Onboarding your eHealthcare Community for Effective eHR Exchange and Integration

Axway

October 31 2011

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Agenda

- Axway Profile

- Health Information Exchanges

- Case Studies

Axway Profile
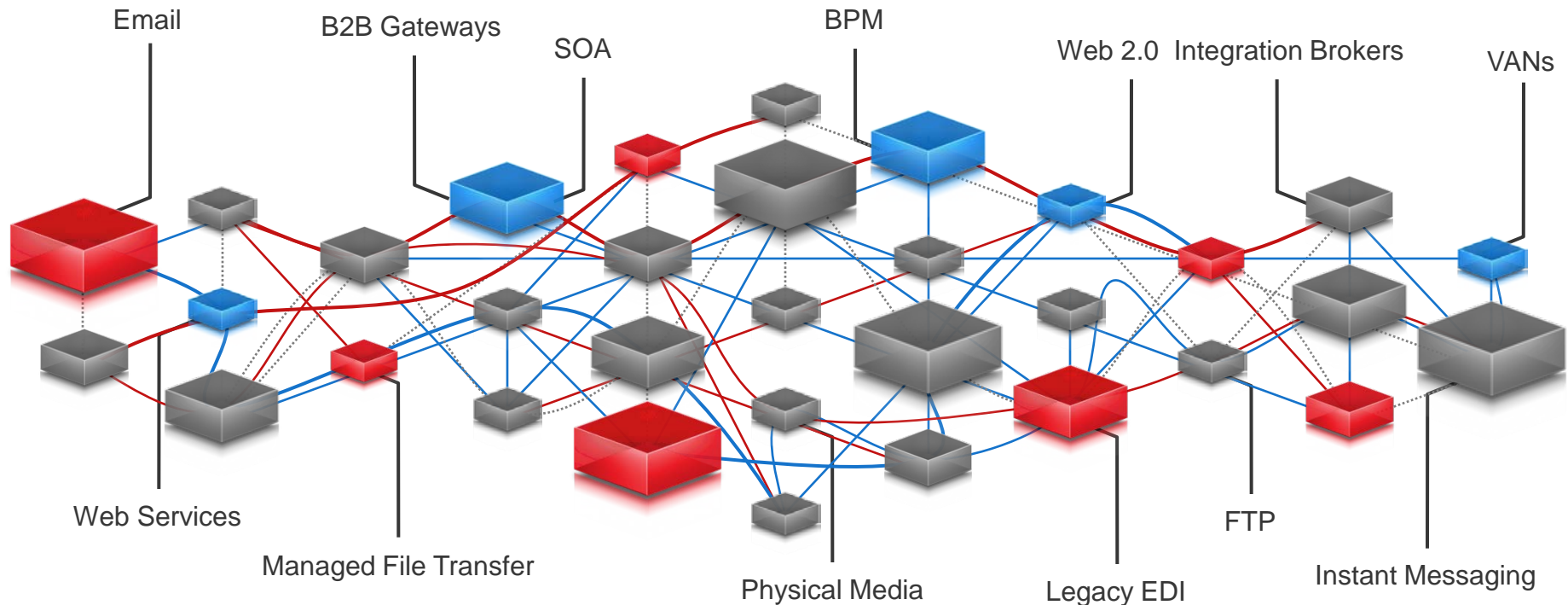
Business Interaction Networks

Axway is the Business Interaction Networks company. We are the only provider in the market today to manage, run, secure, and monitor all your business interactions — emails, files, messages, services, events, and processes.
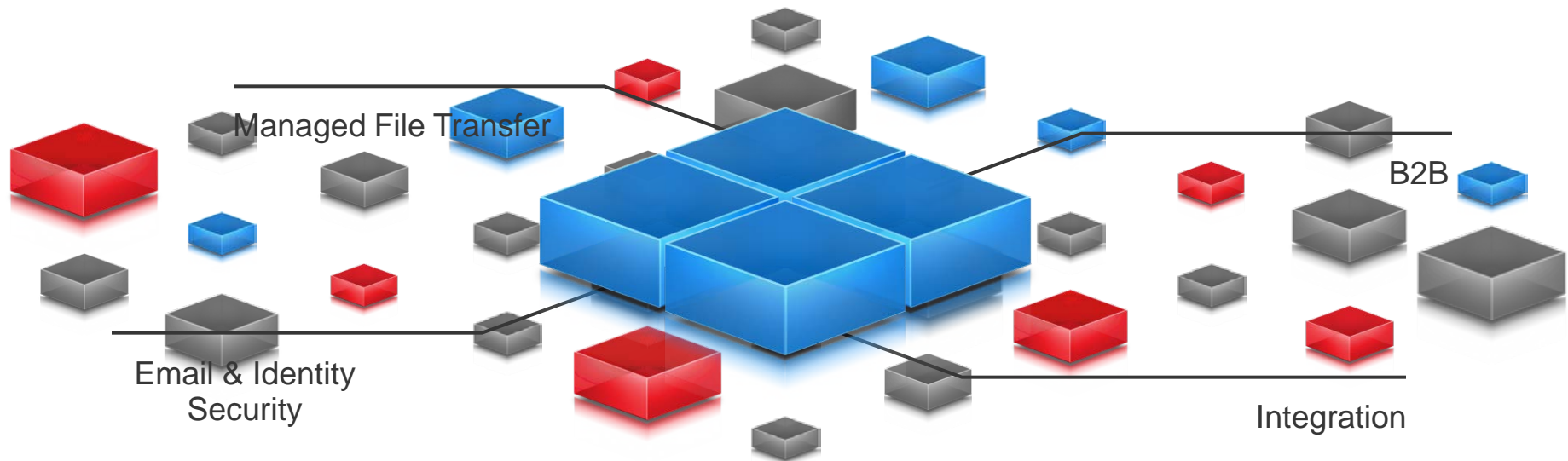
Why Business Interaction Networks?

Managing mission-critical transactions is
costly and complex…

Email

B2B Gateways

SOA

BPM

Web 2.0   Integration Brokers

VANs

Web Services

Managed File Transfer

Physical Media

Legacy EDI

FTP

Instant Messaging
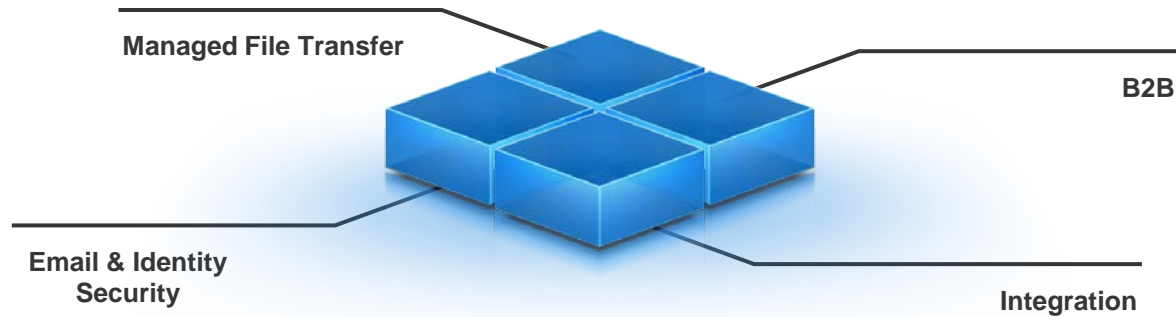
Interactions are built upon an array of fragmented silos,
systems and processes

Introducing Axway

Axway Business Interaction Networks holistically address the complete enterprise community

Managed File Transfer

B2B

Email & Identity Security

Integration

And our solutions manage, secure and optimize business-critical transactions…down to the very last mile

Complete Governance & Convergence

Managed File Transfer

B2B

Email & Identity Security

Integration

Visibility	Policy	Community
Start-to-finish visibility & audit-trails into transactions and communications	Protect and facilitate secure movement of high-value data while ensuring compliance and risk management	Rapidly onboard, provision and enable business relationships, communications and transactions

Flexibility

Scalable elastic technology that easily integrates into existing environments – no rip & replace

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Represented Across the Globe

11,000+ customers	1,600+ employees	Leaders in key industries	Award-winning products

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Selected Axway Customers by Industry

- *80% of US healthcare distributors*
- *19 of top 20 pharma manufacturers*
- *Washington and Connecticut State HIE's*
- *Asia's major Single Windows (Hong Kong , Malaysia, Indonesia; China; Thailand)*
- *11 of the world's top 25 container ports including Shanghai (#1), and 28 E-Ports in China,*
- *World's largest Air Cargo terminal*
- *4 of top 5 global logistics providers*
- *Over 60% of world's top 100 auto parts suppliers*
- *47% of Global 500 financial services / e-payment gateways –* e.g. STET clearing and settlement services for 500+ financial institutions; 13 billion transactions p.a. (€5.1 trillion) - 48% of payment transactions cleared in Europe.

Health Information Exchanges

Connected Communities / Sustainable Operations

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Context of Health Information Exchanges
(1/2)

- Ageing Population
  - Less "workers" to fund the "aged"
  - More likelihood of illness as we age

- Health Care Costs Rising
  - For Governments
  - For People

  - Concern on Quality of Care

- Increasing Scarcity of Care Givers and "Resources"

  ➢ **Drive for**
    - *Efficiency,*
    - *Higher Quality Care*
    - *Reduced Costs*

Context of Health Information Exchanges
(2/2)

- Share (Personal / Patient) Health Records between healthcare providers

  - Reduce administration costs inherent in "paper"

  - Improve "quality" of care through timely, comprehensive health records (e.g. allergies, results of past tests etc)

  - Reduce costs through reduced redundant or duplicate tests and reduced medication errors

  - Facilitate more efficient use of scarce skills and other resources

- Example Care Sectors

  - *Cancer Care*

  - *Cardiac Care*

  - *Pre-natal to childhood (child and mother)*

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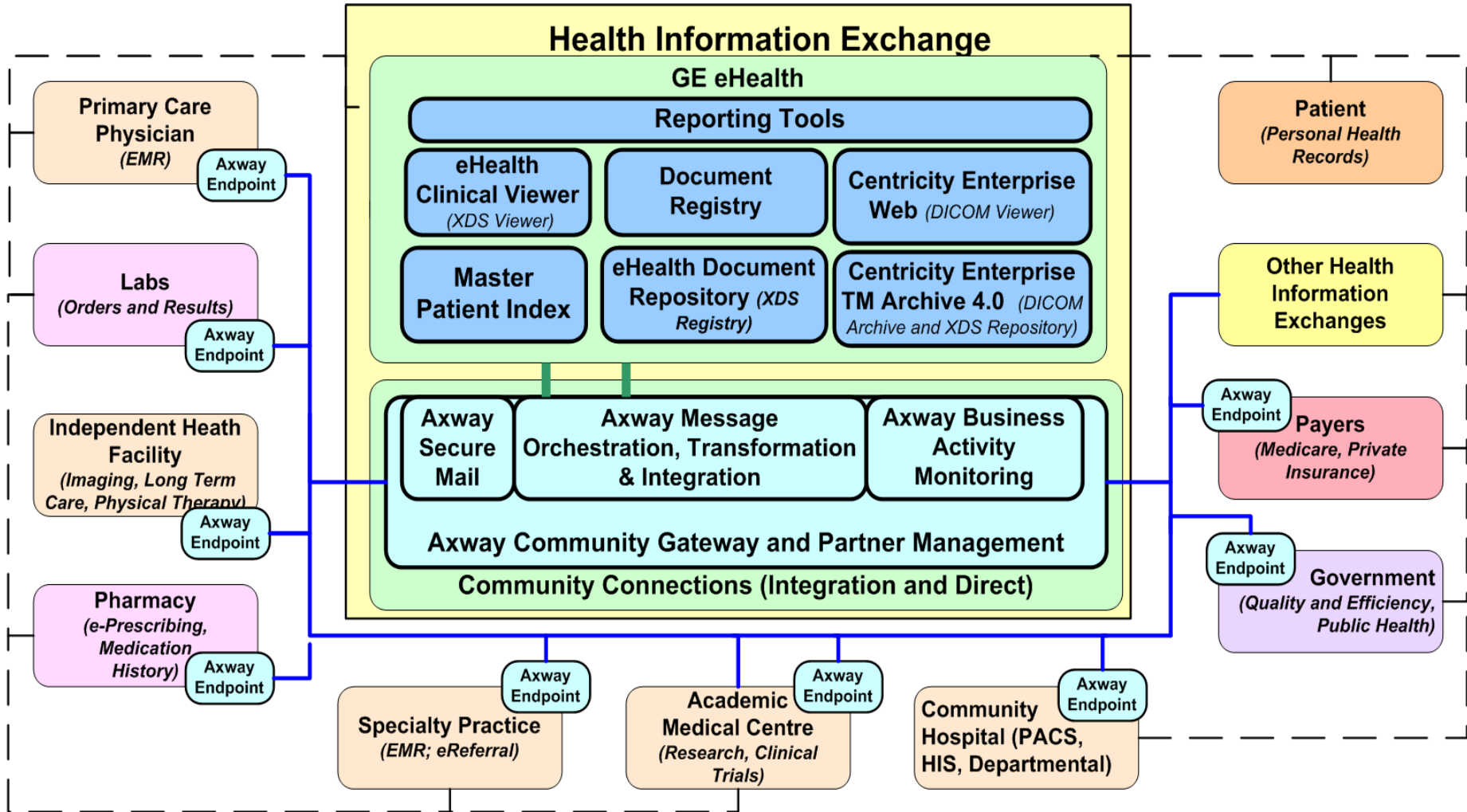
Key Requirements
Health Information Exchange

- **Secure, reliable "trusted" exchange of electronic health records (e-HR) amongst diverse healthcare community**
  - Communications with diverse communications technology and sophistication levels (Web based; email; application to application)
  - Security – encryption, digital signatures
- *Seamless* **Integration with existing and evolving core clinical / medical record systems / repositories**
  - e.g. Electronic Medical Record (EMR), Doctor's and Hospitals Clinical Management Systems (CMS), Hospital Information Systems (HIS), Picture Archive and Communications System (PACS),…
  - Any-to-any Transformation capability (e.g. HL7 V2; HLS V3; IHE profiles)
- **Central, Federated and Hybrid e-HR repositories**
  - Unique Patient identification based on various "fuzzy" identities
  - Master Patient Index and location finder
  - Secure, Consent based "community" access
- **Community Onboarding and Management**
- **Mission Critical Performance and Reliability**
- **Governance, Service Level Management and end-to-end Audit Trails**

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Health Information Exchange

Connected Communities / Sustainable Operations

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GE eHealth and Axway Health Information Exchange Architecture

Health Information Exchange

GE eHealth

Reporting Tools

eHealth Clinical Viewer *(XDS Viewer)*	Document Registry	Centricity Enterprise Web *(DICOM Viewer)*
Master Patient Index	eHealth Document Repository *(XDS Registry)*	Centricity Enterprise TM Archive 4.0 *(DICOM Archive and XDS Repository)*

Axway Secure Mail	Axway Message Orchestration, Transformation & Integration	Axway Business Activity Monitoring

Axway Community Gateway and Partner Management

Community Connections (Integration and Direct)

Primary Care Physician *(EMR)*

Axway Endpoint

Labs *(Orders and Results)*

Axway Endpoint

Independent Heath Facility *(Imaging, Long Term Care, Physical Therapy)*

Axway Endpoint

Pharmacy *(e-Prescribing, Medication History)*

Axway Endpoint

Patient *(Personal Health Records)*

Other Health Information Exchanges

Axway Endpoint

Payers *(Medicare, Private Insurance)*

Axway Endpoint

Government *(Quality and Efficiency, Public Health)*

Axway Endpoint

Specialty Practice *(EMR; eReferral)*

Axway Endpoint

Academic Medical Centre *(Research, Clinical Trials)*

Axway Endpoint

Community Hospital (PACS, HIS, Departmental)

Legend

Axway

Secure, Reliable System to System Communications; Secure Email (direct)
Partners can use Axway endpoint or own gateway software
Protocols - AS1; AS2; AS3; ebMS; MLLP; FTP/S; HTTP/S; Web Services, RNIF
Formats – HL7; CDR; CCD; EDI; XML, Database; NCPDP

Integration – between Axway and GE
Protocols – JMS; File; MQ; Web Services

Web Access to GE Portal or Community Desktop

GE

Typical business flows

- Admission, discharge, transfer summary from hospital to health plans to primary care physicians (HL7 ADT)
  - *Medication history check from a hospital or emergency room*
  - Delivery of lab results
  - *Radiology reports to physicians, clinics, hospitals*
  - Chart summary to physicians, clinics, hospitals and emergency rooms
- *E-Referrals*
- Eligibility, benefits and claim status check with insurance
- *Finding, matching patient records; provider records*
- Clinical message portal
- *Reporting to public health agencies - e.g. Immunizations and bio surveillance*

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Axway B2Bi
Connectivity HUB for Health Information Exchange

Axways B2B solution is a world class communications platform that enables the secure and reliable movement of data over the internet

- B2B supports many secure transport protocols
  - ebMS; AS1, AS2, AS3
  - Exchange of ANY type of data (HL7, CCA, CCD, IHE Profile)
  - HTTP/s, Web Services, FTP, SMTP
  - Hub technology supports content based routing
  - Supports digital certificates, SSL and TLS

- Mapping and Routing
  - Translation for HL7 v2.x, CCD, CDA and any document type
  - Mapping interface, advanced content –based routing

- Tracking and Alerting Framework
  - Tracks movement of every document
  - Alerting framework, auto resend/retry, dashboard visibility for HIE traffic
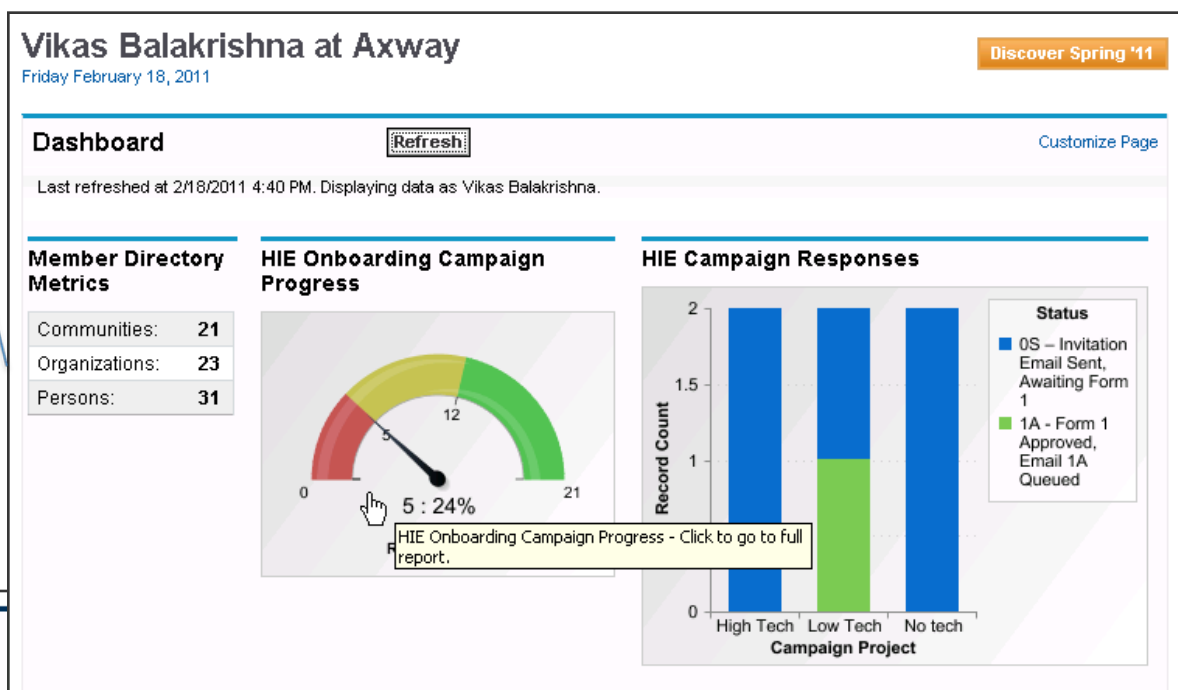
Building Communities

- Adoption *is* a critical success factor

- Axway has developed a community on-ramping tool to manage, automate, and simplify enrollment

- Key Features of Community Management:
  - Create campaigns based on End User demographics
  - Allow HIE enrollees to self register via simple web forms
  - Gather technical information needed for automating provider/user provisioning
  - Manage, track and report on HIE adoption

- In use at OneHealthPort HIE

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Axway Accelerates HIE Adoption

- ## No Tech
  - No implemented EMR or gateway technology
  - Zero-Footprint , browser-based secure web client

- ## Low Tech
  - Implemented EMR, no gateway technology
  - Automated End-point integrates with EMR

- ## High Tech
  - Implemented EMR and gateway / integration technologies
  - Direct connectivity to HIE hub

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Track Campaign Progress

Reports and dashboards provide real-time updates of HIE enrollment

Vikas Balakrishna at Axway
Friday February 18, 2011

Discover Spring '11

Dashboard   Refresh   Customize Page

Last refreshed at 2/18/2011 4:40 PM. Displaying data as Vikas Balakrishna.

Member Directory Metrics

Communities:	21
Organizations:	23
Persons:	31

HIE Onboarding Campaign Progress

0   5   12   21

5 : 24%

HIE Onboarding Campaign Progress - Click to go to full report.

HIE Campaign Responses

Record Count (0, 1, 1.5, 2)

High Tech   Low Tech   No tech
Campaign Project

Status
- 0S – Invitation Email Sent, Awaiting Form 1
- 1A - Form 1 Approved, Email 1A Queued

Recent Campaign Responses   New

Name	Campaign Project	Target	Status	Error Description
CR-00000423	High Tech	Hospital Network	0 - Invitation Email Queued	
CR-00000422	High Tech	Orthopedic Specialist	0 - Invitation Email Queued	
CR-00000421	Low Tech	C Able	0 - Invitation Email Queued	
CR-00000420	Low Tech	L Laboratory	0 - Invitation Email Queued	
CR-00000419	No tech	C Able	0S – Invitation Email Sent, Awaiting Form 1	
CR-00000418	No tech	L Laboratory	0S – Invitation Email Sent, Awaiting Form 1	

Campaigns can be targeted to select groups

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Case Studies

Axway and GE – Best of Breed - Win Connecticut State Health Information Exchange!

- **Away**
  - Prime for project and provides
    - DIRECT (Secure Email Messaging)
    - Community Management (Ramping users onto the HIE)
    - B2B gateway (Connectivity – web services, ITI transactions)
    - End-point technology (Spoke for automated movement of messages from providers/hospitals/clinics)
    - Transformation (HL7 mapping, any to any transformation, XML)
- **GE**
  - XDS Repository and Registry
  - Provider and EMPI indexes
  - Clinical Desktop Portal (view clinical data)

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One Health Port (OHP)
Health Information Exchange for Washington State
Pilot

- **Corporate Overview:**
  - Created by Healthcare Forum in Washington State
  - First funded HIE
  - $5Mil Stated Funded
  - 70 million customers
  - Growth through acquisition

- **Challenges:**
  - Proving out Meaningful Use Stage 1 (secure data exchange)
  - Governance
  - Platform integration with Electronic Medical / Patient Records
  - Sustainability for business and market readiness
  - Knowledge of systems/technology reliant on 3rd party consultants

- **Goals:**
  - Phased approach with initial focus of the HUB "Thin-Layer Model"
  - One place to connect to all trading partners – Admin/Clinical
  - Common contract, info sharing agreement, security policy
  - Consolidated tracking and governance framework

- **Solution:**
  - **Synchrony Gateway (B2Bi), Axway Community Management (HIE), and Sentinel for Governance**
  - Proactive monitoring of B2B transaction processing
  - Graphical verification of file receipt to disposition
  - Integration to existing platform as standard collaborative commerce infrastructure

Provider Founders — The Everett Clinic, Providence Health System, HealthServicesNW, SWEDISH

Plan Founders — Regence BlueShield, PREMERA Blue Cross, GroupHealth Cooperative, First Choice Health

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Catholic Healthcare West Use Case

Catholic Healthcare West

- **Corporate Overview:**
  - CHW is the fifth largest hospital system in the nation
  - 2nd largest not-for-profit hospital provider
  - Awarded more than $3.3M in grants to non-profit organizations across Arizona, California and Nevada

- **Challenges:**
  - 200+ Different EMR/HER Interfaces (Disparate/Legacy Systems)
  - Long Partner Provisioning Timeframes
  - Complexity Increases w/ Compliance Requirements
    - HIPAA, HITECH, Meaningful Use Stage 1
  - Support critical apps sending 1K+ files daily with custom code, scripts, legacy FTP.
  - IT outsourced to Perot Systems (3rd party management)

- **Goals:**
  - Extend existing Enterprise Application Integration (EAI) platform.
  - Achieve "Meaningful-Use" (HITECH payments) and compliance with laws (HIPAA)
  - Secure PHI in motion and at rest and mitigate risk of data breach
  - File lifecycle "Visibility and Tracking" (reduce audit times and troubleshooting)
  - Enabling faster on-boarding and secure data sharing among partners (community)
  - Integrating and automating information exchange between separate EHR/EMRs
  - Standardization & Governance (gateway consolidation)
  - Standardized system for easier on-going management and outsource flexibility

- **Solution:**
  - **Synchrony Gateway (B2Bi), MFT and Sentinel**
  - Proactive monitoring of B2B transaction processing
  - Integration to existing platform as standard collaborative commerce infrastructure
  - Multiple dashboard views and compliance tracking thru Sentinel

Catholic Healthcare West

HQ: San Francisco

Primary IT Operations: Phoenix

Hospitals: 41

Employees: 50 K

Physicians: 9,700

Locations: 150

Acute Care Beds: 8,700

Skilled Nursing Beds: 1000

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Catholic Healthcare West Challenge: Information Exchange Complexity

- ❑ Financials
- ❑ Registration
  - ❑ HIM
  - ❑ Billing
- ❑ Orders & Results
  - ❑ Lab
- ❑ Pharmacy
- ❑ Radiology
  - ❑ PACS
  - ❑ Surgical
- ❑ Emergency
  - ❑ Cardiac
  - ❑ Clinical Documentation
  - ❑ Dietary

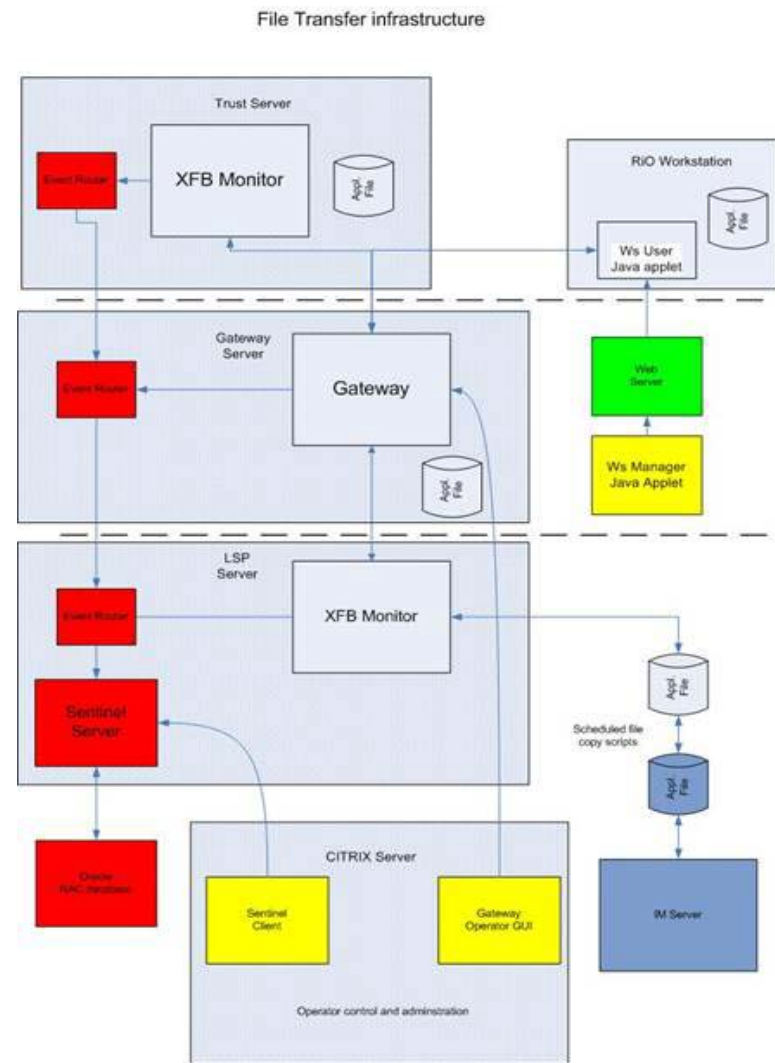Complexity Increases with Compliance

To provide high-quality patient care, CHW has hundreds of applications, connected by thousands of interfaces.

The increasing regulatory requirements around data security and data privacy, along with the need to improve operational efficiencies, have increased the requirements and expectations on enterprise file transfer requirements.

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UK- National Health Service

Axway powers
UK National Health Service Spine

- **Enables the exchange of health records throughout the UK**

- ***One of the world's oldest and most mature health information exchanges***

- **Axway underpins both the North and South System Integrators (British Telecom; CSC)**

File Transfer infrastructure

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Summary

Key Axway Value

Economic
- **Start Anywhere, Use Anything**
- *Reduce costs – single B2B architecture*
- **Leverage legacy infrastructure**
- *Reduce costs of provisioning, configuration, change management*

Community
- **Committed Service Levels**
- *Improve responsiveness to the business*
- **Improve customer service** through better information sharing

Compliance
- **Open Standards**
- *Comply with mandates*
- **Provide world-class security and data management**

Strategic
- **Future-proof Business Interaction Network platform**
- *Highly-secure communication channels - enables "anything"*
- **Trust**

Proven Methodology, Expertise, Technology

What Makes us Different?

MFT

B2B

Email

Visibility

Integration

Domain

Security

Community

Process

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