Digitalisation of environmental permitting procedures

A Policy Learning Platform peer review

Peer review on October, the 5 and 6th 2022

Final Report

Sevilla, 20 Dic 2022

1. Brief presentation of the beneficiary and its motivation to host a peer review

1.1. Brief presentation of the beneficiary.

The competences of Environment Protection are delegated in Spain to the different regions, being assigned in Andalusia to the Regional Ministry of Sustainability, Environment and Blue Economy and particularly , to the Directorate General of Sustainability Environmental and Climate Change.

The Directorate General (DG from now on), as responsible of Environmental Protection has following competences (only some of them are mentioned below):

- Permits related to air emissions, wastes treatment, coasts occupation and evaluation of Environmental impact.
- Managing registers related to actual permits and industrial centres; registration of wastes movement, etc.
- Information to national Ministry concerning environmental data.

Related to this, our DG is responsible for the implementation and control of the procedures related to 'Integrated Pollution Prevention and Control' (IPPC Directive) (Directive 2008/1/EC) and other Environmental Permits, some of which integrate different sector authorizations (including wastes, air …)

The purpose of the IPPC Directive is to ensure a high level of protection of the environment taken as a whole. One of the principles of the Directive is about assuring the 'integrated approach, which means that the permits must take into account the whole environmental performance of the plant, covering e.g. emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents, and restoration of the site upon closure'.

Something similar could be said about other Environmental Permits (different from IPPC Directive) for which our Directorate General is competent. Such permits have to consider:

- The interconnections among integrated permits for facilities under Industrial Emissions Directive (IED) and of the E-PRTR Regulation;
- Facilities and projects under Directive 2011/92/EU, on Assessment Environmental Impact (AEI); and,
- All the sectorial permits (waste, air, discharges, coastline, water, cattle roads, natural habitats and species, among others …).

In the case of the Directive 2011/92/EU, the assessment environmental impact (AEI) for projects are included in the Permits, while the AIE for programs corresponds to a different procedure.

1.2. Motivation to host a peer review

As established by national and regional normative, there is a need of digitalization, improvement and simplifications of procedures:

- Spanish law 39/2015, as compulsory norm to apply by all regional administrations, establishes the need of procedures digitalisation and the obligation for the applicants of communication with the Administration by electronic procedures.
- Regional normative, as Decree 622/2019 to promote electronic administration, procedures simplification and organization improvement, establishes the need of improving the procedures description and management for improving the service to the citizens.

In this context, our DG is impulsing procedures digitalization, to improve the service to the citizens by simplifying procedures and improving transparency.

Several digitalization projects are already in progress in our DG, as the one for air emissions or the one for wastes treatment.

Regarding the digitalization of the IPPC permits, several challenges have been identified:

- The implementation of the IPPC Directive in Andalusia has additional difficulties, since the Permits for the industries include not only the ones the Directive suggests, but additional ones our regional normative determines.
- The specific complexity of the procedures, that incorporate many phases, many different options to be selected at each phase, different Administrations involved, etc. This supposes a specific difficulty related to keep a simple and effective procedure.
- The required communication between the different IT systems or digital tools to process sectorial permits (water, air, etc.) by assuring the quality of the data at every moment, among other requirements.
- The required communication with other local or national Administration. Some of the permits included are from other Directorate General (Cattle Roads, Natural Protected Areas, and others) or other Administrations (National River Basins, local Administrations and others). These other Administrations can be local, regional or national. This also adds an additional difficulty.
- A specific industry or installation can have different Environmental issues and permits, and also they can evolve during its activity. It supposes an additional complexity to keep updated actual configuration according to possible modifications.
- The difficulty of getting the right information of the pollutants emitted by the industries to communicate it to national and European administrations (the European Pollutant Release and Transfer Register (E-PRTR), EU-Registry, and others).
- Some other procedures (similar to IPPC) include the assessment of the effects on the environment of certain public and private projects (Directive 2011/92/UE); and of programs & plans (Directive 2001/42/CE). It means an integration with other procedures.
- Finally, Environmental Permits in Andalusia are delegated to each of the 8 provinces, which is an additional issue to consider. Although the IT tool would be the same, the consideration of the peculiarities of each province has to be taking into account.

This 'tool' to be developed is supposed to give answer about improving the service to the citizens by simplifying procedures, improving procedures management and improving transparency.

2. Specification of the policy challenge encountered

The challenges described have been organized into different "thematic blocks" which are resumed as follows:

- ***Thematic bloc 1. Framework adopted and data governance.***
  - Procedure simplification and definition. How contribution of different stakeholders has to be designed to simplify and define the environmental procedure?
  - How the communication between different stakeholders (internal Departments and/or other Administrations) has to be designed to guarantee a quick information update?
  - Data management. How to get correct and to update information from industries and report it in an efficient way?
- ***Thematic bloc 2. Communication and governance.***
  - How to design efficient communication between stakeholders to ensure information updates? (both between different Administrations and within the same Administration?).
  - How to integrate different stakeholders contribution into the project? How to make an efficient use of the resources involved during the project and the use of the IT tool?

- How to design and manage the digitalisation of the project to satisfy user expectations? How to have an IT tool to increase value for industries and citizens?

3. Participants

The participants of the peer review have been:

Environmental Sustainability and Climate Change. Andalusian Ministry of Sustainability, Environment and Blue Economy

- Andrés Leal
- Pablo Soriano
- Germán Coca
- Julio García Sánchez
- Carmen Jiménez
- Nuria Extremera
- Francisco Rodríguez
- Francisco Sempere
- Paqui Godoy
- Juan Contreras
- Inmaculada Tola

Digital Andalusian Agency. Digital Transformation at Andalusian Ministry of Sustainability, Environment and Blue Economy

- Mª Peña Mate
- Emilio Ramírez Ríos

Management of the Natural Environment. Andalusian Ministry of Sustainability, Environment and Blue Economy

- José Ramón Guzmán Álvarez

General Directorate of Water Resources. Andalusian Ministry of Agriculture, Fishing, Water and Rural Development.

- Pedro Fernández Ambel

Provincial offices. Andalusian Ministry of Sustainability, Environment and Blue Economy

- Segundo Álvarez (Cádiz)
- Carlos Serrano (Huelva)

Andalusian Ministry of Industry and Energy

- Triana Sánchez Crespo

Andalusian Agency of Energy

- Joaquín Villar

Union organizations and official companies representatives

- Luciano Gómez (UGT - Unión General de Trabajadores)
- Luis Quesada from the company ENDESA (CEA – Confederación de Empresarios de Andalucía)

'Lean management' Consultants

- Fernando Calderón (CEO Escuela de Lean)

Industry Organizations

- AIQB. Javier Feria Castillo from Alter Enersun
- AIQB. Gema de la Encina Ortega from Naturgy

Professional Colleges

- Rosario Vargas Pacheco, from COAMBA (Colegio Oficial de Ambientólogos de Andalucía).
- Luis Lanne-lenne Ortega, from COIIAOC (Colegio Oficial de Ingenieros Industriales de Andalucía)

Peers

- Caitriona Strain, ERNACT, Ireland
- Helene Rask-Lantz, County Administrative Board in Östergötland, Sweden
- Riccardo Leoncini, University of Bologna, Italy

Interreg Europe Policy Learning Platform

- Astrid Severin, Thematic Expert, Environment and Resource efficiency.
- Magda Michalikova, Thematic Expert. Environment and resource efficiency.
- Raluca Toma, Communication Manager Interreg Europe Policy Learning Platform

Interreg Europe Program

- Mariame AMMOUR

4. Policy Recommendations

Main policy recommendations stated during Peer review are shown below. They are grouped according to thematic blocks that were established initially. These recommendations have been summarized according to:

- Peer experts recommendations
- Stakeholders recommendations
- Discussions and meetings hold during Peer process.
- Previous considerations in our DG

Thematic bloc 1. Framework adopted and data governance.

Data Governance. How to collect and share actual data from different administrations. Importance of Data. Re-think how Administrations should collaborate. Related to the importance of data management and governance, following aspects should be considered:

- Data management and analysis. Regarding the importance of the data, following tasks should be carried out by different owners of the data:
  - Identification of the required data to be reported needs to be done.
  - Collect the data in an effective way:
    - Integrating citizens and industries.
    - Getting the data from Data Bases.
  - Record all metadata in a data catalogue and ensure traceability for all data elements

  - Agree on the sensitivity level for each dataset and check if any data can be freed if low risk
  - Analyse the data and clean the data, if required.
  - Interpret the results
  - Implementation of Business Intelligence tools to improve the quality of data. For example, Our regional Administration is responsible of reporting data regarding the sludge produced at treatment plants in Andalucia. The data are gathered from different Directorates General. The project consisting of implementing BI would let to improve the quality of data

- Data management office. They are different type of data to be collected in our DG and some of these data are related between. Then, a centralised support is critical to set standards, strategy, governance and ensure appropriate controls, with the aim of:
  - Identification of the required data to be gathered, updated and reported.
  - Identification of the owners of the data.
  - Define set of data domains (types) and select a senior official to lead each.
  - Create deployment road map to prioritise data domains
  - Coordination between different data owners.
  - Data reporting obligations according to the regulations.
- Data steering committee. Data steering committee made up by data 'owners'. Objective: Update of required data regarding the obligations of data reporting from our Directorate General.

Framework adopted: Governance of the project. Project management. Plan of meetings, support, feedback, etc. Following actions could be taken:

- Agile methodology. Good practices and techniques regarding agile methodologies could be considered, as:
  - Regarding user and customer project expectations; clarify as much as possible the required deliverables to have a better understanding of the scope. Establish intermediate deliverables.
  - Periodic meetings between users (e.g. every 2 weeks), software developers and other project members, to validate deliverables, agree about requirements and identify possible restrictions. Approve and/or establish new requirements for the deliverables.
  - Creation of a development team to help an agile development, capable of taking decisions.
  - Consultation and in person meetings. Immediate. With the aim of solving specific problems might occur during project development, promote meetings between stakeholders and project members.
- Project management. Following actions could be taken:
  - Definition and agreement of new project governance procedures by steering committee.
  - Define project goals and objectives.
  - Identify risks and constraints → Create a contingency plan for project constraints.
  - Document milestones, track deliverables and timeline. Estimate a budget project. Evaluate the progress of the project in terms of scope, time and cost → "*Earned value*" method could be adopted.
  - Stakeholders identification and management *(see Governance. Identification of Stakeholders).*
- Project management tool. Long term. Analyse possible project management tools to facilitate project control and follow up.

Framework adopted: Procedural models

- Measure effectiveness and efficiency of the system globally and technically develop indicators with stakeholders accordingly. Important to ensure the correct operation of the tool, once it has been put into operation. In this sense, indicators regarding the operation can be established, as:
  - Number of system and tool shutdowns globally.
  - Number of incidences coming from the users.
- Simplification and standardisation of the procedures. Due to the complexity of the permits procedures, it is important to simplify and standardise them. In this sense, following actions could be taken:
  - Simplify permits procedures considering 'lean magement' approach: before programming the software it is necessary to simplify the procedures by the identification and elimination of non-value added tasks.
  - Create a work team integrating provinces technicians to standardise permits procedures.
- Scalability and modularity of the procedures.
  - Guarantees gradual expandability of new functions to address and satisfy new additional needs from stakeholders.
  - Standardize parts of the procedures (creating standard diagram blocks) that could be shared for other procedures and developments of the DG.
- Self-assessment tool–proactive dialogue with applicants (municipalities, industry…), for example to check the required documentation. Following aspects could be deployed regarding this point:
  - Create an initial check-list regarding permits tool to make sure that correct information is presented. Then, actual processing times will be smaller because so will additional requirements for applicants.
  - Making an easier way for applicants to follow up their permits, so they can interact easier with Administration technicians, and thus anticipating possible problems that could appear.
  - In general, improve transparency. Guarantees that every stakeholder can effectively monitor the processes he/she is involved.
- Single entry point–easier process for the applicants. Looking for a better service to citizens, "it is important to design new kind of ´common tools and resources´ at disposal of the citizens and stakeholders", in a perspective of "One Stop Shop; that could be a place where it is possible to develop training activities, capacity building, interaction and participation with the citizens and the stakeholders, dialogue with the scientific actors". Regarding this point, following actions could be taken:
  - Revise actual website of "Environmental Andalusian Ministry", looking for a better understanding of the information shown and a more simple access to different environmental permits.
  - Integrate additional and complementary information that could help applicants and citizens.

Framework adopted: Governance of the permits

- Establish regular internal coordination meetings. With the aim of reducing permitting processing times, regular internal management meetings are necessary. Regarding this point:
  - Permitting tool should incorporate the coordination meetings approach, to facilitate the management and follow up of the permits in process.
  - Regular coordination meetings need to be introduce at different provinces to manage pending permits (coordination meeting).

- Measure effectiveness and efficiency of the tool performance. In this sense, indicators regarding the operation can be established, as:
  - Number of permits introduced and percentage of them closed on time.
  - Average processing time.

Thematic bloc 2. Communication and governance.

Communication and governance

- Develop a vision and a mission. Consider not only digitalization aspects but other aspects to include in the vision / mission.
- Appoint a communication manager within the project, to coordinate communication with internal and external stakeholders. Create the figure of the communication manager for digitalization projects.
- Conceive a communication plan for different stakeholder groups, avoid redundant and excessive communication. Create a communication plan for the digitalization projects.
- Communication strategy. Take into account following aspects:
  - Make sure everyone speaks the same language. Expectations of stakeholders should be explicitly state, and they should be shared and understood by the sponsor and project manager.
  - Keep communicating (develop and maintain communications plan, appoint communication manager, communicate through a variety of channels).
- Change management.
  - Find people who are in favour of the change and use them to enlarge the group. Re-think the digitalizations projects as “Business Transformation”. Innovate on the procedure.
  - Lead with integrity (say what you mean to build trust, and then do what you say)

Governance. Integration of stakeholders.

- Identification of stakeholders
  - Consider a wider group of stakeholder groups *(*eg. other DG’s, Administrations, citizens) as stakeholders in all projects.
  - Identification of the key groups using sampling, test and co-develop the tool. Include stakeholders from Provincial offices to actively participate during project development
  - Identification of the stakeholders at project initiation stage, identifying who should be considered during project development.
  - Increase collaboration with private sector and universities. Private sector should have more involvement as they should be considered as stakeholders.
- Stakeholders management.
  - Create project stakeholder register, to identify actions related to each one. They can also have an important influence on the project depending on the phase of the project.
  - Seek to understand their needs and expectations (e.g., through stakeholder focus groups, questionnaires, stakeholder interviews).
  - Get all stakeholders talking to one another (invite key stakeholders to initial project meetings/focus groups to identify and resolve conflicts early).

- Engage your stakeholders in project development and progress (newsletter, email, websites, podcasts)
- Work with your stakeholders (e.g., to break project into deliverables and tasks so everyone has a better understanding)

5. Possible calendar of implementation

Next, main actions to be implemented are indicated, as well as the estimated required calendar for implementation. These actions are selected from the recommendations mentioned previously, according to the feasibility of implementation, the impact in the result and the possibility of implementing the action through a pilot project.

ACTION	1 T 2023	2 T 2023	3 T 2023	4 T 2023	1 T 2024	2 T 2024	3 T 2024	4 T 2024	RESOURCES INVOLVED	OBSERVATIONS
1. Data Governance										
1.1. Implementation of data management and analysis to Environmental Liability Procedures. Pilot project.									Environmental Liability Office / IT	The implementation of data management and analysis to a pilot project (as the digitalization of environmental liability procedures) would be useful to identify the criteria and information needed for a correct data governance.
1.2. Implementation of data management and analysis to PRTR regulation. Pilot project.									Environmental Prevention / Inspections / DG / IT	Coordination with Environmental Prevention and Inspections Departments to improve the procedure related to PRTR Data
1.3. Implementation of Business Intelligence for data management to sludge procedures regulation. Pilot project.										Our regional Administration is responsible of reporting data regarding the sludge produced at treatment plants in Andalucia. The data are gathered from different Directorates General. The project consisting of implementing BI would let to improve the quality of data.
2. Framework adopted: Governance of the project										
Agile Methodology									IT / Coordination DG / Developers	
2.1. Establish a better clarification of scope and expectations for digitalization projects. Implementation to HERA project									IT / Coordination DG / Developers	Meetings with project developers, documents and prototypes to clarify stakeholders expectations
2.2. Create intermediate deliverables to guide the project development. Implementation to HERA project									IT / Coordination DG / Developers	
2.3. Create an intermediate 'agile team' and periodic meetings to help agile development, capable to take decisions. Implementation to HERA project.									IT / Coordination DG	
Project Management										
2.4. Control of the project. Identification of milestones. Measure of project effectiveness. Definition and implementation of KPI for measuring project effectiveness									IT / Coordination DG	For example, the implementation of "Earned value" method to HERA project could be useful
2.5. Identify risks and constraints → Create a contingency plan according to project constraints. Implementation to HERA project.									IT / Departments DG	
2.6. Project management tool									IT	Evaluate the possibility of using a project management tool to facilitate the project follow up

ACTION	1 T 2023	2 T 2023	3 T 2023	4 T 2023	1 T 2024	2 T 2024	3 T 2024	4 T 2024	RESOURCES INVOLVED	OBSERVATIONS
3. Framework adopted: Procedural models										
3.1. Measure effectiveness of the system. Identification of KPI's. Implementation to SIRA project									IT / Coordination DG / Developers	Identification and follow up of KPIs regarding the performance of the system and the effective use of the tool
3.2. Measure effectiveness of the system. Identification of KPI's. Application to other digital tools of the DG									IT / Coordination DG / Developers	Deploy a control and follow up system for all digital tools of the DG
3.3. Simplification and standardization of procedures before digitalization. Implementation to HERA project. Lean management approach.									Coordination DG / Departments DG / Provinces	Implementation of Lean methodology to AAI/AAU permits before the digitalization of the AAI/AAU permits
3.4. Scalability and modularity of the procedures. Implementation to HERA project (ex. "Requirement/Correction" module,...)									IT / Coordination DG / Developers	Develop and deploy standard modules that could be shared by different projects (eg. Correction module to be used for different AAI / AAU procedures
3.5. Self-assessment tool–proactive dialogue with applicants. Implementation to HERA project									IT / Coordination DG / Developers	The objective should be to improve the AAI / AAU process (by having a better documentation related the permits) and to improve the interaction with the industries and citizens. (eg. "check-list" for documentation presentation + access to public for the follow up).
3.6. Single entry point–easier process for the applicants. Improve the permitting access at the DG website									IT / Coordination DG	Simplify and clarify the access of the different digital tools for the different procedures of the DG
4. Framework adopted: Governance of the permits										
4.1. Establish regular internal coordination meetings for permits management									Coordination DG / Provinces	Deploy the Coordination weekly meeting for permits management to different provinces
4.2. Measure effectiveness and efficiency regarding the management of the permits. Definition of KPI's and follow up									IT / Coordination DG	Definition and measure of permits management (average processing time,....
5. Communication and Governance										
5.1. Establish objectives and develop & vision and a mission regarding the digitalization projects at the Environmental Prevention Department of the DG									Environmental Prevention Department / Coordination DG	Regarding the digitalization of AAI/AAI, the objectives, mission and vision can be established. This would help later for the mission and vision of all the projects of the DG
5.2. Communication manager within the project. Implementation for future digitalization projects within the DG									IT / Departments DG	Communication strategy. Definition of the communication strategy for digitalization projects.
5.3. Change management strategy									Coordination DG / Environmental Prevention Department	Definition and implementation of the change management strategy among the users to achieve expected objectives with the use of the digital tools
6. Governance. Integration of stakeholders										
6.1. Identification of Stakeholders. Identification of expectations. Definition of specific actions and strategy for each one. Implementation to Environmental Liability Digitalization Project									IT / Coordination DG	
6.2. Stakeholders management. Deployment of the actions to satisfy stakeholders expectations. Implementation to Environmental Liability Digitalization Project									IT / Departments DG	

Following pilot projects have been considered

- Environmental Liability project. Digitalization of Liability procedures.
- HERA. Name of the project and the tool related to digitalization of AAI/AAU procedures
- SIRA. Name of the project and the tool related to digitalization of wastes management procedures.

Conclusions

As final conclusions, Peer Review process has been very useful and productive. It has been a good opportunity to receive inputs from experts and stakeholders in relation with permitting digitalization. Actually, the process itself was an opportunity to reflect over the issue between participants during the event.

The recommendations have been also very useful. They have allowed to identify and put together all improvement opportunities and clarify which would be the lines to work through.

Once recommendations have been put in order and classified, an action plan has been defined. This is a good opportunity to take actions to improve the digitalization process.

The challenge in this sense is to integrate all stakeholders into the improvement process and be able to accomplish all opportunities identified.

Sevilla, Dec 2022