



## AI FOR JUSTICE

CENTRE DE TELECOMUNICACIONS I  
TECNOLOGIES DE LA INFORMACIÓ (CTTI)

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## AI FOR JUSTICE

### PITCH

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Intelligent assistant to support judges in drafting sentences by locating texts of previous judgments and jurisprudence.

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### ORGANISATION DESCRIPTION

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El Centre de Telecomunicacions i Tecnologies de la Informació (CTTI) is the public body that integrates all the information technologies and telecommunications services of the Government of Catalonia. It is responsible for designing, building, coordinating, and deploying technological projects to provide solutions to all departments and various bodies of the Public Administration, being in charge of managing and evolving all the IT services of the Ministry of Justice of the Government of Catalonia according to their needs and demands.

The Secretariat for Justice Administration of the Ministry of Justice of the Government of Catalonia includes among its functions the modernization of the justice administration in Catalonia through the renovation of judicial infrastructures, information systems, and the organization of the judicial office to achieve a more open, agile, efficient and quality justice.

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### CHALLENGE DESCRIPTION

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The time dedicated by judges to search for precedents and legal foundations to write a sentence is high and an impediment to being more agile in the drafting of sentences, causing a high response time and a sense of slow justice.

Currently, the location of paragraphs of interest of legal or procedural references, of any documentary information or the entirety of the magistrates' own judgments or resolutions previously issued, which may be applicable or reusable in the drafting of new judgments or resolutions, becomes a manual and costly process that causes magistrates to spend a lot of time locating, remembering, and reviewing previous judgments, relying on their memory, both for their content and the date they were issued.

In Catalonia, the judge usually performs a manual search in the procedural management application for justice (eJusticia.cat), in the archive of the magistrate's own judgments, or through the Judicial Documentation Center (CENDOJ), depending on the General Council of the Judiciary (CGPJ), as well as other repositories or jurisprudential databases. The search is more or less effective depending on what the magistrate remembers at that time from similar cases or parts of an old judgment that may be applicable to the current one.

The Challenge is to reduce the time dedicated in redacting sentences by locating reusable information within judicial documents, such as sentences issued in any instance and jurisdiction, in order to speed up and facilitate the drafting of new sentences by judges.

Currently, the location of paragraphs of interest (headings, legal foundations, dispositive part or judgment), legal or procedural references or the entirety of the judges' previous sentences, that are applicable or reusable in the drafting of new sentences, becomes a manual and costly process that causes judges to spend a lot of time locating, remembering and reviewing previous judgments, based on memory, both of their content and of the date they were issued.

The solution we want to obtain is an assistant to judges and magistrates that, by entering an open text or prompt, can quickly, accurately, and relatedly obtain all applicable historical information for the sentence being drafted. In the same way, the assistant must provide the applicable legal foundations and sentence draft for a better management of mass litigation cases with hundreds of very similar claims that has also similar resolutions.

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## CHALLENGE MAIN OBJECTIVES

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By means of applying this innovative solutions (the output) we seek to ease the effort needed to write a sentence (the outcome) or, what is the same, reducing notably the time of resolution, avoiding the feeling of slowness in justice and discouragement in citizens (the impact).

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## SOLUTION FUNCTIONAL REQUIREMENTS

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The main barrier associated with a project of this type is the design of a solution that is truly adapted to the needs of end users, and that is why it has been a priority to incorporate a reference magistrate within the co-creation team who will validate the success of the solution and also act as a prescriber of the solution in different judicial areas. It is also necessary to take into account in this sense that the challenge has previously been identified in a "challenge detection workshop" with managers and users from the Ministry of Justice of the Government of Catalonia, so we have observed this need objectively.

Just to add focus in this pilot, the sentences considered will be in the mercantile field, a part of the civil procedures.

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## Compulsory functional requirements

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Just to develop proper solution to the main challenge we must guarantee access to quality data is absolutely critical for the success of the project, in order to train the artificial

intelligence systems. In this sense, we have access to the historical records of judgments as well as the management tools and repositories used by judges in their daily tasks.

To automate the process, it is necessary to access a very large amount of information, mainly unstructured, and have innovative tools that can understand the specific needs of the judge.

Technologies such as artificial intelligence systems and natural language processing tools are emerging, which properly trained can meet the proposed need with the AI FOR JUSTICE project, but there is currently no market solution that solves this problem, so the INNOBUYER program can help bring this type of technology to the market with a concrete product.

Just to summarize, we are thinking of a standalone app or web app. Through this app or web site we must introduce a complaint, on which the judge must enter. The app must be able to search similar sentences among:

- Sentences written by the own judge and stored in a private drive (physical hard drive or cloud)
- Public sentences available on line through legal portals described in point “Pilot set up conditions”, as is CENDOJ
- As this solution is desired to be scalated to other justice administrations that could have different legal portals, is desirable that the solution grants interoperability based upon standards.
- Language. Catalan and Spanish mandatory

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## Desirable functional requirements

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This pilot, as is planned, consists more of a Proof of Concept that will allow us to validate any technology able to aid judges to write their sentences.

- Any friendly user interface could ease this test, but final design could be postponed to further phases of the development.
- In the same way, considering that a magistrate protects his own data with a password, and the access to any database or resource of the Catalan government is kept by secure access, any ‘single sign on’ solution would be appreciated.

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## PILOT SCOPE

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This pilot is meant to test with one magistrate how he writes a sentence in mercantile cases and how can he improve his productivity by means of a technological aid. This aid must find, with semantic search, among previous sentences kept in local hard drives or public cloud storage, similar sentences and write a draft of a new sentence.

## Type and number of targeted end-users

End-user type	Role	Number
<i>Magistrates and judges in the Catalan public Justice Administration</i>	<i>Identification of requirements and evaluation of results.</i>  <i>Test of usability</i>	5
<i>Technical Manager at Catalan Ministry of Justice</i>	<i>Identification of technical requirements and evaluation of results.</i>  <i>Test of usability</i>	1
<i>representative Administració Oberta de Catalunya (Catalonia Open Administration)</i>	<i>Advisors on interoperability among administration</i>  <i>AOC is the consortium promote the digital transformation of the Catalan Administrations, to promote Agile, Logical and Collaborative Governments</i>	1
<i>representative of the Agència Ciberseguretat de Catalunya (Catalonia cybersecurity Agency)</i>	<i>Advisors on cybersecurity.</i>  <i>The is the organization focused on the digital security of the Catalan society and its public administration</i>	1
<i>Mixed Commission of ICT's between the Department and the TSJC (Superior Tribunal of Justice of Catalonia)</i>	<i>Advisors of functional requirements and evaluation of results.</i>	<i>This committee involves different ICT representatives of Justice Administration in Catalonia</i>

<p><i>State Technical Committee for the Electronic Judicial Administration (CTEAJE)</i></p>	<p><i>Advisors of functional requirements and evaluation of results.</i></p>	<p><i>This committee involves different ICT representatives of Justice Administration in All Autonomous regions and the central Spanish Ministry</i></p>
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## Language

The solution provided must understand both official languages in Catalonia, this is to say, Catalan and Spanish, as both languages are used to write sentences in Catalonia.

## PILOT SET-UP CONDITIONS

Just to understand the process let's take a look to a 'hand made process' of writing a sentence:

- Reading of the governing documents (demand and response).
- Drafting of the procedural structure of the main moments or phases of the lawsuit (presentation of the claim, incidents in the admission, answer, holding of the hearings and procedural incidents until the trial).
- Checking that the claims of the parties coincide with similar issues that have already been taken in court usually by consulting personal database.
  - In collegiate bodies (as is supreme court) it is easier to consult CENDOJ database because all the decisions of these bodies are received and classified. But in lesser bodies as is instance courts it is more difficult since the CENDOJ does not include all the jurisprudence.
- If the matter to consider is routine or repetitive, the sentence is repeated from a previous text, making the adjustments to particular data, but with the identical legal arguments.
- If the matter is not routine or repetitive, it is necessary, on the first basis, to make a summary of what each party is asking for (summary of the demand, the response and the pleas of each one of them).

- The second foundation includes a list of proven facts, that is, accepted or accredited facts that serve as a basis for resolving the specific legal problem. To write these facts, it is necessary to go to the governing documents, review some important documents provided by the parties and review the most outstanding aspects of the evidence held in court (reference to what the parties, experts or witnesses declare).
- Based on these initial steps, which are usually very similar in almost all civil/commercial courts, the rules that must be used to resolve the conflict are specified, including the articles that will apply.
- Established the applicable legal framework, it is necessary to put it in relation to the facts that are discussed in each lawsuit and with the evidence carried out, arguing or justifying the decision. At this time, jurisprudential references are included, usually by consulting the CENDOJ.
- We continue with the petitions or complementary aspects of the lawsuit: The petition for interests, the complementary or subsidiary petitions of a legal nature, the order for costs. We resolve these complementary aspects based on what is requested in the demand and response; For these resolutions, consolidated criteria that appear in many previous resolutions of the judge are applied.
- The last milestone is the ruling, where it is indicated whether or not the claim is upheld. In the ruling of the sentence a series of warnings or legal considerations on the effects, the resources that fit and the publication are incorporated.

Under this context, the pilot must ease this process by adding technological tools.

The process of validating functional requirements considered during the pilot could include:

1. Praying of requirements, needs and validation with the Magistrate observer of the project to help the development of the lawsuit or solution. ICT Area of the Department would also participate in this phase just to be observant of any technological requirement.
2. According to the ICT Area of the Department to study the compliance of the operational information systems to the Justice Administration (AJ) in Catalonia: technical integration, call of external services, etc.
3. Presentation of the solution to the Mixed Commission of ICT's between the Department and the TSJC (Superior Tribunal of Justice of Catalonia). In case any consensus and approval is reached, the validation can be extended to a reduced group of Magistrates in Catalonia to end the test.
4. In case that the pilot is fits successfully with the needs identified, the Department of Justice authorizes it, submits the solution to the State Technical Committee for the



Electronic Judicial Administration (CTEAJE) where all the Autonomous Communities in Spain are represented with regard to Justice, the Consejo General del Poder Judicial, the Ministerio de Justicia and the General Prosecutor of Spain and is the collaboration instrument in respect to ICT's in the Justice Administration all over Spain.

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## Ethical, legal or regulatory

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The solutions shall be fully GDPR compliant, as many sentences could include personal sensible data. In case that non anonymized data should be used the provider must use anonymizing algorithms previous to their use.

In the case that information must be stored in the provider's servers in order to execute de PoC the provider must accomplish any confidentiality and security requirement stated by CTTI.

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## Technological

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The systems and servers needed for running the pilot must be hosted or managed by the provider in order to avoid provisioning procedures of test infrastructures isolated from running infrastructures provided for CTTI to the regional government. Should the solution be hosted in the cloud must be compliant with CTTI rules of cloud servers.

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## Data access

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The developed AI Tool can consult or use data in the form of approved previous sentences that can be located in:

- Own judge database, usually stored in local discs or in private cloud discs.
  - This database is not anonymized, so its jurisprudence, in case it is needed for deploying the PoC must be previously anonymized.
- Public jurisprudence databases, either regional or nationwide, as is CENDOJ database or ejusticia.cat database.
  - The provider must meet requirements stated by CENDOJ rules. The jurisprudence included in this database is anonymized.
  - ejusticia.cat database is not anonymized, so its jurisprudence, in case it is needed for deploying the PoC must be previously anonymized.



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## EXPECTED IMPACTS AND KPIs

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The main benefit associated with implementing a solution that addresses the aforementioned need will be the reduction in the time that magistrates need to issue a ruling or sentence, and therefore, the reduction in the time that citizens will have to wait for the resolution of the judicial processes in which they are involved. For massive litigation cases, the impact can be even more relevant, greatly improving the productivity and efficiency of the work of judges or magistrates.

Furthermore, this reduction in the time of judicial processes will generate greater agility in the justice system and will improve citizens' satisfaction with the judicial system by reducing the perception of slowness and inefficiency in the resolution of cases that currently exists.

Another benefit that the solution will bring is the uniformity and quality of the sentences because the precedents and legal foundations found will not depend on the previous experience or the memory of the judges and magistrates. Uniformity in sentencing is important to ensure fairness and equity, and consistency in the application of the law.

To evaluate the impact of the solution, we have chosen the “estimated length of proceedings”, an indicator of the EU JUSTICE Scoreboard of the European Commission, that indicates the estimated time needed to resolve a case in court, meaning the time taken by the court to reach a decision at first instance.

The estimated length of proceeding depends mainly on two aspects: 1) the duration of the proceedings and therefore the time in their processing and 2) the time in the drafting of a sentence or resolution. Point 2) is the time we want to reduce in the execution of the project; one of the results of the co-creation and pilot test will be to determine the specific improvement of this indicator in different types of sentences thanks to the application of the solution.

According to the yearly inform publish by the Spanish Ministry of Justice, “La justicia dato a dato, Año 2022”, a magistrate, on average, redacts a total 306,2 sentences per year.

Considering 220 working days a year, we can assume that an average judge, as could be the observer, redacts 1,39 sentences a day. Any tool that can improve this average to, let's say, an average between 1,8 (30% increment) to 2,00 (50% increment) sentences a day, could be a useful tool.

To add the subjective approach to any solution codesigned, we can test the results of the solution through a test passed by any judge participating of the codesign. Any results between 4 and 5 could be considered a correct approach to our desired solution. This test could be as follows.

*Evaluate from 1 to 5 how much this solution helps you, where each number states:*

5 – the tool is perfect. The sentence proposed is accurate and need few corrections or supervision, improving drastically my performance average time

4 – the tool is good, with some corrections I can draft a sentence in less time than usual

3 – the tool is correct, I can write good sentences but I need a strong supervision to obtain equal results in similar time

2 – The tool is poor, I need too much time of supervision, I prefer tha keep working as usual

1 – The tool redacts incorrect drafts

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## BUSINESS OPPORTUNITY

### Market size

At the level of Catalonia, the judicial system has 846 judges and magistrates, which corresponds to about 11 judges per 100,000 inhabitants. At the national level in Spain, there are 5,726 judges and magistrates with an average of 12 judges per 100,000 inhabitants.

The deployment of the solution developed for Catalonia can be extended directly to the 12 Autonomous Communities of the State that have jurisdiction in matters of justice (Andalusia, Aragon, Asturias, Canary Islands, Cantabria, Catalonia, Valencian Community, Galicia, Madrid, Navarre, Basque Country, and La Rioja), and for the rest of the communities, it can be carried out directly with the central administration of the State.

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### Adoption plans

Within the framework of CTTI's 2025 strategic objectives, an innovation strategy has been designed based on a model of open innovation and customer-centric innovation that uses the co-creation of solutions to respond to the challenges and needs of the Government and the Livings Labs as real environments for experimentation.

The deployment of the CTTI's new open innovation ecosystem will progressively open up to new agents from the external ecosystem, moving from a model focused on the solutions proposed by current CTTI suppliers to a model that incorporates more innovative players of the digital innovation ecosystem. In this sense, innovative public procurement is one of the instruments to be actively explored.

The CTTI's management considers the participation in InnoBuyer strategic to acquire knowledge and experience in this type of process. To do this, an unmet need worked together with the Ministry of Justice has been selected through a challenge detection workshop with users from the Ministry itself, which identifies a real unresolved problem that needs the application of advanced digital technologies such as AI to solve it.

In this way, there is the commitment of the CTTI for the alignment of InnoBuyer on its way towards an open innovation model and of the Ministry of Justice itself to implement the solution resulting from that innovation process as a first example of 'success of joint work between experts in the judicial field and experts in technology.