# Finnish Agroforestry Network

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Public seminar organised by the Viikki Tropical Resources Institute (VITRI), Department of Forest Sciences, University of Helsinki

*Can agroforestry be practiced in Finland as a sustainable agricultural land use system?*

1 November 2022

# Finnish Agroforestry Network – peltometsäviljely- verkosto

- Established in 2019 at Qvidja farm

- Informal network of farmers, researchers, agriculture and forestry advisors, policy and administration, and other interested people

- 235 members

- Since June 2022 member of the European Agroforestry Federation (EURAF) (14 members from Finland joined)

https://www.facebook.com/groups/agrometsatalous

# Objectives of the Finnish Agroforestry Network

- Knowledge and information sharing about agroforestry in Finland e.g. organising fieldtrips, farm demonstrations, lectures, seminars, etc.

- Fill the knowledge gap on agroforestry

- Work together on projects

- Bring agroforestry actors together: Farmers, researchers, advisors, students, small and medium sized enterprises, regional and national policy, and all other stakeholders with an interest in agroforestry.

- Create a platform to discuss about agroforestry

2019

# About EURAF

- The European Agroforestry Federation (EURAF) aims at promoting the use of trees on farms as well as any kind of silvopastoralism throughout the different environmental regions of Europe. EURAF has about 500 members from 24 different European countries.

- Finnish Agroforestry Network is EURAF member since June 2022

SILVOARABLE SYSTEMS ... a traditional technique which must be redesigned for modern machinery ....

Le bocage dans le Perche, près de Nogent-le-Rotrou (Eure-et-Loir). - Cl. L.P.V.A.

Trees are present on five of the six UNFCCC "Lands"
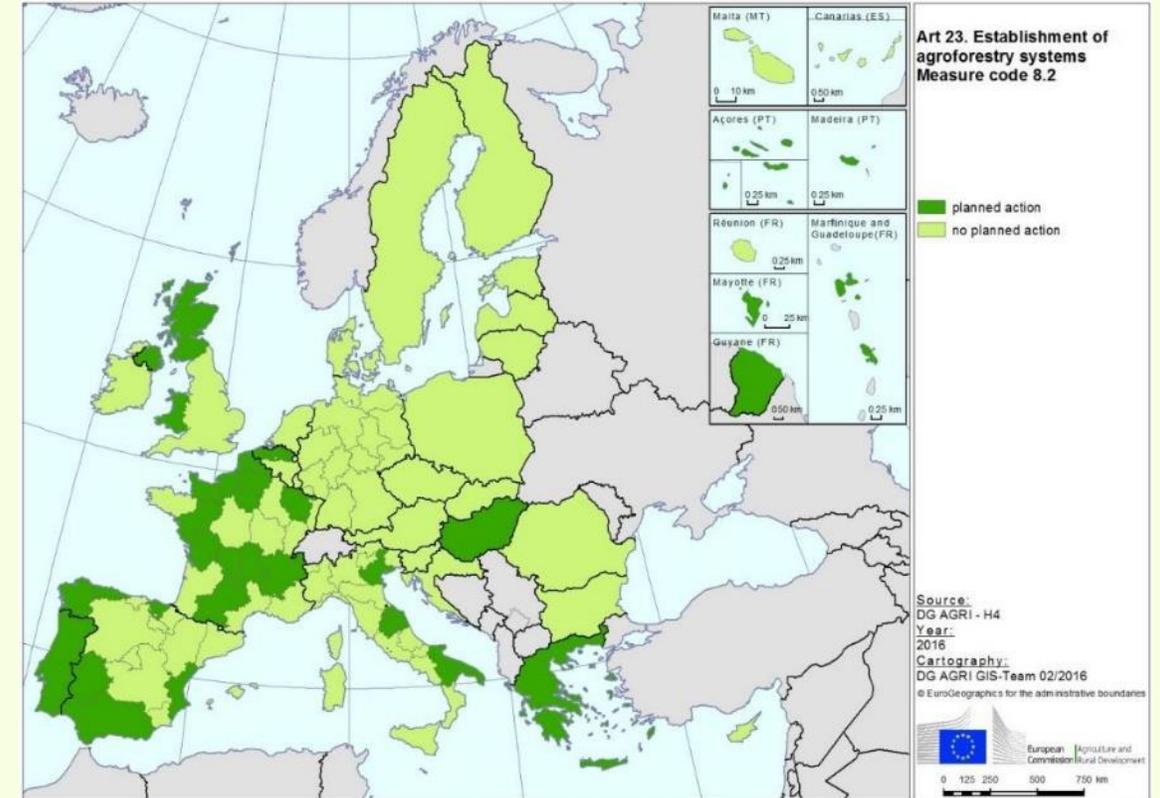
Cropland
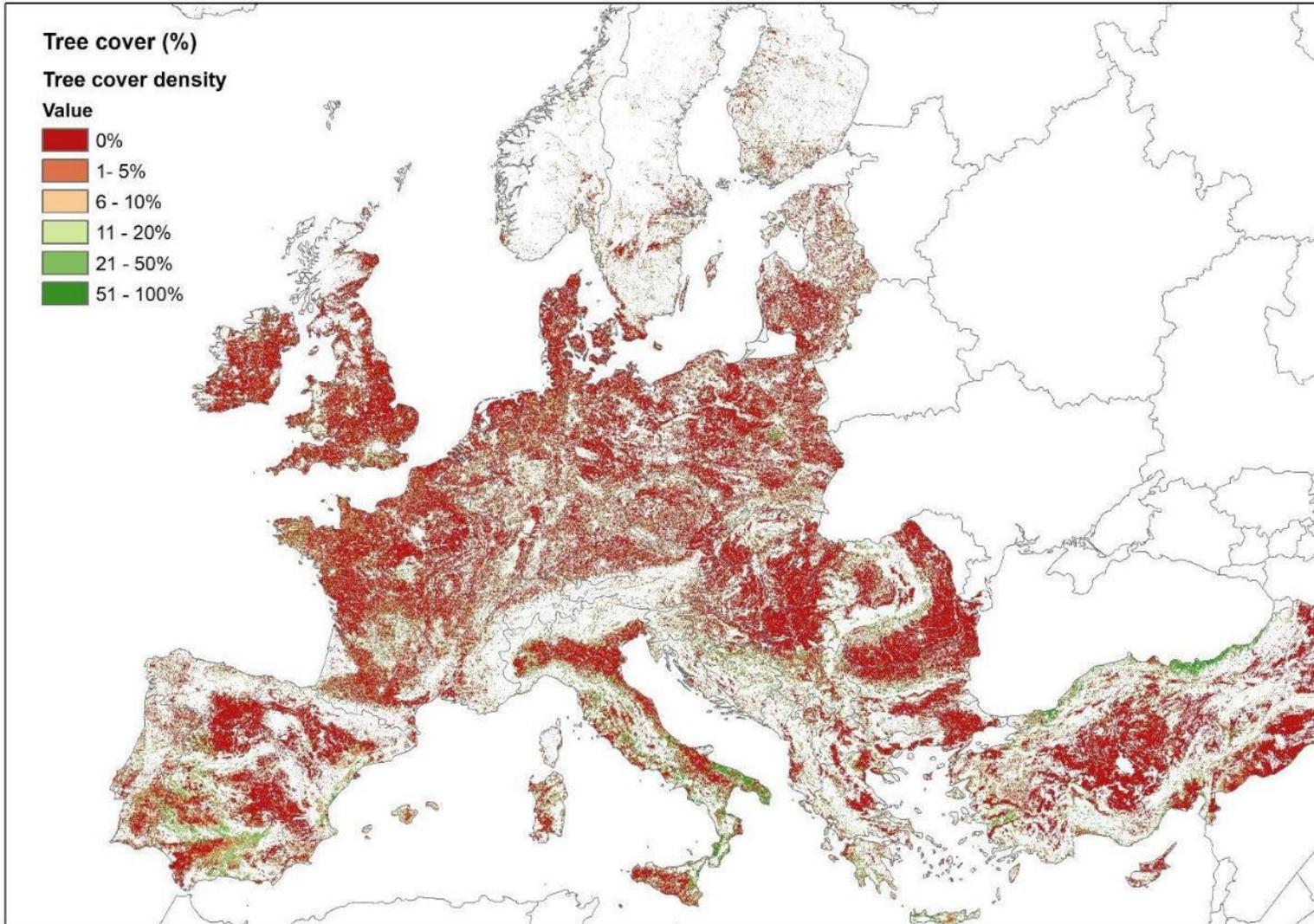
Forest Land

Wetland

Settlements

Other Land

Grassland

# Conclusion of the new Common Agricultural Policy - based on 20 countries … No more ambition than in the current CAP.

- **Ministries …** resist complications and dilution of funds for "secure food supply"
- **Farmers …** scared of losing CAP direct payments
- **Commission …** mostly supportive and **issued EU rules** stating that AF is fully eligible for basic payments, when:
  - "justified based on the **local specificities** (e.g. density/species/size of the trees and pedo-climatic conditions); and ..
  - "the **value added** of the presence of trees to ensure sustainable agricultural use of the land and …"; and …
  - "includes **all agricultural land** ' - arable land, permanent grassland and permanent crops."

# Planting should target environment & GHG needs



Tree cover (%)
Tree cover density
Value
- 0%
- 1- 5%
- 6 - 10%
- 11 - 20%
- 21 - 50%
- 51 - 100%

*Priority planting areas, where tree cover density (% tree cover) on agricultural land is particularly low. Source: Copernicus tree cover density 2015 overlaid on Corine agricultural land use.*
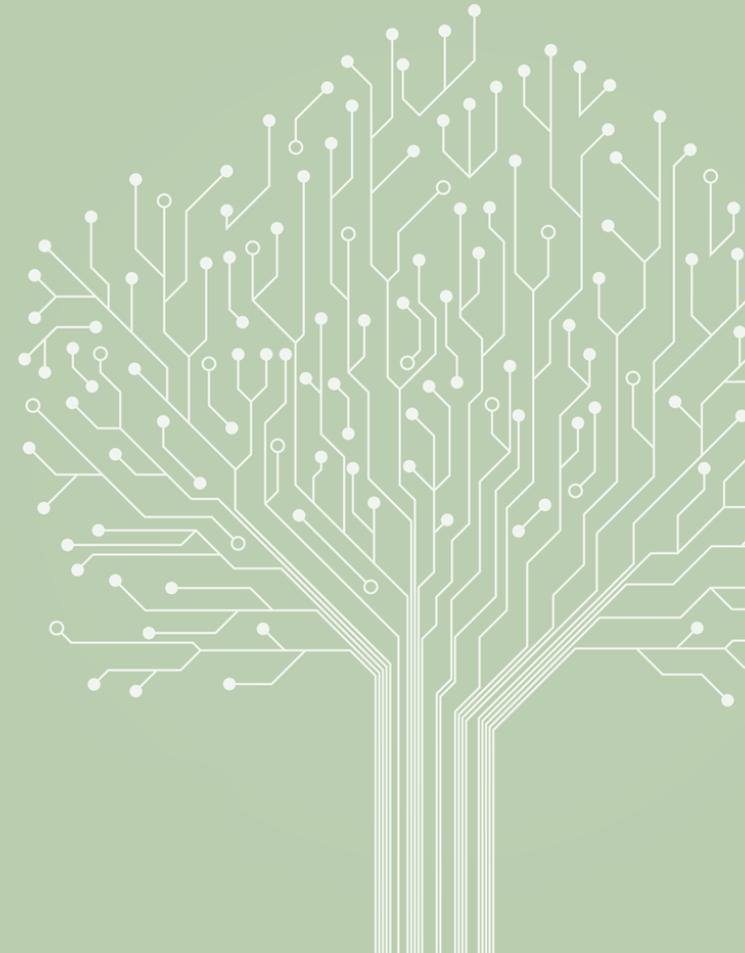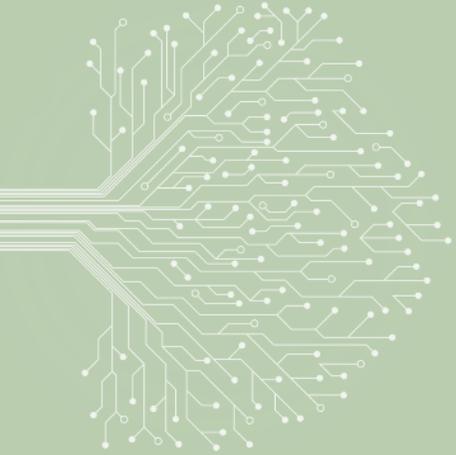
*EURAF Policy Briefing #2*

Den Herder et al. (2017) estimate that the total area under agroforestry in the EU 27 is about 15.4 million ha which is equivalent to about 3.6% of the territorial area and 8.8% of the utilised agricultural area.

Den Herder et al (2020) **show that 1.69 million km2 of European agricultural land has 0% tree cover. An area of 1.71 million km2 of agricultural land has less than 1% tree cover.  This could be the priority area for agroforestry tree planting.**

# DigitAF: DIGItal Tools to help AgroForestry meet climate, biodiversity and farming sustainability goals: linking field and cloud
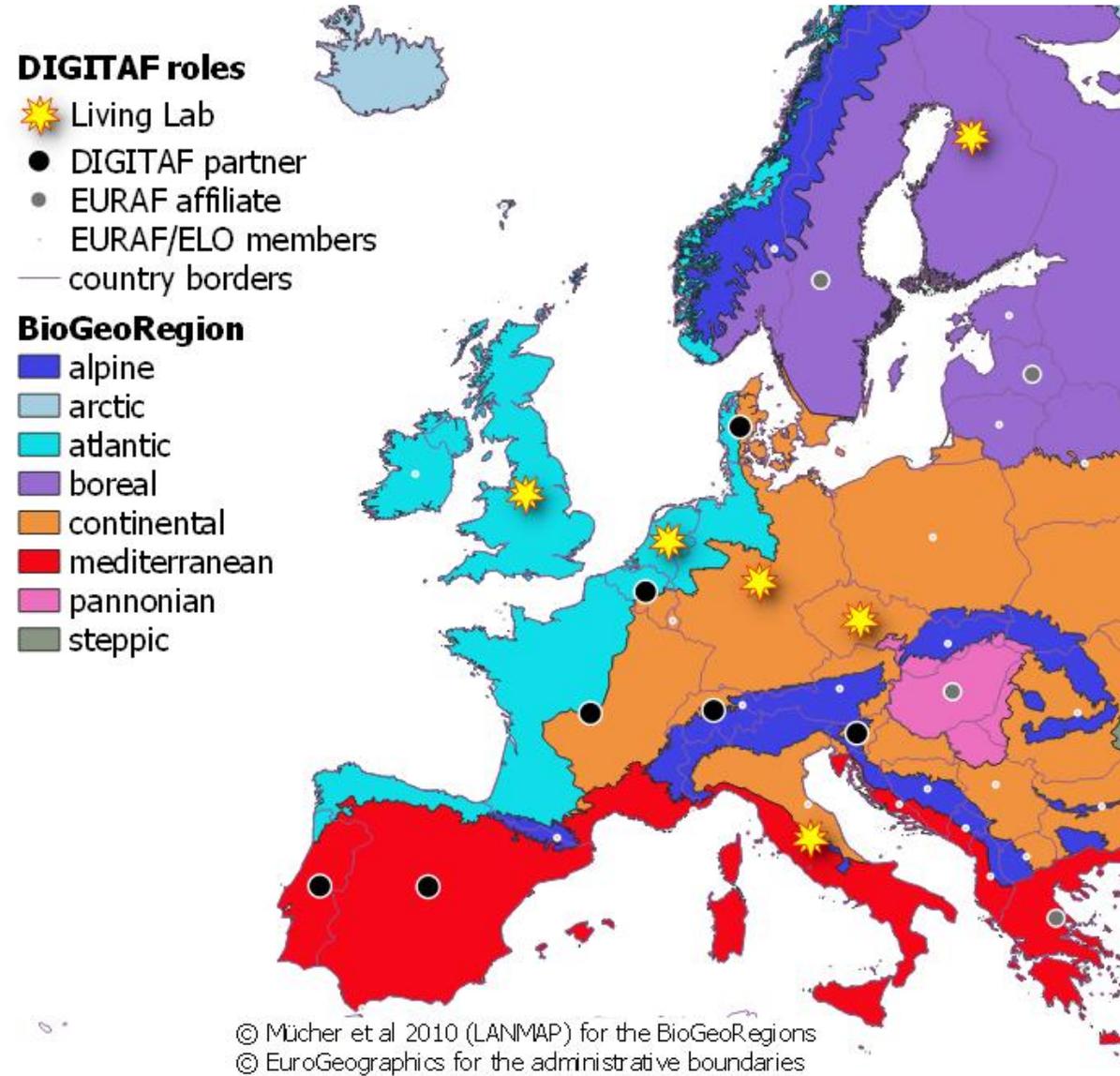
New project started in September

Coordinated by INRAE, France

# Objectives

- To ensure **the right trees are planted at the right place** and **managed in the right way** to **foster climate change mitigation** and **adaptation** as well as **enhance biodiversity** whilst enabling **profitable and sustainable food production** and **efficient use of resources**

- …by providing key actors with **tools** to:
  - Help policy-makers and administrations concerned with agroforestry set the scene for a wide adoption of agroforestry
  - Help farmers and landowners implement high quality agroforestry systems
  - Help value chain actors (e.g. retailers) who benefit from agroforestry assess, quantify and value agroforestry products and services

# Living labs



DIGITAF roles
- ☀ Living Lab
- ● DIGITAF partner
- ● EURAF affiliate
- · EURAF/ELO members
- — country borders

BioGeoRegion
- alpine
- arctic
- atlantic
- boreal
- continental
- mediterranean
- pannonian
- steppic

© Mücher et al 2010 (LANMAP) for the BioGeoRegions
© EuroGeographics for the administrative boundaries

**Diversity of agroforestry covered by Living Labs**

| AF system | Land use classification (e.g. LPIS) | |
| --- | --- | --- |
| | Forest land | Agricultural land |
| Silvopastoral | Forest grazing (a) | Wood pasture (d) |
| | | Orchard grazing (e) |
| Silvoarable | Forest farming (b) | Alley cropping (f) |
| | | Alley coppice (g) |
| | | Orchard intercropping (h) |
| Agrosilvopastoral | Sequential mixtures of silvoarable and silvopastoral systems | |
| Linear agroforestry | Forest strips (c) | Shelterbelt networks (i) |
| | | Wooded hedges (j) |
| | | Riparian tree strips (k) |

# What is digital agriculture?



**(Big) data** — Sensors, smartphones, UAV, satellites, social media…

**Connectivity** — IoT, terrestrial and satellite networks, data exchange protocols…

**Computing** — Algoritms, software, models, Decision Support Systems, visualization, Artificial intelligence, ontologies…
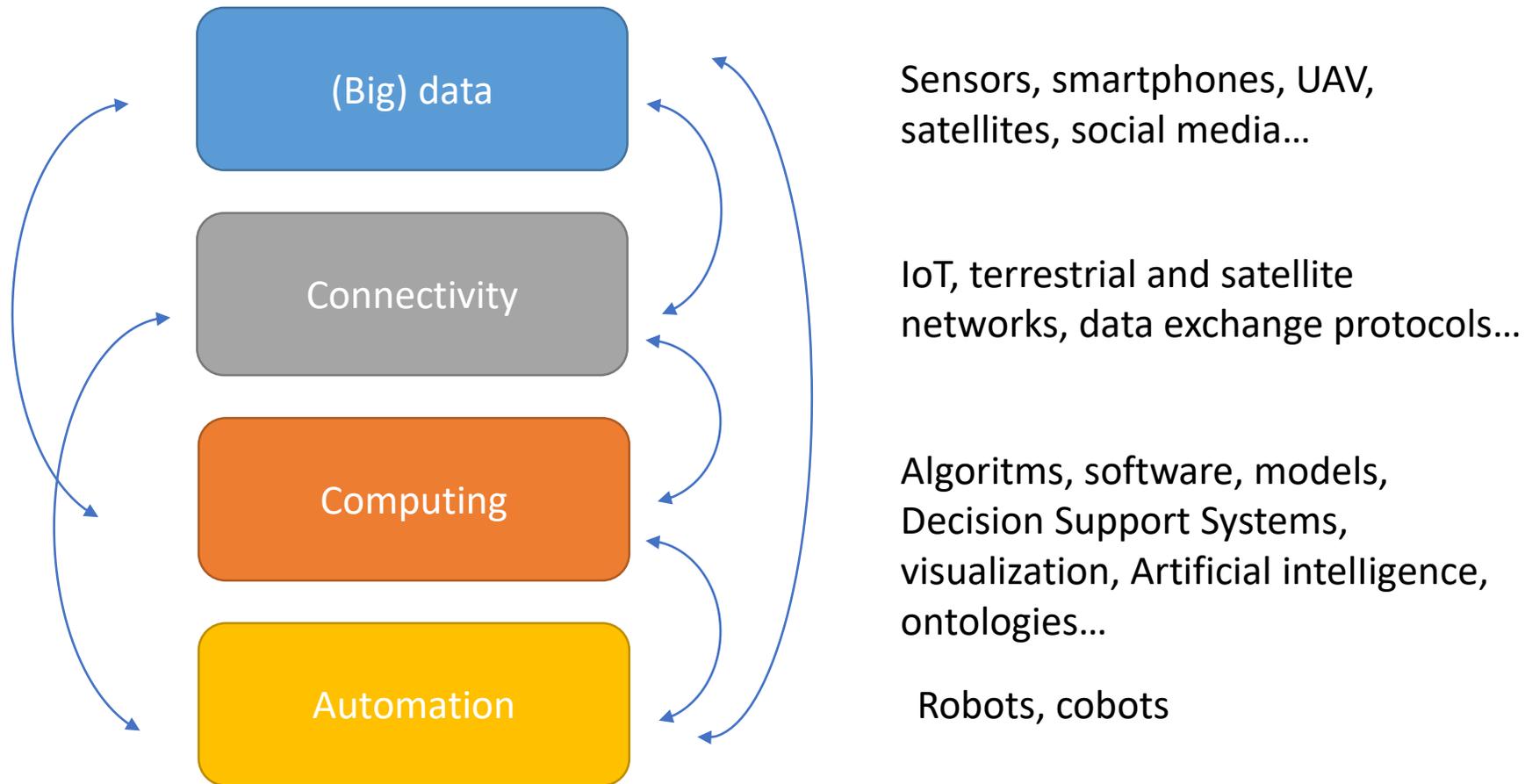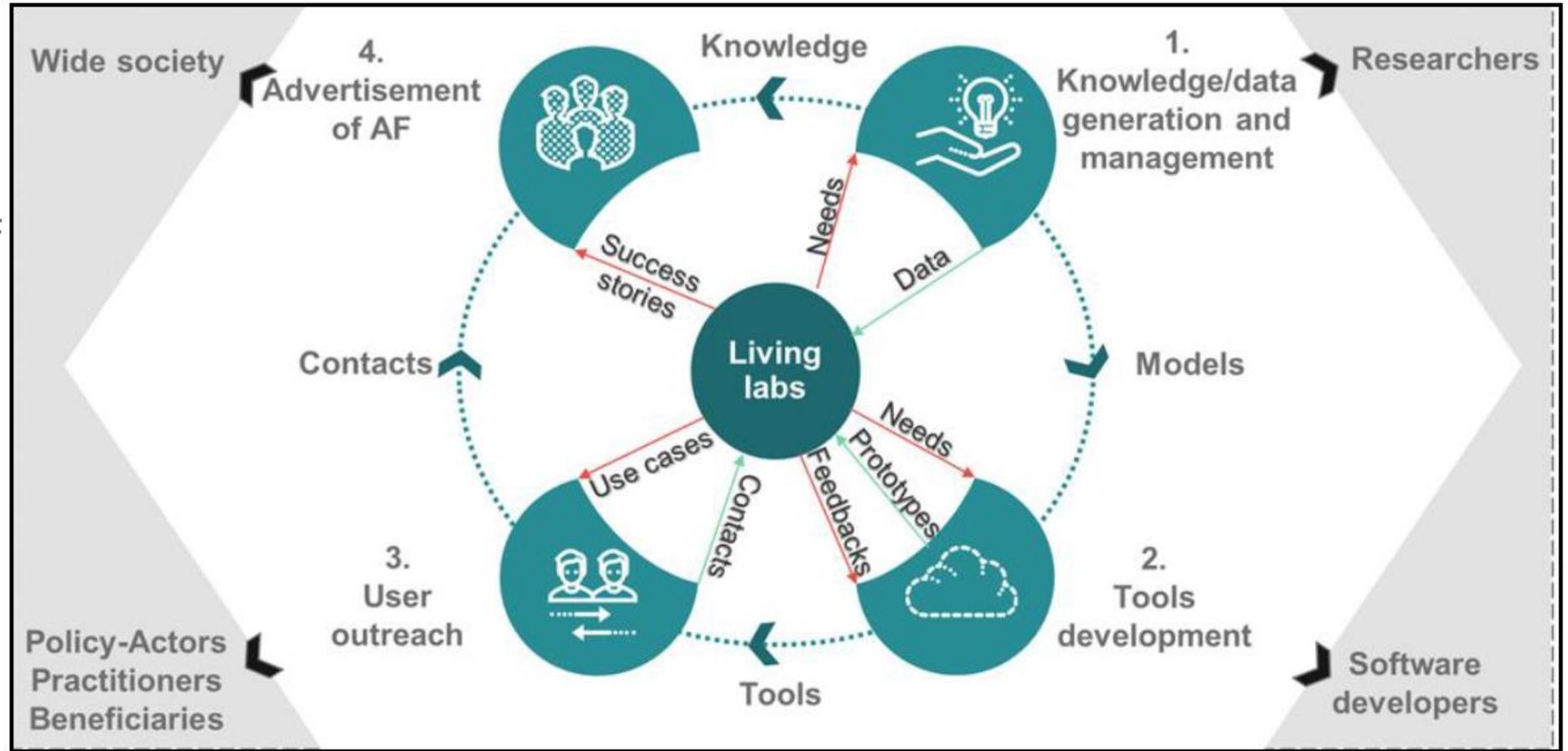
**Automation** — Robots, cobots

Figure adapted from **Marie Gosme**, *Digital agriculture: threat or opportunity for agroforestry?* Online presentation at the 6th European Agroforestry Conference, Nuoro, Sardinia 16-20 May 2022

Developing an ecosystem of open-source, user-centred digital tools to adapt the practices of the key actors towards the adoption of AF

# Living Lab Finland

- Agroforestry practices have a long history in Finland

- However, the term agroforestry is unknown to most farmers and Finnish policy

- Nevertheless, many opportunities for agroforestry in northern climates

- Network of farmers interested in carbon farming, ecosystem services and biodiversity

Objectives of the Living Lab:

- Exchange information on sustainable agroforestry practices suitable for Finland
- Show the potential of agroforestry for Finland
- Active knowledge exchange between farmers, advisors, researchers and policy
- An active Finnish agroforestry network beyond the life of the project
- Show good practice examples from other countries
- More international cooperation

What to expect from DigitAF?

**Farmers**: show the opportunities of agroforestry as a *financially viable* and more *environmental friendly farming* practice, while at the same time *maintaining and diversifying food production*

**Policy**: Information how agroforestry can contribute to Finnish *food security, carbon neutral farming* and *climate change adaptation*

**Extension services**: provide material for farm advisors to develop *information for farmers and training materials*

**Researchers**: create a stronger *community of agroforestry* researchers in Finland

# Information on agroforestry

- [Information on agroforestry](#) in Finland collected by the *peltometsäviljelyverkosto*
- [AGFORWARD](#) project, especially the [innovation](#) and [best practice leaflets](#)
- [AFINET](#) project, especially the [factsheets](#) and [video's](#)
- [DIGITAF](#) project, to be launched soon ☺
- European Agroforestry Federation ([EURAF](#))

# Thank you for your attention!

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