



PAST PERFORMANCE

DIGITAL COMMUNICATIONS SYSTEM

GIZ - February 2019

ABOUT GIZ

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has supported Afghanistan's reconstruction since 2002. Their work is mainly commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Federal Foreign Office. They also work with a number of international donors, including the World Bank and the Government of the Netherlands. GIZ opened their office in Kabul in 2002.

BACKGROUND

Moore Afghanistan has been the pioneer in developing digital solutions in Afghanistan.

Moore Afghanistan strives to translate complex manual processes into digital, automated solutions that are available for everyone having access to a smartphone and internet. Moore Afghanistan focuses on some of the most striking problems to reduce corruption, increase efficiency, and ensure safety for the residents of Afghanistan. Some of our products available in the market are the following:

HesabPay is Afghanistan's first mobile banking solution that lets you transfer funds within seconds, using your smart phone. HesabPay's advanced features for businesses and individuals also include e-taxation, payroll, bills payment, top-up recharge, paying electricity bill and more. These

features greatly help in realizing our vision of reducing corruption and increasing efficiency in both conducting business and quotidian life. HesabPay is available for both iOS and Android.

BBR is one of the first ride-hailing and personal safety apps launched in Afghanistan. The main function of the app is to connect drivers with passengers to enable on-demand transportation. It also provides live location sharing features that can work regardless of requesting a ride on the app.

BBR is also a personal safety app that works regardless of hailing a ride. The users can add other BBR users in their friend's circle that can track the users' real-time location. If the user hails a ride, the app will also share the details of the car and the driver with the people in the user's friends circle. BBR app will accept payments made through cash or HesabPay.

BBR also has a dedicated BBR Driver's app which is accessible by authorized drivers. Any car owner that is interested in receiving ride requests from BBR users and providing transportation services can apply for BBR's driver account. BBR will thoroughly vet the driver's license and identification documents of drivers and the registration papers of their cars before approving the driver's account.

INITIAL SITUATION

GIZ has expanded the coverage of their Technical and Vocational Education and Training (TVET)

program to 31 out of 34 Afghan provinces.

According to their strategy, GIZ needs to regularly monitor the progress of these programs and get feedback of the target groups. However, due to security situation, geography and remote locations of the target groups, GIZ is not able to send their staff on the ground to perform regular visits to the pilot schools and have intensive exchanges with the representatives of target groups (i.e., apprentices, students, teachers, headmasters, representatives of provincial education departments).

Since such exchange is crucial for need assessments, monitoring and feedback for further development of program activities, GIZ asked Moore Afghanistan to develop a target-group differentiated, locally adapted strategy for digital communication.

The strategy was to cover all relevant target groups and consider the high number of participants in the activities of the TVET program. Based on this strategy, Moore Afghanistan developed a tool for digital communication that covers all communication needs of the respective target groups and the TVET program.

OUR INTERVENTION

Moore Afghanistan's strategy is to always build on what exists already. After a thorough evaluation of the existing solutions, Moore Afghanistan then decides whether to start from

the scratch or to build on what is already there.

Moore Afghanistan evaluated the existing communication strategy and system of GIZ TVET Program that was mostly based on phone calls and the all well-known social media and messaging apps.

After identifying all the gaps and loopholes in the existing system, Moore Afghanistan then proposed a comprehensive, streamlined and centralized digital communication solution that provided a mobile app and a web portal providing survey, chat, document sharing and news feed features adopting GIZ TVET's communication work-flows.

Some of the other features included but were not limited to:

- News Feed (articles and announcements)
- Documents Sharing
- Push notifications for new posts and messages
- Email notifications
- Group communications
- Private Chats, Targeted Chats, Public Chats
- Target Surveys and Public Polls
- Realtime Data Analysis and Visualization
- Reporting System

Moore Afghanistan then developed the proposed system that satisfy the current needs of the TVET. The platform is managed through an admin panel which includes the enable, disable, data modification, and restriction based on user access level which were defined by GIZ. The software provides an administrative panel, a public portal, student portal and teacher portal.

Moore Afghanistan developed this system based on.

Agile development methodology/ scrum. With scrum methodology, the "Product Owner" worked closely with the team to identify

and prioritize system functionality in form of a "Product Backlog". The Product Backlog consisted of the features, bug fixes, non-functional requirements, and more.

SYSTEM SECURITY

Systems security is of paramount importance to Moore Afghanistan. We consider system security by design.

For this specific project, Moore Afghanistan implemented multiple security mechanisms to ensure security of the platform, including encryption algorithms (AES, 3DES, and RSA) to encrypt data exchange between pages and system and users.

On top of this, the data stored in the database is in an encrypted format. Some of the other security mechanisms implemented are mentioned below:

- URL encryption (no one can know the nature of the parameters that go through URL)
- Modular (each module is separate and has its own access code)
- Role/access base (users have different roles)
- Backend log (user activities are recorded)
- Data validation
- High Performance (for retrieving data from database, we are using indexing mechanism to prevent from time out errors)
- End-to-End encryption in chat and other private communications

FINAL PROJECT DELIVERABLES

This solution improved the exchange among stakeholders and with GIZ staff, and facilitated regular feedback on and evaluation of the different measures within the program. Final

project was written on a DVD and delivered to GIZ. The DVD contained complete source code, technical documents for further development, user manual, and API for third party applications with documentation.



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