

Laboratory Informatics

Introduction to the portfolio



Freek Varossieau
Product Specialist Lab Informatics

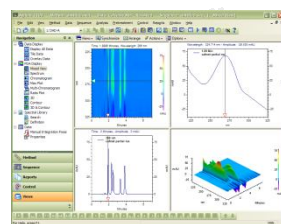


OpenLAB - *The Operating System for the Laboratory*

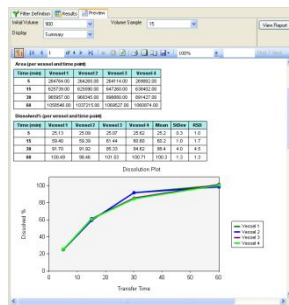
Agilent
Solutions
for the Lab
Informatics



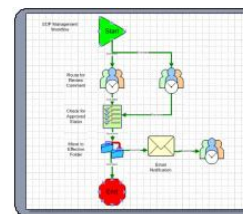
Enterprise
Content
Management
(ECM)



Multi-vendor
Instrument Control
Manager
(ICM)



Intelligent
Reporter



Business
Process
Management
(BPM)



Electronic Lab
Notebook
(ELN)

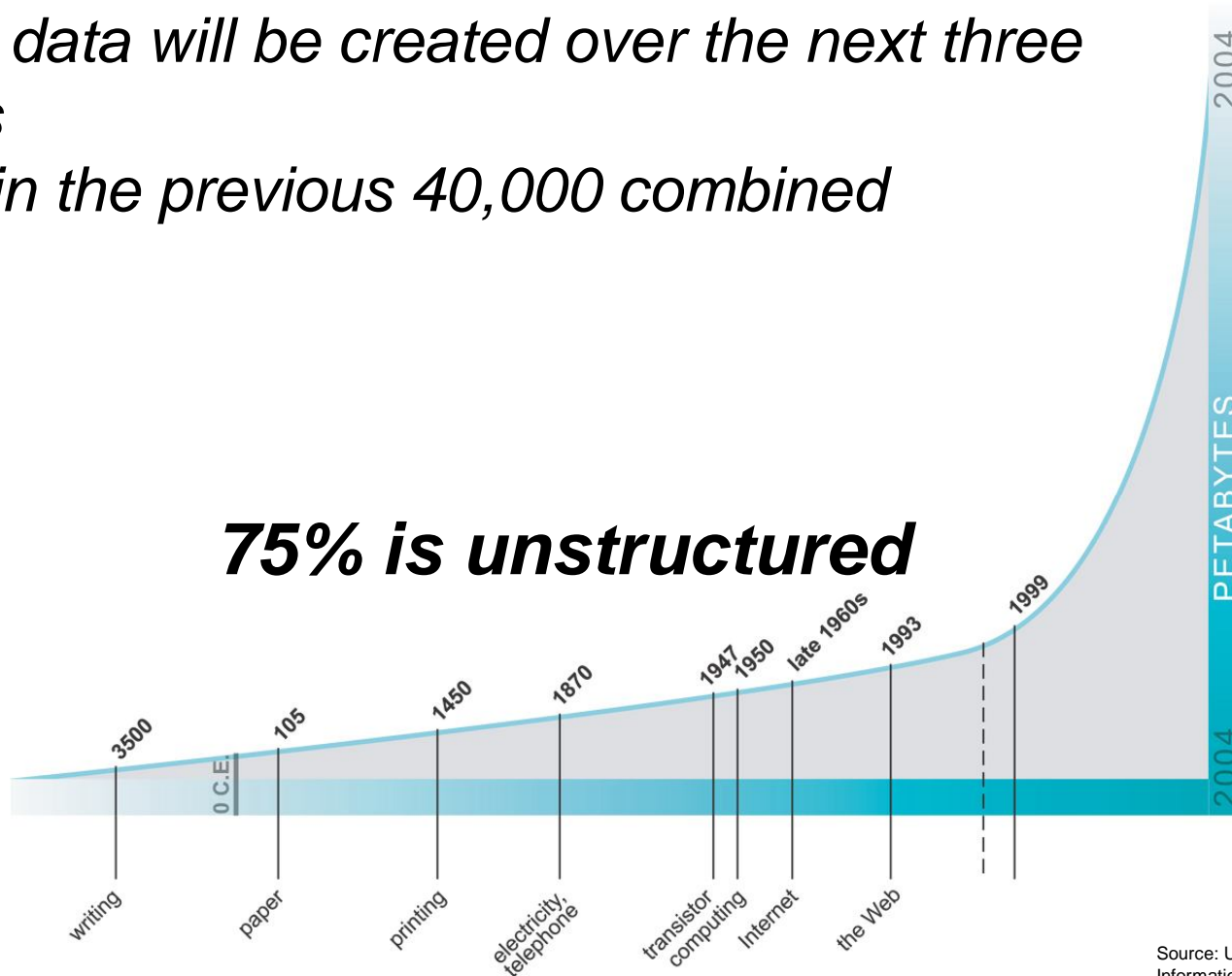
OpenLAB is a fully integrated laboratory system that links people, processes and data, providing all information needed for accelerated decision making.

Integrating framework for other applications and techniques
Web-based, n-tier architecture scalable from small lab to global implementation

OpenLAB manages instruments, people/process and content!

The explosion of data...

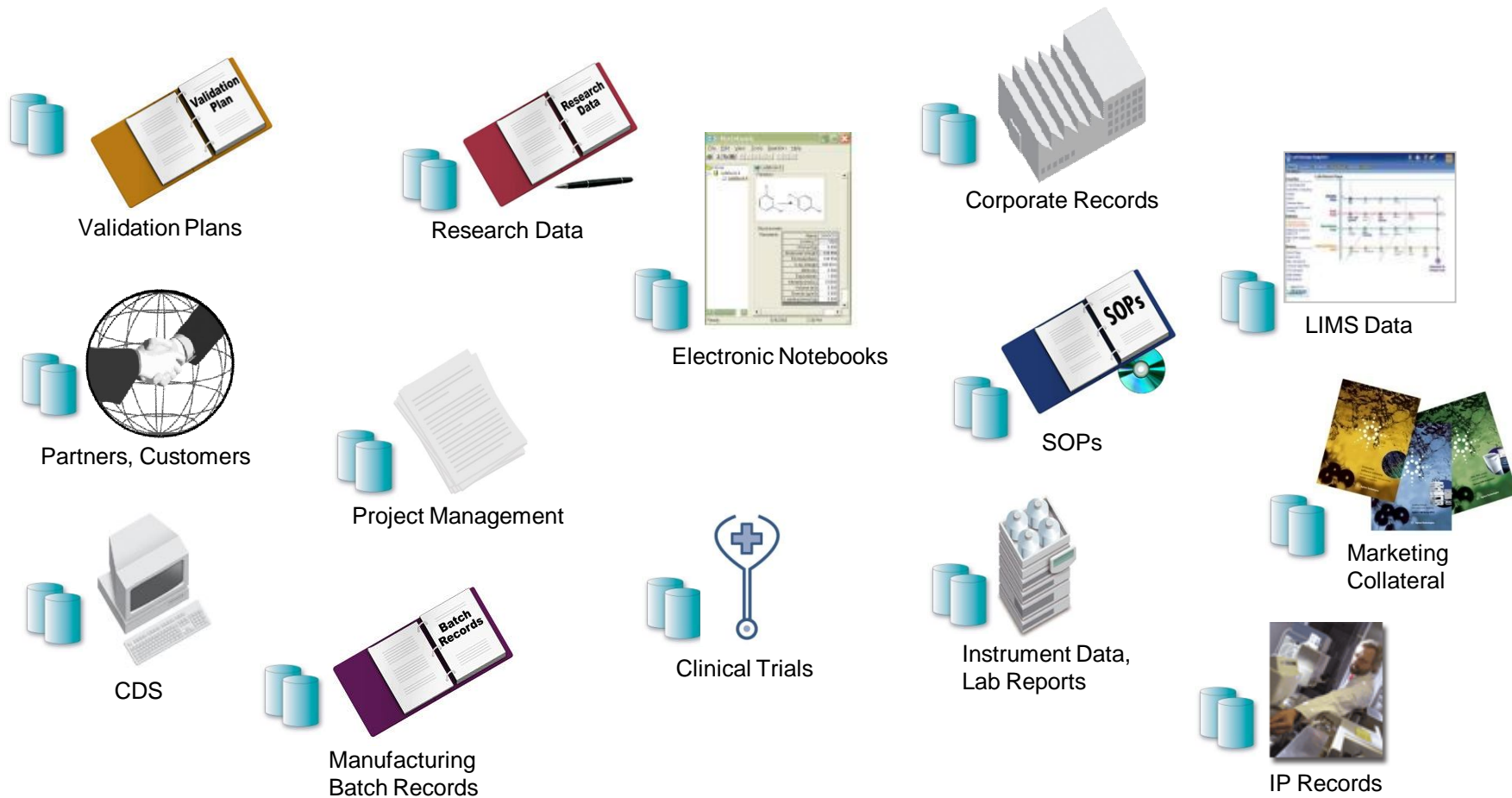
More data will be created over the next three years than in the previous 40,000 combined



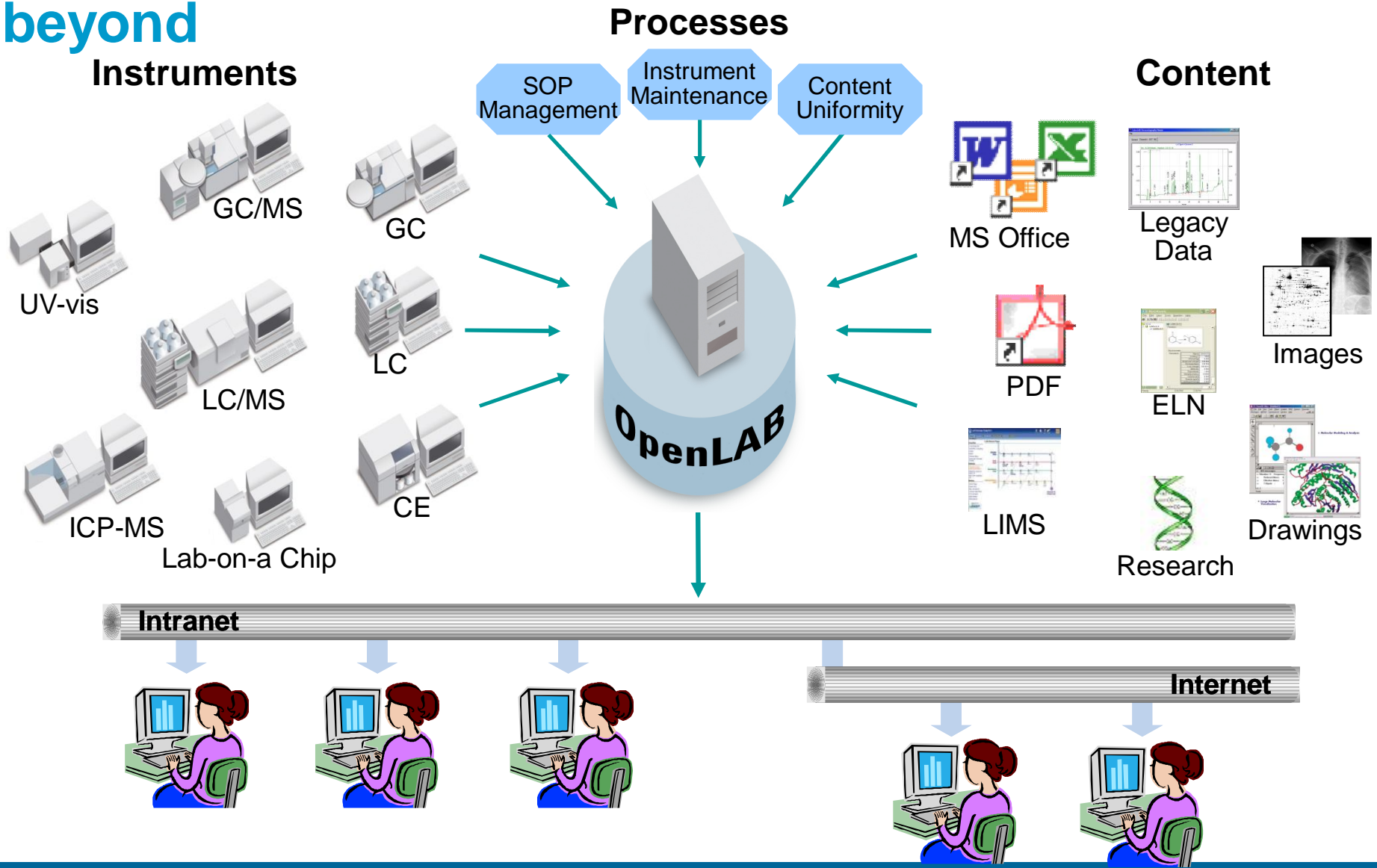
Source: UC Berkeley, School of Information Management & Systems, 2003

...and the unfortunate truth

Today's organizations have too many disparate data silos



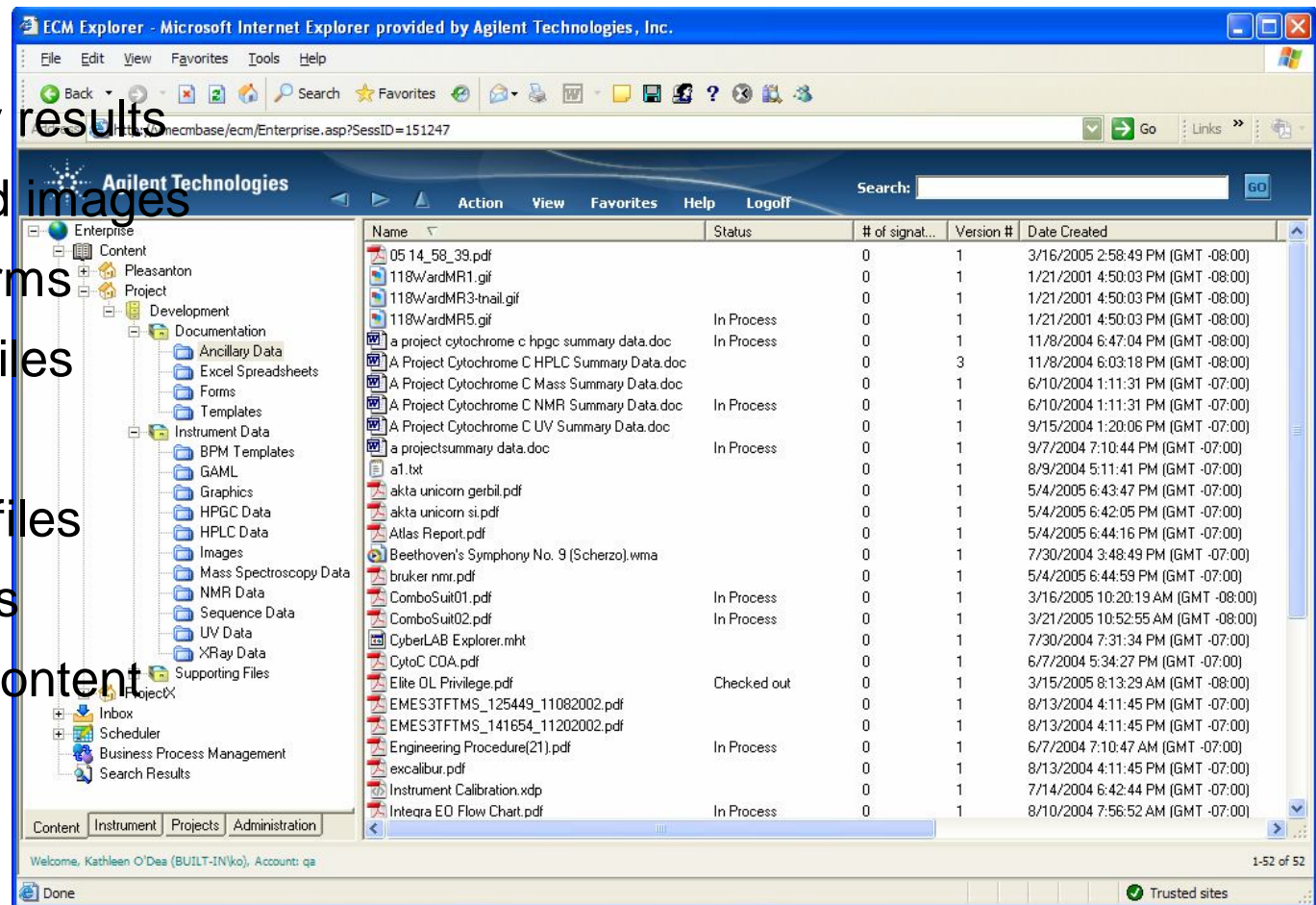
Agilent OpenLAB – linking data across the lab & beyond



Agilent OpenLAB ECM; Centrally Store and Protect All Data

Manage and organize ALL electronic content regardless of source

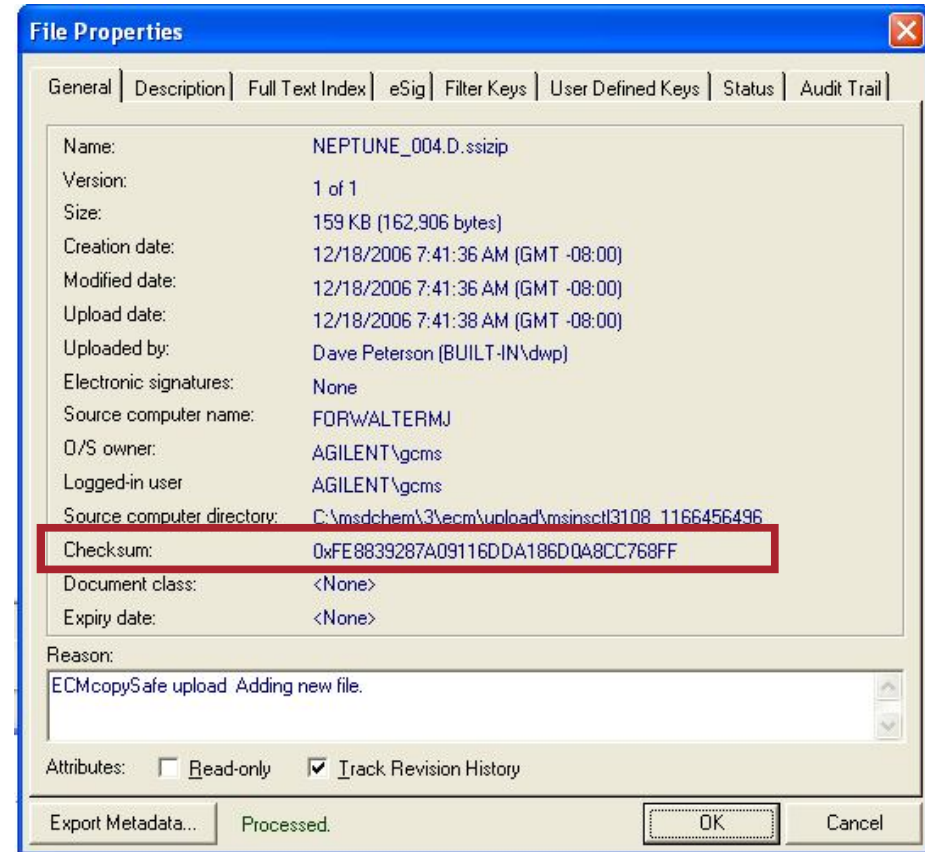
- * Analytical Data
- * Chromatography results
- * Photographs and images
- * PDF files and forms
- * Scanned paper files
- * Email
- * Microsoft Office files
- * Electronic reports
- * ANY electronic content



Data Integrity

Ensure data remains unchanged

- * When a file is added to ECM an MD5 hash checksum is calculated on the file in its original client location.
- * The file is then copied to ECM – where another MD5 hash checksum is calculated.
- * Only if these values are identical is the transfer considered successful and the file is removed from the client location.
- * The checksum is saved as part of the file's metadata (any data that describes the data file).
- * Any time the file is accessed in any way – to be retrieved, signed, moved, emailed, reanalyzed, archived – the MD5 hash checksum is recalculated and compared to that original value.



Complete your Electronic Records Life Cycle

Automate Record Retention Policies

- * Record retention policies define the actions at the end of the record lifecycle.
- * Easily configure multiple classes for different data types (e.g. development vs. QA data).
- * Multiple options for review, audit-trail, actions, decisions, ...
- * Record retention schedules are applied from the web client for a LCDF structure.

The screenshot shows the 'Record Retention Configuration' dialog box with the 'Retention Schedule' tab selected. It features a 'Classes' list on the left containing 'development data' and 'QA data'. The 'Description' field is set to '4 years development retention period'. Under 'Expiration', the 'Expire' radio button is selected with a value of 4 years, 0 months, and 0 days, and the 'After' dropdown is set to 'File archived date'. The 'Event description' field is empty. The 'Available for assignment' checkbox is checked, and 'Account default' is unchecked. Under 'Audit Trail', 'Purge audit trail with files' and 'Add audit trail for purge' are checked, with 'One entry for entire purge' selected. Under 'Disposition', the 'Purge' radio button is selected, and the 'New class' dropdown is empty. 'Apply' and 'Close' buttons are at the bottom right.

The screenshot shows the Agilent Technologies web client interface. The left sidebar displays a tree view of the LCDF structure with folders like 'Enterprise', 'Content', 'Demo', 'Document Management', 'Laboratory 1', 'MS', and 'LC MSD ChemStation'. An arrow points from the 'LC MSD ChemStation' folder to the 'Cabinet Properties' dialog box. The dialog box has tabs for 'General', 'Notification', 'Access', 'Archive', 'Record Retention', and 'BPM'. The 'Record Retention' tab is active, showing a 'Retention class' dropdown menu set to 'development data'. A search bar and 'GO' button are in the top right of the interface.

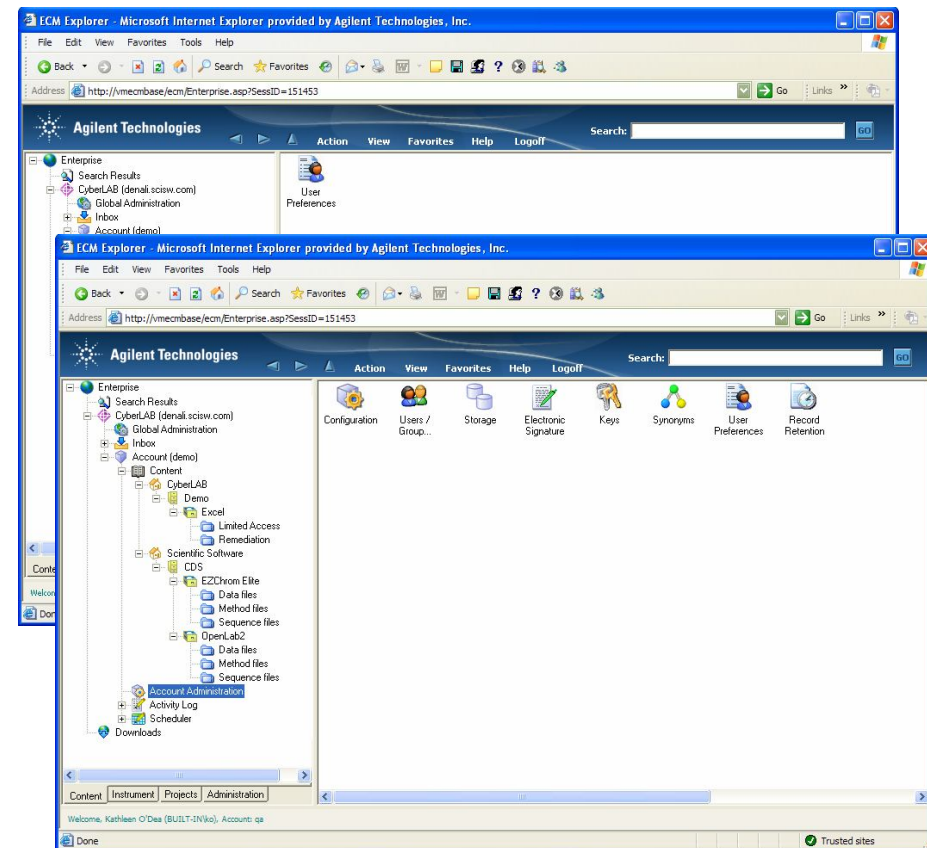
Protect your Data from Unauthorized Access

Controlled User Access

Access to the system is controlled through roles and permissions

- * The user sees only the instruments, content, and software functions that they have the permissions to interact with
- * Roles can be assigned system wide, or on an instrument by instrument, project by project, folder by folder basis
- * User roles within the Instrument are defined by projects
- * Projects link users with instruments with content.

All User, ALL Content
One Software!
One Web Access!

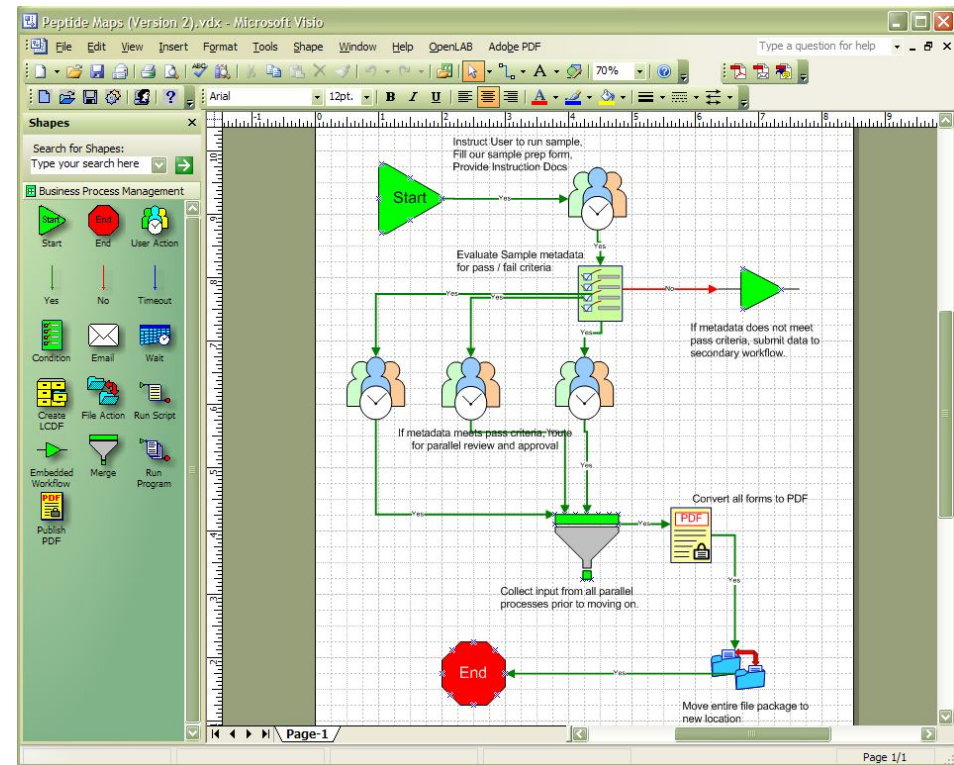


Agilent OpenLAB BPM

Manage the Information Flow in your Lab

Agilent OL BPM option

- * Automate a process in the laboratory without any programming knowledge
- * Control the flow of information for data review, electronic signoff, electronic notifications
- * Manage and schedule instrument maintenance through BPM.



Agilent OpenLAB BPM

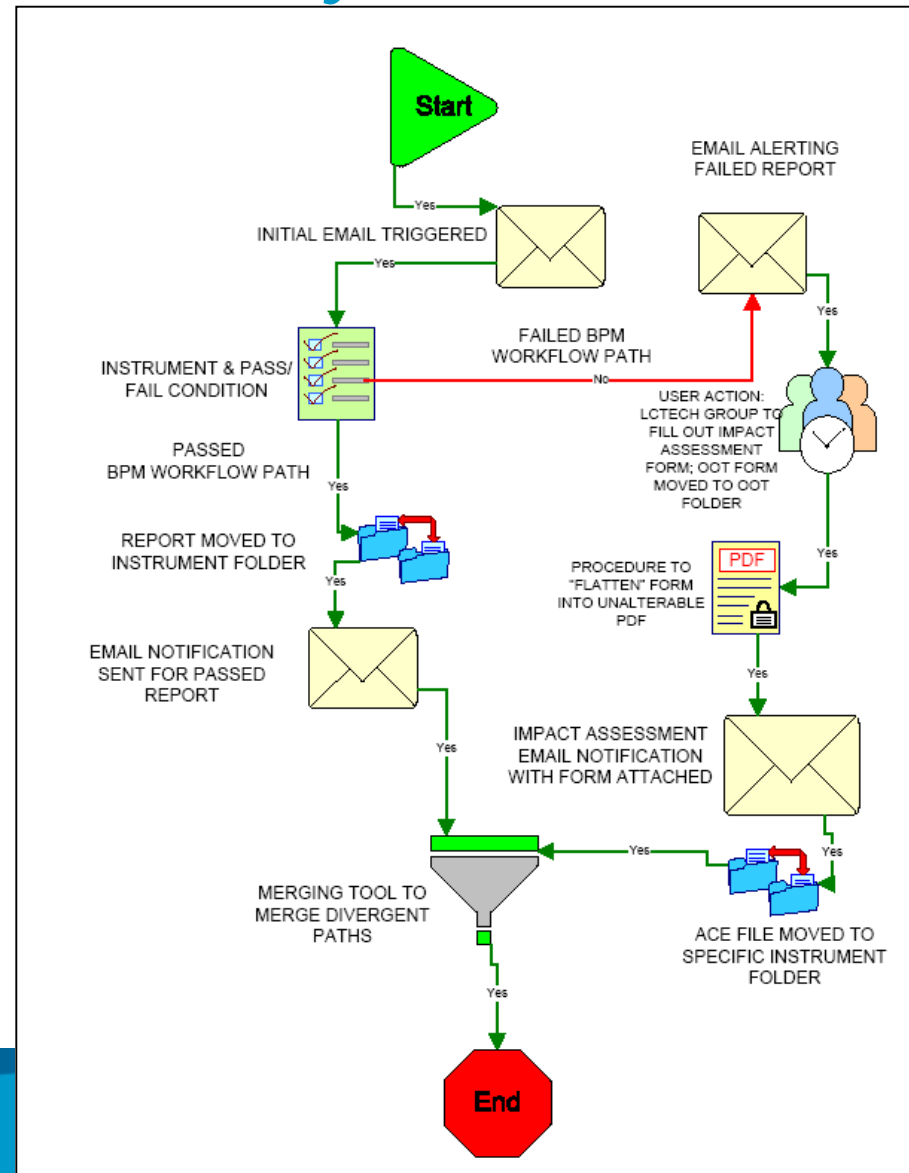
Manage the Information Flow in your Lab

A unique central and easy to use Tool to automate Processes

Almost no Limits

Examples like:

- * Limit checks
- * Instrument Maintenance checks
- * Corrective actions
- * Results Reviews.



Case study: Automating and speeding up review and approval of final reports

Customer profile: Middle level management at CROs (Lab, QA, validation) spend up to 20% of their time for reviewing and approving final reports/documents

Business Problem: Too much time spent on review and approval of reports, final reports go out late (\$\$\$ revenues come in late)

Reason: Too many reports (chromatographic, SOPs, validation, final results) to review and approve. Multi-step review and approval is manual and therefore slow

Desired capabilities:

- Faster turn-around on report review and approval
- Reduce time spent on reports as much as possible
- Delegation of approvals and electronic traceability of reports

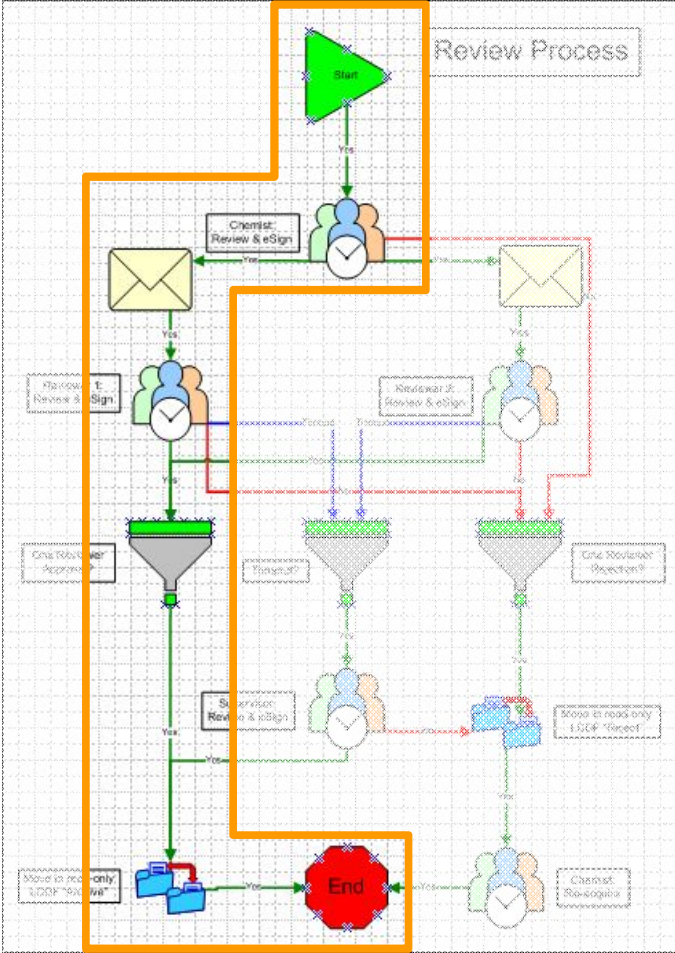


Report Review - Execution

This graphic shows the workflow design.

For a real-life execution of the workflow click on “Start demo”.

The path shown in the demo is highlighted in orange.



Video!

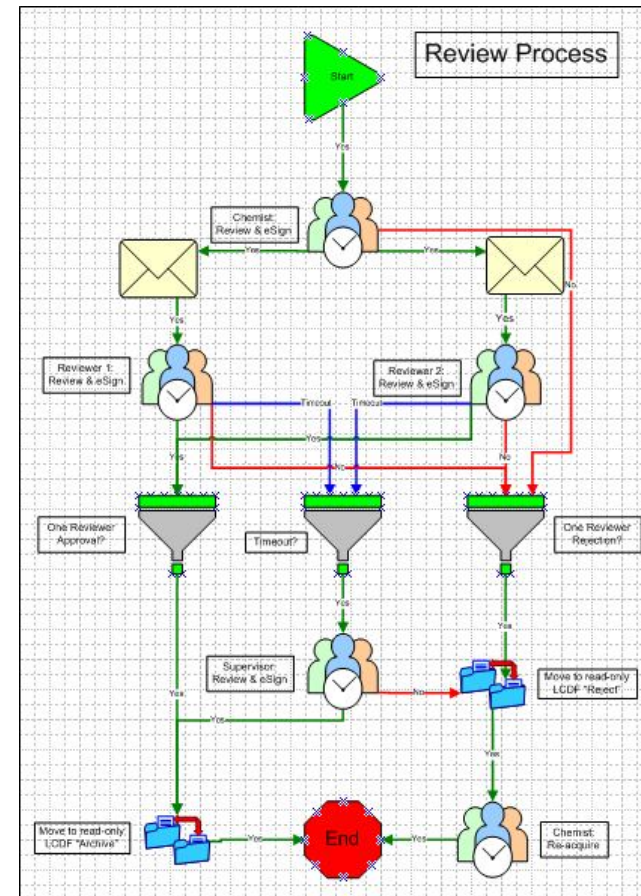


The solution: OL ECM Business Process Management Workflow Automation of report review and approvals

A BPM review process automates document and report review and approval.

This speeds up review and approval by:

- ⇒ Automated email notification for new review activities
- ⇒ Automated or manual delegation of activities
 - ⇒ Based on timeout
 - ⇒ Manual transfer of approval ownership
- ⇒ Setup delegates for absent reviewers
- ⇒ Link of approval request and related document - No more searching for the data required for an approval.
- ⇒ Full traceability of review progress at any time



Result: Streamlined process completed in days - not weeks