

Workshop 1: Continuum of care, how can we build effective pathways? (Room Louis Armand)



Moderator:
Gérard Vincent

Former Managing director, French Hospital Federation (FR)



Véronique Roger
MD, PhD, medicine
and Epidemiology,
Mayo
Clinic (USA)
[@VeroniqueRoger1](#)



Eric Lepage
MD, PhD, Information and
Health, Data ARS IDF (FR)
[@ARS_IDF](#)



Jacques Der Ohanian
Vertical Market
Solutions, Alcatel-
Lucent Enterprise
(FR)
[@DerOhanian](#)

Organised by



Optimizing the care pathway

PARIS
DEC, 13th 2017

Jacques Der Ohanian
Vertical Markets Solutions
ALE International - Alcatel-Lucent Enterprise

Healthcare Trends & Challenges

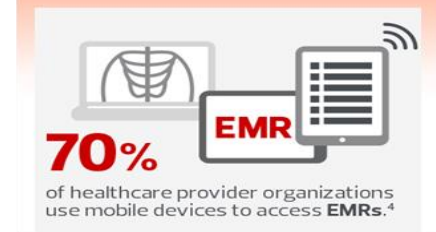
from patient care to citizen health



- Better quality of life (health/ill)
 - Be connected (IoT, Community)
 - Yet voice & human contact matters
 - Engaged and empowered
-
- Better collaboration
 - Overcome complexity
 - Spend more time with patients
 - Be efficient (quality vs cost)
 - Security & Privacy
-
- Digital Transformation
 - Mobility and Cloud
 - Location Based Services
 - IOT, Analytics, AI
 - PoC: Drones, Augmented Reality, Droids



- ### Digitization of Everything
1. EMR/EHR
 2. Digital Imaging
 3. Telehealth
 4. Workflow



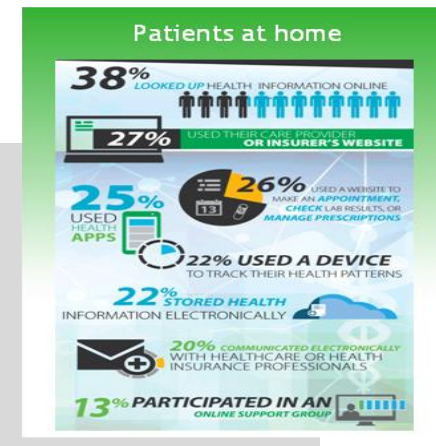
Patients in hospital

More than **75%** of all patients expect to use digital services in the future



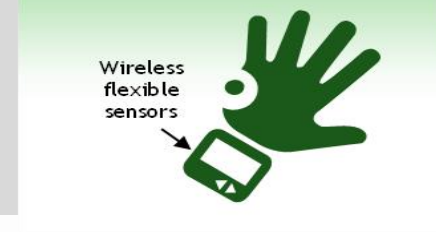
Workflow Evolution to Wi-Fi

73% of clinicians say mobile enables faster, more flexible workflows

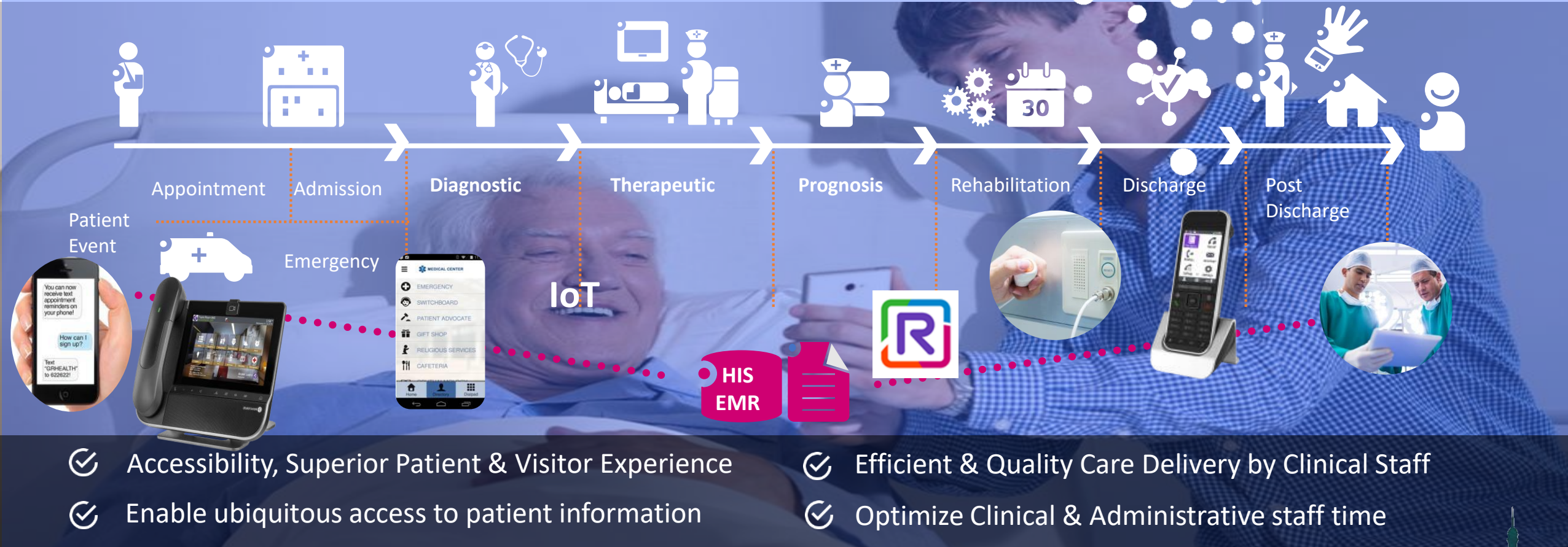


Remote Monitoring & Tracking

By 2017, there will be **7.1 million** home health monitoring devices with integrated connectivity



Optimizing the care pathway

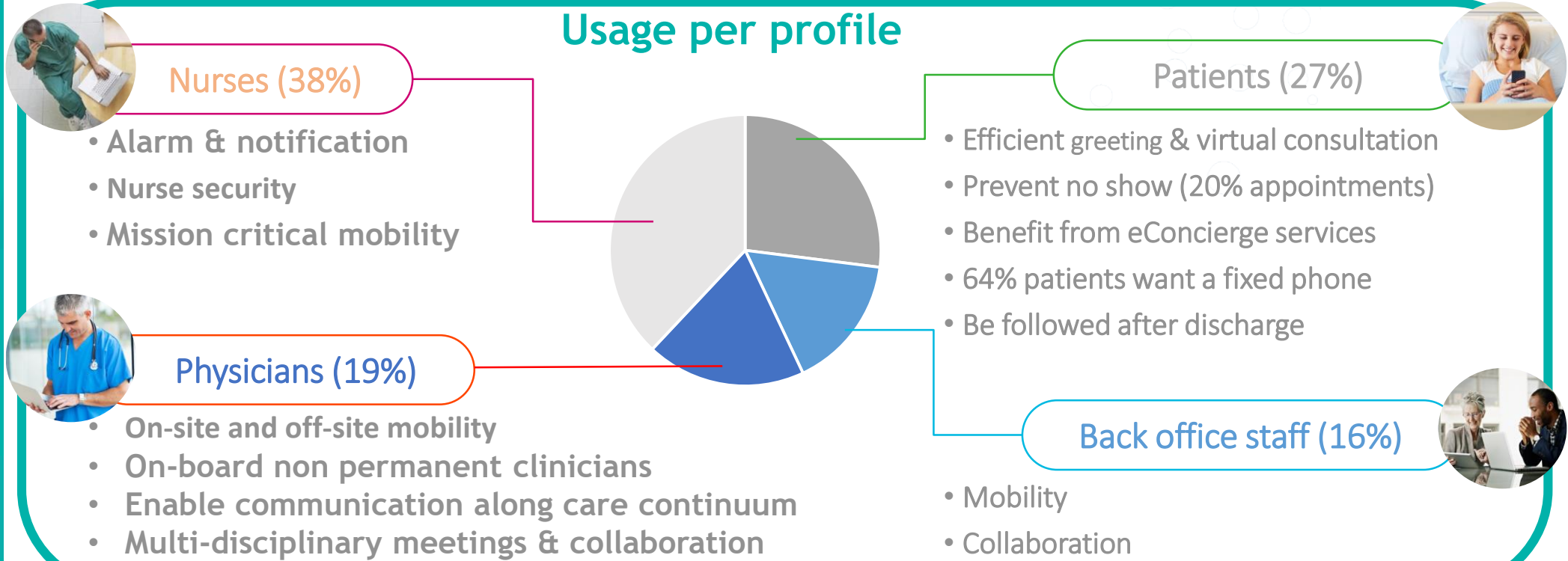


Highly Resilient Network & Communications Infrastructure



Addressing patient, care givers & hospital paint points

Usage per profile



Security & Mass Casualty Incidents
(alarming, crisis management, recording & broadcasting)

Operations: facility mgt, supply chain, IT ...



Embracing Healthcare Digitization



Almost Every Aspect of Health Being Disrupted

Disrupt or be disrupted



Rainbow CPaaS a key pillar for digital transformation



IDENTITIES

Rainbow application

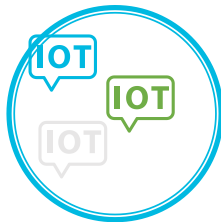
Patient, nurse, physician & back office staff



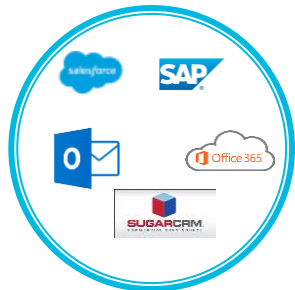
PBX & Terminals



Internet of Things



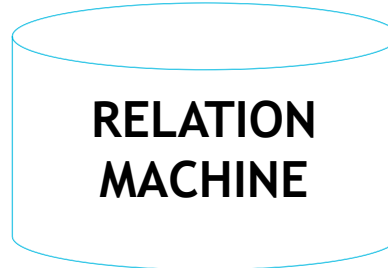
Third party Web & Mobile applications



RELATIONS



RELATION MACHINE



SERVICES

Tracking building alarm



Back office staff



Audio & video conferences with other hospital or suppliers



Office 365



Tracking the patient vital signs in real-time



Patient



Simplify access to hospital services



Providing a "Click to call" button from EMR portal



Nurse



Create workgroups among the caregivers

Physician



Receiving notification (audio or text message) on the DECT set



ANALYTICS



Innovation examples in co-creation



Sovinty by Clepsydra / ALE Rainbow pre/post operative care

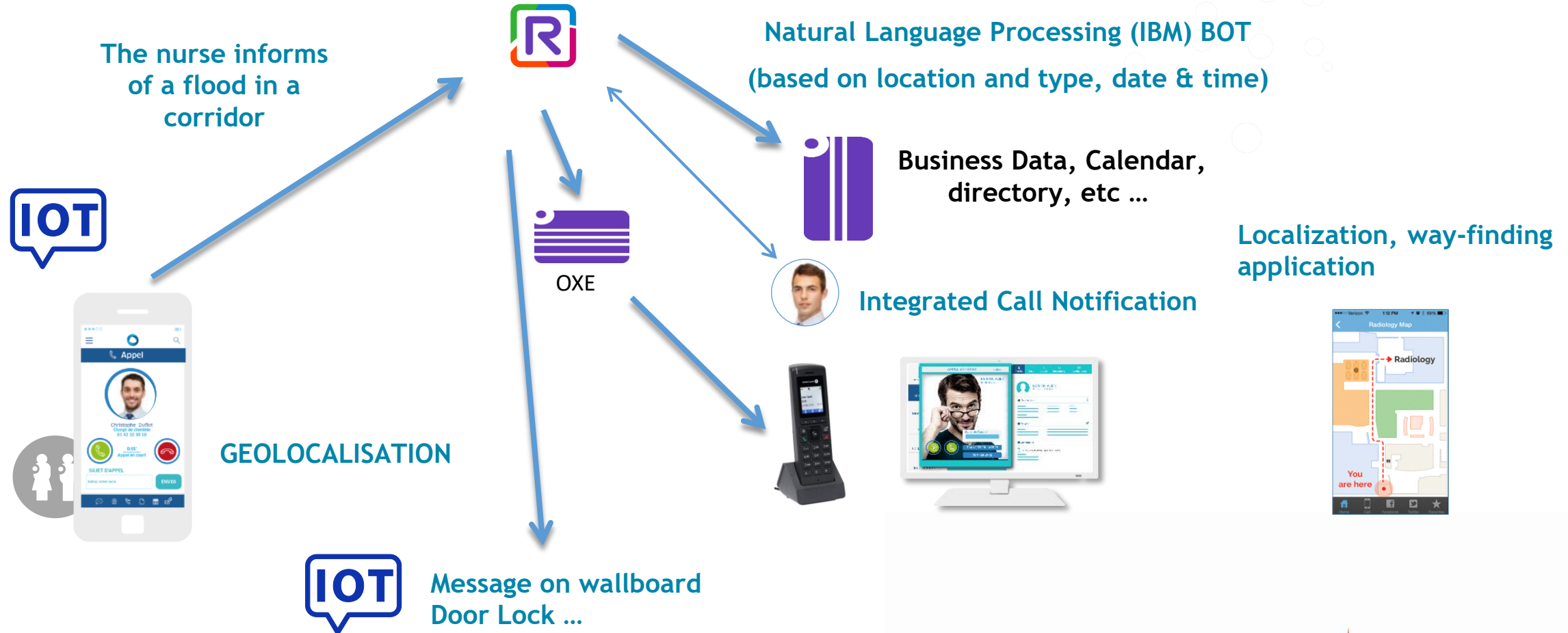
- Add the communication among patient & care givers easily
- Automate alarm messages taking into account patient presence

ALE | Where Everything Connects


SOVINTY
By Clepsydra



The nurse as an agent in a smart hospital



Nurse Application


an example

Epic

Cerner


MEDITECH





ALE Hospitals

Care Giver: **Cindy** LOGOUT



Closed Loop Medication

Patient	James Lee
Location	Ward 4 - Bed 2
Doctor	Dr. J.F. Watson

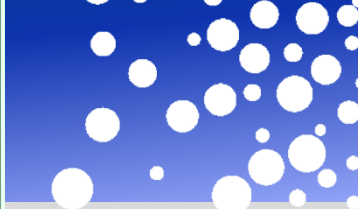
EMR

Medication	<u>Flumucil</u> ; <u>Fepril</u>
------------	---------------------------------

Fepril : 1 tablet

Completed

Press when completed



Innovation examples in co-creation

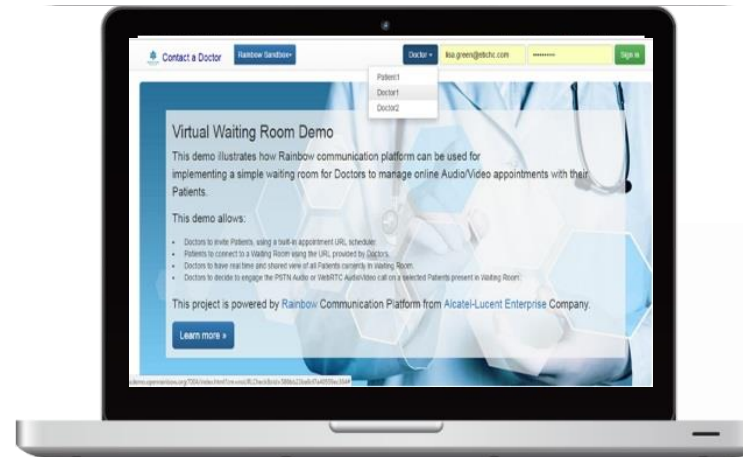


Patient self-services app.

- Improve patients experience during their hospitalization
- Reduce care givers interruption for non-medical services

Teleconsultation solution with virtual room

- Improve efficiency by moving the information instead of the patient
- Can be used to provide a triage system for same-day appointment
- Facilitate medical access for patient



A citizen-centered e-Health



Patient/Citizen empowerment:

1. An easy and simplified access to the care for citizen
2. Patient services to facilitate autonomy
3. Health democracy with all actors across territory

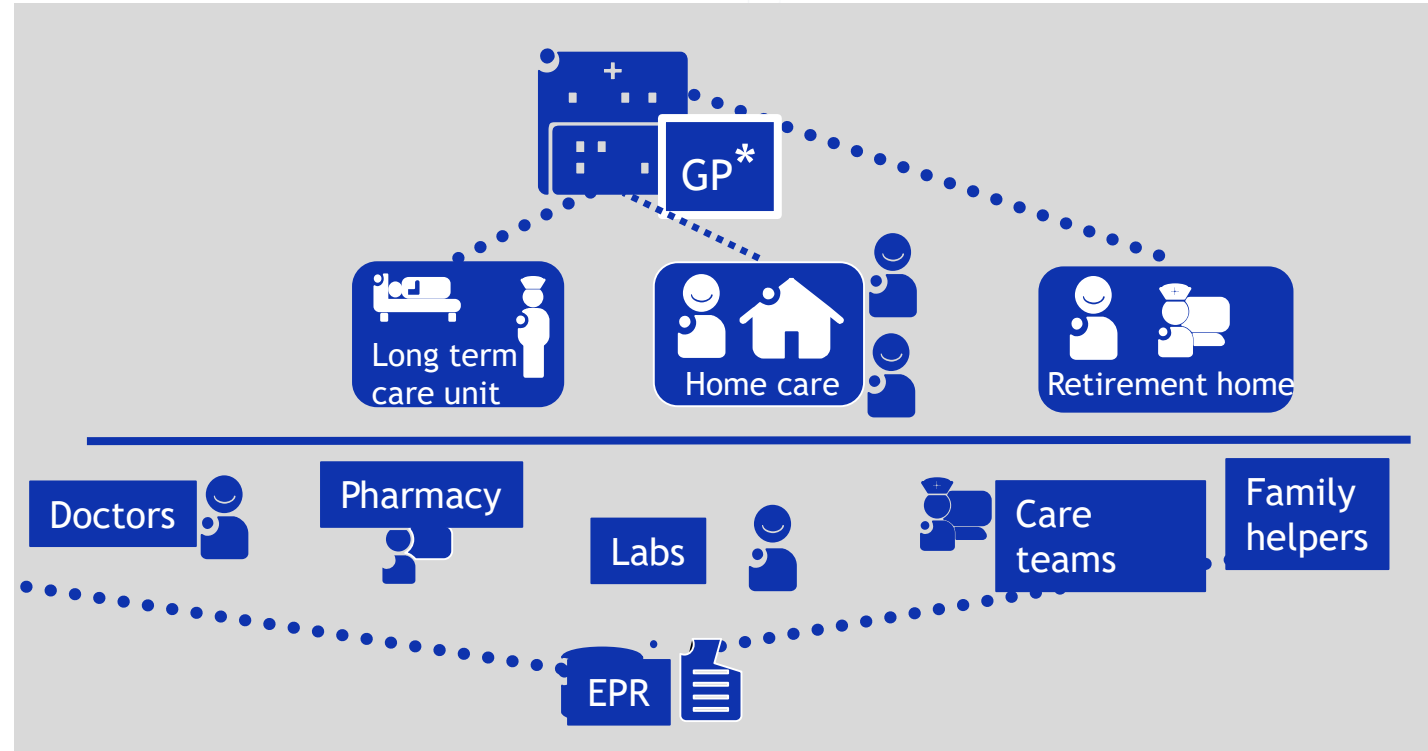
Via a connected and extended eco-system

Health Practice digitization:

1. Support innovation / co-creation
2. Ensure security and privacy
3. Policy enabled economics and governance
4. Break silos and build trust

Analyze and anticipate:

1. Support healthcare professionals' decisions
2. Preventative & Predictive Public Health
3. Big Data, Analytics, Modeling and Artificial intelligence



Global Healthcare Organization Transformation



We help you **Connect** your patients, staff and healthcare ecosystem, delivering technology that **works** across and beyond your facilities.

With **global** reach and **local** focus, we deliver specialist networking and communications for healthcare providers, to optimize the care pathway and enhance patient outcomes.



www.openrainbow.com

PARIS
DEC, 13th 2017

Health and Tech for People : Digital Disruption

Workshop: continuum of care, how can we build effective
pathways?
Paris, December 13th, 2017

Véronique L. Roger MD, MPH
Professor of Medicine and Epidemiology
Mayo Clinic College of Medicine

2013

BIG DATA

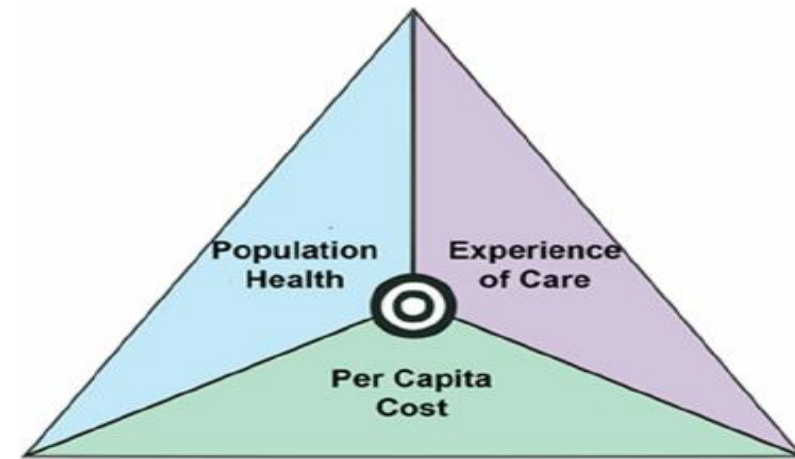
**A REVOLUTION
THAT WILL TRANSFORM HOW
WE LIVE, WORK, AND THINK**

VIKTOR MAYER-SCHÖNBERGER
KENNETH CUKIER

2017

Health care lagging behind other industries

Contribution of digital technology to achieving the **triple aim** remains to be determined



IHI Triple Aim

Digital health technologies: the vision

Wearable sensors, portable diagnostic technologies, telemedicine tools, mobile health care apps, EMRs can transform health care delivery by:

- Engaging **consumers** in their care and defining what services matter to them
- Help **providers, insurers**, and other stakeholders analyze data to identify unmet needs and measure outcomes
- Help manage **health care spending** and design payment models that optimize quality and costs.

From vision to implementation

Consumer
needs

Care
models

- Clinical outcomes
- Population health
- Lower costs

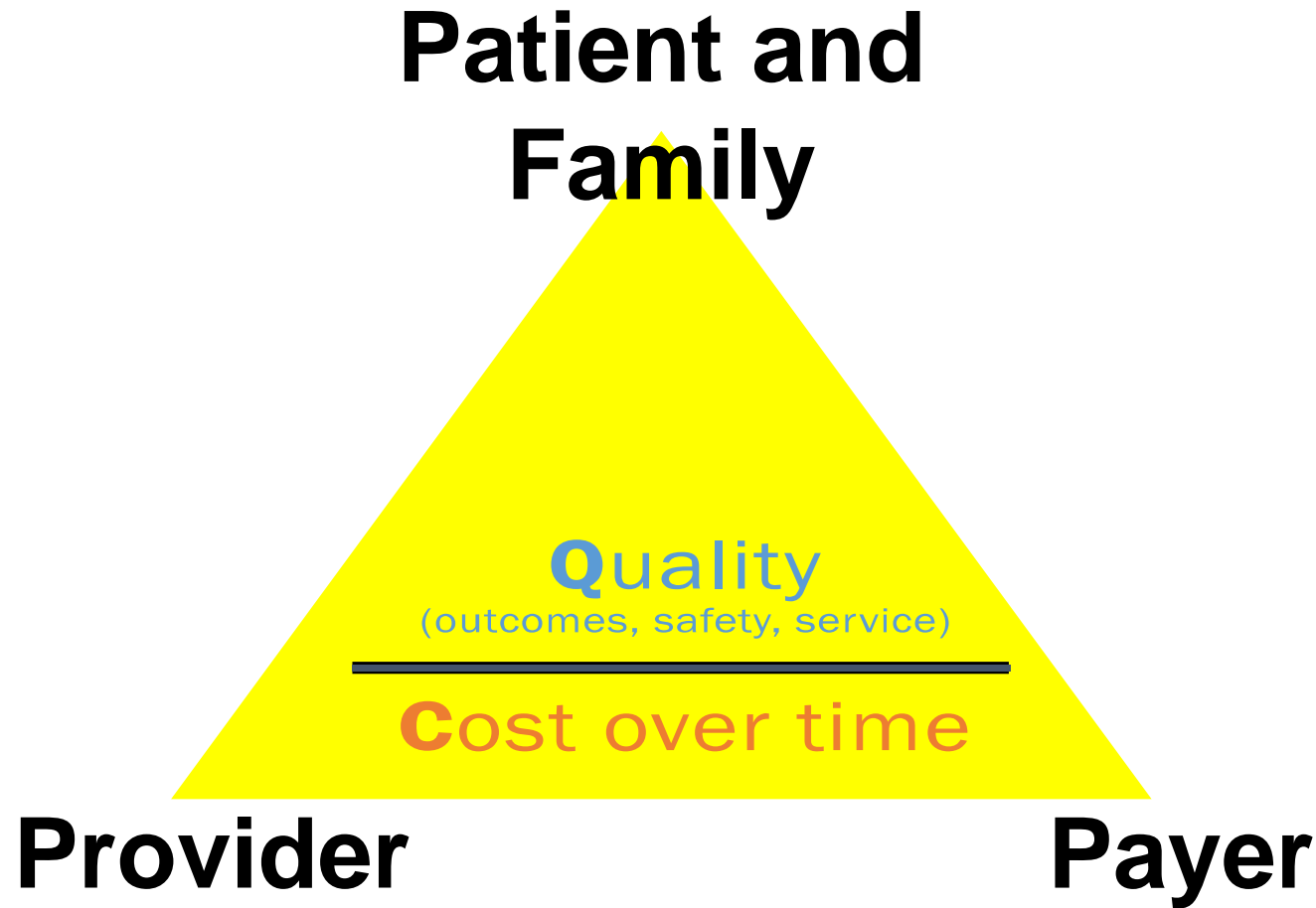


Digital health technology: Key actors

- Users
 - Patient and family
 - Provider
- External to health systems
 - CMS: Meaningful use
 - Venture capital
 - Entrepreneurs (EMR)
- Internal to health systems
 - “Tech savvy” providers
 - Entrepreneurs

- 
- Silos
 - Diverging incentives
 - Communication gaps

Proving value will be challenging



Priority
Patients with
multimorbidity
and complex
care needs

Illustrative examples, Mayo Clinic

- **OB-Nest:** new model of prenatal care
 - Obstetricians worked with designers to transform prenatal care
 - Focus on continuous communication, app to contact RN and virtual visits via video
- **Emergency Dept. Clinical Engineering Lab**
 - RFID in the ED
 - Measure workflow and gain efficiencies
- **Telestroke**



Barriers to Progress

- **Insufficient knowledge of health care**: entrepreneurs and developers from other industries rely on personal experience/anecdotes rather than understanding of complex workflows in health care
- **Insufficient focus on impact on the triple aim**
 - Overemphasis on innovation (e.g track dietary intake; find doctors)
 - Few opportunities for real-world validation
- **Regulatory requirements**
 - Telemedicine: inconsistent state licensure laws, limiting services across state lines.
 - U.S. Food and Drug Administration approval of mobile apps and diagnostic software (delays)
- Fee-for-service **reimbursement model** (CMS/private insurers increasingly pay for virtual visits, but not for most forms of digital health technology)

Selected considerations

- Data quantity overshadowing quality
- Protection of confidentiality/privacy
- Digital divide
 - Race, ethnicity, culture, health literacy
 - Age (cognition)
 - Income
- Rural health: digital coverage and distance from facilities
- Physician satisfaction: the “quadruple” aim

How can we build effective pathways?

- **Prioritize** opportunities based on specific needs while leveraging consensus-driven processes (IOM, AHRQ, others...)
- **Build** interdisciplinary digital health incubators
- **Enable** consumer-centered designs and valuations (health literacy, underserved)
- **Validate** in academic (research, innovation) and integrated (health plan) delivery systems
- **Plan** early for operationalization/dissemination gap

Thank you

Questions?

roger.veronique@mayo.edu

Disclosures

- RO1 HL 120857
- RO1 AR 30582
- R21 AG 045228
- PCORI LHSNet CDRN

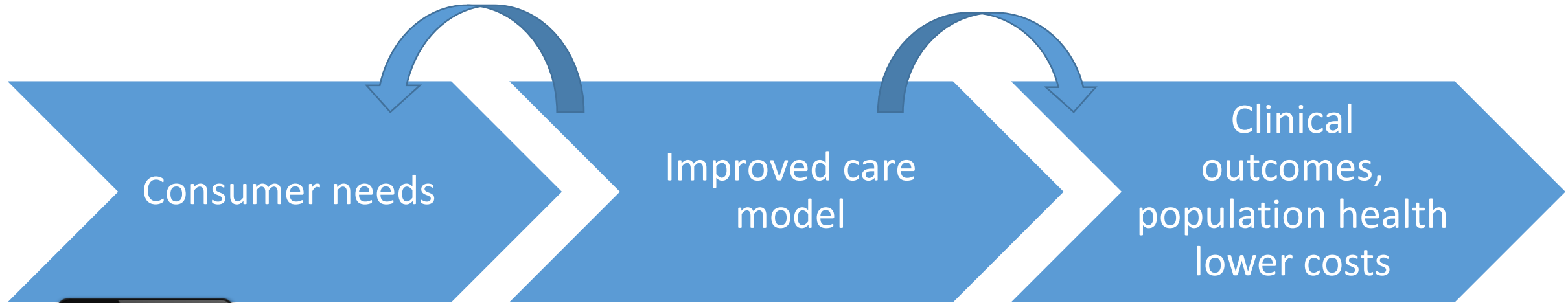
American Heart
Association



Learn and Live



Digital technology and the health care journey



Territorial pathway project

A new organization of Patient management

Introduction : the Regional numeric strategy



❖ Facts

- ✓ A complexity of the articulation City / hospital, Sanitary / medical and social
- ✓ Numerous initiatives concerning coordination and support organizations
- ✓ Lack of Patient data transmission and Patient data sharing
- ✓ Lack of model of pathway payment ?

❖ Objective 1 : a new organization of the Patient pathway

❖ Objective 2 : A regional digital platform in support of this organization

- ✓ Access to a shared information intended for all Healthcare Professionals and Patient
- ✓ Value-added services
- ✓ Mobility access

➔ **Facilitate the exercise of Healthcare Professionals and render patient actor of his care**

A three level information system



- **Local level : daily use**
 - ✓ Health professionals of city
 - ✓ Hospital and medico social Information System

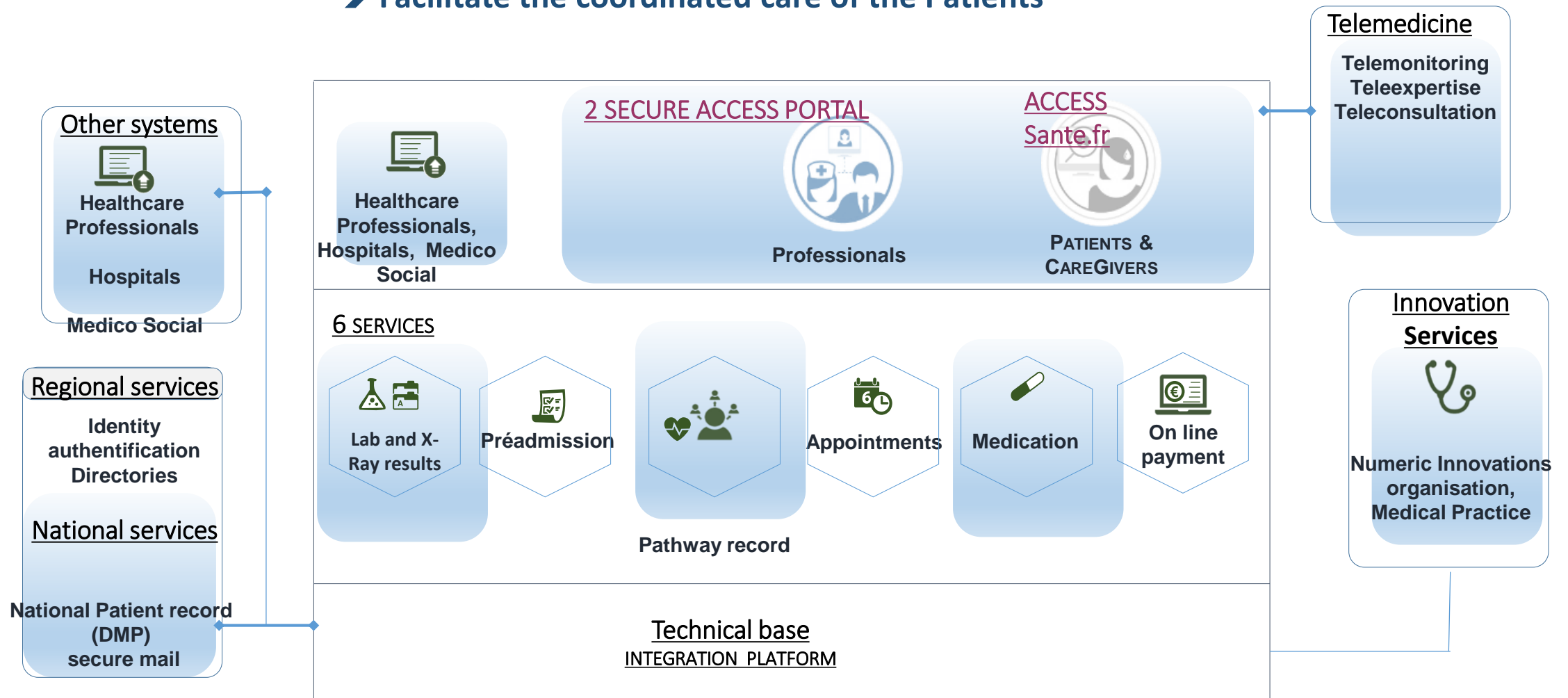
- **Territorial level : coordination of pathway**
 - ✓ TSN project
 - ✓ Platform of sharing and services towards healthcare professionals and patients
 - ✓ Digitalization of the territorial support device

- **National level : dataset necessary to patient care**
 - ✓ DMP Project
 - ✓ Medical information storage intended for territorial and local information system

TERR-ESANTE PLATFORM



➔ Facilitate the coordinated care of the Patients



A first experiment in West territory of Val de Marne

Conditions for success



- Structured organization of patient pathway
- Territorial structure in support of health professional activity
- Development of the syntactic and semantic interoperability
 - ✓ Do not say but make ...
 - ✓ Reinforcement of ASIP organization dedicated to a shared elaboration of these standards
 - ✓ Role of the national and the regional institutions to impose these standards to the industrials and the users
 - ✓ Developp use cases for semantic interoperability
- Integration of territorial platform to the numeric professional environnement
- A set of a minimum services to respond to health professionals needs
- Mobility access

« E Parcours » Regional project



- Objective : Coordinated care of the patient within a territory integrating a structure of support by and for the healthcare professionals.
- Associate all health and medico-social professionals
- Focus experiments on these territories
 - ✓ Organization experiments within the framework of the article 51
 - ✓ Telemedicine and Tele monitoring
- Implement regional numeric platform

➔ National followed by a Regional call for projects in June, 2017

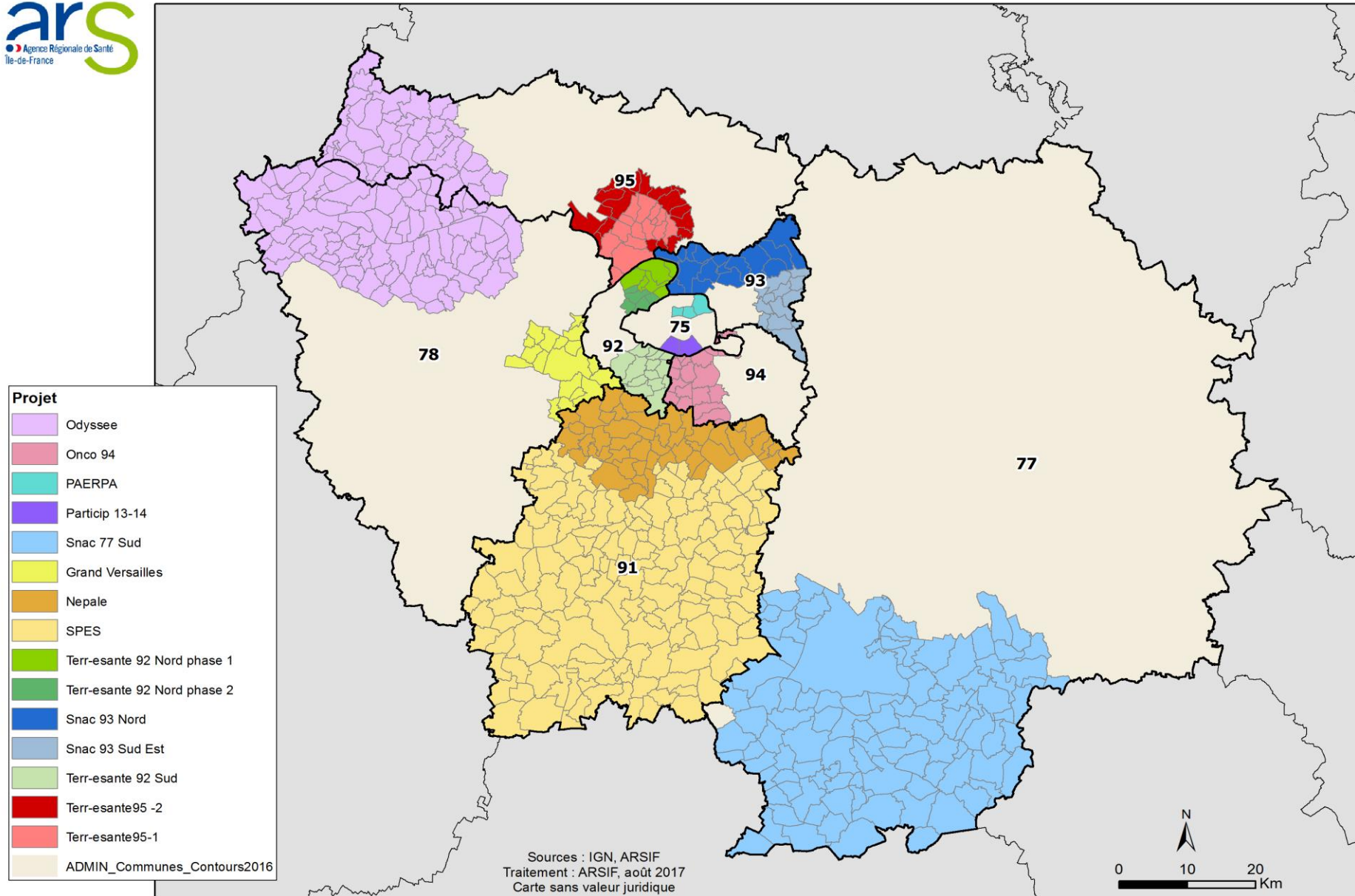
« E Parcours » Regional project : results



14 responses to regional call

- ✓ Represent 6 Millions of the inhabitants (50,5 % of the population of Ile-de-France)
- ✓ Implication of all the actors of the territory,
- ✓ 5 territories in progress for the next 6 months
- ✓ Second regional call in December , 2017

« E Parcours » Regional project : results (2)



Our Panelists



- **Claire CHABLOZ**, Chairwoman, FORAP
- **Tim GREACEN**, Director, Laboratoire de recherche de l'EPS Maison-Blanche
- **Miguel GONZALEZ-SANCHO**, Head of Unit eHealth, Wellbeing and Ageing, DG Connect, EC

