FinTech non-profit leveraging the cloud, mobile, and open source community to transform the delivery of digital financial services to the world’s 3 billion underbanked and unbanked.
**MIFOS.org**

- Financial Inclusion mission
- Started in Microfinance in 2002
- Brokers the market of solutions

**FINERACT.apache.org**

- Formal apache process, PMC
- Larger audience – financial services
- All about the code

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**Generation 1: Mifos**

**Generation 2: Mifos X (API Driven Platform – 2010)**

**Generation 3: Mifos I/O**

**Code for Fineract 1.x (2016)**

**Code for Fineract-CN**

( cloud native, microservices 2018 )
Digital Rails: How Providers Can Unlock Innovation in DFS Ecosystems Through Open APIs

Olga Morawczynski, Lesley-Ann Vaughan, Michel Hanouch, and Xavier Faz
November 2016
Our approach is open at the core: Commoditization of Financial Services Systems

Open innovation is at the heart of the digital revolution, exemplified by the open source movement that has supported so much of the new technology development in recent years.”

Mifos X & Apache Fineract 1.x (“Gen 2”)  

Platform

Online Banking App

<table>
<thead>
<tr>
<th>Total Accounts</th>
<th>Loan Account</th>
<th>Savings Accounts</th>
<th>Share Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>283</td>
<td>232</td>
<td>33</td>
<td>18</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Accounts</th>
<th>Total Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>3507240184391.57</td>
<td>839989.3200000001</td>
</tr>
</tbody>
</table>

Web App

Mobile Banking

Mobile Wallet

Mobile Field Ops
Application

Solution

Platform

Infrastructure
Fintech Solutions Powered by Mifos X/ Fineract1.x

Digital Credit
Fintech Solutions Powered by Mifos X/ Fineract1.x

Mobile Savings
Savings Group App

Mobile Wallet

Marketplace lending for SMEs

Working Capital Loans

Machine Learning

Insurance E-Wallet

Cashless, paperless, mobile microfinance

Agent banking platform

Digital Credit for Urban Microfinance

E-Commerce Lending

Branchless Financial Inclusion

Alternative MSME lending

Agent banking platform
Nigeria

- Population of 197 Million
- 70% of adults are underbanked
- Highly fragmented mobile money market
MINES.IO
Modern financial services for emerging markets.
Solution: KwikCash
Total Client Base: 400,000 customers
Location: Nigeria
Support Partner: Mines.io

❖ Mteka data analytics platform can process terabytes of data in seconds so needed a banking platform with a modern architecture that could match that level of scale.

❖ Open source freed them to focus on customer experience and partnerships with telcos and microfinance banks

❖ Achieved fast time to market and reliable scale

“Mifos saved us considerable time and money in accelerating our platform and accelerating our financial inclusion efforts. The redesign and continuous improvement for scale and pluggable microservices is critical for us to continue using it vs. developing something on our own.”
(Ekechi Nwokah, CEO & Co-Founder)
60% Of Mexicans **don’t have a banking account.***

90% Of transactions in Mexico are in cash

6M Merchants in Mexico do not accept electronic payments

*Source: Mexico’s Financial Inclusion Report*
What is Gentera and Fiinlab?

Gentera is a financial group with social responsibility, with 25 years of existence composed by the following companies and brands:

- **Gentera**: Bank offering savings and microfinance loans.
  - 3 M customers
  - 1.7 Bn USD portfolio.

- **Compartamos**: Remittances company with 4.4 M remittances per year.

- **INTERMEX**: Financial correspondents network with 2,700 merchants.
  - 5.7 M tx processed

- **Yastás**: 5 Million active insurances

- **A T E R N A**: Financial Inclusion lab devoted to creating new business models.

- **Fiinlab**:
Solution: Mifos X
Total Client Base: 3M customers, $1.7B portfolio
Location: Mexico
Support Partner: Mifos Initiative/Fiter

- Needed to rapidly innovate and not be bogged down by legacy core banking system.
- Innovation Lab, FiinLab, uses Mifos X as its innovation platform to roll out and test new innovations and products:
- Long term plan to migrate core banking from SAP to Apache Fineract

“With SAP, in order to get to market with new functionality it took over a year. With Mifos, we were able to shorten development cycles to one week. Mifos is really flexible and has such a strong API that we were able to do it faster than on SAP”

- Eduardo Licona, Director of Innovation Platforms
Mobile App for Group Loan Administration
Erste Financial Services

- Landesbanken - state-owned banks focused on wholesale lending
- Landesbanken sector hit especially hard by the financial crisis - 70B Euro Bailout
- Some, had to be completely restructured - WestLB Bank became EAA Bank
Solution: Mifos X (Apache Fineract 0.6)
Total Client Base: 50,000 customers
Location: Germany
Support Partner: DPC Consulting Hungary

- Entasked with reducing operational costs from 900M euros to 700M euros per year.
- Migrating mortgage loan portfolios to Apache Fineract to lower costs and streamline processes.
- Strong champion in executive leadership but skepticism amongst German IT staff
- Recently acquired by IBM who is exploring as part of a managed service offering to other banks.

“Loan portfolio can now run “unattended” without the monthly manual error-prone and time-consuming review processes”

- Frank Klingspor, Managing Director
India

1. PRESENCE-LESS LAYER
   - Authentication 'on demand'

2. PAPERLESS LAYER
   - Documents 'on demand'

3. CASHLESS LAYER
   - Financial transactions 'on demand'

4. CONSENT LAYER
   - Permission 'on demand'

THE INDIA STACK
Access to a variety of services 'on demand'
Solution: Novopay
Total Client Base: 2.1M customers
Location: India
Support Partner: Conflux Technologies & Khosla Labs

- First mover advantage leveraging proven Mifos X core banking system
- Mobile wallet solution enabling agent-led money transfers, account openings, bill payments, cash management, financial services & more.
- Gold standard for agent management - real-time visibility into agent activity and transaction workflows

“Mifos has played an integral role as part of our open source stack. We have scaled to a billion dollars worth of gross transaction value in a year using Mifos for wallet management & accounting.”
(Arun Sevakule, CTO Novopay)
Lessons Learned

**DO’s**

- Talk about how OSS can foster a culture of maintainable code
- Evangelize your project wherever and whenever you can
- Explain **how** it lowers the cost of innovation to business
- Engineer for scalability and extensibility
- Have more than one company ready to stand behind it.
- Integrate user into community early on

**DON’Ts**

- Force customer to go at it on their own in the community.
- Confuse OSS with free - still important as a message
- Let your architecture get stagnant
- Encourage “free riders” thinking - instead have explicit “inbound improvements”
- Waste time on deals that can’t go.
Thank you

A phone, an account, access to financial services, powered by open source cloud native platforms and open APIs.

Edward Cable
edcable@mifos.org
@edcable

James Dailey
jdailey@mifos.org

Fineract.apache.org  |  https://github.com/apache/fineract
Mifos.org  |  https://github.com/openMF/