IBM Software Group

The Value of WebSphere Portal in the Health Care Industry

CONNECTED PATIENTS FOR
BETTER CARE AND SATISFACTION

Joe Preston

Global Portal Sales Leader,
Healthcare Industry Solutions

Common Healthcare Provider Strategic Objectives…

…Are Patient-centric

…by communicating better with patients

…by improving the patient's experience

…by empowering patients and physicians

…by freeing people to focus more on care!

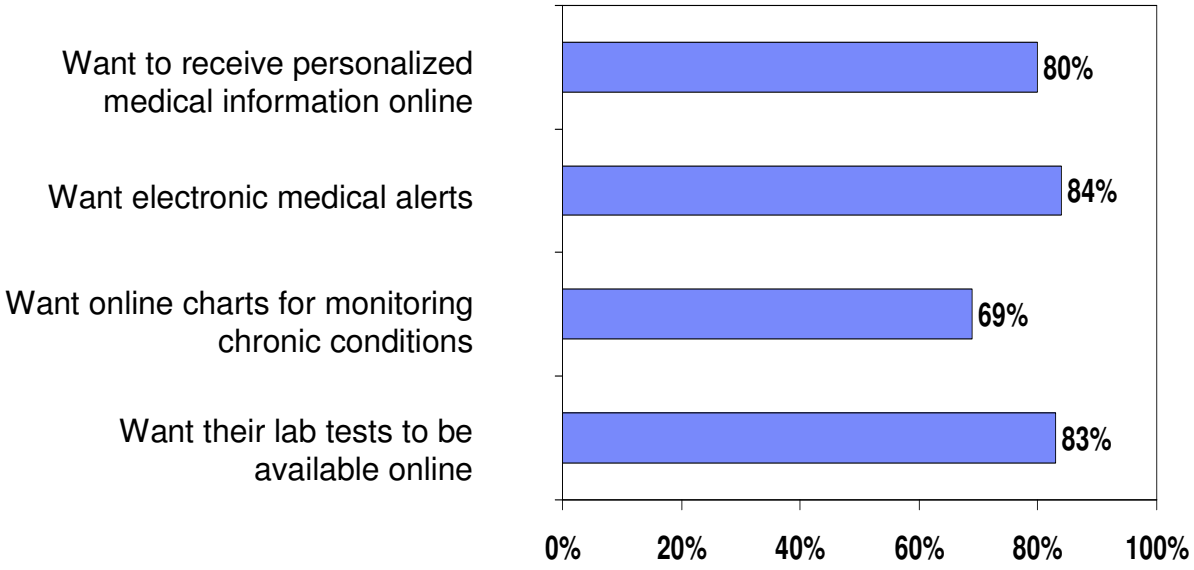
Healthcare Provider Key Business Challenges

- Clinicians need real time, integrated **actionable data** to improve outcomes and reduce medical errors
- Access to information from **multiple applications** with different interfaces and log-ins
  - Lack of **interoperability**, **flexibility** and **openness** with legacy systems
  - Reduce patient and clinical information input **redundancies**
- Drive Strong Customer Service and Awareness
  - Online bills, scheduling, & check-in
  - Automated registration
  - Personal health records
  - Account Status and on line bill payment
  - Disease management delivery supplemented by focused portal content
- Apply analytics to realize value from data, such as outcomes
- Support **point of care** collaboration with clinicians
- Reduce call center burden and **costs**

Provider Services Expectations Keep Rising

Doctors and Patients are increasingly demanding greater access to information as they attempt to manage care in real time:

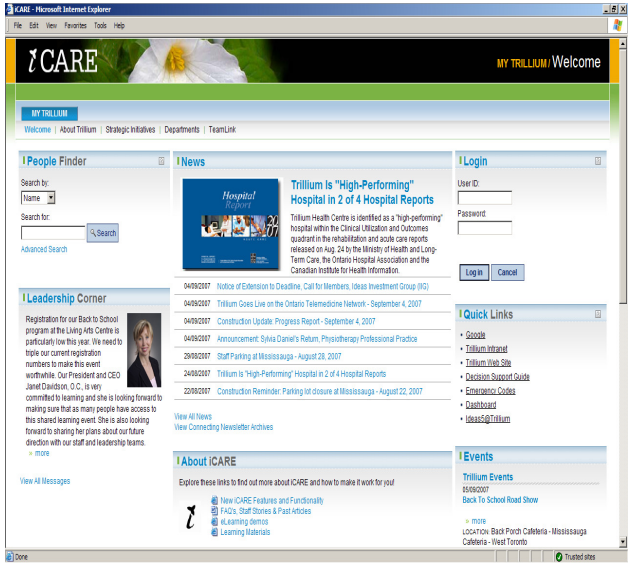
Percentage surveyed who:



Increasing need for "commercial grade tooling" to support these growing requirements

An Enterprise Portal for Patients, Employees and Physicians

Patients | **Employees** | **Clinicians**



Enterprise Portal Framework

Common Infrastructure

IBM WebSphere® Portal software

One Platform...

For Different Healthcare Composite Application Needs

Patient Portals

Physician Portals

Hospital Website/ Portals

Payer Portals

Elevate Web 2.0 Experiences

Web 2.0 + Collaboration + Social Tools

Patients Are Consumers; This Drives Expectations

- **Healthcare Savings Accounts (HSAs) are growing in popularity, giving consumers flexibility to shop for healthcare services**
- **Healthcare consumers are the same ones that can pay their phone, utility, car, and mortgage bills *online*, *anytime***
  - The Internet is the primary place consumers turn to for information, service requests, bill paying and questions/correspondence
    - *Banking & Insurance*
    - *Travel*
    - *Shopping*
    - *Utilities*
    - *Government*
    - *Education*
- **Millions of consumers research medical information on the Internet every day…*but can't schedule a medical appointment or pay a bill online***

Adopting the successful consumer-driven strategies of other industries is a must for every healthcare-delivery provider. Those that adopt and deliver upon this strategy, stand to ***increase patient loyalty & patient satisfaction; realize improved overall performance; and compete more effectively.***

Types of Portals Are Healthcare Organizations Implementing

Providers -- hospitals, independent facilities & clinics, integrated delivery networks

Patient Portal

Online bills, scheduling, & check-in
Personal health records
Automated registration
Disease mgt delivery
Marketing

Clinical Portal

Clinical information & context
Collaboration
Automated referrals
Patient profile view

Operational Portal

HR functions
Dashboards
Facility views
Compliance
Alerts

Top sparkler: "Over 50 hospital systems and major healthcare providers worldwide rely on WebSphere Portal, including Duke Medical, Mayo, Kaiser-Permanente, Catholic Healthcare West, & Sweden's eHealth system"

Payers -- medical insurers, government & other single-payer programs

Member Portal

Personalized plan & payment info
Trusted health content
Provider directory

Provider Portal

Claims processing
Data access

Employer Portal

Reports
Eligibility management
HR support

Broker Portal

Customized product info
Commission calculation
Member data

Top sparkler: "4 out of the top 5 private US health insurers as well as Blue Cross Blue Shield providers in 22 US states rely on WebSphere Portal"

The Patient Portal Is A Compelling Starting Point
What Can It Do?

- **Increase Patient Loyalty & Satisfaction**
  - Patients are consumers and as such have an expectation to be able to do *everything* via the Web – including manage their healthcare
- **Help Providers Compete Better**
  - HSAs and other factors are allowing patients to shop for healthcare; how easy is it for current and prospective patients to do business with you?
- **Decrease Costs & Improve Efficiency**
  - Reduce call center and staff burden by allowing patients to schedule appoints, pay bills and obtain answers online
  - Reduce or eliminate paper-based forms processing (manual recording, entry, filing and maintenance of forms)

IBM® Healthcare Accelerator

Patient Portal Package for Healthcare Providers

- **Increase Patient Loyalty**
  - *Via easily accessed services & information*
- **Improve Patient Satisfaction**
  - *Via anytime access to appointments, payments, medical records, etc.*
- **Increase Operational Efficiency**
  - *By empowering the patient to perform transactions directly*
- **Faster Time-to-Payment**
  - *Online payments reduce mailed payments*
  - *Can bypass a call center and manual handling*
- **Reduce Cost-to-Collect**
  - *Can eliminate paper invoices*
  - *Fewer manual touch points*
- **Single foundation investment (WebSphere Portal) to deliver multiple portals**
  - *Start with a Patient Portal; add profiles and capabilities for Physicians, Nurses, Analysts, Employees, etc.*

IBM® Healthcare Accelerator

Deliver In-Demand, High-Value Self-Service Capabilities

Appointments

- *View*
- *Request*
- *Schedule*
- *Manage*

Payments

- *View History*
- *Submit Payment*

**Exact capabilities to be deployed are dependent upon customer-provided systems, repositories and data sources.*

IBM® Healthcare Accelerator

Provide Related Information/Services - Make the Portal a "one stop" for your Patients

Health Reference

- *Present and/or link to general healthcare resources*

Physicians & Expertise

- *Empower Patients to easily find doctors*
- *Comprehensively present services available to patients*

**Exact capabilities to be deployed are dependent upon customer-provided systems, repositories and data sources.*

IBM® Healthcare Accelerator- *Summary of All Features*

Pre-Built, Customizable, Portal Pages

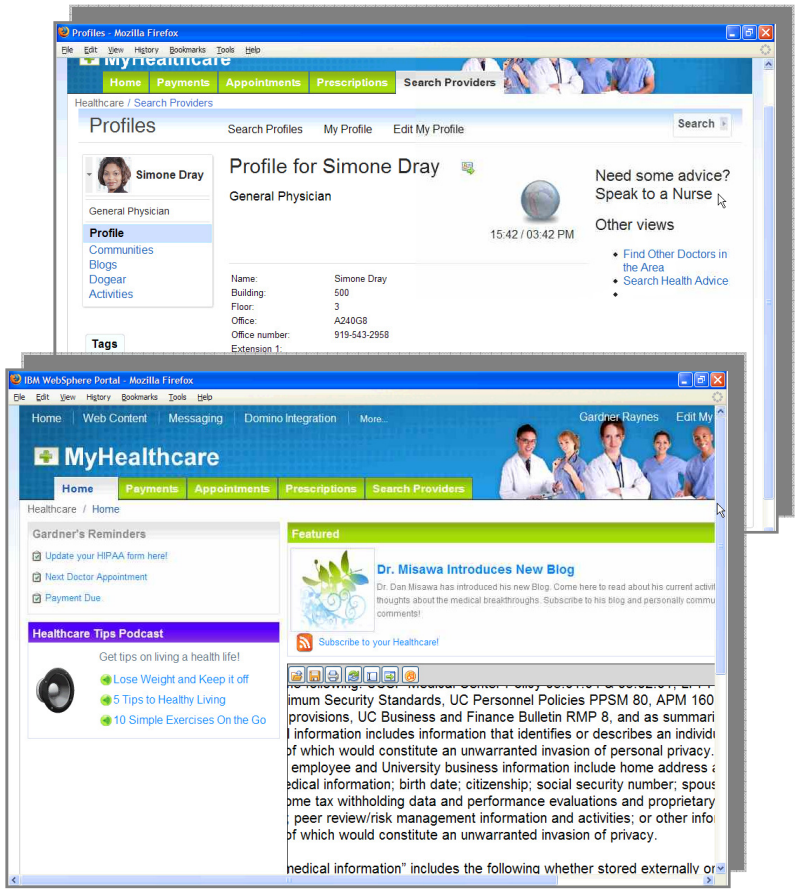
Welcome	Main greeting page contains information of general use to all patients such as "Latest News", "Upcoming Events" and "Find a Doctor".
Medical Services	Content page summarizing the services provided by the hospital
Find A Doctor	Content page listing Physicians by specialty
Patient & Visitors	Content page of information pertinent to patients & visitors to the hospital
News & Events	Content page with latest news & events summary portlets
Health A - Z	Content page with sample health encyclopedia articles
Related Web Sites	Content page with links to other pertinent healthcare sites/resources
Appointments	View, Schedule and request upcoming appointments.
Clinical	Page that may be used to present allergy information
Payments	View past payments and submit a payment.
Profile	Create/update general patient information.
Settings & Preferences	Page with tools for users to manage their preferences including passwords and security questions.
Maps & Directions	Page intended to display driving directions and maps.
Phone Directory	Page with list of all pertinent telephone numbers.
About Us	Page providing overview of the hospital

**Exact capabilities to be deployed are dependent upon customer-provided systems, repositories and data sources.*

Consider Adding Online Provider-Patient Collaboration

Virtual Office Visits Reduce Costs & Further Increase Patient Satisfaction

- **Find-A-Doctor "Profiles"**
  - Supercharge "find a doctor" to include detailed physician information from online profiles
- **Provider "Blogs"**
  - Latest medical news, tips and information from doctors, nurses, specialists to the broad community
- **"Ask-A-Nurse" (or doctor/specialist)**
  - Real-time instant messaging
- **Web Conferences**
  - Preventative care: Health, Nutrition, Diet, Exercise, etc.



WebSphere Portal Case Study: Duke Medicine

Patient Portal Increases Patient Satisfaction, Reduces Costs

- **Duke Medicine** provides a complete range of medical and surgical specialties to meet patient needs across several academic and community facilities in the central North Carolina (US) area
- **Duke Medicine is a consortium of:**
  - Duke University Health System
  - Duke University School of Medicine
  - Duke University School of Nursing
- **Of these, Duke University Health System is the largest, with:**
  - $1.7 billion in annual revenues
  - 12,037 full-time employees
  - 60,935 inpatients
  - 1,417,723 outpatients
  - 83,000+ annual surgical procedures

Duke Medicine - *Stated Vision*

"To transform the way we communicate and interact with our patients."

"In the process we will ***build closer relationships, increase loyalty and satisfaction, improve safety and care, and reduce costs and complexity*** *– all so that we can further our mission of care, teaching, and research."*

Duke Medicine – *Vision vs. Reality*

VISION

- Create a single, personalized and simple-to-use access and information point via the Web for our patients (and internal users, eventually)

REALITY

- Duke is a complex multi-hospital, multi-vendor, specialized-system environment.
  - Multiple billing and patient management systems
    - GE, Siemens, Meditech
  - Over 100 clinical systems
    - McKesson, Cerner, GE
- Real-time multisystem, multivendor integration is critical
  - Abstract all systems through web services (SOA)
- Comprehensive solution critical for full vision
  - Portal, content management, eForms, collaboration, workflow directory services, development tools.

Duke Medicine – *Business Benefits*

Increased Revenue via Online Payments

- ≈$1.2M in billings collected via Web in year 1 (≈18% increase over non-Web method)
- **≈$216,000 increase in revenue** (due to avoidance/reduction of lost bills & missed payments)

Reduced Burden on Call Center Operations

- 20,000 calls typical in 4 peak months
- **50% reduction in calls during peak months after portal implementation**
  - Frees up time, allowing call center staff to focus on more value-added questions
- **≈$200,000 annual net savings** (assumes the fully loaded cost to handle each call is $20)

Reduced Cost to Collect

- **≈82% cost savings per collection** (≈$6 cost-to-collect via Web versus $33 for manual method)
- **≈$10,800 annual net savings** (per every 10,000 collections)

Table 7: Total Benefits

Benefit	Year 1	Year 2	Year 3	Total	Present value
Increased revenue from Web-based channel	$216,000	$216,000	$216,000	$648,000	$537,160
Reduced burden on call center operations	$200,000	$200,000	$200,000	$600,000	$497,370
Reduced cost to collect	$10,800	$10,800	$10,800	$32,400	$26,858
Total savings	$426,800	$426,800	$426,800	$1,280,400	$1,061,388

Source: Forrester Research, Inc.

Source:
The Total Economic Impact Of IBM Patient Portal Powered By WebSphere
Published by Forrester Research, October 2007
http://t1d.www-03.cacheibm.com/industries/healthcare/doc/content/bin/hc_tei_of_ibm_patient_portal.pdf

Duke Medicine – *Return on Investment (ROI)*

- Duke's estimated break-even (payback) point is **1.68 to 2.17 years**
- "Organizations may also realize more significant, albeit long-term, benefits in the form of ***increased patient satisfaction*** *and* ***higher retention rates*** and ***an improvement in the quality of data*** through consolidation across corporate silos."

Table 1: Customer Organization ROI, Original And Risk-Adjusted

	Original	Risk-adjusted
Total cost (PV)	$785,995	$867,663
Total savings (PV)	$1,061,388	$965,562
Net impact (PV)	$275,393	$97,899
ROI	35%	11%
NPV	$275,393	$97,899
IRR	40%	20%
Payback (years)	1.68	2.17

Source: Forrester Research, Inc.

Source:
The Total Economic Impact Of IBM Patient Portal Powered By WebSphere
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Duke Medicine – *IT Benefits*

- Duke's portal connects exclusively to the back ends via SOA Web services
- Using SOA, Duke saved time and effort by leveraging prepackaged portal functionality, rapid application development tools, as a framework for managing user access and Web services support*
- Using Web services as the universal adapter for legacy custom-built and vendor provided applications and the new portal technology reduced the programming complexity*
- Technology was used to hide IT complexity. The approach of creating a single portal across multiple applications enabled Duke users, consumers and eventually referring physicians to see a single user interface and a consistent view of the data and business logic, even though they are accessing information from multiple applications sold by different vendors and running in widely varying environments*

*Even though this project touches many applications, the **IT staff finds itself able to add the functionality faster than the users can absorb it.** This is a reversal of the typical condition in healthcare organizations, where IT development bandwidth is the rate-limiting step in improving user processes. Furthermore, the ability to take the project in small bites and implement rapidly helped to minimize the danger of IT building an application that did not meet user needs.**

***Source:**
Case Study: Duke University Health System Finds Excellent Productivity Using SOA
A report by Gartner, Inc, October 2007.
http://www-03.ibm.com/industries/ca/en/healthcare/files/gartner_report-duke_u_health_sys_soa_case.pdf

Duke Medicine – *Reports & Case Studies*

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Forrester Consulting

MAKING LEADERS SUCCESSFUL EVERY DAY

Prepared for IBM Healthcare and Life Sciences
October 2007

The Total Economic Impact Of IBM Patient Portal Powered By WebSphere

Project Team
Jon Erickson, Senior Consultant
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FORRESTER

Case Study: Duke University Health System Finds Excellent Productivity Using SOA

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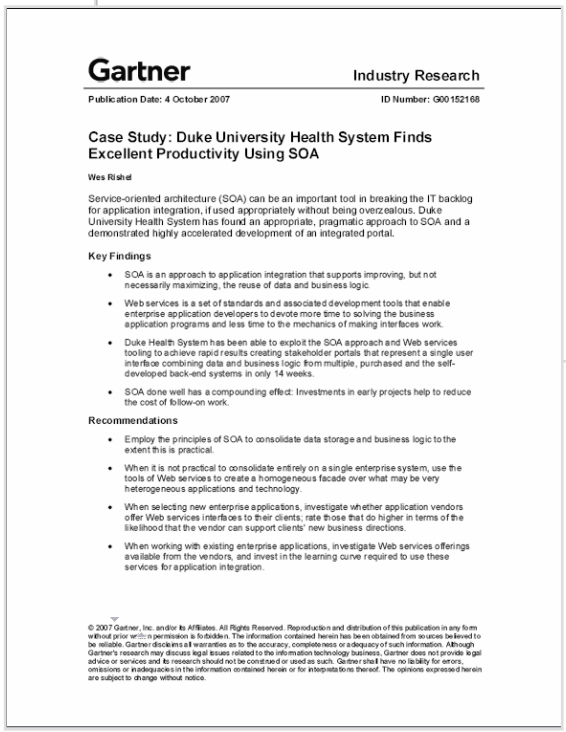


Gartner — Industry Research

Publication Date: 4 October 2007 — ID Number: G00152168

Case Study: Duke University Health System Finds Excellent Productivity Using SOA

Wes Rishel

Service-oriented architecture (SOA) can be an important tool in breaking the IT backlog for application integration, if used appropriately without being overzealous. Duke University Health System has found an appropriate, pragmatic approach to SOA and a demonstrated highly accelerated development of an integrated portal.

Key Findings

- SOA is an approach to application integration that supports improving, but not necessarily maximizing, the reuse of data and business logic.
- Web services is a set of standards and associated development tools that enable enterprise application developers to devote more time to solving the business application programs and less time to the mechanics of making interfaces work.
- Duke Health System has been able to exploit the SOA approach and Web services tooling to achieve rapid results creating stakeholder portals that represent a single user interface combining data and business logic from multiple, purchased and the self-developed back-end systems in only 14 weeks.
- SOA done well has a compounding effect: Investments in early projects help to reduce the cost of follow-on work.

Recommendations

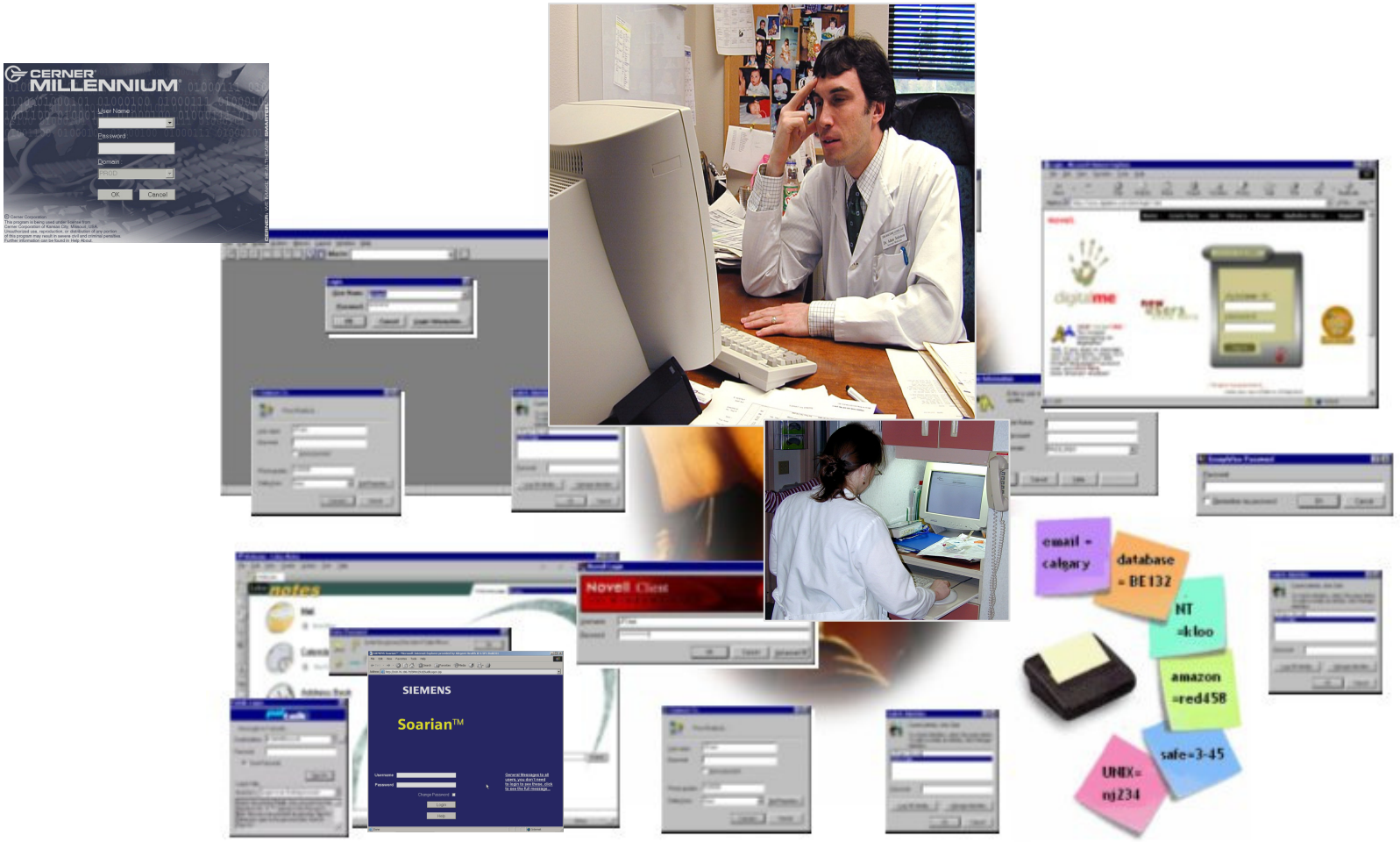
- Employ the principles of SOA to consolidate data storage and business logic to the extent this is practical.
- When it is not practical to consolidate entirely on a single enterprise system, use the tools of Web services to create a homogeneous facade over what may be very heterogeneous applications and technology.
- When selecting new enterprise applications, investigate whether application vendors offer Web services interfaces to their clients; rate those that do higher in terms of the likelihood that the vendor can support clients' new business directions.
- When working with existing enterprise applications, investigate Web services offerings available from the vendors, and invest in the learning curve required to use these services for application integration.

The Clinical Portal:

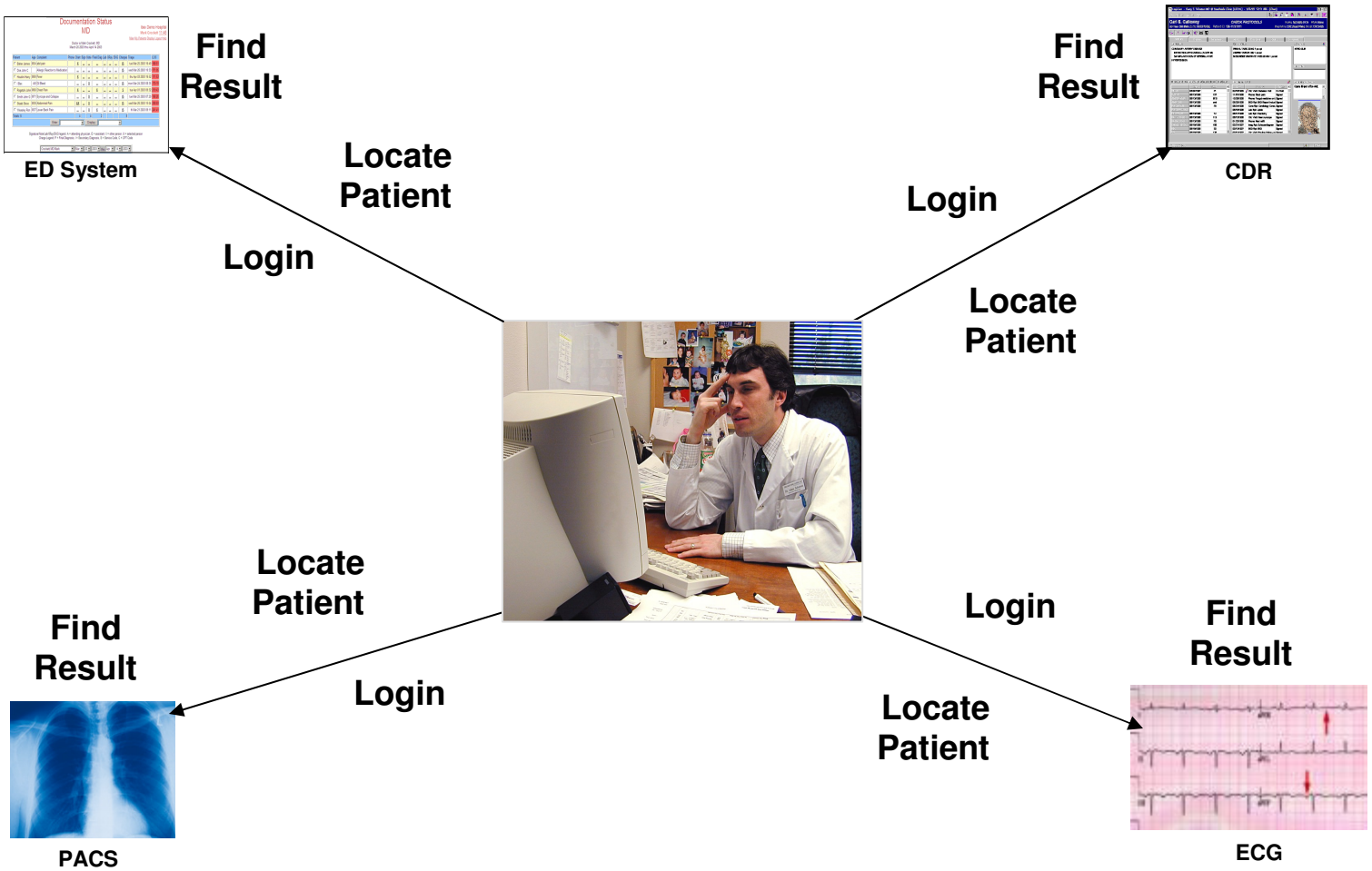
Physicians/Clinicians/Hospitalists want to devote more time to patient care and patient safety. They want a high quality, single view Portal that will:

- **Provide everything they need**
  - **on-demand**
  - **in real-time**
  - **in support of Patient Care**
  - **for continuing education**
  - **of the latest research information**
  - **for effective communication with the entire care team**

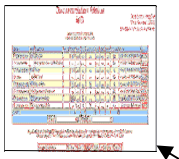
Technology “drag” on medicine



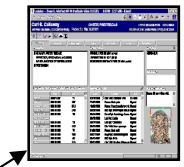
Increasing technology “drag” on clinician



The Solution



ED System



CDR Viewer

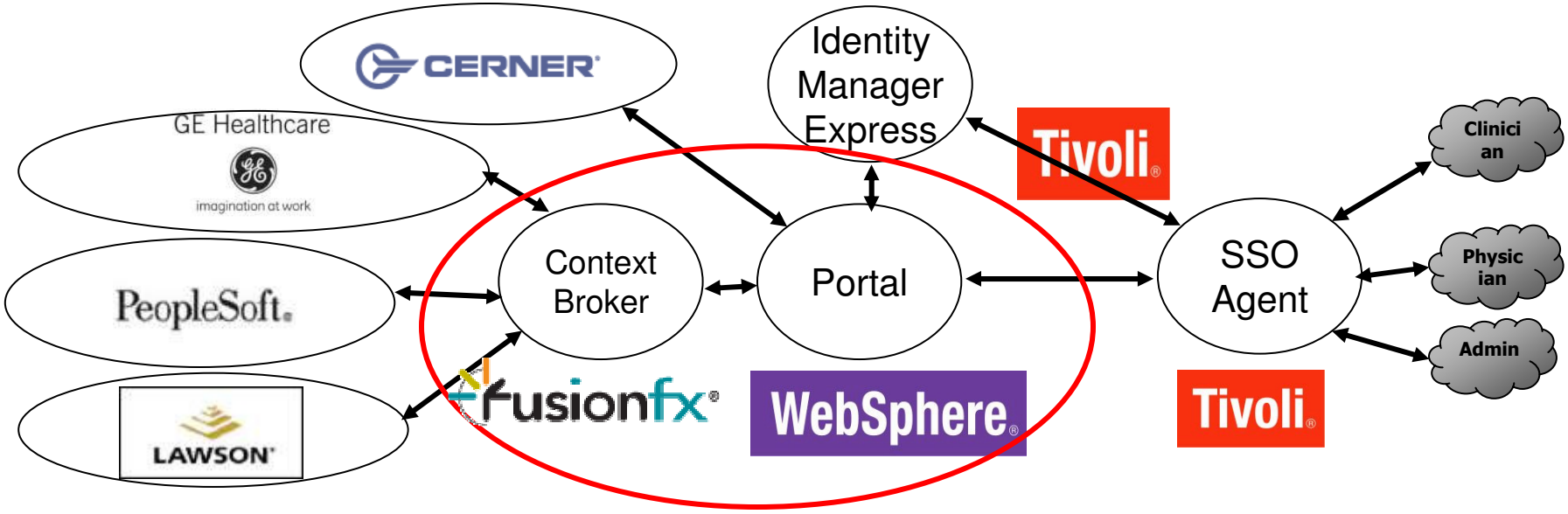
PACS Viewer

ECG

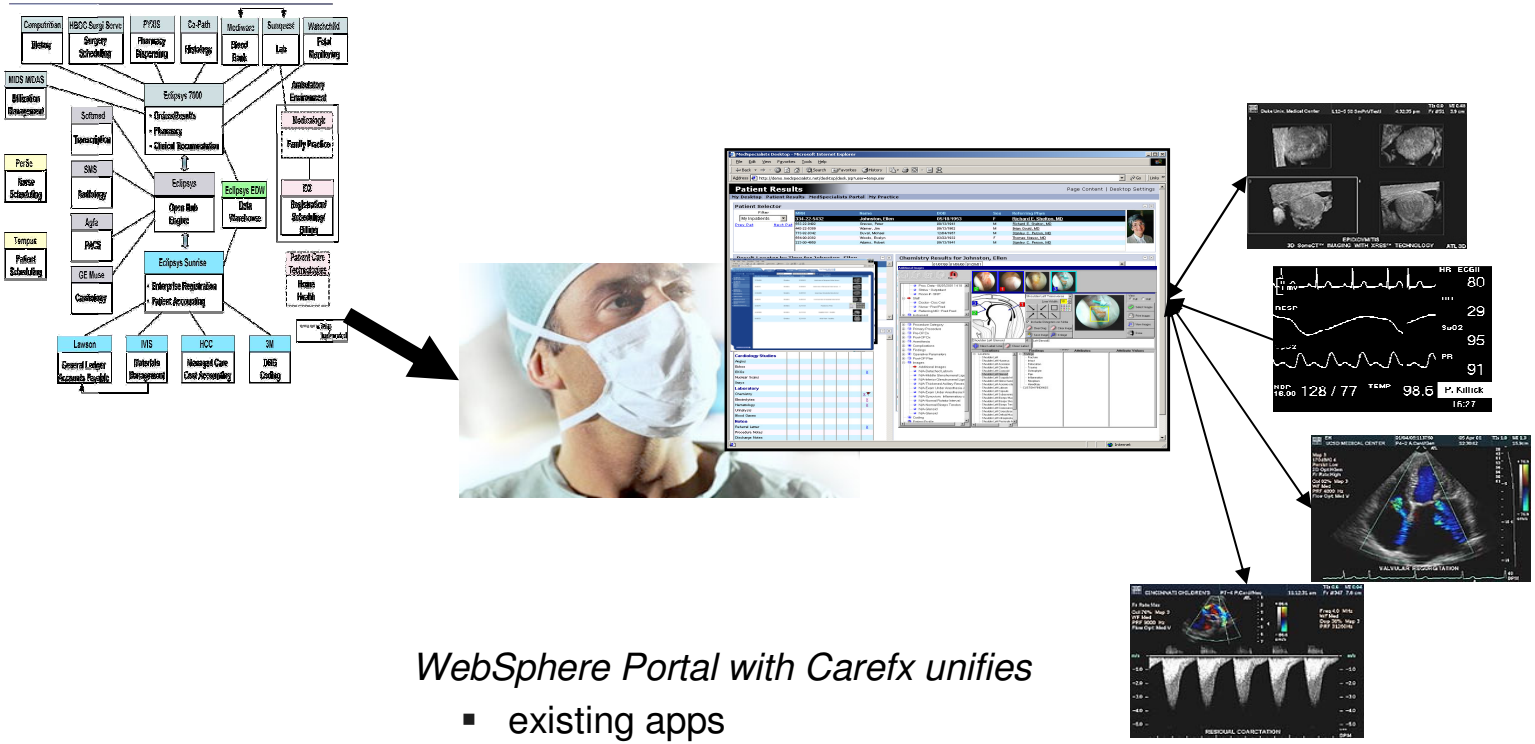
Sign-on once…
Locate patient once…
Auto-navigate to Result
Audit usage
For all applications

Portal and Context Management

- Provides consistent "content" no matter what the backend clinical system
- Providing information sources from:
  - CCOW and non-CCOW participating applications (Web Services and CCOW calls)
  - HL7 event persistent stores
  - Clinical information databases (JDBC, ODBC, etc….)
- Customized access based upon user, role, physical location
- Partner portlets for back-end systems (Meditech, Eclipsys, etc.)
- Carefx (running on WebSphere) for Context Management



Empowering Informed Decisions



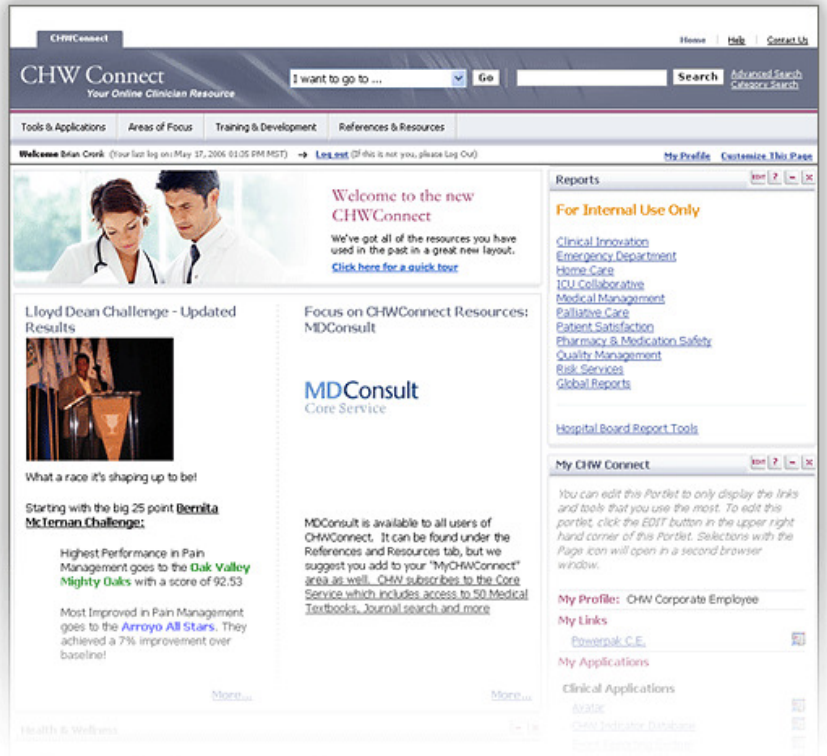
WebSphere Portal with Carefx unifies

- existing apps
- fast login
- patient data access
- application auditing

…through native and web access

Clinical Portal: Catholic Healthcare West

CHW Connect



Goals

- Areas of focus, resources, tools & applications, training & development
- Personal user preferences - role & facility
- Online community integration
- Integrated search and web content mgt
- 5,000+ users (CHW is the 7th largest healthcare provider in the US, with 40 hospitals)

Business Drivers

- Better recruit and retain clinicians and physicians
- Provide a comprehensive and efficient channel for distributing standard information

Clinical Portal Examples: Catholic Healthcare West

Catholic Healthcare West
CHW

Challenges	Solution: Combined SSO, Context Management & Portal
40,000 User Deployment of Portal, Context Management and Identity Management	
Multiple login id's, passwords and shared passwords	**Reduce number of logins from an average of 5 to 1, eliminated multiple / shared passwords**
Cerner rollout dependencies on interfaces for deployment	**Through WebSphere portal deployment, act as a bridge from legacy applications to Cerner, eliminate interfaces and reduced Cerner deployment lifecycle**
Remote access to legacy applications non-existent	**Provide Web based remote access to disparate legacy applications**
Business office process requires access to as many as 11 different applications and multiple log-ins	**Reduce the number of logins to 1 and provide context management at the account and encounter level for fast access to information**
HIM experiences multiple logins to as many as five applications for chart completion and coding	**Reduce the number of logins to 1 and provide context management at the MRN and physician level for fast access to information**

Catholic Healthcare West Testimonials (ROI):

"I'm saving 2-3 hours a day. This increases the time that I can spend with patients and increases patient satisfaction. "

—Dr. Nick Caputo, Hospitalist

"I won't need a chart ever again. I now have flow-sheets that I could never get before."

—Dr. Mahmood Shahlapour, Hospitalist

"…Our physicians are very excited."

—Dr. Terry Ambus, Chief of Staff

"This frees up nursing time because Dr's can get the information they need quickly without nursing assistance. We don't have to write down all of our passwords now… It's a big time saver."

—Joe Healey, RN, Director of Medical-Surgical Unit

What Types of Portals are Healthcare Payers Spending On?

Member Portal
- **Self service** and access to personal information
- Personalized plan & payment info
- Trusted health content
- Provider directory
- Compare Plans

Provider Portal
- Integrated and seamless access to data
- **Self service** and access to member information
- Fast, accurate processing of claims

Consumer Portal
- Compare plans
- Network information
- Provider Directory

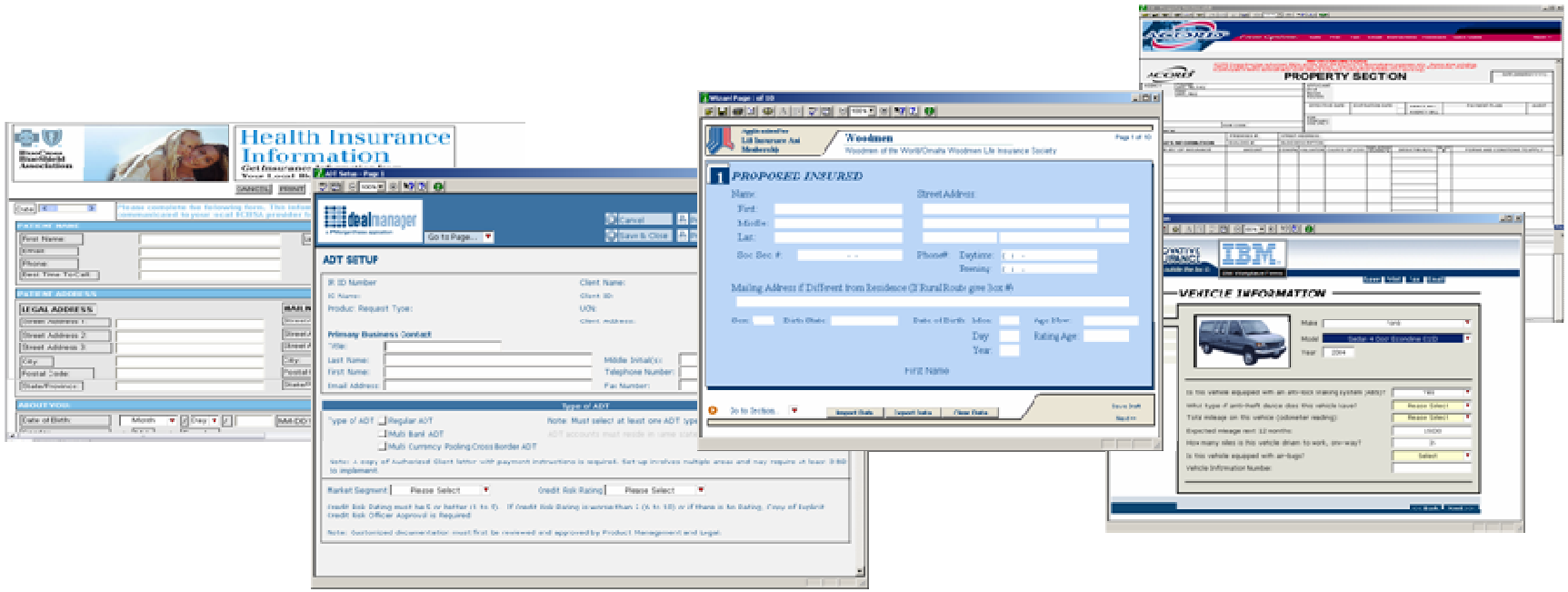
Broker/Producer Portal
- **Self Service** for simplified processes to speed enrollment and renewals
- Customized product info
- Member data
- Support for their book of business

Employer Portal
- Simplified benefits administration
- Reports and seamless access to data
- Plan eligibility management
- Health care partner links for cost management

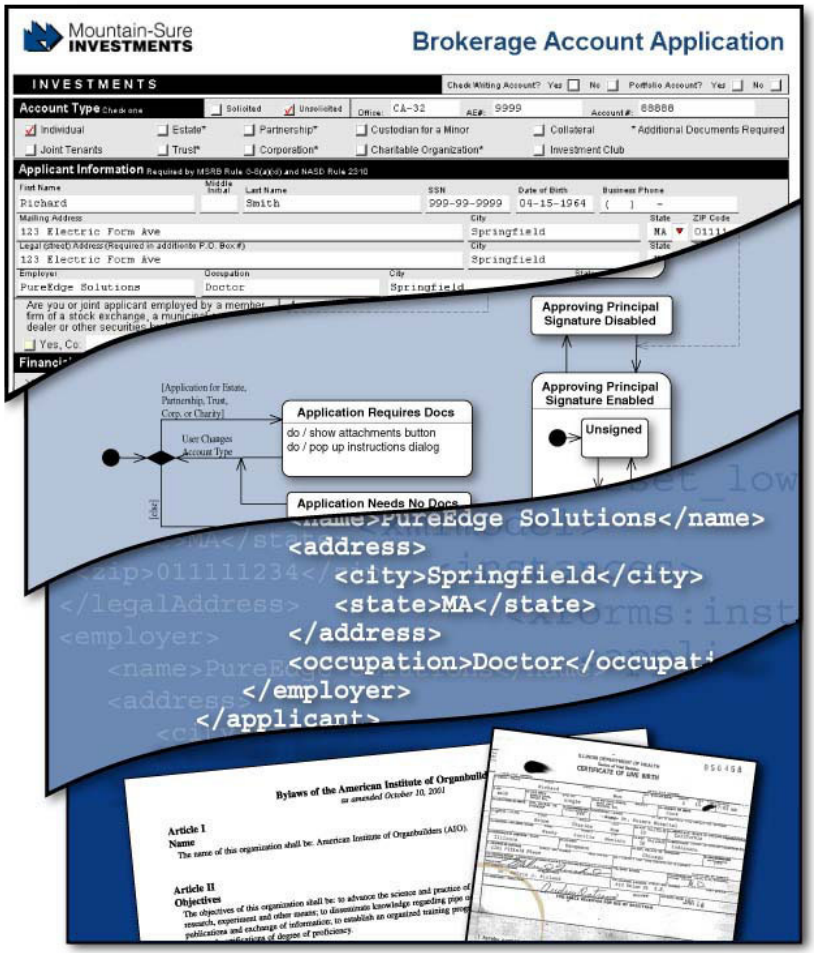
Employee Portal
- HR Self service
- Composite applications
- Fast, accurate processing of claims

What does Lotus Forms do?

- **Automates** business **processes** that are “forms-based”
- Collects data **accurately and completely**, with **straight through integration** to one or more back end systems.
- Creates an **auditable, compliant record** of a complete business transaction
- eForm solutions for **both LOB and Enterprise** (Simplest to most complex forms)



Lotus Forms: eForm Components



Presentation Layer

- Pixel-perfect for duplicating paper forms
- Guided-interview, or wizard, driven

Business Logic

- Capture forms processes in the form
- Integrate business process workflows

Data Instances

- Based on W3C XForms specification
- Multiple XML payloads for integration
- Validate against external XML Schemas

File Attachments

- Capture complete transaction
- Supplemental or associated eForms
- MS Office, videos, faxes, etc.

Lotus Forms: eForm Components

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Lotus Forms: eForm Components

Presentation Layer

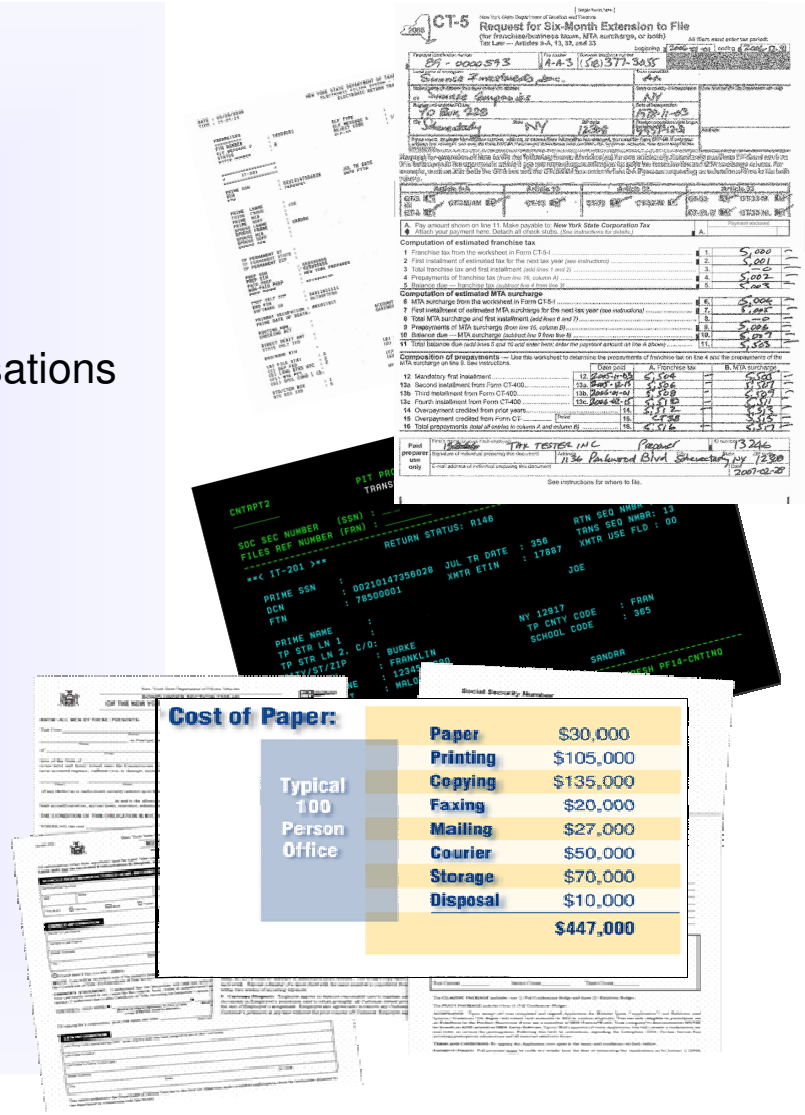
Business Logic

Data Instances

File Attachments

The Impact of eForms on paper-based Processes

- Obvious costs…
  - Paper and printing, transmission
  - Unused form disposal
  - Archival and storage costs
- ...Hidden inefficiencies that can paralyze organisations
  - Lengthy process cycles
  - Incorrect and incomplete data
  - Data re-keying
  - Physical routing time
  - Complex approval chains
  - Data aggregation across forms
  - Inaccessible data
  - Stove-pipe solutions for each process



“ Today’s economy will force decisions around IT cost cutting and optimization. There aren’t many technologies that enterprises can implement with relative ease to generate value almost immediately. But, given the costs of paper production, processing, delivery and integration…

Electronic forms will always save money, always save paper and the environment, always create more productive, happier users and always make data more accurate.

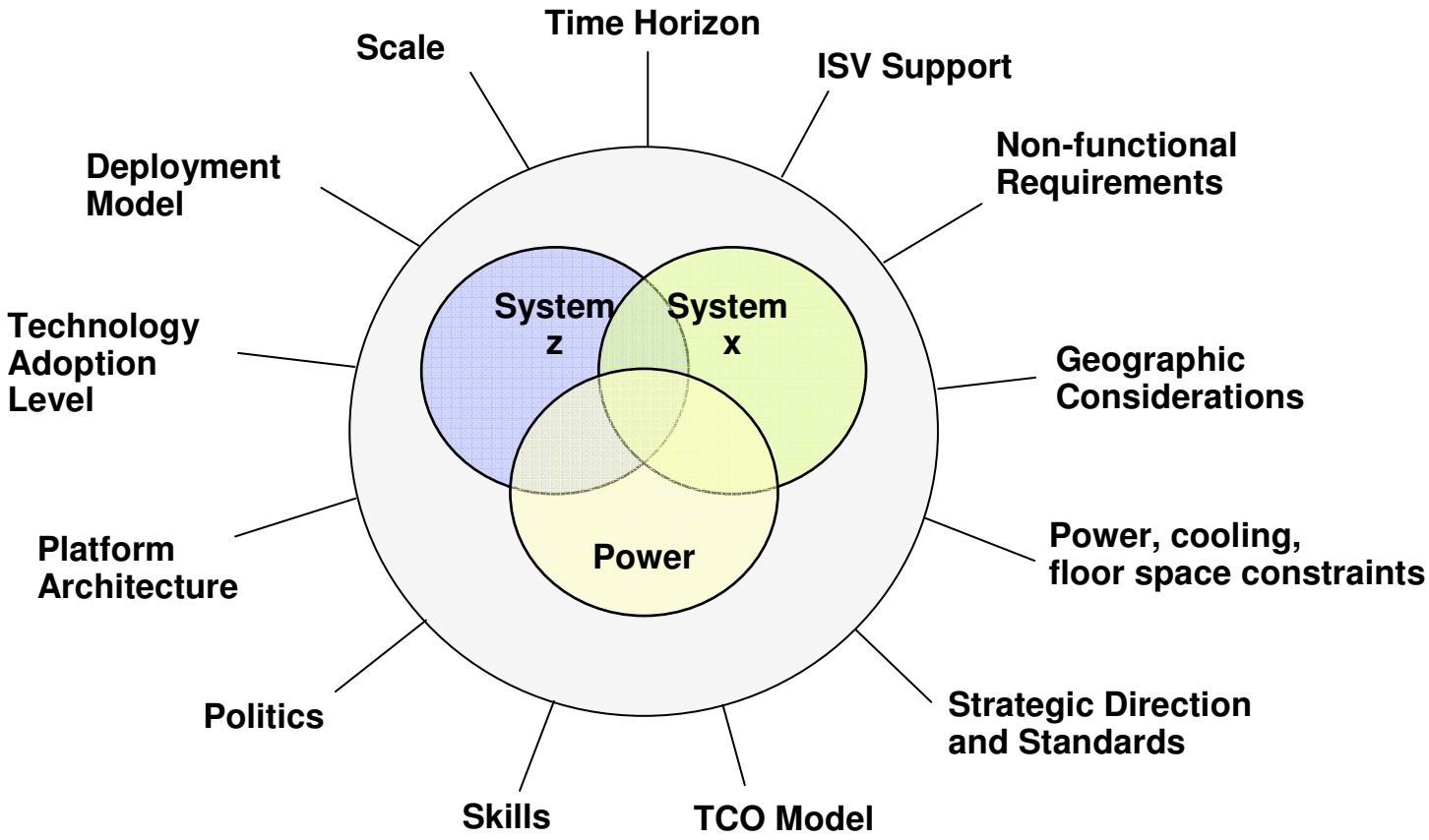
Data accuracy alone can save millions of dollars in most business processes. The world has been waiting for this technology.”

- Toby Bell, Gartner Group, November 2008

Where Should I Run WebSphere Portal?

- **Selecting a Platform and Total Cost of Ownership**
- Deployment Options
- Why System z as a Deployment Option

Selecting a Platform



There are many factors that influence platform selection making it difficult to develop a simple platform selection matrix

How do companies select a platform for their applications?

- First question is
  - “Will it run there?”
- Second question is
  - “How much does the hardware cost?”
- Done!
- But this is just a TCA view……Is that all we should be thinking about?

What did we miss? Non-Functional requirements

- Shouldn't they have asked some questions about:
  - Scalability? Availability? Backup? Site Disaster Recovery?
  - Security? Reliability? Data Integrity? Maintainability?
  - Volumes and Service Levels?
  - Space? Power? Cooling?
  - Operations? Scheduling? Monitoring? Server Management?
  - Integration? Performance and Value of Data Proximity?
- That leads us to a more complete TCO view?

Platform Selection Discussion

- Selecting a Platform and Total Cost of Ownership
- **Deployment Options**
- Why System z as a Deployment Option

System z Resiliency

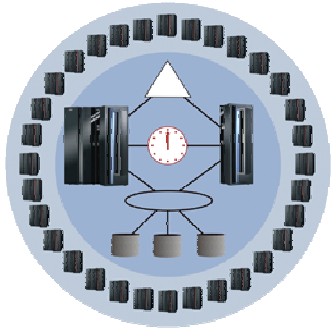
Avoiding the cost of downtime ***Maintaining productivity of users***
Ensuring access to critical applications ***Open to clients 24/7***

- Resiliency built in across the system to deliver availability at the *application level*
- Outstanding availability delivers consistent service to users
- Designed to help mitigate the risk of failure

Single System z

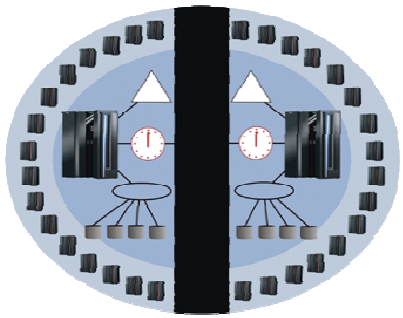
Where mean time between failure is measured in decades

Parallel Sysplex



Designed for *application* availability of 99.999%

GDPS



Industry leading solution for disaster recovery

45

WebSphere Portal on System z Options

Linux deployment: Distributed Consolidation

- ✓ Applications from multiple under utilized distributed servers
- ✓ Higher utilization than distributed servers
- ✓ Green advantages of power, cooling and floor space
- ✓ Implement multi-tier applications in a single System z for better data proximity exploiting hipersockets
- ✓ Lower TCO with IFLs
- ✓ Speedy deployment – cloning/server provisioning
- ✓ Higher QoS than distributed
- ✓ Less stringent requirements than z/OS deployment
- ✓ Alignment with distributed WebSphere family
- ✓ Unrivaled virtualization with centralized management
- ✓ No z/OS Skills
- ✓ Web Serving infrastructure consolidation
- ✓ Presentation Services
- ✓ Flexible, virtualized Test/Migration/Prototyping Platform
- ✓ ISV products not available on z/OS

Perfect for the System z customer requiring speedy deployment with less stringent QoS/integration requirements

z/OS deployment: Integration Option

- ✓ Highest QoS production environment
- ✓ Lower TCO with zAAPs
- ✓ Full exploitation of System z and z/OS
- ✓ Tight integration with DB2, CICS, IMS for chatty applications to eliminate network latency for best data and transactional proximity
- ✓ "Spikey", unpredictable workloads
- ✓ Service level agreement management
- ✓ Dynamic load balancing, prioritization
- ✓ Strict security requirements
- ✓ Highest availability, reliability, scalability
- ✓ Disaster recovery and autonomic function
- ✓ Dynamic I/O configuration
- ✓ Storage management
- ✓ Capability/tools to modernize and integrate existing System z applications
- ✓ Migrate applications from another platform that require additional scalability and integration

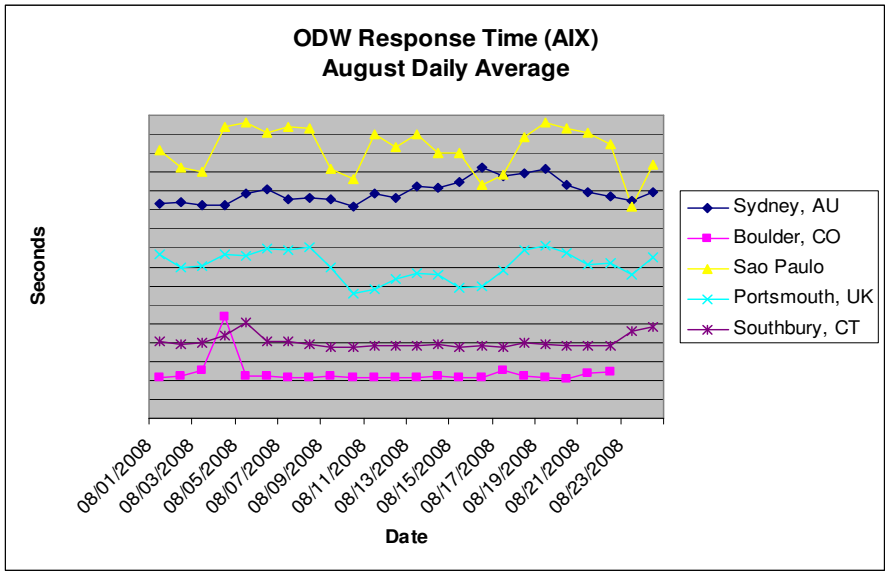
Perfect for the System z customer requiring high QoS and significant integration with CICS, IMS or DB2

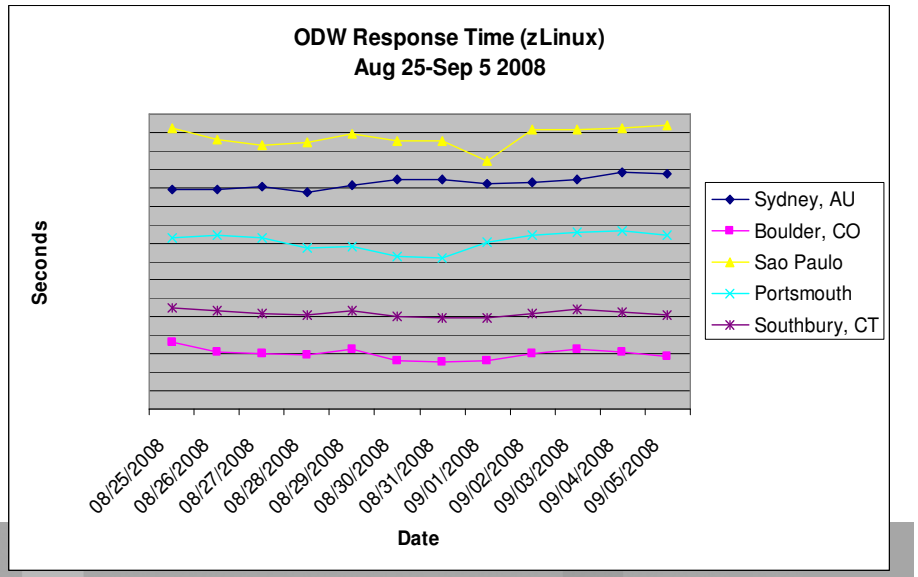
Topics for today's discussion

- Selecting a Platform and Total Cost of Ownership
- Deployment Options
- **Why System z as a Deployment Option**

IBM Case Study – WebSphere Portal on System z Benefits Realized in first month

- Performance:
  - More consistent response times on ODW
  - Average 2 seconds quicker for our BluePages application
  - Higher Utilization
- Scalability:
  - Immediate results to add CPUs to environment
    - Task completed in hours; labor cost minimal
- Go Green!
  - Energy Efficiency Certificates verify savings
  - Estimated Power savings of 119,000 MWH/yr (Approximately 9,000 Average US Homes)
- Consolidation of 3900 distributed servers to 33 System z Servers.
- Increased Availability





Summary

- Not All Hardware Platforms are created equal. When choosing a Hardware Platform, take into consideration the entire TCO picture.
- IBM System z Servers have the lowest TCO
  - Green Servers – Lower costs for energy
  - Lower Maintenance and Administration Costs
  - Best In Class Security, Scalability and Availability
- IBM Can Help you choose the right Portal Solution and Hardware Platform
  - Business Value Assessments
  - TCO Studies - Scorpion and zRace Studies

धन्यवाद
Hindi

多謝
Traditional Chinese

ขอบคุณ
Thai

Спасибо
Russian

Gracias
Spanish

Thank You
English

Dziękuję
Polish

شكرا
Arabic

Obrigado
Brazilian Portuguese

多谢
Simplified Chinese

Danke
German

Grazie
Italian

Merci
French

நன்றி
Tamil

ありがとうございました
Japanese

감사합니다
Korean