DESIRA

DIGITISATION: ECONOMIC AND SOCIAL IMPACTS IN RURAL AREAS

DELIVERABLE 3.6

DIGITAL STORIES REPORT

31.05.22

LEANNE TOWNSEND.

DESIRA receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 818194.

LIVING LAB SCENARIO PLANNING WORKSHOP GUIDELINES

Project name	**DESIRA | Digitisation: Economic and Social Impacts in Rural Areas**
Project ID	818194
H2020 Type of funding scheme	Research and Innovation Action (RIA)
H2020 Call ID & Topic	H2020-RUR-2018-2 / RUR-02-2018 Socio-economic impacts of digitisation of agriculture and rural areas
Website	www.desira2020.eu
Document Type	Report (deliverable 3.6)
File Name	D3.6 Digital Stories Report (WP3)
Status	Final
Authors	Leanne Townsend.
Work Package Leader	James Hutton Institute
Project Coordinator	UNIPI

Table of contents

1. Introduction to digital storytelling

1.1 What are digital stories?

Digital stories are a short form of digital media output, which are used to communicate a narrative. They were originally developed as means of engaging community members in artistic practice. One of the early pioneers was Joe Lambert who 20 years ago founded the Center for Digital Storytelling[1] to empower individuals to embrace creative expression and community building. Digital storytelling was later embraced in higher education settings, and finally by researchers as a tool for co-productive research and dissemination. As an approach, it is now used practiced in many settings including in teaching, research, the Arts, and community engagement.

Digital storytelling is the practice of using multimedia tools to bring stories to life. Digital stories can include digital elements of audio (voice, music, sounds), video and images (photos, illustrations, maps etc.). These elements are combined to produce a digital (video-based) output typically between 2-5 minutes long. Many sources suggest that around 3 minutes is ideal[2], so this is what we recommend for the digital stories produced in the DESIRA project.

1.2 Why did we use digital storytelling in DESIRA?

Digital storytelling is a creative approach that engages researchers and participants. It allows individuals to share stories from their own perspectives, which is incredibly useful on a research project which aims to capture and share multiple perspectives across different Living Lab contexts. Digital stories are compelling and accessible, meaning that they can be used to reach a broad audience with our DESIRA findings and insights. In turn, this has the potential to increase the impact of the project by sharing its outputs with as many relevant stakeholders as possible. Digital stories can be used to share a number of different types of narratives, including ideas and concepts, context of our research, and findings from the research such as the future narratives that we are producing with our Living Labs.

[1] https://www.storycenter.org/storycenter-blog/blog/2013/2/26/full-circle.html
[2] https://learningcommons.lib.uoguelph.ca/item/what-digital-storytelling

2. Methodology

The Hutton team provided training in early December 2021, and this training was recorded and made available to view on the VRE, along with a slideset, and a Guidelines document. We also provided one-to-one support to Living Lab teams.

The process of creating a digital story:

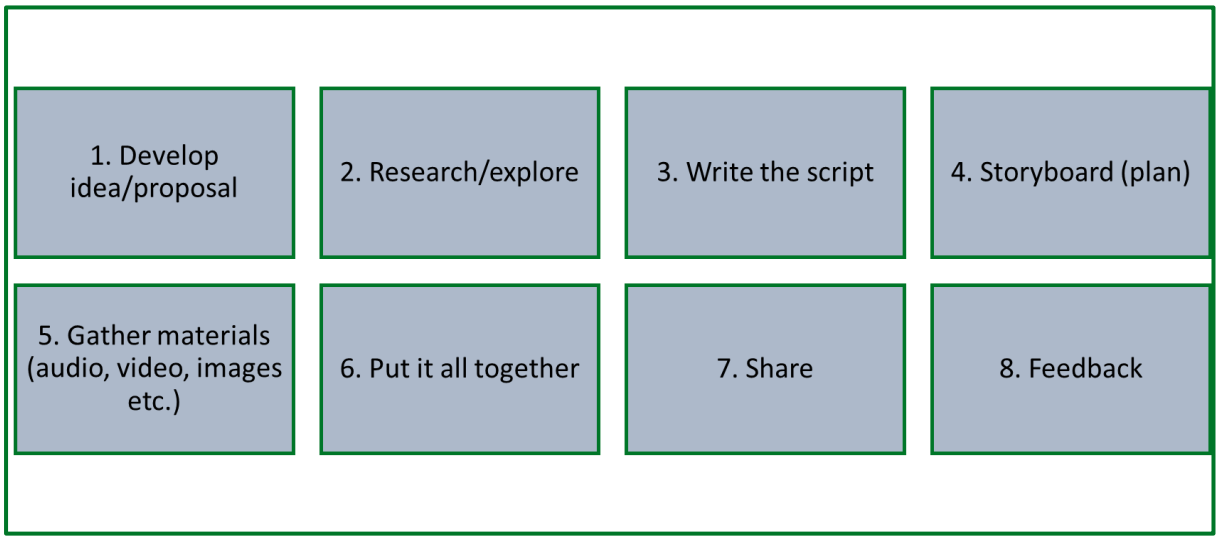

Figure 1: Steps of creating a digital story

Digital storytelling involves a number of steps as illustrated in Figure 1.

1. Develop your idea/proposal: in most cases at least 2 of the 4 digital stories (per Living Lab) were based on scenario narratives co-produced in WP3. LL coordinators were given the flexibility to decide on the content of the other two (in some cases this decision was made together with Living Lab members).
2. Research/explore: this is a typical step in creating a story, to make sure the creators know enough of the background to create a narrative (or script). In DESIRA, this was done in the research carried out with the Living Labs.
3. Write the script: in most cases, for at least 2 of the scenarios, the script was based on the narratives produced (better not best, and worse not worst).
4. Storyboard – this is the planning stage that allows creators to map out the elements of a story. One approach is to draw frames out visually, then make notes of what each frame will cover (in terms of audio and visual content).
5. Gather materials (audio, video, images etc.). These are the building blocks of a digital story.

6. Put it all together: Living Lab coordinators used video editing software on a digital device to combine the elements together into a cohesive output.
7. Share: sharing stories with others is a vital step in storytelling. The DESIRA digital stories are shared with others in the Living Lab as part of the process (either in a digital storytelling workshop or later, online).
8. Feedback: Feedback is an important step in digital storytelling, as it is considered a co-productive process. Feedback was encouraged between Living Lab members on the stories created. The Hutton team also provided feedback as to any technical requirements on the draft stories.

WeVideo tutorials:

WeVideo tutorial 1: Media upload
https://vimeo.com/manage/videos/486934346/2bd7590385

WeVideo tutorial 2: Introduction to editing
https://vimeo.com/manage/videos/487138698/fb870b45f4

WeVideo tutorial 3: WeVideo direct audio editing
https://vimeo.com/manage/videos/487139438/df95232673

WeVideo tutorial 4: Audio levels https://vimeo.com/manage/videos/487140166/a089d7a457

WeVideo tutorial 5: Panning and zoom effects
https://vimeo.com/manage/videos/487140822/e5d69f1c1a

WeVideo tutorial 6: Titles, transitions, and finish
https://vimeo.com/manage/videos/487141600/569dd9825a

Figure 2: WeVideo tutorial links.

Technical aspects:

Story creators used either use a PC, laptop, or tablet device. They also used a range of software. In DESIRA we had access to WeVideo[3], which is a popular tool used for digital storytelling. We also had access to a number of training videos, which were created during the H2020 AgriLink project (credit to Scott Herrett and Alba Juarez Bourke, the creators of these training videos) – see Figure 2.

[3] https://www.wevideo.com/

Taking a collaborative approach:

The Hutton team encouraged Living Lab coordinators to make digital stories in as participatory a way as possible with Living Lab members. Some held digital storytelling workshops with their participants and made stories in a fully collaborative way. Others included Living Lab members as speakers in the video or audio aspects of the stories. In many cases, Living Lab coordinators included Living Lab members in the gathering of the audio and visual materials for the stories (this included asking Living Lab members to take photos or video footage of relevant subjects, find old photos from their own archives, or gather royalty-free materials from the web). The finalised stories were shared with Living Lab members for their feedback and input.

3. Outputs

The proposal stated that we would deliver **80 digital stories.** This means that each Living Lab was required to deliver **4 digital stories.** In the end, the project delivered **81 digital stories.**

In most cases, two of the four digital stories(per Living Lab) represented scenario narratives developed in the scenario workshops:

- "Better not best"
- "Worse not worst"

2 additional digital stories were required. The topic of these was flexible, some ideas for content were:

- Living Lab context
- Best and worst scenario narratives
- Individual case study within a Living Lab
- Highlight a particular aspect of findings, theory etc.

Living Lab coordinators were instructed to produce stories with a voiceover audio in the Living Lab's national language, with all non-English language digital stories to also include subtitles in English language. In some cases, stories were made in English only despite this not being the national language, as this was deemed to be the most impactful for that particular story. In one case, a story was mostly visual with captions and music for the audio element. This was deemed most effective for the dramatic aspect of that particular story.

4. The digital stories

This section outlines the digital stories across all partners. In total, 81 stories have been produced. These reflect the very diverse range of rural themes covered in the 21 Living Labs across the DESIRA project.

All stories can be viewed on the DESIRA website: https://desira2020.eu/resources/digital-stories/ and on the DESIRA YouTube channel: https://www.youtube.com/channel/UC1nnt8u8nCoomtGA-iNN7oA

Living Lab	Digital story titles and brief descriptions
Netherlands	**1: The Living Lab of Oosterwold and the Role of Urban Agriculture:** A general introduction to the role of urban agriculture in the Living Lab of Oosterwold, including strengths, weaknesses and the role of the local Food Cooperative.
	2: Dreams and Nightmares regarding Urban Agriculture in Oosterwold This digital story shows a few dreams and nightmares, which were used as food for thought in the scenario discussions. The results were captured by artists, as can be seen in the second half of the video.
	3: Timeline of the Future of Oosterwold 2021-2030 To stimulate playful thinking about the future, several fictitious headlines of the future were developed and presented in the form of an animation. See what the future of Oosterwold might look like in this animation.
	4: The Game of Urban Farming in the Living Lab of Oosterwold. At a public event in the Living Lab of Oosterwold we played the game of urban agriculture. This digital story shows residents who had to think about dilemmas and debated about regulations and the future of urban agriculture in a playful manner.
Finland	**1: Energy Scenario** This digital story illustrates a future scenario: In the next 10 years the profitability of renewable energy technologies will improve, which will bring new livelihoods in rural areas where major decentralized energy production projects will be carried out. The sustainability and efficiency of the energy system will be increased through digital technologies.
	2: Distance Work Scenario This digital story illustrates a future scenario: In the next 10 years teleworking and people's multi-location will expand. More people will choose rural areas as their

	place of residence and the vitality of the rural areas will grow, with the disadvantages caused by long distances minimised by digitalisation.
	3: Digital Communication This digital story introduces Biovalley Finland which is a centre of expertise in sustainable development in Central Ostrobothnia. Biovalley involves 23 contractual partners and the network's internal and external communications are carried out using different digital platforms.
	4: Luova Kampus This digital story introduces the Luova Kampus 2020 project, which is building a new learning, research and development environment for livestock production. The aim is to get as much digital information as possible from the learning environment and its operations, with the collected data being accessed remotely and shared with the project's educational institutions and other cooperation networks.
Germany (Rhineland-Palatinate)	**1: Positive Scenario: A day in the life of Alex** This digital story presents a day in the life of Alex, a 25 years old female employee of the local administration of Betzdorf – a fictional story looking ahead to the year of 2031. The story was prepared together with members of the Living Lab in Rhineland-Palatinate (including administration and volunteers) and contains video material that was shot exclusively for this purpose.
	2: Negative Scenario: A day in the life of Alex This video also presents a day in the life of Alex, a 65 year old unemployed mechanic living in a small village in the municipality of Betzdorf – a fictional piece looking ahead to the year 2031. This story was also prepared together with our Living Lab and produced exclusively by the Living Lab members.
	3: Scientific Reaction Positive Scenario Following the format of YouTube reaction videos, this digital story is based on the fictional digital story of the positive scenario. It shows two researchers of the DESIRA project looking at the digital story, elaborating on its central aspects, giving background information and context knowledge.
	4: Scientific Reaction Negative Scenario Like digital story 3, this video is a reaction to the fictional digital story of the negative scenario, and shows two researchers, this time looking at the second story. Background information on the genesis of the original material, details on the scenario methodology and basic aspects of the negative story are interpreted and explained.
	1: Challenges of fruit production in the Lake Constance region

Germany (Lake Constance)	This digital story presents the challenges of fruit production with family fruit farms, which is typical for the Lake Constance region in South Germany. As part of the Lake Constance Living Lab, we described, analyzed, and discussed the main challenges fruit farmers have to deal with today and in the future.
	2: Digitalisation Supports Fruit Production in Family Farms in 2031 This digital story presents the best but not the best scenario for digitalized fruit production elaborated with stakeholders during the LL workshop and interviews. It outlines a digital future in which fruit production becomes more sustainable by 2031 by the availability and acceptance of digital technologies. It includes automated and intelligent mulching, disease detecting, plant protection and irrigation equipment and quality-based fruit sorting and packing systems.
	3: Digitalisation Challenges Fruit Production in Family Farms in 2031 This digital story presents the worse but not worst scenario for digitalized fruit production elaborated with stakeholders during the LL workshop and interviews. It outlines a digital future in which fruit production is less attractive for family farms by 2031 as farm size and spatial structure prevent the economical use of digital technologies. Digitalisation enhances the structural change of fruit production in the Lake Constance region.
	4: Recommendations for Decision-Makers in Policy This digital story presents political decision-makers recommendations elaborated with stakeholders during the LL workshop and interviews. It outlines the political measures needed to improve fruit production sustainability and meet consumers' demands with digitalized fruit production by 2031 in the Lake Constance region.
Poland	**1: Geodesign in Rural Poland Living Lab Context** This digital story presents the general overview of rural areas in Poland and the region of Central Poland (lodzkie voivodeship); Special attention is given to dynamic changes in land cover of the region as the result of multifunctional rural development and spatial conflicts emerging from this process and due to the lack of systemic approach to spatial planning procedures.
	2: Spatial Conflicts in Rural Areas (1) – the perspective of local communities This digital story addresses current challenges in spatial planning processes as seen by users of rural areas in the lodzkie region. It focuses on social awareness of local development procedures and their experiences in participating spatial planning processes, presenting examples of spatial conflicts from the perspective of different groups of rural users including farmers, newcomers and investors.
	3: Spatial Conflicts in Rural Areas (2) – the perspective of regional and local authorities

	This digital story addresses current challenges in spatial planning processes, refering to standardisation, interoperability, and compatibility of spatial data enabling public participation in planning processes as seen by regional and local stakeholders responsible for spatial development of rural areas in the lodzkie region.
	4: Geodesign – the Future of Digitalisation in Spatial Planning of Rural Areas This story presents an overview of Geodesign and plausible scenarios of applying this approach to spatial development of rural areas in Poland, from the perspective of local communities (the role of digitalisation to increase participation in spatial planning processes) and regional and local authorities (increasing transparency and integrity of spatial planning procedures) referring to “better not best” and “worse not worst” scenarios.
Latvia	**1: A Digital Future for Latvian Beef** This digital story provides an overview of a scenario workshop held in Latvia in which representatives of the beef sector talked about different possible futures and the actions that need to be taken to ensure the long-term prospects of beef cattle farming in Latvia.
	2: Selling Latvian Beef Online This digital story presents a newly established cooperative of beef farmers that is using digital tools to market and sell their products.
	3: Direct Sales and Digital Marketing in Beef Sector This digital story presents the story of the farm development from beef cattle production to beef meat sales in the farm shop and the use of digital marketing tools.
	4: The Cooperative "Green Beef" This digital story presents a cooperative’s consideration of using different digital marketing tools and platforms for promotion of organic beef.
Austria	**1: The ADAM Platform** This digital story presents an overview of the ADAM Platform which is being studied as part of the Austrian Living Lab research on the DESIRA project.
	2: The European Timber Regulation (EUTR) This digital story introduces the viewer to EUTR, and considers the role of digitalisation in monitoring of illegal logging in Austria.
	3: Exploitation This digital story presents a worse not worst scenario of the Austrian Living Lab research on the DESIRA project based in the year 2031.
	4: Sustainability This digital story presents a better not best scenario of the Austrian Living Lab research on the DESIRA project based in the year 2031.
	1: Agricultural Digitalisation: A Case Study.

Hungary	This Digital Story serves as a case study to illiustrate the impact of digitalisation on a specific agriculture company. This story presents the main implemented digital projects and developments, as well as problems of digitalisation in the case of the company.
	2: The Future of Labour and Digitalisation This Digital Story focuses on the importance of the connection between labour and digitalisation. The main question is what role does the spread of digitalisation have in the labour retention capacity of rural areas.
	3: The Agricultural Workforce and Digitalisation This Digital Story focuses on the impact of digitalisation on agricultural workforce. The main question is what digitalisation skills the agricultural workforce would need to take advantage of digitalisation.
	4: Digitalisation of Agriculture: A Case Study from the Northern Great Plain Region This Digital Story presents the state of agricultural digitalisation in Hungary, especially in the Northern Great Plain region. It focuses on the current state of digitalisation in agriculture, the technologies currently in use and policy recommendations.
Switzerland	**1: Small is Beautiful!** This digital story is about a positive scenario for digitalised weed control in organic farming developed with stakeholders during a workshop. It outlines a digital future in which robotisation is accepted by farmers and society overall. Technology companies invest in the development of weeding robots which become more efficient and widely used, leading to a reduced use of pesticide and making small farms more competitive.
	2: Back to Dairy Farming This digital story presents a negative scenario for digitalised weed control in organic farming developed with stakeholders during a workshop. It presents a digital future in which a lack of skilled labour and economic pressure hinder investment in the further development of weeding robots, with the lack of robotisation in the Swiss organic vegetable growing sector resulting in high labour costs and low profitability, which leads farmers to turn away from vegetable production and return to dairy farming.
	3: Digitalised Vegetable Cultivation This digital story presents a positive scenario for digitalised weed control in organic farming developed with stakeholders during a workshop. It outlines a digital future in which a wide availability of skilled labour as well as public pressure to reduce the use of synthetic pesticides will push forward the development of mechanical weeding robots and lead to their wide adoption in conventional and organic vegetable production, leading to pesticide use decreasing and increased sustainability in the sector.
	4: Failure of Digital Farming

	This digital story presents a negative scenario for digitalised weed control in organic farming developed with stakeholders during a workshop. It outlines a digital future in which there is strong policy pressure to reduce the use of pesticides, but the lack of attractiveness of the Agrifood sector for tech workers strongly hinders the development and adoption of digital tools for weed management. Farmers have to revert to traditional mechanical weeding practices.
Greece (Northern Greece)	**1: A farming community struggles to find its place in digital agriculture** This digital story revolves around a future where the transition to digital agriculture is becoming challenging. The development and adoption of new ICTs cannot be met by the local communities and the lack of synergies between the key stakeholders impedes the digital transformation of agriculture.
	2: Digital farming practices change a farming community's agricultural focus This digital story describes a future where the farming communities located in the region build on existing digital developments that take place in the region and plan towards upscaling the level of adoption of digital infrastructures and tools, that will contribute to the improvement of their production and working conditions whilst also fostering a new innovative culture in the agricultural business outlook of the region.
	3: Reformation of Rural Life through Smart-Digital Transition This digital story is based on the decision of a family to relocate from Athens to the rural area of Trikala, planning to utilise the land in their possession and get involved in the agricultural business. The startup of their agricultural activities is facilitated through the deployment of digital tools, highlighting that organised and planned digital interventions can enable new services for local farmers and businesses while in parallel reshaping social interactions.
	4: A not-so-smart implementation of the Digital Transition This digital story revolves around a future in the region of Trikala in which smart evolution and digital interventions have shaped negative synergies for both society and agriculture . The story is narrated through the eyes of a young farmer beginning form the year 2017, when he relocates in the rural region of Trikala planning to start a new cultivation, and facing the first negative impacts of digitalisation when the regional authorities systemise the further adoption of digital solutions for resource management and more specifically on water usage.
Croatia	**1: Digitally Coloured Rural Life** In this digital story, a young couple decides to change their lifestyle and replace the urban environment with a rural one, making a living from produce from their own land, and offering their products on their future farm through tourist and catering services. The source of income through diversification of their farm within

	a good economic and political situation offers them security and promises a high standard.
	2: Elite, Local, Ecological, Digital Tools This digital story describes a a scenario in which the implementation of a new law that allows all EU citizens to buy land in the Republic of Croatia come large companies but also a number of small producers looking for fertile healthy land for agricultural production. Due to the war and other socio-political factors, a large part of the Croatian agricultural land has been uncultivated for over 30 years, where the production of high-quality organic products is possible.
	3: Rural Idyll This digital story describes a a scenario in which in rural areas there is a fast and stable internet connection, as well as institutions such as kindergartens, nursing homes, health facilities and shopping centres that are easily accessible. Rural areas and neglected villages come to life and become small communities with their own characteristics, customs and traditions. Rural areas are revived and re-created and life in rural areas is beautiful and satisfying.
	4: Great Depression This digital story describes a a scenario in which, after earthquakes and pandemics, as well as a large influx of migrants from around the world fleeing even worse situations, young people are looking for a way out by moving to the estates of their ancestors.
Italy (Appenine Region)	**1: An Overview of the Forest-Wood Sector in Italy** This digital story provides an introduction to the general situation of the forest sector and the related fuelwood supply chain in Italy, describing the logic on the LL question and the participation of key actors in the Living Lab.
	2: Living Lab Participants' Point of View This digital story presents the "tale" of our LL in terms of its objectives, participants, activities and scenarios, with description of some of the participant expectations.
	3: An Entrepreneur's Testimony This digital story presents a real already existing case from the Living Lab – a rural entrepreneur that is also a LL participant that describes difficulties with the implementation of digitalisation in forest sector.
	4: A Political Point of View This digital story presents the digital divide in mountain areas and related politics in the voice of one of the main actors in the decision making arena, for Italian mountain areas.
Italy (Tuscany)	**1: Use of Technology in Ordinary Land Management** This digital story, developed by the participants to the Living Lab of the Consorzio Toscana Nord, describes how technology contributed to increase the efficiency of the ordinary land management system in rural areas with mountain landscapes.

	The story is based on two interviews, one with a custodian farmer and one with a worker from the Consorzio Toscana Nord, which underline the key role of digital technologies in their everyday work and how the use of always better applications can improve the efficiency of their work.
	2: Human Intensive This digital story presents the scenario question and the problem that the Living Lab is addressing: the management of the drainage network in rural areas with mountain landscape in order to reduce the hydrogeological risk. The digital story focuses on the first and preferred scenario identified by the local community during the DESIRA Scenario Workshop.
	3: Technology Intensive This digital story presents the scenario question and the problem that the Living Lab is addressing: the management of the drainage network in rural areas with mountain landscape in order to reduce the hydrogeological risk. The digital story focuses on the second and less preferred scenario – that of a technology intensive future.
	4: The impact of digital technology. Some views and opinions from stakeholders in land monitoring and maintenance. Understanding how digital technology can influence the work of monitoring and maintaining the territory to reduce the hydrogeological risk in mountain areas. This is what we did by listening to the opinion of some of the protagonists of this process. Potential positive and negative aspects of the use of digital tools are explained... but this is only the beginning. The work continues and is ongoing!
Spain (Andalucia)	**1: What's Happened in the Andalusian Living Lab?** The digital story introduces the topic of wildfires and the factors that affect their occurrence and severity. Later, it explains who integrates the Andalusian Living Lab and what has been done in the different group sessions held, including the definition of the focal question and the exercises to define future scenarios, with an invitation to reflect on the future of digitalisation in wildfire management.
	2: The role of Digitalisation in Wildfire Management in Andalusia In this digital story Living Lab participants express their views about the role of digitalisation in the management of private forest properties as well as the role of digitalisation in wildfire management (for emergency response, for wildfire damage reduction and for post-fire recovery).
	3: The Future We Expect This digital story uses icons and infographics to present how we have imagined the situation for Andalusian forests in 2031. The scenario foresees a context of moderate climate change which increases the forests vulnerability to wildfires – however, a combination of technological progress and increased awareness

	about the importance of forests leads to the revitalisation of rural areas and to reduce the impact of wildfires significantly.
	4: Towards an Inclusive Digitalisation of Rural Areas Extracted from a book chapter written by Maria del Mar Delgado Serrano for a publication about future opportunities and challenges of Spanish rural areas, this story presents how these areas are being influenced by digitalisation. We also introduce what DESIRA is proposing in relation to an inclusive digitalisation of rural areas.
Spain (Aragon)	**1: A Glimpse of Maestrazgo and Gúdar-Javalambre** Ths digital story is a presentation of the Living Lab context in terms of location, population and main general characteristics. It focuses on the definition of demographic desert and describes the geostrategic, climate and general characteristics of the area.
	2: Maestrazgo and Gúdar-Javalambre Living Lab. What Have We Done So Far? This digital story summarises the work performed so far: It presents the focal question and the Needs, Expectations and Impacts workshop organised, as well as the scenario workshop.
	3: Europe's Sky We worked with our stakeholders around one scenario question: How digitalisation and the 2030 agenda will change Maestrazgo and Gúdar-Javalambre by 2031? This digital story presents one of the two most plausible scenarios, where the positive impacts of digitalisation have in fact improved the future of the LL in 2031.
	4: Windmill Fields This digital story represents a plausible future scenario in which the potential positive impacts of digitalisation have not improved the future of the LL by 2031.
	5: Future Challenges of Digitisation in the Territory In this digital story we talked to General Director of the Aragón's Government about how he sees the next decade in terms of digitalisation. He talks about the opportunities digitalisation can bring to the territory but also about the transition that should be made towards digitalisation.
France (New Aquitaine)	**1 : Environmentally Friendly French Wines** This digital story describes a a scenario in which French viticulture is on a new path. During the last decade, digitalisation has improved the way wine is produced in France.
	2: The Digital Divide

	This digital story describes a a scenario in which there is now a clear digital divide in French viticulture. On the one hand, there is the "digitalised viticulture". On the other hand, there is the "low tech viticulture".
	3: Technological and Carbon Neutral French Wines This digital story describes a a scenario in which digitalisation has totally transformed the way wine is produced in France. French wines are now all carbon neutral.
	4: The End of an Era This digital story describes a scenario in which low digitalisation has had a very negative impact on the French wine industry. Being unable to make good use of digital technologies, many winegrowers didn't manage to keep the quality that has made French wines renowned all over the world for decades.
France (Burgundy)	**1: On the Right Path** In this future scenario, France hasn't yet reached the objectives set by the Farm to fork strategy but is on the right path to reach them in 2 or 3 years. It has already managed to reduce the use of pesticides by at least 40%. But there are still some bumps in the road.
	2: Target Missed In this future scenario, France is still far from the objectives set by the Farm to fork strategy regarding pesticides use and there is still a large margin of progress.
	3: Zero Chemical Inputs In this digital story, the future scenario is that France has met the objectives set by the Farm to fork strategy in terms of pesticides use. The proper use of digital technologies introduced a new era for precision agriculture.
	4: Zero Digital Inputs In this future scenario, France has totally failed to meet the objectives set by the Farm to fork strategy and the poor use of digital by the French agricultural sector is to blame.
Scotland	**1: Gross Domestic Happiness** This digital story presents the better not best scenario developed with the Living Lab. It depicts a time 10 years in the future when success is measured not on economic outputs but on the wellbeing of local communities, supported by digital tools which encourage community cohesion and bring equal opportunities to all.
	2: Digital Clearances

	This digital story presents the worse not worst scenario developed with the Living Lab. It depicts a time 10 years in the future when digitalisation has led to a declining ageing local community dominated by second home owners, which lacks services and adequate digital infrastructure, and in which young people are unable to thrive.
	3: Digitalisation during Covid-19 This digital story presents the findings from our Living Lab in relation to the role of digital tools and platforms during the Covid-19 pandemic, including how digital tools have been adopted rapidly out of necessity, how they have supported ongoing community action and how they also promote unsustainable tourism practices.
	4: Scottish crofting and the role of digitalisation This digital story introduces the viewer to the Scottish Living Lab – a remote rural crofting community on the North-West Coast of Scotland. It introduces the work carried out in the first workshop with a first look at how digitalisation has impacted the community to date.
Belgium	**1: Potential for Monitoring Emissions** This is an introduction to the Living Lab following three themes: first we explain the impact of ammonia emissions in Flanders, then we orient ourselves to the future and the potential for sensor technology in measuring emissions. We end this video explaining that these developments will create socio-economic changes and that we study this and explain more about this in the next three videos.
	2: Getting Out of Agricultural Crises In this digital story we explore the impact of technology using two scenarios. We then show that a crisis can kickstart positive change and that this can lead to a sustainable transformation. Digital technologies (and ammonia sensor technologies) form an element of this but are not the key change.
	3: Risks of Agricultural Data We start this story in a similar way to Story 2, explaining the scenario-process in a few sentences. Then we describe how, in this future scenario, a crisis in agriculture is not solved and that digital technologies only exacerbate existing issues. We explore why this is the case and end with some key insights in what needs to change.
	4: Data Sharing in Agriculture This is a vlog-style digital story in which we explore an element that came up throughout the Living Lab discussions. This is data-sharing and the issue of who

	owns what data. We explain this topic and describe actions that are possible in order to improve the position of the farmer in data-ownership.
Ireland	**1: High energy (from humans), low energy (from fuel)** This digital story presents a future scenario in which the Cloughjordan Ecovillage community mitigates the worst impacts of a global energy crisis that has led to fuel shortages and the breakdown of supply chains.
	2: Older and wiser: less active and viable This digital story presents a future scenario in which an ageing rural population is unable to keep up to date with technological advancements, while facing challenges caused by the climate crisis and a drop in global production.
	3: Cloughjordan Food Hub This digital story describes how a local community established an online farmers market through a digital platform called the Open Food Network, to directly connect producers and consumers, and strengthen local supply chains.
	4: WeCreate Enterprise Centre This digital story describes the innovative activities at a community led enterprise centre where there's a focus on meaningful livelihoods that directly respond to the climate crisis and other challenges of our times.

5. Reflections on the process

The task of producing 4 x stories with each Living Lab – a total of 80 digital stories – was quite an ambitious one. As work package leaders, the James Hutton Institute team had planned to run a number of in-person training sessions (during planned consortium meetings) to ensure that all Living Lab coordinators and their teams were fully trained and capable of carrying out the digital storytelling activities with their wider Living Labs. We then anticipated that Living Labs would carry out digital storytelling workshops with the relevant Living Lab participants, as indicated in the project proposal.

The Covid-19 pandemic meant that these plans had to change. Firstly, it was impossible to carry out in-person training with Living Lab coordinators and teams, because of restrictions to travel and meeting in groups. The timing of these restrictions unfortunately crossed over with the planned training activities for the digital storytelling work. Training instead had to be offered during online sessions. Although the turnout for these sessions was good, the online aspect did not allow for the hands-on element of training (particularly the demonstration of and practice runs of making a digital story, using different types of hardware and software according to the preferences of the Living Lab teams). This entailed a steep learning curve for Living Lab teams who had to develop new skills, produce four videos according to the rules and standards set by the project, and deliver these within

a set timescale (with online training and available resources but without the experience of hands-on training). On a positive note, individuals withing Living Lab teams developed new skills which can be taken forward into other projects. Innovative approaches were taken in many cases, such as animation and future scenarios acted out on screen. The 80 digital stories produced in DESIRA are diverse and highly creative.

Furthermore, due to Covid-19, most Living Lab teams were unable to run face-to-face workshops with their Living Lab participants, meaning that the participatory element was not as strong as had been anticipated. Nonetheless, the Living Lab teams found creative ways of involving their Living Lab participants in the storytelling process. For example, some videos feature interviews with, or voiceovers by the Living Lab participants. What's more, the stories themselves represent scenarios developed in participatory workshops with the Living Lab participants.

Living Lab teams were keen to produce their digital stories to as high a standard as possible, in order to "give something back" to their Living Lab participants (who might use these outputs to tell their stories and to make the case for development support). Some partners therefore put more time and effort into the creation of digital stories than had been planned, with the aim to make them more 'professional' and rewarding for Living Lab participants. As a result, digital stories are quite varied in style, with some outputs having a more low-tech and "home-made" feel (as is typical for participatory digital stories), and others having a more polished high-production feel.

Given our learnings throughout this process, and the challenges that were faced due to an unforeseen global event, we would recommend that future projects set less ambitious goals for each of their consortium partners in relation to digital stories. In DESIRA each Living Lab was tasked with producing 4 digital stories. In hindsight, even without the challenges of Covid-19, this would have been a major undertaking. Focusing on the participatory production of just one (or perhaps a maximum of two) digital stories per partner/Living Lab might be more achievable given the uncertainty of interactions and resources in the years ahead.