



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA



CIRI

HEALTH SCIENCES & TECHNOLOGIES

Living healthy and active in an ageing Europe



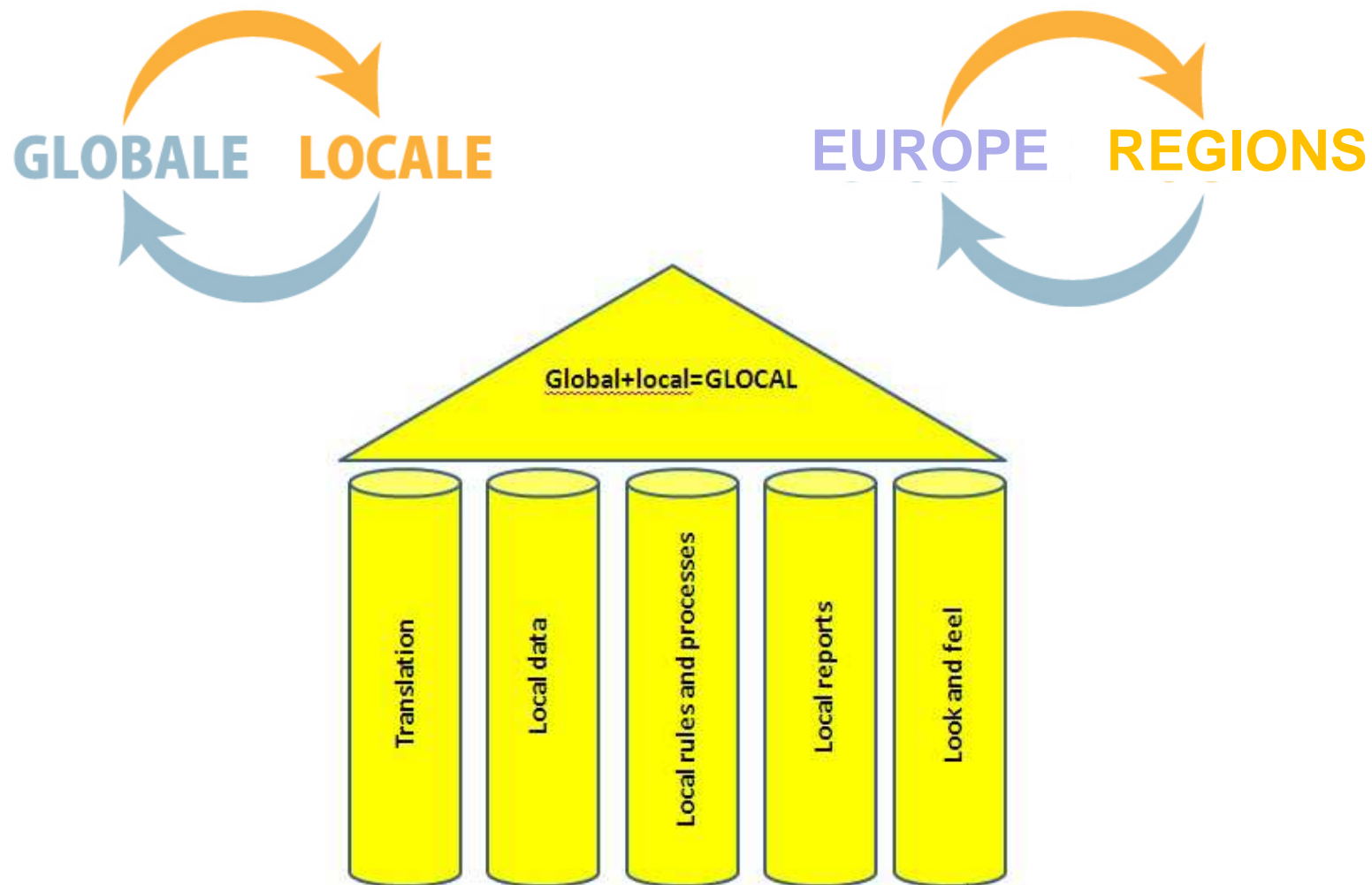
*EIP-AHA & PROFITER project in Emilia Romagna:
a glocal experience in fall prevention*

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Roma – February 6, 2014



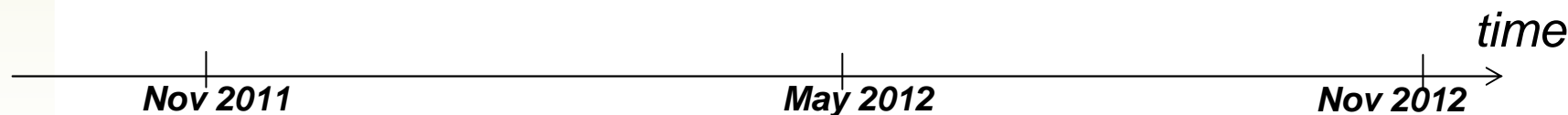
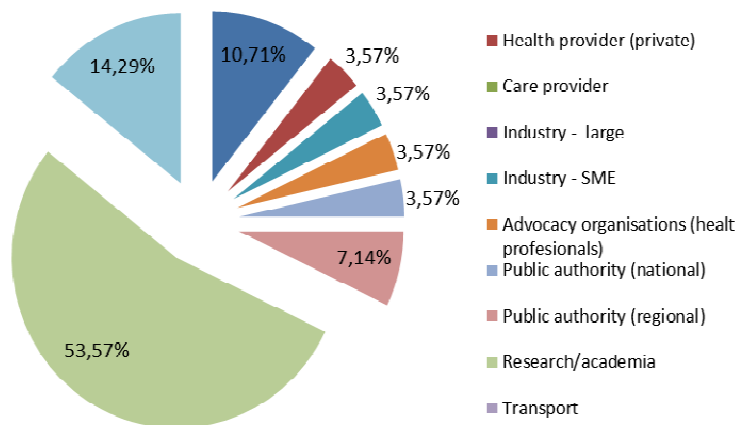
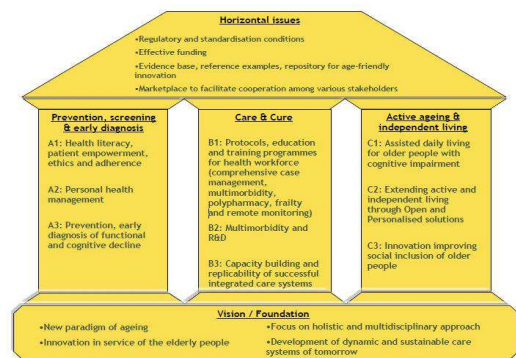
A glocal process



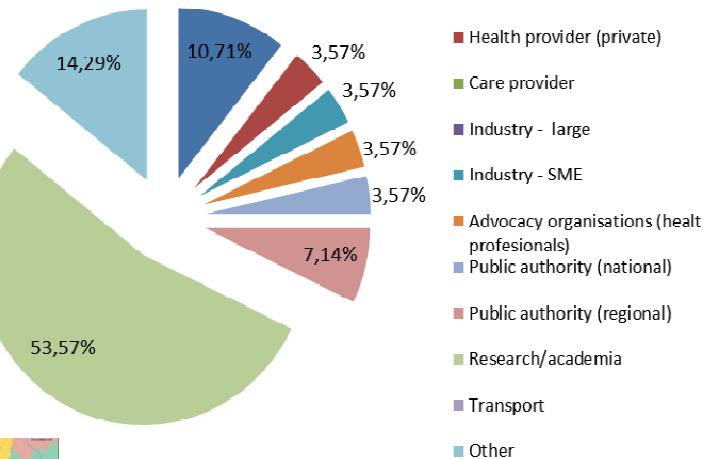
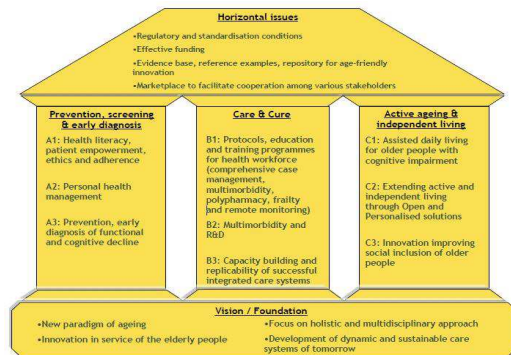
A top-down / bottom-up process



1. Policy drive (SIP) 2. Individual commitments 3. Action Plan



A top-down / bottom-up process



2014

2020 *time* →



European Innovation Partnership
on Active and Healthy Ageing

Reference Sites

The Emilia-Romagna Commitments

- A1** Novel approach for **improvement adherence** to medical plans, medication and management of Bioresources and Pharma
- A2** **Prevention of falls** initiative in Emilia-Romagna
- A3** **Cognitive** component in the **frailty syndrome**
- B3** Delivering **Integrated Care Models**
- C2** Working together for **independent living** at regional level



SOLE / FSE Project



PROFITER Project



ARIA Project

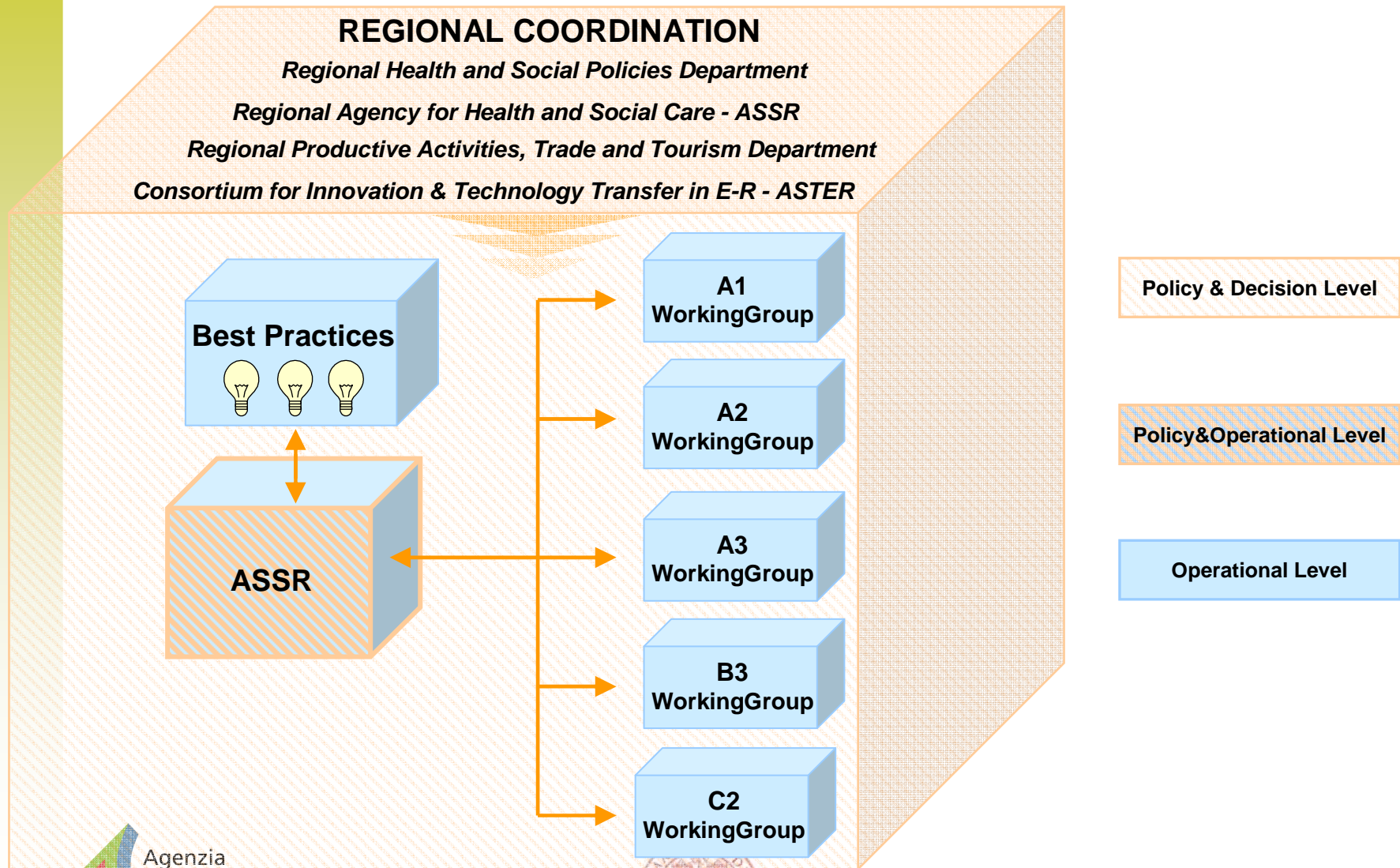


Site: **Regione Emilia Romagna:**

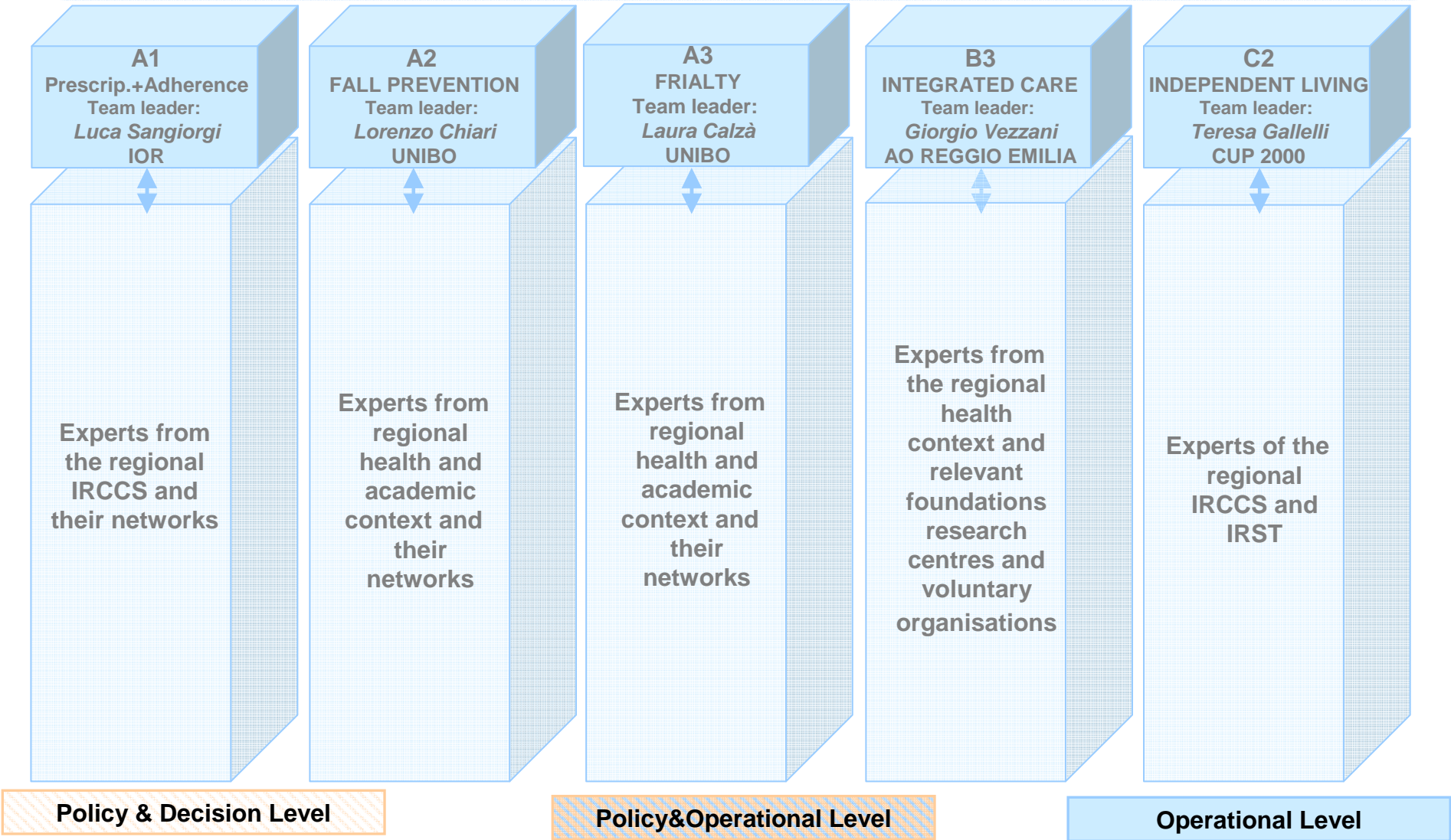


Agenzia Sanitaria e Sociale Regionale dell'Emilia-Romagna (ASSR)

The Emilia-Romagna organizational and coordination model



REGIONAL COORDINATION



The Model main objectives and strategy

The model is aimed at mapping and connecting regional **actions, best practices, projects and stakeholders** acting in the field of aging healthy and active, regardless of their health or productive origin.

Once connected, they can:

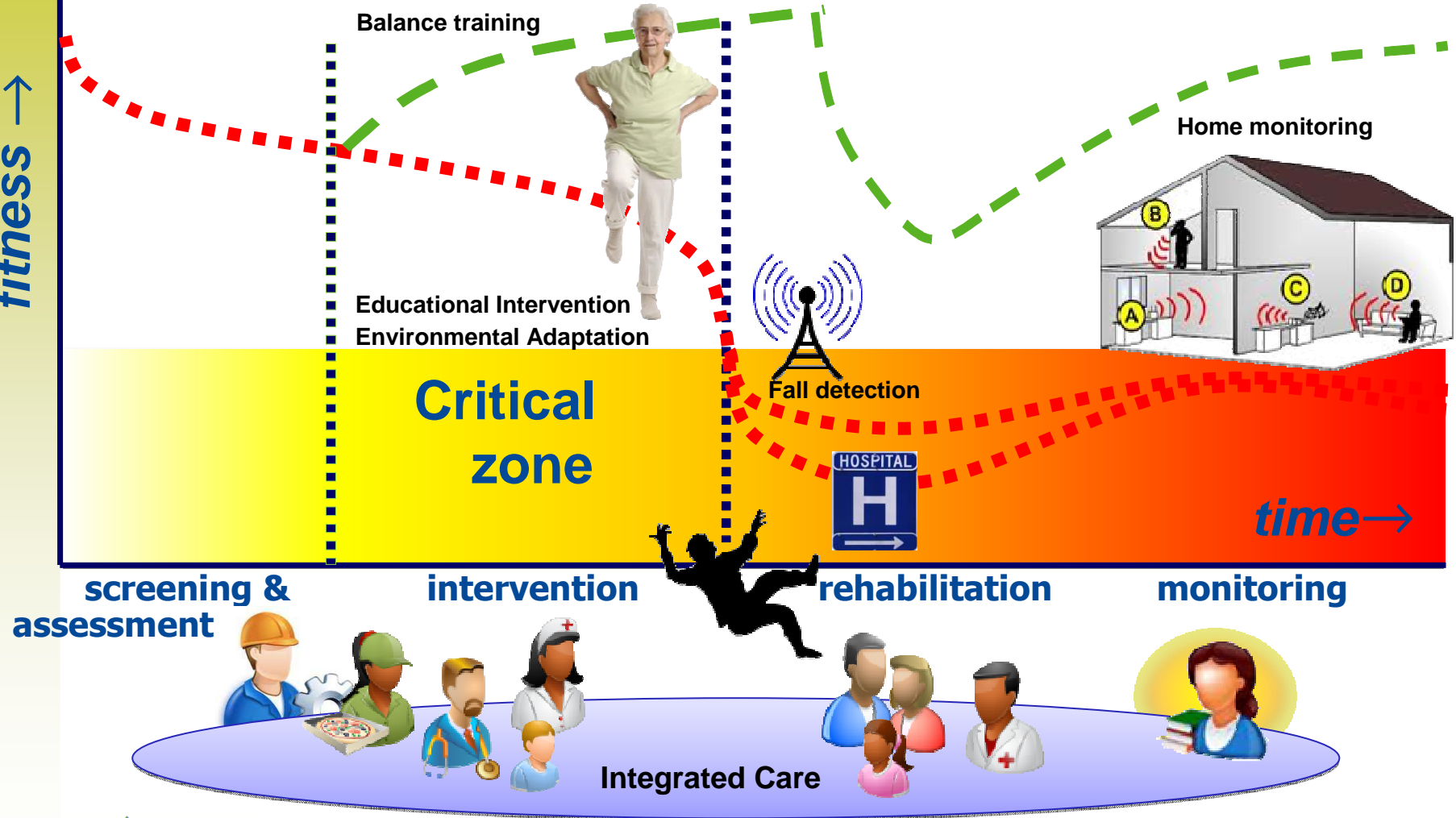
- ✓ take advantage of already existing know-how, expertise and experiences (i.e. ICT, devices, feasibility, cost-effectiveness of specific interventions...)
- ✓ tuneably develop
- ✓ avoid duplication
- ✓ avoid wasting of financial and human resources
- ✓ capitalizing on someone else's local, national and international networks
- ✓ benefit from Regional/institutional endorsement
- ✓ easily access information about what is going on in their field of action both at national and international level

Rationale of fall prevention initiatives



- **1:3** people > 65 years & **1:2** people > 80 years fall each year
 - > **50%** Fear falling, depression, isolation, dependence, loss of mobility
- leading cause injury deaths
- within one year frequent fallers are in hospital, full time care or deceased
- more bed days than heart attack, heart failure & stroke combined
- US direct medical costs of falls \$30 billion
- **0.85-1.5%** national health care expenditure EU
- underestimated problem **75%-80%** falls never reported
- Adequate prevention & management
 - > reduce costs
 - > saves resources
 - > increases independence & QoL

fitness ↑



The regional baseline before EIP

Regione Emilia-Romagna



2^a CONFERENZA REGIONALE PAR

POLITICHE INTEGRATE
REGIONALI PER LE PERSONE ANZIANE

Venerdì 21 novembre 2008
ore 9.30 - 13.30 Sala Polivalente - Viale Aldo Moro, 50 - Bologna

Regione Emilia-Romagna

DAL RISCHIO AL BENESSERE

PIANO TERRITORIALE REGIONALE DELL'EMILIA-ROMAGNA

Una regione attraente
L'Emilia-Romagna nel mondo che

1

Regione Emilia-Romagna

PREVENZIONE NEI LUOGHI DI VITA E DI LAVORO

contributi

64

Il Piano della Prevenzione
2010-2012 della Regione
Emilia-Romagna

SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA

The regional baseline before EIP

This action builds on a number of seminal regional initiatives on ICT-based physical activity monitoring and fall prevention involving different Local Health Trusts, research institutions (UNIBO) and industrial stakeholders, which were supported by the RER and the EU over the last 5 years.

PROFITER

Prevention of Falls Initiative in Emilia Romagna



The PROFITER project



EIP-AHA Action Group A2 – Fall prevention Action Plan 2012-2015

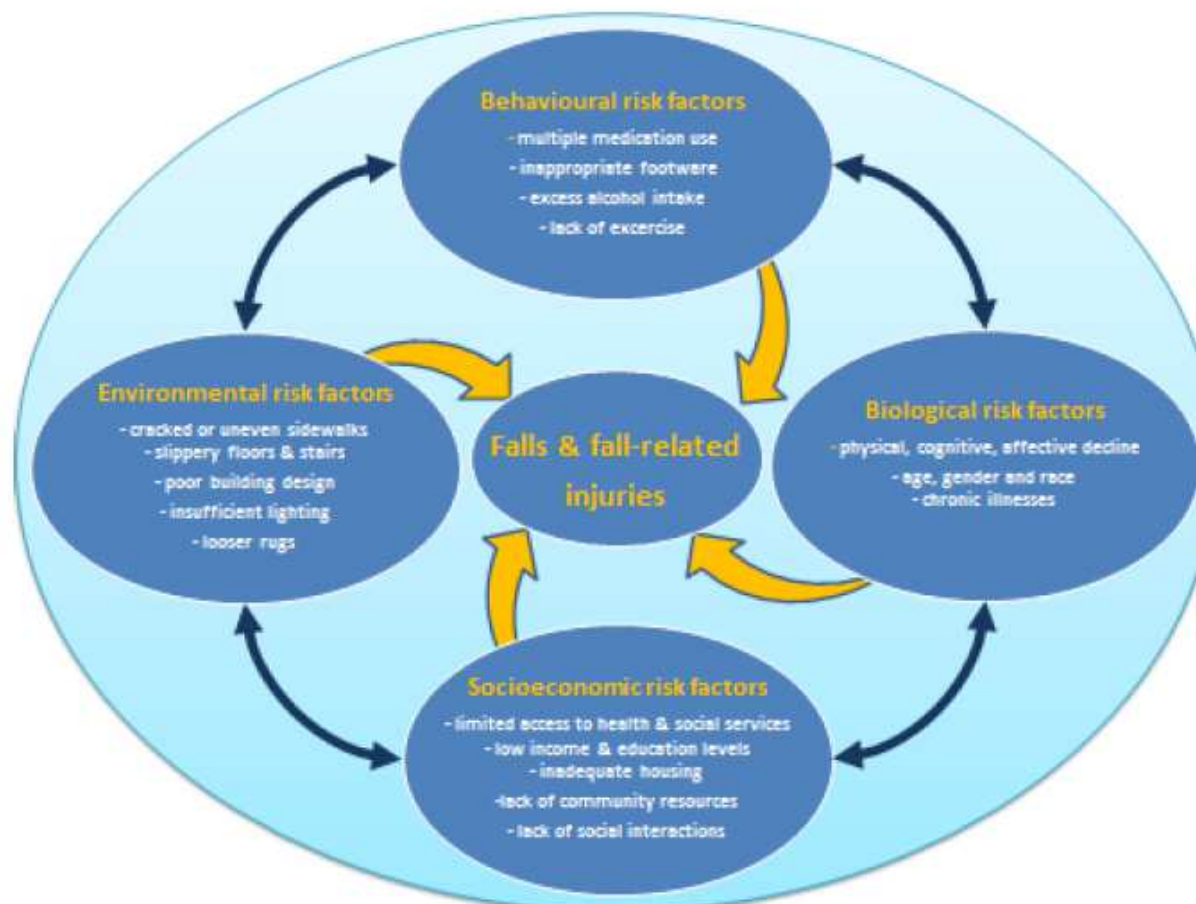


Figure 1: World Health Organisation risk factor model for falls in older age

The PROFITER project



EIP-AHA Action Group A2 – Fall prevention Action Plan 2012-2015

The Falls Prevention and Management Pathway

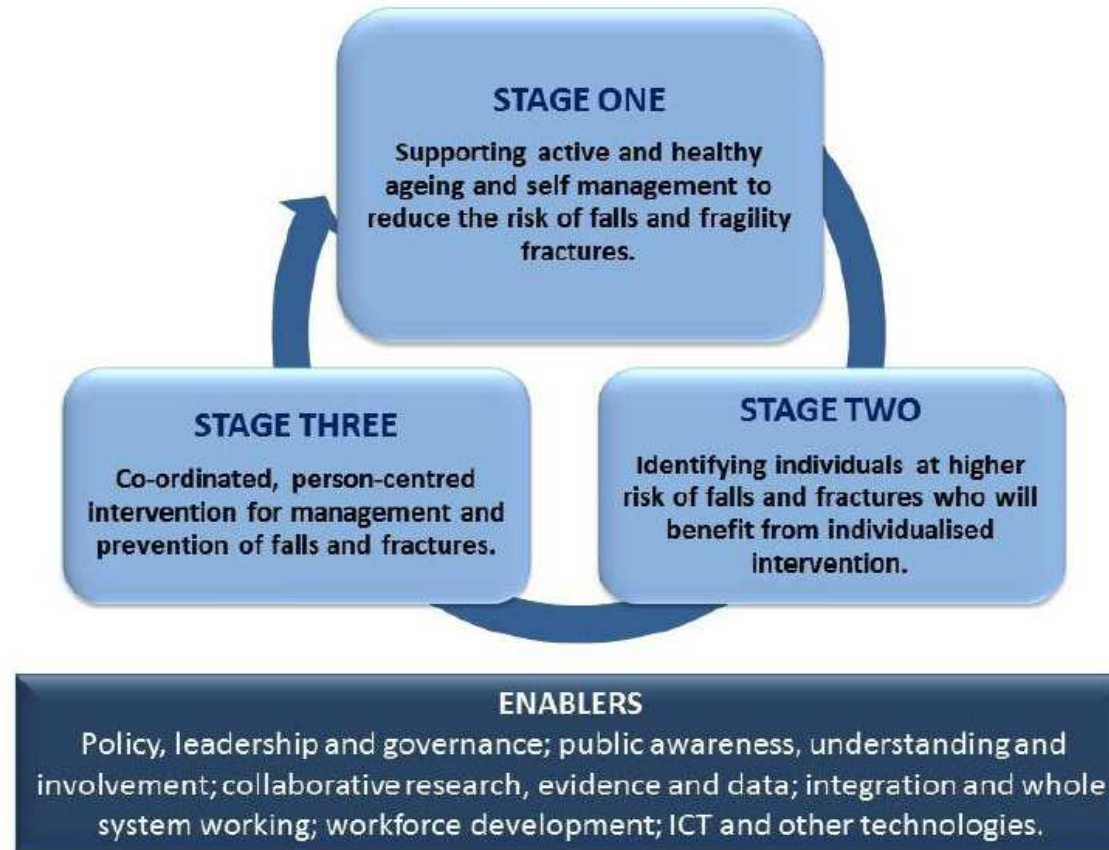
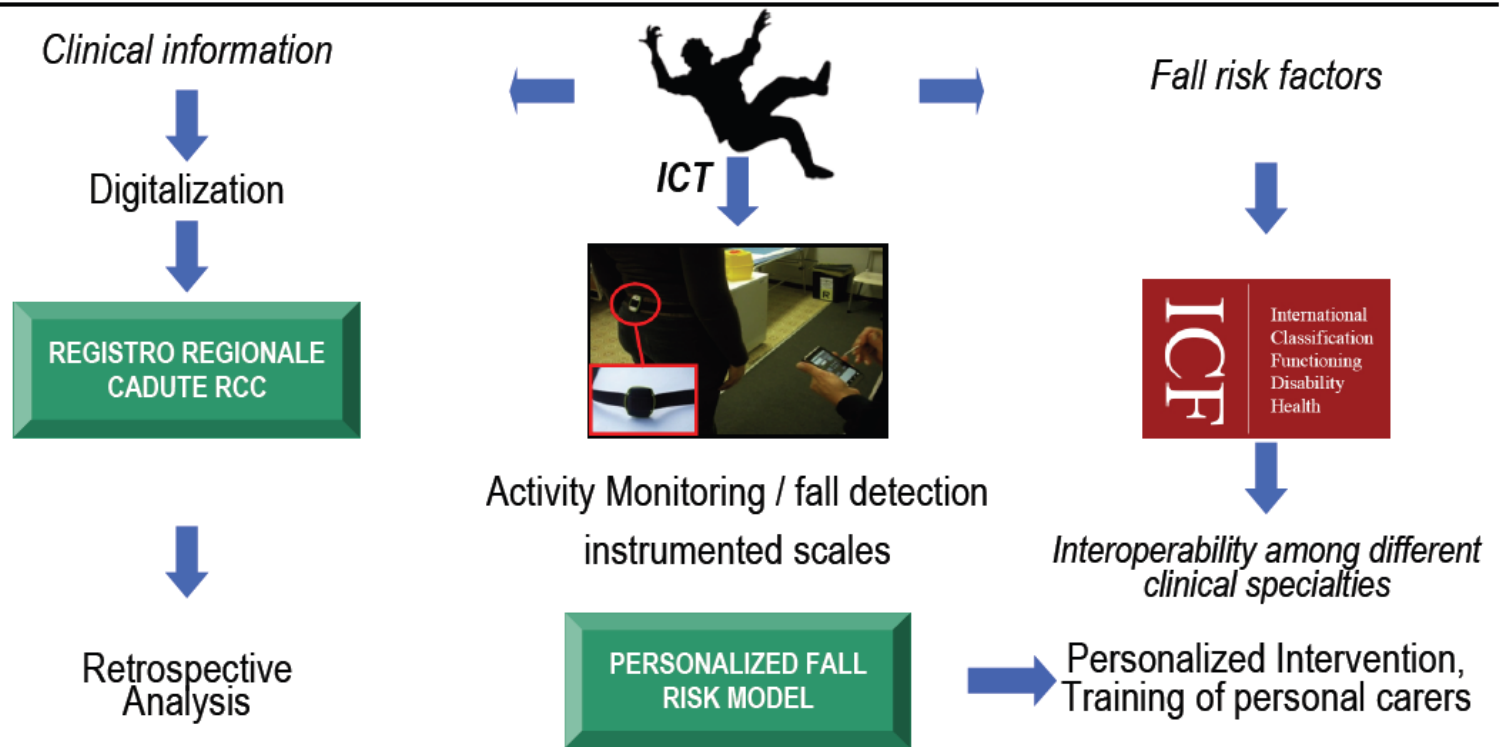


Figure 2: Falls prevention and management pathway

The PROFITER project

Prevention Of Falls Initiative in Emilia Romagna: a regional network for fall prevention



Sponsor: Regione Emilia Romagna (AA.PP.), POR-FESR; EU-FP7 (progetti FARSEEING, I DON'T FALL)
 Partecipanti: ASSR, 3 Univ/Enti di Ricerca, 8 AUSL/AOU/Ospedali, aziende private
 Project Leader: prof. Lorenzo Chiari, UNIBO - lorenzo.chiari@unibo.it

WP
lead

Aims

Ongoing
activities

Workpackage 1: Regional Data & Evidence

Dr Fulvio Lauretani (AOU, Parma), Dr Giovanna Campaniello (AOU, Parma)

The aim of this WP is to create a **Regional Fall Registry** using specific tools and scales in different hospital settings among all Emilia-Romagna Region hospitals for creating a common fall assessment and reporting process.

1. Creation of a questionnaire to evaluate the numbers of falls among all hospital settings and their risk factors
2. Creation of a common dataset for all project participants
3. Production of a report describing the fall rates and major risk factors across different settings based on collected data

**WP
lead**

Aims

**Ongoing
activities**

Workpackage 2: Fall Risk Assessment

Dr. Fabio La Porta (AUSL Modena), Dr Franco Valzania (AUSL Modena)

1. To develop a new taxonomy for fall risk factors based on ICF
2. To map clinical assessment tools in various clinical settings
3. To understand theoretical and practical significance of parameters extracted by wearable inertial sensors
4. To devise a personalized fall risk model

1. Literature review on fall risk factors
2. Linkage of risk factors to ICF categories
3. Development of an online calculator for assessment of the individual risk

**WP
lead**

Aims

**Ongoing
activities**

Workpackage 3: Fall Prevention & Education

Dr. Giulio Pioli (ASMN-IRCCS, Reggio Emilia), Dr. Chiara Mussi (UNIMORE, Modena)

Developing of operational strategies for the prescription of personalized intervention for fall prevention and rehabilitation in community dwelling older subjects, hospitals and nursing homes. The aims include education and training programs for personal careers of high risk subjects.

1. Synopsis of recent guidelines on fall prevention in community, hospital and nursing home
2. Literature search on fall prevention programs in specific population such as patients with Parkinson disease, hip fracture, stroke and dementia
3. Literature search on facilitators and barriers to implementation of fall prevention strategies in different settings
4. Development and implementation of regional guidelines

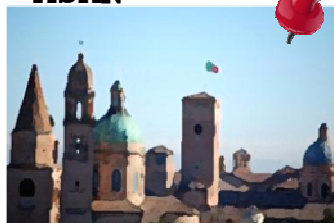
The regional partnership



Parma
AOU



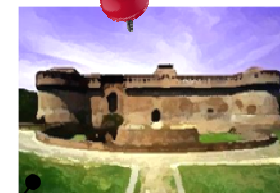
Reggio Emilia
AUSL
ASMN



Modena
AUSL



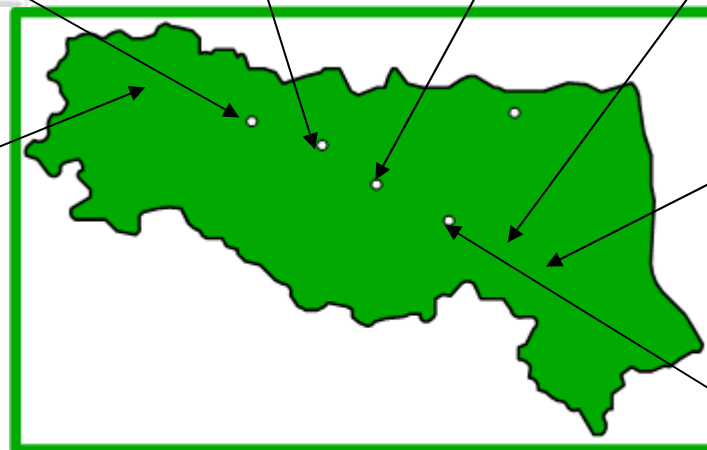
Imola
AUSL



Forlì
AUSL



Piacenza-Bobbio
AUSL



Regione Emilia-Romagna

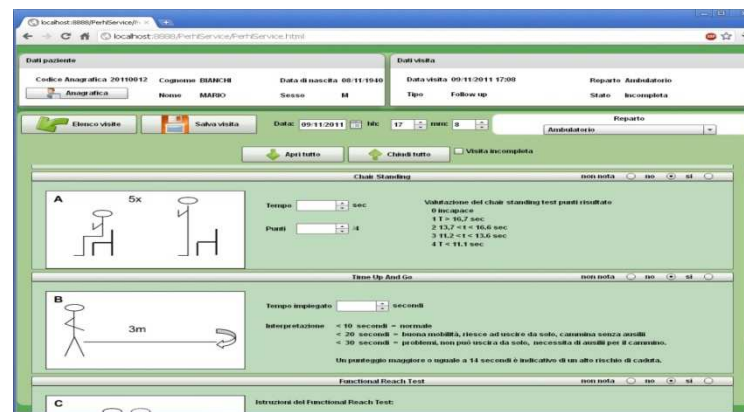
Bologna
SSR
AOU
IOR
UNIBO



Added value

The regional commitment has so far allowed to:

1. build a broad, multidisciplinary network of clinical/research experts;
2. recollect a number of relevant regional initiatives for fall prevention in different settings;
3. start the process to structure knowledge and classify fall risk factors to allow interoperability among different clinical specialties;
4. prepare the exploitation of novel ICT-based tools for fall detection, activity monitoring in daily life, instrumenting clinical scales; the majority of such tools are already available on smartphone platforms.



Measurable outcomes so far

- 1. Coverage within the Regional Health Service:** 7/11 regional LHTs, 3/4 University Hospital Trusts, 1/1 Hospital Trusts, and 2/4 Research Hospitals currently involved in PROFITER
- 2. Clinical professionals actively involved in the GP:** ~50
- 3. R&D professionals actively involved in the GP:** ~15
- 4. Older persons and patients screened so far** (including wearable sensors): ~400
- 5. Regional own funding so far:** 335.000 € to support the project “Efficacy of a multifactorial and personalized intervention aimed at preventing falls in community-dwelling elderly in comparison to the usual care: a randomized controlled trial” (PI: Fabio La Porta)
- 6. Number of training and educational events:** ~10
- 7. International workshops:** 3
- 8. Number of publications:** 5
- 9. Number of technological platforms developed for data collection** (mobile and/or wearable): 5
- 10. Number of start-ups generated so far:** 1

Thanks for your attention



Lorenzo Chiari

CIRI Scienze della Vita e Tecnologie per la Salute

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