The Interoperable Payment & Settlement Systems for Enhanced Integrity and Trust of Financial Transactions in Ghana

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About Ghana

WHO WE ARE

- A West African Country
- Known for exporting Gold, Cocoa etc
- **Population**: 27.41 million (2015 World Bank)
- Capital: Accra
- **Number of Regions**: 10
- **Currency**: Ghana Cedi
- GDP: $ 37.54 billion (WB, 2015)
About GhIPSS

Wholly owned subsidiary of the Bank of Ghana

Incorporated in 2007 with a mandate to implement and manage interoperable payment system infrastructures for banks and non bank financial institutions in Ghana

Currently manages

• National Biometric Smart Card system- e-zwich

• Cheque Codeline Clearing (CCC) System

• Ghana Automated Clearing House (GACH) System

• National Switching and Processing System- gh-link
GhIPSS Mandate,

**Mandate**

Implement and Manage Interoperable Payment Systems Infrastructure for banks and non bank financial institutions in Ghana.

**Vision**

Migrate Ghana to an Electronic Payment Society

**Mission**

To partner the financial services industry in promoting, developing and managing efficient and secure payment systems.
## Performance Over the Years

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>e-zwich 2008 - 2016</th>
<th>CLEARING HOUSE 2010 - 2016</th>
<th>Gh-link 2012 - 2016</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VALUE (Gh¢)</strong></td>
<td>4,285,586,003.24</td>
<td>685,841,183,442.39</td>
<td>1,004,094,502.48</td>
<td>692,130,883,948.11</td>
</tr>
<tr>
<td><strong>VOLUME</strong></td>
<td>11,486,071</td>
<td>66,756,457</td>
<td>5,873,918</td>
<td>84,116,446</td>
</tr>
</tbody>
</table>
Interoperability and Financial Identity
Understanding Interoperability

- Interoperability in simple terms is the ability for different systems to connect with one another.

- Interoperability increases transaction volumes and create new business opportunities
GhIPSS has created an Interoperable platforms for banks and non-bank financial Institutions in Ghana
Current System Architecture

Current Architecture

gh-link (EMV)

(Bank B)

POS
ATM
GIP
Internet

Bank A

ATM
POS
Branch
GIP
Internet

Bank A

POS
ATM
Bank Branch

e-zwich (Biometric)

Bank B

Pos
ATM
Bank Branch

MMO
MTN
Tigo
Airtel
Vodafone
Future System Architecture

- Bank C
- (ATM, POS, Branch)

- Bank B
- (ATM, POS, Bank Branch)

gh-link

Mobile Money

Bank Accounts

e-zwich

- MTN
- Vodafone
- Airtel
- Tigo

Bank A
Achieving Financial Identity (FI) with Interoperability. The Case of e-zwich
e-zwich is an interoperable biometric smart card payment system which links all financial institutions in Ghana.

**Key Features**

- Biometric Authentication
- Online & Offline Loading & Settlement
- 10-Digit Signature Code for Online/Offline Loading
- Multiple Audit Trails
- Transparent & Automatic Recovery
- 12 Map Biometric Search Station
Use Cases of e-zwich

- Authentication of payroll
- Audit Payroll
- Uniquely identify customers

Platform is Currently used by

Government & Non Governmental Institutions:

- NSS, GSOP, LEAP, Cocoa Buying Companies, SLTF

Cards are issued by Commercial, Rural & Community Banks, Savings & Loans Companies
Benefits of e-zwich

- It is faster, Secure and Convenient.
- Gives the cardholder access to a wide range of retail and banking services at any POS terminal anywhere in Ghana.
- The cardholder can also earn interest on money held in the savings wallet on their card.
Benefit of Interoperable Platforms
Increase in the Number of Financial Institutions on the Platform

Increase in 3rd Party Companies

Increased the amount of Money in the banking System

Growth in the number of Fintech Companies
Benefits

- Reduced end to end transaction cost.
- Payments are made more securely, leading to a reduction in fraud.
- Reduce fraud activities.
- Lower Operational & Maintenance Cost
- Improved Financial Ecosystem
Thank you