

## GovLab Arnsberg - LEADER chatbot



source: <https://www.bezreg-arnsberg.nrw.de/govlab/assets/img/slider/slide3.jpg>

Authors: Christopher Graetz, Tanja Klimek and Eva Wascher (TUDO)

### Introduction & Organization

GovLab Arnsberg, founded in April 2018, is a public sector innovation lab within the District Government of Arnsberg in the federal state of North Rhine-Westphalia (NRW), Germany. The mission of the lab is to test and integrate innovative technologies and new working methods in order to improve and reinvent administrative processes in the public sector. Its focus is on the impact and the core benefits for end-users (citizens as well as administrative staff), which are included in GovLab's innovation processes from the beginning. GovLab Arnsberg has created a network of employees from the District Government of Arnsberg as well as actors from politics, business and civil society. This document analyses as specific initiative the co-creation of GovLab Arnsberg's project on the 'LEADER-Chatbot: Development of a digital regional manager'.

### Context

GovLab Arnsberg, founded in April 2018, is an initiative and organizational part of the District Government of Arnsberg, a central authority of the federal state of North Rhine-Westphalia (NRW) in Germany. The District Government of Arnsberg consists of five independent cities and seven districts with 78 district communities. It has almost 3.6 million inhabitants and covers round about 8 000 square kilometers.

According to the National Organization Act, the District Government is the general representative of the provincial government in its district. The District Government is a link between ministries, communities and municipal authorities, as well as companies,

associations and citizens. This bundling function makes it possible to coordinate administrative decisions and makes them 'from a single source'.

The wider context of GovLab Arnsberg is closely connected to its major proponent, the former mayor of Arnsberg and current President of the District Government Arnsberg, Hans-Josef Vogel. Vogel is a member of the Innovators Club, initiated by the German Association of Towns and Municipalities (DStGB) which deals with strategic future topics of municipalities such as education, climate, energy, urban development, communication, IT and cooperation<sup>1</sup>. The Innovators Club is a network of around 40 mayors and district councilors as well as executives from politics, business and science that work together in an interdisciplinary manner. It is the explicit aim of the Innovators Club to think beyond daily politics and to point out new pathways for public sector administration. The club is thus a platform for the exchange of visions, ideas, experiences and numerous concepts. It intensifies the contacts between public administration, science and industry and thus contributes to integrating innovations into the work of local governments.

Vogel, as well as many other high public sector officials, criticizes that the public sector resists change from outside the system and maintains structures to the inside which are also resistant to change. As President of the District Government, he is in a strong position to set an agenda for public sector innovation. The focus is twofold. On the one hand, new technologies and digitalization are very important. Therefore, eGovernment approaches as well as smart city strategies and broadband expansion are relevant innovation topics within the District Government at the moment<sup>2</sup>. On the other hand, another innovation focus is citizen engagement and participation. Civic engagement is understood as a crucial pillar of society within the federal state of North Rhine- Westphalia (NRW). It includes most of all voluntary work in aid organizations and numerous other non-profit institutions. In addition to the appointment of a civic engagement representative, a federal state engagement strategy<sup>3</sup> is being developed as part of a participatory process, which should strengthen civic engagement with the participation of all relevant actors through improved framework conditions. The engagement strategy will then be implemented in the District Government of Arnsberg as a high priority<sup>4</sup>.

Overall, the focus is more on citizen engagement than on citizen participation: formal ways to guarantee citizen participation in policy-making such as petitions and referenda<sup>5</sup> are present, however, no dedicated strategy is present for citizen participation on the federal state level, which would encourage public sector administrations to make more use of instruments of participative governance.

## Organization

**Webpage:** <https://bezreg-arnsberg.nrw.de/govlab/>

**Country:** Germany, District Government of Arnsberg, North Rhine-Westphalia

GovLab Arnsberg, founded in April 2018, is a public sector innovation lab within the District Government of Arnsberg in North Rhine-Westphalia (NRW), Germany. The overall mission of GovLab Arnsberg is to make public administration easier, better, faster and wiser. New

ideas, working methods and solutions are developed, tested and, ideally, implemented. The GovLab is an experiment in itself, as a tryout that develops iteratively, gradually approaching an ideal state in repeated “operations”, in which innovation is generated. It is a new way of bringing innovation into the public sector sphere. The GovLab is pragmatic, experimental and above all adapted to new challenges such as “digital thinking”. It wants to be a unit that develops future topics for public administration ahead of time. Another feature is the open and inclusive setting. Many different actors work together to develop new ideas and solutions. The GovLab does not work formally, but experimentally and practically, as thematic perspectives and practical experiences are inseparable in the lab. Its focus is on the impact and the core benefits for end-users (citizens as well as administrative staff), which are included in GovLabs’s innovation processes from the beginning. GovLab Arnsberg also works as a kind of “change-agent” within the District Government and beyond. Other objectives of the lab include:

- the development and support of innovative District Government projects
- development and testing of new ideas, methods, tools and solutions
- the support of employees in change processes and turning them into innovators themselves (Supporting the employees “when thinking outside the box”)
- contributing to the government innovation community (regional and international)
- benchmarking: good practice, cooperation and knowledge exchange with digital start-ups, companies, other authorities and science
- networking

To sum up, GovLab is transparent about new governance challenges, develops political awareness, creates a network of innovation partners, has a high risk and thus tolerance of failure. Above all, it stands for a positive future and builds on a positive concept of the future. As an innovation lab of the District Government of Arnsberg it covers almost all local government topics of the federal state of North Rhine-Westphalia and stands for new governance through interdisciplinary and joint solution finding.

The overall goal of the GovLab Arnsberg is to change the working culture and thinking in administration and politics. Instead of building new labs, this new mindset should arrive in everyday administrative life, so that the overall goal of GovLab is achieved and makes itself virtually unnecessary.

## Governance

The initial idea for GovLab Arnsberg comes from the President of the District Government Arnsberg and former mayor of the city of Arnsberg. Also inspired by GovLab Austria (see below), he saw the potential of innovative technologies, methods and ways of working to improve or reinvent administrative processes. In addition to coordinating the idea with the Ministry of the Interior of the State of NRW, entrusting an employee with the development and founding of the lab is described as the initial founding moment of GovLab Arnsberg. The start-up phase was a rapid process: first, a project group was organized, which dealt with the basics of such a governance innovation lab and created a first draft. As the structure of the district governments in NRW is determined by the Ministry of the Interior of the federal state of NRW in agreement with the concerned departments, Govlab Arnsberg as a new structure

within the District Government had to be approved on that level. The Ministry of the Interior was open to the idea, so GovLab was included as an “innovation lab unit” in the organizational chart.

Nils Hoffmann was commissioned with the development, foundation and management of GovLab Arnsberg as an innovation tool for the District Government. Although the President of the Government is officially responsible for the GovLab, the lab manager is given a lot of freedom and responsibility as head of the lab. Thus, the decision about possible lab activities and projects is up to him. However, these are discussed in weekly *jour fixe* with the President of the District Government. Overall, the collaboration is very cooperative. A basic attitude of the GovLab is that the projects are free of hierarchies and that “you cannot get on alone”. New ways of cooperation include interdisciplinary project groups and open methods such as design thinking. A strong network of employees of the District Government Arnsberg as well as actors from politics, business and civil society form the basis of partnerships. In addition, the partner network enables a mutual exchange of experience in the field of innovation and digitization.

Because GovLab Arnsberg is a unit of the District Government Arnsberg it does not have its own budget but can rely on the central budgets like other departments. These consist of tax money, which makes cost-effective work important. In the beginning, the lab manager was the only resource directly allocated to the GovLab. The GovLab team does not aim at getting a relatively high fixed budget but emphasizes the importance of a zero-budget approach for innovative processes. This means that ideas and themes for GovLab processes have to be prepared in a way that they can show their potential for bringing solutions to specific problems. Eventually, a budget is allocated to conduct a GovLab process. The actual resources are the full-time position and commitment of the current lab manager, his team of two employees which has been formed during the last months and the strong backing of the President of the Government District.

The lab manager has previous work experience in the banking sector. Thanks to this, he was able to bring in a lot of new knowledge to the District Government and was thus able to change and modernize things in the fields of programming and administrative mechanisms. Before working in the GovLab he was responsible for managing grants at the department of rural development within the District Government of Arnsberg. His skills in agile ways of working and service design are beneficial for working in the GovLab. Concerning the composition of the GovLab team, it was important for him that the staff came from within public administration in order to be well versed in internal structures, well networked and pragmatic. For the current qualification phase, necessary competencies are to be built up in the following fields: moderation, facilitating and project support, design thinking and agile project management. It is also planned that one employee will do a Scrum Master qualification. The other employee, who is more responsible for coordinating tasks, could build up further competences in the field of content design (text and advertising design). Considering career opportunities and paths of the lab staff is an important concern of the manager because he wants motivated and communicative employees.

The GovLab unites a variety of actors from different fields: employees of the District Government Arnsberg, from politics, the economy, civil society and science. They all bring

different perspectives and experiences, which can be called a 'cross-pollination' or 'cross-innovation'. The user-centric focus is fundamental for the work of the GovLab Arnsberg. End users, are included as experts from the beginning. GovLab Arnsberg does not only frame citizens living in the District of Arnsberg as end-users but also all employees of the District Government and its corresponding public authorities.

In the network, the partners profit from each other's experience in the field of innovation and digitization. A close exchange of knowledge and experience as well as support through shared activities, takes place on international level with other public sector innovation labs such as the GovLab Austria (see below), the La 27e Region-Paris (see below) and the Lab in Barcelona (see above). But also with various networks such as Nesta-UK, European Network of Living Labs, the state initiative Future Berlin and universities. Further partners are the companies 'TRILUX Simplify Your Light', 'ORBIT' and 'Insight', the newspaper 'Westfalenpost' as well as the Ministry for Children, Family, Refugees and Integration and a local research project about municipal social innovation labs (KoSI-Lab). The GovLab Arnsberg is open for exchanges with other companies, NGOs, administrative institution, etc. who are engaged in innovative projects to create new collaborations and partnerships.

## Processes and tools

As described above, innovative technologies, methods and approaches, such as agile working methods and project management, service design, moderation, facilitation and, above all, design thinking, play a very important role for the processes in the GovLab Arnsberg. However, there are no fixed specifications in the project work. Rather, each project is considered individually and flexibly. Suitable approaches and methods are chosen in relation to the problem/challenge. However, it is notable that agile approaches, customer orientation and joint testing and prototyping usually lead projects to fast successes. In the spirit of design thinking, it is important that the project groups are as interdisciplinary as possible and that users are involved right from the start, open and free from hierarchies. It is important to create a safe-space so that there is enough freedom to "just do", making everyone aware that "every step counts" and that mistakes are important for learning processes. The GovLab as an innovation lab itself is an experiment that develops iteratively. It experiments, tries, verifies, improves step-by- step, iteratively, uses preliminary solutions, and adds new details. Processes carried out and the tools and methods used are critically reflected in the end so that new findings and learnings emerge from each project.

New technologies and digitization are important for GovLab Arnsberg in different ways. The development of today's society and the economy is strongly influenced by the process of digitization. New technologies and practices are increasingly influencing everyday life and more and more social processes are being transferred to the internet. This applies especially to all citizens of the District Government as well as the administrative staff but also other actors such as companies that need to be supported in order to be able to cope with all chances and challenges of digitization. Therefore, modern and new technologies are an essential and decisive factor for the co-creation processes and for the achievement of the overall goal of the GovLab Arnsberg. New technologies are used, but also (further) developed for the use of public administration. The work of GovLab includes new formats such as video tutorials about administrative procedures for new staff of the District

Government. Furthermore, in the project 'Administration Programmed', employees without any programming knowledge created their own tools that make every day work easier and more comfortable. Employee empowerment is the focus. Several applications have already been produced, such as the automatic generation of grant notices or automatic controlling reports for the authorities. A slim, lean and simple toolbox with different project management tools will be created for project leaders in the Government District. The 'Augmented Reality Day', where trainees and experienced employees discussed technologies, ways of working and projects, resulted in over 20 potential pilot applications for augmented reality. Further projects are still in planning.

## The case - LEADER-Chatbot: Development of a digital regional manager

All content of this case study description comes from the referenced online sources as well as two interviews with Nils Hoffmann, manager of GovLab Arnsberg.

### General description

**Website/ link:** <https://www.bezreg-arnsberg.nrw.de/govlab/index.html#about> **Location:** District Government of Arnsberg, North Rhine-Westphalia, Germany **Initiative Domain:** eGovernment

**Starting and ending date of the initiative:** June 2018 - ongoing

The LEADER-Chatbot is the first pilot project by GovLab Arnsberg. The Chatbot has the purpose to distribute information about the LEADER programme and funding. On an algorithmic basis, information about documents, formal requirements and basic information can be requested. LEADER is an instrument of Community-Led Local Development (CLLD) within the European Union. It provides a local development method that has been used for 20 years to engage local actors in the design and delivery of strategies, decision-making and resource allocation for the development of their rural areas. In the rural development context, LEADER is implemented under the national and regional Rural Development Programmes (RDPs) of each EU Member State, co-financed from the European Agricultural Fund for Rural Development (EAFRD). The programme is implemented by around 2600 Local Action Groups (LAGs), covering over 54% of the rural population in the EU and bringing together public, private and civil-society stakeholders in a particular region. The Ministry of Environment, Agriculture, Nature and Consumer Protection of the State of North Rhine-Westphalia (MULNV NRW) supports the merger of rural communities into LEADER regions in the current EU funding period 2014-2020. In NRW, 28 regions have been selected by an expert jury and are recognized as LEADER regions. In the District Government of Arnsberg are eleven of the recognized LEADER regions. For example, around 28 million Euros are available to rural areas in the District Government through the LEADER funding program. The development of LEADER regions is supported and implemented by local action groups (LAG). The Local Action Groups are often non-profit associations. They decide which projects are funded and steer the implementation of the regional development concept. To support the work of the local action groups (LAG) regions set up a business office, which is home to the regional management. The regional managers perform the following tasks:

- Advising project promoters on project funding
- Accompaniment of project development and implementation
- Support of the honorary acting executive committee
- Preparation and follow-up of the meetings of the board and the competence groups
- Public relations
- Initiation of cooperation with other regions
- Preparation and implementation of internal monitoring

However, the regional management does not decide whether a project is funded or not. This decision is taken exclusively by the Local Action Group (LAG). Furthermore, The District Government of Arnsberg (Department of Rural Development) has to support the decision of the LAG and finally issues the grant decision.

In order to enhance distribution of knowledge about the LEADER programme and to support the regional management in giving information about funding, project requirements etc. the process 'LEADER-Chatbot: Development of a digital regional manager' was initiated by GovLab Arnsberg. Regional managers of the LEADER programme, employees of the Department of Rural Development of the District Government and GovLab Arnsberg have worked together to develop the tool. The virtual chat partner (robot) responds to a wide variety of questions, e.g. generates answers to the LEADER funding process. The Chatbot can be used in social media and websites of the LEADER regions used by whomever needs information about the programme. The bot is currently in the testing phase and usable on several websites<sup>8</sup>.

## Governance

The process 'LEADER-Chatbot: Development of a digital regional manager' was initiated by GovLab Arnsberg (top-down approach). GovLab is part of the District Government and has chosen the chatbot project on its own account. In particular, the decision to work on the chatbot project was made by the GovLab manager with permission from the President and the Vice-President of the District Government Arnsberg. The problem framing started with the question which new technologies could be helpful for addressing eGovernment processes. It was agreed to have one pilot process on one concrete technology and to develop and test it within one of the departments of the Government District. After a research phase, the chatbot technology was chosen for the pilot process, because it is quite a simple technology and can be easily helpful as a communication tool for public administration. Because of his previous work in the Department of Rural Development, the manager of the lab contacted several former colleagues as well as regional managers of the LAGs to discuss the idea of developing a chatbot. Soon, the LEADER programme was chosen as a testbed for the chatbot.

A very small budget was allocated to the process. Finally, only 60 € were used including the cost for the tool to create the first prototype. LEADER Chatbot was the first innovation process conducted by GovLab Arnsberg. The whole process was initiated because working on a 'LEADER Chatbot' could be realized with only a small number of stakeholders in a very short time frame and with highly likely successful results under a small budget.

## Stakeholder landscape

After the decision to work on a chatbot for the LEADER programme was made, the head of the lab invited several colleagues and regional managers in the Local Action Groups (LAG) to join the process. The employees of the District Government could only join the process following a permission of the head of the Department of Rural Development. It was agreed that the employees could spend one full working day for the kick-off of the chatbot process. The group of participants was kept small on purpose to create an experimental safe-space for developing a rather new idea. The regional managers of LEADER have first-hand experience regarding the needs of the people who want to receive funding. The employees of the Department of Rural Development are responsible for the funding of the programme so they decide who is eligible for it and from their experience they know what kind of questions are frequently asked regarding the funding. Intentionally other relevant departments were kept out of the process such as data protection and IT.

Overall, the chatbot-group consisted of the following stakeholders;

- Manager of GovLab Arnsberg as organizer and facilitator;
  - One Employee of the Department of Rural Development, responsible for the LEADER programme with long-term experience in the field within the Department, female, senior/close to retirement;
  - One Employee of the Department of Rural Development, responsible for the LEADER programme with expert knowledge on complex project grants, male, relatively young, high affinity to digitization, has work experience in other public administrations;
  - One Trainee of the Government District, female, student, new to the field, bringing in 'out-of-the-box thinking';
  - One Regional manager of one LAG in the North of the Government District, female, geographer, relatively young;
  - One Regional manager of one LAG in the South of the Government District, female, geographer, relatively young;
  - One Regional manager of one LAG in the Ruhr Metropolitan area, female, relatively young, Urban and Regional planning;
- Motivations on the side of the regional managers of the LAGs:
- Intrinsic motivation to become more innovative as being a promoter of innovation in the region; and
  - Extrinsic motivation to minimize work-load especially for first consultations about the LEADER programme if interested applicants can use the chatbot for first information.

Motivations on the side of the District Government staff:

- Intrinsic motivation to become more innovative;
- Extrinsic motivation to gain a "qualification note" for participating in an innovation process of the GovLab in one's personal records/file.



In general, the group of stakeholders was kept small on purpose to create an experimental safe-space. Furthermore, in preparation of the innovation process, the GovLab manager decided to start off the project with only 5-8 persons for the pilot design thinking workshop. Nevertheless, the group was quite diverse (Heterogeneous gender, age and professional backgrounds; high and low affinity to new technologies; people with only few and also a lot of experience with LEADER). The group knew each other before. There was a trustful relationship and all members of the process were highly engaged with it.

## Process structure and engagement

The manager of GovLab decided to apply Design thinking to the development of the Chatbot and prepared the workshop on his own. The goal was to get to a first prototype fast within the time-frame of one day. The first stage of research was to find out what kind of tool was suitable to easily create a chatbot without knowing how to code (all persons involved in the process including the manager of GovLab are interested in IT but no IT professionals). Soon, an editor tool was found and bought by the manager. The second research stage was concerned with the design of the workshop. Knowing that it would have to be suitable for a one-day time-frame and simultaneously taking into account the main principles of design thinking, the manager of GovLab created a three- step design process 1) Building empathy, 2) Idea development, 3) Prototyping.

### 1) Building empathy

The first step of the process was called “Building empathy” to gain insights on the end-user perspective, different ‘personas’ (fictional character to represent a user type) were created with questions like:

What do applicants for LEADER want to know when applying?

What is good about the application process?

What needs to be improved about the application process?

Furthermore, the group constructed a ‘customer journey’. This is a method that reproduces all single steps a person has to take in order to get from an idea for a LEADER project to a successful LEADER grant.

### 2) Idea development

The second phase of the workshop was about “idea development”. With empathy- building exercises as a basis the group had to form first ideas about what a suitable chatbot would be and would look like. What would applicants like to use? What would they like to see? What functions should the chatbot be able to perform? What kind of language should be used? Should applicants be addressed formally (using "Sie"-formal you) or informally (using “You”)? What kind of design would be appealing? Should different communication tools be used such as videos and text? What kind of background knowledge can be assumed? All ideas were written on post-its and were clustered. There was a fruitful, open and productive discussion and the group came soon to concrete directions within the discussion process.

Following that the group worked on 'terms' that should be used for/explained by the chatbot. What do people want to know? A list of about 100 terms was created.

### 3) Prototyping

The third phase of the workshop "Prototyping/Solution development" consisted of three groups to create the first prototype. One group worked directly with the chatbot editor tool. The other group worked on a computer. Using all collected ideas that had been developed throughout the day, the groups wrote explanations that could be used by the chatbot. At the end of the day the chatbot prototype contained about 60 questions with corresponding answers. With the "showmode" function of the chatbot editor tool, the group was able to directly see the prototype at work. This contributed to the general perception of a successful workshop and a worthwhile cooperation among participants.

After the workshop the participants agreed to further develop the chatbot (e.g. bring in more explanations, editing, looking for ways of implementation).

Furthermore, the chatbot prototype was presented to the President of the District Government and the Vice-President and received recognition. Moreover, the management level of the District Government was also convinced and it was agreed that the involved employees were allowed to spend further working hours on the chatbot. All participants received access to the editing tool and were able to work on the chatbot on their own accounts for refinement of the chatbot. Two of the regional managers agreed to test the chatbot on their LEADER websites about four weeks after the chatbot prototype. Technical implementation was easy and could be done by the GovLab manager. He developed a data protection note for the chatbot on the respective websites as well as an info tag that the chatbot was in its beta version (therefore no guarantee could be given to the correctness of answers). The regions had to pay to use the chatbot tool with about 15 € and to be official partner of the chatbot service provider. After a couple of weeks, the lab team decided together to make the tool available to all LEADER regions. The lab team prepared a presentation for all regional managers at a conference at the federal state Ministry of Environment. Regions could use the chatbot if they agreed to share some of the cost, because the chatbot service gets more expensive if more people use the bot. The discussion went live and most regional managers seemed interested. After one year, eight regions have taken up the chatbot for their LEADER websites.

### Insights on political influence

GovLab Arnsberg as a part for the regional government has the political decision-making power to lead and coordinate the project. The pilot project about the chatbot resulted from a "new technology and digitization" interest of the President of the District Government which sees it as one of the big challenges for public administration but also for citizens. Therefore, the first innovation process of GovLab Arnsberg was connected to issues of how to implement new technologies in the work of the public sector.

The biggest impact of the pilot process was a contribution to cultural change within the public sector. Now, there is much more acknowledgement of a user-centric perspective among the

actors that have been involved in the process. For example, after one year of the 'chatbot process' the regional managers have much more detailed knowledge about the diverse field of their users, e.g. LEADER applicants. This results in a continuous refinement of the chatbot which contains already about 2500-3000 questions and answers. Furthermore, the data generated within the chatbot process creates possibilities to improve consultancy on the side of the regional managers regarding the LEADER programme as well as configurations of the LEADER funding programme at the Ministry. On the other hand, applicants can learn very quickly if their project ideas fulfill LEADER funding requirements or not. This saves a lot of consultancy work for the regional managers, too. GovLab Arnsberg can present the 'Chatbot process' as an innovative and co-creative solution and use it for advertisement about their approach to public sector innovation. The Chatbot is a best practice example for digital development, innovative ideas and agile problem solving in the District Government. Furthermore, thanks to the Chatbot, the partners involved (specifically the GovLab) gained knowledge and experience for co-creation and innovation. Co-Creating this project saved time and money, especially in regards to consulting.

## Media and communication

Concerning internal communication there was no special project management tool used. The lab team received updates on the process by e-mail from the GovLab manager. For external communications Twitter was used to distribute information about the Chatbot, e.g. about the kick-off workshop and the start of the beta phase. Furthermore, the project is presented on the GovLab website. There are some articles written on several websites which are directly or indirectly linked to the LEADER programme, like official websites from regional authorities.

Another important impact is the publicity that has been created with the chatbot itself. Regional newspapers have had several articles about the tool. One journalist even interviewed the chatbot. Overall, the regions, Local Action Groups as well as the LEADER programme received a lot of attention and free advertisement through the 'GovLab chatbot process'. Furthermore, the GovLab process was praised in the media as a best practice example of innovation in the public sector.

## Insights on culture, behaviors and the organization

In general, due to the strong mandate for the process by the President of the District Government the 'Chatbot innovation process' went rather smoothly without having to overcome huge cultural, organisational or behavioral barriers. Though, the adaption of design thinking for the short time frame resulted in a drawback. For two reasons end-users were not involved in the LEADER chatbot pilot process. On one hand, the time frame did not allow for more research and engagement of end-users. On the other hand, the involved public officials should be able to work in a safe space with high trust among participants and they might not have felt secure and confident enough to work with applicants. Therefore, in this pilot process, other external stakeholders had not been involved on purpose to enhance acceptance for the process among the participating stakeholders and to "make things easier". As a lesson learnt, the manager of GovLab would not repeat the process in the same way. For example, the "persona method" was useful to create imaginations about

possible users but it cannot fully substitute for “real opinions” and “real knowledge” of end-users. In effect, the chatbot prototype contained a lot of technical terminology which has been continuously replaced with “simple language” when integrating feedback from real users of the chatbot. If it was possible to involve applicants or successful applicants in the process from the beginning, this would probably have had an impact on the wording and questions used in the chatbot. As a consequence, the LEADER chatbot was the only GovLab process without active involvement of end-users. In other GovLab processes end-users have been involved resulting in positive outcomes.

“Working around public official’s habits” played a role in another instance as well. During the regional manager’s conference one of the first questions that came up concerned the “mandate of the process” and the GovLab manager was asked by an employee of the District Government whether he had permission from the ministries to work on that topic. Interestingly, the LEADER Local Action Groups are independent entities that do not stand under binding guidance by the Ministry of Environment, Agriculture, Nature and Consumer Protection of the State of North Rhine-Westphalia (MULNV NRW). Therefore, they are free to decide if they would like to use the tool or not. Furthermore, the GovLab manager did not want to involve too many levels of decision-making within the District Government and the ministries, especially if these levels were not absolutely relevant to gain a mandate/permission to work on the chatbot idea. Usually, departments within the District Government are agents of the federal state ministries. They conduct what has been commissioned by the ministries. Therefore, developing a LEADER tool within GovLab Arnsberg without involving different levels of decision-making in the respective public administrations was on one hand unusual but, on the other, very effective in creating a prototype in a short time frame. One can assume that asking for too much permission could have stopped the process. This also contributed to a relatively low staff budget, because a lot of potential decision makers had not been involved. Staff hours converted to paid salary would have been much higher if the process would have been managed in the traditional way of following all hierarchies within public administration. In the end, the Ministry of Environment was open to the usage of the chatbot tool for other regions.

Trust among the participating institutions was very important. Especially because the tool that was used to create the Chatbot could not have been officially bought by GovLab due to data protection issues of the Government District. Therefore, the group of stakeholders had to find other ways to gain access to the tools they needed for the process. Fortunately, one of the participating regions stepped in as a third party that was allowed to purchase the tool.

## Insights on the co-creation process

In a reflection on the process, the manager of GovLab Arnsberg stated that creating a spirit for innovation among all participants is much more relevant to the overall mission of bringing innovation to government than to stick to a certain innovative method that is applied. The mission for the first flagship-process, the LEADER Chatbot, aimed at being fast, rather small in terms of relevant stakeholders and cost-effective. All requirements on the process have been met. The methods and tools used for the project were appropriate. Timeline, level of

effort and engagement of the participants were also suitable for all actors involved. The first design-thinking process for LEADER Chatbot only needed one day until there was a first prototype. Furthermore, after the process was successfully implemented the GovLab team requested an offer from professional consultancies for doing the same innovation process. If the process had been outsourced to a professional agency it would have been much costlier than the in-house solution. Overall, only 150 € on material costs have occurred and about 10-12 full days of work spent until roll-out of the chatbot.

Impact has also been achieved on the political level. Especially on management level within the District Government people learned what “software as a service” means. For example, using cloud services to gain fast, cost-effective and easy performance for different tasks. This contributed to an acceleration of eGovernment discussions within the public sector. As one example, the Chief Information Officer (CIO) of the Ministry of Business Affairs supports a cabinet draft concerning the usage of cloud services for eGovernment processes. So far, it is not allowed to use cloud services within public administration in the federal state of North Rhine-Westphalia (NRW). The LEADER Chatbot process proved that using GovLab Arnsberg’s thinking and acting about innovation in the public sector yields good results and creates competencies in-house which are required for modernizing policy-making and implementation. Using innovation methods enhances the knowledge about end-users (citizens as well as administrative staff) within bureaucracies. This can support knowledge-based decisions.

Data protection was a major barrier in developing the chatbot. For example, two regions were interested in the process but declined to implement the chatbot due to data protection issues. The problem of data protection seems to be rather in an attitude of risk-averseness to try a new tool without having a legal statement that secures data protection specifically for the chatbot tool. Though, during the whole chatbot process, no claim against data protection violations has been put forward against GovLab Arnsberg.

As an advantage the project was strongly promoted from the beginning and continues to receive a lot of backing by the President of the Government District. According to the President, public administration as a linear organization does not have the means, attitude or perspective needed to disruptively change their own products or services. The behavior and the task are more oriented towards becoming bigger and bigger. Therefore, it is necessary to find ways to bring innovation to the public sector.

According to the GovLab manager, it is difficult to evaluate the work, as the development and testing of new measures are in focus. Nevertheless, it was provable that the lab builds up very fast powerful knowledge, which would otherwise have to be purchased externally and expensively. The innovative way of working gives a better reflection and a better involvement of the actual users so that ideas can be directly checked for their functionality. Projects are generally documented with a project management tool, so that, for example, the staff and budget used are tracked. Input factors are therefore easily verifiable in contrast to the output factors, which are very project specific. By getting the knowledge building in-house, GovLab Arnsberg can spare externally purchased knowledge. The overall goal of the GovLab Arnsberg is to change the working culture and thinking in administration and politics. Thus, it would be desirable for the manager of the lab, “[to] close the lab in a few

years". Instead of building up new labs, this new mindset should arrive in everyday administrative work so that the overall goal of the GovLab is achieved and makes itself virtually unnecessary.

<sup>1</sup> <https://www.innovatorsclub.de/innovatorsclub/>

<sup>2</sup> <https://www.bezreg-arnsberg.nrw.de/gigabit/#gigabit>

<sup>3</sup> [https://www.bezreg-arnsberg.nrw.de/themen/b/buergersch\\_engagement/index.php](https://www.bezreg-arnsberg.nrw.de/themen/b/buergersch_engagement/index.php)

<sup>4</sup> [https://www.bezreg-arnsberg.nrw.de/themen/b/buergersch\\_engagement/index.php](https://www.bezreg-arnsberg.nrw.de/themen/b/buergersch_engagement/index.php)

<sup>5</sup> <https://www.im.nrw/themen/buergerbeteiligung-wahlen/wie-die-eigenen-anliegen-die-politik-bringen>

<sup>6</sup> [https://enrd.ec.europa.eu/leader-clld\\_en](https://enrd.ec.europa.eu/leader-clld_en)

<sup>7</sup> [https://www.bezreg-arnsberg.nrw.de/themen/f/foerderprogramm\\_leader/index.php](https://www.bezreg-arnsberg.nrw.de/themen/f/foerderprogramm_leader/index.php)

<sup>8</sup> <https://www.leader-5verbund.de/>

<sup>9</sup> <https://www.bezreg-arnsberg.nrw.de/govlab/>