C3-Cloud system: an innovative digital integrated care tool developed with and for multimorbid patients

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EHMA
European Health Management Association
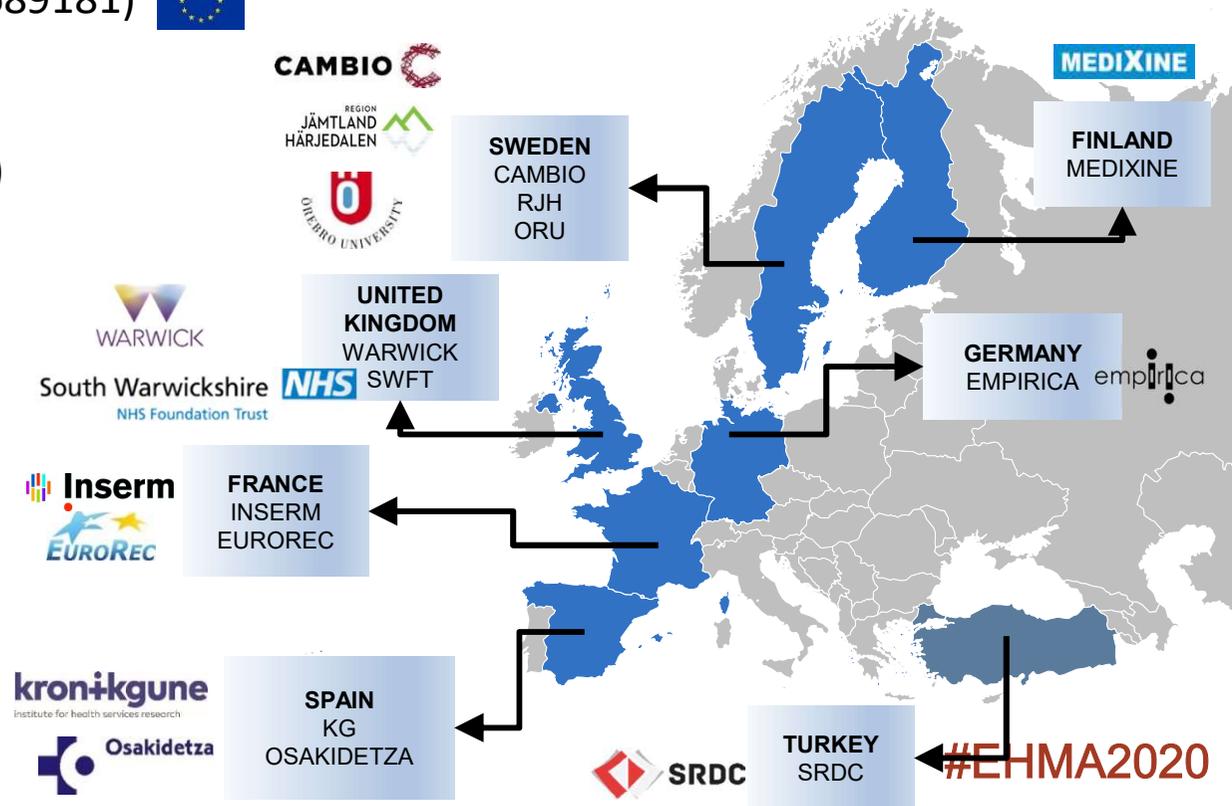
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C3-Cloud project

Tittle: A Federated Collaborative Care Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy (GA 689181)
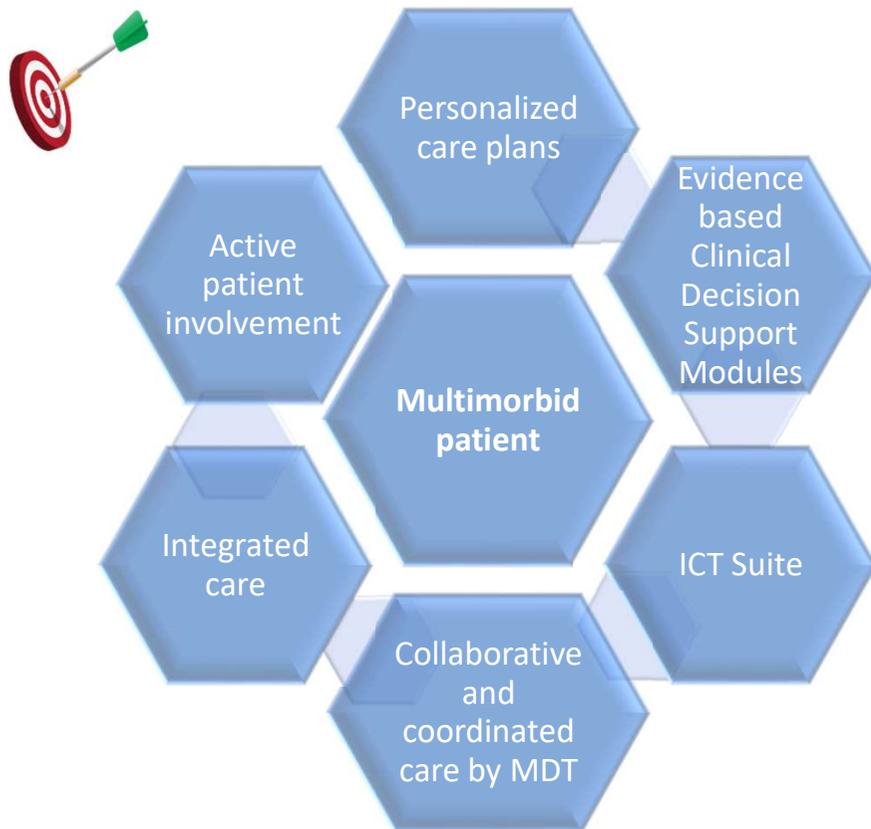
Call: PHC-25-2015, H2020, EU

Duration: 52 months (May 2016-August 2020)

Coordinator: University of Warwick

Consortium: 12 Partners from 9 countries

SWEDEN
CAMBIO
RJH
ORU

FINLAND
MEDIXINE

UNITED KINGDOM
WARWICK
SWFT

GERMANY
EMPIRICA

FRANCE
INSERM
EUROREC

SPAIN
KG
OSAKIDETZA

TURKEY
SRDC

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C3-Cloud phases

C3-Cloud architecture design

Development of **C3-Cloud** Platforms

Deployment and preparation

Intervention

Evaluation
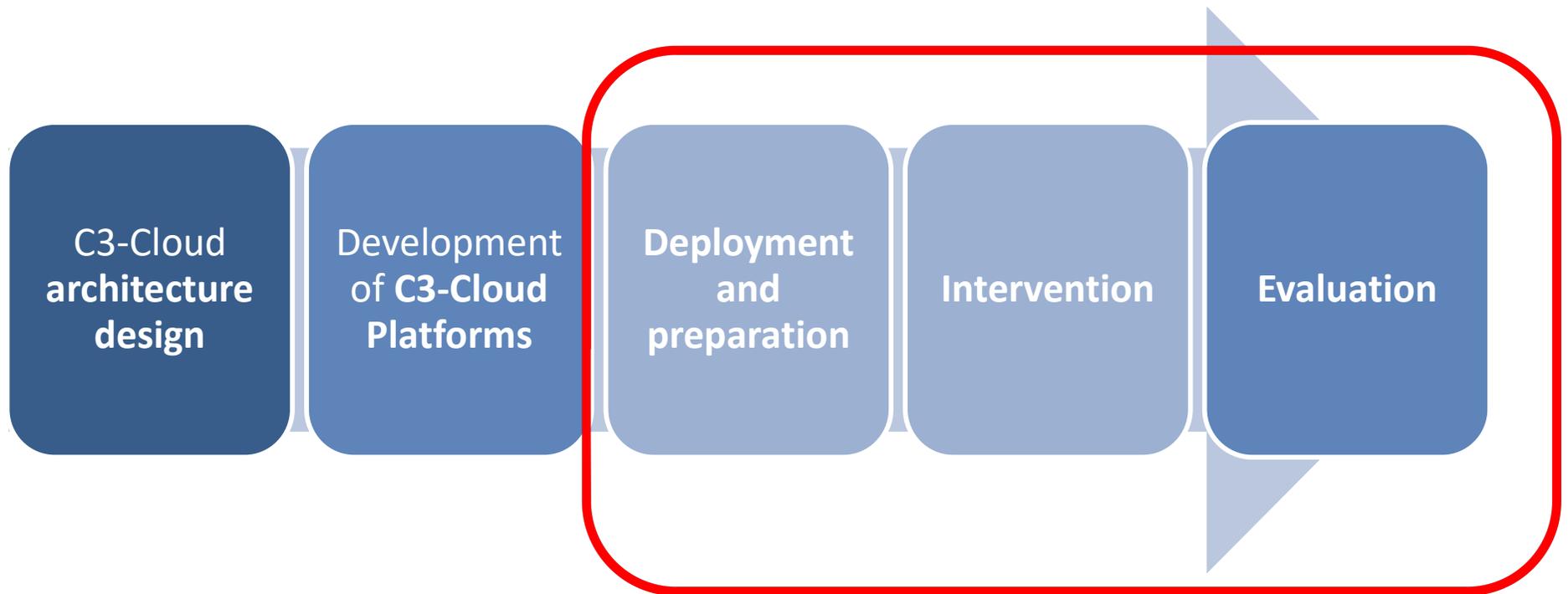
Preparation

➢ Aim: to ensure readiness of the sites for the deployment before the trial

✓ Install, integrate, configure and testing the C3-Cloud ICT component in each site

✓ Ensure the readiness of the main organizational aspects for the intervention

2020

Research question

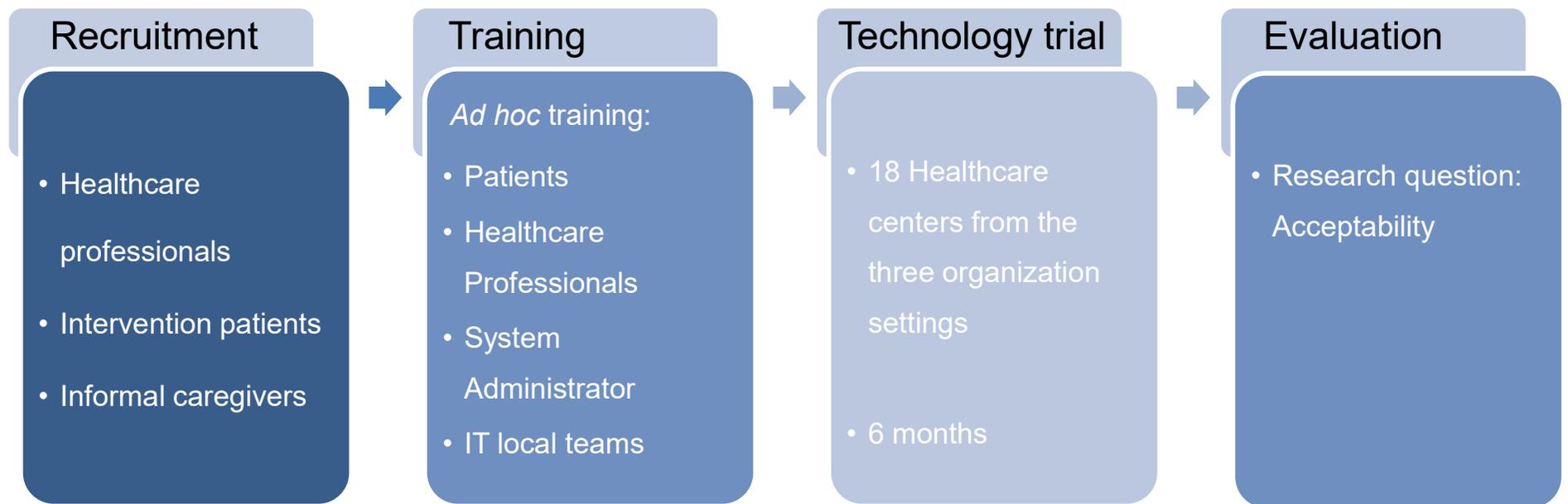The research question for the evaluation of the C3-Cloud technology trial is:

"Is the use of a personalised ICT tool that facilitates coordinated care planning, treatment optimisation and patient self-management acceptable to patients with multiple long-term conditions and their team of health professionals?"

C3-Cloud Intervention

Implementation of C3-Cloud technology trial across three organizacional settings in Europe and their evaluation

Recruitment

- Healthcare professionals
- Intervention patients
- Informal caregivers

Training

Ad hoc training:

- Patients
- Healthcare Professionals
- System Administrator
- IT local teams

Technology trial

- 18 Healthcare centers from the three organization settings

- 6 months

Evaluation

- Research question: Acceptability

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Results - Core Training material

- C3-Cloud Introductory video
- Online video tutorials
- Wallet card
- Project user Guidebooks
- User manual
- Demo version
- User Manual for Pilot Site Coordinator
- Technical manuals

Trusted

Helpful

Easy to understand

Make more concise

Results – Acceptance, User Experience and Usefulness

Easy to learn C3-Cloud

Supportive organizations

Useful for the daily job

Worth the effort

Want to use C3-Cloud in the future

Large potential for care planning

Could not put C3-Cloud to full use

May not enhance productivity

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Results – Budget Impact Analysis

C3CLOUD

- Discrete event simulation was developed

- Statistical analysis of collected data to find significant differences in healthcare resource consumption

- Projection of the significant differences over time

GP visits 0.63 times less likely

Nurse visits 0.74 times less likely

Nurse home visits 0.45 times less likely

Nurse telephone consultations 1.6 times more likely

Use of A&E units 0.57 times less likely

Lessons learnt: tips for C3-Cloud adoption

C3CLOUD

➢ The deployment and use of the C3-Cloud requires a **prepared environment**

➢ **Organisational and culture changes** are needed to adopt and get best value from the C3-Cloud solutions

➢ Multidisciplinary teams need to be **trained** not only in how to use the application but in how to work in a care plan oriented way

➢ A **culture supportive of patient engagement** and of an empowering relationship between clinicians and patients is a critical success factor

➢ A certain level of **ICT maturity** is needed in order for the C3-Cloud solution to be appropriately and effectively used

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Thank you

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