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EDITORIAL

by Nicolas Fortane (INRAE), ROADMAP Project Coordinator

This is it. This is the last Roadmap newsletter. And it is with a little emotion that I write this last editorial. First of all, it's a sense of satisfaction, because when I look at what we've achieved in 4 years, it's enough to be impressed! But there is also a little touch of sadness because the adventure is coming to an end and I say to myself, deep down, if we had four more years ahead of us, there would be so many things left to do!

Nevertheless, I must admit that the main feeling is one of accomplishment. A project is embodied in many things, and not only in the results. First of all, it is the adventure of a group of people who did not know each other four years ago and who found the desire and the resources to carry out this incredible work. It is then the multiple tasks and deliverables that, put together, make the richness of what we have produced.

Last month, we presented the general conclusions of our work at the final conference of the project in Brussels, in front of the stakeholders, policy-makers and partners directly concerned. The discussions were extremely rich and stimulating. We are convinced that Roadmap has brought new insights and answers to the problem of antimicrobial resistance. The challenge of an interdisciplinary and participatory project, framed by the social sciences, has been met. From our analyses of the antimicrobial decision-system to our Living Labs and our various training and communication materials, we hope that actors will be able to see more clearly the actions we can take in the near future to promote the prudent use of antibiotics.

But the journey does not end here. Firstly, there are quite a lot of scientific publications that we are still working on and that will probably be published in the coming months and year. Then, there are other projects, ongoing and to come, which extend this research; in particular those of the Armor group with which we have created great synergies, and which are pursuing this essential challenge of producing innovative and effective knowledge to combat antimicrobial resistance.

See you next time!

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NEWS

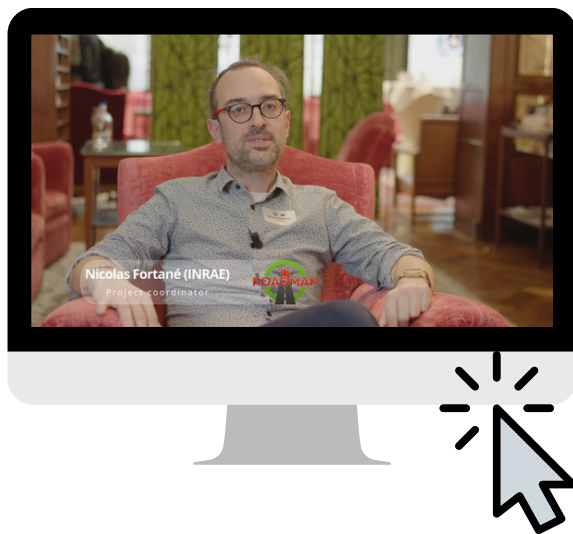
THE ROADMAP FINAL EVENT

On the 25th and 26th of April, we were grateful to organise the ROADMAP final conference at the University Foundation in Brussels. On the 25th of April, before the last conference, an informal network cocktail and dinner were organised at the final event location (University Foundation Brussels). Travelling or local stakeholders were invited for a casual get-together in which discussions and networking were facilitated.

On the 26th, the final event took place with presentations from project partners, a round table discussion with policymakers and a lively conversation with our stakeholder advisory board. It was a very inspiring and interactive day. The final conference was recorded and can be watched [here](#). A resume of the presentations and discussions is found [here](#).

We want to thank everyone who joined us on this journey, and that was present during this special event!

In a hurry? Catch a glimpse of our event in the after movie!



POLICY RECOMMENDATIONS

ROADMAP's main goal was to analyse the practices and decision systems of farmers, veterinarians and other professionals involved in managing the health of farmed animals, ultimately to aid the rethinking of the use of antimicrobials in livestock production systems. Over the years, the project scientists have identified several barriers and lock-ins regarding the prudent use of antimicrobials in animal production. These identified barriers and lock-ins have led to policy recommendations that are captured in the shape of 8 policy briefs:

- 1.How to promote preventive approaches in veterinary medicine? - *Nicolas Fortané, Clémentine Comer, Joséphine Eberhart*
- 2.How to enable farmers to reduce antimicrobial use? - *Lee-Ann Sutherland, Orla Shortall, Gareth Enticott*
- 3.Learnings from 12 living labs. - *Mette Vaarst, Bernadette Oehen, Annick Spaans, Florence Beaugrand*
- 4.How to consider impact when planning interventions to improve AMU. - *Sophie Molia, Merete Studnitz*
- 5.Intensive Danish pig farming faces structural lock-ins for achieving a prudent AMU. - *Hanne Kongsted, Merete Studnitz*
- 6.How to meet the public health challenge of antibiotic resistance in a context of rapid intensification of poultry production? - *Muriel Figuié, Cristiano Macuamule, Calos Cuinhane*
- 7.Improving the use of antimicrobials in the French pig and poultry sectors. - *Sophie Molia, Christian Ducrot, Mathilde Paul, Catherine Belloc*
- 8.Recommendations from the Danish Living Lab on AMU in cows and calves from dairy herds. - *Mette Vaarst, Line Kollerup*

[Read the ROADMAP's project recommendations on the website.](#)



NEWS

NEW PRACTICE ABSTRACTS AVAILABLE

Research shouldn't be in vain. Therefore, various practice abstracts have been developed to describe the practical application of our research findings. These materials provide a condensed summary of significant research findings and are tailored to be helpful and valuable for our stakeholders. In total, 13 abstracts have been developed with subjects ranging from antibiotic-free labelling to weaning practices, of which some are also translated into different languages such as Italian, Spanish, Portuguese and even Vietnamese! Recently, two additional practice abstracts were published:

Why are antibiotics used in the Flemish port and white veal industry?

Fanny Baudoin, Henk Hogeveen, Erwin Wauters

Successful weaning of piglets -without AMU

Barbara Früh, Manuela Helbing, Bernadette Oehen

[Did we spark your interest? Read all our practice abstracts on the website here!](#)

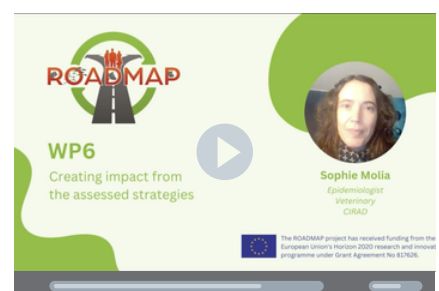
MINI WEBINARS ARE NOW LIVE!

What are the key learnings from your work? That is the question we asked ROADMAP's lead researchers. The results of these conversations were realised in six mini webinars, which are now online! Eager to find out what they said? Watch the videos by clicking on the pictures on the right.

NEW VIDEO ABOUT OUR LIVING LABS

One special feature of the ROADMAP project focused on using Living Labs. These living labs were a tool to foster the transition towards a prudent use of antimicrobials in animal farming, in which it was promoted to rethink and potentially redesign antimicrobial decision systems. Over the course of the project, 12 living labs in multiple countries ran to engage all relevant actors towards improved use of antimicrobials. In April 2022, we joined the final meeting of the calf-rearing living lab in the United Kingdom to learn more about their experiences captured in a video.

Click on the picture to watch!



NEWS

THE ROADMAP TRAINING SESSIONS

After three years analysing the socio-economic drivers of Antimicrobial Use (AMU), developing tailored strategies for change and proposing transition scenarios in diverse farm animal production systems in Europe and low- and middle-income countries the project launched training activities addressed to different targets to ensure acceptability of AMU change. All training sessions were recorded and can now be watched here.

Stable schools as a participatory method to work towards reduced AMU at farm level. *Mette Vaarst (AU-ICROFS)*

She explains the methodology of the so-called 'Stable Schools' which is a farmer-advice-farmer methodology, applied by actors in the Danish and Swiss Living Labs during the ROADMAP project to minimize antibiotic use, and facilitation discussed in our many different contexts. It is addressed to advisors and vets interested on working with stable schools

Living lab methodologies and examples from working in agriculture. *Bernadette Oehen (FiBL) Mette Vaarst (AU-ICROFS), Annick Spaans (ZLTO), Florence Beaugrand (ONIRIS)*

This webinar explains how we have used the Living Lab methodology to find ways forward to move towards a more prudent use of antimicrobials in the ROADMAP project in seven countries. The session includes interactive discussions on how Living Labs can fit into different contexts and is addressed to researchers in EU projects or people working with living labs.

On-farm multi-actor coaching. *Annick Spaans (ZLTO), Arthi Amalraj (UGent - NETPOULSAFE)*

his webinar explains the coaching methodology applied to Dutch and Belgian farms during the ROADMAP project to reduce antibiotic use together with the farmer, veterinarian and advisor. It is addressed to advisors and vets interested in coaching as part of their advisory service, and farmers.

Promoting preventive approaches to animal health. *Nicolas Fortané*

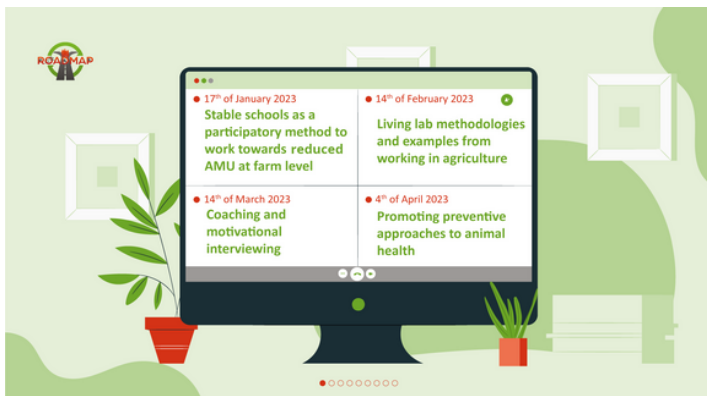
This webinar highlights the results of the ROADMAP project regarding the issues faced by the veterinary profession, related to the development of preventive approaches to animal health. It discusses the levers and breaks for such a development and proposes to work on identifying the efficient key messages to encourage veterinarians to support and adopt such approaches. This training is addressed to veterinarians.

[Click here to watch the trainings](#)



LAST MEETING OF THE SWISS LIVING LAB

Farmers and veterinarians bear a great responsibility when dealing with farm animals. In the event of illness or injury, they have to make important and sometimes difficult decisions about treatment. FiBL made this the subject of an online workshop on May 25 with Dr. Christian Dürnberger, a proven expert on ethics in agriculture and veterinary medicine from the VetMed Uni Vienna. More than 40 people participated and discussed their own experiences on ethical issues in animal treatment. These include, for example, balancing the present, individual welfare of the animal with economic considerations. In the workshop, lecturer and participants also addressed the use of antibiotics in agriculture and how to deal with increasing antibiotic resistance. The discussion showed that organic farming with its focus on prevention, animal-friendly husbandry and feeding is going in the right direction. The workshop was the last event in the framework of the H2020 project ROADMAP. Participants once again became aware of the importance of good animal husbandry for a sustainable and healthy life of future generations.



ARTICLES

POPULAR ARTICLE: CREATE YOUR OWN LIVING LAB TO MEET COMPLEX CHALLENGES IN THE AGRICULTURAL SECTOR

By Annick Spaans ([ZLTO](#)), Bernadette Oehen ([FiBL](#)), Mette Vaarts ([AU](#)), Florence Beaugrand ([INRAE](#))

Living Labs (LL) are a promising tool for the agricultural sector. They were used in context of ROADMAP to reduce the risk of antimicrobial resistance (AMR) through reduced antimicrobial use (AMU). This is a complex issue, and it requires many stakeholders to be involved.

LL are user-centered, open innovation ecosystems based on a systematic user co-creation approach integrating research and innovation processes in real-life communities and settings (EnoLL). The goal of a LL is to structure user participation in real-life settings.

When the goal is to co-create and develop innovative solutions to complex problems or challenges in a given setting, and solutions necessarily have to involve multiple stakeholders, LL will be a relevant option to consider."

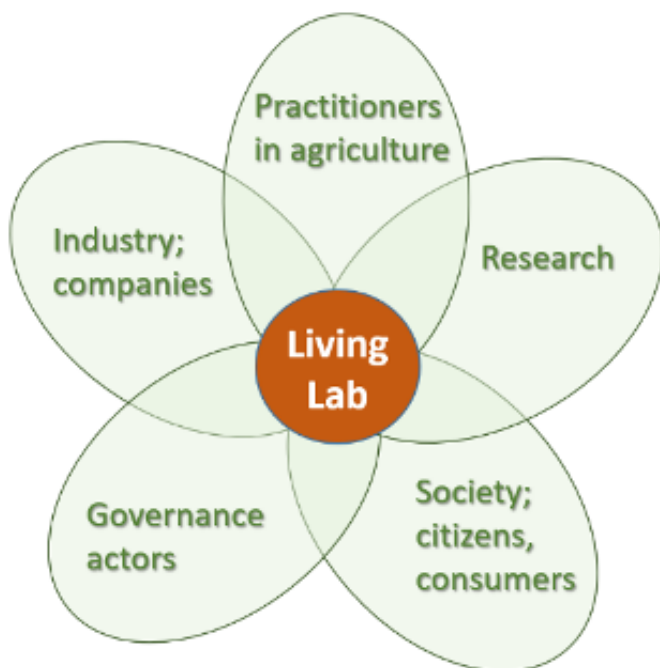
The use of antimicrobials in animal husbandry across Europe differs, but there is still room for reduction. EU and national regulations have been continuously improving for years and livestock sectors have already been tackled with one-size-fits-all solutions. Further reduction can especially be achieved with locally and often societal-adapted solutions. By implementing 12 living labs in different countries and value chains, we aimed at developing, testing, and evaluating locally adapted solutions for the prudent use of antimicrobials.

To make progress on the issue, stakeholders need to agree on the shared goal (e.g. reduced AMU), develop common visions, and agree on the focus of the work. Potential changes and solution(s) to meet the goals should be well-embedded by all these stakeholders.

By starting a LL, the issues in focus can be addressed with all important stakeholders involved. In a LL, the issue can especially be addressed by testing a 'product' (e.g. support services or advice products) through a so-called 'action lab'.

LL are of participatory nature as every participant's expertise is actively brought into the process. It is then easier to overcome barriers due to technical, social or economic asymmetry of information or interactions between stakeholders.

End users are directly involved in developing innovations. The end users can be for example farmers, citizens, companies, workers, or authorities. The LL participants are stakeholders representing the wider community of end users, being end users themselves. They contribute to conceiving, testing and assessing the proposed product, tool or indicator in their daily routine.



"When the goal is to co-create and develop innovative solutions to complex problems or challenges in a given setting, and solutions necessarily have to involve multiple stakeholders, LL will be a relevant option to consider."

The approach is different from an approach where innovations or novel ideas are only tested in the end of a development phase. Instead, LLs require that innovations and ideas are continuously validated and iteratively developed.



Supplementary materials are available for this popular article, including a stepwise guide and tips and tricks to start your own living lab. These materials can be accessed [here](#).

MEET ROADMAP

The ROADMAP Result Booklet

Now you've reached this far into the final newsletter, you may have realised that ROADMAP has produced an extensive database of research results and materials in various formats. For easy-access we have compiled all our main findings in the ROADMAP result booklet, which contains all-you-need-to-know in just a mouse-click away.

Download



PUBLICATIONS

Here are the recent publications and articles relevant with the ROADMAP project:

- Enticott, G., K. O'Mahony, O. Shortall, and L.-A. Sutherland. 2022. 'Natural born carers'? Reconstituting gender identity in the labour of calf care. Journal of Rural Studies. 95:362–372. doi:10.1016/j.jrurstud.2022.09.034.
- Gröndal, H., I. Blanco-Penedo, N. Fall, and S. Sternberg-Lewerin. 2023. Trust, agreements, and occasional breakdowns: Veterinarians' perspectives on farmer-veterinarian relationships and use of antimicrobials for Swedish dairy cattle. Journal of Dairy Science. 106:534–546. doi:10.3168/jds.2022-21834.

CONTACT

For more information about the ROADMAP project, visit our website and follow us on our social media accounts!

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zenodo

From the first of June 2023 the AVANT project will take over the Animal Health & Antibiotics Network.



[Join the network here!](#)

AVANT



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