

Case Study

Government

ABBYY®



ABBYY FlexiCapture® Used for Country-Wide Health Census in Bangladesh

Customer Overview



Name

Directorate General of Health Services

Location

Bangladesh

Industry

Government

Web

dghs.gov.bd

Challenge

Improve efficiency of Geographical Reconnaissance data processing

Solution

Implementation of a solution based on ABBYY FlexiCapture

Results

- 30,000,000 household forms processed in 8 months instead of 2 years;
- The speed of documents processing is now more than 100,000 pages per day.

Bangladesh, the eighth most populous country in the world (with about 153 million people living in an area of 147 570 sq. km), has recently been applauded as an exceptional health performer. The World Health Organization reports remarkable improvements in the survival rates of infants and under-fives, life expectancy, immunization coverage, and tuberculosis control in Bangladesh despite the many challenges of the 21st century. Since 1961, the Bangladesh Ministry of Health and Family Welfare — namely the Directorate General of Health Services (DGHS) - annually conducts health census — geographical reconnaissance survey. Regular control of the situation allows to develop further strategic agenda in the right direction. On the other hand, these studies are not that cheap and easy to conduct.

Challenge

The annual collection and processing of 30 million household forms used to be carried out manually; the entire procedure would take 2 years. There is no need to explain why this term became more and more unacceptable.

Some time ago, guided by the world's and their own experience, Bangladesh authorities made a decision to change manual data collection to a new ICR (intelligent character recognition) form for automatic processing. DGHS was ineffectively searching for an advanced ICR solution for processing GR Forms, until finally Devnet Limited Company — industry leader and expert – proposed a powerful solution, based on ABBYY FlexiCapture.

Being the first national ICR-based survey, the project provoked a lot of questions and arguments among public officials. Previous paper GR forms had significantly deteriorated as the survey had been done almost 2 years before; the poor quality of hand writing could affect recognition results; the enumerators didn't have enough professional skills to work at ICR project — what solution could ever work with this?

However, Devnet demonstrated the highest degree of professionalism during the implementation of the project in terms of technical and managerial realization, and all doubts disappeared.

ABBYY Partner



devnetlimited.com

Solution

Once the details of the project were finalized, Devnet assembled the whole infrastructure: from processing servers and scanners to ICR software and archive database, and started the project.

ABBYY FlexiCapture became the core element for performing intelligent character recognition (ICR) for the first time for a Bangladesh government body. Thanks to the extended settings of document processing, the original images were improved by deleting grain and image noise and aligning distortions, which provided the highest possible level of recognition and visual neatness of the archive forms.



Using open API of ABBYY FlexiCapture, Devnet team wrote special scripts and rules for automatic detection (and, in some cases correction) of specific mistakes which occurred due to human factor — e.g. mishandled relationship codes, inconsistencies in household numbering, mistakes in GEO coding, etc. Moreover, the integrated dictionary of common names for 60,000 titles automatically verified and corrected these personal data in forms. All of those features made it possible not only to improve data accuracy, but also to speed up document processing.

Integrated form-designing technology — ABBYY FlexiLayout® Studio — allowed to improve the survey structure and to form layouts for better recognition results in future researches. Moreover, all the enumerators took the necessary training on how to both fill in the forms and process them.

Results

Thus the main goal of the project — to get the most accurate data in the shortest time possible for further analysis and planning timely actions — was successfully reached. The annual volume of 30 million paper surveys was processed in only 8 months (in comparison to the previous 2 years term). The current speed of document processing is 100,000 pages per day. These inspiring results laid the basis for similar projects in other government bodies of the country.

About ABBYY

ABBYY is a leading global provider of technologies and solutions that help businesses effectively action information.

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