



Institute of Health “Carlos III”

Research Public Organization

Ministry of Science and Innovation

Research Unit on Telemedicine and e-Health

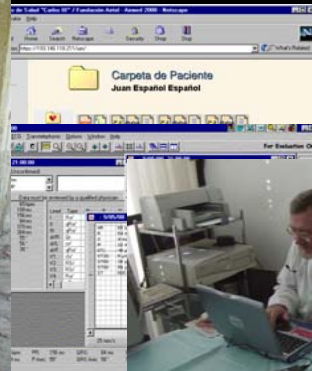
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Mision

Research, develop and innovate on ICT applications for health and social well-being



Visión

- ICT as a key component of the strategies for the healthcare system transformation addressing current challenges
- Building up a digital environment supporting interoperable, ubiquitous, personal health services and tools
- User driven open innovation



Activities

- Scientific and technological research.
- Development of telemedicine infrastructures for Healthcare & Biomedical Research
- Training of researchers and technologists
- Collaboration with health care institutions to carry out pilot, demonstration models and clinical trials
- Collaboration with industry for innovation in products and services
- Collaboration with the Madrid Scientific Park Foundation on industry promotion (eHealth Group)

Areas of knowledge

- ICTs for healthcare (eHealth)
- Mobile Internet technologies
- Biomedical instrumentation
- Smart sensor networks
- Design, modeling and simulation of systems and integrated e-care services
- Evaluation and clinical trials for telehealth based services
- Usability, accessibility and design for all

ISCIII-UITeS

Operational Structure

Coordination and scientific management

e-Patient Environment

Devices
Sensor networks
User Interfaces
Environment and behaviour monitoring

ICT Platform

Technological Platform
Web services
Mobile
Multiaccess agents
Testing

Health Information systems

Electronic Health Records
Interoperability
Standards compliance
Quality Certification

Care Services

Modeling and simulation
Pilots and assays
Assessment
Usability
Accesibility

Security

Risk Analysis

Experiences and ongoing projects at ISCIII-UITeS



Carpeta de Paciente
 Juan Español Español

Measurement	Value	Lead	Type
Heart rate	65 bpm		
P Duration	108 ms		
PR Interval	156 ms	I	Rsr'
QRS Duration	84 ms	II	qRsr'
QT Interval	370 ms	III	qRsr'
QTc Interval	384 ms	aVR	Qr
P Axis	55°	aVL	rs'
QRS Axis	56°	aVF	qRsr'
T Axis	38°	V1	rSr'
		V2	RSr'
		V3	RSr'
		V4	Rsr'

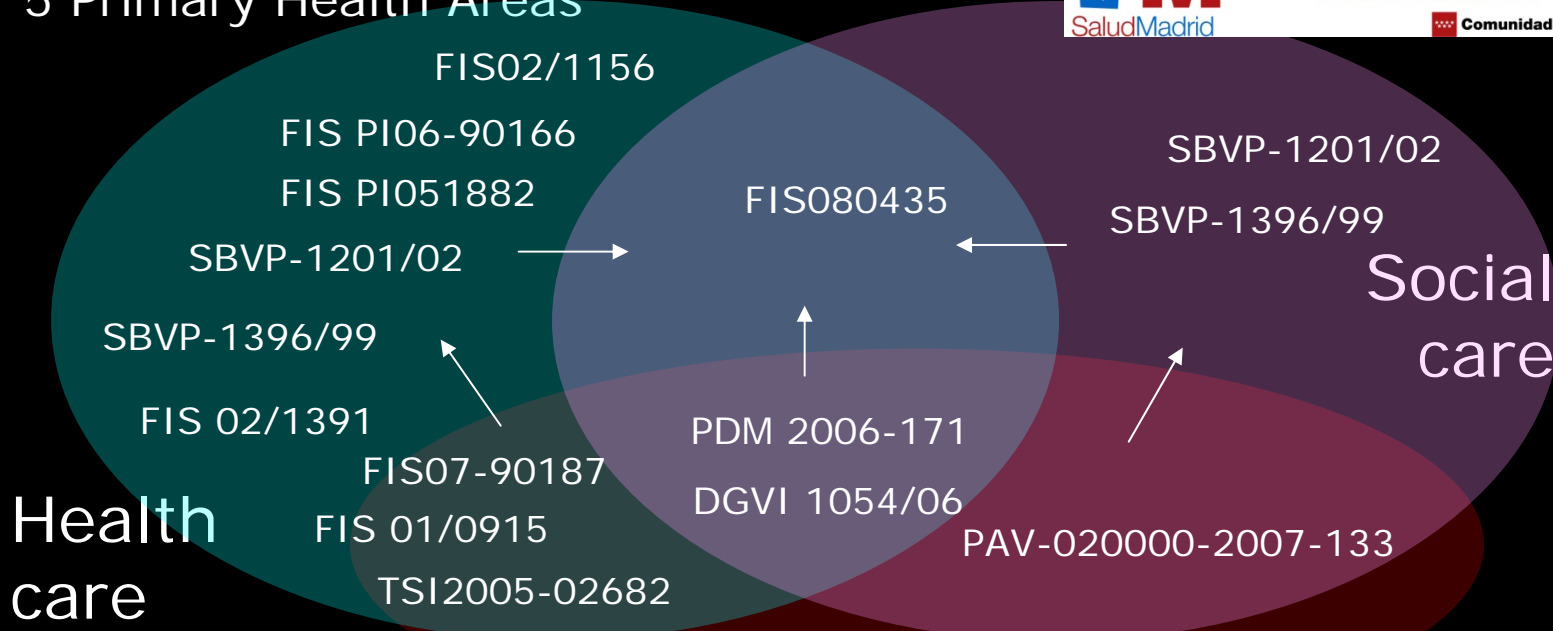
Summary: H Rate: 65 bpm, PR: 156 ms, QRS: 84 ms, P Duration: 108 ms, P Axis: 55°, QRS Axis: 56°



Experience¹ (>10 years)

Chronic care and dependency

- 17 Projects (11 pilots, 6 Assays)
- 1.547 patients
- 107 physicians: 78 GPs + 29 Spec.
- 6 Hospitals
- 5 Primary Health Áreas



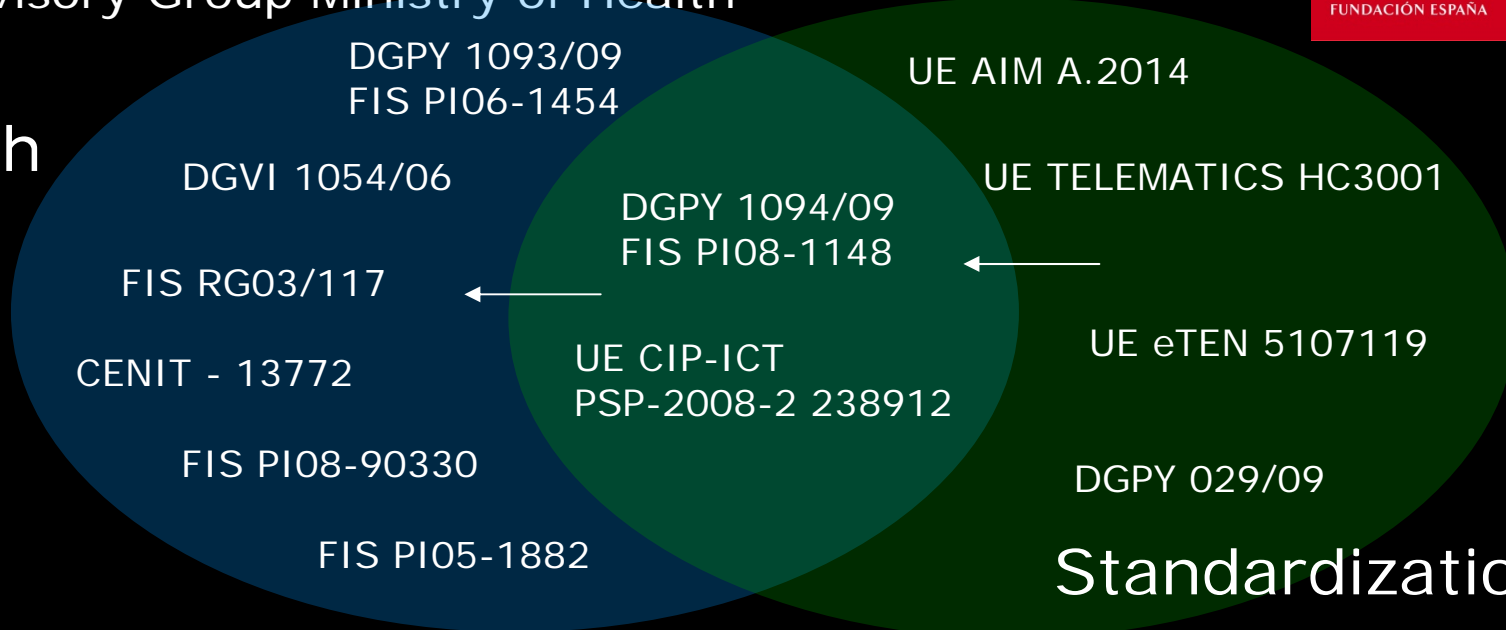


Experience² (>10 years) Interoperability

- 12 Projects
- CEN TC251
- ISO TC215
- Secretary CTN139- AENOR
- Advisory Group Ministry of Health



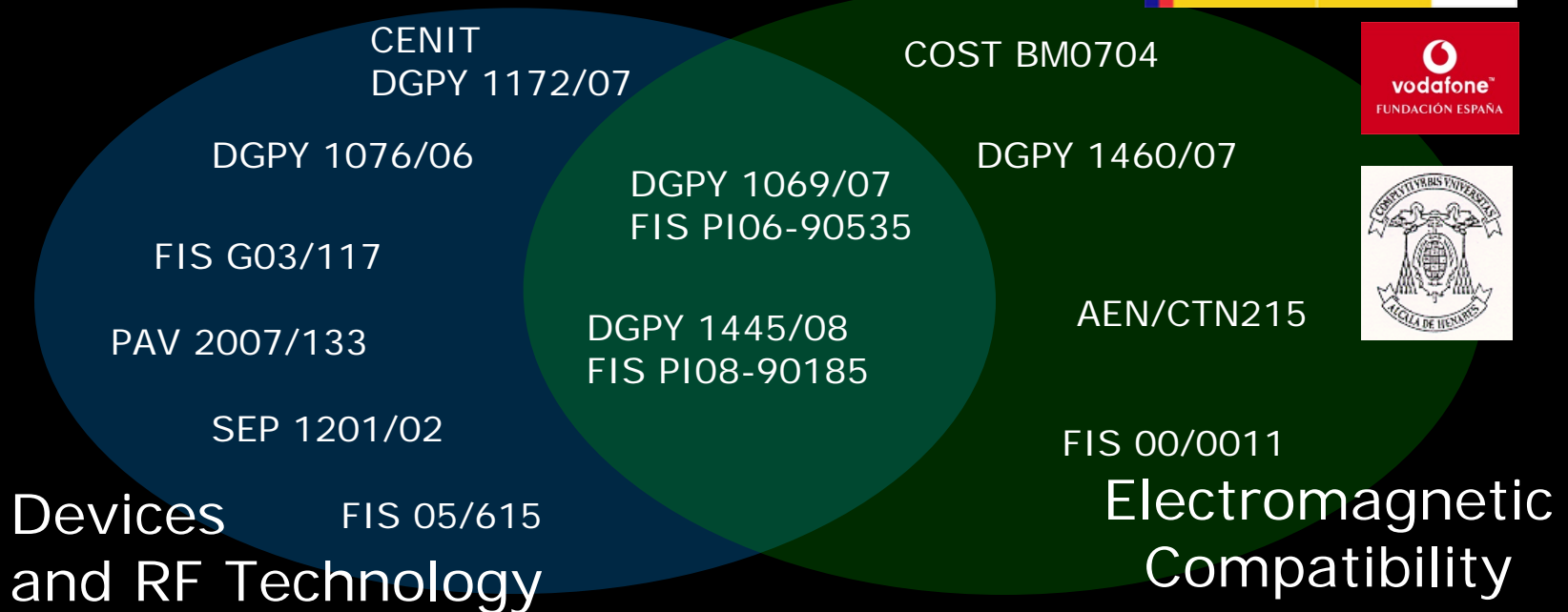
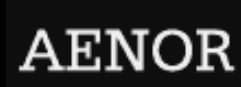
Health
care



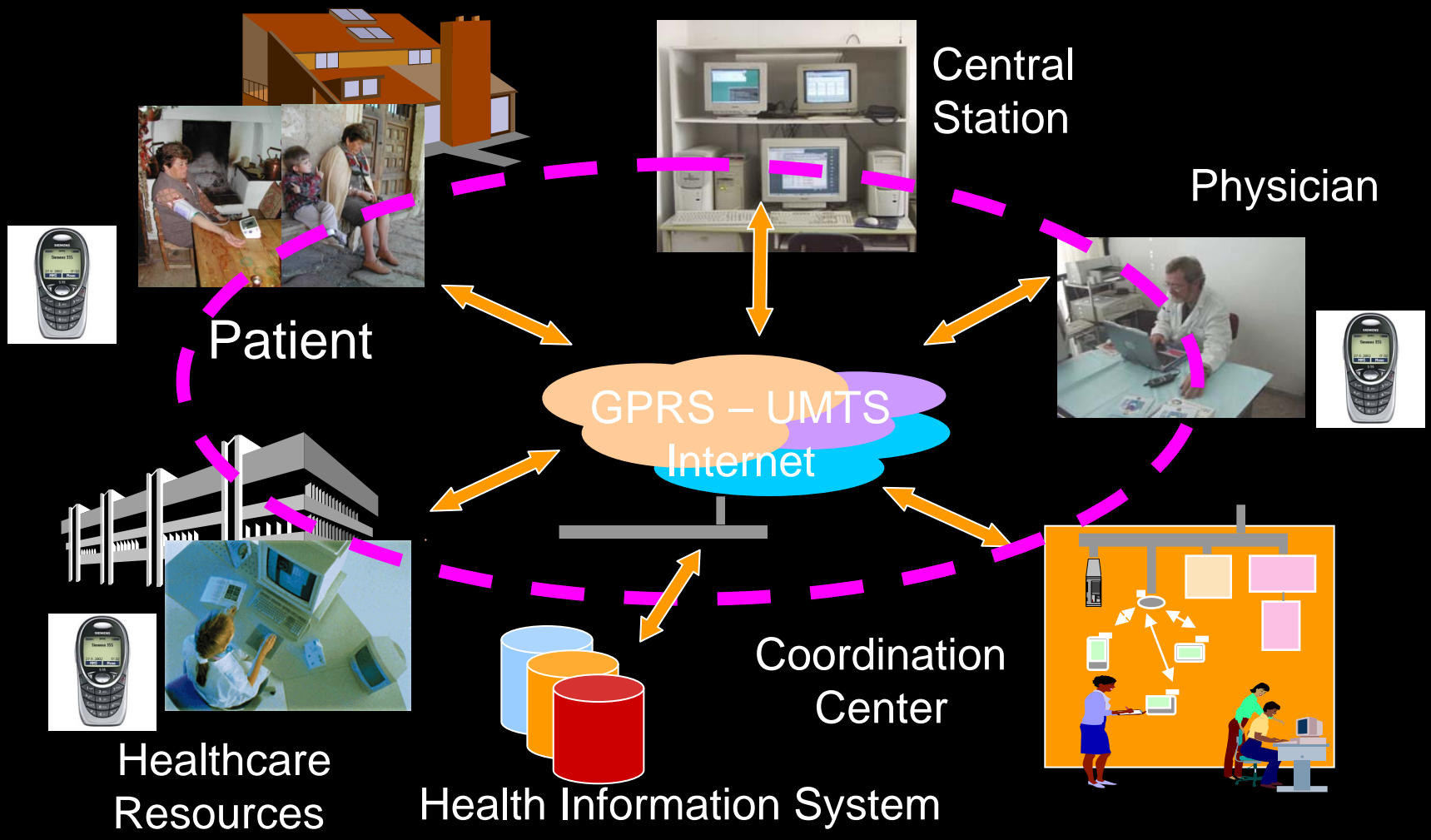
Experience³ (>10 years)

Ambient Assisted Living Technology

- 12 Projects
- AEN/CTN215 (AENOR)
- EU-COST BM0704
- AEIT

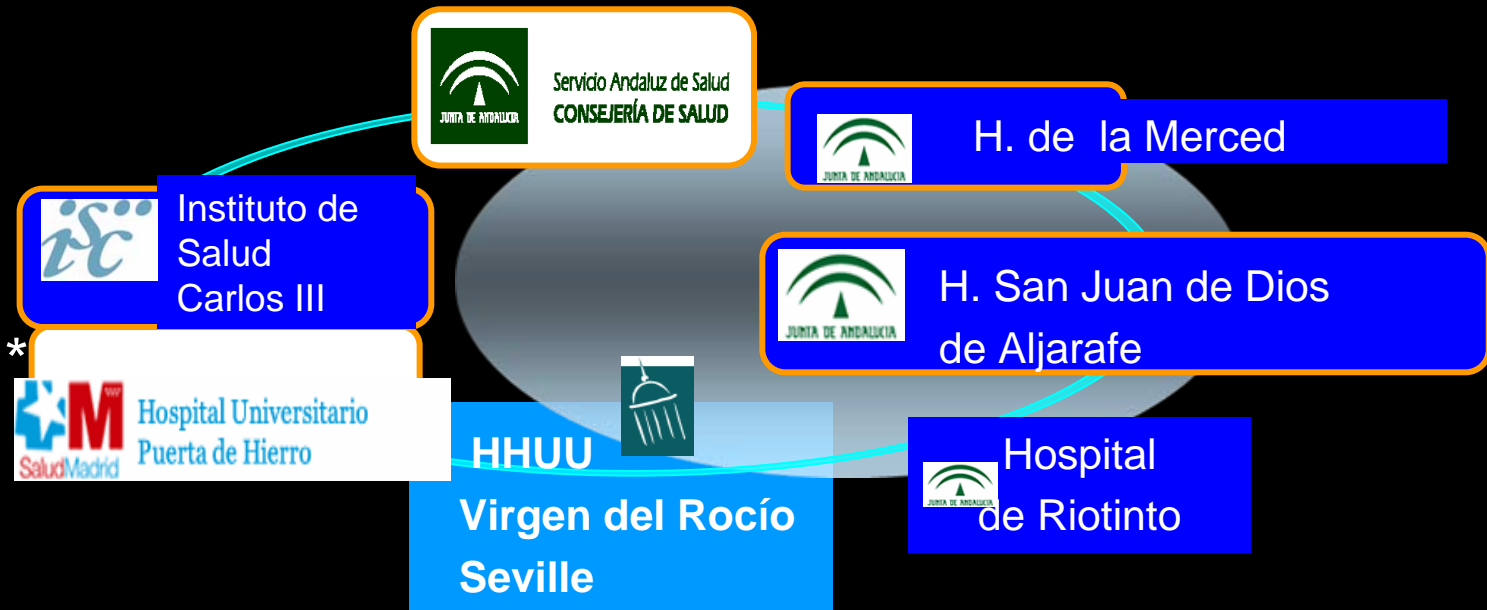


Experience: mHealth System Implementation



Experience: Tele-stroke

- Integrated teleconsultation system for stroke emergency situations



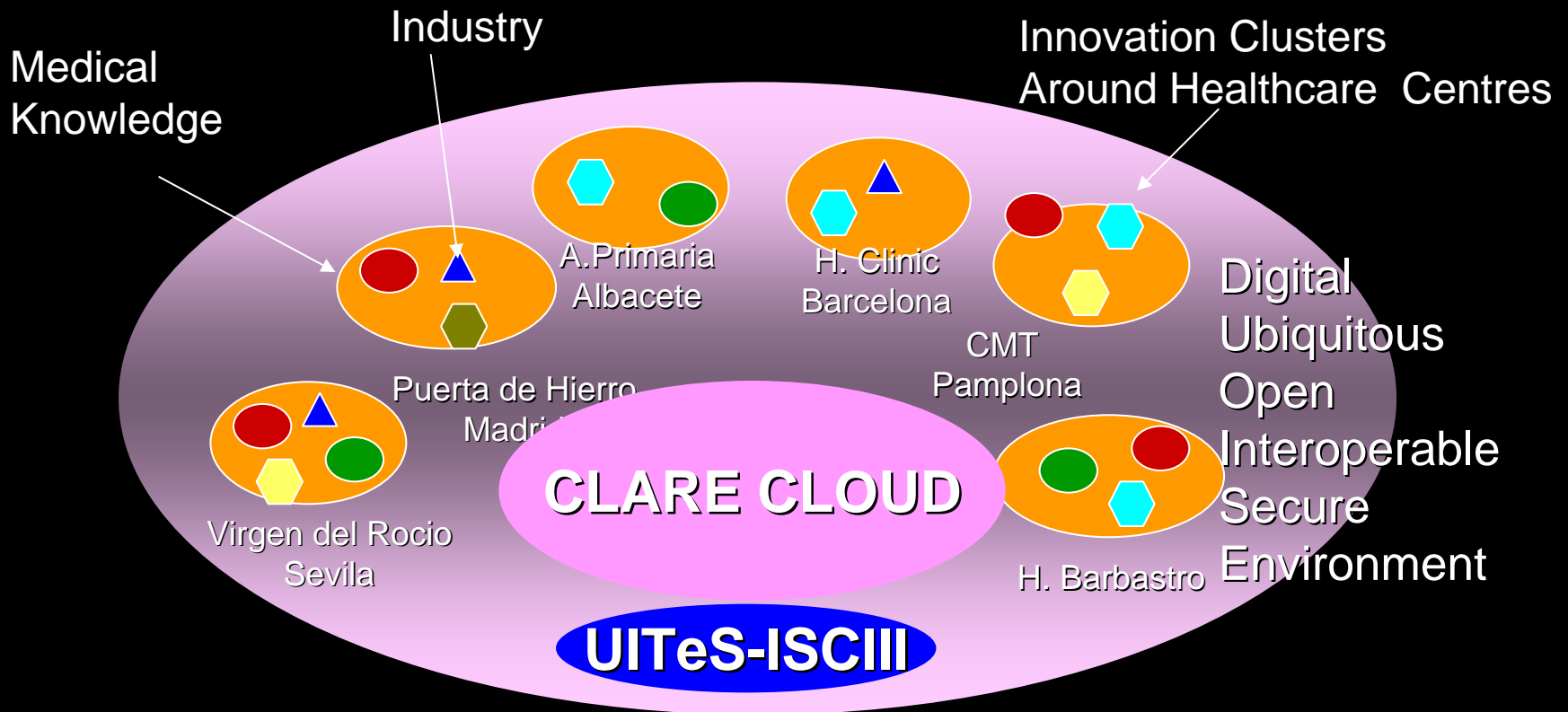
Ongoing Projects



Asociación Itaca (Valencia)
Hospital Univ. Puerta de Hierro
Instituto de Salud Carlos III
Fundación Rioja Salud (La Rioja)
Fundación CARTIF (Valladolid)
Universidad de Granada
Universidad de Málaga
Universidad Politécn.de Madrid
Universidad de Zaragoza

Tecnología y Medio	Internet Web 	S.I. para la Salud 	S.I. y Tecnologías 	Int. Artificial Ambiental 	Sistemas "abiertos" 	Gestión del Conocimiento
	Interoperabilidad Estandarización 	Seguridad Procesal 	Accesibilidad Mejorada 	Sostenibilidad Eficiencia 	Movilidad Ubicuidad 	
Nuevas Funcionalidades	Actividad Localización 	Trazabilidad Personal 	Trazabilidad Ambiental 	Trazabilidad Social 	Interconsulta Actores 	Telemedicina
	Intercambio Documental 	Imagen Médica 	Signos Vitales Ubicuos 	Integración Multimedia 	Integración Multidisciplinar 	
	Teleasistencia Social 					

PITeS: Plataforma for Innovation in Telemedicine and eHealth



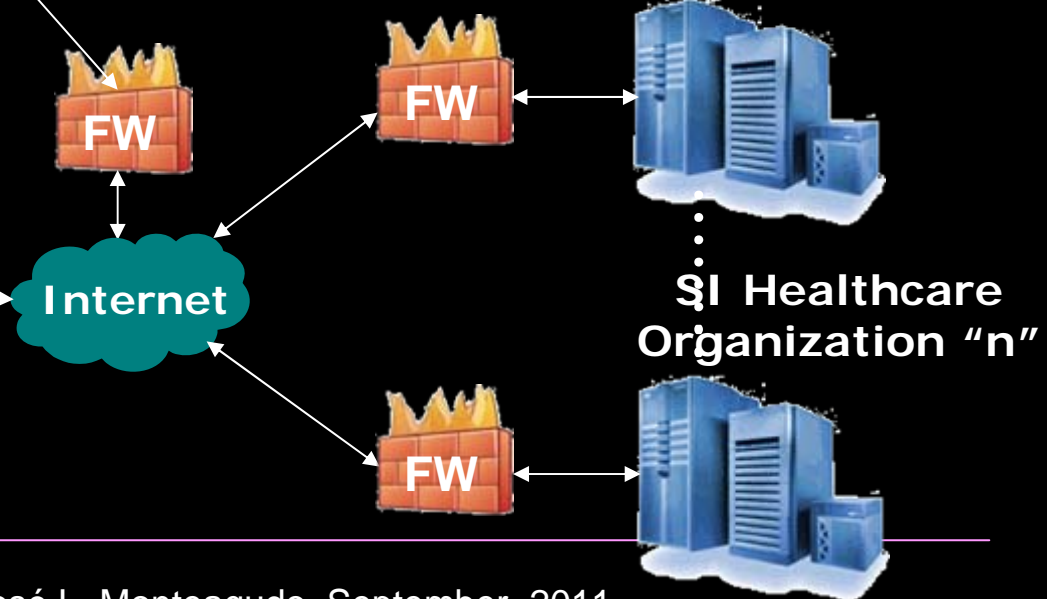
Project CEPA: Clinical research on COPD



Platform PITES-CLARE CLOUD

SI Healthcare Organization 1

Audipoc study
(65 hospitals, 17 Regions,
7500 pacientes)
-2.000 patients
advanced COPD
- 2,5 años





Evaluation of Teleassistance 2nd Generation (including environmental monitoring)

To evaluate the effectivity of 2nd generation of teleassistance systems to decrease morbidity and economic and social impacts of non-intentioned domestic events (falls, fire, etc...)

Controlled, random, open prospective study with two parallel branches

3.000 users (Red Cross) > 75 years old

7 Regions (17 provinces)

12 months, Start July 2011

eHealth Group at the Madrid Science Park

- Collaboration with Madrid Science Park Foundation for industry promotion and development on ICT for Health
- Cluster of SMEs and start-ups with high innovative technology capacities





eHealth Group at the Madrid Science Park

Start-up	Sector/Innovative Area
Bet Quality of Life	eHealth 2.0
Value Creation	Social Innovation
O3 Wellbeing	Psico-Technology
Almira Labs	Mobile Applications and Services
Sinixtek	SW/Engineering
Pixtoon	Vitual Reality/Simulation
Vaelsys	Recognition of Image
Isa Sensing	Sensors
Spartanbits	Sw smartphones y tablets
Vpod.Tv	Broadcasting
Línea 9	SW/HW Location





!! Thank you !!

Correspondence:

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