

eHealth Interoperability

Integrating the Healthcare Enterprise and HITCH Eu Project

ERRIN– Brussels 2011

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COCIR-Health IT Committee
GE Healthcare



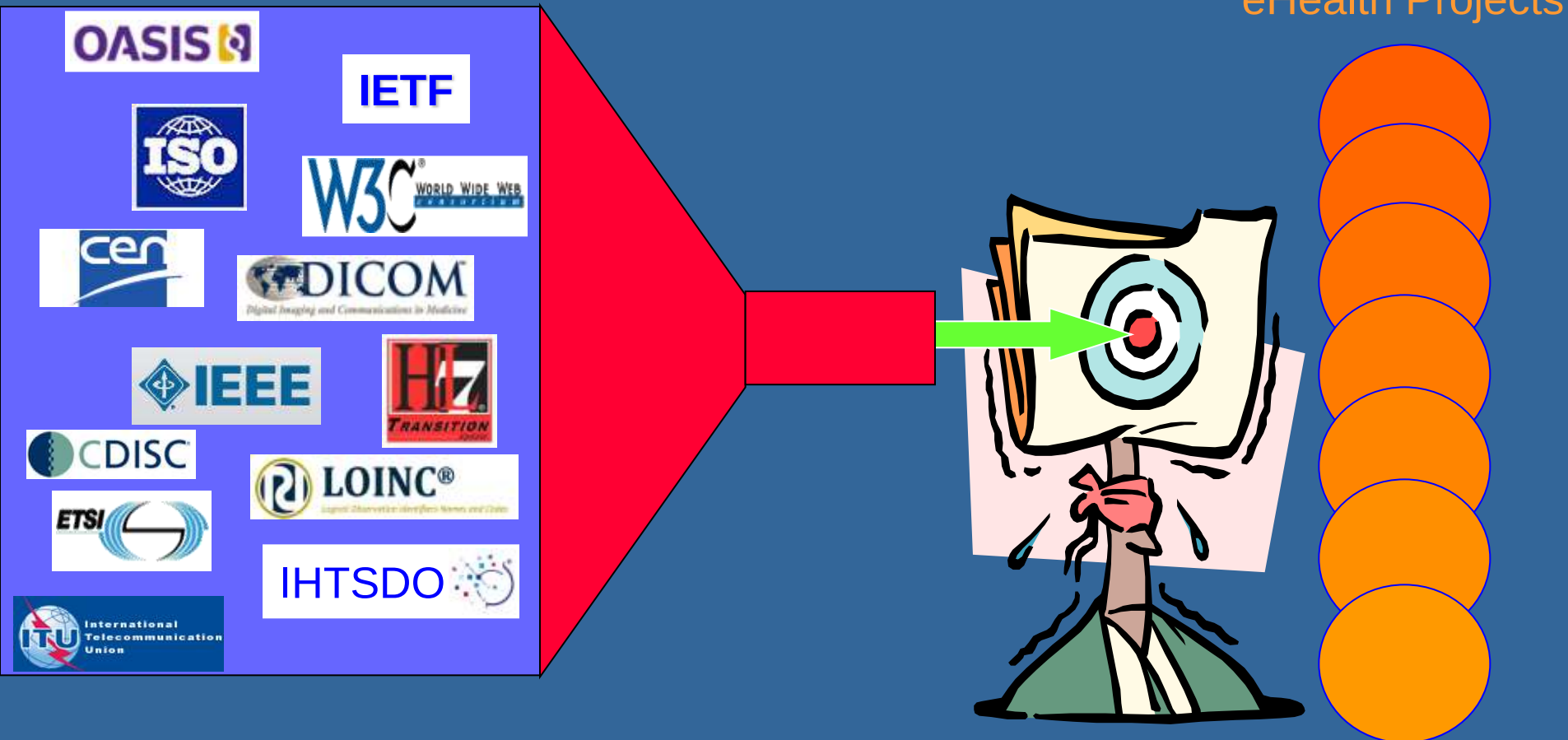
Regional eHealth projects:

- Many regions have identified the sharing of health records as a critical element for care coordination, quality and efficiency
- At first it seems, just like another IT Project, but:
 - Major change in health delivery practice
 - Need to upgrade local health IT systems
 - Interoperability standards, more than “a technical problem”
 - Project has a start, but rapidly becomes a change agent
 - Enables new health technologies to thrive (e.g. home health)

Interoperability: Major Cause of Health IT project failures

Base Standards

eHealth Projects



Health Interop. Standards: Ignore & Face Consequences

Interoperability: From a problem to a solution

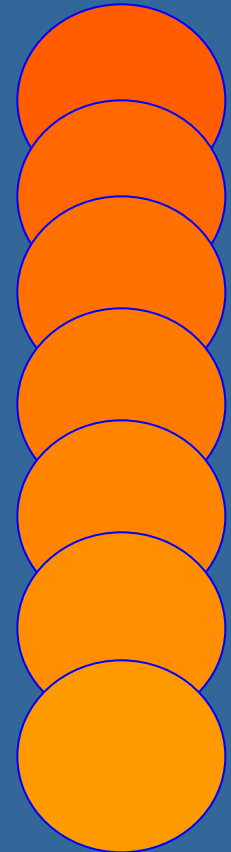
Base Standards



Profile Development & testing



eHealth Projects



Project Specific Extensions

Profiling Organizations are well established

Standards Adoption Process

Develop technical specifications



Identify available standards (e.g. HL7, DICOM, IETF, OASIS)



Document Use Case Requirements

Testing at Connectathons



IHE Demonstrations



Products with IHE



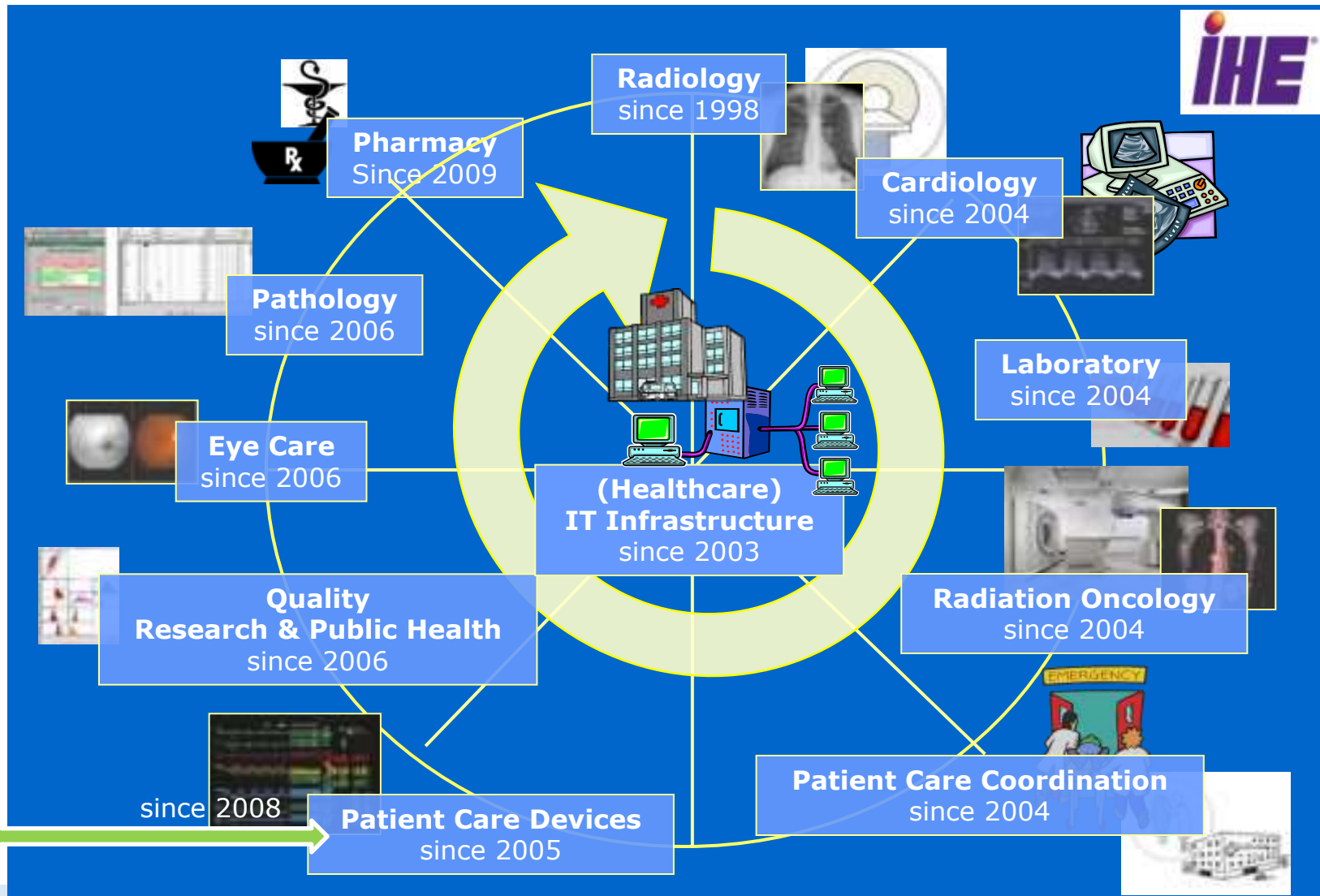
Timely access to information



Easy to integrate products

The IHE Development Domains

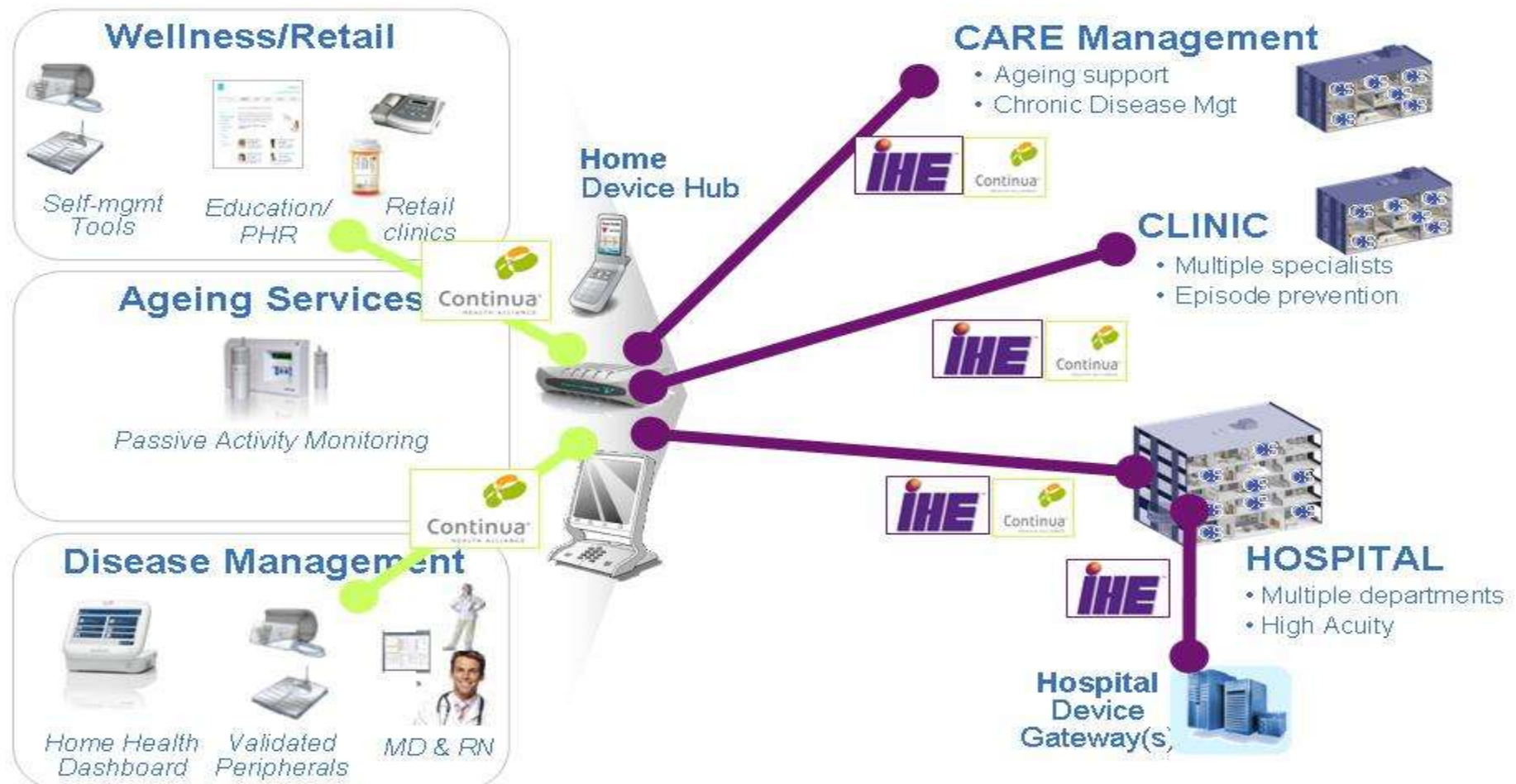
13 Years of Steady Evolution 1998 – 2011



Single data interface architecture: Making technologies sustainable and scalable

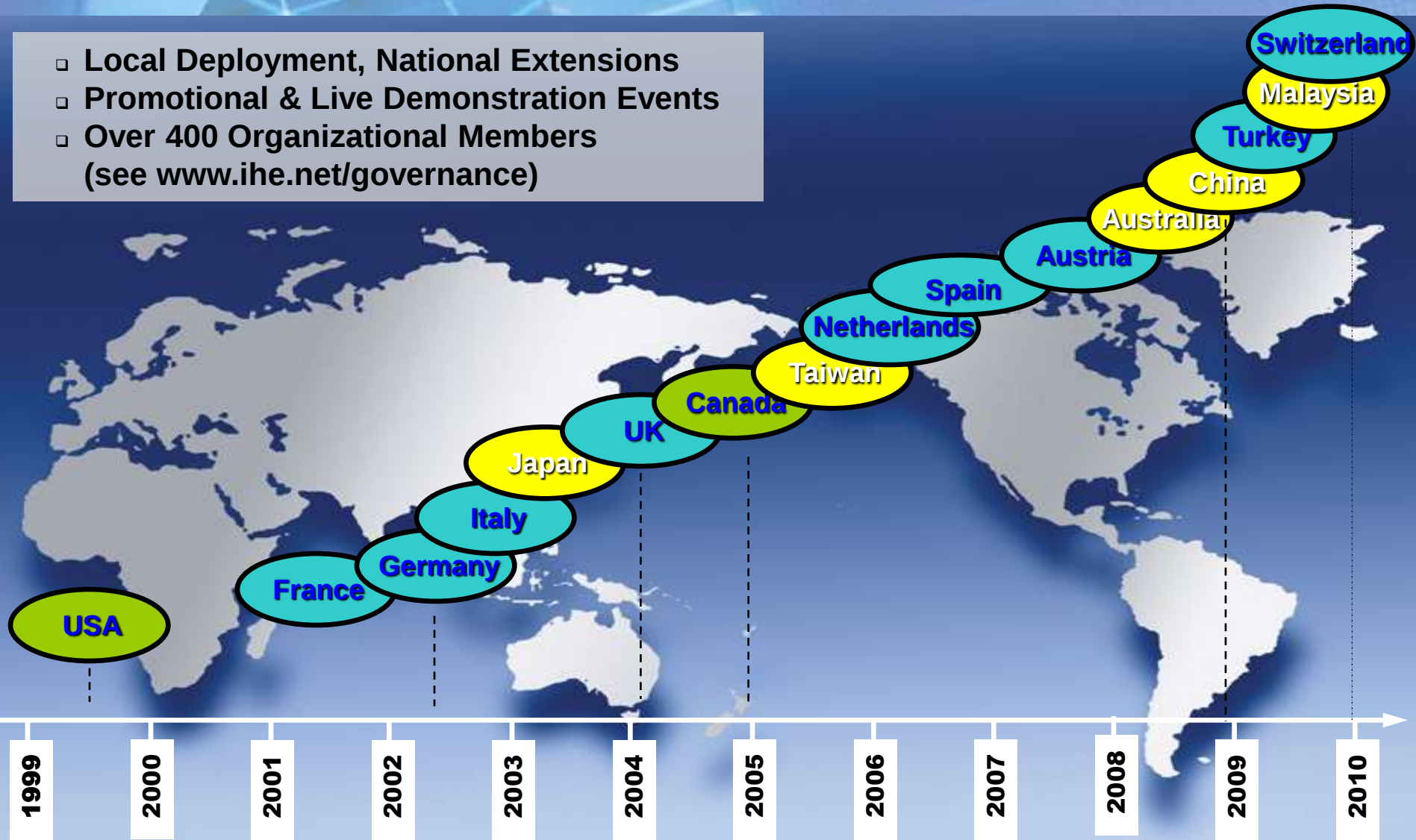
Home health – Key connection Standardized

IHE and CONTINUA have agreed to support the a single common IHE DEC profile for feeding home device data and clinical device data into health records



International Growth of IHE

- ❑ Local Deployment, National Extensions
- ❑ Promotional & Live Demonstration Events
- ❑ Over 400 Organizational Members
(see www.ihe.net/governance)



Pragmatic global standards harmonization + best practices sharing

What is IHE, how much adopted ?

- ISO TR28380 Global Standards Adoption – IHE Process and Profiles
- Home Health & Healthy Ageing : CONTINUA and IHE work together
- Widespread adoption of IHE Profiles by National and Regional Projects around the world:
 - US Nationwide Health Information Network (NwHIN) leverages IHE profiles (XCA, XDR, XCPD, BPPC, ATNA)
 - 23 Country European epSOS Project: IHE-Europe hosting Industry Team, support project interoperability conformance testing (XCA, XCPD, ATNA, XUA, BPPC, CDA Content Modules from PCC).
 - In use in several national and regional projects: Austria, France, South Africa, Italy, Netherlands, USA, Japan, Switzerland, Canada
 - EU Commission eHealth Interop Mandate 403 and HITCH roadmap conformance testing leverage IHE process

IHE Connectathons

2011 Connectathon:
Chicago, USA, January 17-21
Pisa, ITALY, April 11-15
Australia, July
Japan, October



Massive yearly events :
70-80 vendors
250-300 engineers
100-150 systems
....integrated in 5 days



HITCH Overview

► Approach:

- Identify state of the art of eHealth interoperability/conformance testing
- Identify gaps to what is needed for the future
- Propose a plan needed to close these gaps

- HITCH partners from Belgium, Denmark, France and Germany, with IHE, ETSI and EuroRec engaged at the European level.



► 18 months project

- January 2010 to June 2011
- Funded by the European Commission under the 7th Framework Programme

Key HITCH Conclusions and Recommendations

1. Drive adoption of HITCH proposed interoperability Quality Management System (QMS) and guidelines to interoperability testing processes. Improve with usage.
2. Drive closure of key gaps in interoperability testing tools building consistent test tools upon a shared management platform tool and methodology.
3. Organizing Testing and Certification in Europe:
 - ▶ European-level certification or QL valid among countries for the European recognized profiles → *leverage IHE Connectathon*
 - ▶ National-level certification or QL for specific additions to the EU recognized profiles
→ *Build upon EU certification to certify project specific extensions*
 - ▶ Both levels share common processes, tools and QMS

Interoperability: From a problem to a policy

Base
Standards

Profile
Development
& Testing

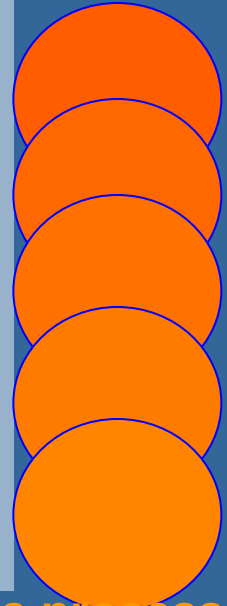
Recognized:

Profile A
Profile B
Profile C
.....

eHealth Projects
**Interoperability
Specifications**



Simple and
Effective
Profile
Recognition
Process &
Policy



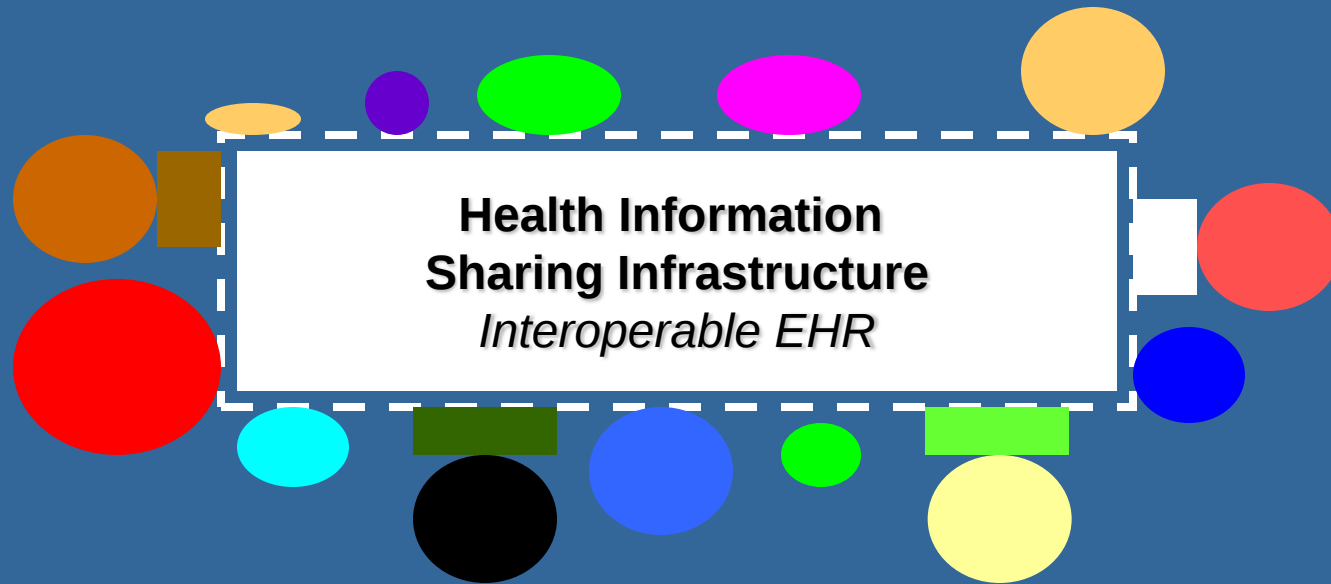
**Leverage Synergies of
Global Standards and Profiles**

Countries/Regions with such a process:

- Austria (ELGA, Regions)
- France (ASIP)
- USA (NwHIN)
- Italy (Venetto, etc.)
- China (MoH)
- Switzerland (ehealth suisse)
- Canada (Infoway)

Principles for a Regional/National eHealth Network

1. Set a standards based boundaries with stable/proven/unambiguous interoperability specifications (profiles of well accepted standards):

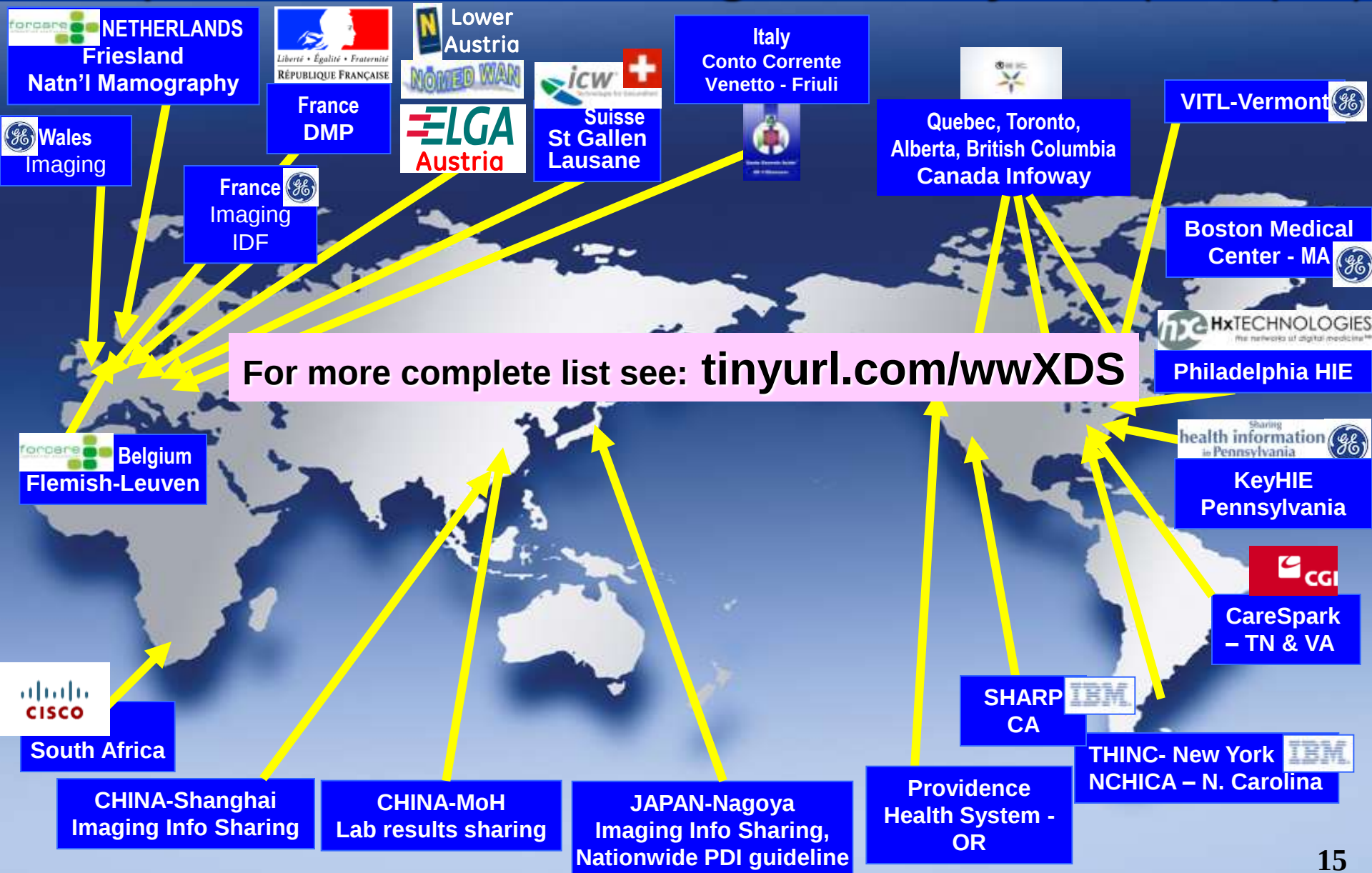


2. Keep things simple and robust within the standards-based boundary (365x24 availability, costs, new use cases, etc.).

→ *Create your own boundary or leverage IHE profiles ?*

→ *IHE Profiles come with testing tools, process, shared experience, open source, a broader community, multi-vendor and stability*

IHE, Global Standards-Based Profiles Adopted in National & Regional Projects (sample)



Worldwide & Open Collaboration

International Governance

IHE International Board

Global Profile Development

Radiology

IT
Infrastructure

Laboratory

Cardiology

Patient Care
Coordination

Pathology

Radiation
Oncology

Patient Care
Devices

Eye Care

Public Health, Quality
and Research

Pharmacy

International
Use Cases & Profiles

Open
to
all

European Coordination
Testing & Education

Regional Profile Deployment

IHE Europe

Austria

France

Germany

Netherlands

Italy

Switzerland

Spain

Turkey

UK

National & Regional
Engagement

Stakeholders



IHE based “Interoperability” experience has demonstrated significant benefits to national and regional eHealth projects:

- Reduce interop specification consensus time
- Simplify policy and implementation efforts
- Reuse of testing tools and processes
- Shared implementation experience

eHealth and Interoperability:

Next Steps for European Regions:

- Most successful ehealth projects in Europe are at the regional level
- The level of resources, risks and time to operational are significantly reduced when interoperability standards reuse rather than invent
- Defining region/vendor specific formats/protocols to exchange health information does not result in competitive innovation, but in costly obsolescence
- Innovation is about “using effectively” shared health information. This requires that entry barrier to sharing is addressed by “off-the-shelf” interoperability standards



**Providers and Vendors
Working Together to Deliver
Interoperable Health Information Systems
in the Enterprise
and Across Care Settings**

<http://www.ihe.net>



changing the way healthcare

www.ihe.net

connects

WWW.IHE.NET