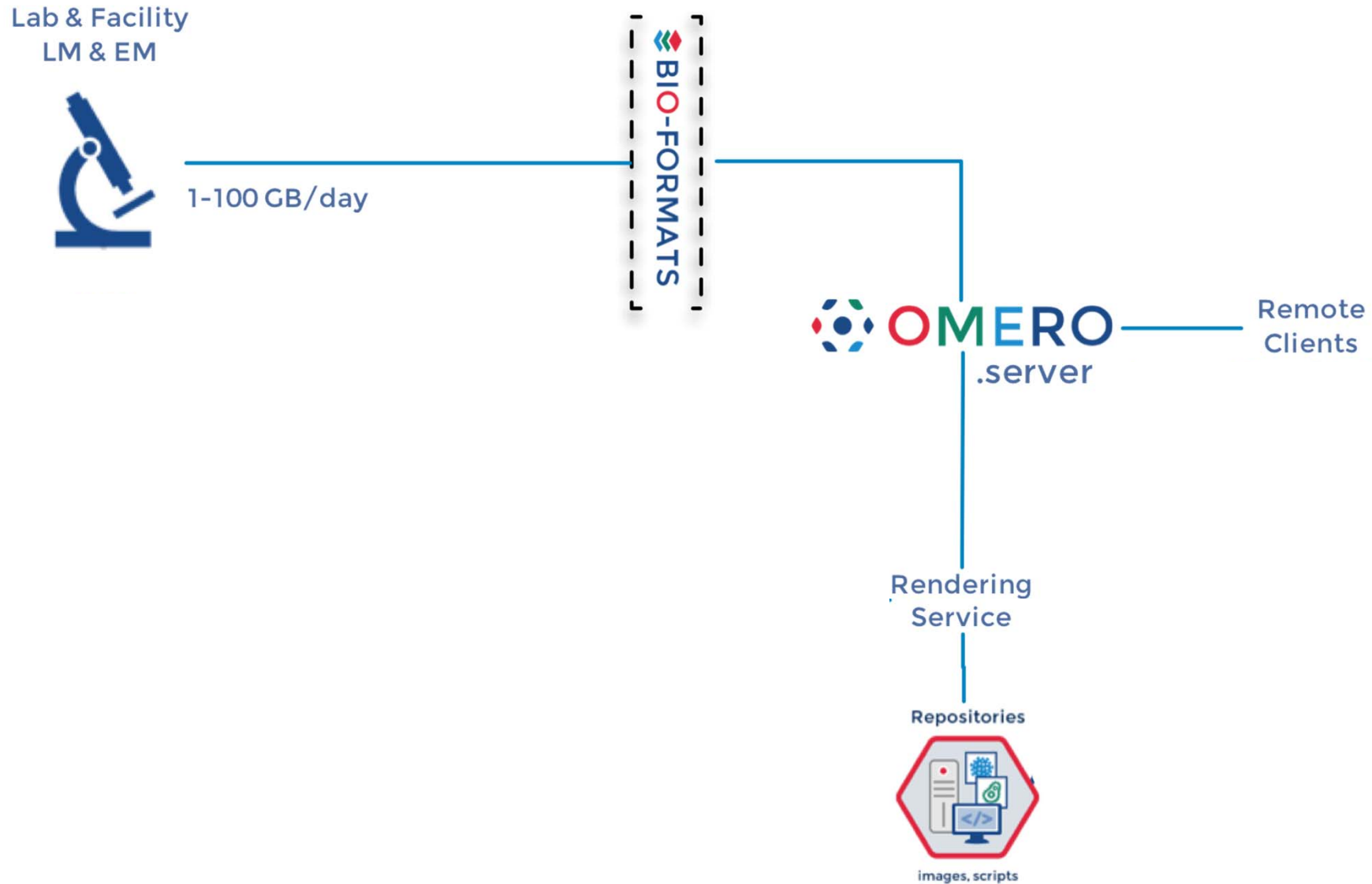
THE PRIORITIES

OME : 2013 Priorities

- **Development Priorities**
 - OMERO.fs
 - Analysis (.searcher, WND-CHARM, MatLab, ImageJ, Icy, etc....)
 - Permissions Improvements
 - Search
 - Schema Updates
- **Things that need to happen**
 - Release of Satellite developments
 - Docs
 - Outreach

OMERO & BIO-FORMATS:

Data Import & Access



OMERO.fs

- **Critical technology for many sites**
 - Import bottleneck
 - Original file access
 - HCS, DP, LSM are priorities
- **Extremely challenging**
 - Performance
 - File format diversity
 - Permissions
 - Clients...
- **Progress & next steps**
 - Two demos completed
 - Delivering to first Beta sites

Analysis

- OMERO @ Work
 - *Data Management* is a big problem...
 - ...but *Data Analysis* is science
 - What's an API for?
 - Integration of data
 - Integration of analytic tools
- The Satellites come to the Fore
 - ImageJ, Matlab, Icy, etc.
 - Custom tools (e.g., C++)
 - OMERO.searcher, WND-CHARM
 - OMERO.biobank

THE PROCESS

What's a Kanban (& does it taste good?)

- Originally developed at Toyota
 - *"just in time"* process
 - A large backlog
 - Continuous development, innovation, testing & release of product
 - Team members make flexible contributions
 - Documentation is amusing and horrible

- Kanban @ OME
 - Discussed in Paris 2012
 - Implemented Summer 2012
 - Used for 4.4.x point releases
 - Powerful and useful
 - Stability & Confidence
 - Understanding of Progress
 - Can create testing burden
 - (Desperately) need a way to visualise work– trying agilo



RAPID DEVELOPMENT & STABILITY...

Two Development Streams...

OMERO 4.4.x (currently, 4.4.6)

- *No API Breakage*
- API Additions Possible
 - OMERO.tables (for .searcher and WND-CHRM)
 - Modulo (for Imperial/FLIM)
- New UI Features
 - Permissions
 - Search
- Analysis improvements
- All bugs
- Satellite requirements
- Aim: 18-24 months of support

OMERO 5.x

- OMERO.fs
- API Changes
 - Multi-image fileset
 - Common ROI Model (OME/ImageJ2/CellProfiler/Icy/ImgLib2)
 - New Detectors, Light Sources, etc.
- Expect Instability, API changes

OME & WHISKY

Changing the Versioning

OME Process has changed

- Kanban process → frequent releases
- PM workflow for a release currently laborious

Need a way to create release packages at will

- Use “arbitrary” names
- So.... why not whisky
- http://en.wikipedia.org/wiki/List_of_distilleries_in_Scotland

THIS MEETING.....

Meeting Goals

Project-wide Mtg

- Developers & PIs
- Share status & priorities
- Progress update & future planning

Upcoming Meetings

- OME User's Meeting– Institut Pasteur, June 24-26
- Developer's Meeting??? (Date? Format? Location? Goals?)
- OME SAB Meeting– Fall 2013