

ASSA RECOGNITION AWARDS

WRITE UP TEMPLATE

CATEGORY	:	Innovation Recognition Award
ORGANISATION	:	Employees Provident Fund Malaysia
CONTACT PERSON	:	Nur Aida Mustaffa naida@epf.gov.my
NAME OF PROJECT	:	ELYA: The Bilingual EPF Virtual Assistant
OBJECTIVE AND NATURE OF PROJECT	:	EPF aims to reduce 30% of call traffic by driving interactions to live chat and other digital channels as well as to empower its members to self-serve in more EPF services online through the implementation of ELYA. ELYA will manage generic interactions that are repetitive while EPF service advisors could focus on more complex and personalised advisory services. ELYA will be designed and trained to perform the following successfully: 1. Offer instantaneous customer support 24x7 across digital engagement channels, reducing dependency on customer service team for repetitive enquiries. 2. Provide helpful response in the form of written content, hyperlink or image to questions around product information and related services. 3. Escalate complex engagements, which are beyond the coverage of the trained knowledge base, to human agents or set escalation channels, seamlessly. 4. Improve over time by being more accurate with machine learning training. 5. Provide a base to expand the capabilities of the Chatbot platform in upcoming phases
WHY IT SHOULD BE RECOGNISED	:	This is the first bilingual Virtual Assistant (VA) for social security organisation powered by Artificial Intelligence (AI) using Natural Language Processing (NLP) and supported by Live Chat.
SUMMARY OF THE PROJECT	:	ELYA, abbreviated from EPF Loves You Always, was invented to reduce drop calls at EPF Contact Centre and empower customers through self-service facilities in a conversational approach. The inspiration to create ELYA's outgoing persona is a culmination of EPF staff's personalities and passion to help customers from different walks of life. At present, ELYA has recorded more than 1.6 million sessions, assisting customers with 30 products in EPF. Moving forward, ELYA will enhance its digital experience by providing basic personalised advisory for both members and employers.

ELYA: The Bilingual EPF Virtual Assistant

Empowering customers to self-serve, anytime, anywhere

Summary

ELYA, abbreviated from EPF Loves You Always, was invented to reduce drop calls at EPF Contact Centre and empower customers through self-service facilities in a conversational approach. This is the first bilingual Virtual Assistant (VA) for social security organisation powered by Artificial Intelligence (AI) using Natural Language Processing (NLP) and supported by Live Chat. The inspiration to create ELYA's outgoing persona is a culmination of EPF staff's personalities and passion to help customers from different walks of life. At present, ELYA has recorded more than 1.6 million sessions, assisting customers with 30 products in EPF. Moving forward, ELYA will enhance its digital experience by providing basic personalised advisory for both members and employers.

The issue or challenge

First, just like any AI-based virtual assistants, series of intensive training and testing are required to produce an intelligent bot that can respond accurately to customers' enquiries. On top of that, ELYA has to undergo rigorous learning process to cater the robust and comprehensive knowledge base of EPF products both in English and Bahasa Malaysia.

Another challenge faced is mapping and designing conversational content that originate from technical and complex information provided by process owners. The selection of Knowledge Based (KB) must represent the Ground Truth (information provided by direct input or observation i.e. customer conversation with agents and customer emails) and most common enquiries received by the EPF Contact Centre.

Finally, the challenge to re-skill and up-skill the stakeholders involved in the development process with AI-related skills to ensure ELYA and Live Chat are being fully optimised. Stakeholders are the product owners, contact agents, front liners, designers and developers.

Addressing the challenge

In order to tackle the requirements to produce an intelligent bot, the team strategizes by scoping the Knowledge Base according to data provided by the EPF Contact Centre. This is in line with ISSA Guidelines on Information and Communication Technology which addresses the need to analyse service desk data regarding incidents, requests, and problems in order to rationalise and optimise the use of an e-service (Part A.3. ICT Service Delivery, Guideline 8). Parallel efforts have been taken, including:

1. Training and releasing of Natural Language Processing (NLP) feature in batches according to analytics on customer enquiries.
2. Involvement of Alpha & Beta testers to provide feedback and assess readiness before releasing to public
3. Establish benchmark on Chatbot response accuracy through an in-house iterative validation process

As for the second challenge, we refer to ISSA Guidelines - Communication by Social Security Administrations, under Guideline 14 (Part C, Communication Unit). It champions the four principles in the ISSA Guidelines on Good Governance of transparency, predictability, participation and dynamism, and the use of clear, simple language, with a focus on user-centric platforms that offer possibilities for dialogue. Converting the mechanism into application, some of the solutions are:

1. Selection of Knowledge Base (KB) done based on use cases.
2. Strong collaboration with product owners to map out product communication journeys suitable to the Ground Truth.
3. Offering guided-menu approach as a quick win to cater to high demand content such as i-Lestari & i-Sinar (both are national stimulus facilities to combat the economic impacts of Covid-19).

Last but not least, the strategy to re-skill & up-skill stakeholders were addressed by getting the buy-in from Management to form a number of teams to hone their skillsets. The teams are categorised as such:

1. Core team of five members with Artificial Intelligence related knowledge to focus on the overall process.
2. Supporting team from various departments appointed by their respective department heads to focus on Knowledge Base development.
3. Team of agile Service Advisors who were reskilled and up-skilled from Inbound Call Agents.

According to Guideline 10 under the same aforementioned ISSA guidelines, it is a strategic move to provide training to employees to update their knowledge in the field of new communication technologies and social media. In adherence to such, through establishment of the teams above, they get to acquire knowledge through formal training and experiential learning according to their expected deliverables.

Targets to be achieved

EPF aims to reduce 30% of call traffic by driving interactions to live chat and other digital channels as well as to empower its members to self-serve in more EPF services online through the implementation of ELYA. ELYA will manage generic interactions that are repetitive while EPF service advisors could focus on more complex and personalised advisory services. ELYA will be designed and trained to perform the following successfully:

1. Offer instantaneous customer support 24x7 across digital engagement channels, reducing dependency on customer service team for repetitive enquiries.
2. Provide helpful response in the form of written content, hyperlink or image to questions around product information and related services.
3. Escalate complex engagements, which are beyond the coverage of the trained knowledge base, to human agents or set escalation channels, seamlessly.
4. Improve over time by being more accurate with machine learning training.
5. Provide a base to expand the capabilities of the Chatbot platform in upcoming phases.

Evaluating the results

Due to the new norm arising from Covid-19 pandemic and lockdown restrictions since March 2020, customers have become more dependent on phone calls and digital channels as their primary communication mode. Therefore, the initial plan set in 2018 to reduce 30% of drop calls at the EPF Contact Centre has yet to be achieved following ELYA's launch in June 2020. It is worth to note however with the current satisfaction rating of 4.1, ELYA did complement (1.6 million sessions recorded) to the increase in EPF digital channel engagements, with an exponential spike of 137% in website visit since its launch from June 2020 – March 2021 compared to visits recorded during the exact period in the previous year (June 2019 – March 2020), inadvertently realising our objective to empower members to use self-serve facilities. ELYA in essence, is a recently launched practice and feature enhancements are still in the works. Combined with the drastic change in customer experience landscape, there is a need to collect bigger sets of customer data to effectively evaluate the impact of this good practice. Once it has been achieved, we anticipate to measure ELYA according to the indicators below in tandem with the targets outlined in the previous section:

1. Total number of engagement sessions completed by ELYA without human agent intervention and escalation is equivalent to total number of voice and digital engagement tickets deflected.
2. Total duration of interaction completed by ELYA in minutes is equivalent to total number of digital engagement minutes saved.
3. Total number of out of hour engagement session minutes completed by ELYA without human agent intervention and escalation is equivalent to savings from investment on out of hour's customer service resources required to perform similar session.

Lessons learned

Three factors that we consider as indispensable to replicate this good practice are as follows:

1. Set clear objectives and hold on to it. Scoping must be based on use case backed by analytics as it is crucial to address actual requirements.
2. Knowledge Base (KB) curation must be based on Ground Truth. Failure of which will complicate the training and hinder the Virtual Assistant from responding accurately.
3. Constant alignment and collaboration among key stakeholders to ensure expectations are managed and outcome is as envisaged and required by the project owner.

Three risks that arose/could arise in implementing this good practice are as follows:

1. Influx of Knowledge Base request which will complicate training and affect accuracy
2. Reduction of call agents attending to generic enquiries, forcing them to reskill and upskill on personalised/advisory related questions.
3. Keeping up with the rapid evolution of Artificial Intelligence (AI) technology and managing integration of the new AI solution with legacy systems to provide the envisaged service enhancements.

Monday, 14 June 2021