Field sales
support system

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Route Master mobile application
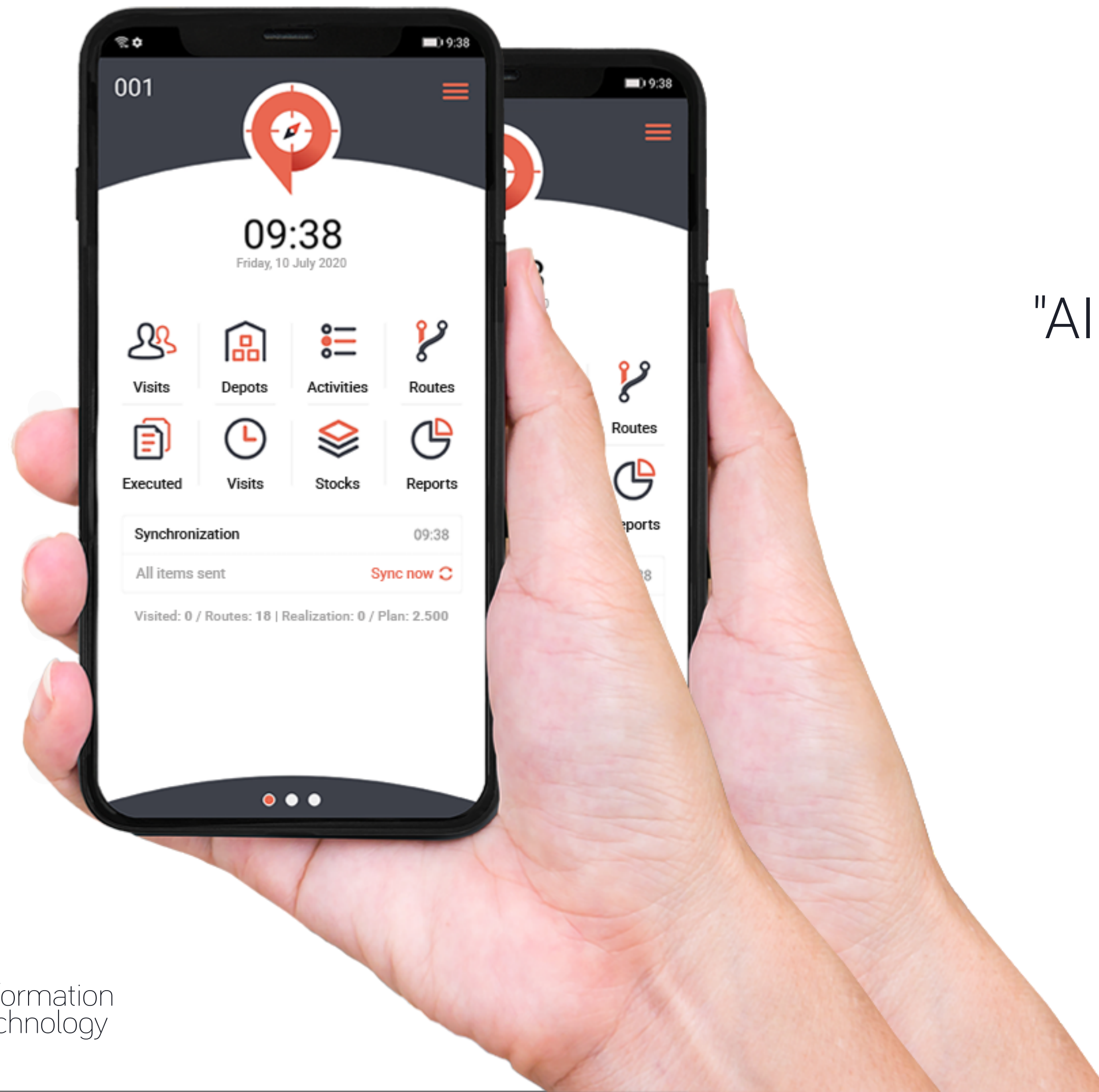
"AI" - artificial intelligence in the **Route Master** application for fast shelf share analysis

AI – Shelf image recognition functionality features

- Use of the image recognition technology for identifying own and competition products on the shelf, with a help of advanced AI technologies for image processing and classification.

  - recognition of the shelf content in just a few seconds after shelf photo is taken, with just a few clicks in the Route Master application

    - Shelf share index:

      - recognized products within one category are automatically classified and the shelf share index is calculated for both, own and competition products

      - shelf share percentage, total for the category and separately for each SKU

      - data are archived and tracked historically - the basis for further reports and analyzes.

    - Planogram compliance:

      - a photo of the existing shelf arrangement is compared with a photo of the contracted or targeted planogram layout for the category

      - products on the planogram are compared by presence and position on the shelf - the application visibly marks all discrepancies, for each SKU.

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Process
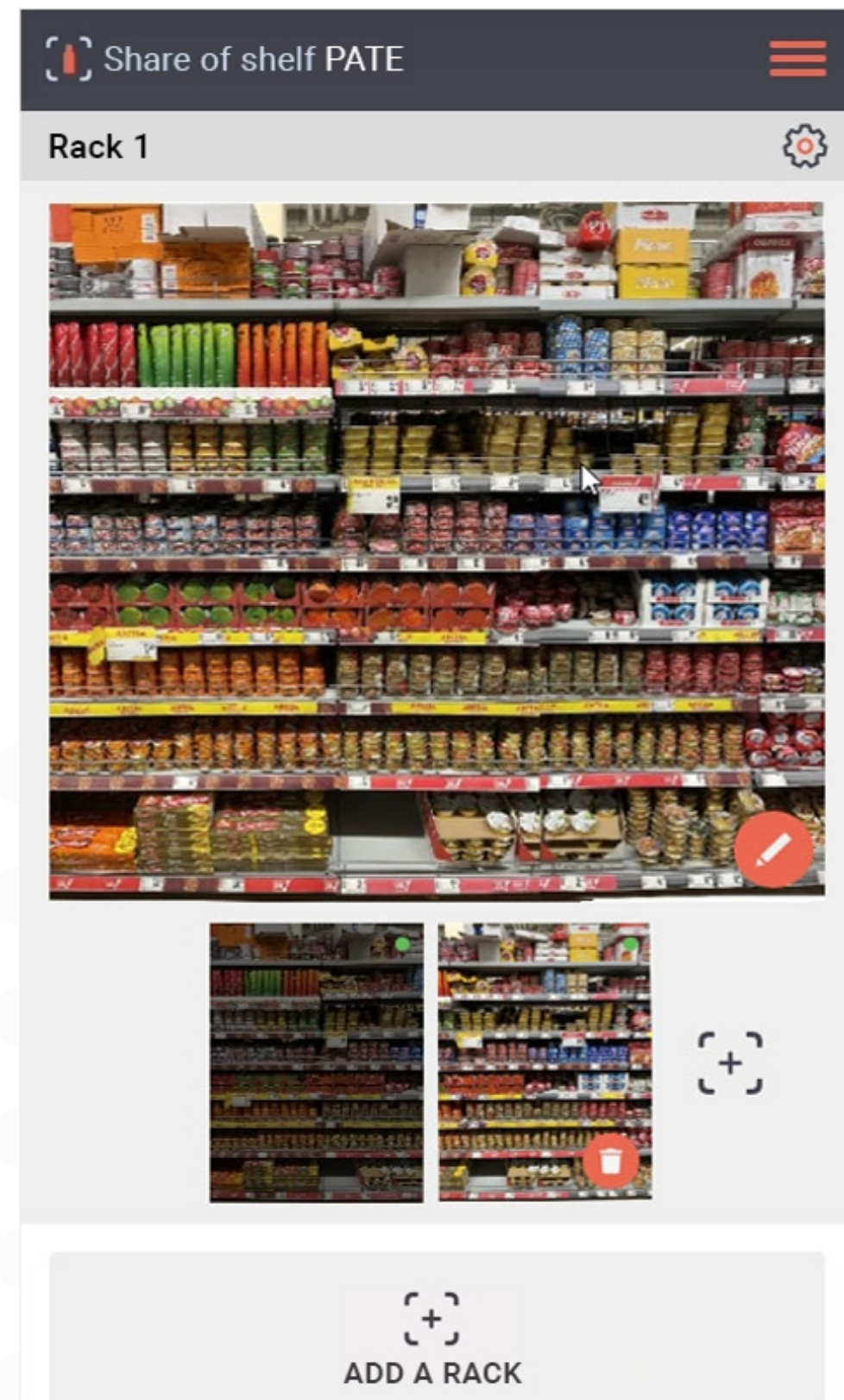
First step – shelf photo:

- shelf content recognition user option is available as an optional or mandatory task within a sales visit to the store

  - the part of the shelf containing the selected category is photographed

    - if the total coverage of the category is wider than the photographed part of the shelf, additional photos are taken from left to right

      - the application automatically merges each added photo into a common one until an integrated image of the whole category on the shelf is formed ("stitching").

Process
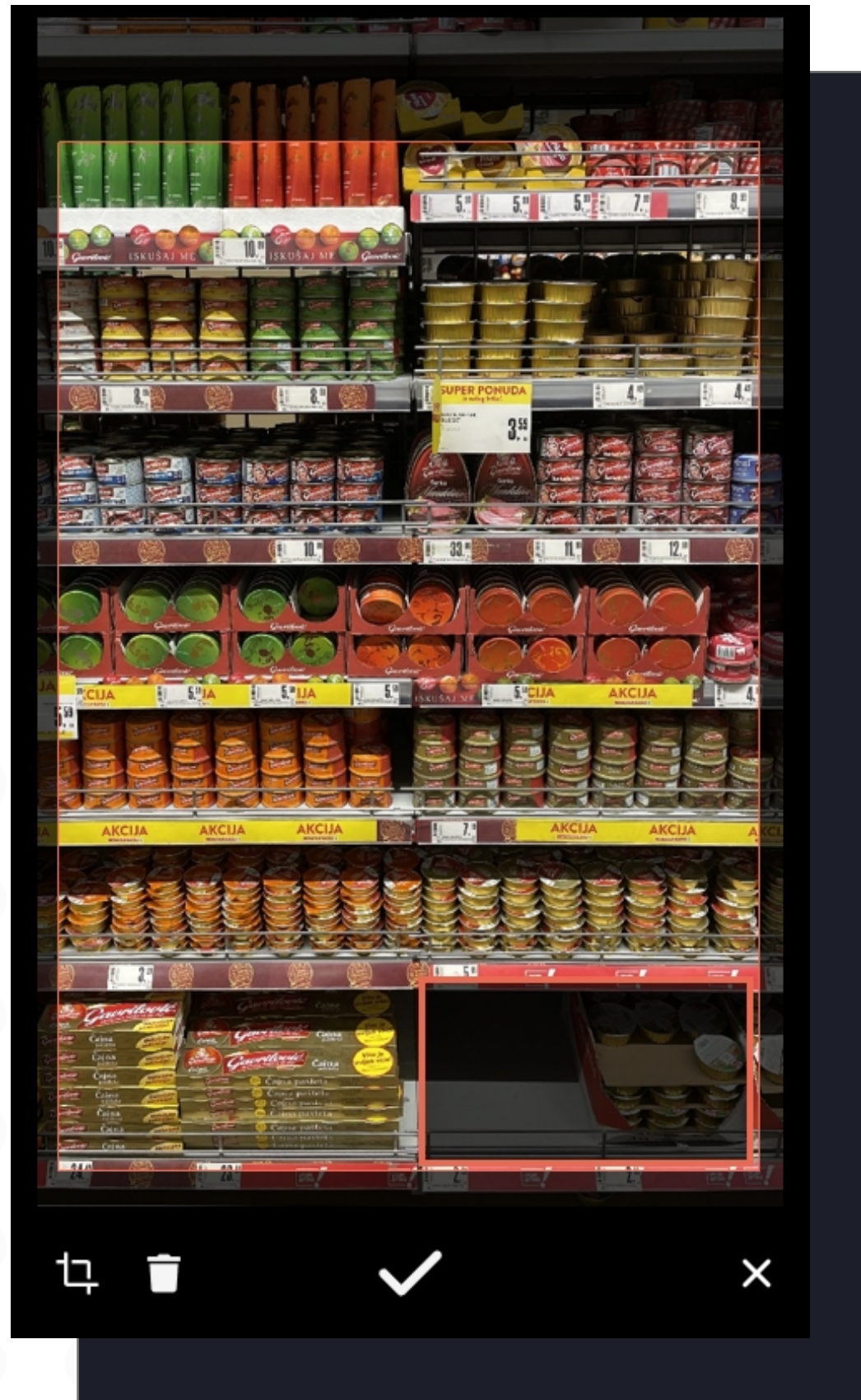
Additional image processing before analysis:

- if necessary, the user can furthermore precisely narrow the overall dimensions of the scope of the category within the shelf image and exclude unnecessary parts of the shelf that do not belong to the category as well as parts that are empty

  - it is possible to cut out unnecessary parts not only on the edges of the image, but also inside the image.

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Process
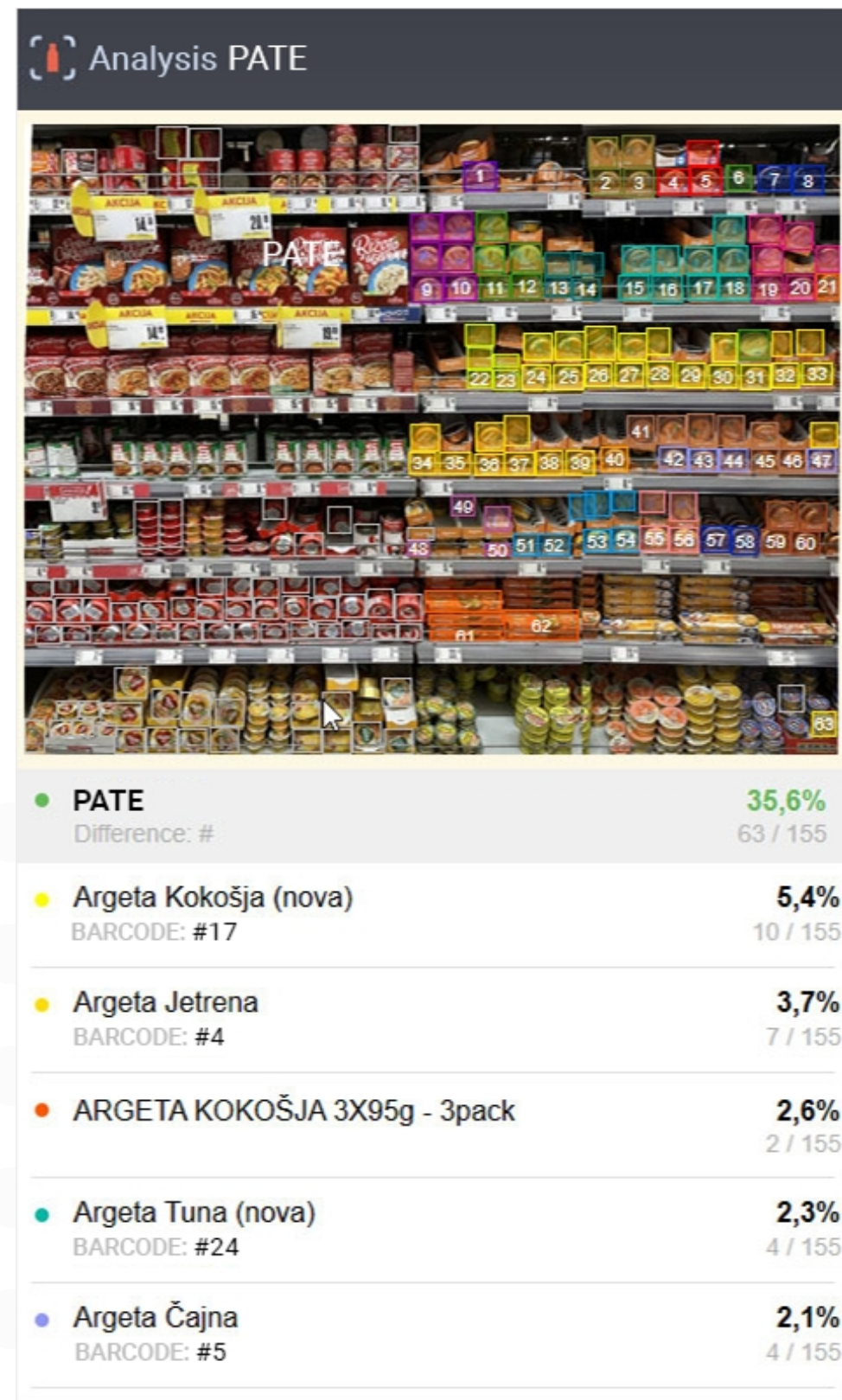
Completion of analysis - calculation of shelf share percentage:

- when the user is satisfied with the final image of the category on the shelf, one-click starts the image analysis

  - image analysis is performed in the background using artificial intelligence on the Route Master system backend servers

    - the analysis is completed in seconds. The user gets calculated percentage of shelf share of own products for the whole category, as well as at the level of each SKU

      - each recognized SKU in the image is marked with a special color frame for better visualization of the results.

Process
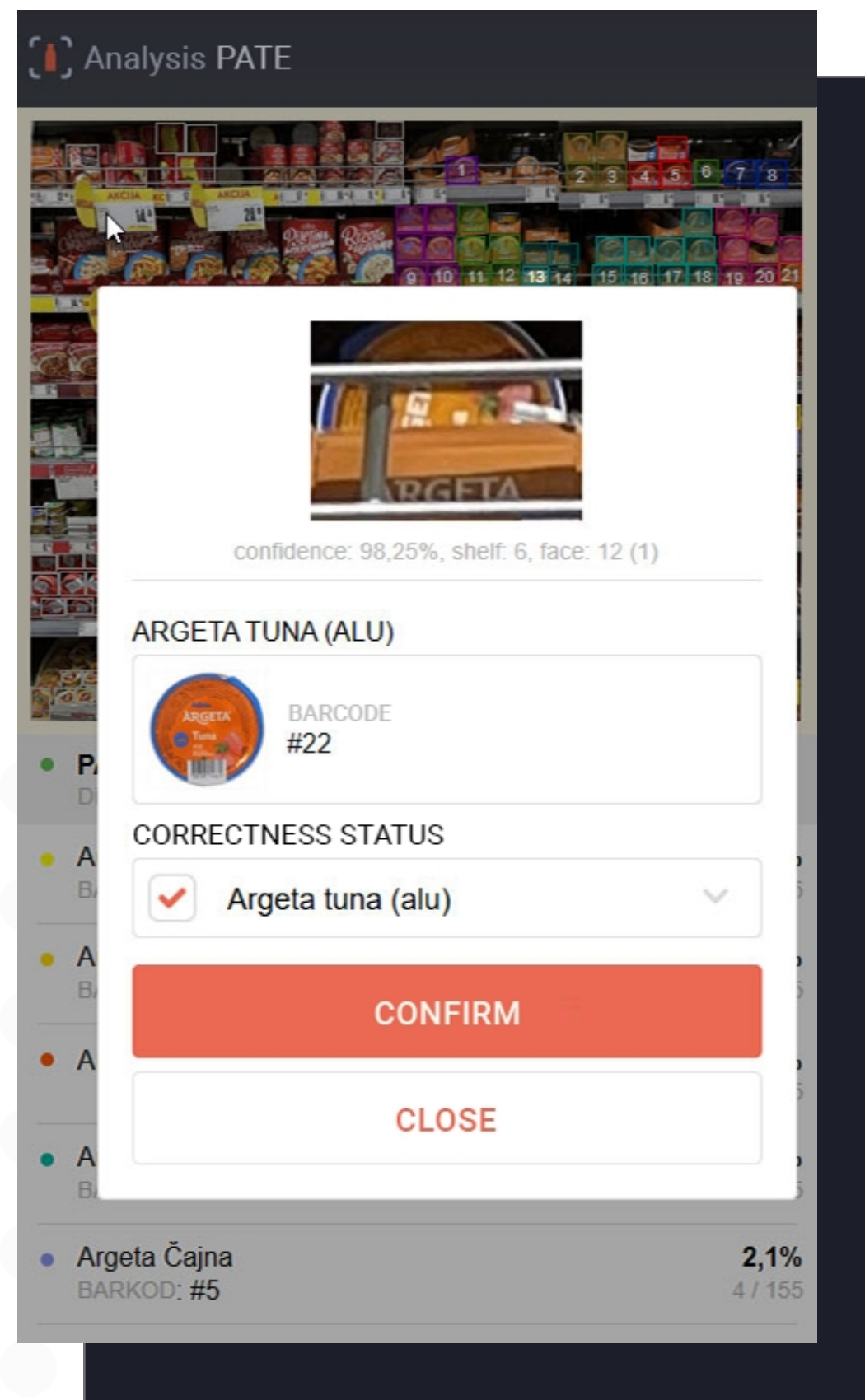
Improving the recognition system:

- overall recognition accuracy and best results are achieved by adding a large number of individual reference photos for each SKU

  - when introducing a new product, the recognition accuracy is not high enough at the beginning and therefore the application has a system of continuous accuracy improvement - end users are continually adding new photos to the system, which increases accuracy.

    - the user notices incorrect recognition, clicks on the image of the product, selects the correct SKU for the image and sends it to the system for "learning".
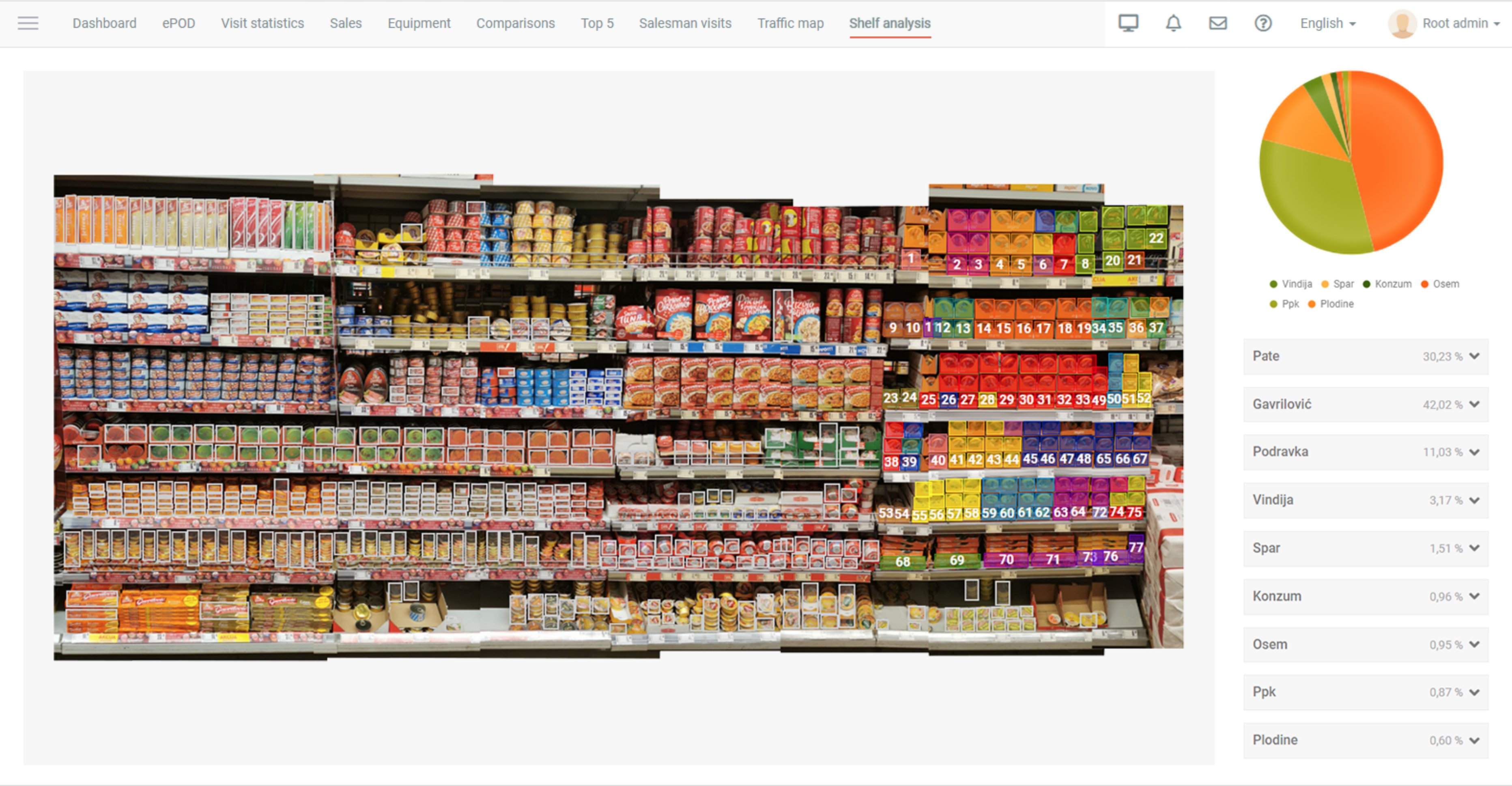
Process
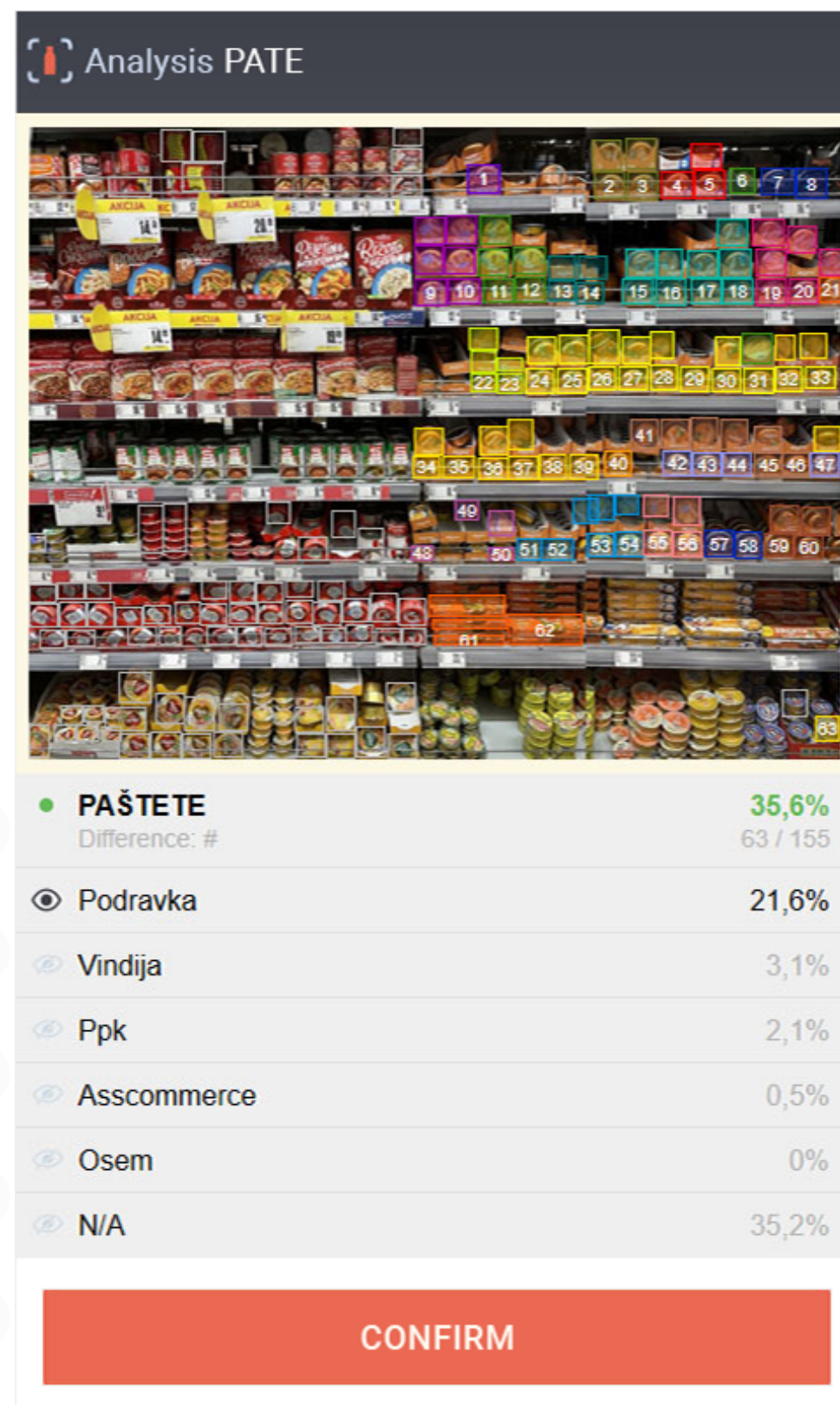
Competition monitoring:

- with an introduction of the competition products into the recognition system, greater accuracy of the system is achieved
  - competition products are classified in the same way as own products
    - with a good preparation and classification of competition products, a company could have better information about the presence of a competing brands than those brands owner themselves

Shelf share analysis in the Web Office

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