

RURAL DIGITALISATION FORUM SCENARIO PLANNING EXERCISE

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1. OVERVIEW

Input is required from the RDF to the Work Package 3 Scenario Planning synthesis report. In short, around 20 Living labs across Europe have held participatory scenario workshops looking ahead to a time horizon of 2031 and considering plausible future scenarios given the effects of digitalisation on agriculture, forestry, and rural communities. The resultant data is currently being synthesised into a single report. DESIRA is committed to augmenting the report with input from the RDF who will consider preliminary findings through the lens of the Long Term Vision for Rural Areas 2040.

1.1. THE FIFTH ELEMENT

Following the last meeting, an exercise to construct a fifth element has been designed. The fifth element will have a family resemblance to the existing four elements of the long-term vision for rural areas:

- **Stronger rural areas**
- **Connected rural areas**
- **More resilient rural areas that foster well-being**
- **Prosperous rural areas**

The working title of the fifth element is 'Digitalised rural areas'. DESIRA findings will be used to inform the fifth element. The long-term vision time horizon 2040 will be adopted, extending DESIRA's 2031 (10 year) horizon.

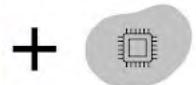
The aim is to use the contribution of the RDF in these workshops to write a short text articulating the fifth element. The text will comprise what is envisioned in 2040 drawing on the DESIRA

findings, how it should be achieved, and a short rationale (why) about it. Full instructions will be given at the beginning of the next workshop.

2. PRELIMINARY SCENARIO FINDINGS

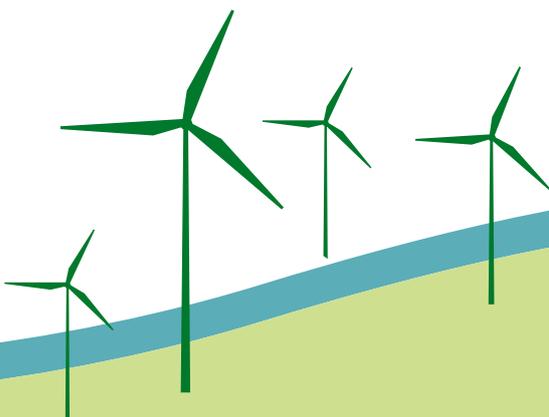
Across Europe DESIRA Living Labs have concluded scenario planning exercises. Participants were encouraged to make positive and negative assumptions about the effects of digitalisation exploring a range of plausible future trajectories. In order to compliment the long-term vision for rural areas format, we have focused on elements of the plausible, optimistic narratives, termed 'better not best' and 'utopia' in the methodology, in order to summarize findings that can be used to construct 'the fifth element'. The long-term vision, as shown (ref) encapsulates an optimistic vision for Europe alongside notions of what is needed to navigate towards them. This workshop is expected to reflect on and critique the findings provided as RDF participants work towards articulating 'the fifth element'.

Integration of DESIRA Scenarios
with the Long Term Vision for Rural Areas



2.1. DESIRA DRIVERS OF CHANGE AND NARRATIVES

| STEEP | Driver of Change | Plausible, optimistic narrative |
|---------------|--------------------------------------|---|
| Social | Demographic renewal | Digitalisation will stabilise depletion in rural areas through enabling more prosperous rural areas in which the young find positive reasons to remain, and incomers are attracted by the opportunities present and their relocation is facilitated by user friendly services (finding housing, finding schools). The forms of digitalisation underpinning this reversal of depletion include digital infrastructure comparable with urban areas supporting new value chains and remote working, innovation opportunities in all of DESIRA's domains, high levels of digital literacy, and a central role for rural areas in energy transitions. |
| | Digital literacy | Optimistic futures generally included some reference to better trained, more knowledgeable actors at the local level and at the point of production. Digital transitions require digital skills and this was broadly recognised in most LLs.. |
| | Flexibility | Digital services are not exclusive with face-to-face also valued. One is not confronted by a digital interface at every turn however services, including medical provision, are accessible and reliable. |
| | Trust | Optimism allows for increased trust between producers and consumers and between local actors. Trust is necessary for the connectedness and data sharing to be effective, for example leading consumers to pay premiums for organic or 'green' products. Trust also underpins the use of digital tools. Effectively digitalised rural areas are built on trust. |
| | Cooperation | Many optimistic digitalisation scenarios posited cooperation in various forms as central to success. Sometimes it was peer-to-peer cooperation with actors sharing resources that would otherwise not be cost effective. At other points, strategic partnerships were identified as between agencies and authorities. |
| | Diversity | This dimension was often envisioned through the suspension of demographic depletion (above) whereby young people contribute to a sustainable, vibrant community and to farm succession. However, it was also strongly felt in some LLs that broader aspects of diversity can be promoted through digitalisation. Strongly connected communities that support inward migration are more likely to have diverse populations, respectful of minorities both sex, gender and ethnicity. Women and girls were specifically mentioned in one report, as enjoying enhanced opportunities through digital developments. |
| Technological | Data privacy/ sovereignty/ ownership | A strong theme across LLs was the need for farmers and other local stakeholders to be the direct beneficiaries of their data rather than ceding control to big corporations or state actors. Where farmers and communities own and control their data it becomes enlightening, liberating and a source of innovation, contrasted to exploitative and an instrument of exogenous surveillance. As data owners and controllers, local actors were more likely to share. Trust is more widespread in the optimistic scenario. |



| STEEP | Driver of Change | Plausible, optimistic narrative |
|---------------|---|--|
| Technological | Digital tools/ technologies | <p>Robotics: Robots replace many seasonal workers smoothing out management issues for farmers and reshaping their working practices. Farmers and other SMEs benefit from investment opportunities (loans and subsidies) to overcome economic barriers.</p> <p>Remote sensing: Developments support many activities inc.: smart water, livestock traceability, wood traceability. It supports sustainability, governance and regional produce marketing.</p> <p>Precision agriculture: Spot farming is good for biodiversity and provides a biofriendly alternative to monoculture</p> <p>3D printing: Fablabs represent distributive manufacture in rural areas shortening supply chains and reducing logistic cost.</p> <p>Integrated platforms: Users have the possibility to find all services they need and providers can supply their services</p> <p>Artificial Intelligence to organise and improve the communication between local population and administration</p> |
| | Innovation | <p>It almost goes without saying that a digital transition will be a product of innovation, but LLs referred to innovation in different ways from formalised 'innovation hubs' to a need for appropriate innovation addressing the needs of small farms and SMEs in rural areas.</p> <p>In the positive vision, rural areas have not been left behind their urban counterparts in the innovation stakes. Importance of social innovation</p> |
| | User friendliness | User interfaces, simple architectures, robustness, right to repair |
| Economic | Energy transitions | Bioenergy and other renewables increase diversification of rural enterprises and provide positive relationships with urban centres. They further improve biodiversity increasing general wellbeing of citizens. |
| | Giving value to farmers' and local actors' work | Many of the LLs envisioned higher prices as a necessary element of optimistic thinking. Digitalisation might support premium prices by improving quality in a number of ways: monitoring and decision science to guide producer choices including varietal selection, sowing and harvesting calendars. Marketing might be radically reshaped through shorter supply chains and value-added processing might be more available to more digitally literate operators within enhanced infrastructures (better broadband, better tools). EID technologies support provenance and certification credentials (organic, high welfare, regional origin, etc.) |
| | Investment arrangements | Adoption and uptake is slowest where short term gains do not justify investment especially from SMEs. When looking forward optimistically many participants saw the need for state support. Support either comes directly from the state (loans and subsidies) or indirectly through arrangements that raise prices. Forms of digitalisation considered included fruit-picking robots and other labour-saving technologies. |

| STEEP | Driver of Change | Plausible, optimistic narrative |
|---------------|------------------------|--|
| Economic | Changes in consumption | European consumers are willing to pay higher prices for high provenance products especially food. The digitalisation of marketing (for example beef) whereby organic, high welfare meat, and regional certifications are effectively targeted at consumers increases profitability and sustainability in the SME sector. Consumer preferences for shorter supply chains and other green credentials catered to by digital marketing and data availability (e.g., traceability) offset declines in meat consumption for rural areas generally. |
| | Local livelihoods | People can work in good jobs in different sectors. Digitalisation is not outsourcing local administration and is improving the quality of jobs with automation and robotics reshaping previously low-skilled unattractive jobs. Digitalisation opens the possibility to offer skilled jobs to people not living in the area to fill gaps of competences |
| Environmental | Biodiversity | Positive digitalisations are more biodiverse than BAU. Remote working has reduced energy use. Energy transitions have reduced pollution, precision agriculture has reduced harmful inputs and weakened the dependence on monoculture, improvements in traceability have reduced illegal and environmentally damaging practices in forestry and farming. |
| | Natural resources | Digitalisation can create opportunities with a positive effect on sustainability. Extreme weather effects can be mitigated e.g., through allowing economic diversification and reducing dependence on activities likely to be disrupted. |
| | Resilience | Smart use of water Smart, sustainable agricultural practices are flourishing with CAP arrangements aligned |
| Political | Balance of power | Digitalisation can shift power towards local actors – often expressed as rebalancing power between farmers and retailers by allowing direct connections between producers and customers, but also through enabling short supply chains and new value chains. Self-determination at the local level was also about digital connectedness, digital skills and the enabling and coordinating opportunities of digitalisation. Local autonomy seen as positive. Regional identities, once dependent on dominating specific markets (e.g., tobacco) are also reasserted through traceability (provenance) and blockchain technologies. A just transition in energy and broader digitalisation is envisioned. |

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