



REGIONE AUTONOMA  
FRIULI VENEZIA GIULIA

# ACCESSIBILITA' PER TUTTI

L'intelligenza artificiale (AI) in sanità innovazioni tecnologiche per l'assistenza socio-sanitaria senza barriere e senza confini



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Disabilità

Trieste, 21 novembre 2019



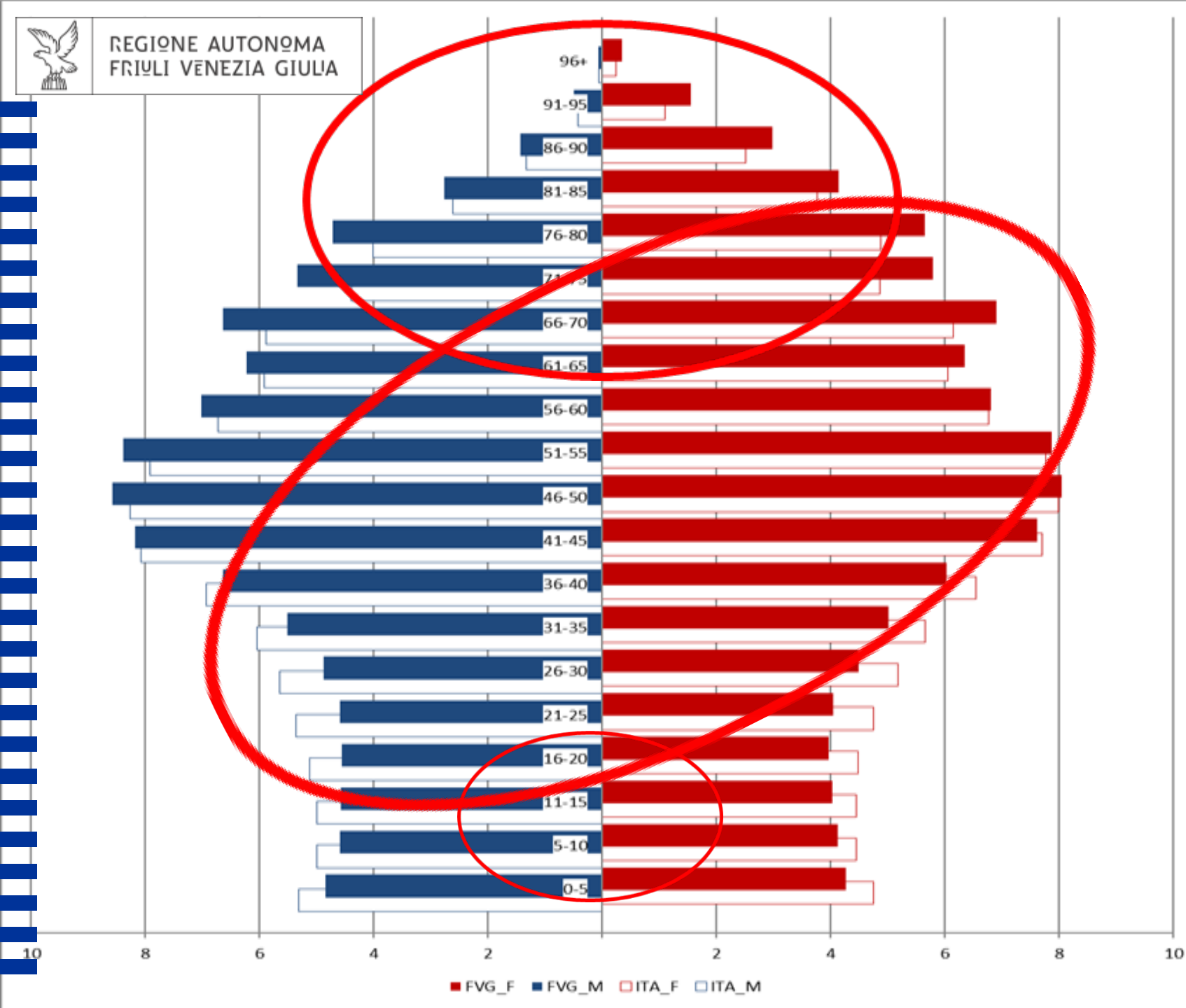
REGIONE AUTONOMA  
FRIULI VENEZIA GIULIA



## The regional context & vulnerability

We have been working for the last twenty years to create a **supportive, resilient** and **friendly** environment for all our citizens.

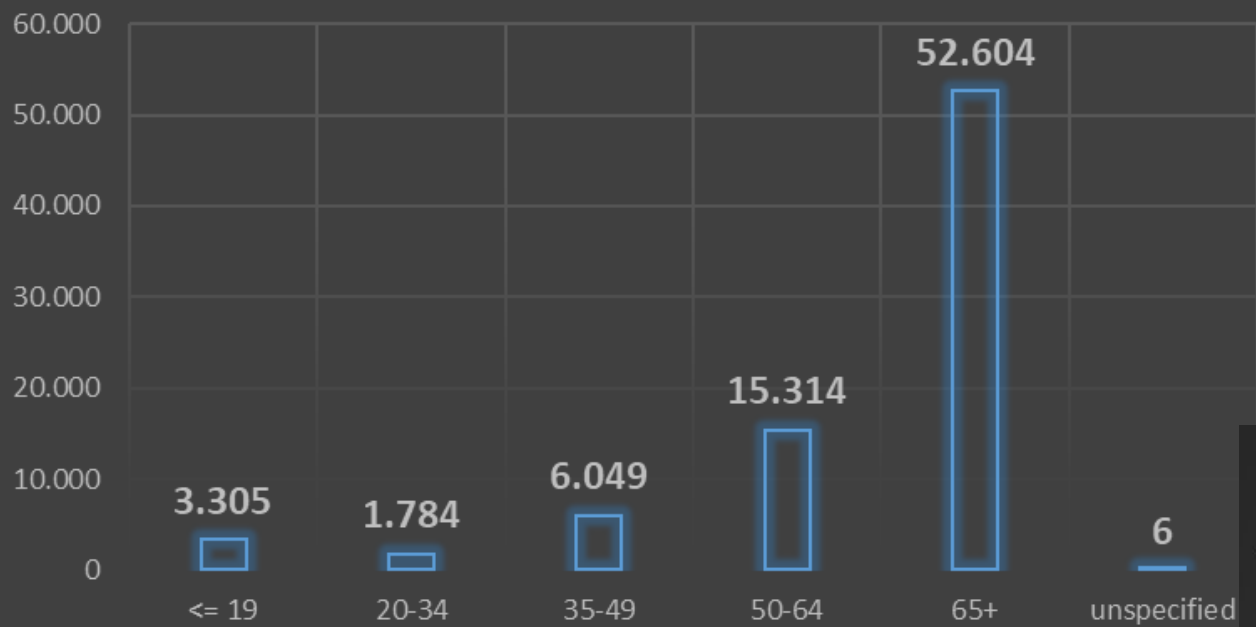
Indicators	Friuli-Venezia Giulia	Italy
Gender gap (years)	5.1	5.5
Ageing index <sup>a</sup>	208.8	165.1
Structural dependency ratio <sup>b</sup> (%)	61.4	55.8
Old age dependency ratio <sup>c</sup> (%)	41.5	34.8
People at risk of poverty/social exclusion (%)	16.7	29.9



We have focused on the vulnerable groups of people: **older people**, **children** and **disabled people** because we believe that an environment suitable for them is an environment suitable for everyone



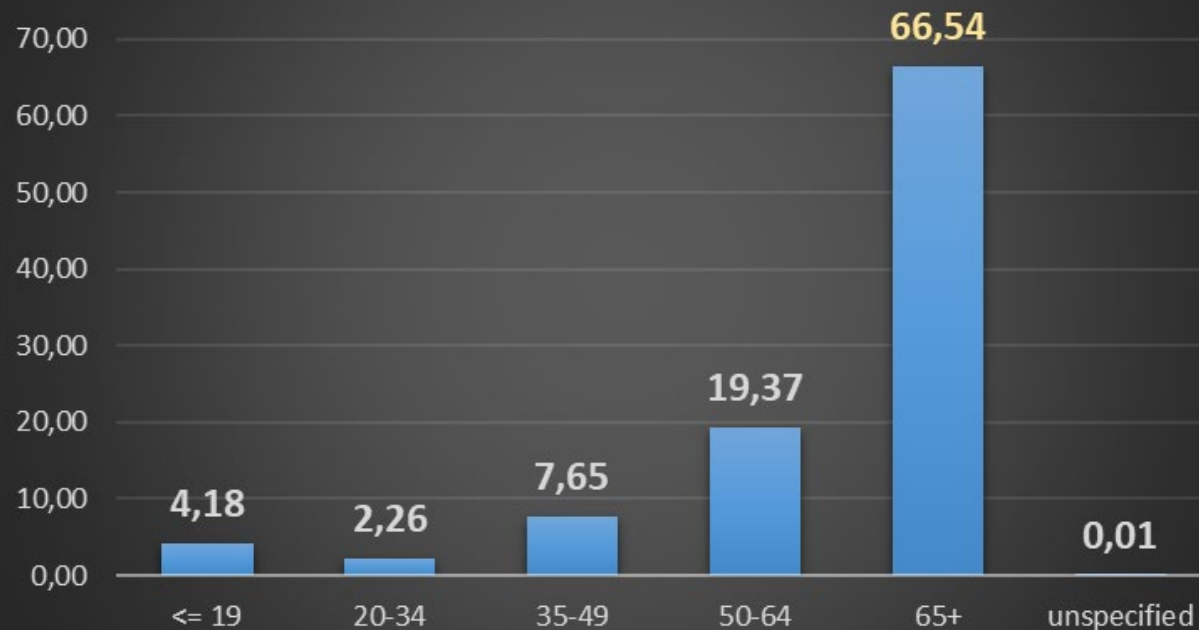
### 79.062 disable people in FVG Region



DATA

Disable people represent 8% of the regional population

### Number of disable people in FVG Region (value in %)





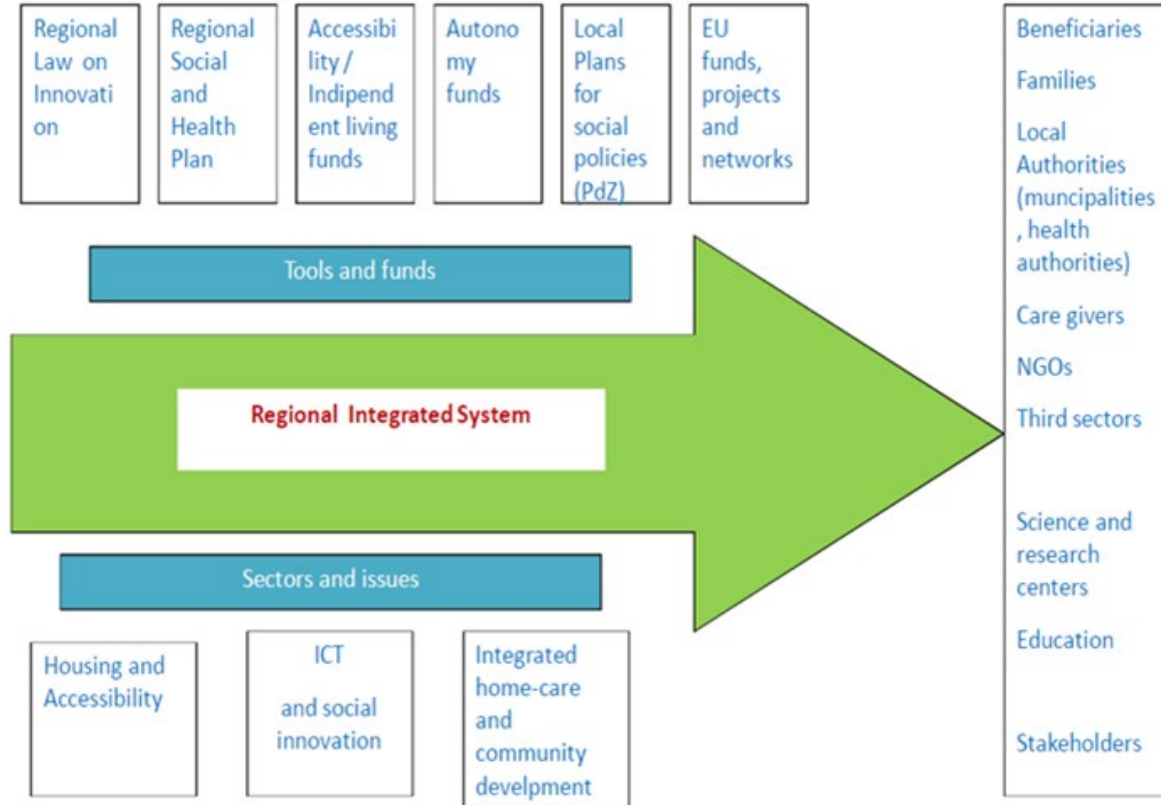
# Challenges

- working in an integrated way
- understanding the importance of evaluation
- finding a unified coordination mechanism
- fostering the idea of supportive environments in Friuli-Venezia Giulia.

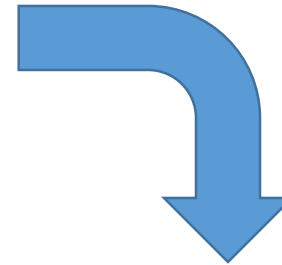




## FVG REGIONAL STRATEGY on Active and Healthy Ageing



The regional strategy to support vulnerable people takes a **multisectoral approach**, implemented through **multistakeholder platforms** (clusters, networks, thematic working groups), that treats vulnerable people not just as beneficiaries of care services but also as key actors in their communities' growth and socioeconomic development



The permanent working groups develop: year plans, programmes, actions, evaluation...



Five Global Goals reference disability



Achieving 17 Global Goals will leave no one behind

Three strategic directions are directly relevant to healthy ageing:

- preventing disease and addressing health determinants by promoting multi- and intersectoral policies throughout **the life-course**
- establishing **healthy places**, settings and resilient communities
- **leaving no one behind**





# From strategy to laws

As the new approach was taking shape at a global level, several laws have progressively been adopted both at the national and the regional level according to the targets now clearly established by the SDGs:

- Regional Law 41/1996, on integration of health and social services for impaired people
- **Italian Law 112/2016**, (also called «dopo di noi», «after us») on assistance to severely impaired people with no family support
- Italian Law 68/1999, on impaired people's right to work
- Italian Law 104/1992, on assistance to impaired people, their social integration and their rights
- **Regional Law 22/2014** on active and healthy ageing and to counteract loneliness





# PREVENTION: PRISMA 7



## PRISMA-7 Project, detecting and mapping frailty in older people

Friuli Venezia Giulia, Italy



Health & Health  
Services



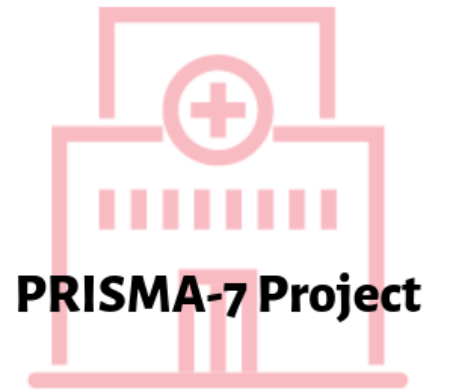
This project seeks to detect frailty early in older people and improve the response of health and social services. It aims to improve older people's quality of life, promote independence and prevent or delay hospitalization and functional dependency.

#EquityinHealth

"The strength of this project is that it not only provides services in the home, but above all teaches us to keep ourselves healthy, and gives us the tools to do so."

Giorgio, age 75, caring for his wife with dementia

#EquityinHealth



## PRISMA-7 Project

26%

of the population of  
Friuli Venezia Giulia  
over age 75

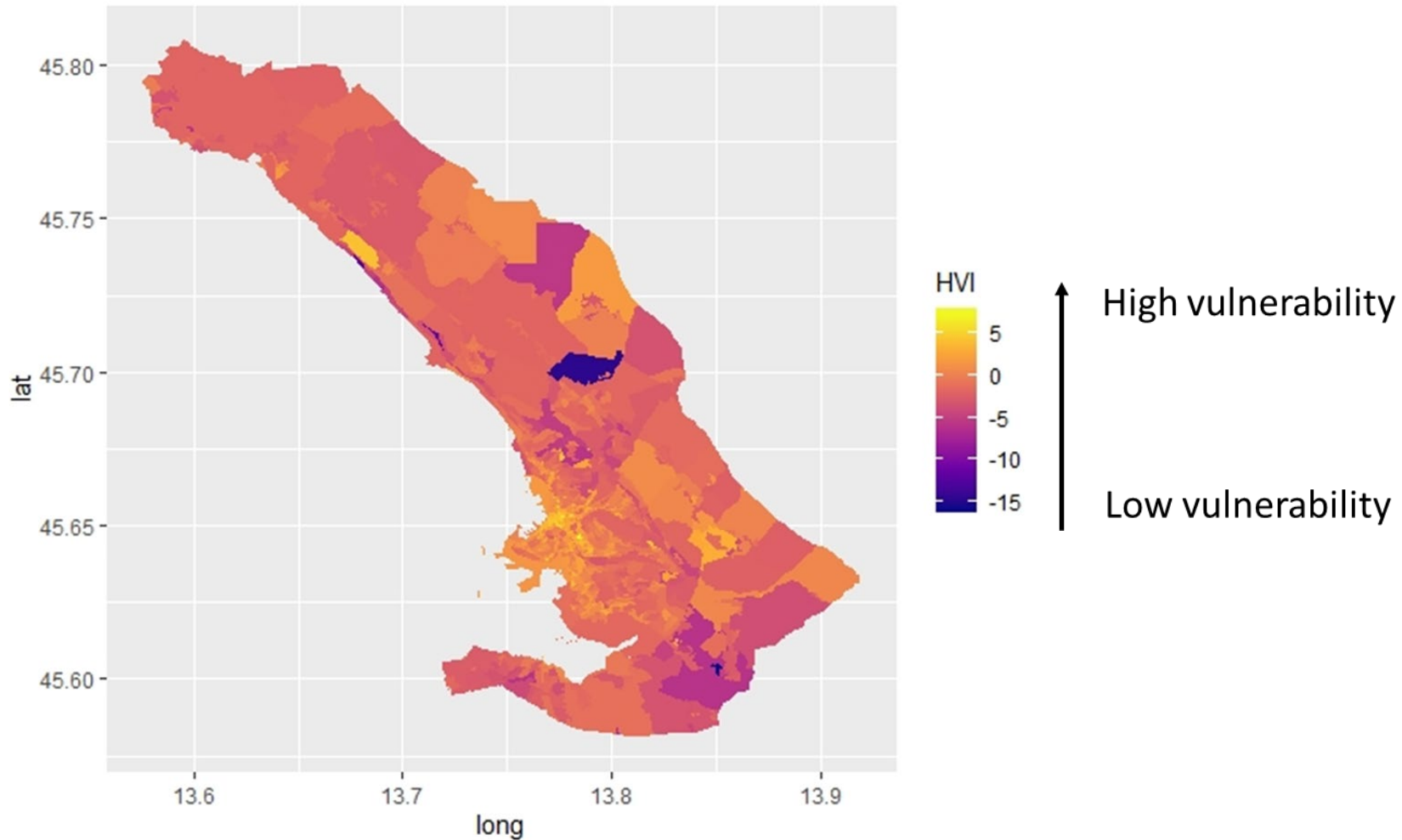
23,000

interviewed for risk  
of frailty



# PREVENTION

## ”Heat Vulnerability Index”



To improve the resilience of the territory against the negative effects of climate change, the Region has set up an interdepartmental research panel for mapping the whole regional territory, and in particular the major urban areas, using the Heat Vulnerability Index (HVI).



# Greet your neighbour



*Entrare nel cuore  
delle persone  
non è una conquista  
ma una  
straordinaria  
opportunità.*

Anonimo

*Come puoi sostenere il progetto?*

- Sii attento alle condizioni di salute dei tuoi vicini, soprattutto di quelli anziani e soli;
- Segnala agli operatori dei Servizi Sociali le situazioni a rischio, loro sapranno agire con competenza e riservatezza;
- Diventa anche tu una sentinella volontaria, promuovendo insieme a noi solidarietà, amicizia e salute.

*Il volontario puoi essere tu!*



Per qualsiasi informazione contatta gli  
Uffici del Servizio Sociale  
al numero **0434/873938**

oppure puoi passare il  
**mercoledì pomeriggio**  
dalle ore 16.30 alle ore 17.30  
Palazzo De Lorenzi- Brinis (Casarsa)



Iniziativa di promozione  
comunitaria per la  
**prevenzione del disagio  
e della solitudine  
negli anziani**  
del Comune di Casarsa della Delizia



Launched in 2011, “Greet your neighbour” (saluta il tuo vicino) is an initiative carried out by one of the municipality in Friuli Venezia Giulia that aims:

- to prevent and address the risk of isolation and loneliness among older and impaired people
- to focus on the most vulnerable segments of the population: people who live alone and have little day-to-day social contact
- to build a live social network for this groups, helping people cultivate new friendships and, if necessary, report any special needs to the municipality’s social service unit.



# FVG: A REGION FOR ALL



Una regione accessibile

PRENOTA ADESSO:  
Confronta la nostra offerta

LIVE

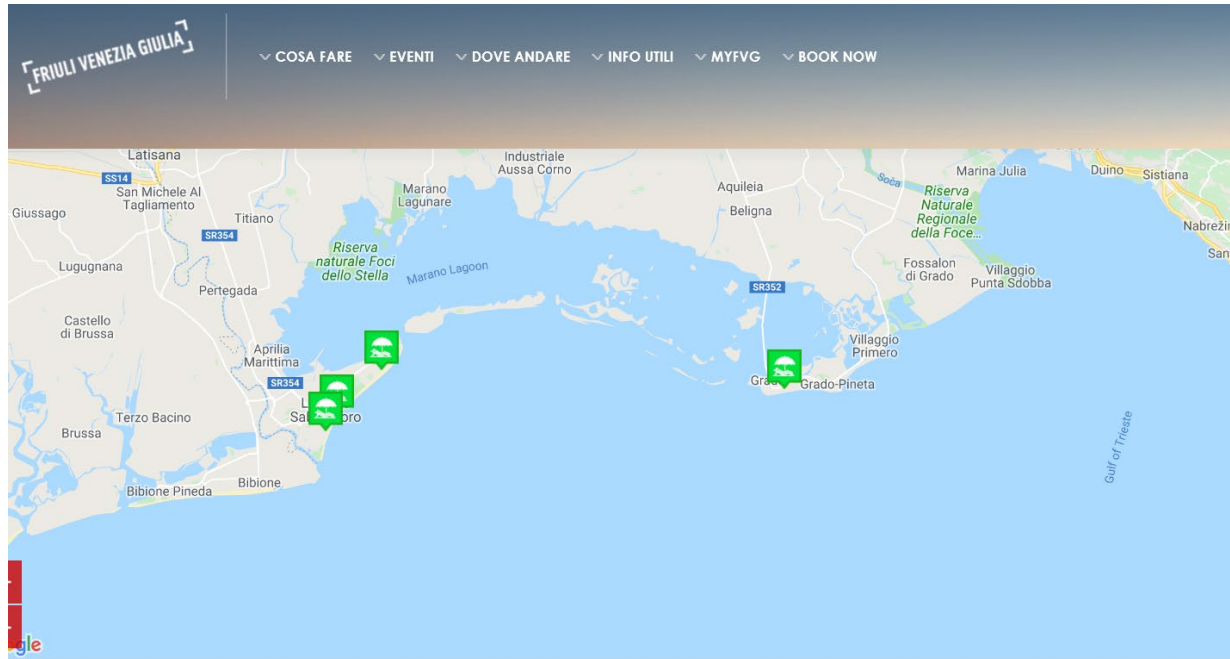
Area		▼	
Tutte le località		▼	
Tipologia		▼	
31-10-2019	📅	07-11-2019	📅
2 Adulti	▼	Bambini	▼
pernottamento e colazione		▼	

Invia

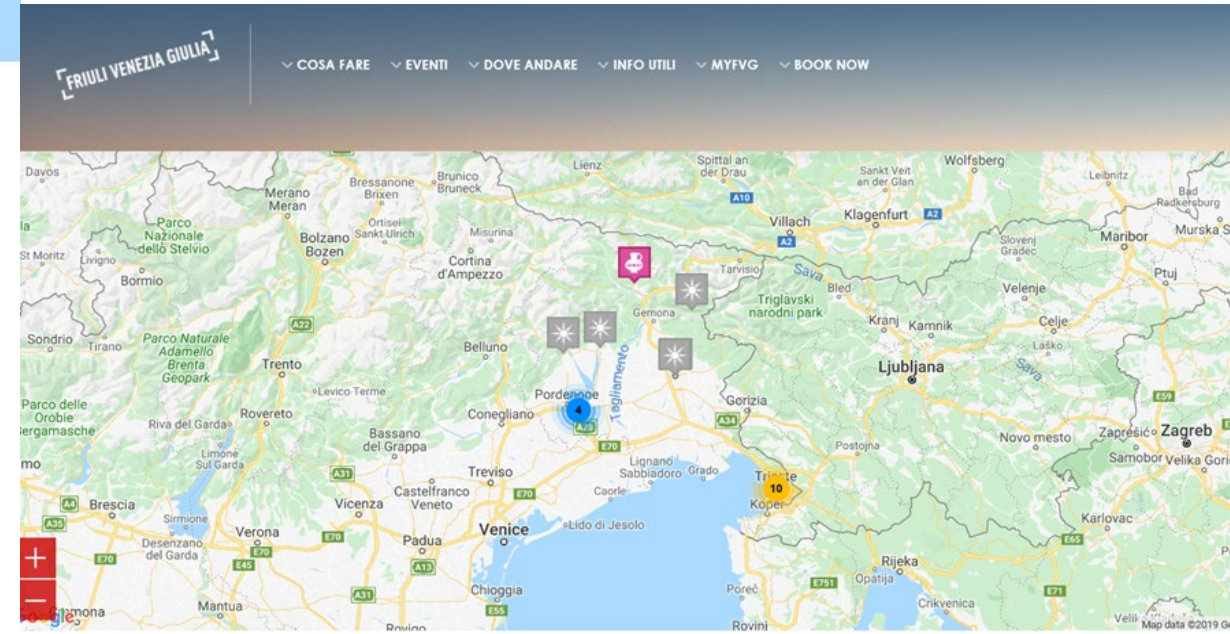
Ricerca Avanzata



# FVG Seaside resorts



# FVG Museums





# Smart Health Ambient Assisted Living

location and detection  
platform for people with  
dementia or cognitive  
impairment



SMARTHEALTH  
AMBIENT ASSISTED LIVING

## PollicIoT

Una soluzione dedicata all'assistenza  
dei malati di Alzheimer

**PollicIoT**  
è una piattaforma di  
localizzazione di persone  
con disturbi cognitivi e  
demenza con dispositivo  
Wearable con sensori per  
l'individuazione di posizione  
e movimento

Con la tecnologia IoT  
il Caregiver localizza  
il paziente in tempo reale,  
ricevendo una notifica  
in caso di caduta e uscita  
da aree predefinite

## PollicIoT

Piattaforma di localizzazione  
e rilevazione cadute per persone  
con demenza e Alzheimer

**PollicIoT** permette il  
monitoraggio del paziente a distanza  
da parte della famiglia o del Care Giver.

Grazie ad un **dispositivo indossabile** dotato  
di sensori per l'individuazione della posizione  
e dei movimenti e ad una **piattaforma Web**,  
il Care Giver sarà in grado in tempo reale di  
**localizzare l'assistito o ricevere notifiche  
di allarme** in caso di caduta o uscita  
da perimetri predefiniti.

Può essere utilizzato:

- ✓ in residenza assistita
- ✓ in famiglia

## PollicIoT - La tecnologia

Utilizza le più innovative soluzioni Radio  
LoRaWAN® e piattaforme Cloud per comporre  
comunità digitali SmartCities.

- L'innovativa tecnologia radio a basso consumo garantisce ampie aree di servizio con tecnologia LoRaWAN.
- La connettività è svincolata dai gestori tradizionali di rete mobile e fissa
- Ha un'ottima portata e bassi consumi
- Fino a 15 km di raggio in campo aperto

**Il sistema web comprende il tracciamento completo del paziente:**

- Tracciamento posizione
- Geofencing, ovvero definizione delle zone di sicurezza e attivazione segnali d'allarme
- Notifica di caduta

## PollicIoT - Il dispositivo

Il dispositivo indossabile dalle dimensioni ridotte e bassi consumi garantisce una lunga autonomia senza necessità di interazioni da parte dell'utente.

PollicIoT è un dispositivo localizzatore in grado di rilevare posizione e movimenti del paziente che lo indossa.

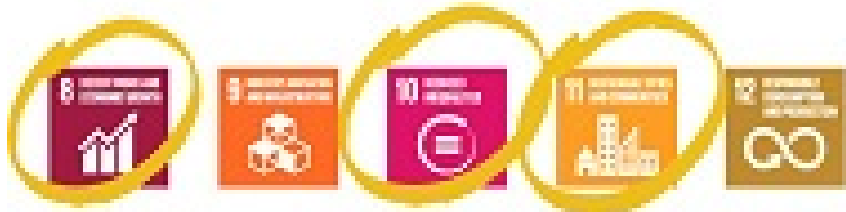
PollicIoT è una piccola scatoletta nera da tenere in tasca. Può essere disponibile anche in forma di bracciale o da mettere alla cintura.

La persona incaricata di assistere il paziente sarà sempre in grado di ricevere in tempo reale i dati e sapere dove il proprio assistito si trova con la localizzazione su smartphone, tablet o computer di casa.

La strumentazione consente anche di raccogliere segni vitali del paziente, dando la possibilità di intervenire subito nel caso si dovessero presentare situazioni critiche, come esempio una caduta.



Five Global Goals reference disability



Achieving 17 Global Goals will leave no one behind



the C.R.I.B.A. (the regional information centre on architectural barriers) offers:

- **free of-cost advice** for the public and private citizens on the construction or renovation of buildings, houses and apartments free of architectural barriers, to promote the mobility of frail people and allow them to stay at home as long as possible



# FVG: The Feasible Living (Abitare Possibile)



The Welfare Area of the Region started Feasible Living, an innovative housing initiative to assist older and disable people who are partially or completely dependent or frail

We will evaluate the Feasible Living initiative at the end of a three-year implementation period.





## HEALTH MAPS & URBAN PLANNING CHANGES

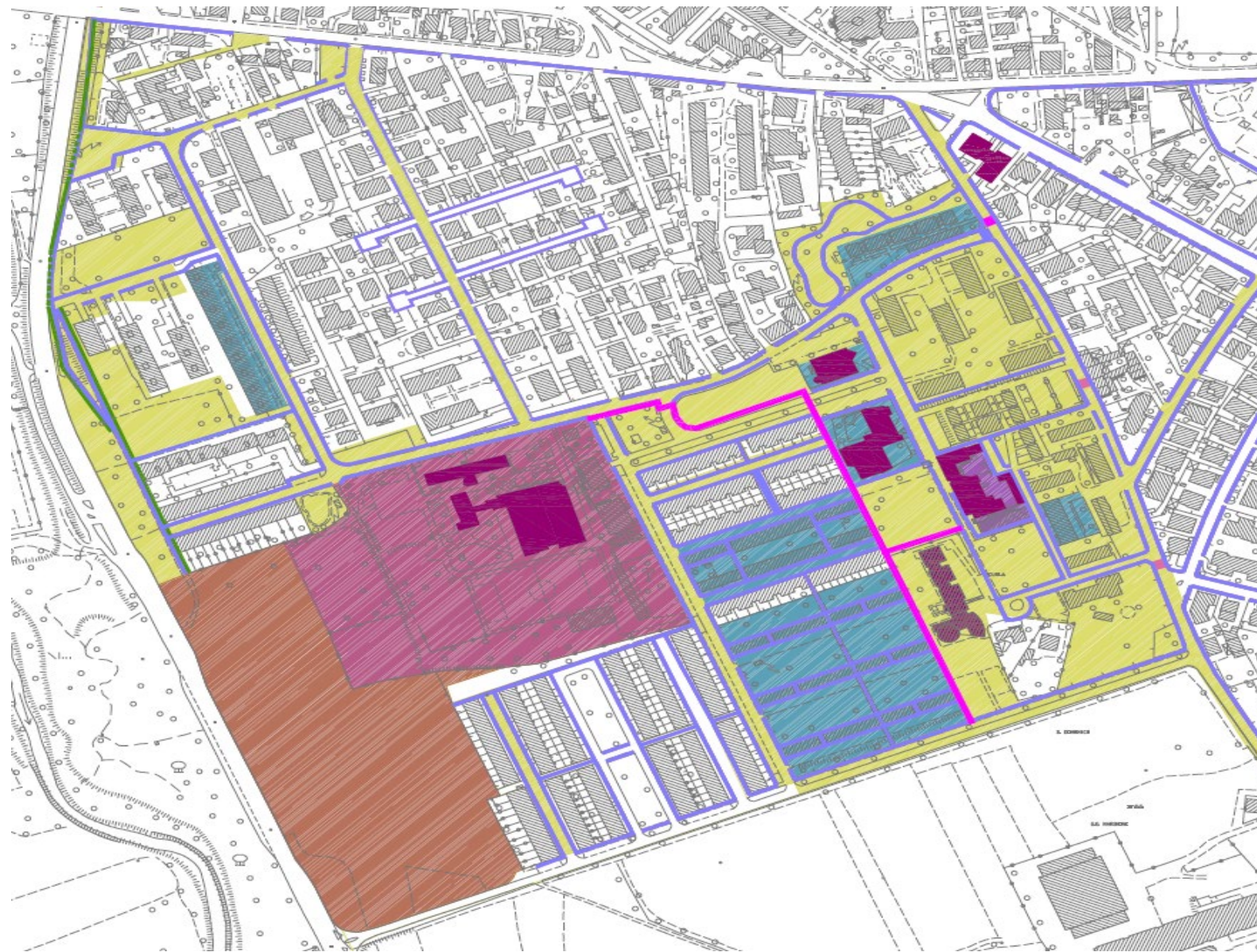
- Interventions to the built and natural environment
- Traffic calming interventions
- Improvement of walking and cycling infrastructures and of green areas
- Improvements for older and disabled people
- 500m distance from the main reference points for older people (pharmacies, shops, etc.)
- People's needs taken into account in the decision-making processes



REGIONE AUTONOMA  
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# San Domenico Project

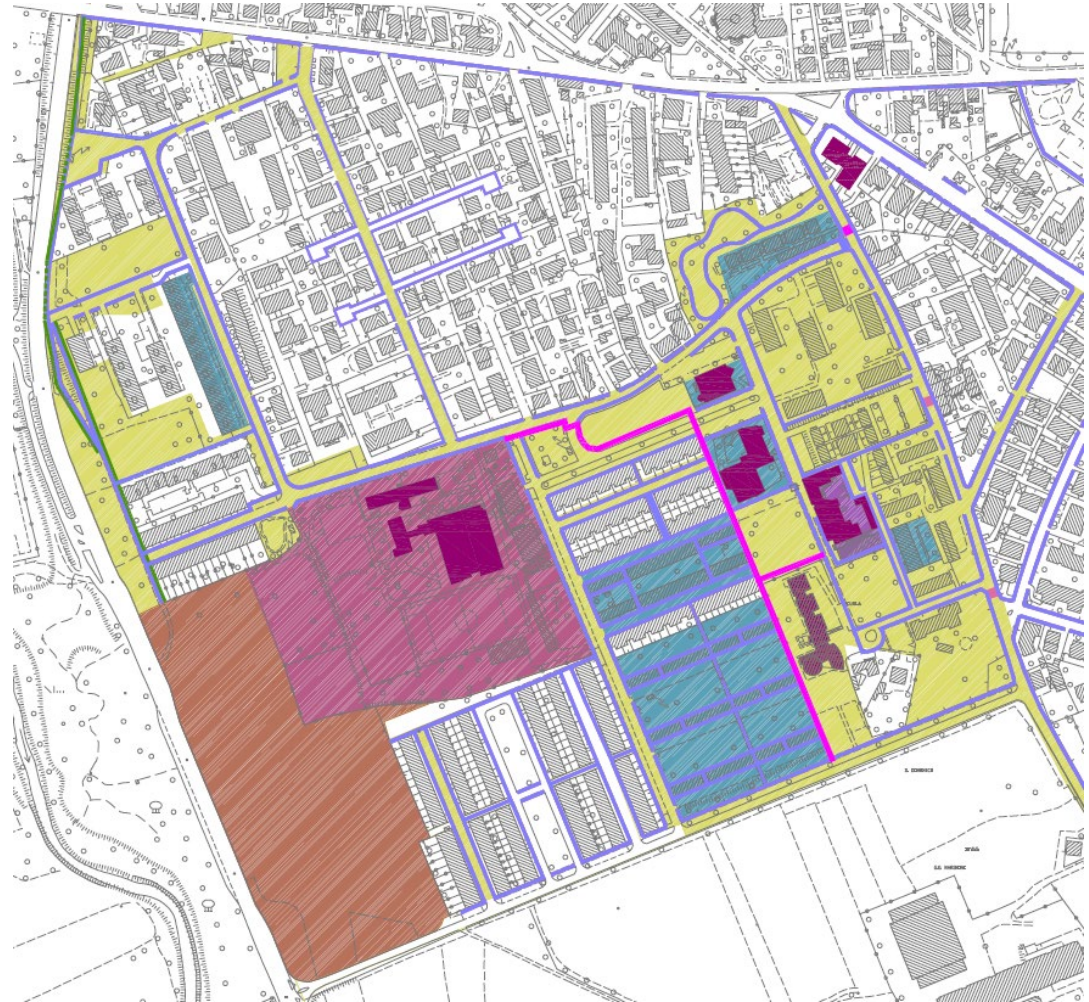




# URBAN ENVIRONMENTS INNOVATIVE PROJECTS

## SAN DOMENICO: City planning

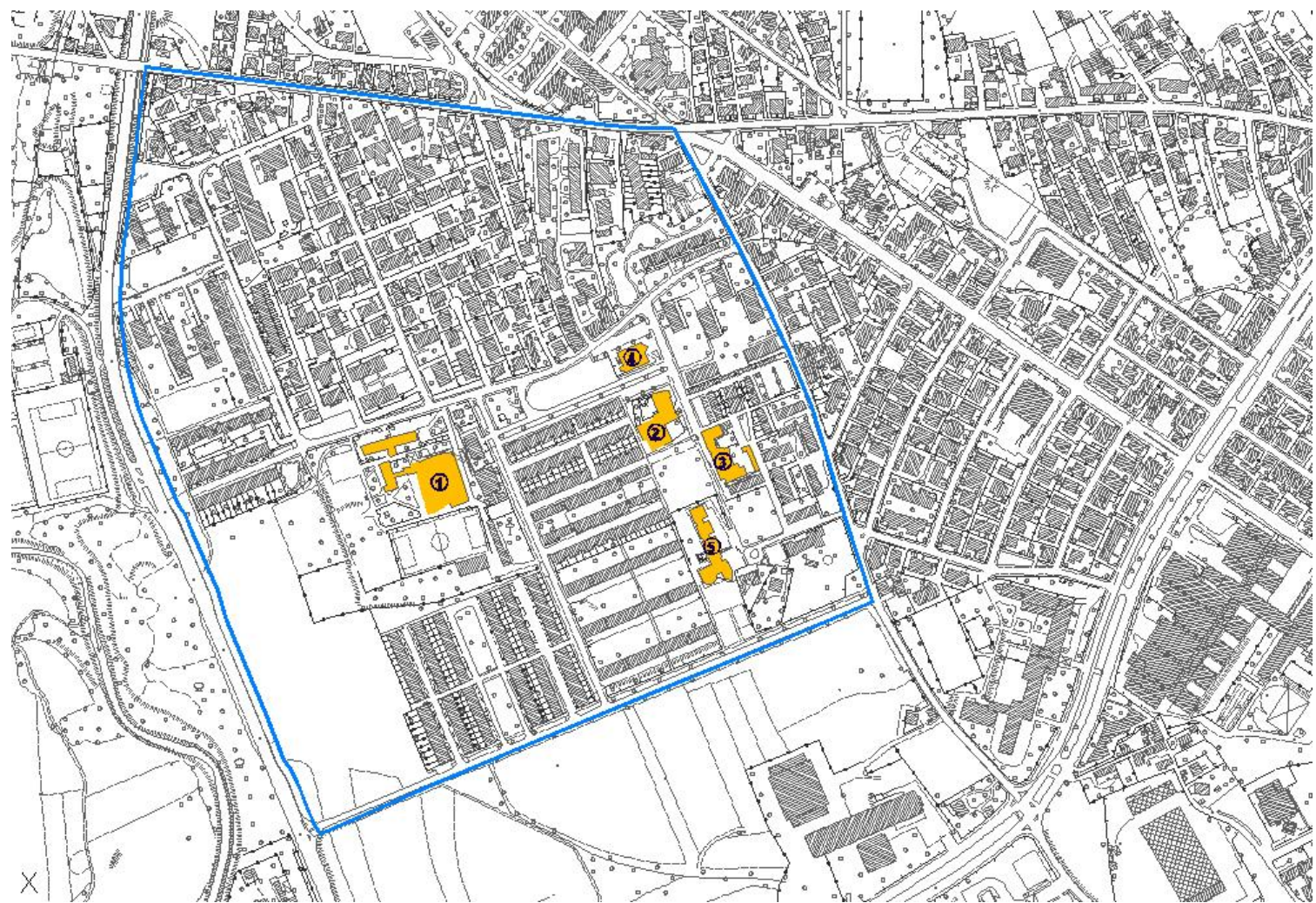
- Participation
- Schoolchildren
- Disadvantaged GROUPS:  
older and disabled people
- Questionnaires analysis and  
diagnosis

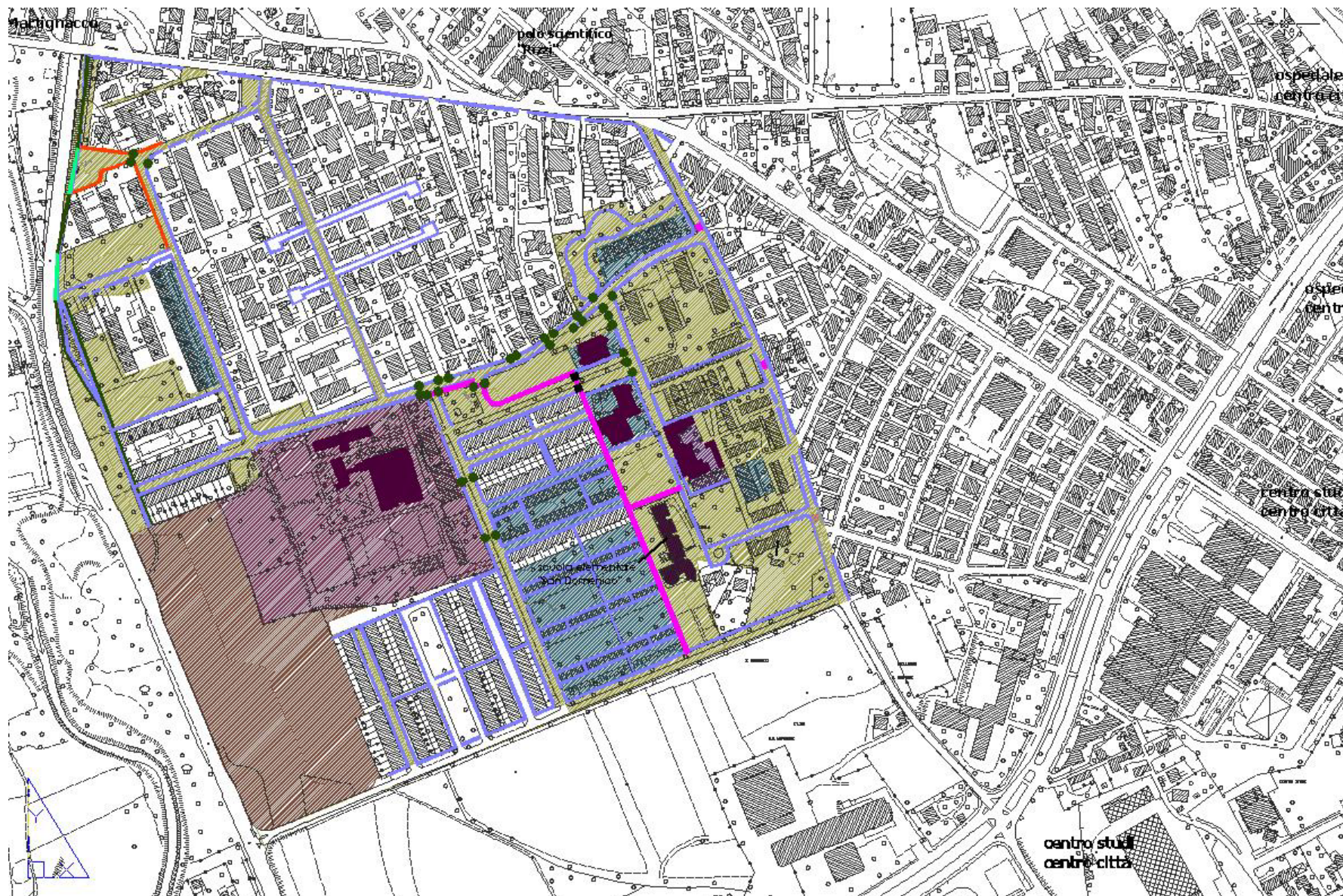


# Main focal points in the district











LEGENDA

- limite dell'area di intervento
- poli attrattori
- ① comunità Don de Roja
- ② parrocchia "San Domenico"
- ③ comunità Piergiorgio
- ④ supermercato di quartiere
- ⑤ scuola elementare "San Domenico"





LEGENDA

-  aree ed immobili di proprietà del Comune di Udine
-  aree ed immobili di proprietà del Comune di Udine concesse in diritto di superficie a terzi
-  immobili di proprietà della Fondazione Casa dell'Immacolata di Don Emilio de Roja
-  aree di P.R.P.C. "Viotta"
-  aree in proprietà della Fondazione Tullio concesse alla Comunità Piergiorgio ONLUS
-  rete dei percorsi pedonali esistenti
-  percorsi pedonali riattati
-  percorsi ciclabili esistenti
-  percorsi ciclabili realizzati
-  percorsi ciclopedonali realizzati
-  interventi puntuali di adeguamento per il superamento delle barriere architettoniche e messa in sicurezza degli attraversamenti pedonali esistenti con la creazione di dossi e la posa di pannelli luminosi
-  interventi puntuali di adeguamento per il superamento delle barriere architettoniche e messa in sicurezza degli attraversamenti pedonali esistenti con la creazione di dossi
-  interventi puntuali di adeguamento per il superamento delle barriere architettoniche lungo i percorsi pedonali ed in corrispondenza degli attraversamenti pedonali esistenti



# Blind Café

In 2014, the Rittmeyer Institute for the Blind opened the Blind Café, a bar run by visually impaired people, to raise the public's awareness and encourage visually impaired people to develop the autonomy and skills in daily living that may help them get other employment in the future.

Five Global Goals reference disability

THE GLOBAL GOALS  
For Sustainable Development

cbm

Achieving 17 Global Goals will leave no one behind





# THE FVG REGION IS PARTNER OF ESOF 2020



Scheduled for 2020, springs from the demand of new technologies at the service of the human beings, studied to fulfill their needs and aimed to a sustainable development.

The main goal is the development of hardware and software technologies orientating the future evolution of science and industry in terms of **full accessibility** for all.



# Bridging the gap between Innovation & Welfare: FVG experience



# Domains of Regional experience of innovation in healthy & social sector in FVG Region towards a regional strategy

Towards a regional strategy for Active and Healthy Ageing

Autonomy  
and  
independent living

Regional funding initiatives destined to the elderly, persons with disabilities and their families to be used within customised projects for autonomy and independent life

Accessibility and Social housing  
for elderly and persons with disability

Regional funds to municipalities and EU Projects for the experimentation of social housing projects as alternatives to the institutionalisation process of the elderly and people with disabilities

home-care and innovative social and healthcare services

EU funded projects  
For ICT-based integrated care and social protection networks

## EU PROJECTS SUPPORTING FVG INNOVATION IN HEALTH AND SOCIAL CARE

1. . **CASA** -Consortium for Assistive Solutions, CORAL network

Policy development for AAL innovation (2009)



2. **HELPS** Innovative Housing and home care solutions

for older people (2011)



3. **SMARTCARE** ICT-supported integrated care

(home care monitoring, telemedicine deployment) (2013)



4. **HealthNET** integrated care in post-discharge process and in different

health care settings, with ICT solutions (telemonitoring mobile kit) (2017)



5. **ASTAHG** Alpine Space Governance

For Active and Healthy Ageing (2018)



# SmartCare FVG deployment site

***Integrated care models with ICT solutions*** implementing two pathways (short term-post Discharge [3 months] and Long Term Care [9 – 12 months]) in Primary Health Care environment, mainly for cardiovascular chronic diseases.

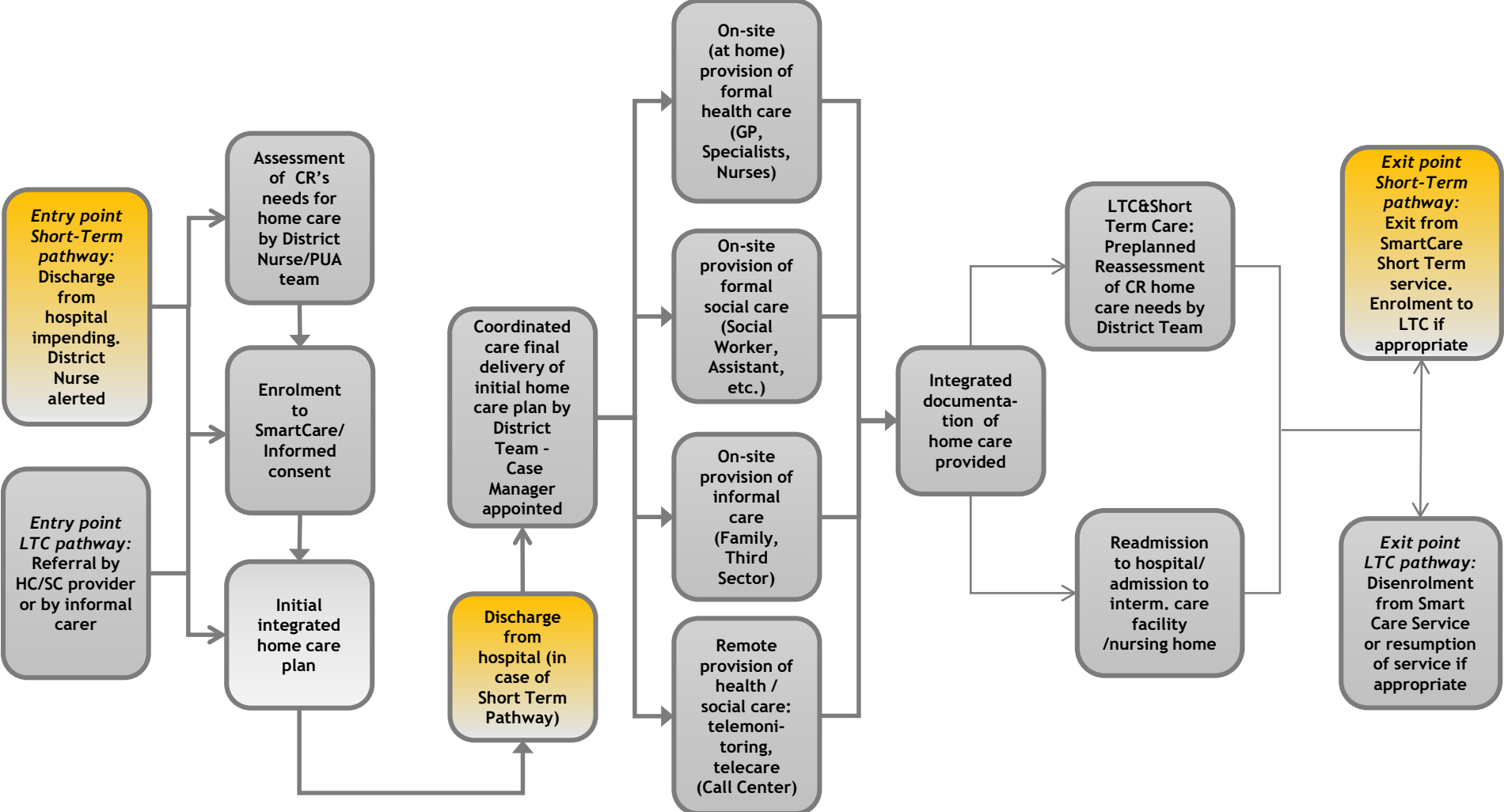
***200 patients recruited***, local randomized study design (100 in usual care control group, 100 in “new ICT supported integrated care” intervention group).

***Health care, social care, third sector, informal care enrolled***

## ***Target population:***

- Over 65
- Frailty Barthell index or BADL and/or timed up-and-go test (TUG)
- Chronic diseases: Heart failure and its comorbidities (Functional class NYHA II - IV), COPD, diabetes mellitus

# SmartCare Integrated Care Short Term - Long Term Pathways



## SMARTCARE in FVG

### Clinical and Organisational System Components

Health Platform is a centralized platform, structured and focused on:

- Care recipient (CR) management;
- HC/SC/informal care management;
- CRs and HC/SC/informal care integrated agenda management;
- Data collection (clinical and environmental), both automatically and manually through the available interface applications (questionnaires).

The Platform has three main components:

1. Central system (icloud);
2. The Hub and the medical devices at CR's home;
3. Devices for the HC staff for monitoring and screening activities.

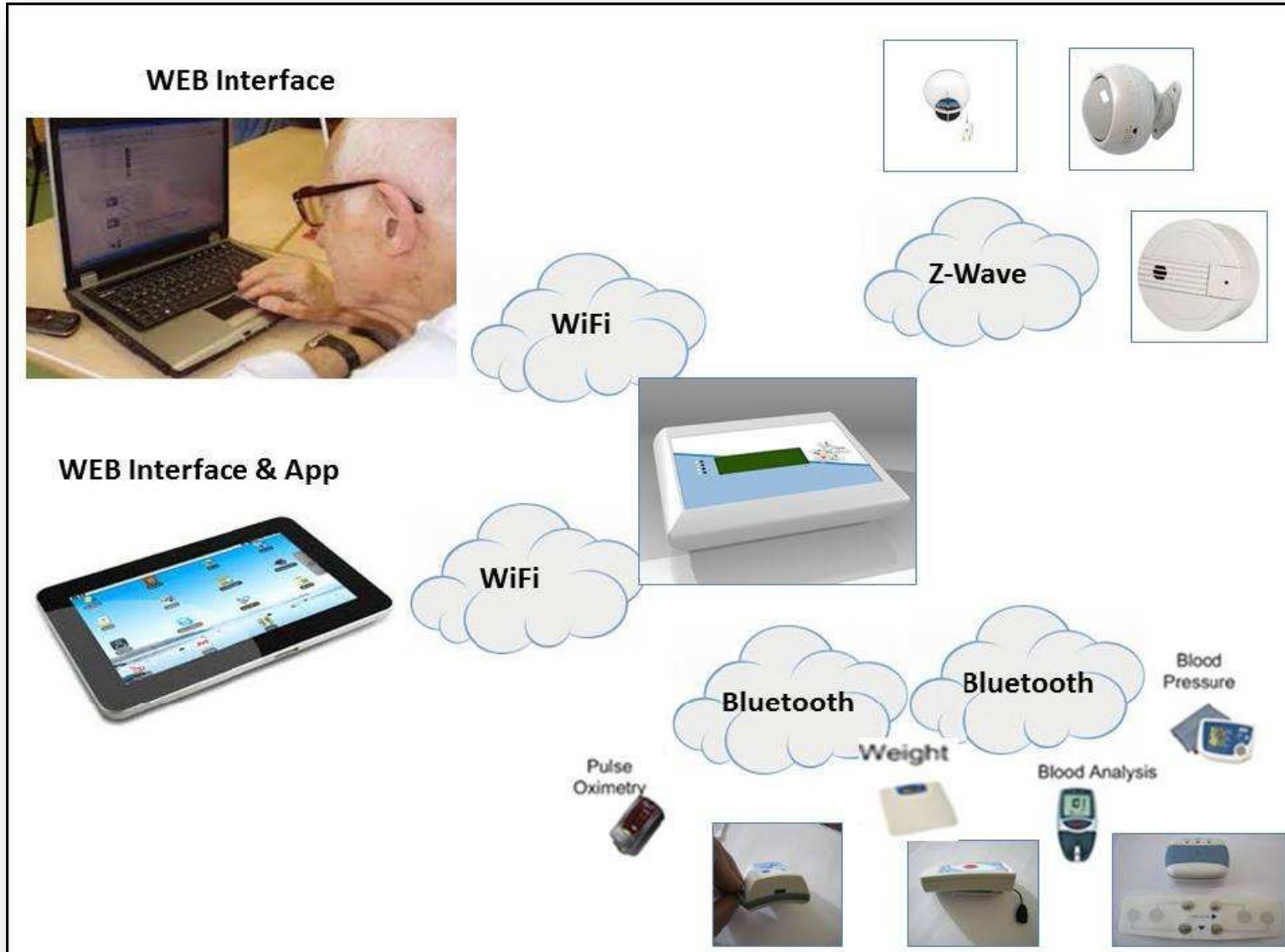
The whole system, both Hardware and Software, has certified medical components and the architecture is built in a way that no data can be lost or changed or simply checked by unauthorized access.

All parameters, clinical and environmental, can be set as appropriate at Hub level (at CR's home) to allow multi parametric behavioural analyses.



# SMARTCARE in FVG

## Clinical and Organisational System Components

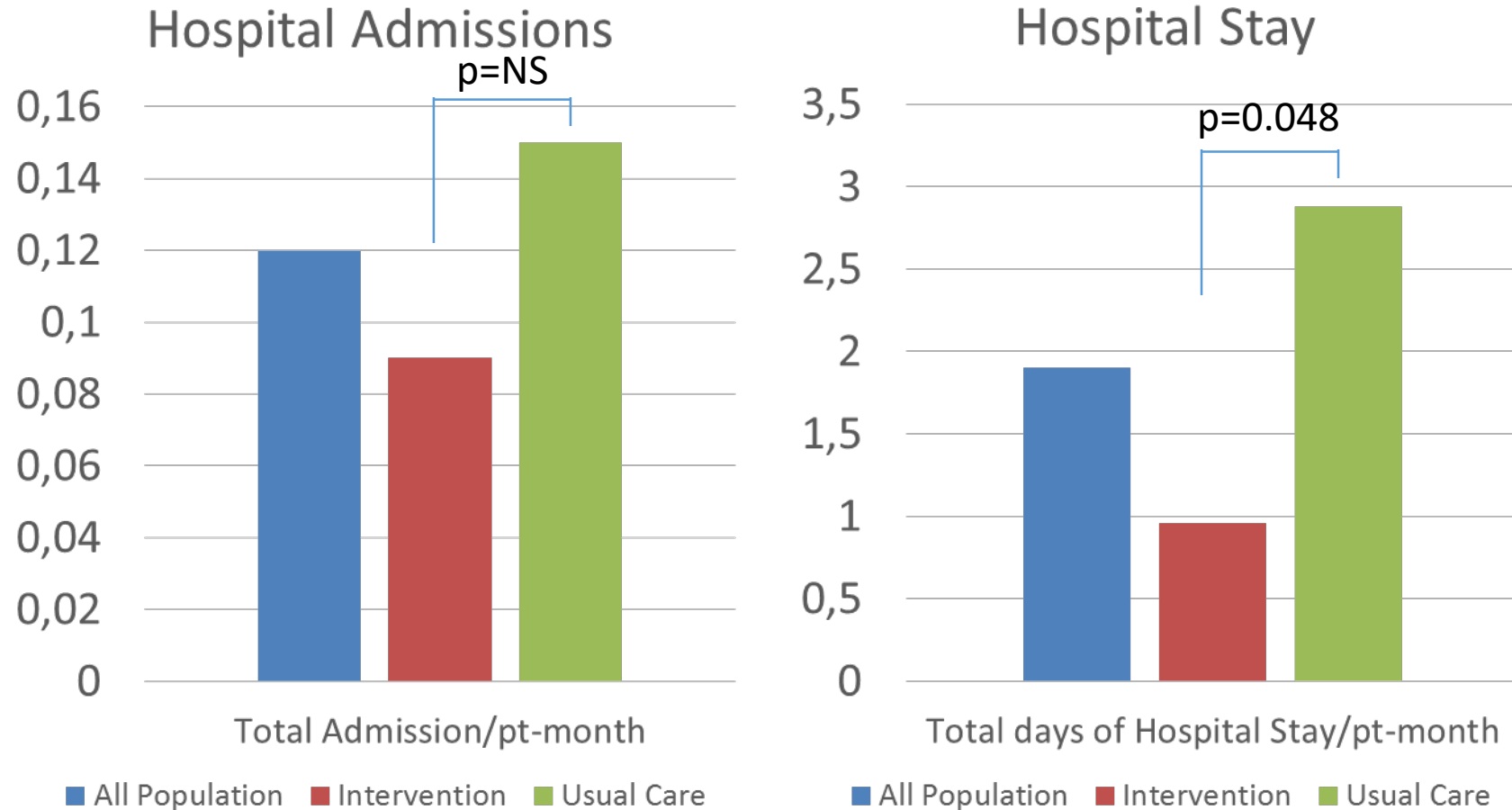


# FVG - Results and general findings

- The whole FVG Health system involved (17 districts out of 20) - Great commitment of the Regional Government and Health Authorities' managers
- 91% of the enrolled patients completed the experimentation period with good care compliance;
- Clear positive result mainly on short term pathway in terms of savings in hospital admissions and days of hospitalization
- Very good involvement of informal care givers
- Active participation and positive feedback from care recipients on technology and solutions adopted



## Impact of Short-term Post-discharge Pathway



**Comparing results of control group and experimental group during 3 month monitoring for short term pathways, the SmartCare service registered saving of 2 hospital admissions and 57 days of hospitalization every 10 patients**

## Key aspects to be considered when implementing a regional strategy on innovation in health and social care

Population needs, Health problems & characteristics of the available solutions

Safety & Clinical effectiveness

Patient perspectives

Economic and financial aspects

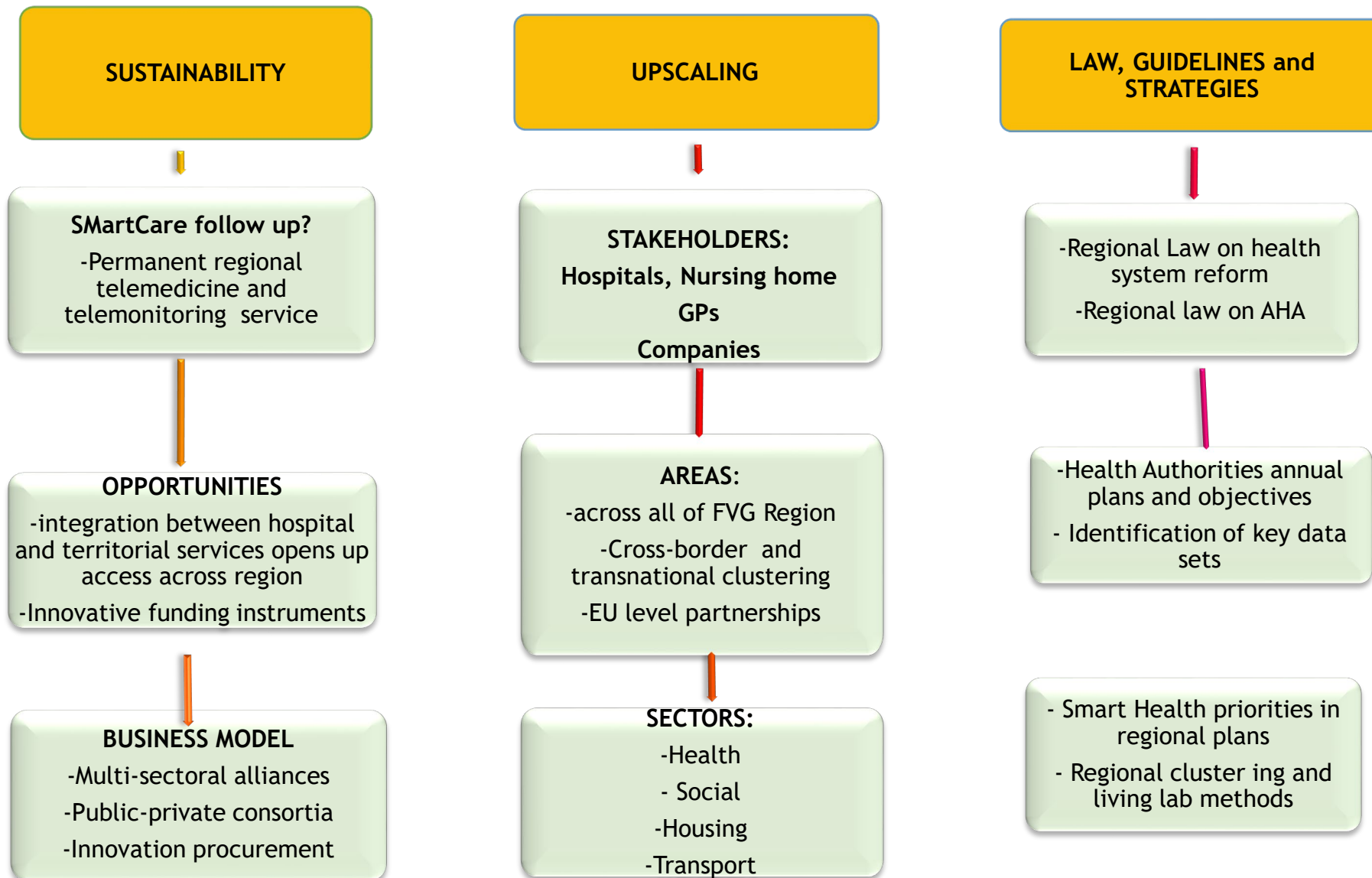
Organisational aspects

Socio-cultural, ethical & legal aspects

## FVG Innovation in social and health care – Open issues

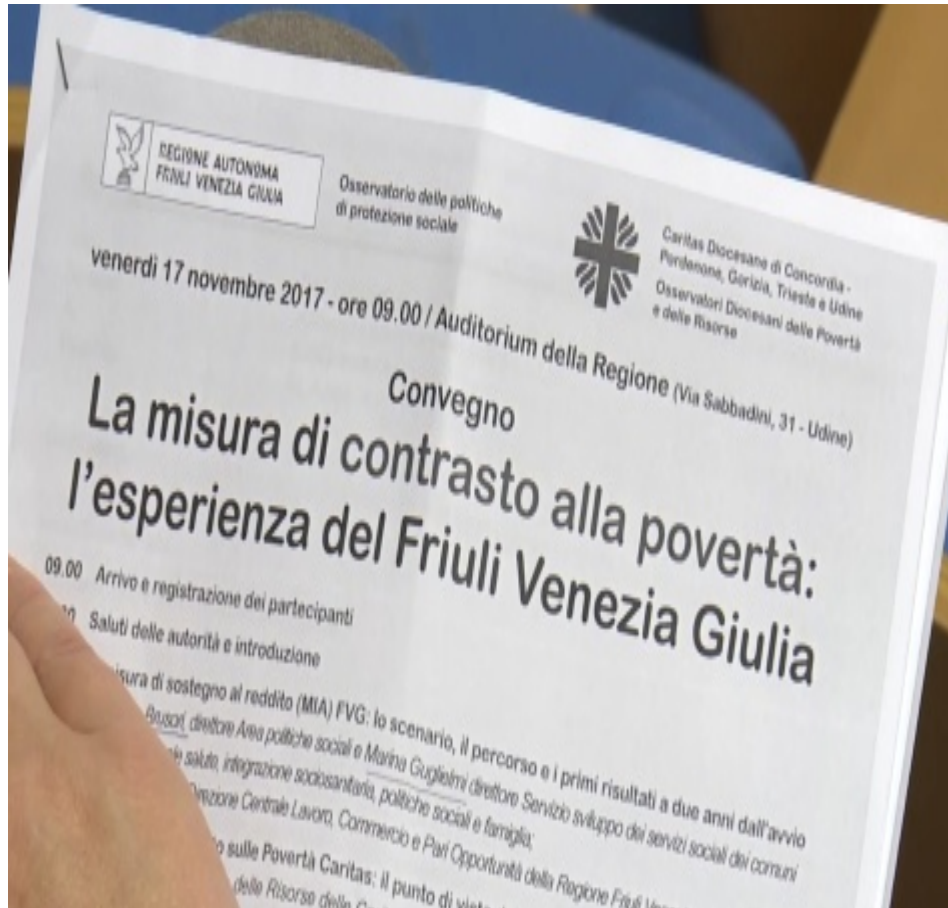
- **Technology is not the issue!**
- Open issues to be still effectively addressed:
  - **new organizational model**
  - **Resistance to change**
  - **evaluation methods on impacts and outcomes**
  - **training needs**
  - **Professional networks thanks also to ICT solutions**
  - **Integration of pilot ICT solution into the existing regional IT system**
  - **Interoperability of different solutions**
  - **Most cost-effective application** (i.e. chronic diseases in post-discharge and post acute phase)
  - **Living lab approach for co-design and co-production**
  - **Procurements rules**

# Sustainable scaling-up: from SmartCare project to SmartHealth in FVG Region





## Policies against poverty



The FVG Region has also adopted the following measures against poverty:

1. Solidarity Regional Fund
2. Add regional funds on the «Social card» national endowment
3. Partnership and support to the NGOs offering homeless day and night hospitality
4. Promotion of the social economy through synergies between public sector, private sector and NGOs



# Law proposal (now being discussed by the FVG Regional Council)

Care levels reorganisation, rules on health and social health planning and programming

Point of arrival and, at the same time, **starting point**  
for a true **social-health integration**

Takes the challenge of social innovation, characterised by the following interdependent and constantly evolving features:

- being closely linked to a detailed context analysis
- being aimed at developing new connections between players from economy, health, social and the third sector (previously distinct or non directly connected)
- identifying technology as a strategic lever
- pursuing the «best use» of available resources
- being aimed at generating a sustainable, substantial, long lasting and widespread change, more focused on the long term impact than on the short term action



# The innovation challenge: methodology approach

- **participatory path:** listening to citizens, operators, social and institutional entities and all the players having a role in improving everyone's health conditions
- **use of a law:** clear establishment of principles, strategies and tools pursuing health goals, while administrative acts (more flexible by nature) will be used for specific organizational decisions best suited to the different contexts



# The innovation challenge: contents

## Focus on:

- centrality of individuals and their relationships
- non discrimination in the access to health facilities
- multidimensional assessment of needs
- customisation and co-design of integrated care pathways
- empowerment of individuals and communities in their health level protection
- recognition of the civil community as a protagonist, through the enhancement of cooperation between public and the third sector in specific projects
- horizontal subsidiarity, to ensure equal rights and equal duties to all the network players
- promotion of all the necessary conditions, under the organisational, technological and professional profile, for an effective and multidimensional take charge
- technological development, as an essential requirement for the improvement of clinical and administrative processes
- constant innovation in welfare services, as a factor of human, community, and social cohesion development





# Law proposal

## TITLE I

### Art. 11

## Innovation promotion

«Within the framework of principles and rules stated in this Section, the regional policy model in the social and health field is aimed at the constant innovation in services producing wellbeing (understood in its health, relational, social, economical and environmental dimension) as a factor of human, community, and social cohesion development

For the purposes referred to in paragraph 1, the Region sets rules in social and health care, including the pertinence and quality assessment, experiencing new accreditation forms for processes and service networks




# Key messages

- Vulnerable-friendly environments are good for all
- Intersectoral mechanisms work
- Start small or locally and gather evidence for use in later scaling up
- Recognize the value of making a cultural shift from citizens to policymakers
- Planning in cycles based on evaluation is important
- Exposure to international experience, leadership and expertise is beneficial (The support from the international community strengthened Friuli-Venezia Giulia's work)





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Thank you for your attention

[www.regione.fvg.it](http://www.regione.fvg.it)