MACHINE LEARNING APPLIED
TO JUDICIAL HEARINGS.

VOICE TO TEXT

General Directorate for Digital Transformation of the Administration of Justice

GOBIERNO DE ESPAÑA
MINISTERIO DE JUSTICIA
DIRECCIÓN GENERAL DE TRANSFORMACIÓN DIGITAL DE LA ADMINISTRACIÓN DE JUSTICIA
AGENDA 2030

OUR MISSION

Improving justice through technology.

STARTING POINT

- Regulations **forbidding the transcribing** of oral proceedings and recorded hearings.
- We have had more than **200.000 judicial hearings** each year over the last three years, that means over **50.000 hours of recordings.**
- The users of the Administration of Justice **need these transcriptions to expedite their work.**

Article 147 of the Criminal Procedure Act:

"oral proceedings in hearings and appearances before judges or magistrates or, as the case may be, before judicial clerk, shall be recorded on a medium suitable for recording and reproducing the sound and image and shall not be transcribed".

Article 230.3 of the Organic Law of the Judiciary:

"oral proceedings and hearings recorded and documented in digital format may not be transcribed, except in cases expressly foreseen in the law".

What do we do with all this?

WHAT WE HAVE ACHIEVED: TECHNOLOGY INITIATIVE

VOICE TO TEXT

Project that responds to the demands of justice professionals and brings benefits to society.

- ✓ ***More efficient management*** *of the information contained in the hearings.*
- ✓ ***More agile*** *with direct access to the interventions of the participants.*
- ✓ *With automatic learning capacity thanks to*

Machine Learning

SELECTION FACTORS

Precision *providing accuracy in the search of keywords.*

Speaker detection *considering the precision in the recognition of speakers.*

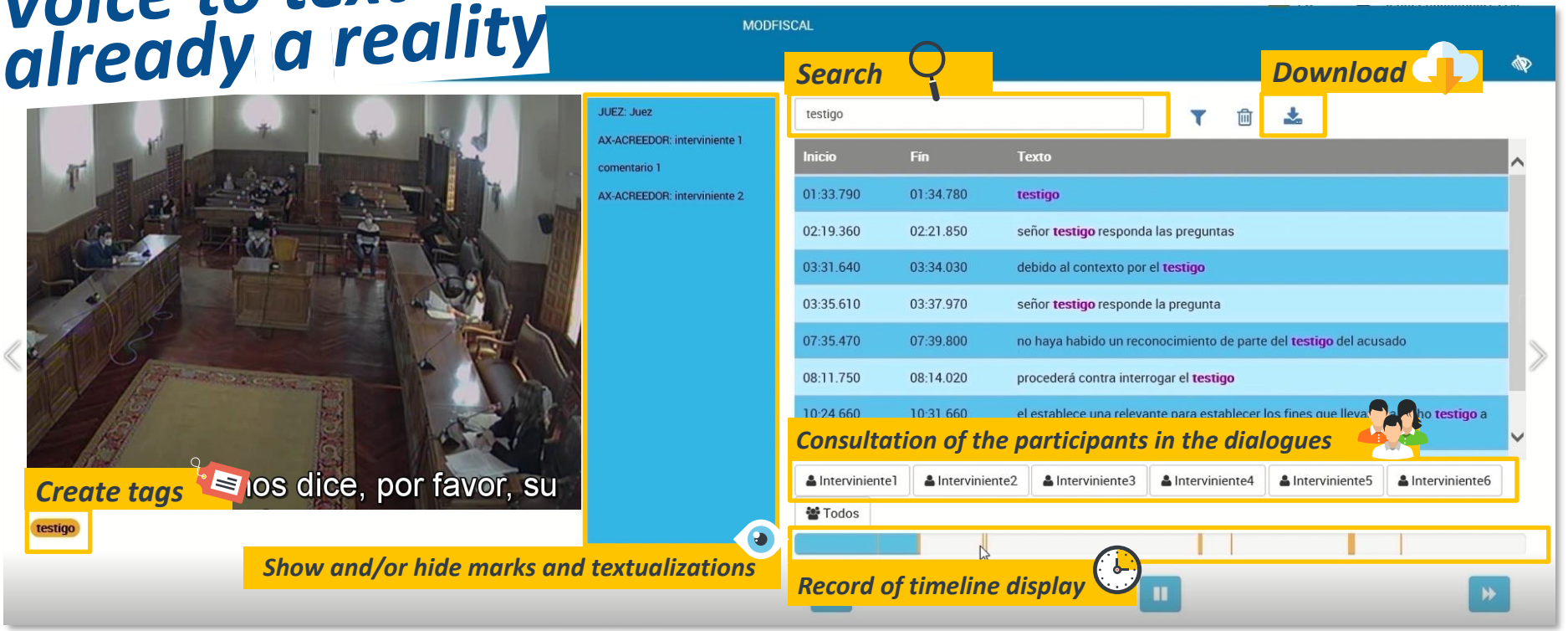
Execution time *considering the fastest processing capacity.*

Integration *with other systems.*

Cloud system *allowing the storage and access to data through the network.*

Machine Learning *prior to the use of the system, it collects data and is able to analyse it in order to improve its capabilities.*

Voice to text is already a reality



Search: performs free text searches on the content of the video in order to go to certain moments when the wanted word was said.

Download: allows to obtain the record of the hearing in an editable text document.

Consultation of the participants in the dialogues: identifies the participants that appear in the video and make it possible to locate the specific moments in which a speaker says a certain word.

Record of timeline display: provides a timeline bar to navigate agilely through the statements of the participant selected.

Show and/or hide marks and textualizations: allows to visualize, hide and/or open in a new window the marks established in the recording.

Create tags: allows to generate tags associated with specific moments of the recording.

VOICE TO TEXT IN DATA

More than
600.000 citizens
already benefit from this solution.

More than
8 million people
will benefit from it at the end of 2021.

*Data from 2019

4.938 recordings
have been textualized this year.

100% of the Ministry of Justice jurisdiction hearings **will be textualized**
by the end of 2021.

*Data from November 30th, 2020

More than
750 judicial users
already use the textualization.

More than
9.000 judicial users
will benefit from it at the end of 2021.

*Data from December 2nd, 2020

IMPROVED PRODUCTIVITY

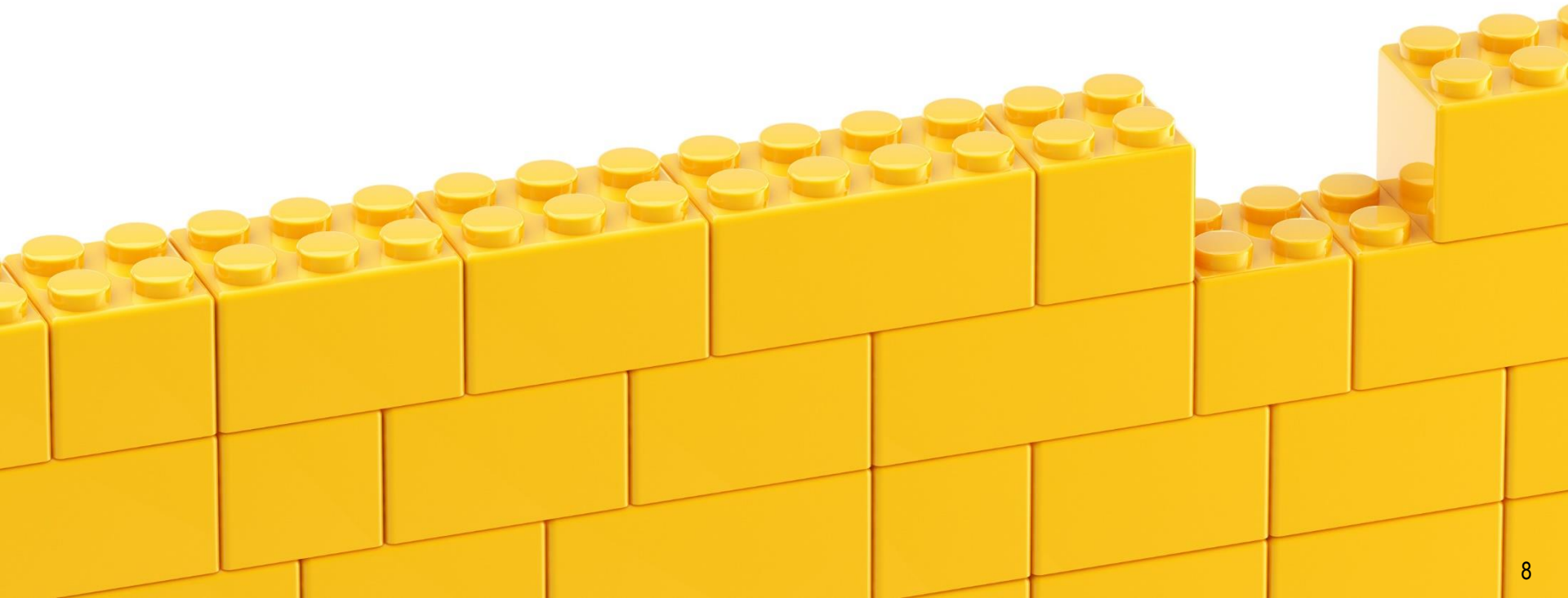
Estimated **savings of 60% in the time** users take to locate a specific extract in a recording.

INCREASED RELIABILITY

The system has an **accuracy level of over 80%** in the textualization, considering that it is still in the pilot phase.

We continue advancing in our mission to **IMPROVE Justice through TECHNOLOGY.**

As one more piece of the digital Transformation of Justice.



Thanks for your attention