

## CASE STUDY DEVELOPING A ROBUST CREDIT SCORING SOLUTION FOR MICRO-ENTREPRENEURS IN TANZANIA



### Summary

In this case study, we share how a local bank in Tanzania contracted Tech Venturas to propose a robust, secure and user-friendly digital application to serve an underprivileged segment of the population.

Micro-Entrepreneurs are largely ignored by conventional banking systems; due to issues such as lack of collateral, lack of financial literacy and geographical outreach challenges. Through the right technology, tools and guidance - micro-entrepreneurs including women were provided with 'business lifeline' like avenues to leverage social values and gain access to business micro-financing.

### Recognizing the need for a robust credit scoring solution

There is a dire need to explore and innovate relating to economic opportunities for entrepreneurs in Tanzania. Micro-entrepreneurs, are exploring new livelihoods and are stepping into small and micro-sized ventures with the dream of achieving financial independence.

A Credit Scoring System was suitable for micro-entrepreneurs because they were familiar with the traditional model of saving within the local community.

The local community is also well equipped with mobile devices. The high mobile penetration rate is a major factor that led to success. The unique model of the mobile application and its proper security settings played a vital role too.

However, the notable lack of financial literacy and minimal exposure to corporate technology was recognized as a serious setback for micro-entrepreneurs who required financial support.

# Developing the right technology, tools and interfaces to overcome limitations faced by micro-entrepreneurs

## Customer outreach

Creating awareness and reaching out to the under-banked entrepreneurial market segment whilst realizing the urgent need for financial products for entrepreneurs, the bank decided to gradually introduce its programs. The bank appointed representatives to convey the message to those communities. The bank also made it possible for entrepreneurs to operate from home by digitizing the whole process.

## Developing a foolproof registration system

Tech Venturas developed a robust mobile application that provided the much needed easy-to-use interface to access digital bank accounts. They had to walk the new market segment through certain registration procedures. As part of the registration process, customers had to ensure verification with the employment of biometric Know Your Customer (KYC) processes. State issued national identification cards were used for the registration of micro-entrepreneurs.

## Integrating AI to serve verification

A Liveness Detection feature was implemented to gain secure second-level verification. A reputed Third-Party Application was integrated into the process to achieve an added security layer. To register, the application required the user to take a live picture of him/herself with movements.

After the verification process is completed, customers can then open a digital bank account through the banking system. No payment is required to open an account, and it can simply be done via registration.

## Robust microservices architecture

In terms of technology, a microservices architecture was designed as the basis of the platform. Open-source technologies were leveraged for successful and secure integration of the bank's backend system.

The Front-End Application was designed using cross-platform technologies to securely and effectively run on both platforms (Android and IOS). Flutter was the technology of choice for front-end development.

## Solution successes

The robust Credit Scoring System was greatly beneficial for entrepreneurs in many different ways.

Primarily, a positive credit score is an indication of a promising future. They can provide for their families. Apart from that, they are capable of saving and investing enough money to think of a better solution to find a better opportunity for their livelihood.

More than anything, entrepreneurially spirited individuals emerged stronger and more independent through the credit scoring system. This eventually led to the formation of a community that came forward to address pressing issues in society. They become powerful enough to collectively voice against discrimination and inequalities against marginalised societies. Hence, this shows how the credit scoring system of the banks not only found its revenue doubling but had created a larger impact in the local community.

## Expansion of digital financial services

The bank initially started with savings and micro-lending services for people who wanted to start a business. They were given small loans as a micro-investment. There are daily or monthly models from which the customers can choose.

As more individuals actively participated and showed financial progress, the bank wanted to go ahead and introduce the credit scoring system. They have built the credit scoring algorithm based on the data obtained through the micro-loan system. The bank could also successfully track how well this segment did in repayment and credit scoring. Eventually, their credibility on the platform elevated.

## Customer development

The bank engaged in expanding services for more secure loans and banking facilities. Within a short period, the previously unbanked community of micro-entrepreneurs gained sufficient financial literacy and were more mature in their business finances.

## Customer success story

Financial learning is one of the key aspects delivered from the platform. Micro entrepreneurs, including women, are guided as to how they can save money and make it a long term investment. They will have their digital pot of money which is accessible through the system and that can help them set life goals.

Customers can create financial goals and save for a year or two to buy land to start farming or get into a new venture. It is a commitment they make and cannot withdraw money as they want. By the end of the year, they reap the benefits.

A notable success was that within 3 months after the introduction of the mobile application service, hundreds of unbanked entrepreneurs downloaded and got on board and gained access to business financing.

## Choose Tech Venturas

Tech Venturas is a leading tech services provider. We make sure that we stand out in the industry with our innovative product technologies alongside a great user experience. Tech Ventura's specialised product research team is equipped with the latest tools and frameworks in the market to ensure a qualitative approach to get your product to market.

**“They have the right methodology to deliver incredible tech solutions. Their speciality lies in how they will walk you through every stage of the function and implementation to develop real-life solutions for real-world problems” - Customer Spokesperson**



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