## First Access is a data analytics company that can reliably predict risk for consumers who have never had a bank account or credit score, using their prepaid mobile data.
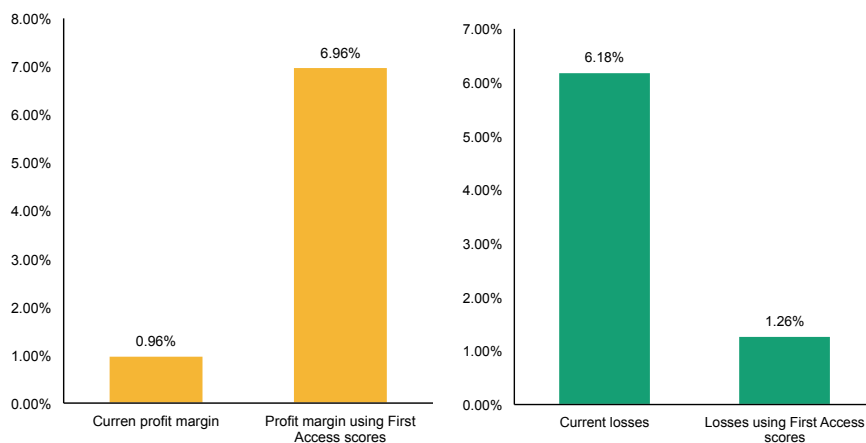
### HOW IT WORKS

- No software installation, no new equipment, no setup fees, no downloads
- Entire system is SMS-based, with web portal for lenders to manage their risk appetite and track performance
- Any bank employee can request a score via SMS
- Loan applicant receives an SMS requesting permission to use mobile records
- Once permission is received, First Access processes the data and delivers a recommended loan size to the bank (see image above)
- The entire process takes under 90 seconds

### WHY FIRST ACCESS?

- *Accurate:* based on empirical analysis, not theoretical scorecards
- *Actionable:* specific loan size recommendations, no just risk levels
- *Affordable:* prices from $0.75-$1.25 per score and earn 11-16x cost savings each
- *Accessible:* on any phone, anytime, anywhere, instantly

*First Access scored all loan applicants from 2013 for a current client and compared its premium score predictions with actual outcomes:*



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**Clients**
- 14 signed client institutions in Tanzania
- Commercial and unregulated lenders
- Microfinance institutions
- Algorithms proven accurate for housing, agriculture, energy, micro-business, SMEs

**Data Suppliers:**
- Vodacom (commercial)
- Tigo (pending commercial)
- Airtel (pending commercial)
- Zantel (pending commercial)
- Tanesco and Dawasco (via M-Pesa)

**Recognition**
Forbes • Financial Times • American Banker • PopTech Social Innovation Fellowship • Winner: WJF Sustainable Business Competition • Winner: Pipeline Fund Competition • StartingBloc Social Innovation Fellowship • Nominated: Forbes 30 Under 30

**First Access has been working with the Financial Sector Deepening Trust (FSDT) since June 2013 to offer free credit scoring algorithms and testing to lending institutions throughout Tanzania**
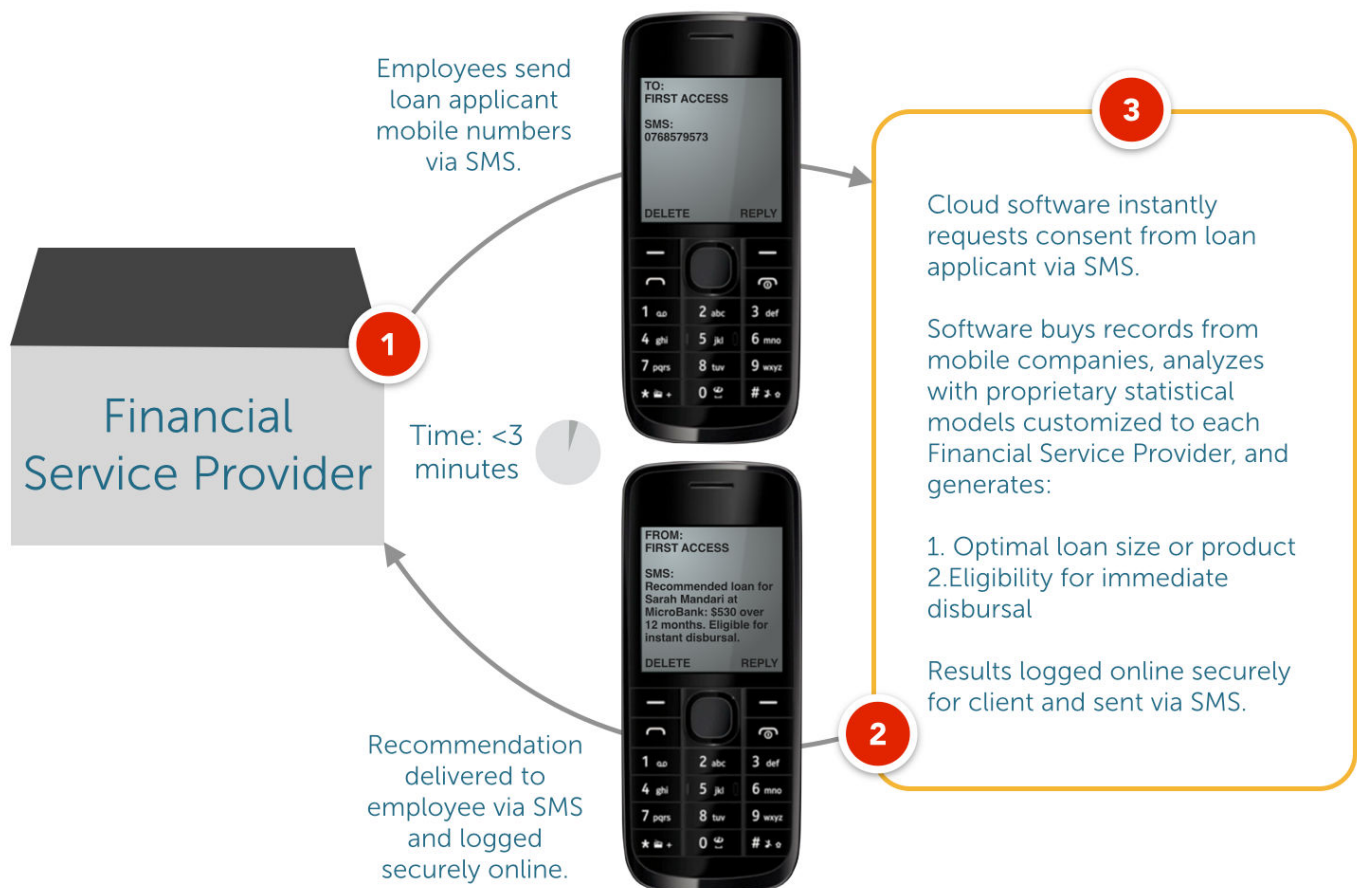
## PARTNERSHIP

FSDT began supporting First Access with financial and technical assistance in mid-2013 to customize scoring algorithms for various lending institutions throughout Tanzania at no cost to those institutions. With FSDT's support, First Access was able to build a world-class analytics team, with Columbia and Harvard-trained data scientists developing scoring models, proving that mobile data can accurately predict credit-worthiness in Tanzania. FSDT's support enables Tanzanian lending institutions to access sophisticated analytics on their portfolios at no cost.

## RESULTS

- Over 320,000 loan applications analyzed
- Scoring can increase profit margins 5-10x for portfolios of individual borrowers
- Can reduce default losses 18-80% for portfolios of individual borrowers
- Enables lenders to reach more people, faster, at a lower cost
- .85 accuracy ratio, compared to .38 and .48 by other "alternative" credit risk analytics companies in developing countries
- Group borrower models in progress as of May 2014

## How SMS-based Credit Scoring Works



Employees send loan applicant mobile numbers via SMS.

**1**

Financial Service Provider

Time: <3 minutes

TO:
FIRST ACCESS

SMS:
0768579573

DELETE       REPLY

**3**

Cloud software instantly requests consent from loan applicant via SMS.

Software buys records from mobile companies, analyzes with proprietary statistical models customized to each Financial Service Provider, and generates:

1. Optimal loan size or product
2. Eligibility for immediate disbursal

Results logged online securely for client and sent via SMS.

FROM:
FIRST ACCESS

SMS:
Recommended loan for Sarah Mandari at MicroBank: $530 over 12 months. Eligible for instant disbursal.

DELETE       REPLY

**2**

Recommendation delivered to employee via SMS and logged securely online.

## BENEFITS TO FINANCIAL INSTITUTIONS

By back-testing historical financial data for free, financial institutions were able to explore a new alternative credit scoring solution with absolutely no risk involved. Many institutions were also offered advisory services on future data collection and management practices, were alerted to instances of fraud, and were informed about how credit scoring methodologies can significantly impact portfolio performance.

## PROMOTING FINANCIAL INCLUSION

The cost savings various lending institutions achieve through scoring with First Access will allow for the furthering of financial inclusion throughout Tanzania. The largest barrier to reaching new borrowers and individuals is the high cost associated with lending to first-time borrowers, both in the time in takes to conduct a loan evaluation, and the risks involved in lending to an unknown individual. Now that institutions have access to an instantaneous, affordable, low-tech, accurate service, they can expand their operations with the time and resources they will save. First Access and FSDT envision dozens of financial institutions utilizing this unique, reliable scoring service to mitigate risk, reach new borrowers, and eventually, passing additional cost savings onto borrowers in the form of lowered interest rates.

## WHAT TYPES OF MOBILE DATA CAN BE USED?

First Access predictive models are tailored to the portfolio of each FSP, capturing its unique client base, risk tolerance, cost structure and loan products, as well as borrowers' willingness and ability to pay. Each new loan applicant's data are benchmarked against thousands of anonymous profiles of current and past borrowers. First Access engineers carefully select the factors that are statistically significant for each FSP, and only these are included in the algorithms.

Each profile, while not identifiable by name (and thus not requiring permission for data access), represents a current or past borrower of the given FSP, and includes his or her financial and mobile records linked by an anonymous unique identification number. The models base risk level on a variety of record categories from the MNOs, including demographic, financial, social and geographic:



**Demographic** indicators like age and gender, which correlate with risk level themselves and also interact with other types of indicators to predict customer segments and performance.



**Financial** indicators, including expense patterns and types from different sources, including mobile phone and mobile payments, as well as utilities and school fees. More stable transactions correlate with better loan performance.



**Social** indicators identifying the strength and breadth of a subscriber's social network and relationships, such as the number of unique incoming callers. Stronger social networks correlate with better loan performance.



**Geographic** indicators identifying the individual's proximity to urban areas, region within a country, or other locations that correlate with risk, and in the future, his or her degree of mobility.

## NEXT STEPS

First Access welcomes Tanzanian financial service providers to sign up for a free customized credit scoring algorithm. The company is currently completing technical integration with all four Tanzanian mobile network operators. Tanzania is poised to be the first market to offer a sustainable, mobile-based scoring service, placing itself squarely at the forefront of mobile financial services and financial inclusion.