

## 'Treasury of the Taxpayer' - task description

Problem: NRA customers have a problem with define their tax status (due to the lack of tax knowledge) and with meeting the related deadlines.

The idea: IT solution, which, based on the data provided by the user, will propose and remind him of important deadlines, provide information and, if necessary, guide him to the most appropriate form of contact and the appropriate unit.

The solution should automatically prompt information and data relevant to a given type of user (without the participation of NRA employees).

Formulating a query indicating specific data about events and facts about the user that may affect his tax situation (for example number of children, their age, disability certificates), for example in the form of a questionnaire ("do you have children" ... etc). Based on this, the user receives information (for example if you have a children at school, you can benefit from the child tax credit ", " if you bought a secondhand car, you are obliged to submit a declaration within 14 days ", " you moved out, then update your new address in the PIT tax return, ").

Simplify contacts with NRA units. Currently, these contacts take place through:

- National Revenue Information (form, chat) - substantive questions.
- Tax offices (by phone, in person, in writing) - issues related to the tax settlements (e.g. do I have arrears, what are the opening hours of the Tax Office).
- A large number of technical support e-mail addresses (e-mail addresses for specific services, such as e-Financial Reports, JPK, e-Deklaracje, and others).

The solution should guide the user to the proper channel and contain information about all available forms of contact with NRA and recognize what form of contact the user needs (if contact with a NRA is necessary).

Assumption: the solution must not download or process any data from NRA's IT systems - it should base only on anonymous behavioral data or data entered by the user. User must not be identified in any way as a particular taxpayer. None of individual user data (entered in the solution) may be available for NRA in any way. User is assured about this feature within the solution's GUI.

Solution usage examples:

1. The **user does not know what he wants**, so the service asks him questions about his life and gives him tips on what he needs to do. For example
  - a. "do you have children?" - if so, then further specific questions in terms of child tax relief
  - b. "Are you running a business?" - further questions and guidance for business activities
  - c. "are you a board member?" - if so, then the detailed questions in terms of obligations related to financial statements

Based on the answers in this "survey", the service gives a list of things to remember with the option to add reminders to the calendar on the device.

2. The second option is if the **user knows what he wants**, for example:

- a. the user knows that he has tax to pay, but he has no money - he needs to be provided with information about the possibilities (reliefs in repayment, for example installments) and possible consequences of not paying taxes on time.
- b. the user has bought a car and is looking for information on what to do next
- c. the user wants to know which tax reliefs can he deduct in tax return
- d. the user wants to know what are the opening hours of his tax office ( for example according to the address of residence )
- e. the user needs a tax certificate - he gets a description of the procedure and contact information to the proper tax office

3. The third option, the solution - service suggests potential problems and the possibility of solving them, based on the user's behavior, visiting relevant areas of the solution and entering phrases in the search engine. The solution, based on user's behavior, anticipates the issues he is most likely to encounter with, e.g.:

- a. the user knows that he has tax to pay, but he has no money - he needs to be provided with information about the possibilities (reliefs in repayment, for example installments) and possible consequences of not paying taxes on time.
- b. the user has bought a car and is looking for information on what to do next
- c. the user wants to know which tax reliefs can he deduct in tax return
- d. the user wants to know what are the opening hours of his tax office ( for example according to the address of residence )
- e. the user needs a tax certificate - he gets a description of the procedure and contact information to the proper tax office

Source data should therefore be data which is generally available on the NRA website (the knowledge base) and information about the user collected by the service. The result of the service should be provided to the user specific answers to his needs (ready tax information, advice ready to use by customer ). The final service must be characterized by:

- easy configurability (the possibility of adding new information sources, modifying existing ones), in particular the possibility of the simplest and frequent updating of the knowledge base used by the solution (it is both about expanding the substantive area in which the solution is able to help the citizen - further taxes / substantive areas and update of information in connection with changes in the law / tax rulings). For the purposes of the hackathon, a short knowledge base has been prepared (mostly downloaded from [podatki.gov.pl](http://podatki.gov.pl) in the field of child tax relief).
- anonymity of the user's actions (the service will therefore neither identify the user as a specific taxpayer, nor provide him with data collected in NRA registers).

The service must correctly interpret the questions asked by the user in common, natural language - written text analysis (recognition by the service of everyday language in written text, analysis of everyday language sentences, on their basis identifying what the user is asking about).

The service must also support reminders - work with the calendar in the user's account (external calendars). If the result of the service is information containing a certain date (e.g. for submitting a declaration, paying tax or fulfilling some other obligation), the service should propose to add such information to the calendar.

First of all, the effectiveness of the service will be assessed, understood as the effectiveness of the hint mechanism used - the accuracy of the answer to the customer's question.

In terms of technical aspects, it will be important to base the proposal on open source solutions, and in particular on innovative solutions (not currently offered on the market as complete, ready to use, IT solution). Aspects such as the planned mechanism of propagation of the new knowledge base and the amount of data necessary to use the service (so that it can also be used with slow or limited methods of connecting to the Internet) will be assessed. The multi-platform nature of the solution will also be important (the ability to run on as many end devices as possible).

The service for an external user must be ergonomic. A very important issue is the ergonomics of cooperation with the user, in particular the ergonomics of the method of collecting data about the user and the contextual nature of the answers (taking into account that subsequent questions may refer to the same topic and information provided by the user in previous answers). Ergonomics should also be remembered when configuring the knowledge base on the NRA side. The mechanism of introducing new facts must be easy (not requiring development work). The service must also take into account contextual connections between facts, categories of competence areas to which the facts relate, additional clarifying questions asked by the solution, etc.

**We ask you to submit your final solutions to our challenge in the form the following files:**

1. PROJECT NAME\_ Project description.ZIP [MANDATORY]:

- In English or in Polish
- No more than 500 words

2. PROJECT NAME\_PRESENTATION. ZIP [MANDATORY]:

- an archive containing all kinds of information materials, descriptions, screenshots, presentations, links to films and other visualizations related to the task, prototype interface etc.
- presentation (in English or Polish, in PDF only, No more than 10 slides)

3. PROJECT NAME\_ MANUAL.ZIP :

Video URL [MANDATORY]:

- Either video of your project or team member explaining the project
- No longer than 60 seconds
- In English or in Polish
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Demo Link [MANDATORY]:

- Make sure to provide login information

Repository URL [MANDATORY]:

- Everything in one repository (if your project has different modules please put them in separate folders)
- Available to view online
- an archive containing a compiled version of the tool or a link with its location, as well as a description of the steps to run the solution on Windows or Linux in a short time.
- An **automation script** is recommended.
- Framework list, compilers, virtual machines, framework, containers, runtime environment, system requirements, equipment requirements
- Other tools list (for example data base, IT program),
- Operating manual – for system administrator
- Basic user's manual
- Architecture description