Réseau wallon
de Développement Rural

EUROPEAN SEMINAR :
FOSTERING INNOVATION

Meet the challenges of rurality

MAY 2018

THE ACTS

Avec le soutien de la Wallonie

European Agricultural Fund for Rural Development:
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Contents

INTRODUCTION

This document contains the reports on the presentations and the discussions which took place during the seminar.

It is structured according to the seminar itself and is divided into 3 parts:

- Part I – Report on the presentations and the discussions in the plenary session, in the morning, May 17th
- Part II – Report on the presentations, the discussions in workshops and the recommendations
- Part III – Report on the plenary session regarding the restitution of the recommendations discussed in the workshops

With regards to part II, the report is the same for all 16 workshops and is divided into the following 3 points:

1. Brief summary of the presentations;
2. Summary of the discussions;
3. Three key recommendations.

Remember that the discussions in the workshops were questions-issues that sub-groups of 5-6 participants had to answer. Then, the participants were asked to chose 3 key recommendations to present in the plenary session.

Please note, the seminar's programme is annexed to this document.

All the presentations are available online, here: www.reseau-pwdr.be/stimuler-innovation. These are part of this document.

PART I
REPORT ON THE PRESENTATIONS AND THE DISCUSSIONS IN THE PLENARY SESSION, IN THE MORNING, MAY 17TH

PART I – REPORT ON THE PRESENTATIONS AND THE DISCUSSIONS IN THE PLENARY SESSION, IN THE MORNING, MAY 17TH

GLOBAL CHALLENGES AND KEY PERSPECTIVES FOR INNOVATION, DR. IR. JOSÉ VOGELEZANG, SCIENTIFIC DIRECTOR AND TOP MANAGER IN THE HORTICULTURE & STARTING MATERIALS SECTOR IN WAGENINGEN PLANT RESEARCH, U&R WAGENINGEN

The challenge worldwide is feeding more than 9 billion people in a sustainable, safe and healthy way. While, we are also faced with malnutrition and obesity and the fact we will have to feed 2 billion more people. At the same time, we are faced with energy, water and nutrient shortages as well as soil erosion. That's why we need a system change to implement solutions which strengthen:

- Ecosystems' resilience, to have ecosystems that are more robust based on the biodiversity;
- Efficiency with regards to resources and the circularity at a local, regional and intercontinental level;
- The transition from fossil fuels to renewable energies;
- The transition from the transport system to ships and trains. We would void airplanes and trucks;
- An organic economy is very important based on quality ingredients/components;
- A living environment which is greener for our wellbeing, environment and economy.

With regard to resilience, agricultural systems have become vulnerable and unstable as a result of various climate phenomenons. A transition is necessary in order to make agricultural systems more robust based on biodiversity and resilience. These systems should be able to face up to external dangers. For this to happen, we need to understand how plants and animals' resilience works.

A productive ecosystem's resilience is based on 3 pillars:

- Genetic diversity (soils, plants, animals, at a micro level);
- Cultural diversity;
- Farming diversity.

Why should we mix crops? 10 years of research in Asia and Africa where mixed crops are normal, has shown that this crop system allows increased return on investment – around 20% -, greater resistance to illness and enriched soil with more organic material. Here, in Europe, we should find other mechanisation systems so that these mixed crops can work. Another important aspect is crop resistance itself and its ability to create more resistant genes. A test on resistant genes to mildew in potatoes allows us to use 75% less fungicides.

Efficiency in terms of resources since agriculture uses up to 70% of water consumed, by pumping water from rivers, streams,... For this purpose, we can use precision techniques in agriculture and horticulture with new models. Production systems which are possible in the open fields for different kinds of crops (vegetables, fruits, big crops) which means that you can reduce the amount of space used and the leaks in the soil. In The Netherlands, research projects on different kinds of crops have been going on for 10 years now.

Energy represent 25% of production costs (lighting, cooling systems, heating, transport, etc.). Besides, Europe needs an effective economy in carbon. It needs lighter materials, new lighting technology, humidification, etc. With regards to transport, 22% of journeys are linked to agricultural products. The transport needs to be revolutionized, which includes long-distance freight done by boat or by truck. Some products are transported effectively (keeping them fresh) thanks to special containers.

With regards to the organic economy, this needs to be developed because plants contain high-quality ingredients (30,000 ingredients per plant). These elements provide solutions for protecting plants in a way that is respectful to the environment. Coming from food and non-food crops. Research is necessary to use these different extracts to their full potential => new opportunities for farms.

In 2060, more than 80% of citizens will live in urban areas: yet a green environment offers many advantages. In fact, green cities can help improve the environment, biodiversity, decrease sound and light pollution and use less water... Green cities are essential for the future.
This evolution will be very important in future years.

There is overwhelming scientific evidence showing that green cities contribute to people's wellbeing by speeding up the healing process, by facilitating education in schools, by promoting the revalidation of human beings, by reducing stress... What we need is a greater understanding of these effects when working on prevention.

INNOVATION DYNAMICS: A CHALLENGE FOR RURAL TERRITORIES, PROF. BERNARD PECQUEUR, UNIVERSITY OF GRENOBLE

It is important to talk about innovation in a period of change for agriculture, rural areas and ways of eating, especially in an urban environment.

In terms of innovation, there are, of course, technological variables but there are also organisational variables which play a role in innovation.

Some key ideas on the challenges we expect to face:
In 1950, 70% of the population lived in rural areas. Around 2000, both curves crossed (50/50). In 2050, 70% of the world will be urban. We cannot resolve the food challenge simply by increasing returns and productivity. Even if this was the main concept over the last few decades (green revolution, etc.). In fact, technological innovation has triggered a competition between the effectiveness and the efficiency of the system, Basically, you could say that the agricultural production has been effective (we achieve goals) but with an increasing inefficiency (costs which needed to be paid to achieve goals).

The system generates increasing non-allocated costs, with discounts (operating market, but not prices which do not reflect costs). For example: agriculture in Brittany produces killer algae on beaches. It is communities and tourists that pay to clean it up. This situation is characterized by an increase in inefficient costs especially when it comes to public health (obesity, urban diabetes, etc.), with staggered consequences.

Therefore, we are faced with a system with solutions (productivity) but which faces inefficiency obstacles, which eventually challenge the system and can block it. In view of this situation, it will be tempting to innovate with alternatives. But there are no complete solutions: the need to feed more and more people (productivity) remains.

How can we combine productivity with food quality, which may seem contradictory and needs to be balanced.

The answer lies in the need to offset innovation. Technological innovation continues but it is no longer the only component. It needs to adapt to social innovation.
If you are in a region where it works, there is no need for alternatives. But what if you are in rural areas that cannot keep up with the competition, what do you do then?

In these regions, the developer often says: "we can't do much". Nevertheless, there is potential, there are other ways which take into account the special features and characteristics of a region.

There are numerous examples of places where the stakeholders become aware of their issues and the extent to which solutions need to be found: they construct a unique space which is the space for the problem and the space for the solution. This is when it does not simply come down to a breakdown of the space: this is how we identify a problem and how we are going to resolve it.

For example, Atelier Paysan builds on evidence showing that only 60% of agricultural equipment bought is used because it is not always the right standard. In response to this, Atelier Paysan provides technological means for producing machines that meet the farmers requirements through a collective solution and raising awareness about specific factors regarding standards. You can find all the resources here that you cannot find anywhere else.

The process is always done in two stages:
The first stage is essential and is made up of meetings and establishing the common problem. And yet, this stage is often rushed. The way in which the "diagnosis of the territory" is carried out needs to be brought into question: the use of a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) does not allow for, for example, unexpected prospectives. Yet, especially in a rural area, the aim is to imagine unexpected prospectives and solutions to problems which are also unexpected!

On this topic, the Massif de l'Oisans (Alps, France) example is interesting: faced with economic difficulties in mountain and medium mountain agriculture, a stagnating source of income from white gold, the region the territory has begun a thought and came up with an idea where we least expected it: Alpes d'Huez, a stage of the Tour de France (3rd sport event, 850 million TV spectators seeing the countryside and its characteristics). The development of a "CyclingLab" which turned the valley into the "bicycle valley" where high-tech cycling equipment for bicycles can be produced as well as tourism adapted to a unique resource in the valley: the slopes.

This first step before developing a project is important: Who are we? What is the region's calling and what is different from others?

Other examples: the co-operative "Fermes de Figeac" (cf. Dominique Olivier) went through a similar process. Some sheep producers developed new diversification paths through a process that took two years and numerous meetings: they took the time to discover/identify the region's resources which we never would have thought of.

Social innovation implies changes, in particular, in relation with elected people. All over Europe, there is a kind of priority of the elected, who will collect projects under their management and with whom we will try and develop these. Nevertheless it is often a project cut-off of the first order: elected people have an ability to block projects much greater than their capacity to support it. If they want to block it, it's immediate, if they want to support it, it's more complicated. The relationship with civil society needs to change, because it's time to realise that public policies are in a deep crisis (loss of meaning).

In the past, elected people have had an overwhelming responsibility to create employment and to think afterwards. Yet creating employment is a consequence and not a reason for public policies. This misunderstanding has distorted public policies and provoked competition amongst them.
The market is therefore essential but it does not resolve all problems and likewise public policies. It is a relationship that needs to be reinvented with civil society through new alliances.
This alchemy is ongoing, in addition to the technological innovation. It is a question of rediscovering the balance between different powers. It is not easy, for example, for someone elected to admit that the voluntary

sector could do what they do... Nevertheless, competencies are becoming more complex, this is an obstacle that would need to be overcome. The civil society groups should also be able to organise themselves in this way.

A final example of innovation necessary in the Ardeche: How do you make 480,000 meals over the course of 4 months for tourists that are drawn to the prehistoric paintings?

There are two solutions possible, for which an arbitration is necessary: either asking big societies like "Sodexho" to organise the supplies through delegation rather than valuing local products and falling back on local development or the self-organisation of farmers, to meet this unexpected request. In this second case, political stakeholders play a different role, in a collective system, in order to create an unexpected offer in the face of a new unexpected request. In this case, innovation will mainly be organisational. There needs to be a compromise in two domains: the productivity domain (which we will always need) and the "specificity" domain of the territorial self-organisation which determines which resources are theirs.

Contrary to what you may think, there is no opposition between these two domains, but rather the necessity to find a new balance, like for example, in Bio-valee (Val de Drome) where where olive ("Price maker") and apricots ("Price taker") productions co-exist within the same farm because these productions depends on international markets, two different universes.

EIP INTERACTIVE INNOVATION MODEL, SERGIU DIDICESCU, EIP-AGRI SERVICE POINT

EIP-AGRI is the European Partnership for Innovation in agriculture, launched in 2012 by the European Union. There are many EIP in Europe, EIP-Agri is linked to DG agriculture and rural development. There are also partnerships for water, raw materials, ageing, ...

The aim is to encourage innovation and speed it up through linking policies. In reality, working on innovation and agriculture within Europe is a bit like a big job in a big organisation: sometimes some departments ignore what is happening in other departments. In this case, EIP-AGRI tries to link these policies, to make sure that the policies are more aligned, so that they are more understandable for the final users.

EIP uses a bottom-up approach and is based on an open innovation concept, an interactive innovation model which is applied within the Operational Groups (see below), and in the projects with multi-stakeholders H2020.

In all European, national and regional politics, dedicated to innovation in rural areas, EIP-AGRI brings the stakeholders together: the network collects practices, connects regional stakeholders and organises exchanges of good practices, partnerships.

It is a three-sided approach: link stakeholders, stimulate co-creation and do some networking.

THE EIP-AGRI OPERATIONAL GROUPS

The Operational Groups (OG) are groups based on precise projects with a relatively short lifetime: 1, 2 or 3 years, ... This short duration is due to the fact that, right from the start, a precise final objective is defined. The goal is to be very operational, to not be purely theory and to work on concrete challenges. The goal is also to use different kinds of knowledge as best as possible: practices, technologies, sciences,... and to do this in an interactive way. In these OGs there are key stakeholders, like: farmers, researchers, NGOs, industries,... which are in a position that allows them to reach the project's objectives and to share them on a large scale.

27 member states and 98 Rural Development Programmes (RDP) have Operational Groups (a member state can have more than one RDP). (There are 3200 OG programmed from now through till the the end of the programming period). Some of the topics covered are: food supply chain, climate, biomass, forests, energy,...

The 5 most popular domains are:

- Plant protection
- Precision farming
- Agri-environment
- New supply chains
- Organic farming

EIP-AGRI plays an important role when it comes to facilitate an improved collaboration between projects, thanks to a supportive environment and thanks to the financing of the project preparations. The EIP also organises numerous events to connect OGs in Europe in order to create a real network.

H2020 PROGRAMME AND EIP

The two most important principles in the Horizon 2020 programmes are:

- focusing on the beneficiaries' problems/opportunities and developing innovative solutions which meet real needs. The final users like farmers, forestry workers or companies will be more motivated to use the projects results, because they were involved in the production and so feel more like «co-owners»;
- connecting the key stakeholders with the complementary knowledge, in order to solve problems and address opportunities, for example: farmers, advisors, researchers, suppliers, processors, agencies and/or other stakeholders, which co-operate and co-innovate in the project.

THEMATIC NETWORKS WITHIN HORIZON 2020

In the H2020 thematic networks, the partners need to summarize, share and present existing scientific knowledge and good practices that are not as well-known (and applied) by practitioners. These thematic networks target specific themes and make sure that the knowledge generated is then used by professionals. The approach remains bottom-up and we focus on the most urgent needs.

There is still 500 million Euros worth to be invested in the rest of the programming period (3 years) for 100 multi-stakeholder and thematic network projects.

FOCUS GROUPS EIP

Focus Groups are groups made up of maximum 20 experts, who come from all over Europe, in which their role is to handle the important themes for agriculture and forests. It usually lasts one year, with 2 meetings and the creation of a final report, which gathers ideas that wan be put into action by the OGs. For example, the new innovation projects, research ideas or identifying certain gaps.

EIP-AGRI EVALUATION

- The EIP is a unique financing for innovative opportunities, which are equally appreciated, for the bottom-up approach and the real needs/opportunities coverage
- This is demonstrated in the vast majority of the Member States that have programmed this new measure in their RDP
- The flexibility of the EIP allows them to adapt to different circumstances and to innovation infrastructures, by tackling the gap between research and practice.

Recommendations :

- Avoid weakening the EIP's practical bottom-up approach
- Boost advance payments and the innovation support services
- Create more networks, multiplications and links that generate an European added value by connecting and expanding the AKIS of the EU.

INNOVATION ROAD: METHOD AND RESULTS, MARC MORMONT, SCIENTIFIC COUNCIL OF THE RWDR

The "innovation road" is a mechanism introduced by the Walloon Rural Development Network (*Réseau Wallon de Développement Rural*, RwDR) for handling «innovation» in agriculture.

Defined by the RwDR Permanent Commission, as part of the «innovation broker» role of the network, the innovation road is a six-day series of meetings between farmers, public officers, private or associative, researchers, trainers/teachers that take part within their domain to support farmers regarding knowledge, technical information and advice.
The idea of the "Innovation Road" was fundamentally to encourage exchanges between partners who do not always know each other well and to reflect on the question of innovations in the agricultural world today.
The method consisted in organising six days of studies in a series of farms identified as innovative: each one of them, like the farmer's path, were presented by the host farmer and many other farmers with similar concerns were asked to submit their ideas, their projects, their achievements in relation to the theme of the day. Workshops (agri-cafes) followed in order to develop these innovations, to confront them and bring out other initiatives..

Innovation, especially technological changes, is a constant in agricultural history, since neolithic times. Nevertheless, in the last fifty years (since the Sixties) agricultural innovation has been extensively:

- oriented in a perspective that must be called productivist (in the sense that producing more was an not discussed imperative)
- managed by state policies, public research institutions in the field of common agricultural policy
- however, in the past two decades, it is driven increasingly by private companies upstream agricultural production: agro-chemical, seed companies, machine industries and driven by demands from the industrial and commercial companies to standardise products...

Without judging this evolution, it needs to be said that it has led to more and more agricultural producers having a more dependant relationship with regards to markets both upstream markets and downstream markets of agro-food systems. This evolution tends to concentrate innovation in these industrial sectors.

The bet of the innovation road has been two-sided:

- on the one hand, relying on a process (even if it is diffuse) involving numerous farmers looking for more autonomy by considering this demand as promising, possibly constituting it as a lever for innovation.
- on the other hand to turn resolutely towards the farmers themselves by highlighting the fact that they were, at least some of them, real innovators.

The quest for autonomy

Requesting independence of course has an "economic" aspect: it's the result of a legitimate accountant's calculation. Autonomy consists in producing what could be bought on the market yourself, which could save money and bring security. This is how the hosts' stories often started... but it often takes the farmers even further.

Innovative farmers

Numerous farmers continued to innovate even in the context mentioned above. However, we have stopped paying attention to what is happening in farms, and so we often ignore the farmer's capacity for innovation.

This innovation road thus consisted in the organisation of five days which all included:

- a detailed visit to an "innovative" farm
- discussion workshops between farmer and people in the field of agriculture, research, education in a broad sense, public stakeholder, etc.

Therefore the idea was to first look at how a farmer took gaining autonomy into account in either one or another domain, which changes took place, which path did they follow...

Then different kinds of animation process were proposed to encourage these discussions, in order to sort out some lessons, to imagine other projects to find other possible innovations in respect to autonomy. It also consisted in making the farmer's regular partners think about their role and their action in this process. The sixth day was more exclusively dedicated to this work on these paths for change for the future.

The following farms were successively visited:

- a farm which has been classified as a conventional farm for fifteen years producing for the industry (cereals, potatoes, beets) yet producing for local markets classified as an organic farm through direct marketing, all the while with a continuing milk production.
- A farm orientated around milk production and cheese-making while ensuring the protected zones are maintained (project Life, zones Natura 2000) via a flock of a rustic breed of sheep
- a farm involved in a network focused on soil conservation through different working techniques and soil management but also specific productions
- a farm producing energy (biomethanisation) with horticulture and sales at the farm
- finally a farm that has adopted / adapted a milking robot while still practicing grazing.

Some lessons were learnt from these meetings, they could inspire a new way of bringing innovation into agriculture.

2. The farms' trajectories

It is very important that the following observation is made: we arrive in these farms at a certain moment but what is happening now is the result of a long process, and it is certainly not the end, since, each in their own way, all consider prolonging their innovations with other changes. This is important because if the innovator focused on only one aspect, one technique, one crop or farming practice at a time, it would not be defined by this punctual innovation that they're experiencing. Innovation is not the invention of this or that, it is the process of trial and error, experimenting, adjustments which progressively transform the farm and the system. So we need to stop focusing on the path already walked and path to be walked. That is why each farmer's ability to adapt needs to be the main focus. This is what we are seeing in these innovations, it's the reconfiguration of farms that are gradually adopting new farming systems..

3. Systems

These new agricultural systems are characterised by new technologies (for example: energy production, drying hay in barns, milking robots, etc.) but also by the development of new products (processing at the farm...) new services (management of natural areas, integration for disabled people, social farming, ...) and new sales channels. One of the consequences of this is the creation of jobs because these activities require work.

4. Adoption / adaptation

The different innovations seen were characterised by the farmers ability to not only adopt techniques bur also to adapt them to their situation and to their project. The most striking example was the farmer's adoption of a milking robot. For him it meant, more than anything, gaining more freedom, more autonomy in his work (especially for taking part in local life) but also more autonomy for his animals. However the robot was not perfectly suitable for what he wanted and so he modified it after a series of trial and errors, to the extent that the company modified their model...

5. Alone and together

Innovation is paradoxical because it is at the same time an individual who dares, who takes a risk, who is sometimes mocked or decried by his colleagues, and something collective because innovative farmers are not only: they rely on very different collectives in their composition and their form. These collectives can be made up of pairs, other farmers with whom they have shared experiences, interns who sometimes come from abroad, specialists like nutritionists, agricultural equipment technicians, local associations... but also consumers, neighbours and of course all the family support.

6. The innovation process

The innovation processes imply three conditions:

- there needs to be, between the innovation partners, a space for shared questions and concerns
- there needs to be various places for experimentation, in other words, farms where they test the solutions or do the trials
- then there needs to be a space for sharing experiences.

- In the cases observed throughout the "Innovation Road" these questions and concerns of course refer to a search for autonomy (more than profitability) which means that often the desire is to have an interesting profession, a job that is more than just routine and performance and a job which gives you a feeling of purpose for yourself and for others. The quality of work aspect seems to be a very important aspect in the search for autonomy.
- For the experiments that take place in farms here or elsewhere, they all have their own priorities, their own land, their climate and everyone is experimenting in their own way.
- The exchanges are made between peers or with scientific, technical and other partners,

- The focal point is often a technique that is adopted and adapted to certain situations and to local conditions.

These three elements form the basis for innovation.

Results

One of the objectives of the Innovation Road was to spark discussions that can generate innovative collectives and several emerged as "operational groups". They address topics like: food and protein independence in poultry production, inter-cropping grazing by sheep, drying hay in a barn and hay milk.

At the end of the process, the "Innovation Road" showed that the ability to innovate is ever-present in the world of agriculture and that the search for autonomy is a strong dynamic and it encourages innovation.

The examples studied and the discussions organised also provide important indicators on how support and management should reorganise themselves in order to support this dynamic, in particular;

- opening up to concerns and values in the agricultural profession.
- being able to combine different skills to handle their concerns in the context of projects that arise from farmers.
- by focusing on the experimentation and the discussions among farmers and their partners.

This "Innovation Road" has, in any case, been an opportunity to meet up and get to know stakeholders from different backgrounds, directly concerned with the future of agriculture. It is without a doubt, the first step towards action.

INNOVATION BROKERAGE : H2020 AGRISPIN PROJECT RESULTS, MARK GIBSON

Mark Gibson contributed to the Irish AKIS (Agricultural Knowledge Innovation Systems) which was developed to promote innovation in the agro-food sector. This is why he took part in the European H2020 Agrispin project (lasted 18 months with 15 partners in 12 countries).

There are multiple Agrispin objectives:

- Identify the best practices in the innovation process and
- Develop recommendations and tools.

Among the stages,

1. Define what innovation is
    - ◊ What are the stages?
    - ◊ What are the driving forces for launching innovation, the places that favour it, the different support services that exist and their roles, the obstacles identified.

2. The distinction between different kinds of innovation
    - ◊ Technological innovation.
    - ◊ Innovation that comes from collaboration,
    - ◊ The kind that relies on pooling at a regional level,
    - ◊ And the kind that is a response to a crisis or to regulatory barriers.

3. Visit to nearly all of the partner countries with interesting experiences and analysis: 50 cases were diagnosed. The project's website presents interesting documents on the case studies: videos, quantitative and qualitative reports. They have been identified as the "pearls" (the positive factors, the things that need to be improved), the "puzzles" (the questions left unanswered). Among these cases, Mark Gibson highlights the high level experiences of "Innovatiesteunpunt" in Flanders (www.innovatiesteunpunt.be).

4. Description of the innovation process
   The analysis lead to a description of the innovation process in a spiral that indicates that the approach relies on trial and error and that taking a step back is sometimes necessary. The spiral goes through a series of phases: the idea (e.g. from brainstorming), and inspiration (thanks to "hot" networks i.e. active, pooling interest points, sharing objectives), planning (creating an experimentation location), the development (establishing a pilot), the implementation (by adapting the pilot to different contexts), the promotion (sharing experiences) and finally anchoring (developing the conditions for a large adoption). This last point is often neglected even though it is crucial in order to make a real impact through innovation. It can be achieved by integrating it into policies, plan of actions...

5. Results
   The project developed a methodological guide to help analyse the study cases and propose lots of useful tools to evaluate the innovation.

6. Recommendations
   1. The necessary diversity of stakeholders and connections to be formed between stakeholders.
   2. The interaction amongst the various stakeholders is done through tools, bridges between key stakeholders. This is the role of the "connectors" or facilitators. This requires skills that are not innate but can be acquired. Moreover, Agrispin developed a training module on the subject. More specifically, it was Eelke Wielinga (eelke.wielinga(at)netwerkenco.nl) who produced the tools for the brokers in innovation.

SYSTEM INNOVATION: EXAMPLES IMPLEMENTED IN THE NETHERLANDS, DR. IR. JOSÉ VOGELEZANG

In 2010, the government launched a programme to boost agricultural innovation (crops, farming,...) including a multi-stakeholder approach. In light of its success, visitors from Brussels including Inge Van Oost from EIP-Agri who was inspired to start up some EIP-Agri Operational Groups. The methodology developed allows them to have an outlook and a schedule (i.e. a programme):

1. Some objectives on the horizon
2. Co-innovation and networks
3. Multi-functional agriculture

On the diagram (see presentation) we find a way of working according to 2 flows:

1. From the future towards practice: an outlook developed in an interactive way with the stakeholders: the outlook, is the basis of the new innovation concept over a longer horizon:
2. From practice towards the future: work with pioneers, businessmen supported in their ambitions in order to implement new sustainable farming practices. On one hand, this approach is aligned with the EIP-Agri approach. Progressively we built a schedule shared with different networks and Operational Groups (OG). On the other hand, we have some farmers launching high-risk innovations who are faced with difficulties and obstacles at a legal, social, technological and also organisational level. These difficulties and obstacles have allowed to co-construct a work schedule and programme.

First example regarding a methodology applies in the innovation system: a very advanced methodology in which the goal is to create a long term outlook for the innovation system... The idea is to think radically about the system, which includes more than just the farm, it is also the supply chain, other stakeholders (NGO, government,...). It consists in the "reflexive, interactive design" method based on the following 3 principles:

1. Analysing the system and the stakeholders;
2. New structured design based on the new principles. For example, manure is not a waste product it

is a source of profit;
3. Try to create opportunities

Application in the dairy sector

1. "What would a business look like if we apply these principles?"
    - ◊ New project plans based on new rules.
    - ◊ New farming system based on new principles (e.g. new labelling, new brands, alliances with the sellers)
    - ◊ Support for new ideas.
2. "Farming for the future" : support for an innovative protection of crops based on the hypothesis that these new methods will reinforce the chances of adoption.

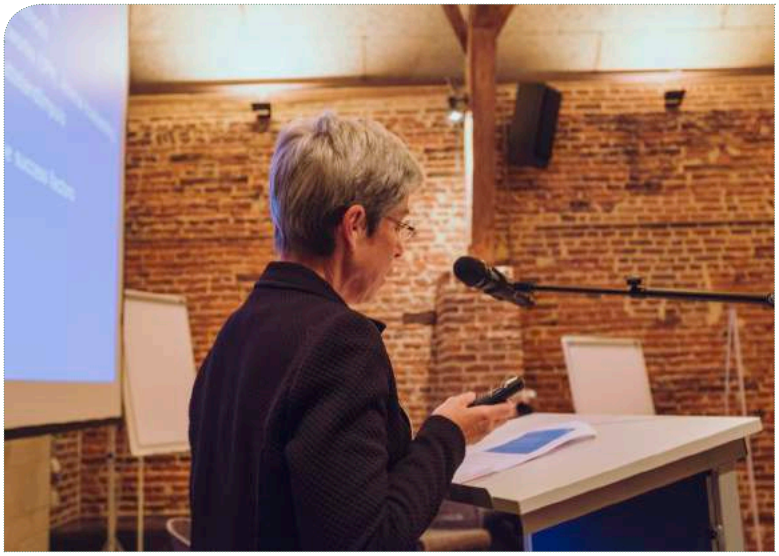
Network of 34 groups based on the excellence principle of science and make it possible to spread the new good practices.

Second period - Managing the stakeholders

Work with groups of stakeholders radiating around the farms given their influence on the producers state of mind. This work on the management of stakeholders (pesticide producers, water organisation, suppliers, ...) is important because they directly/indirectly determine the sustainable routines. It is also important that the messages diffused by stakeholders are coherent. Therefore a lot of effort has been made to involve these different stakeholders. There is an important communication role.

200 contacts were encouraged to launch concrete collaboration.

Method used in other projects in which we want to make changes.



Other examples

Launching call for tenders for the farmer's networks in order to stimulate practical innovation.

Applying guiding principles to involve more people

The option for financing is available for experts and the implementation of necessary infrastructures

125 networks maintained over 4 years. Due to its success, the experience has been prolonged.

Multi-functional agriculture

1. The idea is to address the pioneer farmers (since 2000) in terms of tourism, water management... all kinds of functions beyond production. These farmers were gathered and they created their own innovation schedule. By bringing them together, they became partners of the government and were recognised in their sector. Therefore the formation of a partner's network for the government was made possible.
2. Platteland impulse: support for 35 groups that work with new entrepreneurial concepts, through a step-by-step approach to stimulate multi-functional agriculture in The Netherlands.

Conclusions

1. About networking: interest in starting up heterogeneous networks made of multiple stakeholders composed according to the principle of the optimal cognitive distance: each stakeholder needs to understand the other's activities but they need to be sufficiently different in order to inspire others. 1 tomato producer talks to 1 milk producer. They can talk about objectives pursued by their sector, the way in which the stakeholder sees the future, their position...
2. There was a need to create a social cohesion, trust among stakeholders; the management of stakeholders was a very good way of creating the openness necessary for the network. A common outlook was necessary.

3. Resource management in the most optimal way.

A SYSCOP brochure compiles all the methodology and practical experiences.

DEBATE

Q. As LAGs are groups which enable innovation, what is the link between LAGs and OG?
A. There are a few differences between LAGs and OG: the LAGs are based on a precise region and their objective is to develop it. Innovation may be one of their objectives. The LAG work during a certain period in order to implement their strategy. The LAG can ask to join an OG.
The OG: their purpose is to resolve an issue, testing a solution that has been tested in another area, they are not limited to a particular region.

Q. In Wallonia, we often talk about autonomy as a track towards innovation. In The Netherlands, José talks about diversification at a farm level. Is the hyperspecialisation model still relevant?
A. In The Netherlands, the sustainable development aspect gives cohesion to all of these initiatives. We have noticed a need for new models like those in The Netherlands. Whether it is prioritising the autonomy, environmental and local development aspect, we are looking for other models with other characteristics that better respond to the ambitions, the judgement criteria, social function applied to agriculture, etc. It is not just one picture.

In The Netherlands, there are two kinds of complementary development. The kind that produces for the international market and those that produce for local markets, who want to add value at a local level. Their farming contributes to the economic model, representing a new way of generating income and benefits, and their farmers want to be local farmers involved in their community and adding value.
How can both of these approaches be coordinated, of course, this is not enough. The natural tendency is rent-seeking. So if agriculture is competitive, you are in the right position if not in the dominant position on the market, feeling less pressure from large companies. In this case, there is no reason to work on local development or initiatives that go the other way. Development requires mobilisation. If all is going well, we do not mobilise.
Hence the interest in innovation when it's going badly, because then we mobilise. We have an incentive to mobilise. Therefore it is not diversification vs. homogeneity but rather specification, to be capable of seeing what the comparable advantages are that are relatively positive, in surprising domains.

Q. In The Netherlands there is a concept of strategy. Whether is it at a farming level (from the farm) or at a supra-local or national level, they know where they want to go. In order to put this strategy to practice, there is a structured method. So Wallonia should follow by example.
A. A few factors explain The Netherland's success. The stakeholders were able to work 1. on long term, 2. on the new principles and 3. on encouraging the creation of agricultural networks. The EIP-AGRI approach is concentrated on resolving issues through a multi-stakeholders group in the short term. Whereas the H2020 programme is considered a long term dynamic. A combination of the two would be a good option since working on long term innovation is important.

Q. A source of innovation may be to respond to consumer demand. What measures could be taken in order to ensure the sustainability of these consultation platforms?
A. The H2020 NEFERTITI project, in which Wageningen is partner, focuses on the new ways of working, especially, the after-project. NEFERTITI will create a innovative farms network across Europe, 20 regions are involved, the idea is to appropriate the project once it is finished, appropriate the network.

In Ireland, for example, the Bare & life project was transformed into a governmental agricultural programme. Besides, a distinction needs to be made between a project and a long term programme, the difference between an OG and a larger programme. A long term outlook is necessary because people change, so objectives change as well. We need to stick to find a direction. So it takes a vision and a person who maintains the dynamic, the flow of energy in order to facilitate co-operation between all the different stakeholders. Sustainable financing helps to keep the projects going (municipal or regional support).

The EIP-AGRI hopes to continue to develop knowledge systems, so that the system is appropriated at a regional level. Involve the rural development networks because they can provide their knowledge on how to get funding for rural development.

In the future we need a mix of agriculture advisors that are more network focused and involved in rural development networks, researchers who work in close co-operation with the networks and the agricultural advisors.

Q. What about individual initiatives without support, a farmer-researcher's status, farmer's initiatives accompanied by the researchers that can design and diffuse the innovation?
A. In Ireland, the farmers are encouraged to become members of local discussion groups of 15-18 farmer who meet up 5 times a year. They find support because the group is dedicated to sharing and solving problems. It is facilitated by an agricultural advisor. This model is very effective for sharing knowledge.

PART II
REPORT ON THE PRESENTATIONS, THE DISCUSSIONS AND THE RECOMMENDATIONS IN THE WORKSHOPS

PART II – REPORT ON THE PRESENTATIONS, THE DISCUSSIONS AND THE RECOMMENDATIONS IN THE WORKSHOPS

	FARMING SYSTEMS	REGIONAL APPROACHES
TOPIC 1 How to stimulate innovation in rural territories	**WORKSHOP 1** **Advisory services in agricultural knowledge and information systems**	**WORKSHOP 2** **Impacts of Culture on the creativity of rural territories**
	· **Agricultural knowledge and innovation systems (AKIS) in Wallonia** *Philippe BARET, Head of the Faculty of Bio-engineers of UCL, Earth & Life institute* · **Teagasc, AKIS Ireland** *Mark GIBSON, Knowledge Transfer and Communications* · **CIVAM network, France** *Vincent DULONG, CIVAM Director*	· **Role of the Centers of Expression and Creativity** *Marie-Catherine VANDERICK, director of the centre of expression and creativity , "L'atelier" at Marcourt* · **Village Vital: cultural participation for rural development** *Beate KEGLER, Hildesheim University* · **The Rossignol-Tintigny cultural centre in a rural area: between democracy and cultural democratisation** *Bernard MOTTET, director of the Rossignol-Tintigny Cultural Centre*
TOPIC 2 Innovation: the virtue of constraint	**WORKSHOP 5** **Technological sovereignty**	**WORKSHOP 6** **Local food systems**
	· **Atelier paysan: selfconstruction cooperative** *Nicolas SINOIR, Atelier Paysan* · *Jean-François MARIBO, self-builder, farmer and market gardner* · **Selfconstruction in biomethanisation** *Michel WARZEE, farmer*	· **Implementation of a territorial food governance system: French experience** *Marketa BRAINE-SUPKOVA, International Urban Food Network / AgroParisTech* · **Paysans Artisans: a cooperative of farmers, transformer artisans and consumers** *Benoit DAVE , Paysans Artisans* · **SKIN - an example of European Thematic Network to boost the Short Food Supply Chain** *Dr. Evelien Lambrecht, SKIN project, Ghent University*
TOPIC 3 Opportunities and innovations linked to digitalisation	**WORKSHOP 9** **Agriculture 4.0 / smart farming**	**WORKSHOP 10** **SMART territory and village**
	· **FarmHackNL: from digitization in agriculture to innovation opportunities for the farmer!** *Antoine MILTENBOURG FarmHack* · **EU project H2020 IoF2020: Making precision farming a reality** *Chari VANDENBUSSCHE, Flemish Research Institute for Agriculture and Fishing, partner of the H2020 project* · **What impact does precision farming have on the work of farmers?** *Amélie TURLOT, CRA-W*	· **Digital village project in Germany** *Dominik Pascal MAGIN, Fraunhofer Institute* · **Wallonia smart village** *Isabelle RAWART, Agence du Numérique* · **Developing a SMART rurality by analogy to SMART cities: Happy Hageland a digital tool to open countryside.** *Pierre Bernard VAN ACKER, GAL Hageland*
TOPIC 4 Innovate for greater resilience	**WORKSHOP 13** **Agriculture and forestry coping with climate change**	**WORKSHOP 14** **Demographic evolutions: innovative approaches**
	· **Ecological file of forest tree species** *Jean-Pierre SCOHY, Nature and Forests Department, Forêt Wallonne asbl* · **Practices, Innovation and Resilience of Agroecosystems facing climate change - Farming's impact on climate change** *Astrid LORIERS, CRA-w* · **Practices, Innovation and Resilience of Agroecosystems facing climate change - Climate change's impact on farming** *Frédéric VANWINDEKENS, CRA-w*	· **Support fraily seniors at home. Join local forces** *Yves DARIO, King Baudouin Foundation* · **Citizenship and seniors' health in rural areas. « Wallonie Amie des Aînés »: an innovative tool?** *Myriam LELEU, UCL and WADA project*

COLLABORATIVE SYSTEMS

WORKSHOP 3
Collaborative third-places (FabLab and coworking) in rural areas

- Agrinew shared transformation workshops
  Alain DE BRUYN, Agrinew asbl president
- Yourlab, a Fablab in a rural area
  Sylvain DENIS, FabLab of Andenne co-ordinator
- Rural coworking network in Wallonia
  Lisa LOMBARDI, Digital Wallonia

WORKSHOP 7
Valorisation of local ressources through circular economy

- Interreg Project Re-direct, From local green waste to local green resource and/or product
  Tom ANTHONIS, Interreg NWE Re-Direct
- Biogas Bralanda, Sweden
  Nils LAGERROTH, Swedish Rural Network

WORKSHOP 11
Cocreation through digitzation

- Ludgate Hub, Ireland : Attracting high- profile (digital) businesses, creating large-scale employment, rebranding the town of Skibbereen
  Adrienne HARRINGTON, Ludgate Hub co-ordinator
- Cocreation projects of the Walloon LAGs
  Florian BURNOTTE, GAL RoMaNa, and Cécile MESTREZ and Jean-Pierre TRESEGNIE, GAL Meuse@Campagnes
- Pilot project: smart eco-social village
  Marie-Noël NEVEN RED

WORKSHOP 15
Energy transition and sustainable development

- Condroz Energies Citoyennes, a co-operative that develops projects in the field of renewable energies (hydro energy or agricultural biomethanisation)
  Hervé PIRARD, CEC President
- COPO, a company that turns green waste into bricks
  Xavier SOHET, GAL Pays des Tiges et Chavées
- Coopeos, a citizen's co-operative of local biomass for sustainable heating
  Frederic JANSSENS, COPO

COLLECTIVE INTELLIGENCE

WORKSHOP 4
Territorial management of skills and jobs

- GPECT in France, a tool for territorial development
  Pham TRUONG, Sols & Civilisation
- The Paysans Artisans employers group: a tool at the service of small agricultural producers and trasnformer artisans
  Benoit DAVE, Paysans Artisans
- Creative world of handcraft: A new model for occupational orientation, Austria
  Nicole Troesch, Regional Development Agency and LAG, Oststeirisches Kernland Styria/Austria

WORKSHOP 8
Territorial living labs: innovative places creating innovation

- Wallonia e-health living lab, first walloon living lab dedicated to health
  Lara VIGNERON, Wallonia e-Health Living Lab
- The Smart Rural Living Lab of the Municipality of Penela, Portugal
  Luis MATIAS, Living Lab Penela
- Innovation camp method in rural development: experience and results
  Joel KARISSON, Finnish network for rural development - agency for rural affairs

WORKSHOP 12
Aging population: SMART innovative solutions and new services

- Social innovation for active and healthy aging: European case studies
  Bénédicte GOMBAULT, Roi Baudouin Foundation - Belgian implementation of turbo models, participatory model of a senior's residency - Philippe VAN DEN BROECK, WEL SPRL
- Frail-safe European project: delaying frailty by combining medical datas and technologies
  Lienia GHENO, AGE Platform Europe
- European Mobile Age Project: web application co-creation on 4 pilot sites including a rural one located in the north of Manchester
  Ophélie DURAND, AGE Platform Europe

WORKSHOP 16
Community-led initiatives

- The CATL Food and Land Belt, a dynamic mobilizing the vital forces of the Liège region around the creation of a local, ethical and sustainable food chain *Christian JONET, CATL co-ordinator*
- Citizen transition dynamics in the Rochefort region
  Nicole WILLEM, RET
- Participatory budget: lessons from the EMPATIA project (Enabling Multichannel Participation Through ICT Adaptations), Portugal
  Kalinca COPELLO, University of Coimbra, Portugal

Beyond the plenary sessions, the programme consisted in 16 workshops. In each workshop, there were 3 case studies (except for workshops 12 and 13) presented and debated.

WORKSHOP 1 - ADVISORY SERVICES IN AGRICULTURAL KNOWLEDGE AND INFORMATION SYSTEMS

BRIEF SUMMARY OF THE PRESENTATIONS

CIVAM NETWORK, FRANCE

The CIVAM network is an associative stakeholder for agricultural and rural development which has been operating for more than 50 years for living and solidary french countrysides. Its characteristics are the following:

- Reference to values of **popular education**,
- Essential role the farmers and rural residents played in the evolution of farming practices and in the development of the countryside,
- **Role of groups in innovation** within the network,
- **Discuss and share** between the network facilitators and work with multiple and varied partners which encourages the **spin-off** of numerous initiatives within and outside the CIVAM,
- Outlook on agricultural and rural development which is reliant on the know-how, the experiences, the farmer's energy and the region's resident that complete and enrich the scientific research and the technical advice which arises as a result.

CIVAM NETWORK

Objectives

- To promote innovative and respectful agriculture by humans towards their environment
- Contribute to the maintenance of the social and economic fabric of rural areas
- Promote intelectual, social and economic emancipation of CIVAM members and more broadly the farmers and residents of rural areas though a popular education approach

Key figures: 13 000 members, 11 000 of which are farmers, 130 are local or regional groups, 13 are regional federations, 250 are employees in the network (17 of which are for the national structure) 12 million € of budget consolidated by the network, 20 members of the National Board of Directors (farmers and rural residents).

Assignments

- Bringing the network to life
- Capitalisation, analysis and diffusion of the initiatives
- Monitoring and prospective
- Representation towards nearby national or European institution
- Contribution to developing public policies
- Information and communication

Areas to work on

- Economic and independent production systems
- Territorialized agricultural and food systems
- Welcome and exchanges in rural areas Transmission and activity creation

Innovations by the CIVAM network

- An adapted method: support, a multiplier effect; the collaboration, a bottom-up approach; the region/local group
- A hollistic approach: agriculture AND rural/ Agriculture and Food...

The CIVAM approach was illustrated through two concrete cases studies (see presentation) which were:

- The management of change in the agricultural production systems in Brittany through a support process with a group of 13 farmers
- The emergence of agricultural activities or not through a process of stimulation and territorial consultation in Normandy.

TEAGASC, IRELAND

Teagasc ("education" in Irish) is a national semi-state establishment of the Republic of Ireland that offers integrated research, advice and education services to the farming and food industry as well as rural communities. www.teagasc.ie

In terms of innovation, Teagasc relies on 12 "Stakeholder Groups". These stakeholder groups regularly work on different topics (economy and agricultural management, agri-environment, meat production, milk, forestry, market gardening, sheep, pigs, tillage, rural development, etc.). They meet up annually at the "National Conference of the Stakeholders Groups".

Moreover, Teagasc offers stakeholders in the Irish food farming sector a platform to share knowledge: the **Teagasc ConnectEd Programme**.

Services offered by the **Teagasc ConnectEd Programme**

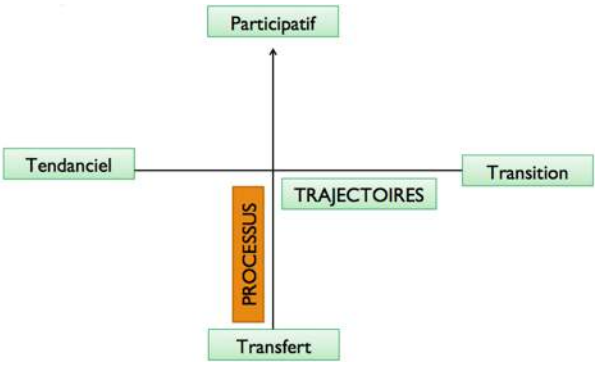
- T-Stór : scientific communications, articles, work documents, conference documents, other publications and products by Teagasc personnel are available for free;
- Website app https ://epm.teagasc.ie: allows users to register their data annually, in particular, financial data regarding their company and it allows them to compare it with other references. The system produces management reports on farming performance;
- Website app https ://pasturebase.teagasc.ie/ : a tool to help manage pastures «PastureBaseIreland» stores all the data concerning Irish pastures in a common structure;
- Website app http ://dhm.teagasc.ie: monitoring a dairy herd;
- Tool available via https ://nmp.teagasc.ie : development of management plan for environmental and regulatory reasons;
- http ://gis.teagasc.ie/soils/: an Irish national map of soils on a 1/250,000 scale is available, associated with a digital information system on soils. It offers spatial and quantitative information on the types and the properties of soil across the country;
- Website app https ://saol.teagasc.ie: online access to soil analysis results.

AGRICULTURAL KNOWLEDGE AND INNOVATION SYSTEMS (AKIS) IN WALLONIA

Philippe Baret summarises the characteristics of the Walloon model for innovation in agriculture in the following way:

- Research-development that is not/hardly co-ordinated;
- A strong openness to foreign influences;
- A relative weakness of collective structures;
- A big potential for interaction between stakeholders in the sector;
- Classic innovation stakeholders like universities, research centres;
- New stakeholders like:
    - ◊ Associations from research partnerships (Greenotec, CRPhyto, DiversiFerm….)

- ◊ Associations linked to public policies (GAL, Food belts, Protect'eau, Natagriwal, etc ..)
- ◊ Models rooted in agricultural experiments (Régénacterre, Ferme de Graux,...)
- ◊ Sectoral stakeholders (BioWallonie, CIPF, FIWAP, ..).



Taking into account these elements, the innovation stakeholders, according to Philippe Baret, should be in a better position and interact, be funded in a proportional way and better populate the landscape of innovation (see diagram) in order to help the AKIS Wallonia to evolve.

Given the complexity of the risks related to agriculture, the diversity of stakeholders and the options, and the inadequate means, the network stakeholders need to be clear on the model that they are contributing to. A co-ordination of the stakeholders' work would increase general efficiency and it would be useful to register this in a sustainability framework.

SUMMARY OF THE DISCUSSIONS

Origin of the groups accompanied by the CIVAM network

Farmers are generally part of the CIVAM network with well ingrained discussion practices. Some have invited other stakeholders from their region to take part. They found that not only did the group provide answers to their questions but they also found that the groups represent a way of reducing financial risk.

The role of the consumer in innovation mechanisms

In the case of CIVAM, the Board of Directors consists in farmers and consumers. In terms of innovation/ research we want to address issues in the world of farming, which, nevertheless, acts on the countryside, the environment, the consumer,... Why don't we integrate the latter right from the start of the reflection process? Agri-food is simply this: thinking of the consumer. Innovation which is too agricultural does not take the consumers into consideration.

One of the elements related to a bottom-up approach is making sure that all stakeholders are involved. Which would require significant work in Wallonia since this would involve organising the farmers and the consumers and connecting the two "links" of the chain as well as the content. In addition to connecting the chain is complicated. Besides, what about other kinds of stakeholders. Linking the two ends of the value chain together (consumers and farms) excludes those that are in the middle - the distributor for example - who is also responsible. Therefore we need to include other stakeholders. Another concern is: the consumers are also citizens, individuals, humans and society are linked to farming not just as a consumer but also as a citizen.

Expertise : beyond the experiences that bring together consumers and farmers, it is sometimes necessary to mobilise expertise.

The CIVAM network offers support, but where do they find expertise?
Nature & Progress is an example of one that combines both. The hybrid models should inspire us because often get people who are already active in other structures. So we kind of go round in circles.

Citizens are members of the board of CIVAM. In terms of support, the CIVAM network calls upon external figures, in particular during national days. They are here to raise awareness, question the system, even if the construction and the solutions come from the farmers. In the French case, where the chambers of agriculture are managed by farmers linked to a trade union, the CIVAM network calls for citizens to be equally integrated.

In Ireland there are food boards that are in charge of promoting agricultural projects. They consult consumers through surveys. These are intermediary structures which compensate for the lack of direct links within

Teagasc between farmers and consumers. Therefore, there is no doubt that these two will need to be more connected. However, there are open farms, where farmers and consumers can meet.

If it is interesting to increase the organic production and the cereal consumption by humans, it is difficult because it is not interesting for everyone. For example, in the case of the Green Acres programme, people who fund it are financially interested in the result. Therefore, there are not many people to counteract this. It is very noble to want to reduce the plant protection and fertilizer, but who is going to fund this change? Commercial interest is so important that you would need to be very creative. For example by comparing the amount of illnesses among farms, that use co-design and implement very practical solutions.

Valuing innovation
In innovation schemes, there is little mention of the stage of valorization. But there are brakes at this level.

In Ireland, TEAGASC supports innovation of new products and contributes to their promotion by filing patent, doing marketing, and promotional campaigns. TEAGASC seeks diverse clients, that they hope to better reach out to, or to let people stand out themselves. It is important to make sure that innovations are adopted and often farmers are in the best position to do so.

KEY RECOMMENDATIONS

- Support CETA (Center for Agricultural Techniques Studies) in order to develop places for multi-stakeholder discussion and information, which include farmers, researchers and consumers.
- Promote operational groups for experimenting on the basis of public/private partnership
- Promote innovation based on results from experiments, through real cases (farm experiments) and by entrusting the outreach role to the farmer.

WORKSHOP 2 - IMPACTS OF CULTURE ON THE CREATIVITY OF RURAL TERRITORIES

BRIEF SUMMARY OF THE PRESENTATIONS

ROLE OF THE CENTERS OF EXPRESSION AND CREATIVITY

Rural areas are the theatre for specific challenges and of new cultural crossings, between the city and the countryside, induced by the arrival of refugees and created by the openness that media and social media brings to the world. In a rural area, relying on the transversal role of culture allows them to rethink the development strategy and to open up to other perspectives. On the one hand, it means translating the participants daily life and aspirations into artistic language, on the other hand, it involves crossing artistic practise with local resources like the region's trades (wicker, wood, tourist products, festivals at the mill, at the sheepfold, ...).

In the French-speaking part of Belgium the 2009 decree pays specific attention to rural areas and defines particular conditions like a minimum quantitative requirement, a supplementary budget (expected) to make decentralisation possible, and also local homelessness.

The challenge is going out to meet the public. How do you do it? You decentralise, go to institutions, occupy school canteens, meet people where they are.

VITAL VILLAGE. CULTURAL PARTICIPATION FOR RURAL DEVELOPMENT

The Vital Village programme aims to identify sustainable cultural models for rural areas and to diffuse these models at a European level. To this end, it is essential to better understand the role that culture plays in cultural centres that are already active in rural areas. This programme, implemented by the European Network of Cultural Centers, combines research, experimentation, practice and policy.

Amongst the findings, the programme identified a series of obstacles for cultural work in rural areas, including:

- A lack of momentum and of networkers;
- A lack of contemporary identity elements at a regional level;
- A need for civic engagement;
- A need for new stories to tell;
- A need to learn what to do when it comes to transformations and changes in a rural areas.

Amongst the success factors of cultural work, the programme recommends the following:

- Base cultural work on popular culture and amateur arts given that they are at the heart of the village's cultural life, it's what makes them alive;
- Adopt a participatory approach and decentralise to stimulate civic engagement, which requires time;
- A boost of momentum from professional cultural stakeholders;
- To get residents, local elected representatives, existing cultural groups to start networking, ... the proximity is important;
- Get support from sponsors, leaders, people capable of organising events;
- Last but not least, have fun and laugh!

THE CULTURAL CENTER OF ROSSIGNOL-TINTIGNY IN A RURAL AREA: BETWEEN DEMOCRACY AND CULTURAL DEMOCRATIZATION

Cultural action aims to have an impact on:

- Freedom of creation and expression;
- Economic, physical, geographical, temporal, symbolic or intellectual access to works of art and different and quality practices;
- Strengthening the exercise of responsible, active, critical and solidarity citizenship;
- The increase in citizens' ability to express and be creative, individually or in a group, in view of their individual and collective independence;
- The maintenance, the development and the promotion of heritage and culture, including in their formative phase;
- The move away from cultural practices among social categories, spheres of action and cultural groups.

SUMMARY OF THE DISCUSSIONS

Rural territories are not alike and each of them faces specific challenges.
Therefore, a cultural development strategy should drawn on a diagnosis of the area, in order to take into account the resources available, the characteristics of the environment (population density, type of economic activity, opportunities in terms of transport, demography, etc.), and the residents' needs.

It is a question of making culture accessible, to do with, not for, and to co-build from what is already there. The challenges concern cultural democracy and the democratisation of culture, which implies that all micro-culture has the right to exist.

The cultural stakeholder plays a central role, thus making it possible to bring people together for cultural activities, to create a link and to reinvigorate a feeling of belonging is often diffused or lost.

The job of the cultural stakeholder in a rural area should be based on the following principles:

- Move towards people, towards new audiences, meet them in their environment, value them;
- Identify who exists and is part of this fertile land;
- Stimulate mutual curiosity and bring the residents and citizens together for common projects;
- Create something new from what already exists;
- Stimulate meeting up and working on co-building between cultural stakeholders, the public and the residents (e.g. by organising a village festival together);
- Increase the connections, the meet ups and the acquaintances.

KEY RECOMMENDATIONS

Culture, and art in particular, is an undeniable drive for creativity and therefore innovation. For this reason, the regional cultural operator play an important role in society: they create a bond between people, artists, associations, local businesses, etc. They promote the development of co-built cultural projects/experiences (where the citizen becomes a cultural player) as well as the development of a culture whose destiny is to mix the whole population (rural/counter-urbanisation, foreign population, ageing population, ...) and the whole of their heritage

- Reinforce the go-between role of the cultural player;
- Relying on local resources (trades, craftsmanship, folklore, yearly festivals, etc.);
- Making sure that the citizen, spectator is also involved;
- Allow experimentation, trial and error.

WORKSHOP 3 – COLLABORATIVE THIRD-PLACES (FABLAB AND COWORKING) IN RURAL AREAS

BRIEF SUMMARY OF THE PRESENTATIONS

AGRINEW SHARED TRANSFORMATION WORKSHOPS

Starting from a cheese project, the workshops will finally work with meat and vegetable in order to meet demands, even the producers, who should be the real driving for the project and the ones who really want the project. The numerous services that the npo will offer to producers will allow them to learn their job and minimalise both technological and financial risks. The tool is intended as a business incubator. The challenges faced when implementing a "Hall Relais Agricole" (transformation workshop) have been underlined.

YOURLAB, A FABLAB IN A RURAL AREA

A Fablab is a place that makes innovation possible by either giving access to digital manufacturing tools or not. "Open to the whole public, we can do a lot of things in a Fablab like manufacturing, exchanging ideas, learning and developing", explains Sylvain Denis, Fabmanager. Also insisting that a Fablab is a platform for social, digital and economic innovation. The material is not necessarily digital but this technology can be used through various tools (milling machine, saw, laser cutter, printing, ...). The city of Andenne financially supports the project (3 employees).

RURAL COWORKING NETWORK IN WALLONIA

Through the example of coworking Wallonia, Lisa Lombardi (*Digital Wallonia*) presents her new three locations which have the wind its sails and which favour and facilitate the users and the coworkers' direct conversations, co-operation and creativity.
Based on the principle of the three pillars (work-discussion-connection), these locations have been very successful with a very varied public (age, education, ...). Nearly 60% of users are, however, self-employed on the side or as a main profession and 61% use it full-time or part-time.
There are numerous positive effects like, for example, improved motivation and profitability at work, work in networks, the relationship between coworkers, ...

KEY RECOMMENDATIONS

- Raising awareness and informing the public about the Fablab and coworking approaches, especially in order to reduce the fear of competition and to normalize these new concepts.
- Networking Fablabs and coworking to share knowledge, good practices, ...
- Develop these new tools like real economic models based on local needs in order to achieve the creation of value and employment.

WORKSHOP 4 - TERRITORIAL MANAGEMENT OF SKILLS AND JOBS

BRIEF SUMMARY OF THE PRESENTATIONS

GPECT IN FRANCE, A TOOL FOR TERRITORIAL DEVELOPMENT

The GPECT is a collective and prospective intelligence approach, to anticipate and plan the activities and skills of tomorrow in order to better construct a region's strategy.
This approach adheres to the region of the Community of Municipalities of Erder and Gesver (12 municipalities, 60,000 residents), a dynamic region, in which employment and activities are increasing and which is attractive in terms in terms of transfer and installation compared to neighboring territories.
The collective dynamics produced evolution scenarios based on the fabric of existing actors and the determinants of the territory, which will be prolonged into a 2nd stage of strategic skill development to boost the special characteristics of the region.

THE PAYSANS ARTISANS EMPLOYERS GROUP: A TOOL AT THE SERVICE OF SMALL AGRICULTURAL PRODUCERS AND TRANSFORMER ARTISANS

The GEPA is designed as a tool to help small producers and processing artisans involved in commercialisation activities (online sales, producers shops and markets and raising awareness (see the workshop 6 presentation).

It allows them to recruit and to make staff available to work for a minimum amount of time (minimum 1/3 time) or seasonal activities. This helps to meet demands from producers and, on the other hand, to create real employment in the agricultural sector. The GEPA manages administrative and contractual aspects, helps them to find employment, to pay salaries and to do invoicing.

The GEPA has 17 producers and one co-operative at the moment and there are 10 employees (6.2 Full-time Equivalent).

The immediate benefits are easy management and the possibility of benefiting employment programmes, which reduces staff costs for producers. Over time, the GEPA stabilises the activity and the relationship between the producer and the employee, in order to develop the employees' skills, to vary their tasks and to gain varied experience, also to evolve from an employee status to a self-employed status on the side and, lastly, to organise enriching meetings between workers.

GEPA's added value also constitutes a service for assembly and transport, as well as an accompanying network for the progressive increase in producers and processing artisans and an interesting means for hiring, educating and giving young people the opportunity to throw themselves into their own activity.

CREATIVE WORLD OF HANDCRAFT: A NEW MODEL FOR OCCUPATIONAL ORIENTATION, AUSTRIA

The project aims to broaden opportunities for young people's future professional carriers, by finding a balance between their ambitions and companies' demands, with the objective of revaluing craftsmanship trades (catering trades, technicians, art and design, ...)

Raising awareness regarding professions starts at primary school and resumes in the last two years of secondary school. The innovation lies in the use of a design material as a support of awareness, which was created by an architect / designer with the help of artisans, in the form of workboxes, corresponding to 24 identified careers. handicrafts in rural areas).

A new road show will be organised in Styrie (which has 15 LAGs), from April 2018 onwards, and it will give them the opportunity to test the workbenches, to really understand all of the professions proposed, to test the tools which are unique to each profession and the skills required, in a fun way.
Besides the multiple tests for the students, it will give them the opportunity to get feedback from the schools and the students regarding this new way of raising awareness of these professions.

KEY RECOMMENDATIONS

- Raise young people's awareness with regards to the professions during their school career, from skills and their parents' professions (extended family) according to a transmission logic as a driving force for raising awareness about professions.
    - ◊ The importance of creating tools that are designed, creative, aesthetic and pedagogical to raise awareness (e.g. the 12 work boxes from Styrie).
- A reference territory facilitation mechanism on employment and skills issues that builds trust, optimizes opportunities, decompartmentalizes, mobilizes a variety of key players and focuses on the end user.
    - ◊ Sharing job posting online (especially to pool staff), develop social networks to bring the offers and demands together, draw on the demands of young people look for meaningful work.
- Develop skills online: entrepreneurship, learning and mentoring creation of a MOOC.

WORKSHOP 5 - TECHNOLOGICAL SOVEREIGNTY

BRIEF SUMMARY OF THE PRESENTATIONS

ATELIER PAYSAN: SELFCONSTRUCTION COOPERATIVE

Free access to material for technological sovereignty for farmers
Semantic clarification: it is important to distinguish the difference between technological sovereignty, adapted technology and self-build.
In brief, the Atelier Paysan is:

- A co-operative non-profit organisation with a collective interest (findings, sharing, reclaimed independence in terms of skills, tools and flexibility);
- Free access to diverse, modern tools and some low tech as a guarantee (the dissemination) and open source as a means;
- Supporting farmers for the design of tools based on simple and rustic material in order to "make it at the farm" (grinding machine, drill, welding equipment);
- A tool for collaborative work (human, material, logistical and the spin-off): R&D participatory farmers, identifying innovative practices and support for farmer collectives (e.g. designing equipment for toasting protein crops);
- A Co-ordination of the French-speaking network (link with Quebec and Wallonia) and a local response to duplication, adoption and decline in other countries.

Two basic principles :

- Innovation should be made by the users for the users;
- The interest in innovation is as much about the process as it is about the product itself. Innovation should be about more than just technical aspects. They should be able to introduce a positive change into society and be focused on the region concerned.

Technological sovereignty is:

- Regain the ability to make decisions and take actions regarding technology, on their access and distribution, their use and their "consumption". What happens to used machines, what can we use them for?
- Sharing knowledge. Individual knowledge should be turned into "common" knowledge, a knowledge that guarantees freedom, in other words, sovereignty;
- Start advocacy in the face of technological lock-in which leads to over-investment and to overbidding, and start to ask real question concerning the effectiveness of the system in order to reclaim flexibility in a "technician" context;
- An advocacy for the need for a new financial, accountancy, research and innovation framework and lastly an advocacy for the agricultural model that we want today in order to avoid enslavement in a financial context of technological and institutional innovation which pushes to consume and always makes new things, in order to build new responses, more resilience and systems that are simpler.

"SELF-BUILDING IN FARMING AND VEGETABLES GARDENING"

In 2015, Jean-François Maribro took over his grandparents' farm. The farming equipment that dates back to the 80s has not been discarded (e.g. an old fiat from 1964). Which is lucky since Jean-François specialised in market gardening. His motivation for self-building: the cost of equipment and the fact he had material suitable for the power of farming tractors.

Examples of self-built equipment:

- Construction of a dung spreading harrows limited to 3 meters wide
- Potato bumper
- Construction of a log splitter with the help of a restorative truck cylinder from agricultural machines and reinforcement by fixing it in his own forge (cost: 350 €)
- Transplanter from vegetables to buckets
- Cultivator/sub-soiler
- In the making : calibrated seed sorter for meslin and maize.

SELFCONSTRUCTION IN BIOMETHANISATION

Michel Warzée is a farmer (Bawagri : dairy farming of 220 milking cows, equipped with 3 milking robots, construction of a barn in 2009) and businessman (Warzée SA : agricultural machine (e.g. unrolling machine sold worldwide) civil engineering, farm buildings)

Since the farm is not initially connected to the electricity network (use of a power generator - costs 60,000 €/year), Michel developed a valuing project from the manure produced by the milking cows. After a first failed experience (2015) with material bought outside, in 2017, he developed (through self-building) a biomethanisation unit feeding into an auto-regulated generator (100 Kw). A self-built 800 m3 digester. Current production: 48 KWh. Digestate spread across the farmland. Cost of the installation: 450,000 €. It's a profitable investment because it is easy to build.

Michel Warzée would like to increase the use of equipment that is powered by electricity (telescopic and mixed self-propelled machinery) and valuing the heat produced by the biomethanisation unit by drying hay and wood chips and the heating of a calf barn. He would like to meet up with other farmers in the future in order to provide the village with heating.

SUMMARY OF THE DISCUSSIONS

The important thing is the reliability of the installation. It needs to be a simple and effective system. It is worth pursuing an objective valuing heat. The educational aspect vis-à-vis local residents for this kind of installation is important and valuing heat through collective equipment could help.

Patents on self-built machines

Yes but few patents since the field of agricultural machines is not the same as other very technological fields. The machines are modified, improved by the builders or the farmers. Historically, farmers always modified their machines. But this all changes with the replacement of generations and the hyperspecialisation of the farmer. This being said, farmers continue to weld, etc.

Atelier Paysan protects its plans and tutorials with licenses "creative commons" but it does not have access to legal services. In this case, taking action if there is a copy and commercialisation is not easy. For Atelier Paysan, the machine is a mutual object to be improved: a need to keep the tool and the plan alive.

Agricultural subsidies only take “new machines” into account and not those built by the craftsmen. Nevertheless, self-building, it is not second hand, especially not in a time when everyone is talking about the circular economy. There should be more education on this topic.
The history of abuses and the need to control public finances prevents the funding for self-building today.

Support for creating new tools
Producing your own equipment takes time and thought, therefore it is necessary to closely evaluate the cost/benefit relationship. Self-building is a return to the source, doing things yourself and light investments, and reparations that don’t cost that much. Modern material is not always suitable (bigger, for example, or even more expensive) or the financial aspect is important. Self-building means that you can have equipment that is adapted to your needs.

Main working points

- Adapting equipment to traction engines and to the farming structure takes time (restraint), but it gives them suitable material and reduces the dependence on suppliers;
- A need to give the farmer the option for trial and error;
- A need for reinforcing the farmer’s skills if they want to throw themselves into self-building;
- Pay special attention to reliability and safety, especially in terms of self-building buildings;
- Favour repairing existing material rather than buying new material;
- Look for/value the skills that are already there (collaboration with technicians or retired engineers, etc.)

KEY RECOMMENDATIONS

- Create a network/collective of farmers for discussions about plans, ideas in terms of self-building
- Get farmers interested in various technical courses for farmers (welding, electricity, etc.(especially at a CTA level) interested in self-building, in particular, by giving out training vouchers (*Chèques-formation*) for suitable courses:
- Encourage repairing old machines:
    - ◊ Creation farming “Repair cafés” : valuing and repairing old material
    - ◊ Creating workshops/support teams and supporting the implementation of self-build projects, and Fablab, especially in relation to schools (but possibly limited today due to questions of security).

WORKSHOP 6 - LOCAL FOOD SYSTEMS

PRESENTATIONS

IMPLEMENTATION OF A TERRITORIAL FOOD GOVERNANCE SYSTEM: FRENCH EXPERIENCE

The concept of the local council for food in France, inspired by the Food Policy Councils as an innovative means of engaging citizens in the development of a food policy (started in Canada and then came to Europe, Australia and New Zealand) is presented. These councils became the multi-stakeholder governing bodies of the Regional Food Project (*Projets Alimentaires Territoriaux*, PAT) and their implementation constitutes a criteria of recognition from the PAT, as the project leader for the long term, they guarantee transversality in the approach, dialogue and communication amongst stakeholders and citizens, in a setting that favours collective construction of projects and in general, renewal of social connections. In other cases, they are independent spaces for raising awareness and reinforcing local food democracy.

The food houses bring food stakeholders together who have mutual experiences and knowledge, in order to clarify and educate consumers regarding their choice of food.

The example of Bordeaux Métropole shows the progress of the approach and the big steps of food governance in Aquitaine, in 3 regions, where Bordeaux is the pilot city.

The regional strategy will be built from a 21 programme, then a diagnosis and a map of stakeholders will be developed, an event and workshops on "eating healthy, well and not far" will be organised and from the perspective of the formalisation of the Advisory Board of Sustainable Food Governance (*Conseil Consultatif de Gouvernance Alimentaire Durable, CCGAD*), co-building a regional food strategy regarding 6 topical think-tank workshops (90 participants).

The CCGAD is structured around 3 objectives: offering to local authorities and stakeholders the means to bring out original initiatives for the relocation of the food system, ensuring the place for sustainable food issues in the Metropolitan strategy and favouring the synergy of skills at an administrative level and for stakeholders in the food system.

The governance is organised around a management committee and a think-tank committee with 5 stakeholders from different relevant sectors.

The next steps aim to structure the Regional Food Project and the food policy in Bordeaux Métropole and to gain more benefits for the citizens. .

PAYSANS ARTISANS: A COOPERATIVE OF FARMERS, TRANSFORMER ARTISANS AND CONSUMERS

Paysans Artisans is structured around 3 main activities:

- short distribution cycle
- networking producers and
- permanent-mobilisation education

In a region of 9 municipalities, with 665 cooperators, of which 70 are producers and an organisation that has 4 judicial structures according to the type of activity.

In terms of the sale to individuals, the goal is economical, but also political, social and cultural, know that one of the objectives is reaching out to more people.

Networking producers envisages by production sector, with the creation of a group of employers to pool certain jobs, the creation of a land agency in order to facilitate access to land and buying shared equipment

(equipped kitchen, « hall relais », and a short cycle zoning project).

Paysans Artisans organises workshops and discussions on know-how, meeting alternative farmers and a popular university in order to support a citizen and independent movement and construct a shared vision and a collective intelligence on farming and food issues.

SKIN - AN EXAMPLE OF EUROPEAN THEMATIC NETWORK TO BOOST THE SHORT FOOD SUPPLY CHAIN

The project offers an analysis of the diverse kinds of short cycles in Europe and has noticed a limited amount of integration in regions, with the need to develop effective discussions on approaches, strategic innovations and management practices.

The project has mobilised 21 research structures, farming organisations and support services for innovation in order to develop direct sales, a sharing economy of good practices and initiatives, the creation of a good practices network (according to 6 topics) and to generate new innovative actions, create trusting relationships and shared values between producers and society, favour better use of land including wellbeing and health, and favouring the resilience of the short cycle.

An inventory and an analysis of 100 good practices in dozens of jobs took place, with a prevalence of those concerning the contractualisation between partners in the sector, the logistics and distribution organisation and the reliability of distribution. The first Innovation Challenge Workshop was organised in April 2018 in The Netherlands and In Belgium through different on-site visits.

KEY RECOMMENDATIONS

- Establish new alliance arrangements between public authorities and initiatives from national activists who are more balance and fair;
- There needs to be more action and less talk, jump into action in the economy based on shared values. This refers to the support group and the region which makes sense;
- Learn how to communicate, celebrate, create a link, associate the project with pleasure (motivation).

WORKSHOP 7 - VALORISATION OF LOCAL RESOURCES THROUGH CIRCULAR ECONOMY

BRIEF SUMMARY OF THE PRESENTATIONS

INTERREG PROJECT RE-DIRECT, FROM LOCAL GREEN WASTE TO LOCAL GREEN RESOURCE AND/OR PRODUCT

Located in Flanders, Pro-Natura (social enterprise) and mostly active in planning and management of green spaces and the use of environmentally friendly and natural methods. The enterprise takes action in the social reintegration of people searching for a job. For Pro-Natura, the social economy should not be limited to collecting and transporting waste but also, and above all, it should be the conversion, transformation and the production of a final product. Tom Anthonis emphasises the importance of working in a cluster, a network or a group of biomass in order to maximise the use of all these components of waste (fibres, sugar, nutrients, energy value,...). The Interreg project, called Re-Direct for REgional Development and Integration of unused biomass wastes as REsourses for Circular products and economic transformation, has 5 member states. Among their objectives, the objective to increase the efficiency of local resources, of developing portfolios of specific biomasses, establishing a circular approach through pyrolysis, etc.... Example of use: the Japanese Knotweed (invasive plant) turns into active carbon which could be used in cosmetics or for filters.

BIOGAS BRALANDA, SWEDEN

Started in 2013, a biogas project with 4 agricultural farms and a production capacity of 12GWh/yr. The unit can provide gas for 1,800 vehicles. In total it costs 8 million Euros, this project brings together numerous stakeholders like the farmers, the municipalities, a development centres, energy and technology companies and local organisations. The factory is powered by manure, livestock manure and waste from slaughterhouses. Compared to fossil fuels, the green gas produced locally helps to reduce greenhouse gases by 170%.
Unfortunately certain obstacles prevent the development of biogas, to name a few: low financial yield, bureaucracy, ...

KEY RECOMMENDATIONS

- Show examples and real achievements (the producers point of view for the technique) in order to:
  - ◊ Let consumers know how waste can be used for their value by being formed into a new products:
  - ◊ And by encouraging them to bring their raw materials.
- Changing the legislation so that waste can be considered as a raw material at the end of the process.
- Change the legislation to guarantee the profitability of the circular economy through subsidies (e.g. biogas production).

BRIEF SUMMARY OF THE PRESENTATIONS

WALLONIA E-HEALTH LIVING LAB, FIRST WALLOON LIVING LAB DEDICATED TO HEALTH

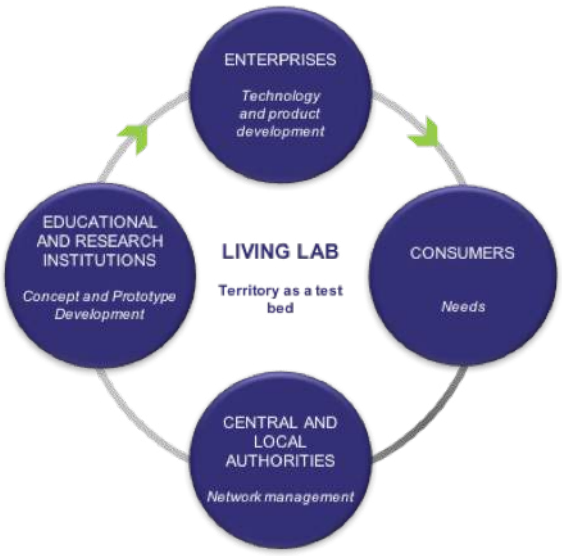
The E-health Living Lab is a place of innovation that supports the design of innovative products and services that respond to users' needs. Based on a need clearly identified, besides the final user, it involves a partnership with the ad-hoc stakeholders required for the product design or service.
The WeLL vision is based on three WeLL components: a social aspect, an economic aspect and an intellectual aspect (knowledge).

This design process includes the following three steps:

- Explore : based on a need, it consists in better understanding the users, their expectations in relation to the idea of a product or service
- Co-create: design a suitable solution together
- Test, experiment: experiment and evaluate the solution in a real environment.

THE SMART RURAL LIVING LAB OF THE MUNICIPALITY OF PENELA, PORTUGAL

The municipality of Penela is situated in the middle of Portugal and it is a rural municipality with 6002 people spread over 132.49 km2 which means it is a very low density with just 45 residents per km2. The creating of a Smart Rural Living Lab (SRLL) is in the framework of a revival strategy of economic activities in this municipality, so of its activity. This strategy is based on a vision, defined by the mayor, a very dynamic entrepreneur: «services for local resources». Four strategy sectors have been identified: forestry, regional products, tourism and renewable energy. The Smart Rural Living Lab is recognised by ENOLL, the European Network of Living Labs.
The SRLL is designed as an ecosystem that brings together the stakeholders who are necessary for the development of the new products/services and also those who are active in the municipality.



Besides, it is based on the following three governing principles:

- The region is the living lab's range of action and what is potentially usable;
- A rural environment seen as an opportunity to gain a competitive advantage;
- The development of products/services dedicated to improving the quality of life in the municipality.

The result is the following four areas of work:

1. Natural resources/regional products: agriculture, fire prevention, forestry, grazing;
2. Social and health development: health clinic and seniors centre;
3. Tourism and identity: preservation of patrimony, tourist area, virtual hunting;
4. Citizenship and entrepreneurship: access to internet and public participation.

Products/services designed by the SRLL and their impact:

- Training to become a goat farmer and therefore developing the processing of goat's milk produced locally;
- Launching the start-up "Connect Robotics": delivery of lunch boxes by drones;
- Launching the smARTES, a centre for creative industries;
- Creating a coworking centre;
- Creating a rural Fablab "FabLab Penela";
- ...

INNOVATION CAMP METHOD IN RURAL DEVELOPMENT: EXPERIENCE AND RESULTS

Innovation Camp is a method designed and implemented by the Finnish Rural Network in order to stimulate creativity in rural areas and to challenge the citizens to develop economic activities. The 48 innovation camps were implemented according to the needs identified in the area in accordance with the bottom-up approach.

Like a hackathon, an "innovation camp" is a process which makes it possible to develop an idea in 3 intensive days of work.

This process is based on:

- 5 rules to be respected;
- 4 roles (camp host, facilitators who design the process and prepare the work materials the team coordinator, the jury);
- A 3 stage process spread over the course of 3 days:
  - ◊ Day 1 :
    - Learn to get to know yourself
    - Develop new ideas
  - ◊ Day 2 :
    - Choose which idea will be delved into
    - Test and conceptualize the idea (pitch the idea, elaborate the business model)
  - ◊ Day 3 :
    - Finalise the concept
    - Present the final product to the jury
    - Invite the media and stakeholders who are interested

Advantages of the "innovation camp" method

- Pragmatic and intensive method of coming up with new ideas;
- Creating a setting for innovators
- A tool for attracting new rural development stakeholders;
- A means for promoting the assets of a rural area;
- Useful in an EIP process (European Partnership for Innovation).

SUMMARY OF THE DISCUSSIONS

A Living Lab (LL) helps to provide answers that are out of the box and adapted to the locals' needs. It is an answer to collective challenges and is based on work carried out by a multi-stakeholder group. It values intelligence brought together in this way ("collective intelligence").

The LL and the innovation camp are both ways of coming up with ideas to solve a problem that has been identified. In the LL, the emphasis is placed on the involvement of the final user in the process of transforming an idea into a prototype. Both methods are based on:

- A bottom-up approach to identify the needs and issues;
- The creation of an ecosystem composed of pertinent stakeholders;
- And support, right up to the prototype for the LL, and right up to the business model for the innovation camp.

In this way, it involves a paradigm shift, in view of a traditional regional development approach. It gives a feeling of belonging thanks to its participatory approach.

For a LL to have an impact on social and economic development:

- It should take local resources into account;
- It should integrate a wide range of stakeholders representing a variety of skills necessary for achieving their goal;
- It should include an economic component;
- The purpose of the research should have an «use» aspect, failing that it is difficult to get the final user involved;
- The economic aspect could be reinforced through a collaboration with a Fablab where for example, the prototype made by the LL can be made on a small scale in a Fablab;
- The social component - Improving well being is essential.

The highlights of the work topics of a rural Living Lab:

- The economy of proximity: developing services/subsidies for people;
- New supply chains;
- Short cycles.

KEY RECOMMENDATIONS

1. Implement the necessary tools so that people who go through the goods process and grasp the principles: usefulness, transparency, a co-decision process (e.g. though a communication and an operational charter in order to avoid conflicts of interest);
2. Make sure that it is at an expert quality level, varied, multi-sectored and with sufficient funding for the duration of the project and right up to the end of the experiment.
    - ◊ Work with local resources
    - ◊ Raise awareness regarding local policies
3. Meet local needs by applying the living labs to the short cycles and/or to the local supply chains.

BRIEF SUMMARY OF THE PRESENTATIONS

FARMHACKNL: FROM DIGITIZATION IN AGRICULTURE TO INNOVATION OPPORTUNITIES FOR THE FARMER!

"We mobilise creative spirits so that data and technology works for farmers and agricultural data for the future of food". A true group leader, Anthony knew straight away how he could quickly convince his public of the effectiveness of multi-disciplinary groups who meet up for a few hours (maybe even a day!) in order to develop IT solutions in close partnership with the farmer. One of the objectives is to hack the data found in multiple tools of agricultural farming and which could be useful for producers. These experiences are done outside the commercial environment.

EU PROJECT H2020 IOF2020: MAKING PRECISION FARMING A REALITY

The IOF 2020 project is a European project with 71 partners, in 16 regions for a budget of 35 million Euros over the course of 4 years. Its objective is to encourage a large scale IOT (Internet of Objects) in the European farming and food sector.

It aims to:

- Demonstrate the profitability of the IOT in the farming and food sector;
- Reusing the available IOT technology and taking advantage of universal infrastructures;
- Ensuring the acceptability of IOT solutions by the user and meeting the user's needs and concerns;
- Ensuring the sustainability of the IOT solutions beyond the project.

Through different examples of enforcement, Chari Vandenbussche shows us the importance of a multo-stakeholder approach and a methodology combining business, ecosystems and technology. A system where the producer is the main concern.

WHAT IMPACT DOES PRECISION FARMING HAVE ON THE WORK OF FARMERS?

Precision farming seems to be a reasonably abstract concept for some farmers. Nevertheless, many sensors linked to software and communication tools make it possible for farmers to make decisions according to the information provided.
However, precision farming influences the producers work and their daily life (physical and mental well-being, the herd's behaviour, the points for improvement, stress, schedule, ...)

For example - the milking robot -, Amélie Turlot shows us a few results from her research on topics like the time and the contents of the job, the human-animal relation, the mental workload, etc.

SUMMARY OF THE DISCUSSIONS

Some data (see consumption of water by pigs) allows us to see whether an animal is healthy or not.
The Farmhack clients are varied but the agricultural producers are very demanding of this exchange and research system between different stakeholders. On average, one case takes three months to organise. In general, it is the state, a university or a ministry that pays the team and the organiser, not the producer. The project does not work on the causes of the reluctance of producers to enter into such projects. However, once it is designed, they are the most suitable for creating, sparking the interest of other producers. The projects are not always technology oriented but they are also market orientated, the implementation of a platform and the access (financial) to data depends on the technology. But some data could be rented (accessed for a certain period of time)...

KEY RECOMMENDATIONS

- Implement live labs to be developed in each country - a network among countries - for which the producers should have initiative but also be involved in the daily management.
- Well personalised/customised technology so that they can be adapted to the characteristics of each farm.
- Establish a useful data framework for farmers and create producers groups (by coupling skills ad hoc) in order to decide what is useful or not useful data and who can defend members together vis-à-vis the suppliers/builders.

BRIEF SUMMARY OF THE PRESENTATIONS

DIGITAL VILLAGE PROJECT IN GERMANY

This project concerns 5 municipalities of the Rhénanie-Palatinat; Dreis-Brück (850 residents, 18 km2), Betzdorf-Gebhardshain (26,000 residents, 74 km2), Eisenberg (13,000 residents, 63 km2), Göllheim (12,000 residents, 79 km2) and Steinwald Allianz (37,000 residents, 490 km2).

The first stage of the project was about "local supply" and the voluntary activities. So for this purpose, two applications were created:

- "BestellBar" - local market online:
  - ◊ Local merchants receive the orders in an online shop
  - ◊ Citizens can order their products online 24/7
  - ◊ The products are delivered that same day.
- "LieferBar" - flexible car sharing/delivery service
  - ◊ Citizens or "couriers" are in charge of deliveries in the neighbourhood
  - ◊ The application gives an insight into all the open deliveries
  - ◊ Citizens receive a payment in "DigiTaler" (local money) and exclusive rewards.

In the second stage, the project has developed different services (digital prototypes) like:

- "Dorf News", a news portal for local events:
  - ◊ Quickly informs citizens about local news
  - ◊ Relies on individual editors
  - ◊ Integrates local journalists, clubs and organisations
  - ◊ Centralises all the news of a region and an area.
- "Dorf-Funk", a local chat for all the questions on citizen's minds:
  - ◊ It's a means of communication in the neighbourhood
  - ◊ Citizens can ask for or offer help (for example, for renting tools)
- FahrBar is a tool for organising municipal mobility. It means you can:
  - ◊ Call to share a journey
  - ◊ See the request (meeting point/pick-up)
  - ◊ Organise voluntary shuttle services

WALLONIA SMART VILLAGE

Isabelle Rawart presented the declination of the "Smart Region" concept by Wallonia.
Why and how do you implement this kind of approach structured in a context with limited resources? How do you reduce possible friction between the regional approach (top-down - development of a common strategic outlook) and a local approach (bottom-up - supporting private, associative, citizen and municipal initiatives)?

Networking, innovation & intelligence

- Mapping out companies and projects on the Digital Wallonia platform
- Implementing a Smart City Managers Network and advisors
- Establishing Offer/Demand meeting events between companies and cities => emergence of the Smart Region project
- Specific action to raise awareness and educate
- Promoting public/private co-operation in an innovative way

The 3 main priorities of Digital Wallonia are:

- **Smart Energy & urban infrastructures** (intelligent management, internet of things, ...).
- **Smart Mobility** (sustainable, shared, communicative, multi-modal, ...).

- **Smart Living & Smart Governance** (single contact, open data, de-materialisation and e-services, bidirectional communication with the citizen, participatory application, ...).

The tools implemented by Digital Wallonia in order to support the "Smart Region" dynamic are:

- The "Smart Region" charter: promotes open data and the emergence of new companies through Big Data;
- Open data, as a driving force for innovative services;
- Projects supporting the dynamic through the "MarketPlace".

According to Isabelle Rawart, networking and sharing good practices is essential in the "smart" dynamic. It consists in promoting citizen's active participation and reducing the digital divide: the diversity of the stakeholders involved in a "smart" dynamic is important. The approach advocated by Digital Wallonia should make the emergence of a start-up and putting services online possible, the most common tool being the smartphone (the gateway). It is therefore worth developing useful application services through the aforementioned tool. In this context, the role of Wallonia is to promote the duplicability of projects and sharing practical and useful elements for the users. It is also a question of crossing the assets and the needs.

Not everyone needs to do same thing: the approach advocated by Wallonia is to promote a single investment (profitable critical mass) and to diffuse the solutions developed according to a bottom-up approach to innovation. It is worth playing on the coordination at a regional level (networking, raising awareness, mobilisation, education of and with the stakeholders in various fields) in order to organise themselves in to a partnership ecosystem. This approach allows them to add real value. .

DEVELOPING A SMART RURALITY BY ANALOGY TO SMART CITIES: HAPPY HAGELAND A DIGITAL TOOL TO OPEN COUNTRYSIDE

These days we do not live in a village but in a region. In this context, two questions fed into LAG Hageland's thoughts:

- How can we move on from digital frustration to digital happiness in our rural area?
- How could we connect local stakeholders to each other?

The LAG Hageland decided to raise these issues through the "Happy Hageland" project. It is a question of building a smart phone application for the rural area of Hageland (20 municipalities of the Flemish Brabant) by creating a mobile digital platform with geo-localisation and web exploration technology in order to give the user information at different levels:

- Commercial
- Tourism
- Administrative

In order to put the Hageland region under the digital projector, both for residents and visitors, different features were made:

- Creating calendars
- Search function based on geo-localisation and proximity
- Sharing results by email/social media
- Recording events to create a digital calendar
- Add to favourites
- Following local organisations/businesses
- Push messages feature
- Integrated QR code scanner
- Recording data for analysis and recording reports for supporting policies

Today, the challenges that "Happy Hageland" faces are:

- Confidentiality policies (conforming with the RGPD and the approved written deceleration of confidentiality)
- Partnership agreements (data processing and responsibilities)
- Development through design (think before taking action and verify before throwing yourself into it)
- The development speed of the tool (technology, project organisation, partner initiatives)
- Promotions (target group, budget, partners)

SUMMARY OF THE DISCUSSIONS

How can we avoid excluding population groups when we are living "all digital"?

Ironically, elderly people, the first people we think of in terms of the digital divide, are very involved. The digital divide could refer more to other individuals, like single women, for example. The solutions are different according to the size of the region and even if the needs are similar.

How can we make sure that the projects are not redundant?

- The approach developed by Digital Wallonia, via brand, platform, digital strategy makes it possible to reduce the risk;
- A "smart" project takes 3 years to build with citizens. At the start, 30% are opposed;
- A "smart" approach backed by the LAG allows them to bring energies together and avoid the spread of initiatives at are too local and too expensive.

The funds necessary for the "smart village" project depend on the kind of project. For example, Hageland (launch 10/11/17) has 3,500 users today (1.5% of the whole population of the region), and reaches out to 20 municipalities. The budget mobilised is 220,000 € of which 40,000 € is dedicated to "digital" development the rest will continue to be used to fund communication.

KEY RECOMMENDATIONS

- Developing smart schools in order to raise citizen's awareness about the "smart" approach;
- Implementing "ambassador" projects in order to spread good "smart" practices, create a catalogue of exemplary "smart" projects, good practice guides and leaflets to illustrate the added value of "smart" projects and to develop communication tools on the topic;
- Technological choices and the "smart" projects should be developed based on the social needs of the residents of the region in question;
- Improve the connection (broadband) so that the "smart" project can be developed;
- Good governance: guaranteeing the neutrality and transparency in the management and the protection of personal data (avoid political exploitation);
- In order to save time, organise hackathons to develop the smart region's tools (exists in Wallonia, but has multiplied);
- To promote inter-regional co-operation between municipalities to avoid competition and to include all levels of pertinent regions.

WORKSHOP 11 – COCREATION THROUGH DIGITZATION

BRIEF SUMMARY OF THE PRESENTATIONS

LUDGATE HUB, IRELAND : ATTRACTING HIGH- PROFILE (DIGITAL) BUSINESSES, CREATING LARGE-SCALE EMPLOYMENT, REBRANDING THE TOWN OF SKIBBEREEN

The digital divide is a reality that affects rural areas, creating a widening gap in terms of access compared to urban areas., creating a constantly increasing divide in terms of access in urban areas. The cause: a lack of broadband connection and a lack of digital skills. In order to fix this problem, the Ludgate Hub, a digital hub was created in 2015, in Skibbereen. The initial support of public authorities came in 2017. The Ludgate Hub's objective is to revive the city by making it more attractive to a population that needs to be connected: amongst other things, the hub offers coworking, sharing skills and a 1 GB connection. Besides the revitalisation of the city, the project aims to revitalise the whole region of West Cork long term.

COCREATION PROJECTS OF THE WALLOON LAGS

The local authorities of Marche-en-Famenne founded a creation centre "e-Square" in order to promote digital creativity and to create a digital community. A space is now available for coworking, training and a FabLab. In collaboration with e-Square, the GAL RoMaNa launched a new web TV (the famous WebTV) and a digital innovation and creativity strategy.

Regarding the GAL Meuse@campagnes, this encourages citizens to express themselves by digital means and this is in order to:

- facilitate relationships between those elected and the population
- supporting citizens' dynamics
- federate and become a tool of social cohesion.

It is a question of associating citizens with regional governance and finding a balance between a top-down approach (strong incentive for local authorities who want to prioritise digital citizenship), and a bottom-up approach (citizen's initiatives who sustain and use the tools set up).

PILOT PROJECT : SMART ECO-SOCIAL VILLAGE

This European project has the following objectives:

- Map out the actual challenges that European rural areas are faced with and how to boost the development of these rural areas.
- Develop a definition of Smart Villages and getting to know their characteristics, motivations and success factors.
- Focusing on the practical solutions in order to resolve the challenges and improve the situation in the villages.

- Present good practices which could provide pragmatic solutions for rural villages, using new or existing tools to promote development.

SUMMARY OF THE DISCUSSIONS

The significance of an approach depends on numerous success factors, such as:

- Relying on pre-existing social groups at its launch like youth movements;
- Knowing the needs of the region and identifying what interest participants could have in the SMART approach. Creating a tool that meets real needs is necessary;
- Offering added value for the user (for example, the possibility of working at a lower cost);
- Communicating: essential for presenting a project to citizens and for facilitating its appropriation.
- In this regard, it is wise to go through certain stages, like opinion leaders. We can play on a snowball effect to diffuse information;
- Trust the users, don't lock them in, promote participation and do not put too many breaks on the process. And this includes access to data and to tools themselves.

To sustain a SMART approach and instead of creating new structures, which need to be funded, the projects should be able to make the most of what already exists and creating links to mobilise skills which are already in the area. From this point of view, the diversity of funds (public-private) offers more of a guarantee. It is the best way to make sure that citizens appropriate the tool.
The project also needs to be inspirational for citizens, politicians, different stakeholders, … it is also very important to have local authorities that support the project. The make the link between "top and bottom".

In the approach, with digital tools, you need to remember that:

- Digital technology is simply a tool to meet the needs identified: the tool is not an end in itself.
- The SMART tools are not suited to everyone, but it can help to have a variety of tools to reach out to citizens in terms of communication.

KEY RECOMMENDATIONS

A SMART project needs an eco-system, with an effective network which is the definition of HUB. Ideally, you would create links that multiply to the maximum, from a central point: a robust, communicative community. We also noticed that in all successful projects, there is always a link: a significant place, a project, a personality…

- SMART makes it possible to customise, given that not every tool is not suited to every region. Digital technology is simply a tool to support a regional development strategy.
- The added value for the user (and not to the creator) can of course increase participation and citizen involvement.
- A centralised idea, a location, a personality, … can embody the project and multiply it. Other people will create the support group for the project and the enable the project to develop.

WORKSHOP 12 - AGING POPULATION: SMART INNOVATIVE SOLUTIONS AND NEW SERVICES

BRIEF SUMMARY OF THE PRESENTATIONS

SOCIAL INNOVATION FOR ACTIVE AND HEALTHY AGING: EUROPEAN CASE STUDIES - BELGIAN IMPLEMENTATION OF TURBO MODELS, PARTICIPATORY MODEL OF A SENIOR'S RESIDENCY

The King Baudouin Foundation (*Fondation Roi Baudouin, FRB*) mapped out 220 social innovations in the field of ageing actively and in good health, 6 topics were highlighted: accommodation, ageing, intergenerational, independence, employment, health and voluntary work. Amongst the findings from the analysis, the FRB highlights the following elements:

- Major innovations should be simple;
- Innovative initiatives recognise social issues;
- Users are part of the creation of the innovation;
- The innovation creates new kinds of voluntary involvement;
- The innovations should use the evaluation tools focused on the impact.

Among the 220 initiative analysed. The Turbo Models, a model imported from Sweden, was implemented by 6 care homes. The objective is to put some sense back into meeting senior's needs, where the participatory promotes the delegation of responsibilities.

This model is based on the following principles:

- The resident is the main stakeholder of the home, their life plan and is not the object thereof.
- The care home is their home: the natural continuation of their last residence.
- The relationship is the main priority.

In terms of organisation, this leads to a de-compartmentalisation of the functions and a bigger motivation, which falls into a democratic process for staff and residents who develop a culture of entrepreneurship and more management independence, and thus savings.
The results for the residents are more independence and a better quality of life, the feeling of being heard and useful, the reduction of a feeling of insecurity and improvements in situations objectively observed. The participation of residents and the collaboration with staff concerns the developments, organising activities and events, the caring process and budget management.

Translated into daily and concrete actions, this model offers numerous advantages, including:

- Giving them space to express themselves and reducing the feeling of breaking down
- Giving them a similar feeling of independence as they would have at home but then in a community setting
- The relationship is based on us and not on «them», which leads to less distance between the professional and the resident
- A quality approach
- Reducing the feeling of insecurity
- Results objectively observed on national comparisons
- A better quality of life at work and greater staff satisfaction
- Savings

FRAIL-SAFE EUROPEAN PROJECT: DELAYING FRAILTY BY COMBINING MEDICAL DATAS AND TECHNOLOGIES

In 2060, 30% of the world population will be 65 years old and older, compared to 17,4% in 2010.
From this perspective and from the aspect of living longer without getting ill, the use of digital technology makes data mining possible (better understanding the medical data and symptoms collected from a quantitative and qualitative aspect), to work on the augmented reality, to develop «serious games» capable of detecting symptoms thanks to intelligent textiles (Eg. Smartvest for collecting real time data). In a rural

area this makes monitoring, a medical follow-up from a long distance possible and for people to follow the recommendations proposed by the system.

EUROPEAN MOBILE AGE PROJECT: WEB APPLICATION CO-CREATION ON 4 PILOT SITES INCLUDING A RURAL ONE LOCATED IN THE NORTH OF MANCHESTER

This European project aims to co-develop mobile applications because of the use of open data based on the needs in mobility and access to services, to activities, etc. The methodology adopted is the co-creating of applications with seniors on various subjects: designing safe and enjoyable paths, access to events, identifying the quality of the urban environment for daily commutes (e.g. specific layouts), access to healthcare, ... the stages of co-creation are part of an open, contextualised, participatory and repetitive approach (process flexibility) and made the creation of a co-creation guide possible (tools and open data) and an online platform, (helping development).

SUMMARY OF THE DISCUSSIONS

Ageing should not be approached in terms of problems, but also from its positive aspects, for example, the concepts of active ageing and of senior's citizenship.

Thus, in terms of the caring for the elderly in residential care homes, and in preparation for their involvement in the organisation of daily life and activities, it is important that we stop talking about beds and start talking about residents, and focus on the people again. Getting seniors involved in the management of the residential care home is an approach that requires the worker's support and it definitely substantially changes the relationship between residents and the workers, as well as the hierarchical relationships in the institution.

Smartvest is a technological vest which allows us to collect data instantly on the health of the individual. At this stage, the real question is how is it going to be spread around.

The co-design of the Mobile Age app is done with the users according to their needs and profiles, in order to find an approach in accordance with the service provided which therefore could reach more people.

The innovations should benefit everyone.

KEY RECOMMENDATIONS

- The innovations should benefit everyone since ageing happens to everyone.
- The use of digital technology should make sense, contribute to increasing solidarity, it shouldn't replace the human factor.
- Think about change at an organisational, management level as well as an infrastructural level, in order to take the diversity of stakeholders into account and to give everyone the power to make their own decisions in what concerns them and what they control. This means seniors also need to be involved in the use of the data, based on a feeling that it is of benefit to them, and making the added value obvious with regards to real needs.
- Really focusing on the elderly people again and promoting their participation, by enabling different people to work together through digitalisation and know-how.

WORKSHOP 13 - AGRICULTURE AND FORESTRY COPING WITH CLIMATE CHANGE

BRIEF SUMMARY OF THE PRESENTATIONS

ECOLOGICAL FILE OF FOREST TREE SPECIES - HTTPS://WWW.FICHIERECOLOGIQUE.BE

The ecological map of forest tree species is a tool to help make decisions that allow forest and nature reserve management officials to determine the balance between variety and location.

In fact, the ecological map of forest tree species has existed for 25 years already, in paper format, then the time came to rejuvenate it: climate change means that there is a limited choice of species that can be planted and it also reduces the amount of options available. We need to progress towards what is best => we need strict information for the most rigorous/best decisions.

The ecological map of forest tree species compiles lots of data. It is accompanied by a video tutorial in order to help the user use the tool:

- The site makes it possible to pinpoint their exact location all over Wallonia;
- It makes it possible to view various kinds of maps (arial views, IR, Natura 2000, climate zones, exposition, soils, etc.) and it makes it possible to play with the transparency of these different layers;
- The tool makes the design of a plot of land => localisation of factors which have an impact on the species' ability to develop;
- The parameters (water and trophic content) can be modified according to the soil observations (the goal: corresponds with reality);
- The site makes it possible to identify the species that are more adapted to the position concerned and makes it possible to compare species => sequenced information (natural distribution, ecology, kind of development, etc.). Around 50 species are documented at the moment.
- The site also makes it possible to «educate» users through an information section and offering them the option to download a small report on the analysis carried out => Summary of the varieties' behaviour in terms of climate change through symbols.

PRACTICES, INNOVATION AND RESILIENCE OF AGROECOSYSTEMS FACING CLIMATE CHANGE - FARMING'S IMPACT ON CLIMATE CHANGE

A need to start thinking about greenhouse gases and farming in order to promote thought on the ways that could help reduce the impact of farming on climate change (14% of greenhouse gases are produced by farming).

The increase in greenhouse gases leads to the implementation of regulations, action plans, incentives that aim to estimate and/or reduce the impact of human activity. The Air Climate Energy Plan Wallonia (*Plan Air Climat Energie wallon*, *PACE*) 2016-2022 includes 142 measures to reduce greenhouse gases by 40% (in comparison to 1990) by 2030. There are 4 main points regarding farming:
Point 1 - sustainable management of the inputs
Point 2 - promoting the use of fuels that are more neutral from the environmental aspect
Point 3 - regional management
Point 4 - improving the energy and environmental effectiveness of farming

The part linked to production represents at least 50% of the carbon footprint of food products. In this context, creating an assessment (greenhouse gases, energy) would enable:

- to see where you stand, see which positions have the most emissions and implement new practices;
- evaluate the environmental impact: procedure, product, sustainability of the farming products;
- to take the region's special features and the carbon credit into account (ER, pastures,...).

Hence why the DECIDE tool was developed, a greenhouse gases, direct and indirect energy, renewable energy, assessment tool and ammoniac emission assessment too available for cash crops or cattle farming. It will soon be available online for monogastric animals.

The DECIDE tool makes it possible to explore the ways to reduce greenhouse gas emissions (forages, use of fertilizers and spreading techniques, etc.). Nevertheless the greenhouse gases remain complex (an important variability). It will also be necessary to integrate the economic and social indicators soon.

THE IMPACT OF CLIMATE CHANGE ON AGRICULTURE

The climate is a major factor that influences how farms are run, it has always been this way. Farmers have relied on this factor for developing balanced agrarian systems in different agro-ecological regions of Wallonia. Today, one finding: global warming with impacts on farming. The harvesting date of numerous crops has changed and it is a difference of about 20 to 25 days compared with 1988 (temperature effect - modelling).

Some of the impacts:

- Evolution of the distribution zones of the species (crops, weeds, auxiliary insects or pests);
- Extreme climate events, when they occur, have a profound impact on the agro-ecosystems. They are more intense and more often (heavy rain, hail, late frosts or a lack of rain => drought). The risks associated with these extreme events depend on the hazards and its characteristics (spatial and temporal occurrences, intensity) and the vulnerability of the system which is interfered by these hazards. These elements will determine the risk of climate change and the extent of their impact on farmers (crop and feed yield, impossible to harvest) and for society in general (mud slides, fertilisers in surface water, ecological consequences)

Since we cannot risk the occurrence of these hazards and characteristics, we should try to reduce the farm's vulnerability in order to limit the consequences of the extreme event. Different adaptation factors exist: making the most of the soil's characteristics (carbon count, structural stability), fertilisation, soil drainage, planting or harvesting season, "no night grazing", choice of breed, diversification of the productions, choice of varieties, diversification of crop and inter-crop rotations, minimising soil disturbances and increasing soil coverage, etc.

How to adapt: resilience (function recovery) vs resistance (collapse of the systems).

SUMMARY OF THE DISCUSSIONS

The ecological file is evolutionary tool which integrates changes in terms of the last climate data available. It's a legal tool: we must comply. We need to work with the best species indicated by the tool, otherwise there will be a request for exemption submitted to the Nature and Forest Department => binding in nature.

The tool does not provide a model and does not provide predictive data. But in the long term, it should be possible to develop predictive maps in terms of needs.

The ecological file of forest species, takes illness into account. In the long term, it will also provide a list of the species which are an option in the future.

The measure of the vulnerability of an area involves collecting information, modelling and an inventory of practices to compare.

The climate aspect of the agro-environmental measures is not developed in a day. The DECIDE tool should be integrated long term in order to be a tool that helps decision-making and supports the farmers who contribute to the fight against climate change. But beware, this is not about using this work to add more norms.

The DECIDE tool is available for free online by requesting access (http://decide.cra.wallonie.be/fr) and is not know by all farmers.

KEY RECOMMENDATIONS

- Raise farmers awareness about the impact that climate change has on their activities and vice versa.
- Encourage energy assessments
- Maintain organic material and soil health through TCS, MAEC, AF, permaculture, etc. and by using decision-making tools
- Develop the research of old varieties adapted to climate change, in the big data
- Promote/popularize ecological associations and diversity by visiting farms and forests (analysing the functions and the resilience of ecosystems to climate change)

WORKSHOP 14 – DEMOGRAPHIC EVOLUTION: INNOVATIVE APPROACHES

BRIEF SUMMARY OF THE PRESENTATIONS

SUPPORT FRAILY SENIORS AT HOME. JOIN LOCAL FORCES

To what extend is the neighbourhood a central link in the support of vulnerable elderly people living at home? Answered via a SWOT (strengths-weaknesses-opportunities-threats) analysis.

Strengths

- Meeting on a formal-informal level
- Human aspect (its someone you know)
- Proximity of the offer and the request
- Proximity = fewer barriers
- Vigilance and alerts are easier to organise
- Less mobility is necessary
- Helps to support caregivers

Weaknesses

- Availability of expertise
- Complex needs
- Complexity and fragmentation of the offer
- Lack of social cohesion in neighbourhoods
- A lack of attention to ageing in many domains

Opportunities

- Co-operation and co-ordination
- Self-management of teams
- A need to invest in more cohesion in neighbourhoods
- Active seniors
- New technology
- Promoting another image of ageing

Threats

- A tendency towards centralisation, to critical mass research
- Intrusion of privacy
- Ability of elderly people
- Not an economic model, no economic incentive

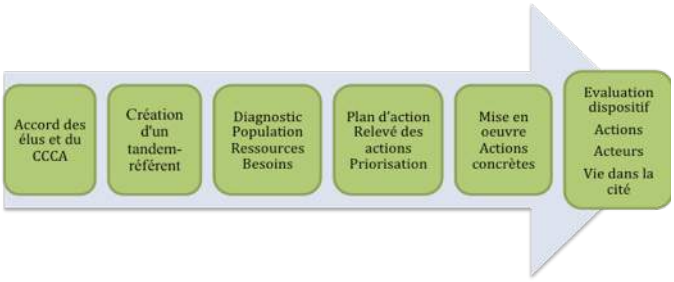
CITIZENSHIP AND SENIORS' HEALTH IN RURAL AREAS. « WALLONIE AMIE DES AÎNÉS »: AN INNOVATIVE TOOL?

Wallonie Amie des Aînés (WADA) is an action research aiming to develop an integrated methodological approach to promote "municipality friends with the elderly". 6 pilot municipalities participate in this action research – Malmedy, Farciennes, Braine-l'Alleud, Vaux Sur Sûre, Namur and Sprimont.

This action research resumes the 8 fields of action as defined by the WHO - outdoor areas and building, transport, habitat, social participation, respect and social inclusion, social and citizen engagement, communication and information, community support and health services.

A city or municipality friends of the elderly is a city/municipality which aims to:

- Promote active ageing;
- Reduce ageism;
- Change policies, services and structures according to seniors needs and priorities;
- Take action in a complete and integrated way;
- Promote citizens and seniors' participation;
- Rely on dialogue and mobilisation of the whole community.



The process consists in 6 stages and is built according to:

- The local reality;
- The history of the city;
- The past and current action of seniors;
- Individual, political and administrative challenges, etc. ;
- Local stakeholders.

SUMMARY OF THE DISCUSSIONS

The main risks are the fight against isolation, quality of life (incl. mobility, the appropriate habitat,...) access to services and health.

A regional policy for seniors should combine a neighbourhood approach and more broadly a city/municipality approach. Both approaches are complimentary. It is the environment that makes the difference: either there is an ability to be a stakeholder of the solution or it is the cause of the issue. As a consequence, all projects/processes concerning seniors should integrate them in order to keep in mind their abilities and to motivate them. Everyone should participate according to their abilities and their wishes.

Raising awareness about ageism is necessary to better plan ageing at a regional level and to promote a different image of ageing. Ageing is not a problem to be solved. This would benefit everyone.

KEY RECOMMENDATIONS

- Based on local needs to maintain an "interlocking", an anchor at different levels (neighbourhoods, municipalities) => changing WADA to "Amis des Âges et des Ainés" (Friends of Age and Seniors) in the strategic transversal plans, the Municipal Advisory Committee for the Elderly. Creating intergenerational municipal advisory committees.
- Expanding administrative roles to include a more human touch to make them life assistants.

WORKSHOP 15 - ENERGY TRANSITION AND SUSTAINABLE DEVELOPMENT

BRIEF SUMMARY OF THE PRESENTATIONS

CONDROZ ENERGIES CITOYENNES, A COOPERATIVE THAT DEVELOPS PROJECTS IN THE FIELD OF RENEWABLE ENERGIES (HYDROENERGY OR BIOMETHANISATION)

The hydro electric projects endeavour to develop in Wallonia. Changing rules, profitability and most of all energy sources, fear and concerns with regards to innovative projects, there seems to be many explanations. Nevertheless, as Hervé Pirard explains, there is not a lack of opportunities and especially at the level of potential sites. And proposing some thought pathways but also insisting on revaluing an important patrimony and local (sentimental) attachment to the potential sites.

COPO, A COMPANY TRANSFORMING GREEN WASTE INTO BRICKS

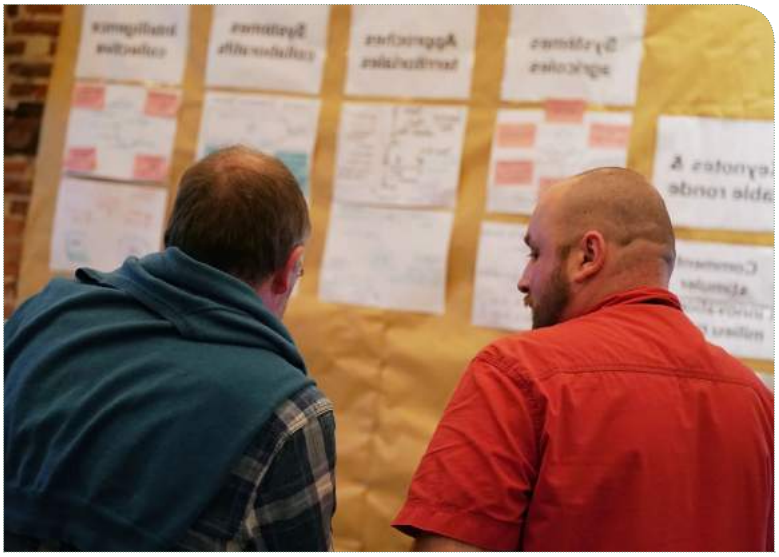
Frédéric Janssens is a logger and value a part of forest cut into briquettes. According to him it is important to ensure a constant quality in order to offer a good fuel. Although the tree specie plays an important role in the quality, the grinding, the humidity levels, the screening also play an important role. There could be multiple sources (deforestation for new allotments, maintaining roadsides, ...) and therefore it is essential to find collaborations between private and public partners.

COOPEOS, A CITIZEN'S CO-OPERATIVE OF LOCAL BIOMASS FOR SUSTAINABLE HEATING

With this slightly provocative title, Xavier SOHET shows us first hand the issues in terms of energy as much on the climate as on the choice of the kind of energy.

Amongst the various missions of GAL "Tiges et Chavées", the development of green energy is very important in their programme. Their goal: "To create one, or more than one, sustainable production chains of renewable energies, from local resources and wood biomass, to meet the local energy needs, by local economic stakeholders" In order to evaluate this resource, a random innovative sampling tool was put in place to evaluate the potential of the whole area for biomass energy.

In more concrete terms, the boiler in a communal building is powered by the briquettes of collected, grinded, dried and sieved wood from the municipality itself. The sieved wood is also used in order to optimise this green gold.



SUMMARY OF THE DISCUSSIONS

The collection of green waste should remain manageable and easy to organise. According to these two criteria, the scope of action should be limited to a radius of 100 km. Besides, using all kinds of wood limits the scope even more. The cost of production of the briquette is half that of the pellet.

Apparently, in Sweden, hydraulic projects also strike a legislation and ecological constraints which are more and more complex. In Wallonia, the low water level of rivers and the tests carried out by water production companies reduce the profitability of hydraulic energy. Hence why the projects are often limited to individual projects (self-consumption).

KEY RECOMMENDATIONS

- Project development should be based on scientific research to promote partner's trust.
- Promote and foster development and a public-private partnership.
- Involve more citizens who receive energy in the projects, in order to become a cooperator and to not simply be a user. Promote the existing tools more.

WORKSHOP 16 - COMMUNITY-LED INITIATIVES

BRIEF SUMMARY OF THE PRESENTATIONS

THE CATL FOOD AND LAND BELT, A DYNAMIC MOBILIZING THE VITAL FORCES OF THE LIÈGE REGION AROUND THE CREATION OF A LOCAL, ETHICAL AND SUSTAINABLE FOOD CHAIN.

The Food and Land Belt in Liège (*La Ceinture Aliment-Terre Liègeois*, *CATL*) defines itself as a mobilisation project of driving forces of the region of Liège, which enables the development of a short and ecological food sector and creates quality employment. In order to achieve their goals, they simultaneously opened many decaying construction sites based on a plan of action on the following subjects.

- Creating a city-village alliance;
- Facilitating access to property;
- Developing the information sector and support for launching farming and entrepreneurial activities;
- Building the logistics of the local food chain in a short cycle;
- Add the missing links in the local food chain;
- Ensure the funding of projects;
- Raise awareness and educate them about the risks associated with food (health, ecology, etc.): 2 editions of Feeding Liège (*Nourrir Liège*) and a case study on the quality of our food: the endocrine disruptors;
- Mobilise political and institutional stakeholders;
- Promote citizen participation "multi-dimensional"

Amongst the projects running, we noted the creation of a productive resources counter in order to pool the best materials, equipment and land. It was supported by the AEI, for the spin-off of the short cycle in Wallonia and enriched the "agriculture" part of the Development plan for the district of Liège and is beneficiary of the Créafarm project (made available to properties by the city of Liège).

CITIZEN TRANSITION DYNAMICS IN THE ROCHEFORT REGION

The goal is to rebuild local resilience by developing local abilities to react to crisis/upheaval, in a citizen's, collective and local approach. In addition many topical work groups were created:

- Supporting existing or potential local producers.
- Fundamental farming questions,
- Education,
- Local citizen's currency,
- Seeds,
- Mobility,
- Habitat and isolation.
- Energy.

Amongst these concrete projects, we note:

- The creation of a monthly farmer's market "touring" (since 2011);
- The creation of the school École des Petits Chemins for a participatory and open education for everyone (started in 2016)
- Starting up a complimentary local citizen's currency (in 7 municipalities): Le Voltî – 10/2016 ;
- Launching a weekly market for local products (April, 2017).

Its innovation? It is based on an ambitious and pragmatic question, working on the attitude and the responsibility of citizens and giving the way they work on the contents the importance it deserves, as well as taking the principal of Chinese bamboo into account (time to mature is necessary).

PARTICIPATORY BUDGET: LESSONS FROM THE EMPATIA PROJECT (ENABLING MULTICHANNEL PARTICIPATION THROUGH ICT ADAPTATIONS), PORTUGAL

EMPATIA is a European project that aims to identify and analyse the examples of a participatory budget (PB) for the purpose of extracting good practices. The principle of a participatory budget is to allow citizens to decide how part of the municipal budget is used. Each PB follows the following steps:

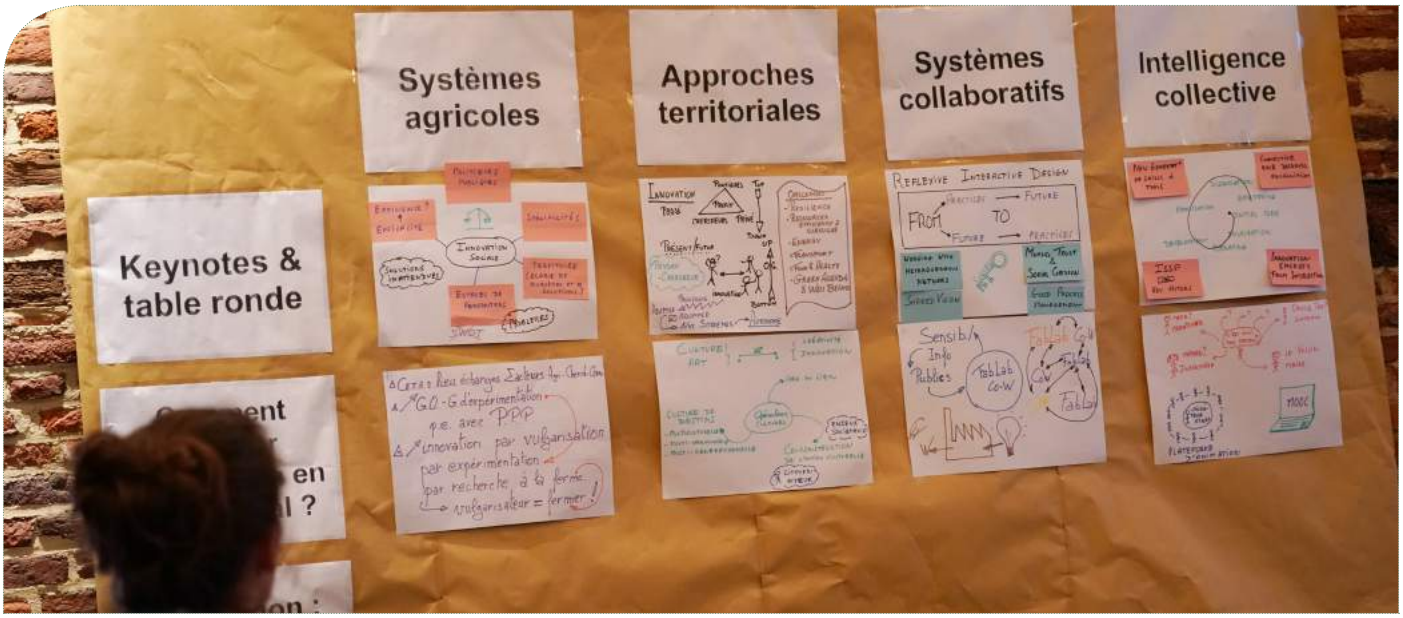
Citizen's meetings > Collecting propositions > Analysing the technical feasibility > vote on the projects > public presentation of the results > Implementing the approved projects

Scrutinizing participatory budgets was also an analysis of the systems that allow citizen's participation, including digital participation and communication. The digital platforms in the PB promote greater involvement for more people, including those who do not normally participate in this kind of process due to of a lack of time. Digitalisation means you can save time and it costs less.

Amongst the issues encountered during the implementation of PB:

- The lack of a clear vision regarding the societal, behavioural or structural changes desired
- The financial structure; where is the money coming from? Is the budget correctly evaluated?
- A lack of follow-up
- No evaluation of the social, behavioural or structural impacts of the PB on citizens.

The well-designed systems increase transparency and a sense of responsibility, the citizen's understanding of the function of the PB, as well as a better understanding of the citizen's needs.



SUMMARY OF THE DISCUSSIONS

- The sustainability depends on the quality of the partnership and the funding promoting a public-private mix.
- Using the right format to present a project, in order to get credible support.
- Relying on constituency groups and/or using individual approaches.
- Sustain support groups, ensure they are renewed.

KEY RECOMMENDATIONS

1. Connecting public authorities to initiatives
2. To keep people engaged, to follow-up and to give feedback on the progress and results and to show the added value for each stakeholder.
3. Co-create the rules of the game, prioritise a co-governance committee.

PART III
REPORT ON THE PLENARY SESSION REGARDING THE RESTITUTION OF THE RECOMMENDATIONS DISCUSSED IN THE WORKSHOPS

PART III - REPORT ON THE PLENARY SESSION REGARDING THE RESTITUTION OF THE RECOMMENDATIONS DISCUSSED IN THE WORKSHOPS

SUMMARY OF THE KEY RECOMMENDATIONS

WORKSHOP 1: INNOVATION SUPPORT, THROUGH CASE STUDIES (EXPERIMENTAL FARMS) AND BY ENTRUSTING THE POPULARISATION ROLE TO THE FARMER.

- Relying on Research Centres on Farming Technology (*Centres d'études techniques agricoles, CETA*) to develop multi-stakeholder exchange and information places, involving the farmers, the researchers and the consumers.
- Promoting operational groups for experimenting by building on the public/private partnerships.
- Promoting innovation by building on the results of the experiment, through cases experienced (farm experimentation) and entrusting the role of popularisation to the farmer.

WORKSHOP 2: CULTURE AND CREATIVITY IN RURAL AREAS

Culture and art in particular are undeniable vehicle for creativity and innovation. That is why the cultural operator plays an important societal role in the region: they create a link between people, artists, associations, local companies, etc. it promotes the development of co-built cultural projects/experiences (where the citizen becomes an important player in culture), as well as the development of a culture destined to mix the whole population (rural/neo-rural, foreign population, ageing population, ...) and all of their different patrimonies.

WORKSHOP 3: FABLAB AND COWORKING

- Raising awareness and informing the public about the Fablab and coworking approach, especially in order to reduce the fear of competition and to domesticate these new concepts.
- Networking Fablabs and coworking to pool knowledge, good practices, ...
- Developing these new tools as real economic models based on the local needs to lead to added value and employment.

WORKSHOP 4: SKILLS AND JOBS

- Raise young people's awareness of professions during their school years, from skills and professions to extended family, seeing the community, in order to assure the transmission (or the knowledge of certain professions).
- Promoting the emergence of devices for regional life that are multi-stakeholder, joined-up, able and focused on the final user.
- Implementing courses online on entrepreneurship (e.g. MOOC) as well as support and/or mentoring tools.

WORKSHOP 5: TECHNOLOGICAL INDEPENDENCE

- Creating a network of groups of farmers: exchanging plans, ideas, self-building.
- Basic training for farmers: welding, etc.
    - ◊ Making it possible to value self-building
    - ◊ Through a training vouchers system
- Encouraging the repair of old machines
    - ◊ The value of sharing techniques
    - ◊ Farming repair café
    - ◊ Help and support workshops + Agri-Fablab

WORKSHOP 6: LOCAL FOOD SYSTEMS

- Implementing new alliance requirements “Public authorities & citizen’s initiatives activists” who are more balanced and fair.
- We need to DO not just SAY. Take action straight away in economic development but based on shared values. Initial conditions: a support group and a region to make sense of this.
- We need to learn how to communicate, especially how to celebrate, create a link between project & pleasure (motivation).

WORKSHOP 7: CIRCULAR ECONOMY

- Show concrete examples and achievements (the perspective of producers for the technology) in order to:
  - ◊ To make consumers aware of the possibilities of using waste for their valorization as a new productt;
  - ◊ Encouraging them to bring their own raw materials.
- Change the legislation in order to make it possible to consider waste and the end process as a raw material.
- Change the process to guarantee the profitability of the circular economy long term through help (e.g. biogas production).

WORKSHOP 8: LIVING LABS

- Implementing the necessary tools in order to make it possible for those going through the process to really grasp the principles: usefulness, transparency, co-decision process (e.g. through communication tools, an operation charter in order to avoid conflicts of interest).
- Ensure quality at an expert and multi-sectoral level as well as sufficient funding for the whole duration of the project.
  - ◊ Working with local resources
  - ◊ Raising awareness among local politicians
- Meeting local needs by enforcing living labs to short cycles and/or to local supply chains.

WORKSHOP 9: AGRICULTURE 4.0 / SMART FARMING

- Implement live labs to be developed in each country - a network among countries - for which the producers should have initiative but also be involved in the daily management.
- Well personalised/customised technology so that they can be adapted to the characteristics of each farm.
- Establish a useful data framework for farmers and create producers groups (by coupling skills ad hoc) in order to decide what is useful or not useful data, and who can defend members together vis-à-vis the suppliers/builders.

WORKSHOP 10: SMART REGION AND VILLAGE

- Developing/implementing “smart schools” to raise citizen’s awareness from a young age about SMART.
- Large diffusion of pilot projects as ambassadors and leaflets on the added value of the SMART approach or projects.
- Paying attention to preserving/promoting the social aspects of the SMART tools developed.

WORKSHOP 11: CO-CREATION BY/FOR DIGITAL TECHNOLOGY

- SMART makes it possible to customise, given that not every tool is not suited to every region. Digital technology is simply a tool to support a regional development strategy.
- The added value for the user (and not to the creator) can of course increase participation and citizen involvement.
- A centralised idea, a location, a personality, … can embody the project and multiply it. Other people will create the support group for the project and the enable the project to develop.
- The perpetuation of a SMART project also works in terms of budget, on a private-public approach: not only relying on public funds, while keeping public authorities involved.

WORKSHOP 12: AN AGEING POPULATION, NEW SOLUTIONS

- The innovations should benefit everyone since ageing happens to everyone.
- The use of digital technology should make sense, contribute to increasing solidarity, it shouldn’t replace the human factor.
- Think about change at an organisational, management level as well as an infrastructural level, in order to take the diversity of stakeholders into account and to give everyone the power to make their own decisions in what concerns them and what they control. This means seniors also need to be involved in the use of the data, based on a feeling that it is of benefit to them, and making the added value obvious with regards to real needs.
- Really focusing on the elderly people again and promoting their participation, by enabling different people to work together through digitalisation and know-how.

WORKSHOP 13: AGRICULTURE AND FORESTS FACING CLIMATE CHANGE

- Promote/popularize ecological associations and diversity by visiting farms and forests (analysing the functions and the resilience of ecosystems to climate change)
- Improve the organic matter and soil health by simply working on the soil, agro-forestry, permaculture… and tools to aid ad hoc decisions (like for example the ecological file).
- Develop the research of old species adapted to climate change, especially thanks to big data

WORKSHOP 14: DEMOGRAPHIC EVOLUTION, NEW APPROACHES

- Based on local needs to maintain an “interlocking”, an anchor at different levels (neighbourhoods, municipalities)
- Changing the name WADA to “Amis des Âgés” (“Friends of the Elderly”).
- Valuing and renewing the participation in the different municipal devices: strategic transversal plans, the Municipal Advisory Committee for the Elderly. Creating intergenerational municipal advisory committees.
- Expanding administrative roles to include a more human touch to make them life assistants.

WORKSHOP 15 : ENERGY TRANSITION AND SUSTAINABLE DEVELOPMENT

- To promote the partners trusts, basing energy project development on valid scientific research, but all the while trying to save means.
- To promote the involvement of as many partners as possible, starting from the most symbolic pro-

jects from a local attachment, the environment and patrimony perspective.
- Promoting mechanisms which make it possible for the final user to participate in finance (e.g. a house connected to the central heating = direct co-operator; co-ooperator of a citizen's co-operative = client of a co-operative supplier).

WORKSHOP 16 : CITIZEN'S INITIATIVES

- Partnerships between public authorities and citizen's initiatives, this promotes support and collaborations.
- Trying to keep the motivation up:
    - ◊ Follow-up and monitoring + feedback
    - ◊ Identifying the added value for all the stakeholders
- Explaining the rules of the game and co-creating with all stakeholders and establishing co-governance places (committee).

SPEECH BY JOSÉ RENARD, MINISTER RENÉ COLLIN'S JOINT OFFICE MANAGER, RESPONSIBLE FOR AGRICULTURE

What makes Wallonia unique is that it is one of the rare regions to have a minister who included rural areas in his mandate and has since paid a lot of attention to all the impacts of all the decisions made regarding rural areas.

The **current context is complex** since new negotiations on the CAP are underway. According to a few people, the EAFRD will be pushed aside in budget efforts, Brexit is digging a hole into the European budget and, possibly due to a lack of audacity and/or imagination, the European Commission especially proposes reducing spending on the two main policies financed by the European budget: the policy on cohesion and the CAP. Within the CAP, in order to avoid provoking too much protest, the direct payments will be less significantly affected. The costs will be directed to the Second Pillar with significant reductions, and the split between Member States is still not known. So, yes, it will be difficult to maintain these measures. It is therefore essential that at the next PwDR development, we show innovation and intelligence. If the word existed, we would be talking about Smartitude.

Innovation is at the heart of the issue. It is incredible to see how this innovation has progressed. Today, everyone talks about supporting local production, transformation and commercialisation.
But how are we going to support the butcher's farm when we can place an order online with just a click of the finger? These are elements that we needs to take into consideration and those who are a step ahead in the matter are doing pretty well.

Turning the constraints into opportunities is a real mantra. Saying "yes" instead of "yes but". Finding out how to implement it instead of writing 25 pages to explain why it doesn't work.

Creating new collaborations, new solidarity is a key aspect! In a transversal way, you need to act based on the constraints and characteristics!

Simplifying administration is a good course of action for the next PwDR. All together, we need to think about and develop measures that are easier to manage. Risks arise from complexity, risks which amongst others are financial, which become more and more difficult to bear. Simplifying also implies working "with" people and "for" people, for the beneficiaries. A

thought-process should lead to action in terms of research, based on the principle that the priorities of the research should be those decided by the beneficiaries and not by those proposing the projects. In terms of rural development, it is crucial that we stimulate the bottom-up approaches to have more participation amongst beneficiaries and citizens.

Collaboration between authorities and citizens, yes! The question is: who is the citizen? Who is the consumer? It is important that we listen to representative organisations more and implement good systems in order to ensure that the citizen is well heard!

Forests and climate change: In Wallonia, we have a great tool that allows us to have a mix and species that are better adapted to their location, the ecological file of tree species. Published last year, its current version is digital, smart and easy-to-use version. It is worth checking it out!
Diffusion of innovation in farming. The topic of risk hedging is a topic that needs to be worked on. From research in the laboratory, to protected on-site research and the realities of the farms, there weight of some risks needs to be shared and not only carried by those who throw themselves into innovation. For example: if

we want to move towards a new variety of apples that are more resistant to illnesses and therefore consume less plant protection products, it would take 10 years for the apples to be produced! And if, after 10 years, we realise that the apples are more resilient but that the production is half of the classic varieties, we will have wasted time and money. So **we need to share the risk**. Risk management in climate issues, the market, ... but also innovation management is crucial since the risks sometimes put the brakes on innovation.

All the documents are available online
www.ruralites.be/stimuler-innovation

Réseau wallon
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FOSTERING INNOVATION

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