

# The Kuelap Digital Financial Services Platform

*Technology Solutions for Financial Inclusion 2.0*

*Seattle*

*Winter, 2017*

*Today's model for financial inclusion is broken: costs are too high, access is too hard, and innovation is too slow.*

*The future of financial inclusion is the fast, low-cost mobile delivery of digital financial services. We call this new model Financial Inclusion 2.0, and we believe that the fastest way to bring this about is by providing a Digital Financial Services Platform, or DFSP.*

*We first articulated this vision with a Mifos.org white paper in spring 2016. In just one year since that time, we have made tremendous progress:*

- *Focused the Mifos.org mission on the global Financial Inclusion 2.0 community*
- *Built out a DFSP architectural vision*
- *Developed an open source DFSP framework*
- *Put that framework under the governance of the Apache foundation*
- *Spun out a new company, Kuelap, to build a complete DFSP and offer it as a service*

*We invite banks, cooperatives, SACCOs, credit unions and others to join us in bringing Financial Inclusion 2.0 to the world's two billion unbanked.*

*Craig Chelius*

*CEO, Kuelap*

# The Crisis in Financial Inclusion

## Slow Progress

Financial exclusion has been cut from 2.5 billion people to 2 billion in just three years. The world is making progress, but not fast enough.

Muhamad Yunus set a target for ending poverty by 2020. Progress is so slow that he had to extend it all the way out to 2030. We are not even on track to reach the World Bank's goal of universal financial inclusion by 2020. One billion people will still be left out.

We need to go faster, but current methods make it impossible. Costs are too high, innovation is too slow, and access is too hard.

## Burdensome Systems

Today's systems and technology are the problem. Rather than helping, they hold things back.

- **Isolated.** Banks need connections to digital financial services, to other banks, to mobile app delivery services, to national switches, and to regulators. Today's systems are isolated. Without the connections they need, these systems will fail.
- **Incomplete.** Core banking systems provide only part of what's needed. Among the many pieces that have to be added are digital financial services, mobile apps, analytics, KYC, watchlists, and disaster recovery. Each one, as it's added, makes the system more and more of a fragmented patchwork.
- **Rigid.** Achieving universal financial inclusion will call for a stream of innovative new products, services and approaches. Today's systems make that difficult, because they're so hard to change. It's costly and time-consuming to add a function, build a new product, or configure a mobile app.

## Unsustainability

- **High costs.** Banking systems are costly, and as much as 80% of the cost goes into just keeping the bank operational. That cost burden then either has to fall on customers, in the form of high fees, or on the bank itself in the form of low margins.
- **Wasteful duplication.** Every bank has to acquire and operate its own IT infrastructure. This forces banks to focus time and attention on IT, instead of on their

customers and their value add. This is as wasteful and inefficient as if every bank had to generate its own electricity.

- **Low growth.** Banks have already reached the people they can reach with today's systems. Without digital financial services, new products, and mobile delivery, they will be trapped in a period of low growth even while they are paradoxically surrounded by the vast potential of two billion unbanked people to serve.

## Our Vision: A Digital Financial Services Platform

Mifos.org articulated a powerful new model for helping to end poverty, Financial Inclusion 2.0.

Our vision at Kuelap is to enable that model through the sustainable, fast, low-cost mobile delivery of digital financial services.

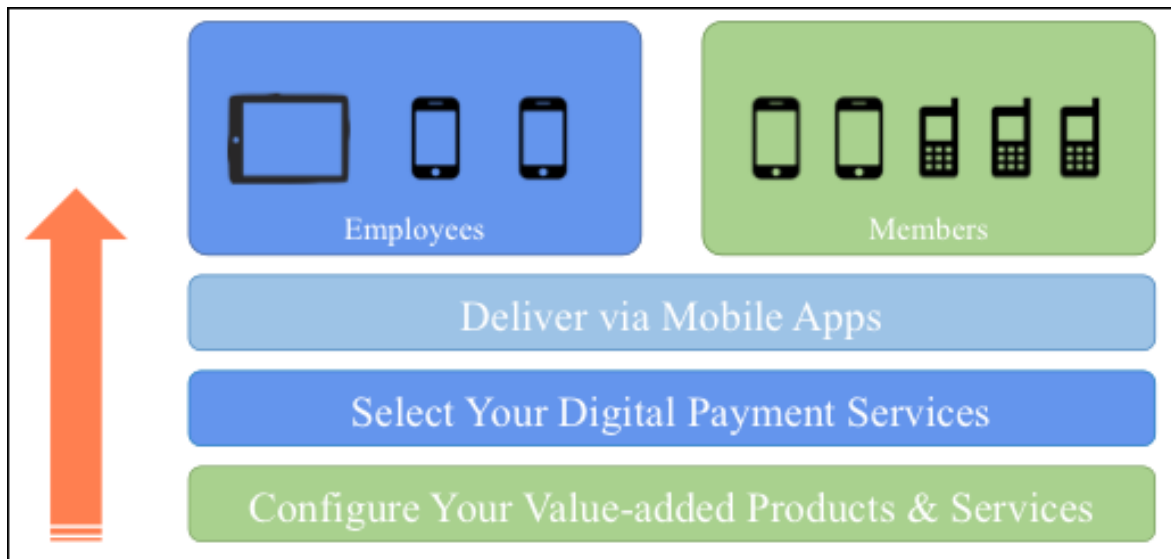
### Complete

From our years at Mifos, we understand financial inclusion.

With that knowledge, we built everything that's necessary into the Kuelap solution. It includes not only the core banking system, but all the other functionality needed. Banks don't have to add pieces or build it out.

The solution is designed to handle all the IT work that isn't banking, so the bank can focus on its business. The bank can just configure the right products, choose the right payment providers and digital services, select the right mobile apps, and serve its customers.

#### Enabling Banks to Focus on Customers, Not IT



### Robust

We know how to build robust IT solutions. Our team includes senior management from VMware, the leader in cloud computing, and Pivotal, the leader in secure enterprise

platforms, and we have deep expertise in cloud applications, open source and microservice software architectures.

We've built a solution that's more robust than anything the bank can build itself. It's more secure, more reliable, built to global standards, and has full regulatory compliance built in.

## Self-Sustaining

Four members of our team have been company founders and CEOs. We have built sustainable business models and solutions that support them -- including a business model that turned customer support from a cost center to a profit center and was adopted by IBM, HP, AT&T, 3M and GE Capital.

The Kuelap solution is built for lower operational costs, for rapid growth in membership, and with a revenue model that pays for itself.

# The Kuelap DFSP

## Delivery as a Service

The Kuelap solution is delivered as a service. We operate, support and maintain the system so the bank doesn't have to.

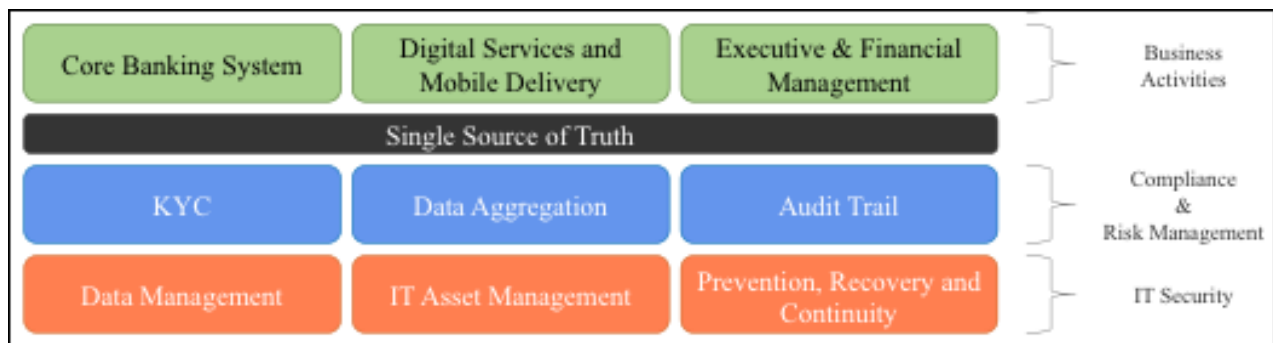
Banks can use Kuelap in the same way that they use electricity. A bank doesn't build its own power plant when it needs light; it just switches the light on. In the same way, a bank doesn't have to build its own IT infrastructure, but can just switch on the Kuelap DFSP service.

Our pricing model is the same as the pricing model for electricity. We bear all the setup, capital, operations and maintenance costs. The bank is just charged for the actual amount it uses.

## Structure

Kuelap is a complete solution, not just a core banking system hosted in the cloud. Besides core banking, Kuelap provides risk management and compliance, IT security, connection to digital financial services, and mobile delivery.

### Kuelap DFSP Structure



### Business Activities Layer

- Core Banking System:** Meets all functional, legal and regulatory requirements for the bank's financial products, services, and operations. The system is also designed so that products can be configured from a product dashboard, with no programming needed.

- **Digital Financial Services and Mobile Delivery:** After the bank configures a product, all that's needed is to connect it to digital financial service providers ' including national switches, ATM networks, clearing houses, payment gateways and mobile money operators ' and choose which mobile apps to use for delivery.
- **Executive and Financial Management:** Kuelap is built to satisfy all requirements for management reporting, risk management, and regulatory compliance.

## Single Source of the Truth

A constant challenge for banks is that data can be spread across multiple applications. Intellect, in the UK, puts it this way:

*It is not that banks do not collect data, far from it. Instead, there is too much data and too many versions of the 'truth.' A 'single customer view' has been the holy grail of the banking sector, which has spent significant sums of money to get there' including the investment of over £1billion by UK banks to become compliant with Single Customer View requirements.*

Kuelap's Single Source of the Truth ensures that banks will always have the data they need for answering whatever questions regulators, investors and executives might ask.

## Compliance & Risk Management

- **KYC / AML-CFT.** Supports the entire KYC/AML program, from customer due diligence and onboarding, to monitoring transactions and reporting suspicious activity.
- **Data Aggregation.** Kuelap aggregates data from the bank's various internal departments and branches, as well as from its external partners and correspondents.
- **Audit Trail.** Kuelap keeps a complete and permanent record of every transaction, action, change, or event.

## IT Security

The Kuelap DFSP is more secure and more reliable than stand-alone core banking systems and self-hosted data centers.

- **Data Management.** Meets all legal and regulatory requirements for data security, storage, and access.

- **IT Asset Management.** Reliability, availability, performance, and security of IT infrastructure
- **Prevention, Recovery, & Continuity.** Business continuity through threat prevention & monitoring, back-up, redundancy, and off-line capabilities

## Architecture

- **Cloud Native.** Kuelap is built on top of Fineract, the open source DFSP Framework that is governed by the Apache Software Foundation. Kuelap is cloud-native, meaning that it is 100% designed and built for cloud.
- **Microservices.** Banks can use the DFSP as is, or they can easily extend it and incorporate it into their own offerings because the Kuelap architecture is built from separate, open-source microservices, components, and containers. The framework is lightweight and extensible with a clean separation of back and front end, a clean distinction between back-office and customer facing applications, and separate data for customer facing applications. The architecture adheres to global software design standards throughout, with clean APIs for integration and connectivity with external solutions.
- **Scalability.** Kuelap is highly scalable, for massive deployment and to allow banks to scale in response to demand. Built for fast, simple and cheap replication and addition of cloud capacity, Kuelap can flexibly accommodate growth or process peak demands.



## A New Model for Sustainability

Kuelap is dedicated to the mission of making financial inclusion sustainable. To that end, we designed the system and the business model to make operational costs lower, to make it easier to grow the bank's membership, and to reduce the Kuelap net cost to zero.

### Lower Operational Costs

As banks move to digital financial services, their costs are significantly reduced. According to the McKinsey Global Institute, there is a 66% reduction in operating costs and a 90% reduction in transaction costs from digital financial services.

With Kuelap, the cost reductions are even greater. Kuelap deploys and maintains the system at no cost to the bank: there are no setup or implementation fees, no software licenses, no support, maintenance, or upgrade fees and no training fees.

### Growing Membership

The world has two billion unbanked people plus another two billion underbanked. Today, it's difficult for banks to serve them because costs are too high, access is too hard, and innovation is too slow.

We created the Kuelap DFSP to solve those problems, so banks can grow their membership and billions of people can enter the world of financial inclusion.

### The Kuelap Business Model: Paying for Itself

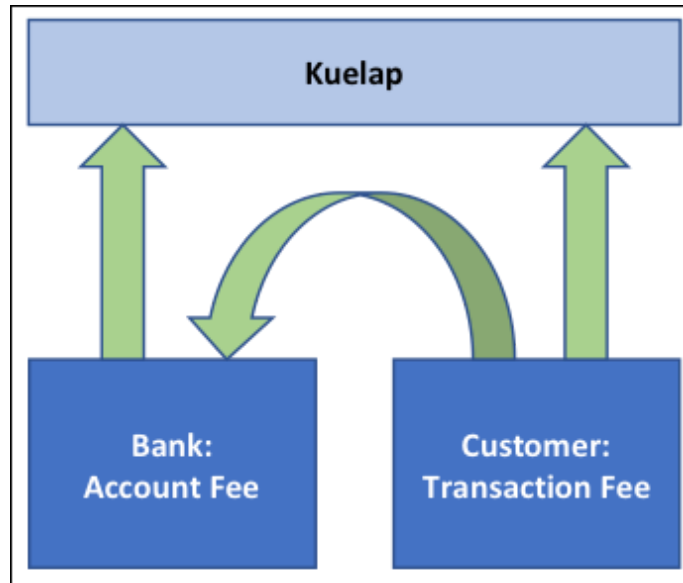
To help make financial inclusion sustainable, we built a business model that gives the bank a net cost of zero.

Kuelap charges the bank a monthly fee for each open account.

Kuelap also charges the customer a small fee for each transaction; this is typically much lower than current transaction fees. Kuelap keeps part of the fee and rebates the rest to the bank.

For a typical bank, the amount of the rebate is equal to or greater than the monthly account fee. The result is a net zero cost to the bank.

### Kuelap Bank Fees: Net Zero



## About Us

### Our Story

The Kuelap story begins at the Mifos Initiative. Mifos is the global thought leader for financial inclusion software, dedicated to ending poverty, one line of code at a time.

The long-term goal of the Mifos Initiative has been the creation of a sustainable digital financial services platform. That goal has now been achieved, with the creation of Kuelap.

The Mifos chairman, Mifos executive team, and Mifos software development team are now part of Kuelap. With us, we bring the knowledge we built through deploying Mifos software to 500 financial institutions in 37 countries, and building a network of 50 local deployment partners.

### Our Invitation

We invite banks and others -- from MFIs to cooperatives, SACCOs, credit unions, savings groups, SME lenders, asset-based financiers, agricultural lenders, and marketplace lenders -- to join us in bringing the fast, low-cost mobile delivery of digital financial services to the world's unbanked.