



DataIaia

The data & AI platform for public sector
by NTT DATA

An advanced platform with AI and Big Data capabilities

SUCCESS CASE

Client



The client, the General Comptroller of the Regional Government of Castilla-La Mancha, is the official supervisory body in charge of auditing regional public spending and directing and managing public accounting.



The general mission of the General Comptroller's Office is to strengthen and improve all the administrative processes and the economic management of the regional public sector so that it functions by the principles of legality, effectiveness, efficiency and transparency.

Their mission has a direct impact on regional spending, which exceeds 12.2 billion in 2022, including more than €3.6 billion for healthcare and approximately €2.1 billion in education spending¹.

¹ Source: Official Regional Budget 2022.



THE CHALLENGE

In an initial phase of the project, NTT DATA identified all functions and needs of the client, as well as potential use cases in which Artificial Intelligence (AI) techniques could be used to improve their work. Several general challenges were identified, including the following:

- Large amounts of human resources dedicated to re-petitive tasks that could be automated through robotic process automation (RPA) or other similar technologies.
- Internal control excessively based on ex-ante individual expense records, in which each minor contract was analyzed individually, rather than an ex-post global assessment of public spending management. This includes more than 15.000 contracts in a single year.
- Human resources that lack quantitative and program-ming skills.
- Lack of use of big data sources that could be available for auditing purposes and lack of tools to explore data summaries and relations that allow data cross-check from different sources. This makes it hardly feasible to have a general overview of all the minor contracts and practices.

All these limitations had a particularly high impact on the inefficient use of contracts into minor contracts (contracts below a legally determined threshold) that are directly awarded without public competition.

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Solution

The proposal was to create a dashboard capable of monitoring the public procurement of the Regional Government of Castilla La Mancha that includes targeted descriptive analysis of the general management and use of minor contracts. An AI model was also proposed to detect the similarity of minor contracts facilitating the identification of eventual undue splitting of contracts into minor contracts.

This dashboard allows the client to change their organization internally and to transition from an ex-ante control of minor contracts to an ex-post and data-based control. The client required a solution that satisfied their specific technological needs and a partner to execute the project from the discovery phase to the implementation, integration and launch. For that purpose, NTT DATA is providing a team of several experts in data science and AI techniques, Big Data engineering and public sector finance as well as the platform to support the development of the use case.

The solution had to have the following capabilities:

- **Automatically generate detailed reports on results, entities and activities that statistically entail a higher risk of undue splitting.**
- **A forecast model that provides a complete set of alerts for certain groups of contracts that, according to the model, have a high probability of undue splitting. The main technologies applied are recommender systems and Natural Language Processing (NLP). The model developed**

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NTT DATA brought to the project Datalaia, an advanced platform with AI and Big Data capabilities that integrates internal and external data sources as data spaces built specifically for public administrations. Its effortless integration with other data components due to its modular and flexible architecture, its data space capabilities that facilitate the access and publication of data and its user-friendly interface, together with the team of experts in both technology and public sector requirements, pointed to Datalaia as the best solution for this project.

**Datalaia is
an advanced
platform with
AI and Big Data
capabilities.**



The development of this use case lasted 6 months in total. During this period, the NTT DATA team:

- Identified the data sources, metrics and visualizations that were relevant for the client considering the specificities of public procurement.
- Performed the data source analysis and transformations and developed the AI model, evaluating results with the client.
- Designed and implemented the visualizations, integrating the results of the AI model in the dashboard too.
- Deployed the solution and presented it to the General Comptroller's Office.

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Outcomes

By implementing Datalaia, the General Comptroller has achieved a qualitative leap in two key fronts:

- A comprehensive and accurate general overview of all the contract management requests that need auditing and controlling through the new dashboard
- Easy detection of any similarities between minor con-tracts through the new dashboard and alert system



The General Comptroller reports the following potential improvements in their internal business operations:



- The new **user-friendly dashboard** centralizes and monitors all the public procurement processes in a single tool (tenders and minor contracts).



- The **comparative analysis of the distribution of the volume of contracts and amounts by several characteristics and monthly and yearly evolution** disaggregated by Government departments, contracting bodies and awarded companies has a positive impact and increased productivity in the way public auditors control public procurement.



- **Macro and micro level monitoring of tenders and minor contracts** allows searching for particular contracts for further detailed analysis.



- The **machine learning model** that was created to detect similarities between minor contracts, facilitates the understanding of the split of minor contracts practices and the identification of potential areas of risk.



- The dashboard provides a tool to avoid bad practices in the future through reports and communications with contracting units.

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We help clients transform through consulting, industry solutions, business process services, IT modernization and managed services. NTT DATA enables clients, as well as society, to move confidently into the digital future. We are committed to our clients' long-term success and combine global reach with local client attention to serve them in over 50 countries.

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