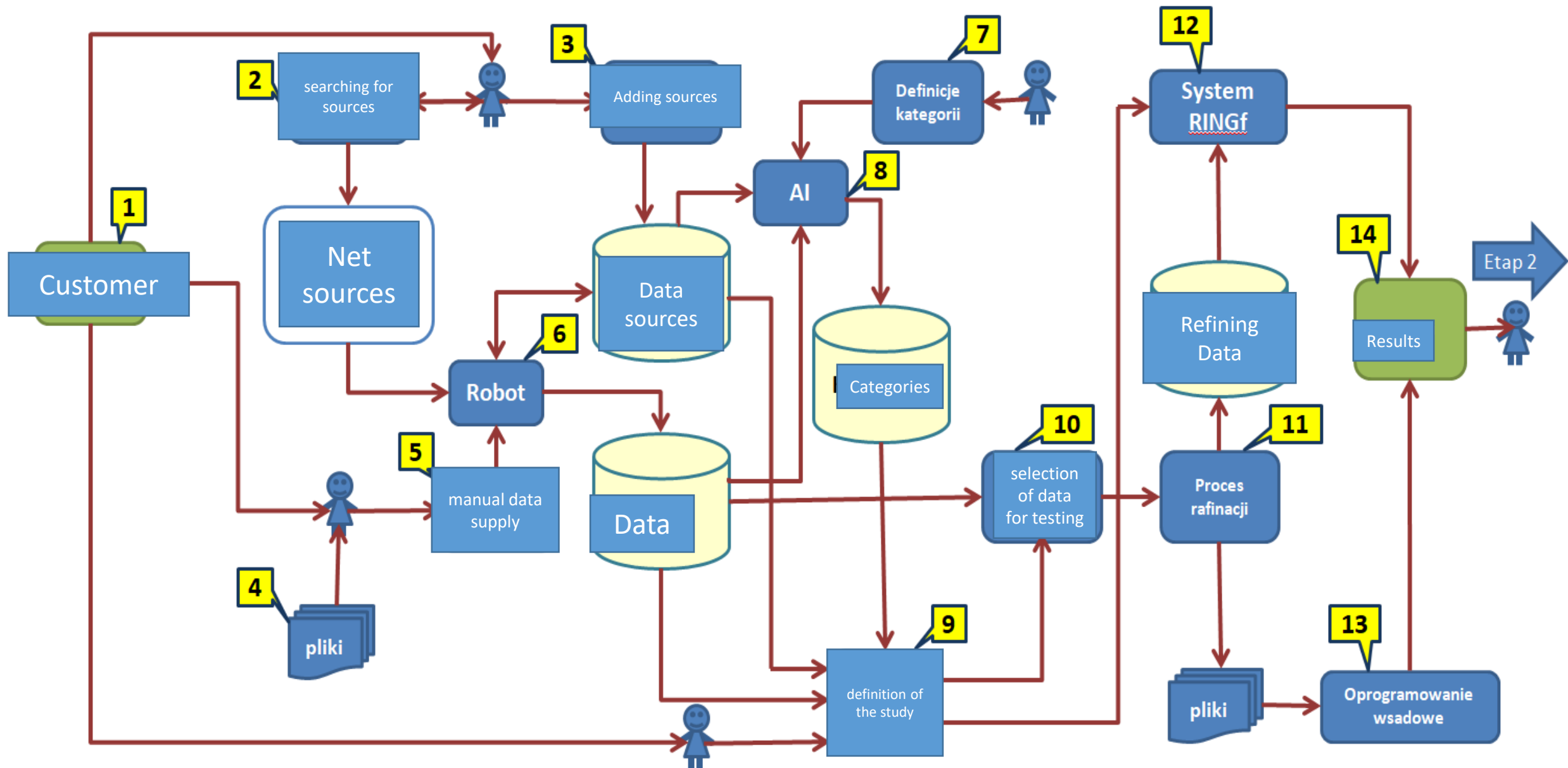


Execution algorithm
Refining the data



1. Task order

- Contains all information necessary to determine the scope of the study.
- Includes purpose and assumptions.
- Includes: topic of the study, time interval, key words defining the subject of the study, recommended data sources.
- The selection of the above mentioned elements is closely related to the subject of the study and elements such as the necessary input data, source selection, data collection, analysis have to be defined on case-by-case basis.

2. Searching for sources

- A process carried out by the researcher, the aim of which is to find the right data sources according to the subject of the research.
- Searching for sources each time is carried out manually using the procedures described in this document.
- At this stage, a division is made into sources that can be collected fully automatically by the robot and those that require semi-automatic or manual processing.

3. Adding sources

- Actions performed from the level of the administration panel, through which the researcher introduces sources of information to the source database.
- Based on the entered data, the robot starts collecting the data. This process is fully automatically and no human input is required.

4. Files

- They are all kinds of materials that are not available in the network sources. This applies to customer's own materials, which for various reasons can not be accessed online. In a sense, we can describe these materials as offline materials.
- May include materials digitized by the researcher or client as well as any other materials that require unusual processing, e.g. converting a multimedia file (image, audio) into text.

Data supply

- **Manual data supply** - this is the function that powers the robot database with the data that the robot can not automatically handle due to its unavailability in the network. Manual data supply of the robot database is a complement to the automatic power mechanism.
- **Robot** - a fully automated system for collecting data online (24/7/365).

Definition of categories

- **Definition of categories** - on the basis of information provided in the order, the researcher defines the categories of data for a given study.
 - The defined categories are processed by AI algorithms in such a way that individual data sources can be assigned to specific categories.
 - The AI mechanism in the assignment of categories has been described in the Report.
- **Artificial Intelligence (AI)** - a separate fully automated AI mechanism built based on TensorFlow.

Definition of the test

- **Definition of the test** - the activities defining the audit in the system are a derivative of the order and processes described above. The researcher determines from which data sources, which categories and on what data the test will be performed. The parameters specified in this section are the input configuration for the selection of test data and the refining process.
- **Selection of data for testing** - an automatic process, which determines specific documents to be taken for testing - the refining process. The input data for the selection are the boundary parameters given during the definition of the study based on the information from the order.

Refining process

- **Refining process** - a fully automatic process carried out depending on the needs on one or several calculation nodes. As a result of the refining process, the system generates files with a database structure or writes data in the database "Data after refining".
- **RINGf system** - a fully autonomous system that processes data after the refining process into a human-readable form. The data generated by the system in the form of raw results is the basis for the analysis and preparation of reports.

Batch software

- **Batch software** - includes authoring software that performs automated data analysis after the refining process. In addition to the already defined scenarios, batch software can implement custom data processing algorithms.
- **Results** - it is a set of files being the basic raw material necessary to prepare a report in stage 2.