



REGULATOR

Financial consumer protection automation in the Philippines

Central Bank of the Philippines

December 2020



Acknowledgments

The automated consumer protection system at the Central Bank of the Philippines (BSP) was developed via the RegTech for Regulators Accelerator's competitive process, with sponsorship from the the Bill & Melinda Gates Foundation, Omidyar Network, and USAID, and administration from Rockefeller

Philanthropy Advisors. Proto was selected from nine bids across seven countries, namely due its competency in Natural Language Processing for under-resourced and mixed-languages, which addressed the requirement for Tagalog and Taglish capability. The BSP and its Center for Learning & Inclusion Advocacy

participated as a beneficiary and design partner during the pilot-phase, following which, the automated system was procured for consumer protection across the financial ecosystem in the Philippines. A very special thanks goes to the BSP's late, former governor Nestor A. Espenilla Jr. for his vision and enabling role.



Proto

Proto is a leader for multilingual AI Customer Experience (AICX) in emerging markets for the financial industry. Its AICX suite for contact centers is powered by the HermesAI™ natural language processing engine, which delivers high-accuracy for under-resourced languages. Proto's solutions have an inclusion-focused impact lens.

BSP

The Central Bank of the Philippines is the national supervisory authority for all financial institutions in the Philippines, overseeing commercial banks to e-money providers to lenders. The BSP has a strategic mandate to promote broad access to high quality financial services, and to undertake policy initiatives aimed at enhancing financial inclusion, financial literacy, and consumer empowerment.

87%

average annual case growth

776

financial operators covered

12,200+

consumer chats per quarter

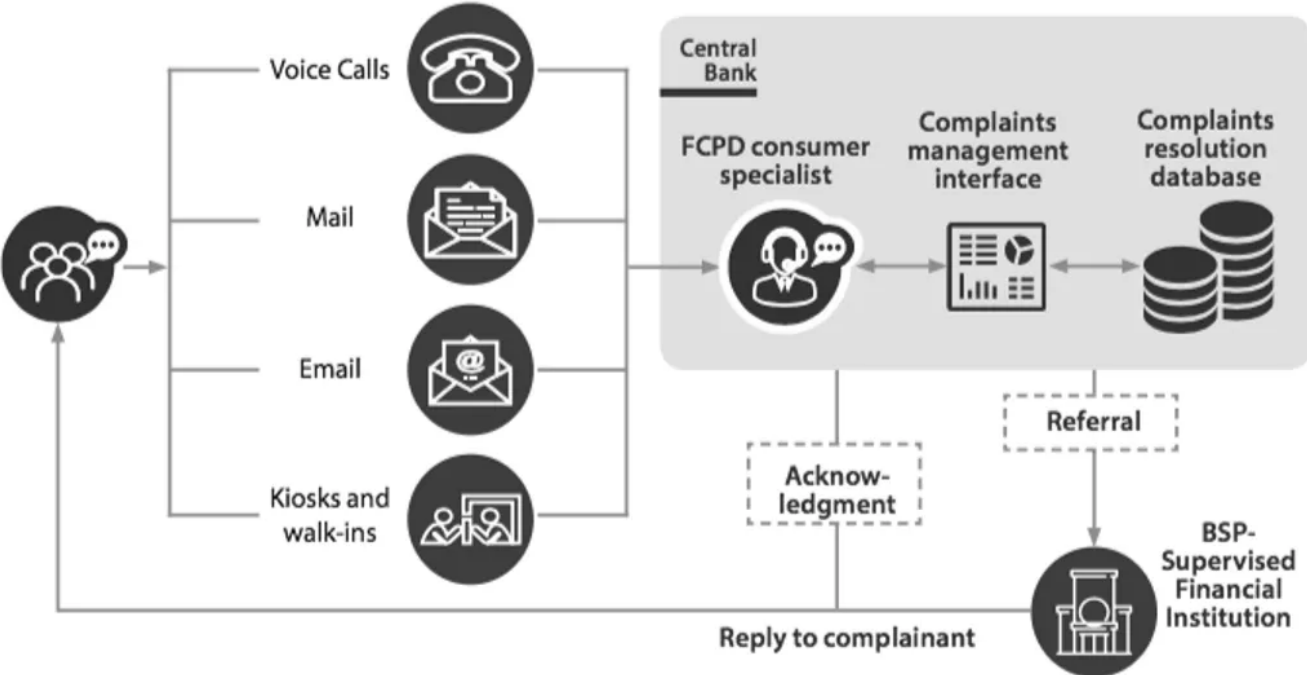


Aside from enhancing the central bank's quality of service, the multilingual chatbot empowers financial consumers by giving them a more accessible channel for raising complaints. This is in line with the central bank's commitment to pursue innovations in financial services for the benefit of Filipinos.



Benjamin E. Diokno
Governor, Central Bank of the Philippines

Problem



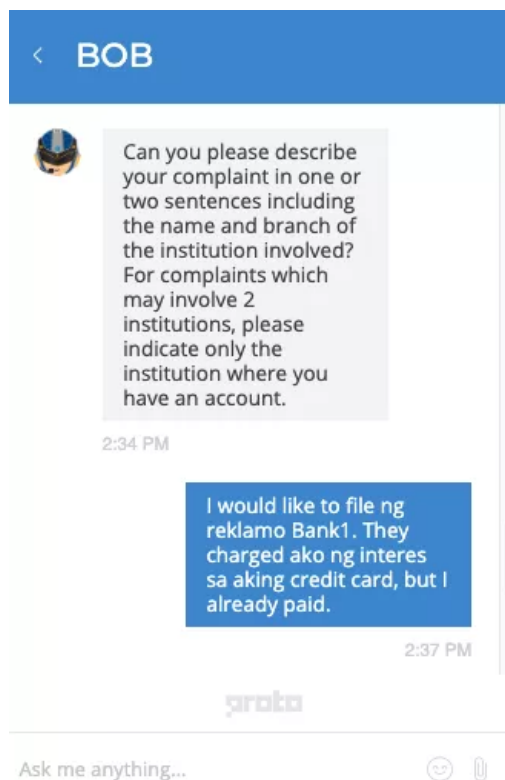
The BSP manual complaints handling process had multiple limitations that caused hassle for consumers and administrative burden for consumer protection staff. On the consumer-side, firstly, the existing channels of written letter and walk-in kiosk were outdated in the context of rising mobile penetration in the Philippines, the *texting capital of the world*. Additionally, channels such as email required a level of literacy and digital infrastructure out of reach for low-income, rural, and historically-marginalized Filipinos. The process therefore had an urban, male, and high-income bias, resulting in the vast majority of complaints to originate within the Metro Manila area, while leaving customers outside the capital with fewer recourse options for financial misconduct. On the BSP-side, the laborious nature of case management was a binding constraint on the ability to process complaints scaling 87% year-on-year. Delays impaired timely remediation, with the risk of discouraging usage of the consumer protection mechanism. Additionally, human data entry was prone to errors and omissions, resulting in an inconsistent consumer protection database for informed policy-making.

Inclusion barriers
Urban-bias of existing channels
Inadequate data for policy-making

Technical barriers
87% annual case scale with delays
Rural digital infrastructure gaps

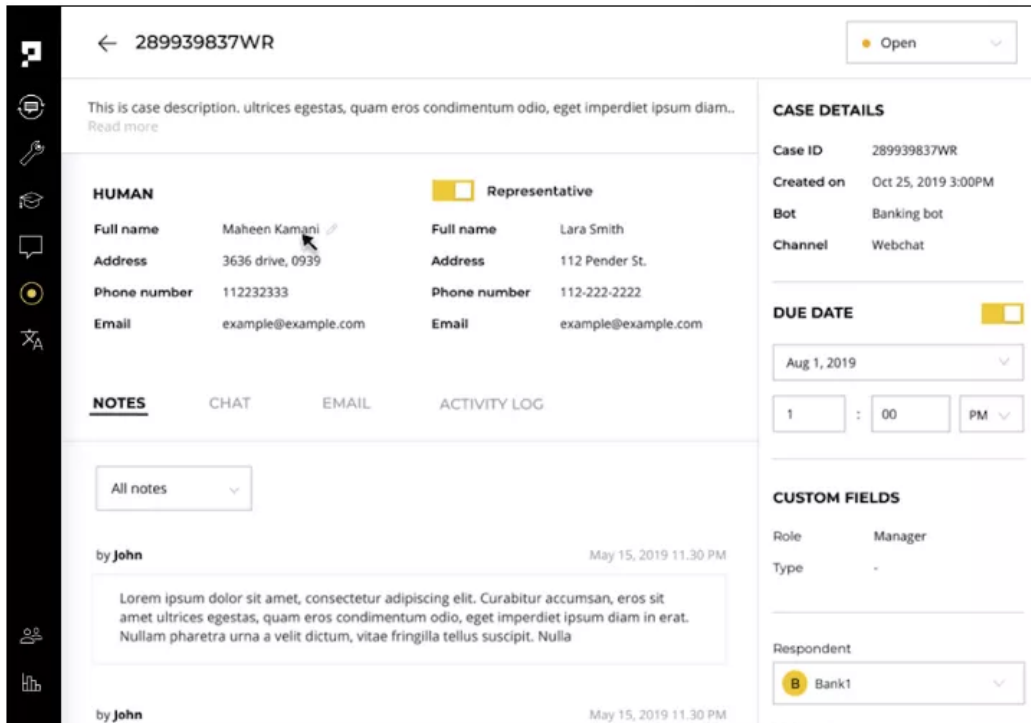
Solution

Proto deployed the automated consumer protection system as a replacement for the BSP's manual process, enabling consumers to seek financial misconduct recourse regardless of geography, gender, income status or education level. From the consumer perspective, the chatbot is widely-available via Messenger, SMS and Webchat. The chatbot is capable of understanding emotional and typo-heavy complaints in Tagalog, English, and Taglish (mixed Tagalog and English) across 776 of financial operators and 24 product & service categories. Initially deployed with an average chat-level intent classification accuracy of 92.84% for Tagalog, English, and Taglish, the chatbot has gathered training data from over 12,200 consumer chats per quarter in order to refine the NLP models for continuous dialogue and accuracy improvement.



Within the BSP's consumer protection department, the cases are automatically categorized, lodged within Proto's Track product for human agent oversight, and disseminated to the financial operators for reply within 7 days and monitored resolution. The consumer protection staff are thus repurposed for higher-order functions such as consumer case investigation and policy development based upon the consistent data set gathered by the automated system. Additionally, the data offers efficient insight into potential market misconduct, with gender disaggregation, which was not provided by the previous manual system. Crucially, the data also includes insights from rural and historically-marginalized populations via the SMS channel.

Results



9.8%

more female usage

12,200+

chats per quarter

92.84%

Chat-level accuracy

99.75%

Message-level accuracy

72%

cases via Messenger

26%

cases via Webchat

66.25%

retail bank cases

15.23%

e-money cases

Inclusion benefits

Gender-based data collection
SMS available for rural consumers

Technical benefits

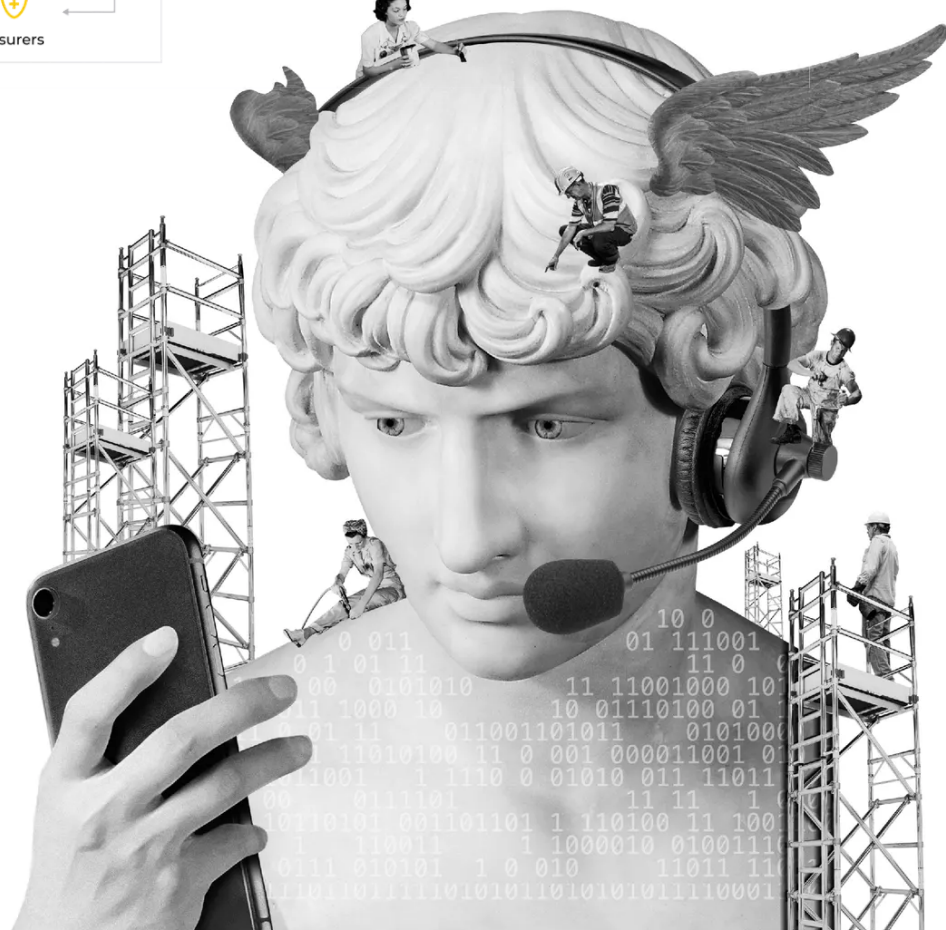
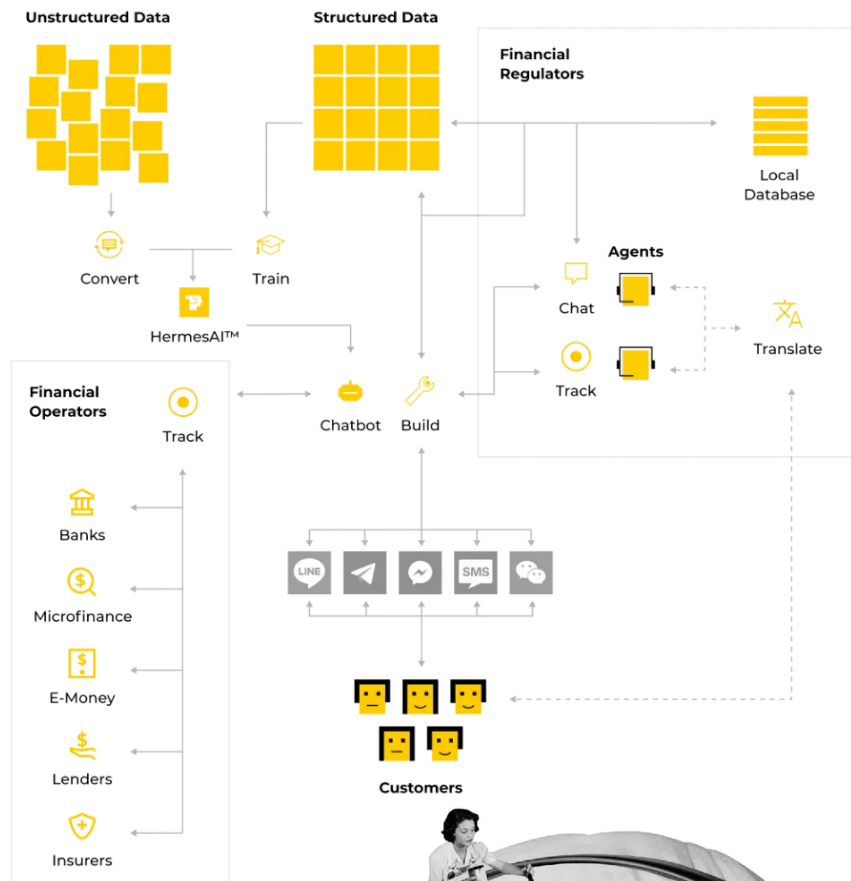
Unlimited scale with no delays
>90% local language accuracy

Ecosystem Approach

Proto's deploys its AICX solution for the financial industry in any given country with the market regulator first. While not a common approach for software vendors, there are multiple, unparalleled benefits for the financial ecosystem as a whole.

First, this localized AI technology has inherent capacity for good by including and protecting under-served and marginalized people. This protection mandate is held by regulators, but they have resource constraints limiting their ability to keep pace with disruptive technologies that pose potential risks for consumers.

Second, and most essential, the regulator is effectively a "data hub" by way of its mandate to gather and monitor consumer protection communication in the financial industry. For example, the BSP gathers structured local language data from 776 operators. For an AI innovator, gathering this training data from a single source is highly efficient. The result of this "data hub" approach is superior, localized NLP models for the financial industry, which offer operators a compelling opportunity to deploy inclusive and localized chatbots.



Conclusion

As digitization expands financial services into underserved population segments, regulators need to match this increased inclusion with new consumer protection systems designed for equal scale and complexity. Reliance upon existing manual processes risks failures in proper scrutiny and transparency, and places financial consumers, especially financially-illiterate and first-time users, at vulnerability to misconduct. Failure to protect consumers from these risks also affects confidence in financial technology, which could stifle growth of indigenous financial providers. Consumer protection is therefore closely entwined with efforts to improve inclusion and stability.

The Central Bank of the Philippines is pursuing a balanced approach to the risks of digital financial services by keeping pace with technical innovation and addressing known gaps in consumer protection. In recognition of this effort, the automated consumer protection system went on to win the Central Banking Fintech & Regtech AI Prize.



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