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**Semester 1\_Activity 3: Report on training and knowledge needs for (please indicate the policy area of reference)**

**OD4GROWTH Project**

***XX xx, 2024 (not later than 24/02/2024)***

***City, Country***

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| **Methodology followed** | The mapping activity should enable partners to judge wether there is a need for support/training (yes/no answer expected). We redirect partners to the activity 3, which will allow you to dig deeper into this need.We had already identified certain skills gaps during the interviews carried out for activity 4 in semester 1. We carried out a maturity analysis for 3 entities. |
| **List of actors filling in the assessment survey** | Grand E-Nov+, Région Grand Est, Métropole de Reims, Pays de Thur-Doller, DataGrandEst |
| **Analysis of the actors involved (legal status, mission, etc)** | Grand E-Nov+: Business support organisation, IntermediariesProvide added value to a dataset.Région Grand Est: Regional authority, creates public policy to have an effect on society or a territory. They also design evaluation protocols and possible transformation scenarios.Métropole de Reims: Local authority, creates public policy to have an effect on society or a territory. They also design evaluation protocols and possible transformation scenarios.Pays de Thur-Doller: Local authority, creates public policy to have an effect on society or a territory. They also design evaluation protocols and possible transformation scenarios.DataGrandEst: Policy instrument from the Region Grand Est, Creators of services and uses / technical experts. Develop analysis and visualization solutions that enable products or services to be created from data. Responsible for collecting, managing or accessing a data set |
| **Number of assessment questionnaires collected** | 5 |
| **Main outcomes concerning People and culture** | Depending on the size of the organisation producing the data and its responsibilities in terms of public policy, human resources have different sizes and skills. Responsibility for data is either non-existent, shared or concentrated. In rural areas, resources and skills are limited, the priority is to digitise activities, and departments devote the little time available to publishing essential data or data ordered by other public authorities. The activity may have little meaning. The perceived value of open data will be quite different in metropolises where the vocabulary used to deal with the data journey is shared across departments, where new data-related functions are being recruited, or where management is paying attention to improving the ability to analyse and exploit data, and thus to integrate it into overall policies. |
| **Main outcomes concerning Data activities** | Depending on the experience of the organisation producing the data, the needs and services will vary in maturity, which will affect the data collection strategies required. The quality of the data itself often depends on the demands made on it and the resources deployed to meet them. In the Grand Est region, the DataGrandEst platform is putting in place tools to improve data quality, enable traceability and secure the system.Only the major metropolitan areas have set up data registers and catalogues, automated data processing procedures and shared best practice in data management. and have a continuous improvement plan. |
| **Main outcomes concerning Business Process** | Diagnostics have shown that public data is beginning to be used to improve public services. This began several years ago in metropolises and urban areas, but is now starting to happen in rural areas. At the same time, data producers have begun to formalise and apply data management processes that incorporate the requirements of external reporting. In the best cases, these processes provide the keys to analysing and resolving problems and improving processes.When local authorities use service providers, data flows are mapped out for each new service developed.Finally, efforts are being made to measure the outcomes and impacts associated with the publication of open data. But the effects of organisational changes are almost never taken into account in terms of data management capabilities, and business continuity plans for data-related activities do not exist. |
| **Main outcomes concerning Technology** | Technologies used to manage and publish data are poor in small collectivities. Only big cities and regional authorities developed platforms facilitating the homogenisation of the data quality, data diffusion and use. Some new technologies have been demonstrated like registers and are under optimisation by using AI solution to automatise data quality cheking and completion.  |
| **Summary of the main training needs from the assessment survey for the policy area** | We are dealing with data producers who have varying degrees of knowledge and skills in data management. To support the different profiles and priorities of the various structures, the support activities will have to take different forms; e-learning for sensibilisation, workshops and modular training material to build business cases, expert training sessions to learn how to use some new technologies, case study analysis sessions.  |
| **Lesson learnt and recommendations for the training activities** |
| Stakeholders need to be considered at two levels: the individual and the group. Individuals may have varying levels of familiarity and comfort with open data. Within the same structure, individuals can have very different levels of knowledge and skills (foundational, intermediate, advanced). Within a team, people will not necessarily be in the same phase of the change dynamic. At group level, some will have ambitions, objectives and projects to implement, whether clearly defined or not. Departments within the same entity may not be at the same stage of progress, and the digital tools used or processes may be different. This is reflected in the organisation's level of maturity (Chaotic, Reactive, Stable, Proactive, Predictive). Our objectives are to help improve individual and organisational capabilities. Tables hereafter give some clues about learning activities that can be offered referring to those observations.**Improving individual capabilities**

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| **Calibration of learning actions according to knowledge level and stage of change dynamics** |
| **Knowledge Level:**  | **Depending on stakeholders' existing knowledge levels, you can offer learning activities that build on their current understanding:** |
| Foundational Knowledge:  | E-Learning Modules: Interactive online courses covering basic open data concepts, terminology, and principles can establish a solid foundation.  |
| Infographics and Guides: Visual resources simplifying complex concepts can make them more accessible to those new to the subject.  |
| Webinars and Workshops: Basic webinars or workshops introducing open data concepts, benefits, and use cases can help novices and skeptics understand the value proposition.  |
| Case Studies: Real-world examples showcasing successful open data implementations can inspire confidence and help skeptics see the practical benefits.  |
| Intermediate Knowledge:  | Skill-Building Workshops: Workshops focusing on specific skills, such as data cleaning, visualization, or basic data analysis, can enhance the capabilities of intermediate users.  |
| Hands-On Labs: Interactive sessions where participants work on real open data projects can provide hands-on experience and build confidence.  |
| Deep-Dive Webinars: Webinars diving into specific open data topics, such as data licensing, data quality assurance, or data privacy, can help build more in-depth knowledge.  |
| Tutorials and How-To Guides: Step-by-step guides demonstrating processes like data wrangling, API usage, or creating interactive visualizations can advance their skills.  |
| Advanced Knowledge:  | Masterclasses and Expert Talks: Invite experts to deliver advanced sessions on topics like data ethics, advanced analytics, and predictive modeling to stimulate advanced contributors.  |
| Hackathons and Data Challenges: Engage advanced users in hackathons or data challenges that encourage them to solve complex problems using open data.  |
| Peer Workshops: Organize workshops where advanced users share their experiences and insights, fostering peer-to-peer learning and advanced discussions.  |
| Research Collaborations: Encourage advanced users to collaborate on research projects that leverage open data, pushing the boundaries of knowledge.  |
| **Stage of Change Dynamics:**  | **Adapting learning activities based on the stage of change a stakeholder is in can foster effective engagement:** |
| Awareness and Interest:  | Webinars and Seminars: Engaging presentations introducing open data's importance, potential, and impact can raise awareness and spark interest.  |
| Ted-Style Talks: Short, inspiring talks sharing success stories and innovations can capture attention and generate curiosity.  |
| Consideration and Planning:  | Workshops and Brainstorming Sessions: Facilitated sessions where stakeholders brainstorm ideas for integrating open data into their work can drive consideration and planning.  |
| Roadmapping Exercises: Guided exercises to create open data integration roadmaps aligned with stakeholders' goals can encourage strategic thinking.  |
| Adoption and Implementation:  | Practical Labs: Hands-on labs with real datasets and tools can help stakeholders directly apply open data practices in their projects.  |
| Mentoring and Coaching: Provide one-on-one support from open data experts to guide stakeholders through the challenges of implementation.  |
| Sustaining and Scaling:  | Communities of Practice: Establish online communities where stakeholders can share experiences, challenges, and best practices for long-term sustainability.  |
| Advanced Training Programs: Offer advanced training for stakeholders looking to deepen their expertise and further integrate open data in their work.  |

**Improving organisational capabilities**From what we observed the scope of the data capability change will drive the type of support needed. Some of the stakeholders need global support for all the services impacted by open data. Others will have a specific need for an ongoing project. **Calibration of learning actions according to the global level of maturity**A learning action plan should support them to:Define an open data strategy              Setting the level of ambition              Definition of objectives              Clarifying the datasets to be publishedBuilding processes and activities              Organization for dataset production              Organization for dataset publication              Organization for dataset enhancementConstruction of a transition plan              Initialization and training              Production of open data by default              Empowering departments to produce and publish data* This refers to the “People and Culture / data activities / business process” pillars of the assessment

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|  | **Calibration of learning actions according to project maturity** |
| **Project maturity** | **Technical milestone** | **Learning action** |
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| 1. Data Discovery and Collection:  | Identifying and collecting relevant open data sources that align with the service's goals.  | Workshops on data discovery techniques, web scraping, data APIs, and data source evaluation.  |
| 2. Data Cleaning and Preprocessing:  | Cleaning, transforming, and structuring the collected data to make it usable for analysis.  | Training sessions on data cleaning tools, data formatting, and handling missing values.  |
| 3. Data Analysis and Exploration:  | Analyzing the data to uncover patterns, trends, and insights that inform the service's design.  | Data analysis workshops, statistics training, and exploratory data analysis exercises.  |
| 4. Service Design and Prototyping:  | Designing the user interface, functionality, and interactions of the service.  | User experience (UX) design workshops, prototyping tools training, and design thinking sessions.  |
| 5. Data Integration and APIs:  | Integrating data into the service using APIs or other data integration methods.  | API integration tutorials, web services training, and backend development workshops.  |
| 6. Visualization and User Interaction:  | Creating data visualizations and user interfaces that effectively communicate insights.  | Data visualization workshops, front-end development training, and interactive design sessions.  |
| 7. Performance Optimization:  | Optimizing the service's performance, responsiveness, and scalability.  | Performance tuning workshops, caching strategies, and load testing exercises.  |
| 8. User Testing and Feedback:  | Conducting usability testing and gathering user feedback to improve the service.  | Usability testing methodologies, user feedback collection techniques, and user-centered design principles.  |
| 9. Data Privacy and Security:  | Ensuring that user data and open data sources are handled securely and comply with privacy regulations.  | Data security workshops, GDPR compliance training, and cybersecurity awareness sessions.  |
| 10. Deployment and Maintenance:  | Deploying the service to a production environment and ensuring its ongoing maintenance.  | DevOps training, deployment best practices, and service monitoring techniques.  |
| 11. Continuous Improvement:  | Continuously enhancing the service based on user feedback and changing data needs.  | Agile development methodologies, iterative design, and continuous deployment strategies.  |

* This refers mainly to the “technology” pillar of the assessment.

Complementary observations:* **A learning action plan is only one part of a transition plan**.
* The **support will be different regarding the size of the institution, the management structure (number of levels), the dynamic of change level** (mandate for change already gained / case has to be made).
* To be effective, the training plan must serve to advance the organisation's priorities. It must be directly applicable. Targets have a scope of the data capability change. They have ambitions or projects that need to be diagnosed in order to identify the capacities or resources that still need to be structured in order to achieve them.

**The assessment cannot be used alone to build a training plan** tailored to different employees in the structure. It is also **necessary to**;* + Have an ambition, objectives to achieve in order to
	+ Identify the skills, infrastructure or partners that are lacking, and
	+ Build a comprehensive **progress plan in which training is one of the pillars**.
* The **training courses** available on Data.europa Academy are **in English** (with French subtitles). This is likely to be **a barrier for local authority staff**. O**ther sources/formats should be considered** (workshops/training for several participants, other platforms, personal support, etc.)?
* The diagnoses are best carried out with a Head of IT dpt, and the training courses will involve people who do not necessarily be part of the department that carried out the diagnosis. This administrative process could take time.
* 40 hours of training per learner is a heavy investment. Some local authorities, for example, dedicate only a fraction of their working time to publishing or promoting data, so 40 hours just for training one person could be too much. The time dedicated to implementing training could also be considered in part. It is at this point that an improvement in organisational capacity could be measured.
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| **Follow-up meeting** | Stakeholders Meeting n°3 |
| **Resources** |  |
| **Other personal remarks** |  |