



Digital transition:

Long-term implications for EU farmers & rural communities

20 February 2024
Yulia Barabanova

EU Policy Lab

Home What we do ▾

European Commission > EU Policy Lab



EU Policy Lab

A collaborative and experimental space for innovative policymaking

https://policy-lab.ec.europa.eu/index_en

What is Foresight?

Medium/long-term perspective

Collective intelligence about future

Plausible rationales of possible developments

Future as something to **shape**

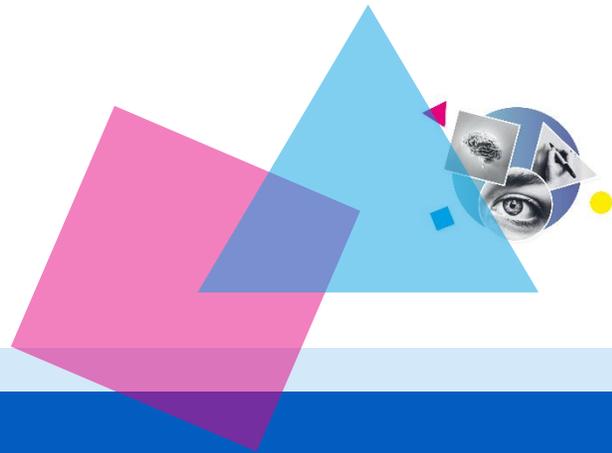


Building on previous JRC projects



Why using foresight for digital transition?

- Digital transition moves ahead at fast speed
- Technological treadmill, mostly driven by private sector
- Public sector risks lagging behind while it has roles and responsibilities
- Strategic foresight helps:
- Systemic **understanding** of trends – multiple perspectives
- **Anticipate** change, both incremental and disruptive
- Build **priorities, vision, strategy**



The team



Evi Mourmoura



Pierluigi Londero



Fabio Cossu



Yulia Barabanova



Maciek Krzysztofowicz



Greta Hauer



Florence Buchholzer



Koen Mondelaers



Orsolya Besene-Szaplonczay



Anne-Katrin Bock

DG AGRI

EU Policy Lab

Digital transition: Long-term implications for EU farmers & rural communities

Discover how digital transition can support **the resilience** of the agriculture and rural areas in the disruptive futures



European
Commission

Links



[Link to the report](#)



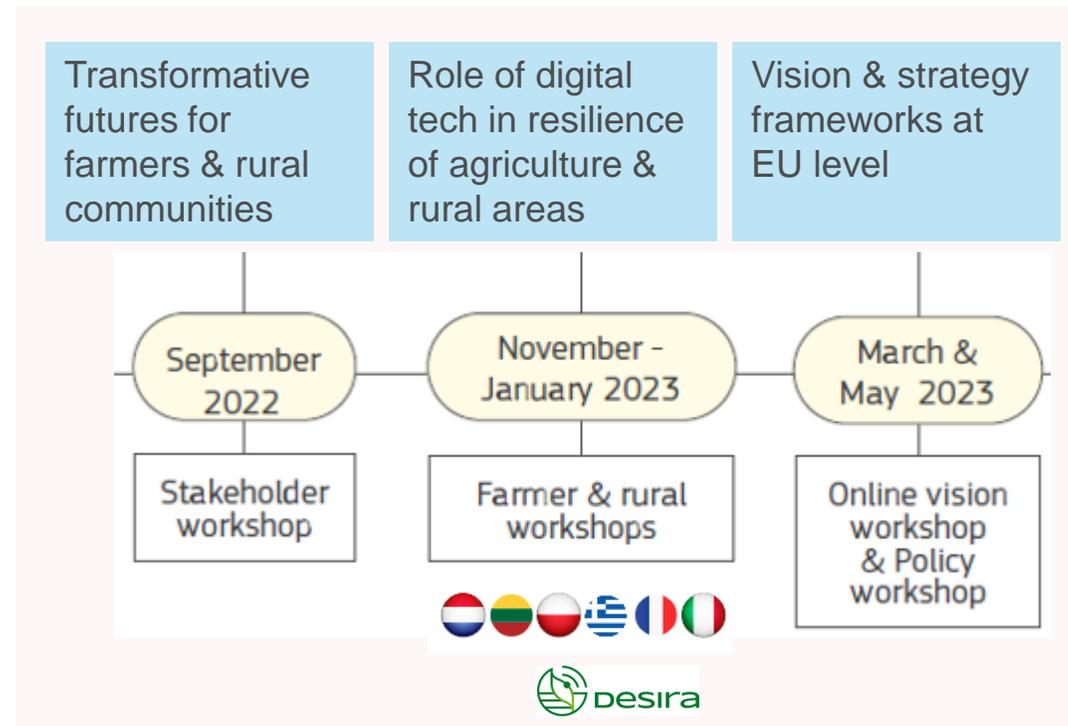
[Link to the digital version of the toolkit](#)



Digital Transition: Long-term implications for Farmers and Rural Communities

[Link to the video about the study](#)

Overview of the foresight process



Transformative futures 2040

Scenario 1 Navigating Storms



High energy prices hinder advanced technologies. Food scarcity and land competition fuel social unrest. Regions focus on becoming self-sufficient, through decentralised solutions and frugal digital technologies.

Scenario 2 Community revival amid technological collapse



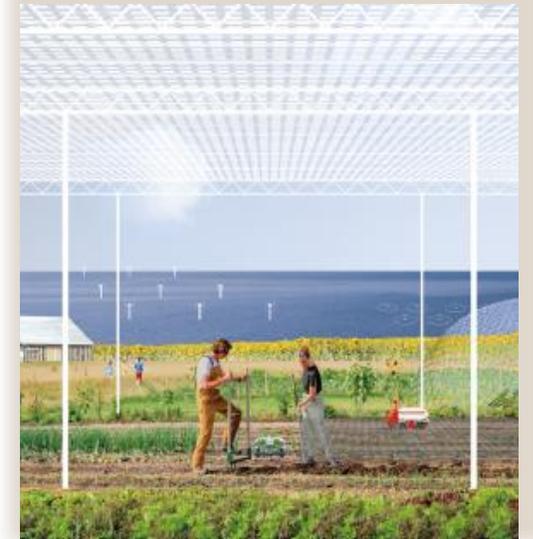
Disruption of energy & internet connectivity infrastructure due to extreme weather events leads to frequent power outages, unstable internet connection & soaring energy prices.

Scenario 3 Reclaiming digital sovereignty



When satellites fail, corporate farms struggle. Small independent farmers form communities focused on digital sovereignty and develop their own technologies.

Scenario 4 Resilient roots to withstand the shocks



Despite disruptions to technologically advanced farms due to satellite failure, progress towards sustainability continues thanks to the resilience of regenerative farms and support from the green tech industry.

Implications for resilience



Broadband deployment as a foundation for resilience & critical enabler



Robustness to withstand extreme climate events and energy shortages



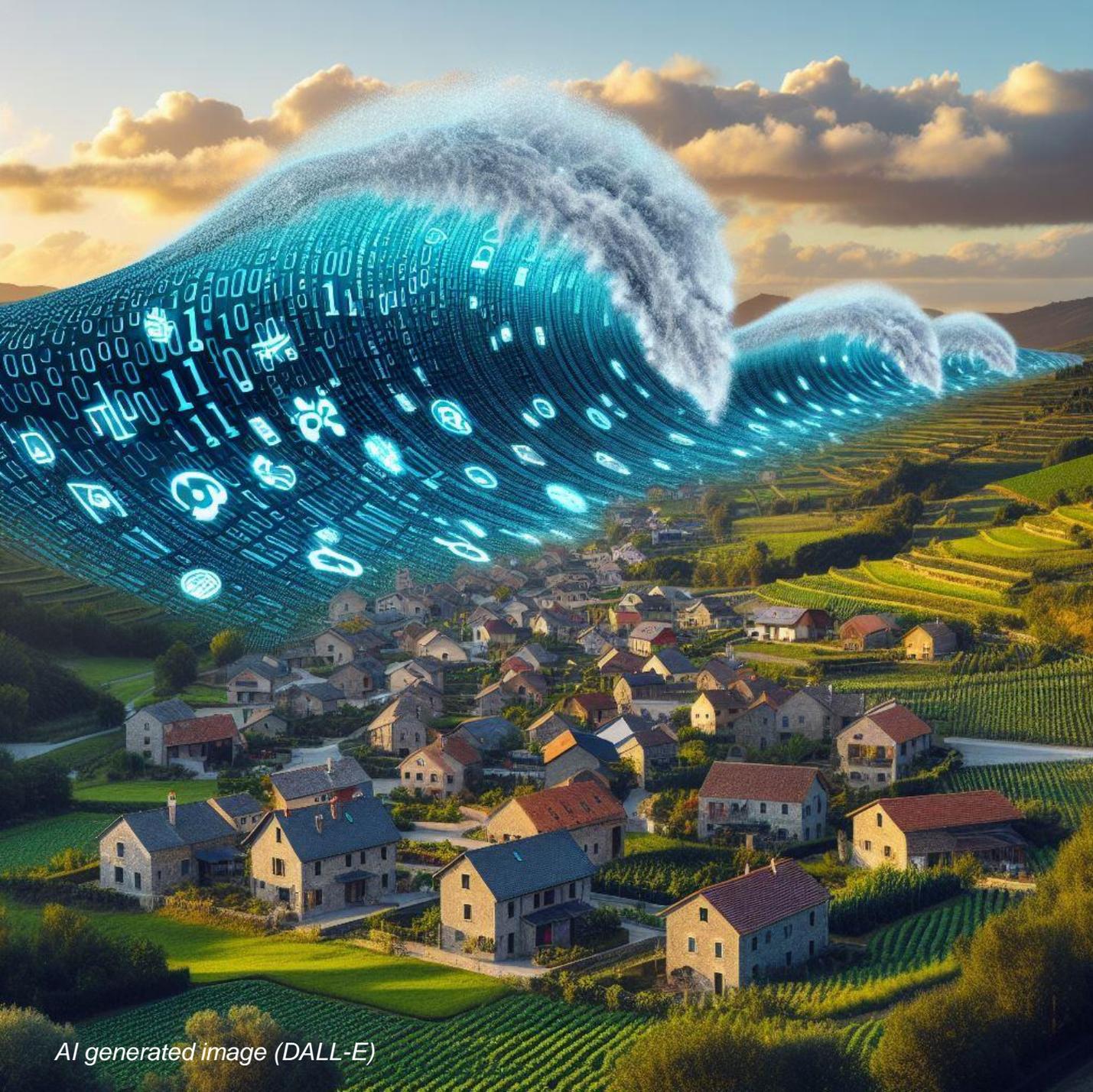
Contingency for service interruptions & support to traditional communication



Energy-efficient broadband solutions for self-sufficiency, alternative energy sources



Support for decentralisation in technology (local networks and data centers) to promote regional self-reliance and autonomy



AI generated image (DALL-E)

What is the purpose of digital transition?

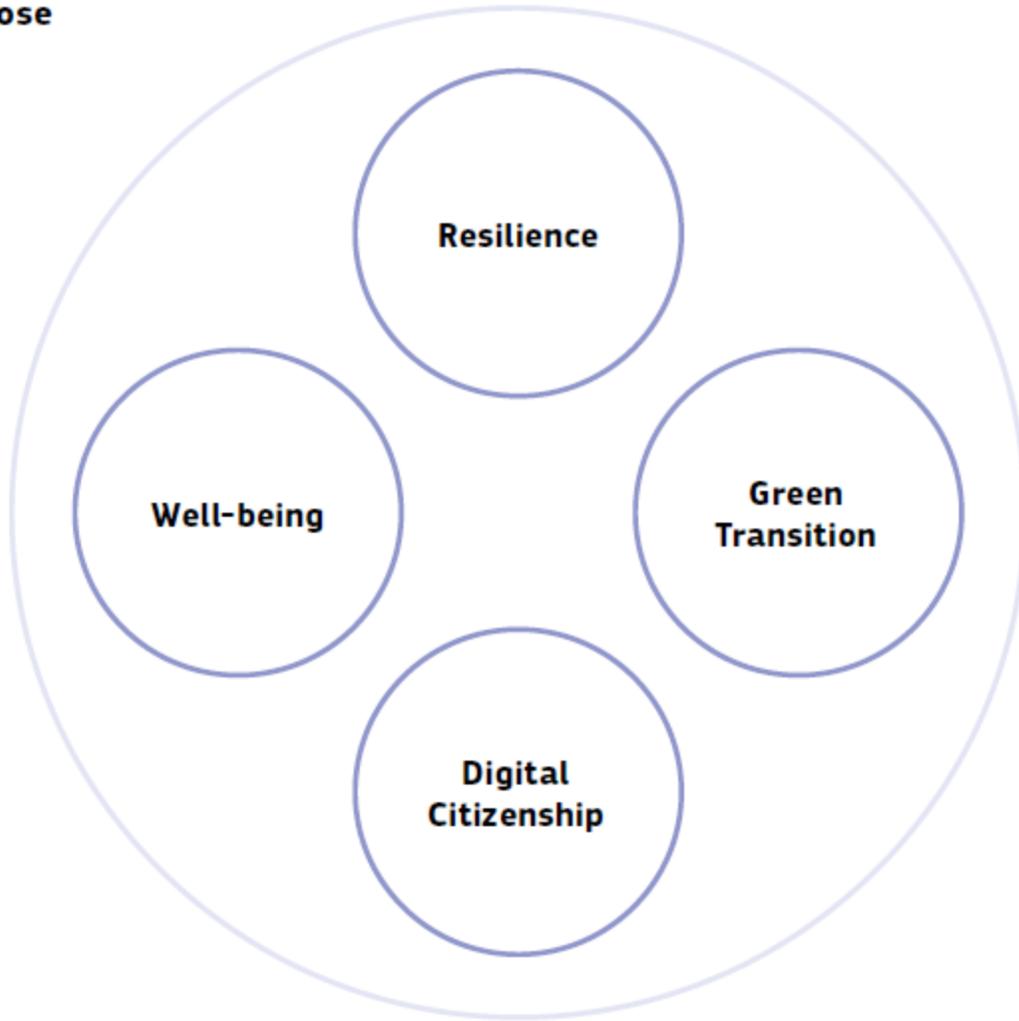
Which values & principles to guide it?

Join at
slido.com
#1452 849



[Link to the live results](#)

Purpose



Resilience of infrastructure

From providing connectivity to ensuring a resilient digital ecosystem that supports green transition

Green transition: Aligning with sustainability goals

Energy-efficient technologies & practices in broadband infrastructure

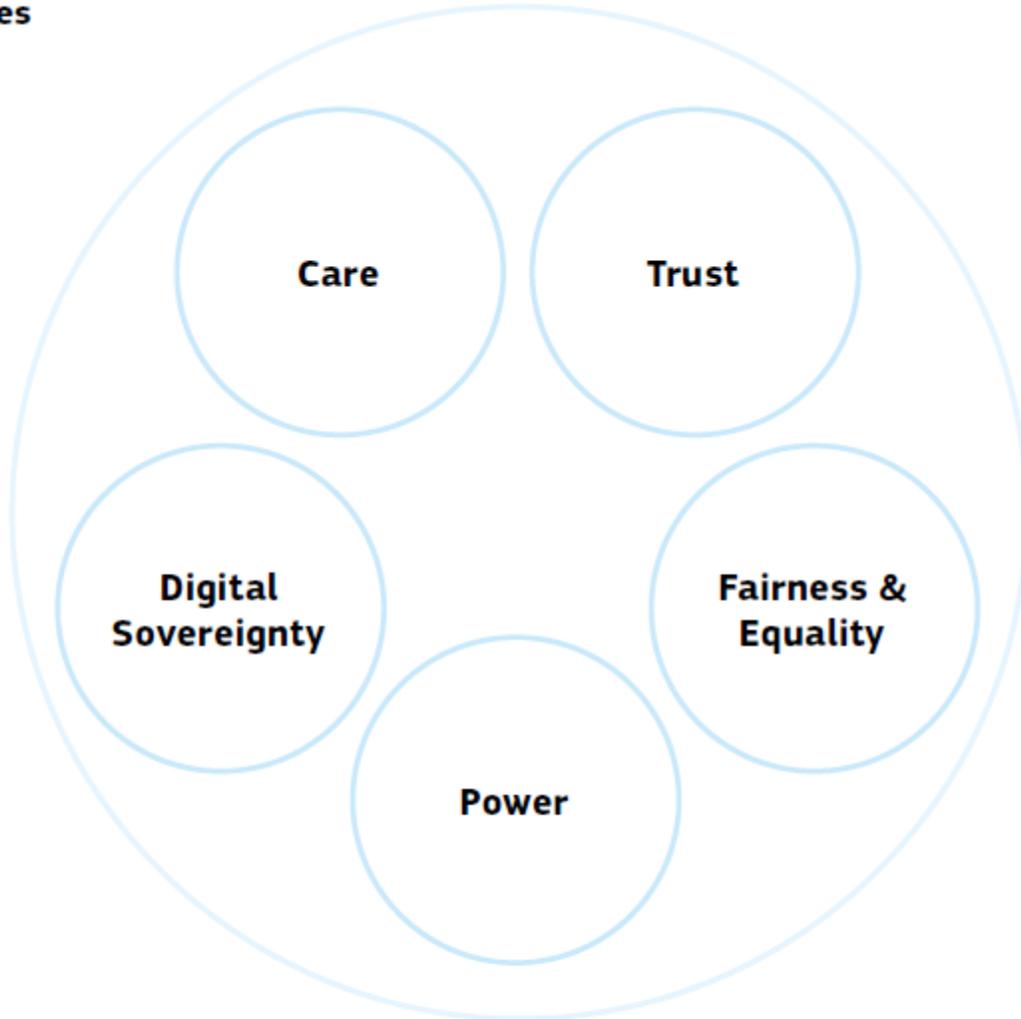
Enable digital citizenship

Provide tools & platforms for active participation in the society

Enhance well-being through connectivity

Improve access to services & opportunities (health care, education, social services)

Values



Trust

Transparent communication about deployment
Safeguarding user privacy
Ensuring reliable services

Fairness & equality

Access to all, especially to marginalised groups & remote areas

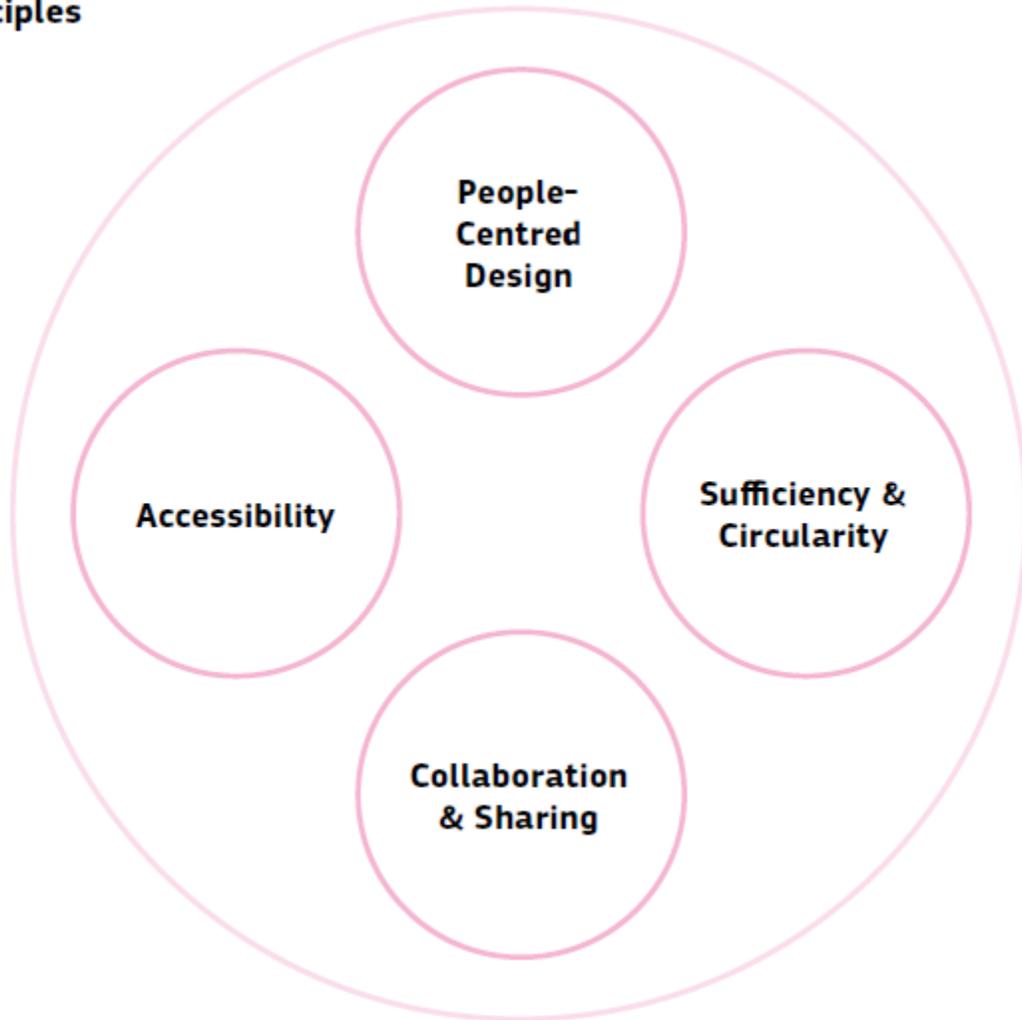
Power & sovereignty

Supporting local decision-making & ownership structures;
Reducing reliance on external tech providers

Care

Designing & deploying tech in a way that nurtures the well-being of inhabitants & natural environment

Principles



Collaboration & Sharing

Involves farmers, rural communities, the private sector, governments, and tech companies working together. This can be achieved through forming networks, sharing knowledge, data, practices, tools, and infrastructure, as well as promoting cross-border networking and collaboration.

Accessibility

Ensuring accessibility and affordability of digital technologies and services to all farmers and rural communities, regardless of their location, income, or the size of their operation.

People-Centred Design

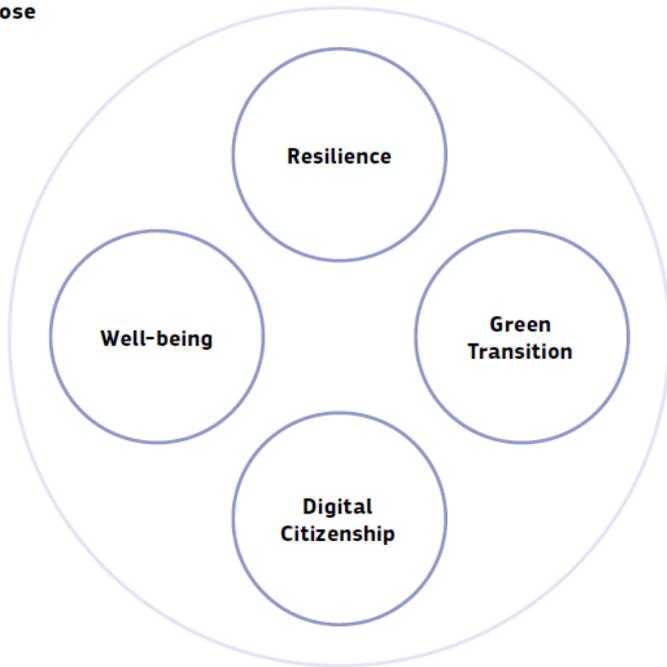
Factoring the needs and preferences of farmers and rural communities in the development of digital tools and services through an iterative process of user feedback and design.

Sufficiency & Circularity

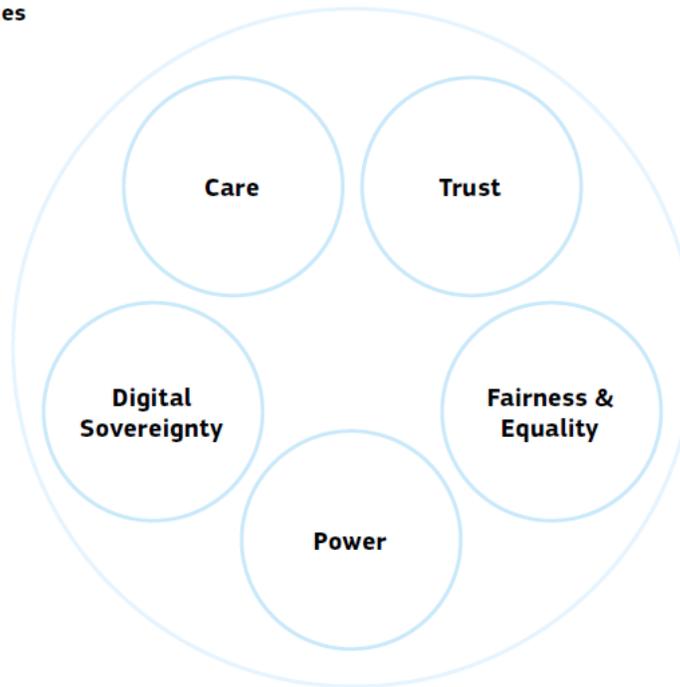
Ensuring that digital technologies are environmentally, socially and economically sustainable, durable, open for modification, recyclable, and are used frugally.

Vision Framework

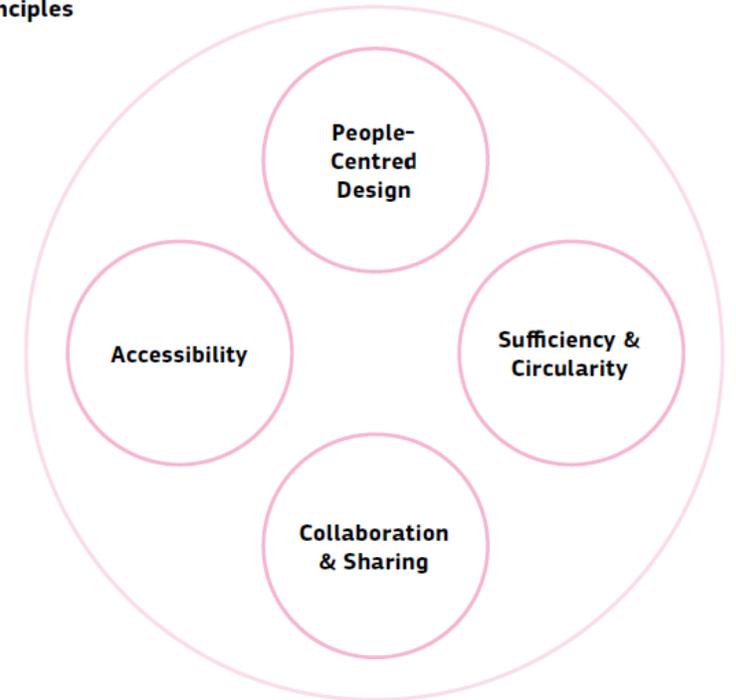
Purpose



Values



Principles



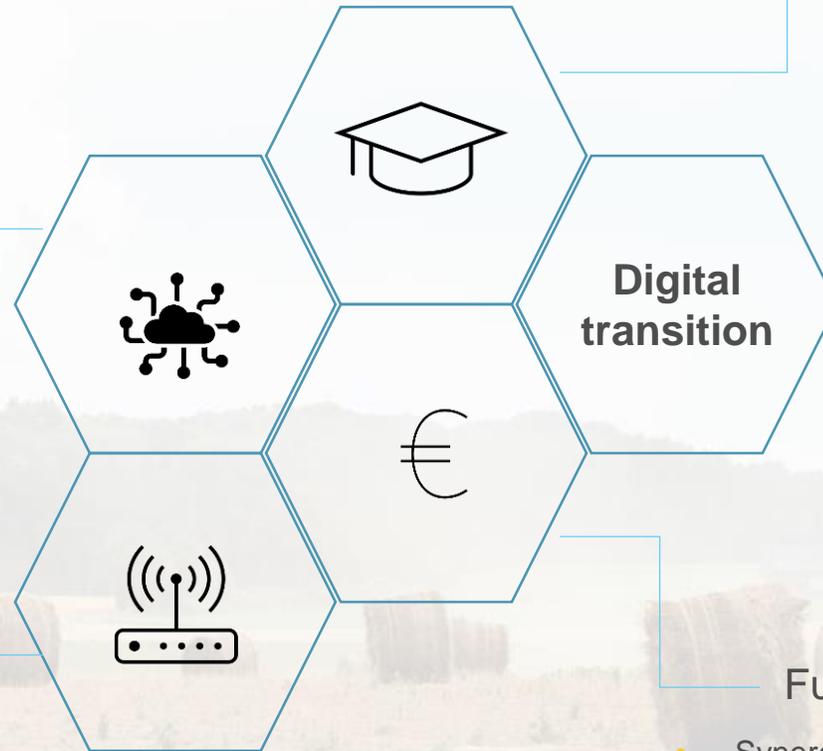
Enablers for digital transition

Digital ecosystem & governance

Dynamic & adaptive regulatory environment (data protection, privacy & cyber security)

Infrastructure & connectivity

- Physically robust & secure infrastructure & hardware/software



Capacity building

- Coordinated approach to education, training & life-long learning

Funding & investment

- Synergies between funding schemes & measures
- Public-private partnerships

Recommendations



Adoption of technology:
vision & broader
implications of connectivity



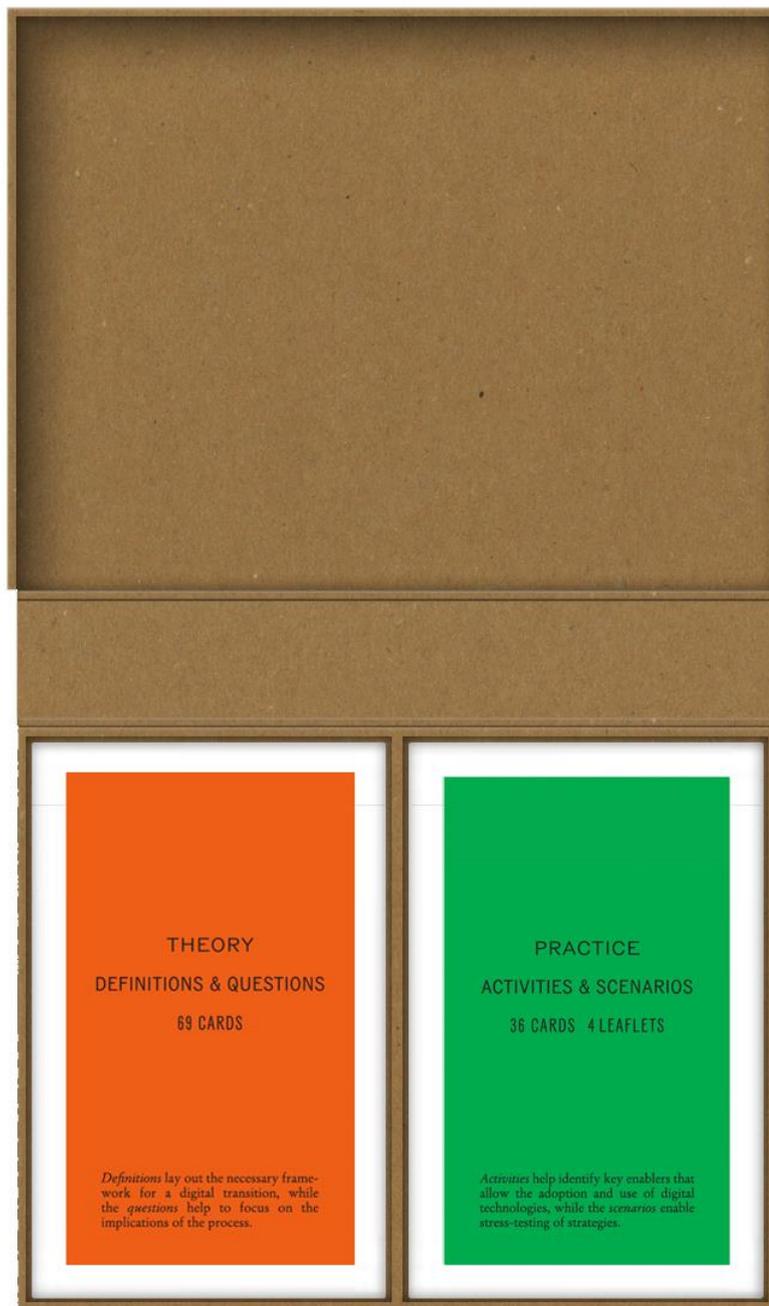
Policies to support flexibility
& diversity of digital
solutions



Governance framework at
the EU level



EU digital transition strategy
+ MS/regional/local
strategies



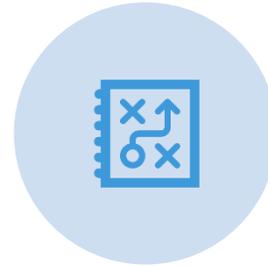
The toolkit can help you to



UNCOVER KEY ISSUES
FOR VISION & STRATEGY



ENGAGE
STAKEHOLDERS



FUTURE-PROOF YOUR
STRATEGY



SET OR REVISE
OBJECTIVES,
MILESTONES & ACTION
PLANS

THEORY
DEFINITIONS & QUESTIONS

69 CARDS

Definitions lay out the necessary framework for a digital transition, while the *questions* help to focus on the implications of the process.

PRACTICE
ACTIVITIES & SCENARIOS

36 CARDS 4 LEAFLETS

Activities help identify key enablers that allow the adoption and use of digital technologies, while the *scenarios* enable stress-testing of strategies.

Q

QUESTION 40 OF 46

What are the main barriers in infrastructure and connectivity in our area?

THEORY → ENABLERS

0

Q

QUESTION 25 OF 46

Which marginalised or vulnerable groups may be negatively impacted by digitalisation?

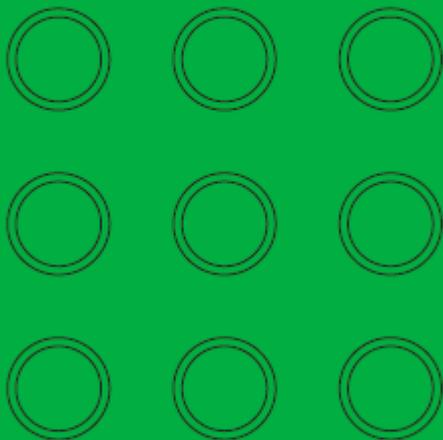
Relates to *Care*
THEORY → VALUES

0

A

ACTIVITY 1 OF 5

Map out key actors and stakeholders in your digital ecosystem



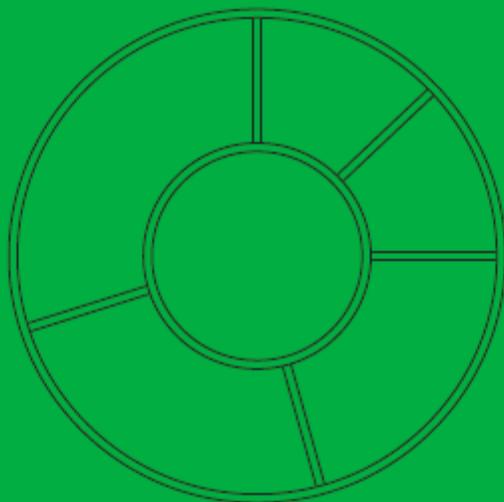
Position the relevant *actor-cards* on the flipchart.

PRACTICE

V**A**

ACTIVITY 5 OF 5

Allocate budget for your digital transition strategy



Allocate amounts for e.g. capacity building; *infrastructure and connectivity; digital ecosystem and/or data schemes; collaboration and networking; research and development.*

PRACTICE

V

What are the risks for our digitalisation strategy across the four scenarios? How can we mitigate them?

SCENARIO 1 OF 4

Navigating Storms



SCENARIO 2 OF 4

Community Revival Amid Technological Collapse



SCENARIO 3 OF 4

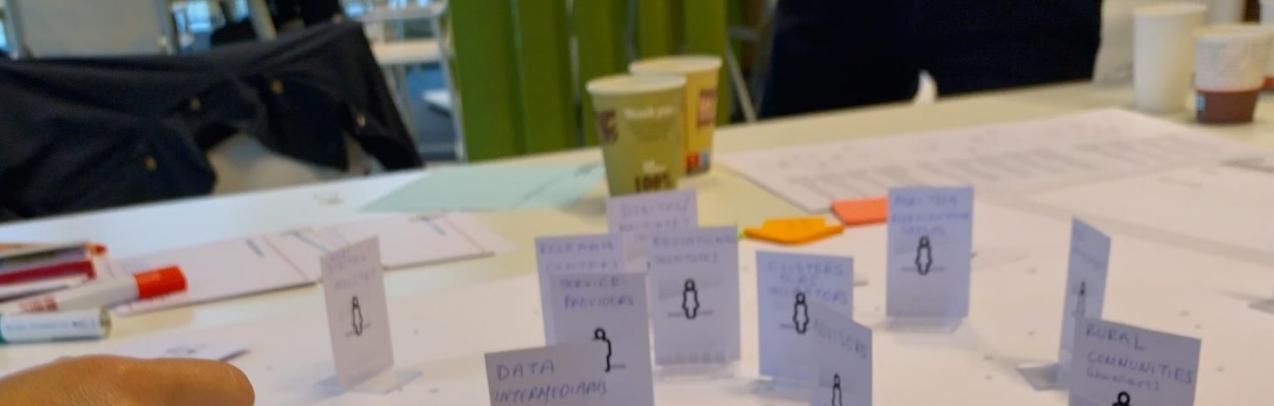
Reclaiming Digital Sovereignty



SCENARIO 4 OF 4

Resilient Roots to Withstand the Shocks





Interested to use the toolkit? Get in touch:

jrc-foresight@ec.europa.eu

Keep in touch



EU Policy Lab

A collaborative and experimental space for innovative policymaking

<https://policy-lab.ec.europa.eu>

Keep in touch



EU Policy Lab: policy-lab.ec.europa.eu

EU Science Hub: ec.europa.eu/jrc



@EU_ScienceHub



EU Science, Research and Innovation