



INNOVATION AWARD

Advancing financial inclusion through data innovation

A background image showing two women sitting at a table in a meeting, smiling and looking at each other. They are in a modern office setting with large windows in the background. A network diagram of yellow nodes and lines is overlaid in the top right corner.

Bizfundi: Improving credit access through tailored business advice

DataHack4FI Innovation Award Season 2
**Winner of the Women & Youth
focus prize for Tanzania**

Targeting small businesses with personalised business advice and predicting successful loan applications

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December 2018

An initiative of



Advancing Financial Inclusion

About Bizfundi

Bizfundi is a Tanzanian initiative that aims to support micro, small and medium-sized enterprises (MSMEs) – particularly those owned by women and youth – by enabling business owners to locate, connect with and engage business advisors through an online platform.

For those MSMEs that need help to access capital, Bizfundi provides access to a credit-readiness service that seeks to improve the likelihood of the business receiving formal credit. This is done through a trained network of business advisors who work with business owners to improve operations in areas such as record-keeping, planning, documentation, marketing and compliance. Businesses that go through the business advisory process will also have their profile shared with a network of financial institutions, so that credit-seeking businesses can be steered towards financial institutions that are best placed to give them a loan.

Bizfundi is incubated under the USAID Feed the Future Tanzania's *Enabling Growth through Investment and Enterprise* (ENGINE)¹ programme. Bizfundi was developed from 2016 and was officially launched in November 2017. Since then, it has registered over 2,700 MSMEs across Tanzania.

The credit access challenge in Tanzania

In Tanzania, over 2.7 million businesses are either micro, small or medium-sized enterprises and are estimated to employ over 5.2 million people². For most of these MSMEs, access to finance – and the use of business-appropriate financial products and services – serve as a major barrier to growth³.

The financial services environment can be daunting for first-time credit applicants. They are faced with uncertainty as to the different types of financial institutions, varying loan term options, and the complexity of application requirements by different institutions. Application requirements can include identity documents, proof of residential address, banking details, collateral and credit history, among others.

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1 ENGINE is a four-year USAID-funded economic development programme that seeks to streamline the regulatory, informational and financial channels that encourage investment in Tanzania (Bizfundi, 2018). The programme is implemented by American NGO IESC, the International Executive Service Corps.

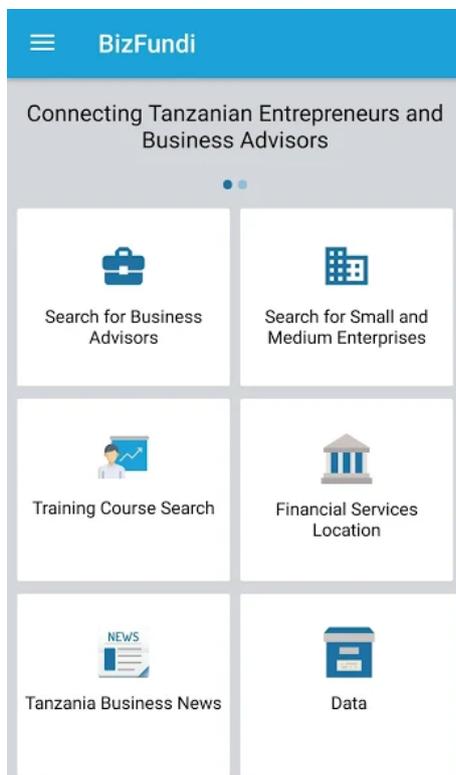
2 A firm is classified as a micro, small or medium-sized enterprise if it has fewer than 250 customers (Copenhagen Business School. N.D. Tanzania country study)

3 FSDT. (n.d) SME Finance. Available at: <http://www.fsdt.or.tz/sme-finance/>

Addressing the challenge with the Bizfundi service

Bizfundi allows users to search for, and connect to, nearby business advisors. Their online platform can be accessed via the web, tablet device or smartphone, and it can be downloaded from the Google Play store. A screenshot of the platform's interface is shown in Figure 1 below.

Figure 1:
Bizfundi app home page interface

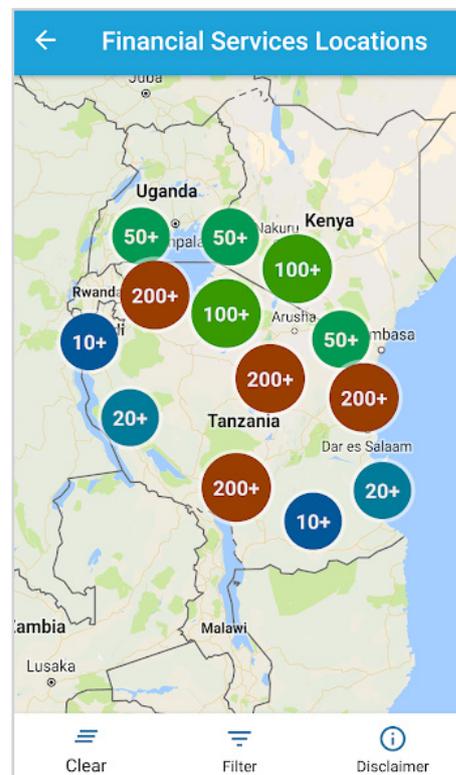


Source: Bizfundi (2018)

Users follow a simple sign-up process where they provide basic company characteristics, including information on the owner, the type of business, the sector, organisation size, business turnover, and number of years in operation. Businesses are also required to provide documentation of any collateral that they might have.

Through the platform, users can conduct customised searches for advisors according to their type of business and proximity to potential advisors. This allows users to view the profiles of advisors to get a better sense of the advisors' experience and services being offered⁴. The platform then visually displays, on a political map, all nearby and relevant business advisors, according to the support requested by the user, as seen in Figure 2 below.

Figure 2:
Bizfundi app financial service locations interface



Source: Bizfundi (2018)

Once the user has selected a business advisor, the advisor will provide tailored assistance to the MSME. For businesses that seek help with qualifying for a loan, advisors take them through a step-by-step process to assess the business, discuss their financial goals, explore their financing options and prepare the necessary documentation, including financial statements and business plans.

Once the advisor has notified Bizfundi of this step's completion, Bizfundi will share the user-inputted company profile of credit-seeking MSMEs with financial institutions. MSMEs are then directed towards those financial institutions that are best placed to give them a loan, based on their company profile and collateral. Bizfundi later follows up with each MSME to determine whether they were successful in getting a loan, the loan value (if applicable) and the financial institution from which the loan was, or was not, disbursed.

Data and analytical approach

Through the DataHack4FI Innovation Award, the Bizfundi team – in collaboration with a data fellow and an external data science mentor – sought to improve on their credit-readiness service by adding a feature that uses predictive modelling to provide a potential borrower with their probability of qualifying for a loan. By doing so, this better enables Bizfundi to provide new users to the platform with a more accurate likelihood of receiving a loan. This, in turn, improves the business support received by MSMEs, which can be personalised to focus on those areas that would have the greatest impact.

To do this, Bizfundi used an Artificial Neural Network (ANN) model – a tool used in machine learning which digitally replicates the way in which a human brain would work and would learn⁵. ANN models are often used to identify complex patterns, which can be extracted from large sets of information. The machine then learns the patterns to improve future pattern recognition and predictions. In this case, the model will learn the relationship between MSME profiles and outcomes of loan applications.

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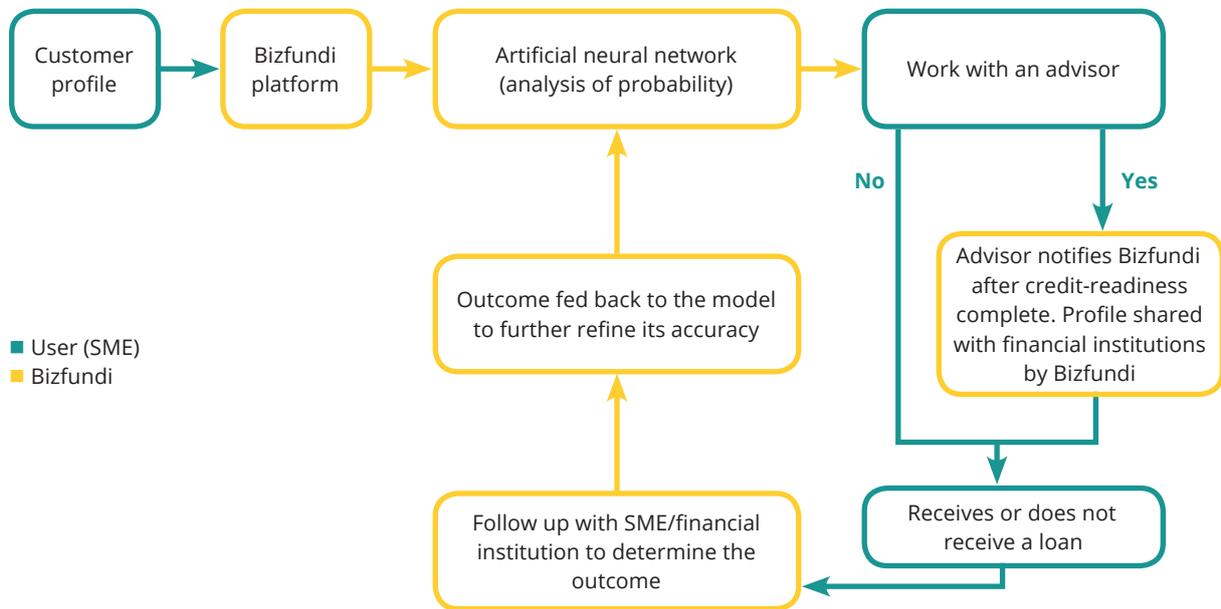
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5 Luke Dormehl. (2018). What is an artificial neural network? Digital Trends. Available at: <https://www.digitaltrends.com/cool-tech/what-is-an-artificial-neural-network/>



Figure 3: Bizfundi platform



Source: Author's own

The model will use MSME user data, historical data from ENGINE's partner financial institutions, as well as data from Tanzania's credit reference bureau. Using these data sources, the model seeks to more accurately predict for new MSMEs to the platform:

- Their probability of receiving a loan
- The potential loan value that they could receive given their characteristics
- Which financial institution would be willing to provide a loan to them

The model will also extract the specific business characteristics that are found to be correlated with successful receipt of a loan, and this information will be fed back to the advisor. This will allow the advisor to further improve the assistance and personalise the advice that they provide to each MSME. An overview of the process is shown in Figure 3 above.

Implications of the solution

Bizfundi seeks to encourage MSMEs to better understand their likelihood of accessing credit. In this way, MSMEs can apply for a loan when they know that they have a high probability of being successful.

Bizfundi also seeks to make MSMEs more competitive with larger businesses. The advisory service aims to give new MSMEs in the market a chance to compete with other businesses already operating by providing additional support to MSMEs.

This solution aims to be most useful to marginalised groups such as women and youth, by levelling the playing field. Bizfundi seeks to provide an alternative mechanism to those who typically struggle to receive credit and obtain financial support. Since women- and youth-owned businesses often face challenges in obtaining financial opportunities, they are expected to benefit the most from this service. For these groups, the Bizfundi app provides an easy-to-access, less intimidating and simple online interface through which they can engage and gain better access to credit services to further grow their business.

Bizfundi's new predictive feature is set to be introduced in 2019.

This case study is part of the DataHack4FI Innovation Award competition Season 2 series. It describes the solution as developed by the tech startup and its partnered data fellows during the competition. The competition brings together data enthusiasts and financial service providers to promote the use of data-driven decision-making in financial inclusion. Find out more about the competition at datahack4fi.org.

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