

RAVA3PRO

Towards automated checking of BIM-Based Building Permit



Anna-Riitta Kallinen
Project Manager

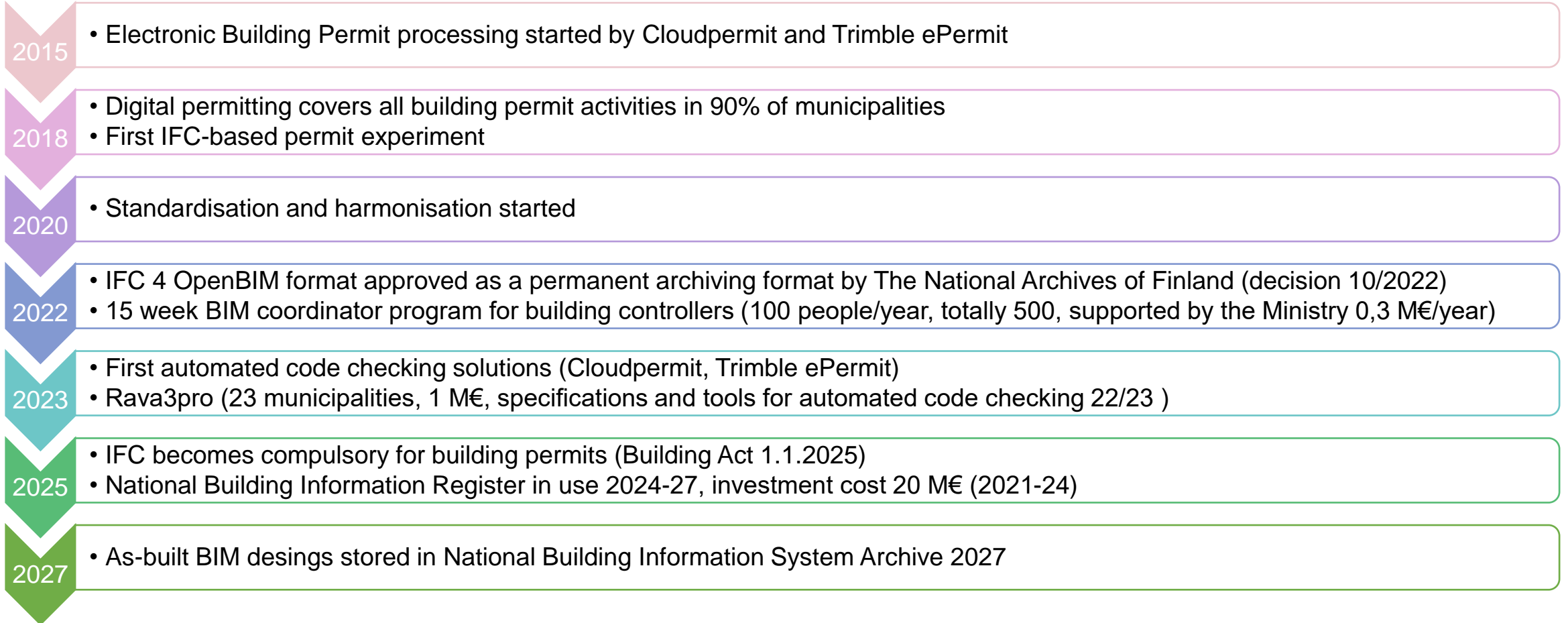
R A V A 3
P R O

BIM-based Building Permit development projects in Finland

- **Requirements of new COBIM2020 years 2018-2020 survey (buildingSMART Finland)**
What were the needs for OpenBIM process in Finland (Specific requirements for IFC and Use Cases to describe the information delivery process)
- **Kiradigi pilot (RAVA1)** funded by Ministry of Environment of Finland year 2018
City of Vantaa and City of Järvenpää made some first pilots for BIM-based Building Permit (Gravicon, Solibri and Sova3D was also in Project-team)
- **RAVA2** Project Ministry of Environment of Finland years 2020-2021
First National Propertyset for regulatory (minimum) Building Information form BIM-based Building Permit process and first use cases surveys
- **COBIM2020 part 14** Project Ministry of Environment of Finland years 2021-2022
First new COBIM part, First National Use Case for BIM-based Building Permit process
- **RAVA3Pro Project** Ministry of Economic of Finland and 23 cities years 2021-2023
National Propertysets, Use Cases, Checking rules, BIM-based building permit automatic Checking pilots

CURRENT USE OF BIM

Building permits applied by BIM (IFC)



RAVA3Pro Municipalities:



R A V A 3
P R O



Collaborating:



MINISTRY OF FINANCE
FINLAND



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment



Association
of Finnish
Municipalities



THE NATIONAL ARCHIVES
OF FINLAND



R A V A 3 O R P
P R O 3 A V A R R
R A V A 3 O R P
P R O 3 A V A R R
R A V A 3 O R P
P R O 3 A V A R R
R A V A 3 O R P
P R O 3 A V A R R
R A V A 3 O R P
P R O 3 A V A R R

Main Goals:

- Checking of BIM-based building permit against regulations is automated
- Cloud-based information exchange and communication platform that is connected to RYTJ (*RYTJ= National built environment information system*)
- The fully automated data exchange to other government systems
- National Requirements of IFC-files (propertyset) and Use Cases
- National IFC Checking rules for BIM-based building permit
- The goal of municipalities is also to increase their BIM-maturity level and be a strong partner to National development of BIM-Based process

Projectplan

R A V A 3
P R O

IFC Requirements and Checking rules

National Requirements of IFC-files (propertyset) for Building Permit

National IFC Checking rules for BIM-based building permit

Building Permit Announcements forms Information and Process in Permit platforms Cloudpermit and Trimble

Process development

National Requirements of Building Permit Use Cases

RAVA3Pro use cases for using IFC files in city/urban/land-use measurements

RAVA3Pro use cases for using IFC-file for urban plan citymodel

Cloud-based information exchange and communication platform process (In future connected to RYTJ)

Piloting

Piloting reading Minimum building information form information from IFC-files to permitprocess platforms Cloudpermit and Trimble

Piloting National IFC Checking rules for BIM-based building permit Use Cases

Piloting IFC Coordinations information Checkings and modifying in cloudbased saas-software

Piloting IFC use in making cityplan /zoning measurements

BIM-maturity level

BIM Education for municipalities to increase their BIM-maturity level

Piloting IFC-model use in Building Permit process in municipalities and increase their BIM-Based Building Permit process -maturity level

Collaboration with global OpenBIM and BIM-Based Building Permit research and development networks

RAVA3PRO TEAM



Anna-Riitta Kallinen

Project Manager

+358 40770977

anna-riitta.kallinen@arkcon.fi



Suvi Välimäki

Project Coordinator

suvi.valimaki@hel.fi



Aarno Alanko

RAVA3Pro Chair of Board
Head of Unit, City of Helsinki,
Urban Environment Division

+358 40 668 5685

aarno.alanko@hel.fi

R A V A 3

P R O

WD BE
WORLD OF DIGITAL BUILT ENVIRONMENT
2023

Launching the
results: R A V A 3
P R O

INVESTING IN CLIMATE THROUGH TECH
19–20 SEPTEMBER TALLINN + HELSINKI

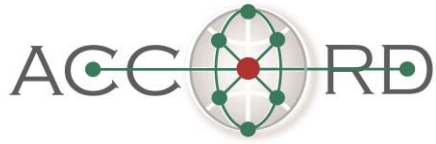
<https://kirahub.org/en/wdbe/>



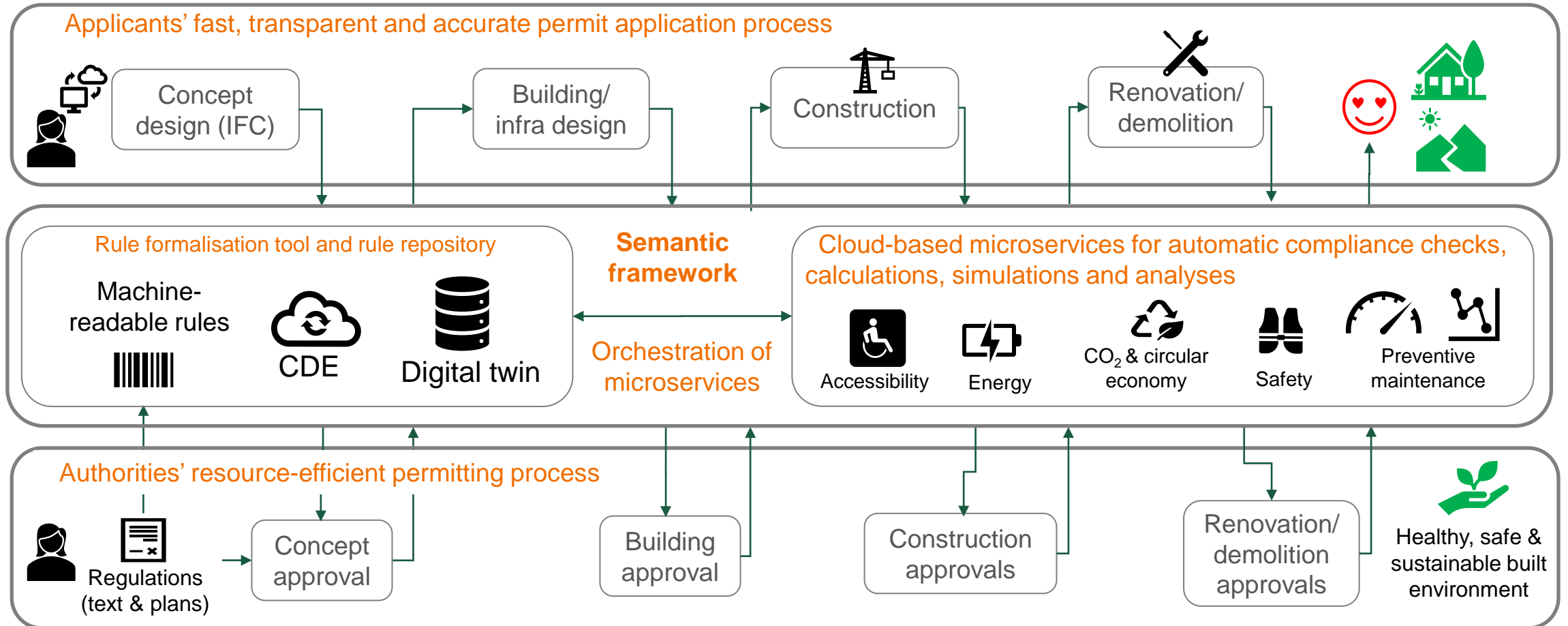
ACCORD Horizon Europe project 2022-2025

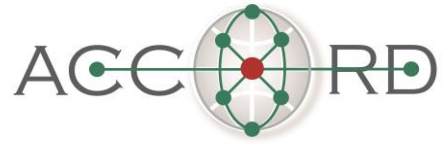
Digital Building Permit

Automated Compliance Checks for Construction,
Renovation or Demolition Works



Transparent & resource-efficient BIM-based permitting process

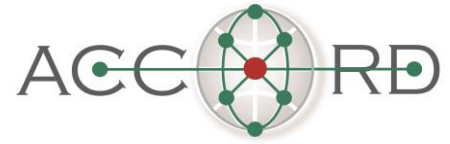




Partners



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101056973



Thank you!

Rita Lavikka, rita.Lavikka@vtt.fi
coordinator of ACCORD project

Follow us



Access our website



Funded by the
European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101056973



UK Research
and Innovation