



California Department of Mental Health – IT Workgroup

eHealth & HIE: The Promise of Connectivity

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Vice President, Sales – InterComponentWare, Inc.
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Agenda

- ICW Overview
- eHealth – Definition and Benefits
- Current State
- Future State
- HIE in Practice
- Summary / Q & A



InterComponentWare, Inc. Overview



History

- Founded in 1998

Company Focus

- Integration of source systems for seamless health data exchange
- Solutions for Care and Disease Management
- Personal Health Record with controlled access for care providers and patients

Shareholder Structure

- Privately Held
- Primary Investors:
 - Dietmar Hopp (Co-founder and former CEO of SAP AG)
 - Dr. Thomas and Dr. Andreas Strüngmann (Founders of Hexal Pharmaceuticals)

Locations

- Germany: Walldorf (headquarters), Cologne, Berlin
- USA: Malvern, PA (headquarters); San Mateo, CA
- Sofia, Bulgaria; Vienna, Austria; Zurich, Switzerland

Employees

- 700+ worldwide,
 - R&D Focused
 - >50 Physicians



Global Success with Customers and Partners





eHealth Defined

eHealth refers to healthcare practice which is supported by electronic processes and communication. The term can encompass a range of services that are at the edge of medicine/healthcare and information technology:

- Electronic Medical Records
- Telemedicine
- Evidence Based Medicine
- Consumer Health Informatics
- Health Knowledge Management
- Medical Research



Benefits of eHealth

Quality of Care

- **Improve** communication among healthcare stakeholders
- **Facilitate** better decision support
- **Reduce** medical errors
- **Enhance** reporting capabilities
- **Encourage** disease prevention and wellness



Benefits of eHealth

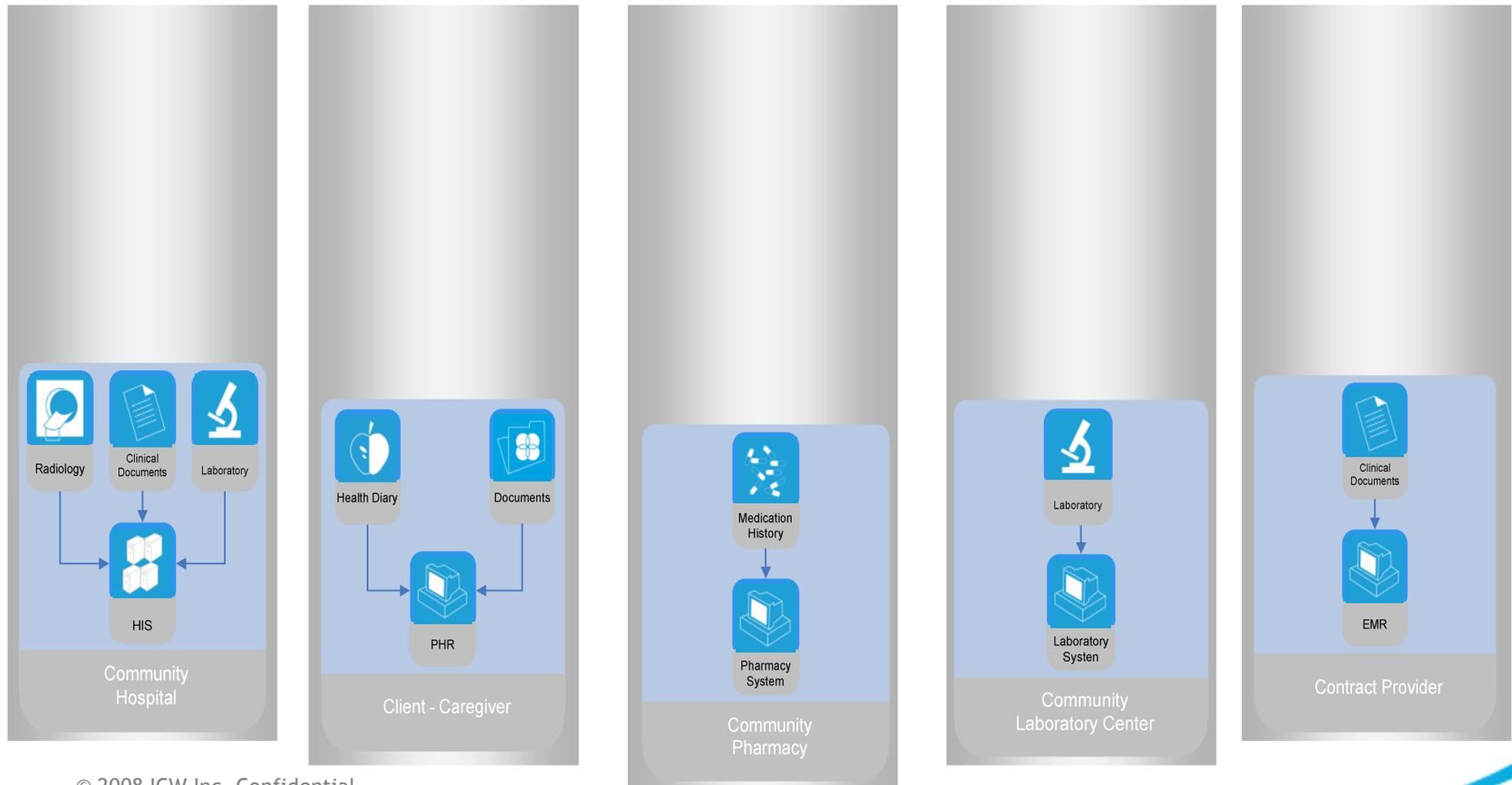
Dollars and Cents

- **Increase** revenues via better coding
- **Reduce** the administrative burden of billing and reporting
- **Eliminate** administrative costs of managing paper records
- **Minimize** duplication of lab and radiology tests

Current State: Typical County Ecosystem



In a typical county, all the data across the community resides in silos



EMRs: One Part of the Equation

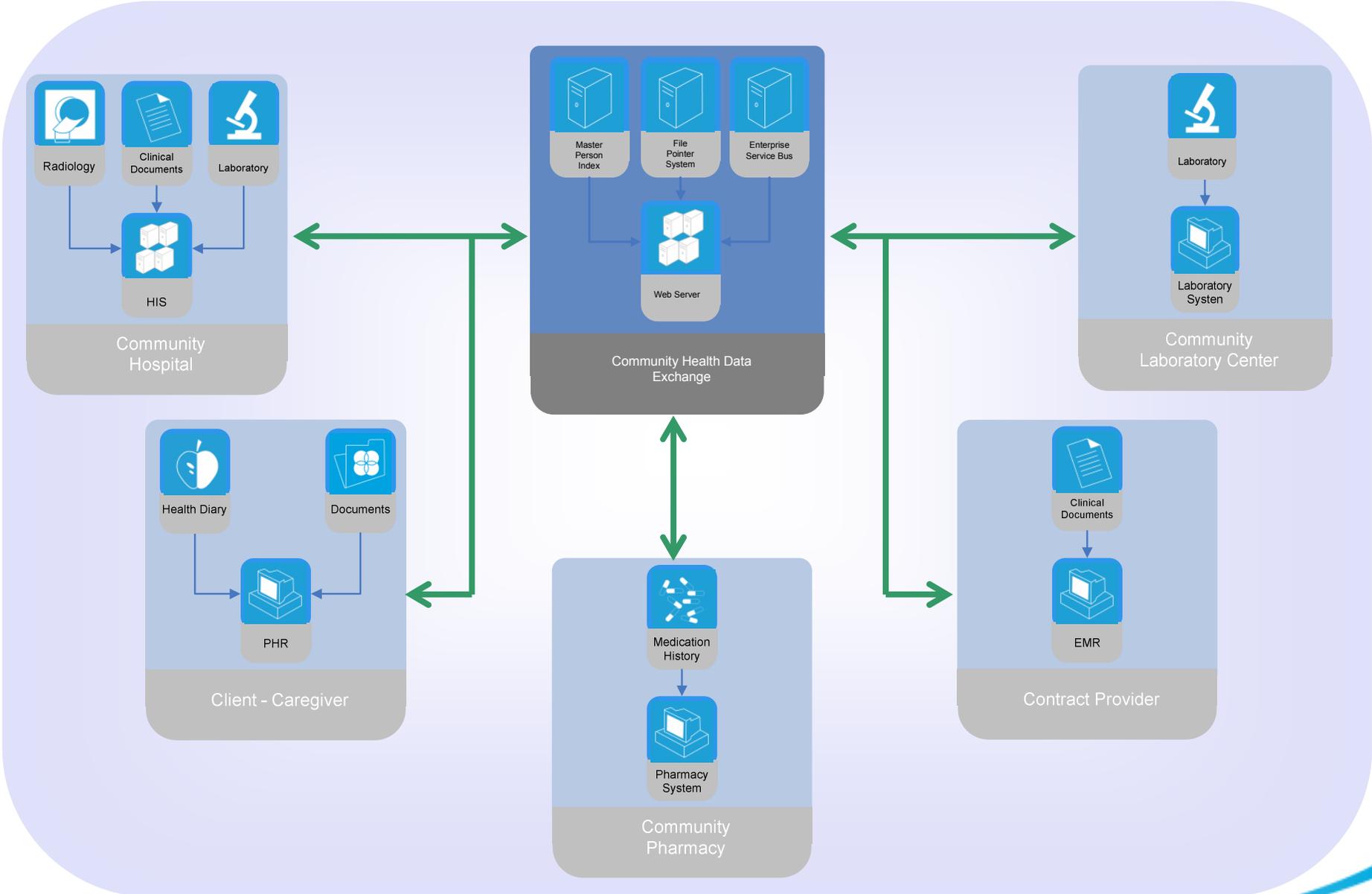


The screenshot displays the FileMed EMR software interface within a Microsoft Internet Explorer browser window. The main window title is "FileMed - Michael A. O'Donovan, MD". A menu is open, showing options like "New Patient", "Demographics", "Clinical Chart", "Images", "Network Configuration", "Export Database", "Backup", and "Exit". The "Demographics" form is the central focus, containing the following data:

Demographics				
Last Name, Maiden	First Name, MI			
Watts	Jennifer A			
Record#	Social Security #	D.O.B.		
000001	23784598	03/08/1967		
Current age	Sex	Marital St.	Occupation	Nationality
39 y.	F	MAR	Teacher	american
Insurance/Coverage	Insurance ID	Photo		
Blue Cross/Blue Shield	47815879	Add Delete Change		
Address	City	Diagnoses ICD-9CM ICD-10 Paste 11/25/2004: Allergic rhinitis Nasal polyps Acute sinusitis.		
7235 SW 48th St	Miami			
State/Province	Zip/Postal Code			
FL	33155			
Phone	Fax			
305-666-5599	305-666-5560			
Mobile/Pager	Email			
305-666-5015	jenwatts@uol.net			
Referring Physician	Attending Physician			
Dr. W. Garland	Dr. Herman Stewart			
Date of First Visit				
07/15/2004				

Buttons at the bottom of the form include "Remove Pt", "Print", "Save", and "Cancel". The status bar at the bottom of the application shows "Patient: Watts, Jennifer A", "User: Administrator", and "Version 5.1 - Multiuser © Medical Soft 1999 - 2007".

The Future State: Developing a True HIE



The End Result: A Unified View of Client Data



ICW Professional Exchange Server - List view - Mozilla Firefox

Professional Exchange Server

Change password Emergency Access Logout Help

Welcome Page | Inbox | Patient Management | Medical Record | Administration

Search Patient | Patient Info | Dashboard | Medications | Diagnosis | Procedures | Labs | Documents

You are here: Medical Record > Patient Summary

Patient Summary

Filter Search: Type: All

Date: from to (dd/mm/yyyy)

Name: Spence, Katherine DOB: 04/10/1965 Eligibility From: 01/07/2007
 Address: 1234 Pine Street Philadelphia, PA 19107 Gender: Female To: 06/30/2008
 Phone: 221-717-1117 Status: Active

Print My Dashboard Actions Back

Medications

Date	Name	Provider
08/05/2006	Enalapril 10mg	Dr. Susan Smith
09/01/2003	Carvedilol 25mg	Dr. Susan Smith
06/13/2003	Simvastatin 20mg	Dr. Peter Doe
10/26/2001	Cypro Cystitis Pack 1	Dr. Bill Robertson
03/20/1999	Metformin 850mg	Dr. Jeff Brant

Metformin 850 mg One tablet per day By Dr. Jeff Brant 03/20/1999 Discontinued

Diagnosis

Date	ICD Code	Description
04/02/2007 12:07	648.0	Diabetes Mellitus
04/02/2007 12:07	405.0	Renovascular Hypertension
04/02/2007 12:07	427.31	Atrial Fibrillation and Flutter
04/02/2007 12:07	434.1	Cerebral Infarction, unspecified
01/19/2007 11:00	272.2	Hyperlipidemia

Procedures (Surgeries)

Date	Description	Provider
11/05/2007	Upper gastrointestinal endoscopy	Dr. Peter Doe
09/06/2006	Electrophysiologic evaluation	Dr. Bill Robertson
06/19/2006	Reconstruction lateral collateral ligament, elb...	Dr. Bill Robertson
03/25/2003	Flexor origin slide for cerebral palsy	Dr. Peter Doe
10/26/2001	Insertion of implantable intra-arterial infusio...	Dr. Bill Robertson

Procedures (Radiology)

Date	Description	Provider
12/10/2007	MRI Examination of the Lumbar Spine	Dr. Bob Jones
06/16/2005	Abdomen Pelvic Ultrasound	Dr. Bob Jones
06/16/2005	Chest 2 Views	Dr. Bob Jones

Labs

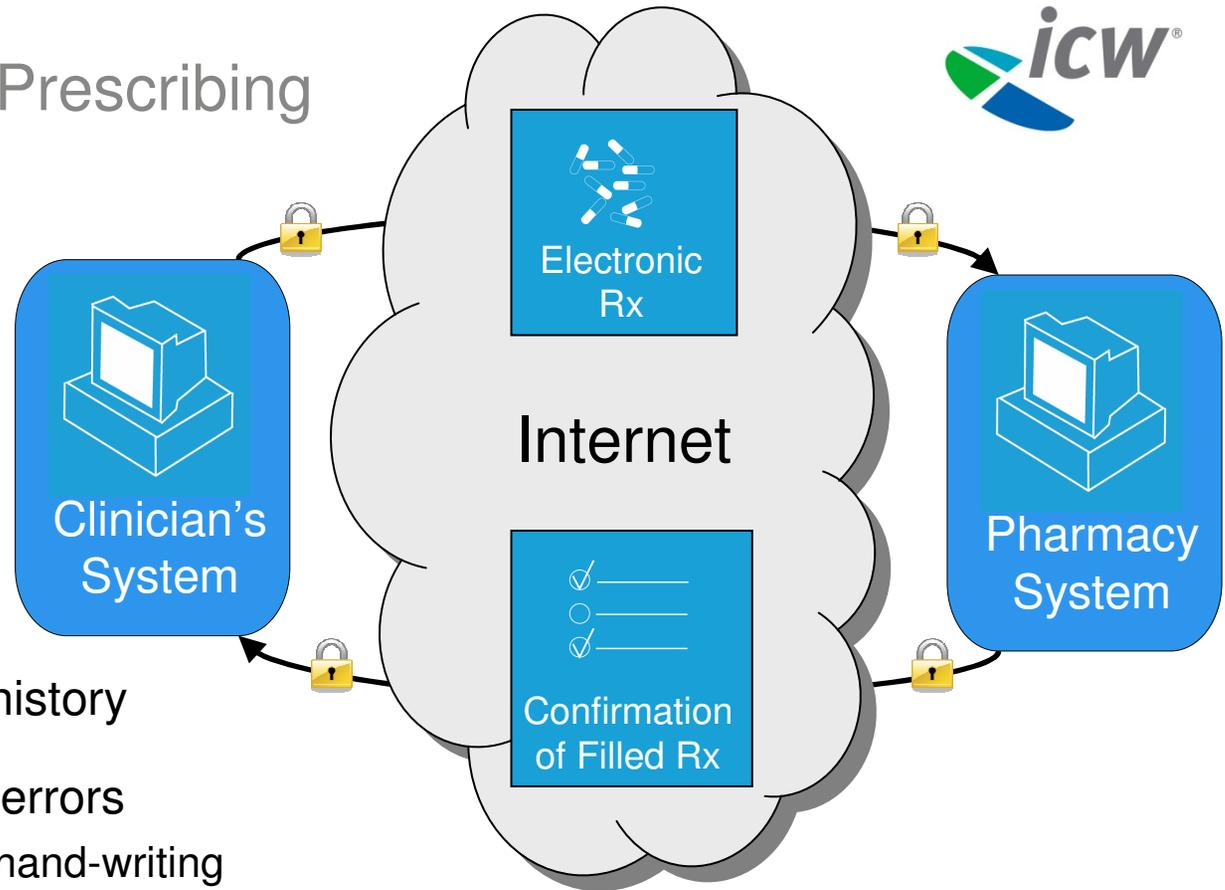
Date	Tests	Provider
04/02/2007 06:42	CBC	Dr. Tim Morningstar
04/02/2007 19:07	BCP	Dr. Robert Jones
12/16/2006 07:10	Blood Culture	Dr. Robert Jones
10/10/2006 17:52	CHEM 20	Dr. Jessica Sullivan
03/20/2005 10:19	Culture, Stool	Dr. Germain Jackson

Documents

Date	Type	Provider
11/02/2007 12:00	Transfer Note	Dr. Steven Krause
11/02/2007 11:00	Discharge Summary	Dr. Steven Krause
04/02/2007 16:35	CT	Dr. Steven Krause
04/02/2007 12:48	Progress Note	Dr. Steven Krause
04/02/2007 12:07	ECG	Dr. Steven Krause

Print My Dashboard Actions Back

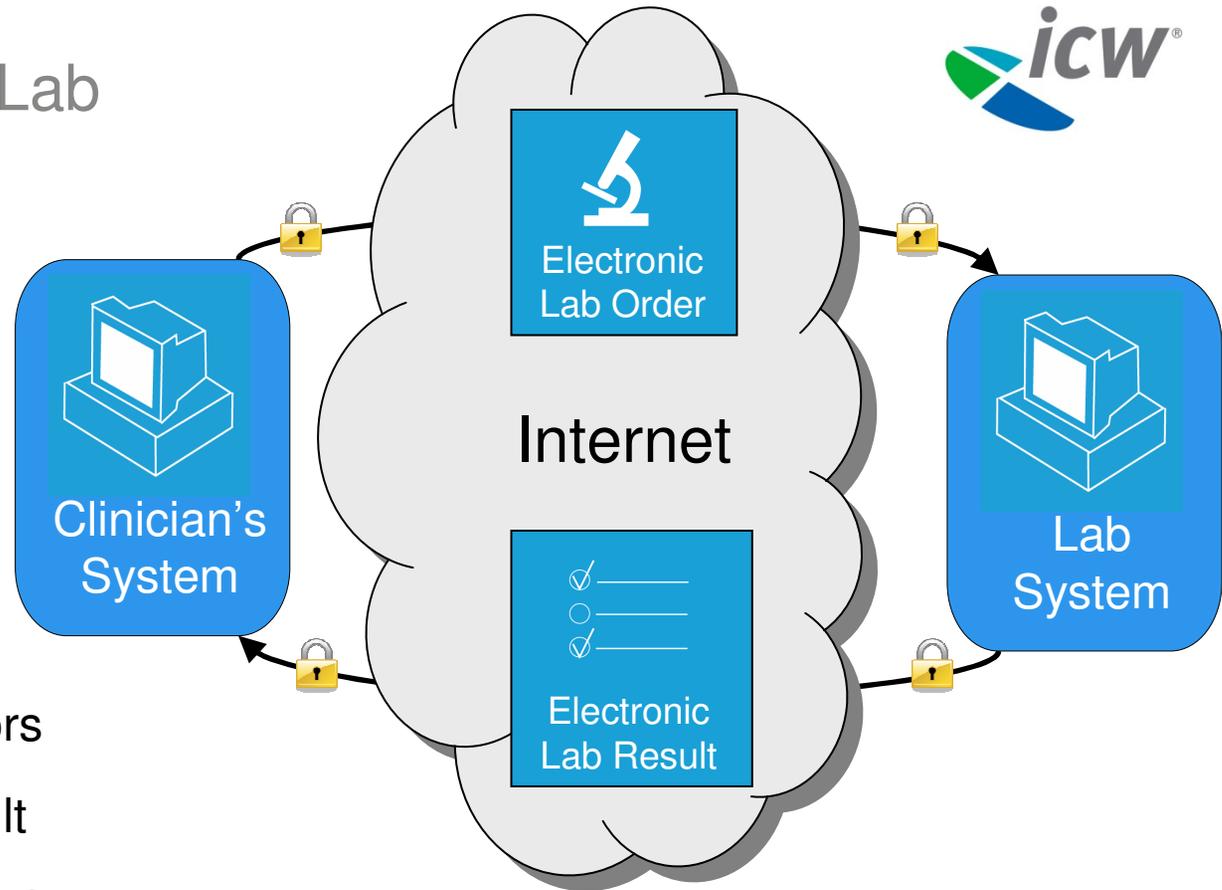
HIE in Practice: e-Prescribing



Benefits

- Ready access to Rx history
- Reduced prescribing errors
 - Eliminates illegible hand-writing
 - Facilitates drug-drug interaction checking
- Automated refill requests
- Improved auditing
- Enhanced client service & satisfaction

HIE in Practice: e-Lab



Benefits

- Decreased order errors
- Reduced time to result
- Decreased administrative costs
 - Eliminates follow-up calls to lab
- Encourages clinicians to follow best practices
- Enhanced client service & satisfaction

HIE in Practice: Engaging the Client via PHR



The screenshot shows the LifeSensor Charly 3 PHR interface in a Mozilla Firefox browser window. The browser title is "LifeSensor® Charly 3 | LifeSensor Care" and the address bar shows a local file path. The page header includes the LifeSensor logo, user information "Logged in as Heinz Klein", and navigation links for "My Devices", "My Account", and "Access Manager".

The main content area is titled "LIFESENSOR CARE" and features a navigation menu with "Overview", "Diary", "Documents", "Activities", "Services", and "Forum". The "Overview" section is active, displaying "Current activities" for "Wednesday, 14 November, 2007". It includes links for "My activities", "Today...", and "Weekly overview from 11/8 - 11/142007". Below this, "Latest diary entries" are listed for Nov 13, 2007 ("Current entry...") and Nov 9, 2007 ("Barthel-index...").

A "NEW MESSAGES IN THE CARE FORUM" section lists two discussion topics: "Questions about PEG tubes" (1 new message) and "Rehabilitation" (2 new messages). A "LifeSensor-Hotline" box provides the number 1-800-397-2090. A feedback box asks "Questions about LifeSensor? We appreciate your feedback *".

The right sidebar shows a user profile for "HEINZ KLEIN" with a list of services: Medical Data, Calendar, Health Summary, Emergency Data, Documents, Statistics, Health Information, and Personal Data. Below this is an "ADDITIONAL PACKAGES" section with a "Care" package and a "COMMUNICATION" section with a "Communication Center" link.



HIE Solutions: Things to Keep in Mind

- The technology is as important as the application
 - Flexible architecture is a must
 - Leverage open-source, open standards platforms
 - It is an enabling tool to support and improve care delivery
- No single vendor will have the “killer app”
- Seek a solution that leverages and extends your current IT investment
- HIE is a means to an end
 - Do not assume that “If you build it, they will come!”
- Client-centric care requires coordination among all care givers and family support members



Q & A





Questions?

Please Contact:

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(916) 486-4281

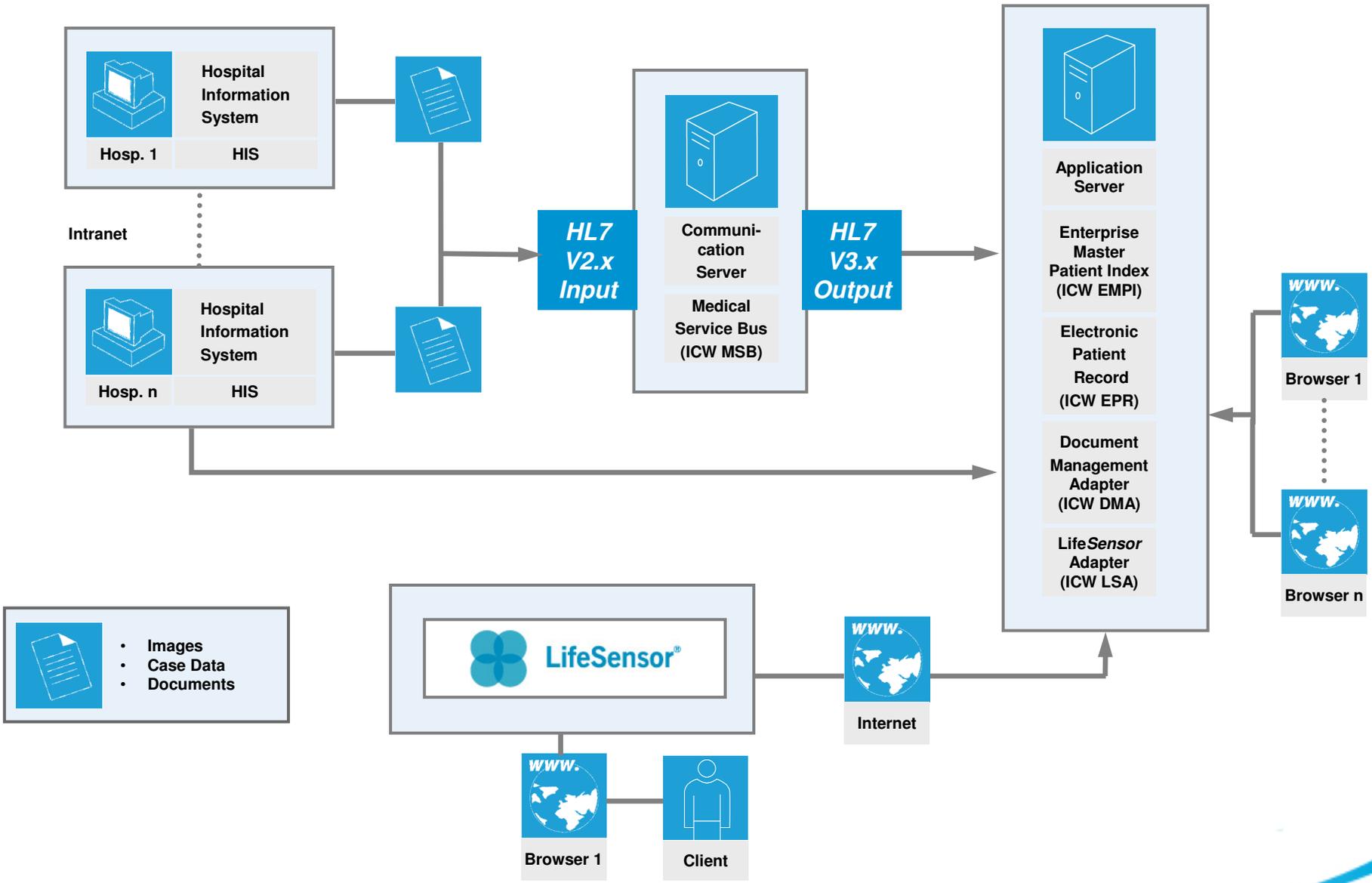


Thank You!

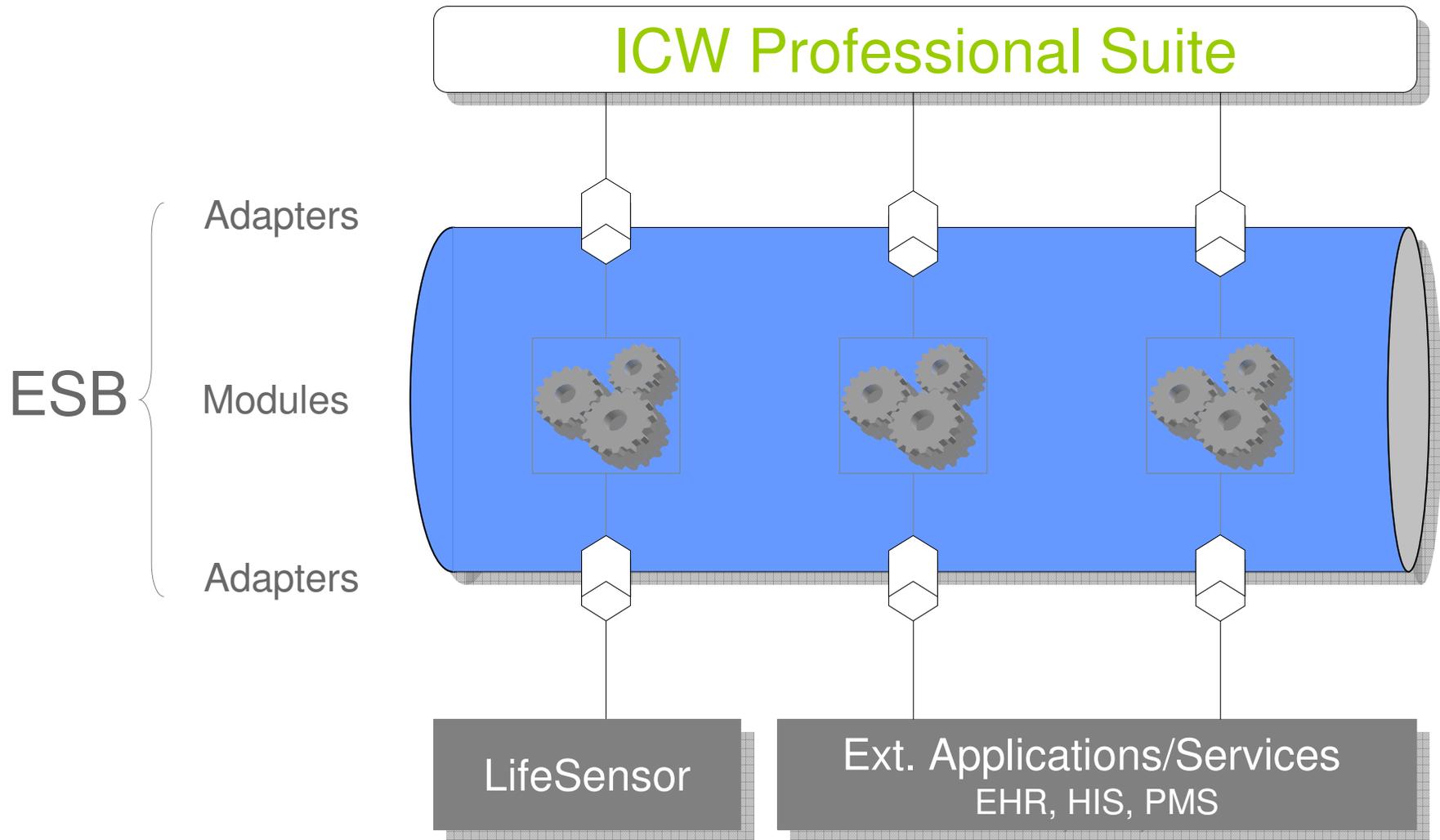


Appendix

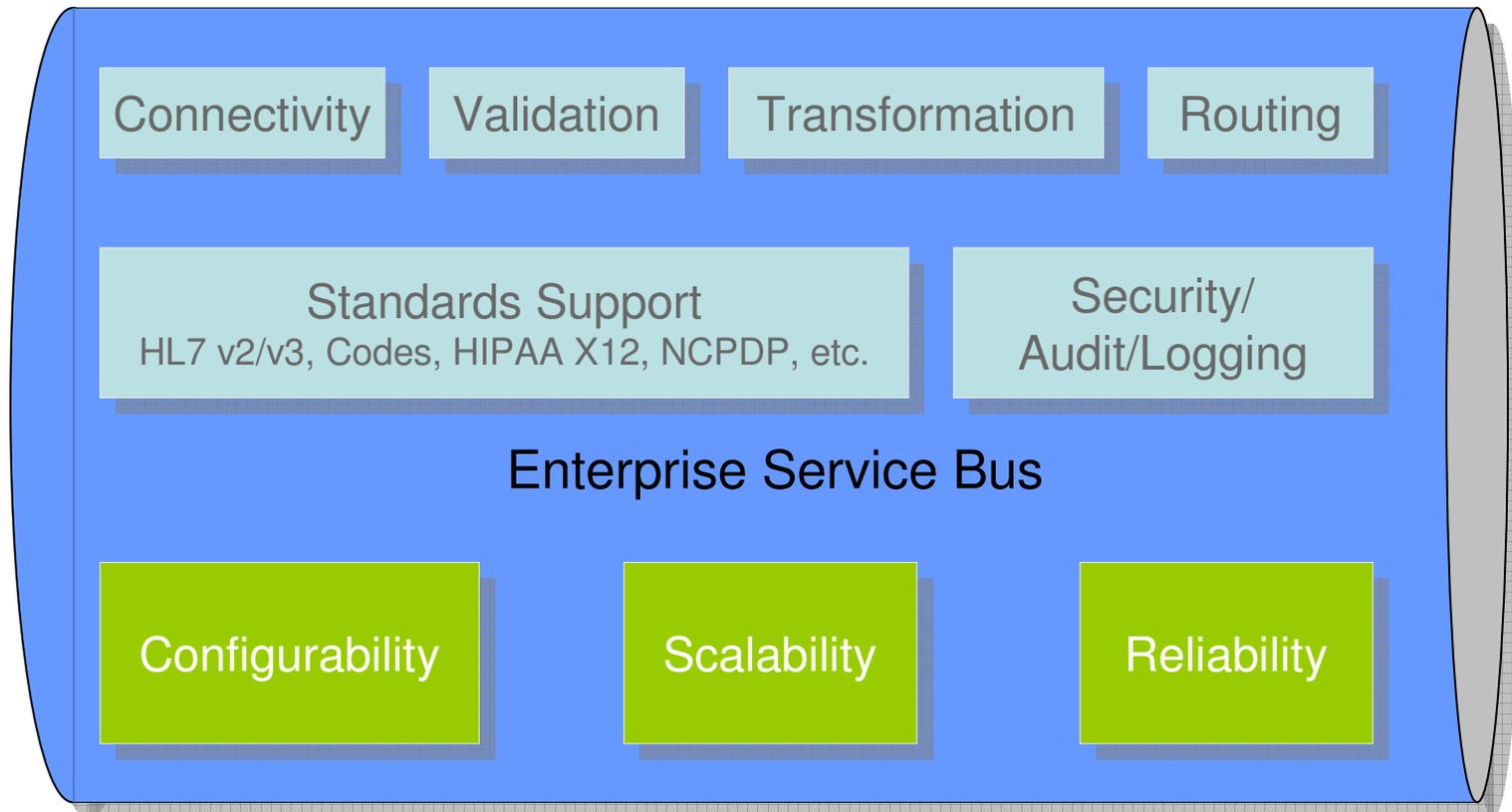
PXS System Architecture



ESB - Overview



ESB - Features



ICW Integrated Solutions



eHealth Infrastructure

eHealth Framework (eHF)

PATIENT / CITIZEN

- Health Conscious
- Athletes
- Chronically Ill
- Young Mothers
- Elderly

Personal Health Record

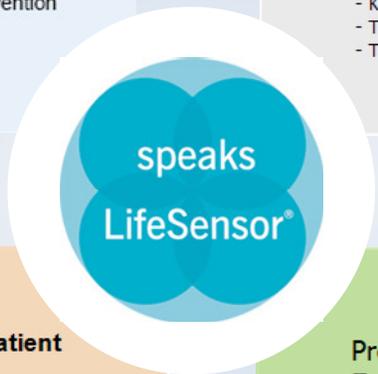
- Patient Information
- HomeCare
- Fitness and Prevention
- Rehabilitation

HEALTH INSURERS

Care and Disease Manager

- DMP Management
- Card Management
- Kiosk Systems
- Teleconsulting
- Telemonitoring

- Insurance Companies
- Call Center



PHYSICIANS/-NETWORKS/PHARMACIES

- Physicians
- Pharmacies
- Radiology

Electronic Patient Record

- Teleconsultation
- Patient Integration
- eHealth Integration
- Networking of Physicians

HOSPITALS/-ASSOCIATIONS

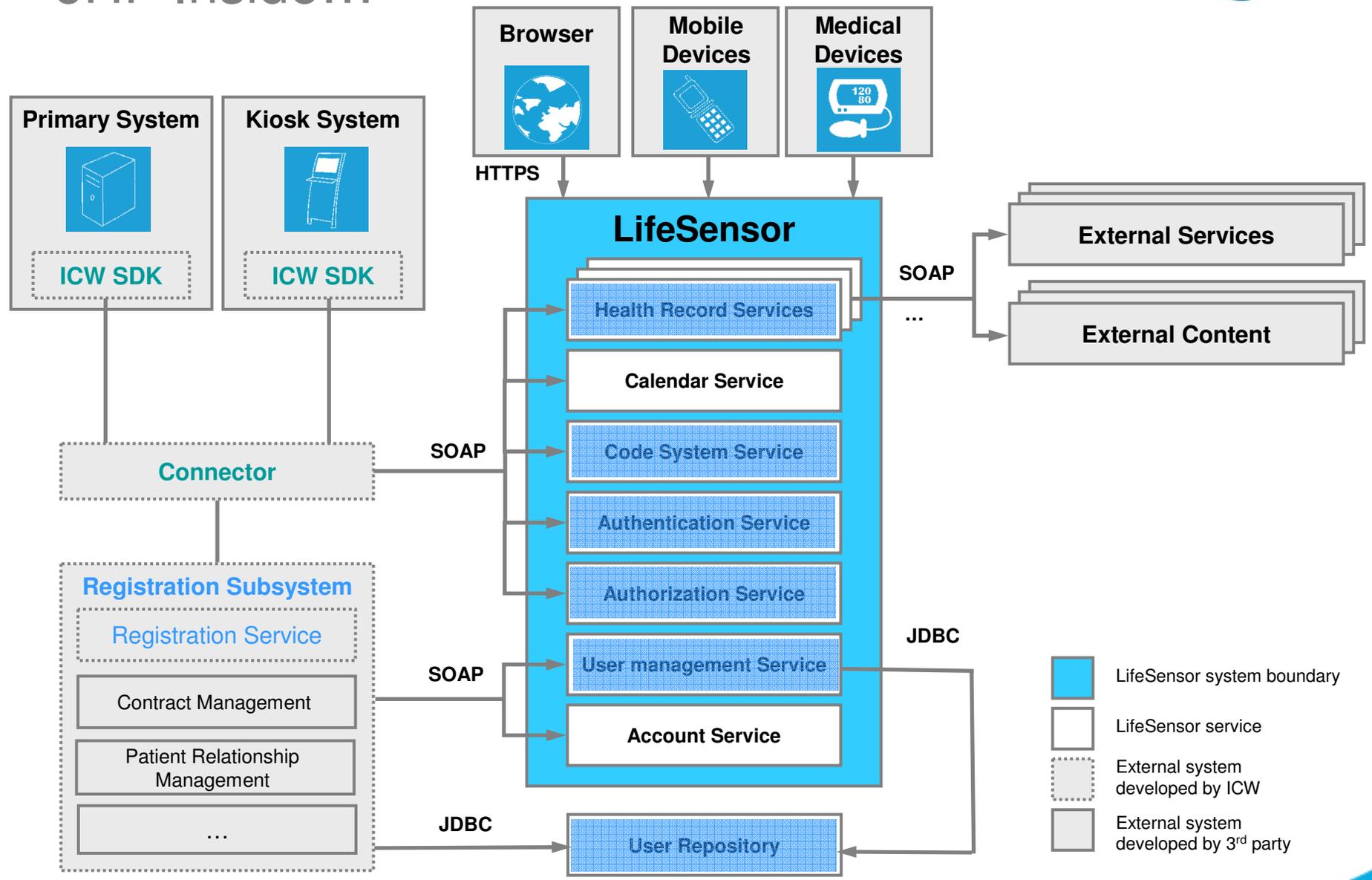
Professional Exchange Server

- Hospital Networking
- Referrer Loyalty
- Patient Integration
- Telemedicine

- Hospital
- Hospital Associations



eHF Inside...





The ICW eHealth Framework: Provides the tools that you need to customize LifeSensor

