

Managing Healthcare Big Data using Electronic Content Management (ECM)

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ChartMaxx

Today's Presenter



ChartMaxx - Empowering people, patients, and processes with an all new platform for enterprise business process and content management

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Agenda

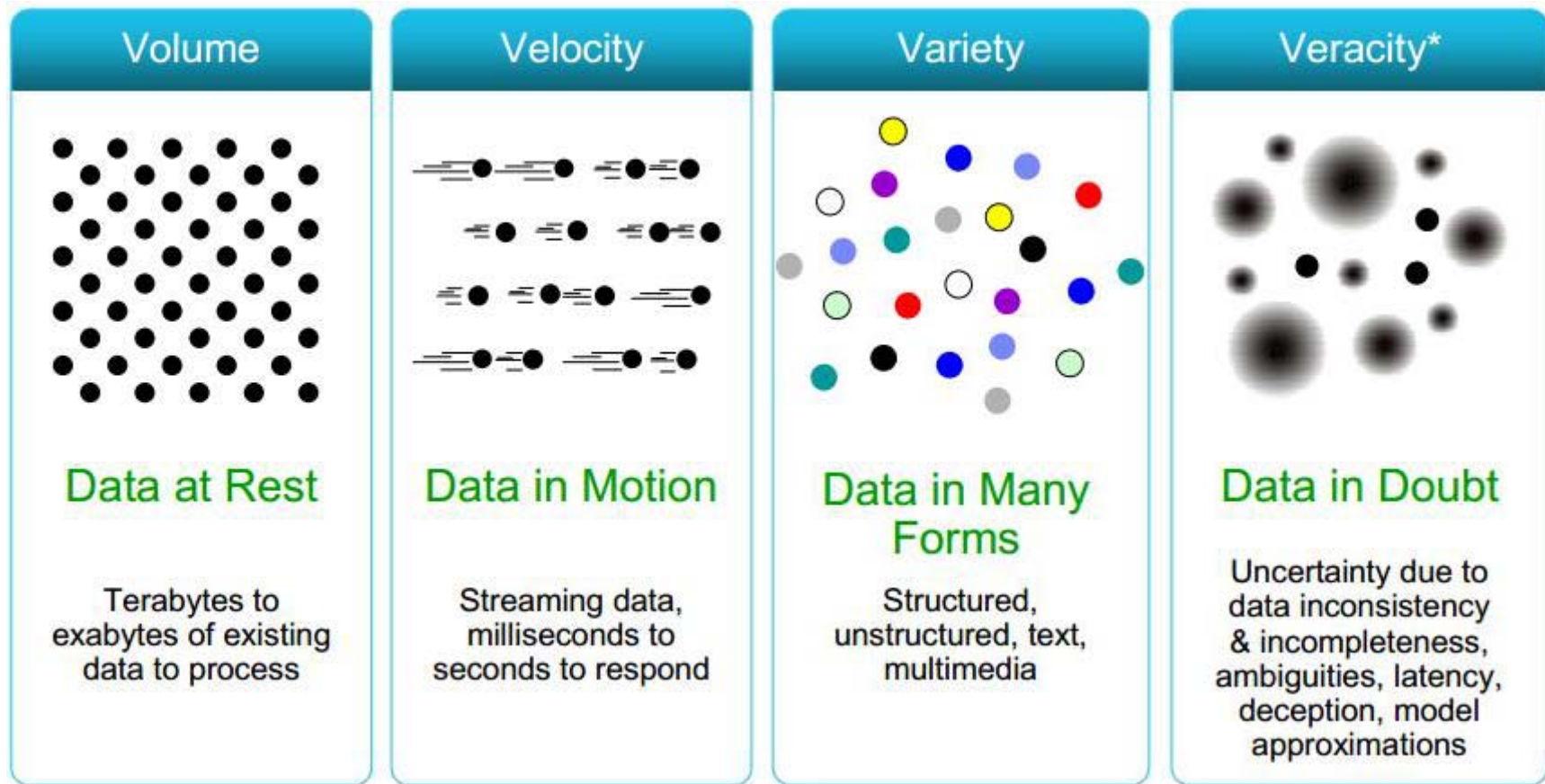
- Defining Big Data and its Drivers
- Key Challenges for Big Data in Healthcare
- Where Your Data Come From
- Combining Enterprise Content Management with Business Process Management to Meet the Challenge
 - Customer Showcase
- Questions and Answers

Big Data – What is it?

Gartner defines it as... "Big data are high volume, high velocity, and/or high variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization."

(Douglas, Laney. "The Importance of 'Big Data': A Definition". Gartner. Retrieved 21 June 2012.)

Big Data 3 V's + 1



"Translating Health Care Through Big Data, Strategies for leveraging big data in the health care industry" - Institute for Health Technology Transformation

Big Data Key Drivers

- Better data = actionable insights
 - Drive to improve patient care
- Fraud detection
- Cost savings

'A recent Infoway study found that effective use of electronic information, including patient records, prescribing, imaging and test results, would dramatically reduce the number of visits patients must make to doctors, clinics and hospitals. This would translate into 18.8 million fewer hours off work each year in Canada, with a corresponding \$408 million boost in economic productivity.'

http://business.financialpost.com/fp-tech-desk/value-of-big-data-in-health-care-is-measured-not-just-in-dollars-but-in-lives?__lsa=3612-f6c5

Key Healthcare Industry Challenges

- Industry Readiness
- Data Usability/Trustworthiness
- Data Fragmentation
- Architecture and Infrastructure Issues
- Health Information Ownership, Use and Security

“Smarter healthcare converts patient and clinical information into actionable insights to improve the quality of care while optimizing operational efficiency.”

Institute for Health Technology Transformation: Transforming Health Care Through Big Data Strategies for Leveraging Big Data in the Health Care Industry
http://www.ibm.com/smarterplanet/global/files/ca__en_us__healthcare__ca_brochure.pdf

Where Do the Data Come From?

Clinical and HIM

- **Structured**
 - EHR
 - HIS
- **Unstructured**
 - Image based – PACS and radiology, EKG's, Monitor Data
 - Insurance Card, patient photo, consent forms, orders
 - Paper based patient information

Administrative

- **Human Resources**
 - HR Management Systems
 - Documents such as new hire paperwork, employee records, credentialing, etc.
- **Legal**
 - Documents include contracts and agreements, correspondence, compliance
- **Finance**
 - Statements
- **Business Office**
 - Correspondence

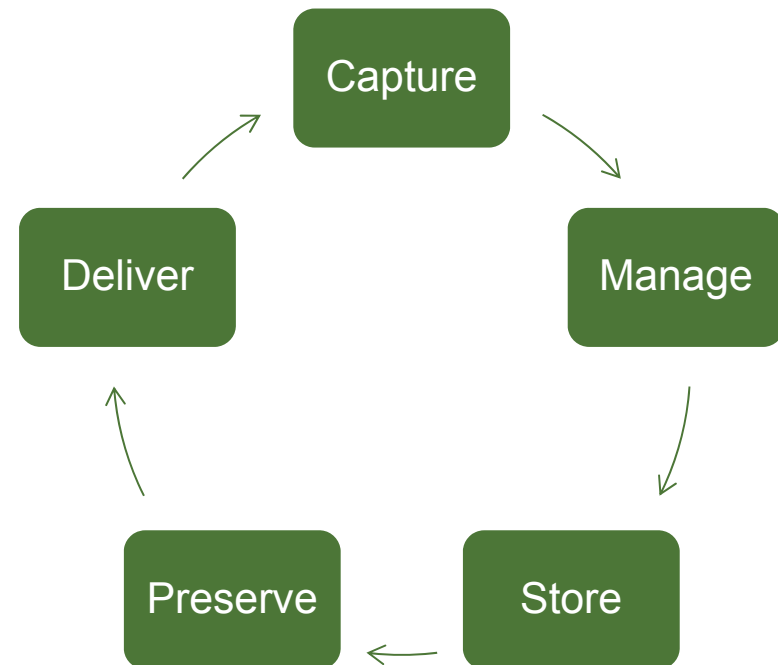
Supply Chain and Revenue Cycle

- **Supply Chain**
 - Materials Management
 - Documents such as requisitions, purchase orders, invoices, packing slips, receiving paperwork
- **Revenue Cycle**
 - Pre-registration
 - Claims Management
 - Correspondence Documents

Enterprise Content Management

ChartMaxx ECM actively manages the Data Lifecycle

- Inbound Document Management (emails, faxes, etc.)
- Intelligent Electronic Forms
- Context Driven Search Capabilities
- **Business Process Management (BPM) for policy driven workflows**
- Legal Health Record management
- Document and Content Management
- VNA (Vendor Neutral Archive)
- Transparent User Experience and Secure Repository

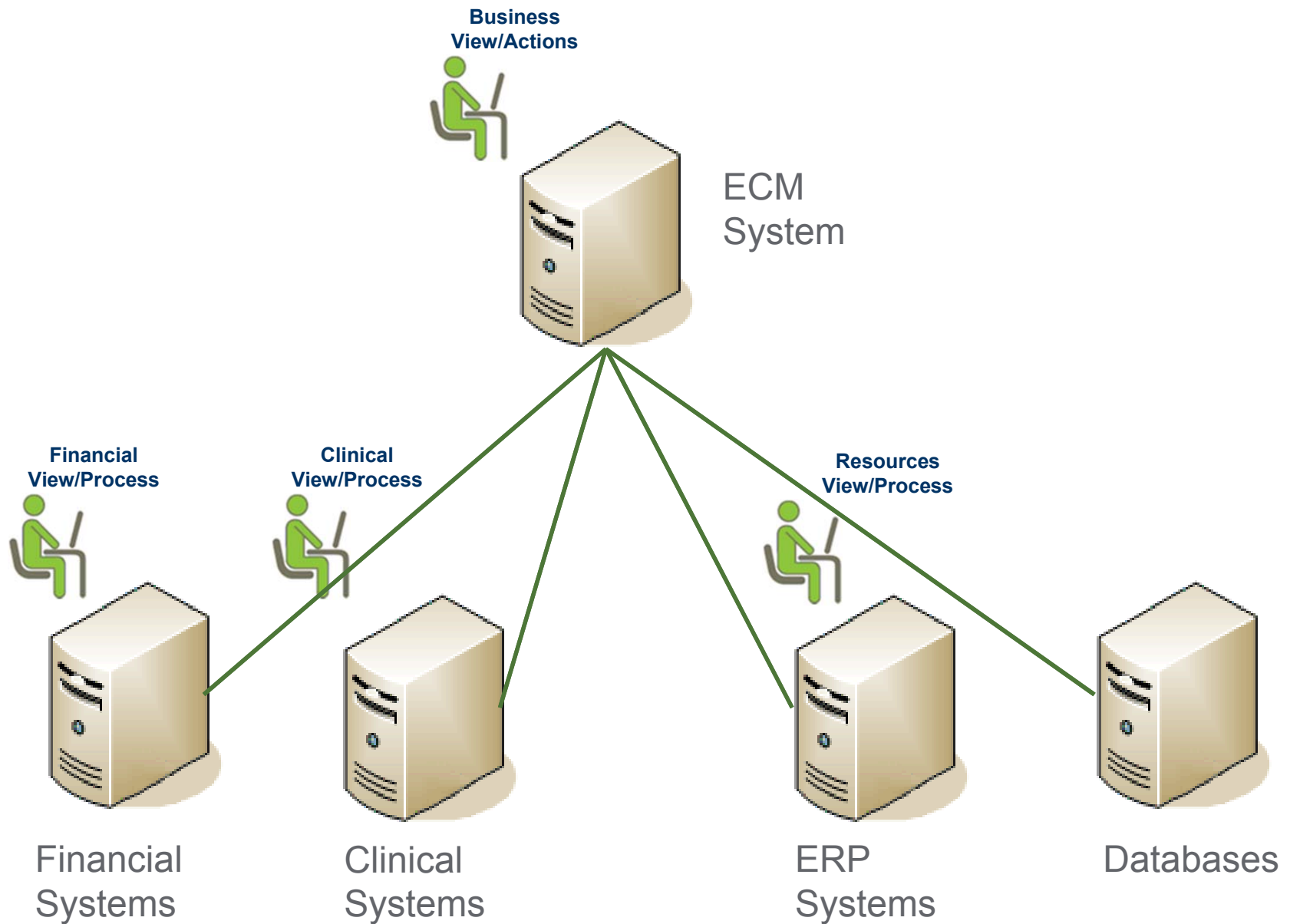


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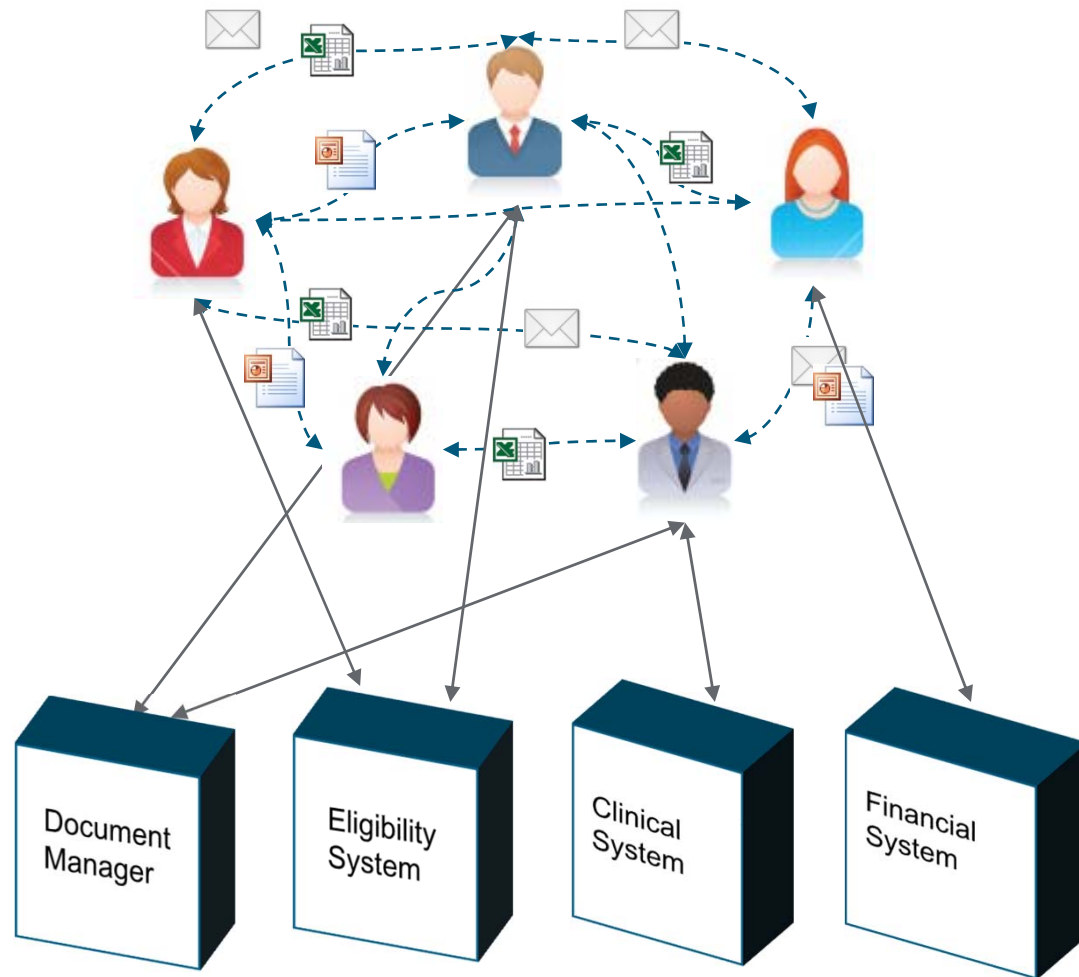


Business Process Management

- **Full-featured engine for modeling and executing business processes using:**
 - Visual design tools
 - Rules-based routing
 - OCR integration
 - Intelligent electronic forms
 - Real-time business activity monitoring
 - Secure connectivity with other business systems
 - Digital signatures
 - Mobility support

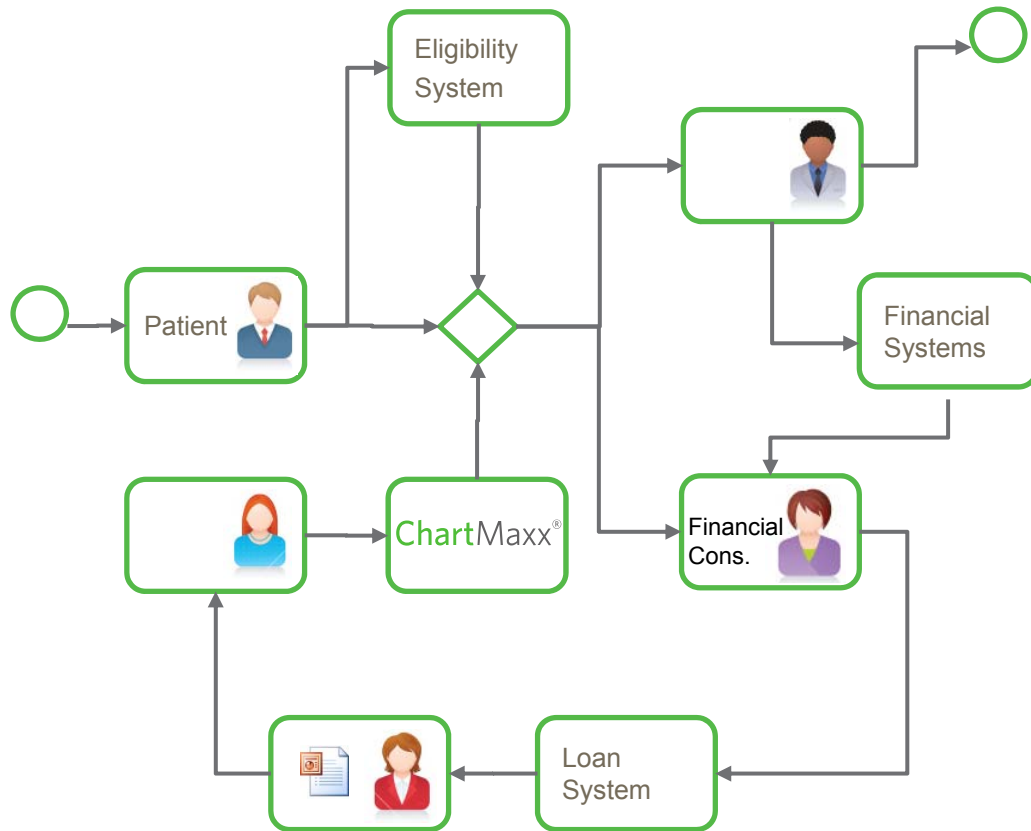


How Actionable Are Your Data Today?



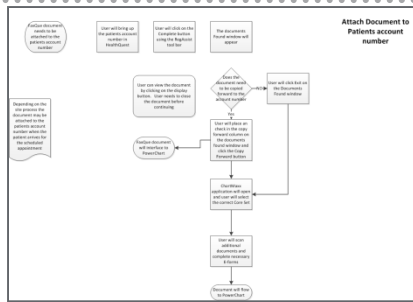
- Informal Access
- Limited Ability to Audit
- Fuzzy Priorities
- Outcome Depends on Path
- Overlapping Functionality
- Confusing User Interfaces
- Resorting to outside tools for tracking and task completion including spreadsheets and email

ECM Makes Data Actionable

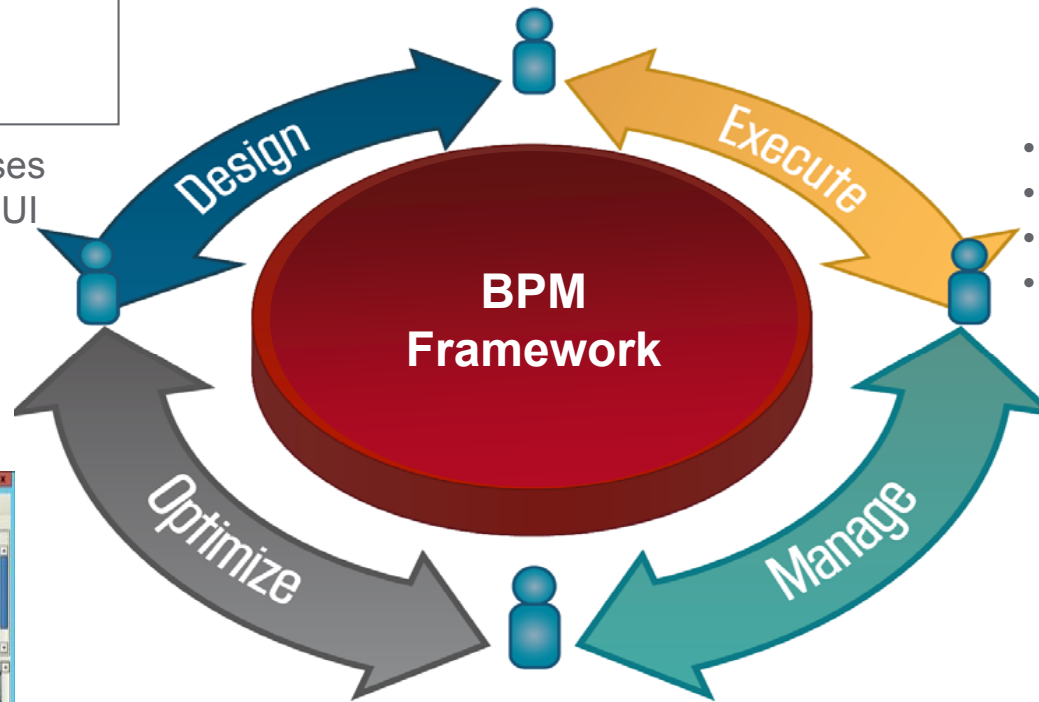


- Clearly Defined Processes
- Enforced Business Rules
- Integrated Systems
- Consistent Results
- Systemic Auditing
- Analyze and Improve Over Time
- Targeted User Interfaces
- Actionable Data
- Processes that cross departments and systems

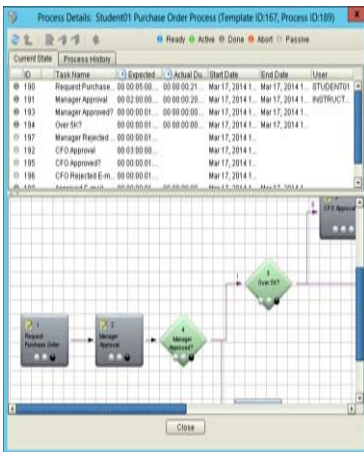
Rapid Delivery Model



- Document Processes
- Create Forms and UI
- Define Rules
- Define Data

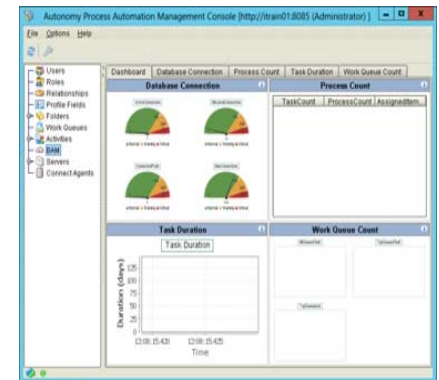


- Execute Defined Processes
- Integrate with Systems
- Execute Rules
- Present UI and Task Forms



- Aggregate Past Performance
- Identify Bottlenecks
- Executive Dashboards
- Predict Future Scenarios

- Handle Exceptions
- Real-Time Track Status
- Manage Task Workload
- Re-route Process Flows



Web Enabled BPM

- Web based access to tasks, forms and process management tools

The screenshot displays the ChartMaxx web application interface. The top navigation bar includes the user name 'Administrator' and various system icons. The main content area is titled 'Assignments' and features a search bar and a list of tasks. The task list has columns for Subject, Name, Sender, and Received. Below the list, there is a pagination control showing 'Page 1 of 1' and a 'Display 1 - 18 of 18' indicator. A detailed view for a selected task, 'NewRoutingTest - NewRoutingTest [Mar 3, 2011 9:36 AM]', is shown at the bottom, with tabs for 'Notes', 'Attachments', and 'History'. The 'Attachments' tab is active, displaying a table with columns for Title, Included By, and Date.

Subject	Name	Sender	Received
NewRoutingTest	NewRoutingTest	Administrator	Mar 7, 2011 12:...
NewRoutingTest	NewRoutingTest	Paul Eddington	Mar 3, 2011 9:3...
NewRoutingTest	NewRoutingTest	Administrator	Mar 2, 2011 5:1...
NewRoutingTest	NewRoutingTest	Administrator	Mar 2, 2011 5:...
NewRoutingTest	NewRoutingTest	Administrator	Mar 2, 2011 5:...
In the Test queue	PTO_Request	Administrator	Mar 2, 2011 5:0...
Test Expense Report Process	Expense_Report	Administrator	Mar 2, 2011 2:4...
PTO_Request	PTO_Request	Administrator	Mar 2, 2011 2:4...
Transaction_Report	Transaction_Report	Administrator	Feb 28, 2011 6:...
NewRoutingTest	NewRoutingTest	Administrator	Feb 25, 2011 11:...
Transaction_Report	Transaction_Report	Administrator	Feb 25, 2011 10:...

Title	Included By	Date
Testing	Paul Eddington	Mar 7, 2011 12:23 PM

Mobile Enabled BPM

The screenshot displays a mobile application interface for task assignments. At the top, there is a blue header bar with a back arrow, the text "Back Assignments", a search input field containing "All", and another search input field with a magnifying glass icon. Below the header, a navigation bar includes a "Sort By" dropdown menu set to "Received", and buttons for "Previous Item", "8 of 291", and "Next Item". A secondary navigation bar contains tabs for "Details", "Notes", "Attachments", "History", and "Process State", with "Process State" being the active tab. Below this, there are "List" and "Graph" view options. The main content area is a list of task assignments, each with a category on the left and task details on the right. The categories are: Folders, Sent Items, Saved Items, Deleted Items, User Alerts, Local Forms, Local Assignments, and Local Completed. The task details include the task name (Task ID), state, start and end times, and the user name.

Category	Task Name(Task ID)	State	Start	End	User Name
Deleted Items	Form A (7517)	Done	Nov 16, 2012 4:07 PM	Nov 16, 2012 4:07 PM	John M Mooly
User Alerts	Form B (7518)	Done	Nov 16, 2012 4:07 PM	Nov 17, 2012 1:56 PM	user91 user91
Local Assignments	Form C (7519)	Done	Nov 17, 2012 1:56 PM	Nov 17, 2012 1:59 PM	John M Mooly
Local Completed	Form D (7520)	Active	Nov 17, 2012 1:59 PM		John M Mooly

Managing Data and Processes Across the Enterprise with ChartMaxx ECM

Clinical and HIM

- Automated Chart Completion
- Ancillary Services
 - Clinic
 - Wound Care
 - Home Health
- Visit Type Monitoring
- 30 Day Re-Admit Tracking

Administrative

- Human Resources
 - Onboarding Process
 - Alerts for Personnel File Requirements
- Legal
 - Intelligent eForms and process automation for contract management
- Finance
 - Statements
- Business Office
 - Correspondence

Supply Chain and Revenue Cycle

- Supply Chain
 - Materials Management and invoice tracking processes
- Patient Accounts
 - Document Collection
 - Pre authorization
 - Missing Required Documents
 - Chart Completion
 - Coding Worklist

ChartMaxx Customer Showcase

- Sainte-Justine Mother and Child University Hospital Center
 - Respiratory Therapy App
- Other BPM Apps
 - Inbound Document Management
 - Supply Chain Management
 - Human Resources Onboarding



ChartMaxx Supports Your Priorities

- Executives are Looking to Maximize Their Current Systems Investments
 - Connect Systems through Seamless Integrations
 - EHR, ERP, etc.
 - Elimination of out of date legacy systems
- Continuous Improvement is a Focus - Process Automation, Alerts and Workflows
 - Processes and alerts that cross systems and departments
 - Completely customizable

ChartMaxx Transforms Data Into Actionable Insights

- Stable, reliable, and secure location for the Legal Health Record
 - Audit Trials
 - Record of Release of Information
- One size does not fit all
 - Design the solution for your process,
NOT design the process for the solution
- OCR
- Intelligent eForms
- Workflow and Business Process Automation



Questions?

