

Our Classification Agent CAL assigns a category to messages from customers to ensure they are supported with the right information, sent to the right place, and handled in the right way.

Lokulus uses Artificial Intelligence and Robotic Process Automation to manage customer interactions.

CAL is one of three bots involved in this process. After an inbound message has been enriched, CAL gives it a category. For example, this could be *Order Enquiry*, *Product Enquiry*, or *Returns*. This helps our system, and your agents, recognise what the enquiry is and who should handle it.



Category Allocation

CAL categorises messages using rule-based and statistical classification. For greater accuracy, a combination of both can be used. This category is then used by our other bots for automation and to route the message to the right agent.

Rule-based Classification uses a set of fixed rules based on properties we expect to see in a message that would give a strong indication of category. This could be derived from keywords present in a message subject or queries sent to a specific email address. We can also use rules to spot certain words or phrases.

Statistical Classification is where CAL analyses inbound messages using classifiers. The right category is determined by comparing messages to reference data using natural language processing (NLP) and statistical analysis.

Classifiers

Classifiers are machine learning algorithms we set up and use in statistical classification. When a message comes into the system, each classifier is consulted and, if it matches, determines the message's category. Multiple classifiers can be used to identify categories and classifiers are retrained over time.



Training

Classifiers are trained using reference data, that is, messages that have already been categorised by a trusted classifier. The relative frequency of key features within these is recorded so future messages can be categorised in the same way.


Retraining


The accuracy of a classifier is analysed when it is first trained, during configuration before a system goes live. We then monitor its success during live running. Over time, classification accuracy may reduce as messages vary from the original samples. We counter this and maintain high accuracy by retraining classifiers regularly. As more messages go through classification, the amount of data we can use in training increases and so too can the accuracy of classification when we retrain the classifiers.




Benefits

Classification has many benefits, including:

 **Reduce manual workload** by having the confidence to send automatic responses, aided by the information extracted in enrichment.

 **Help REG find the best agent** to handle the enquiry, leading to better-quality responses and faster resolution.

 **Streamline the process of communication**, from the second the customer hits send through to resolution.

Next Steps

After CAL assigns a category to the message, it passes it back to the Workflow Agent (FLO). FLO automates low-level tasks, then passes anything needing manual intervention to the Resourcing Agent (REG) to be distributed to agents. They will use the helpful information gained in enrichment and classification as they deal with the enquiry.

This process ensures that each enquiry reaches the right person with the right skills at the right time. If anything can be automated it is done so, with the right information, taking pressure off your teams.

See the *REG*, *FLO*, and *Enrichment* fact sheets for more information.