



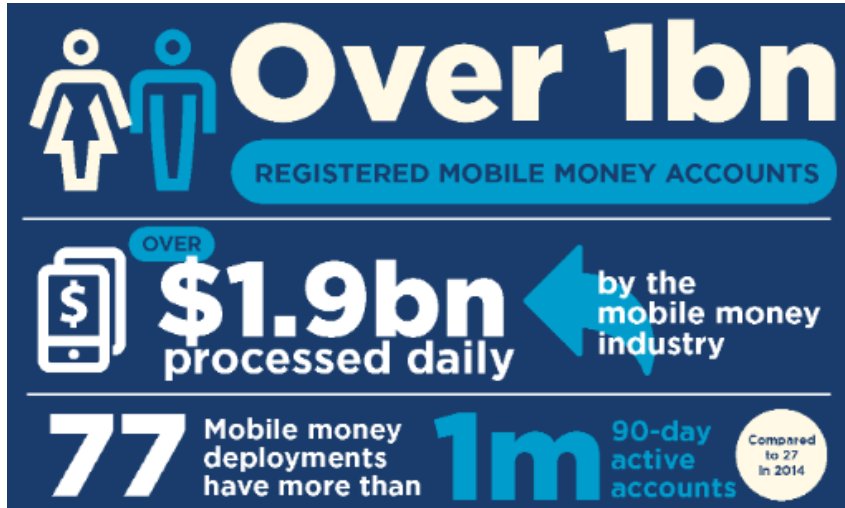
The many paths to mobile money interoperability

Selecting the right technical model for your market



In a fast growing mobile money industry, interoperability remains a priority

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An interoperability solution can be viewed as having five core components

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Connection

The interconnection allows DFSPs (institutions holding the client accounts) to **exchange information, initiate and receive** transactions, accept or reject them and debit or credit end user accounts.

Settlement

The settlement mechanism is what allows the **flow of 'real' money** between participant organisations. In the world of e-money, this step need not coincide with the debiting and crediting of end user accounts.

Governance

Governance refers to the way participants of an interoperability solution make decisions.

Pricing and Business Model

Pricing and business model encompasses the key determinants of an interoperability solution's profitability and sustainability. These generally revolve around **processing or transaction fees, interchange and client surcharge**.

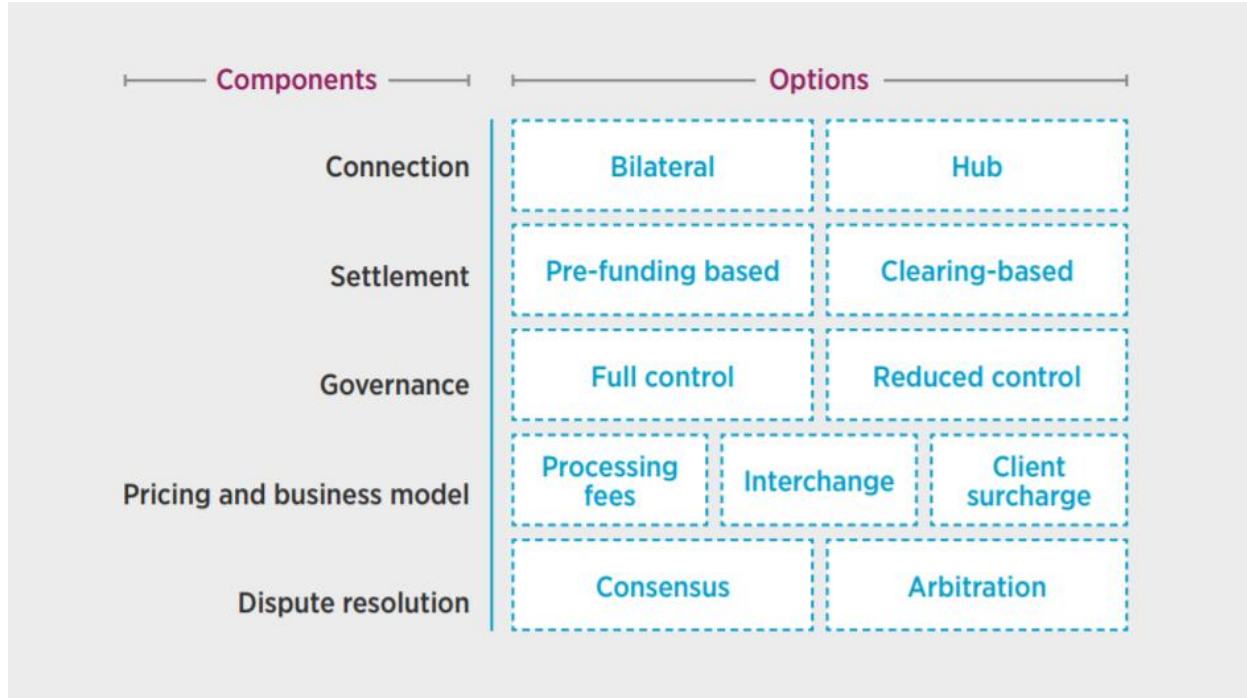
Dispute Resolution Mechanisms

Interoperability requires specific dispute resolution mechanisms, as enabling clients to perform cross-net transactions requires the ability to reach consensus with other DFSPs.



Each interoperability component offers a set of potential options

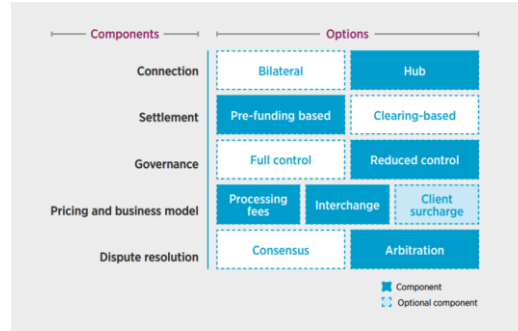
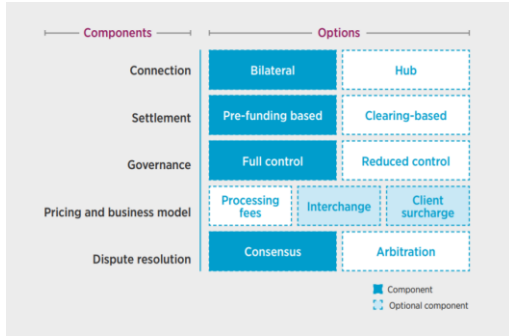
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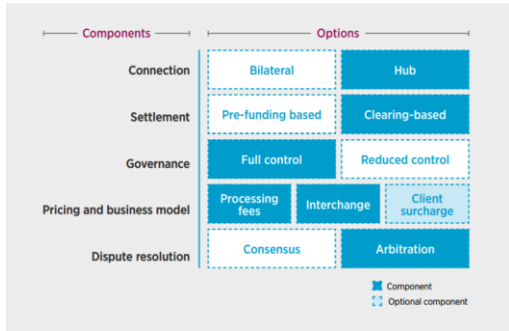


Out of eight possibilities, we identified four viable interoperability scenarios

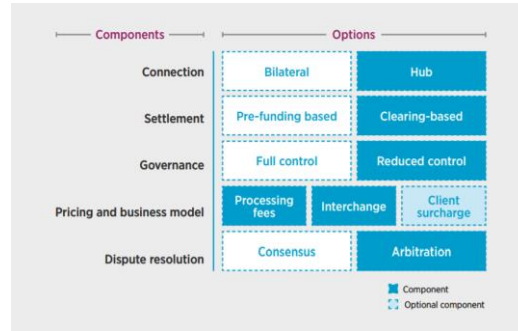
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2/4 Aggregator Model



3/4 Mobile Money Hub Model



4/4 Global Payments Hub Model



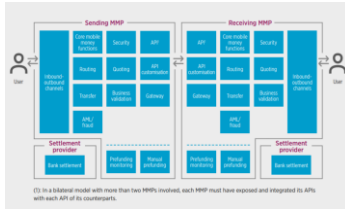


Implications of different interoperability models

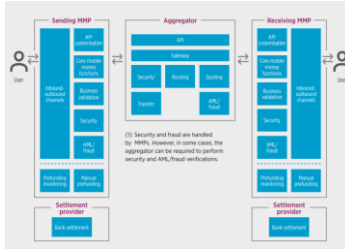
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Technical Architecture

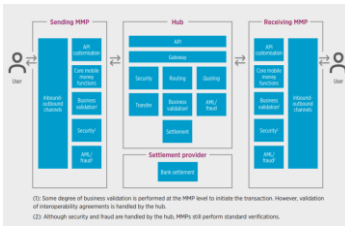
Bilateral Model



Aggregator Model



Hub Models



Technical implications

- API design and protocols
- Account identification
- Processing capacity and scalability
- USSD session timeout
- Breakdown risk

Commercial and Business Implications

- CAPEX
- OPEX
- Time to market
- Prefunding and liquidity requirements
- Dynamics with other stakeholders
- Integration times



Selecting the right interoperability model for your market

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Category		Bilateral agreement	Aggregator	Mobile money hub	Global payment hub
Cost	CAPEX	Dark Blue	Dark Blue	Light Blue	Light Blue
	Transaction cost	Dark Blue	Light Blue	Light Blue	Light Blue
	Maintenance cost	Dark Blue	Light Blue	Light Blue	Light Blue
	Settlement/ prefunding cost	Light Blue	Light Blue	Light Blue	Light Blue
Revenue	New opportunities	Dark Blue	Light Blue	Dark Blue	Light Blue
	Appropriate pricing	Dark Blue	Light Blue	Dark Blue	Light Blue
Scalability	Time to market	Dark Blue	Light Blue	Light Blue	Light Blue
	Scalability of volumes	Light Blue	Light Blue	Dark Blue	Dark Blue
	Scalability of participants	Light Blue	Light Blue	Light Blue	Dark Blue
Robustness	Identify and monitor transactions	Light Blue	Light Blue	Dark Blue	Dark Blue
	Reliability and availability	Light Blue	Light Blue	Light Blue	Light Blue
	Security and resilience	Light Blue	Light Blue	Light Blue	Light Blue
Governance	Decision-making power	Dark Blue	Light Blue	Dark Blue	Light Blue

All models have their relative strengths and weaknesses; there is no 'right' answer universally applicable to all contexts.

Extent to which the interoperability model supports objectives:





GSMA's position on interoperability

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Interoperability is a **strategic priority for mobile money providers** in order to:

1. Enable the long-term growth of mobile money
2. Strengthen the relevance of mobile money accounts to consumers, ensure their loyalty, and drive network effects
3. Contribute to the digitisation of cash in the ecosystem and to the modernisation and the efficiency of payment systems
4. Improve financial inclusion by bridging the gap between banked and unbanked consumers

GSMA focuses advocacy and engagement efforts on **an industry-led approach**:

- The **timing** of interoperability should be determined by commercial logic – if mandated prematurely, interoperability could undermine early-stage investment incentives and increase operational complexity and risk, without advancing market growth.
- **Commercial incentives should drive the choice of (i.e. the model) financial infrastructure** - mandated approaches prevent effective competition, can increase cost and ultimately lead to technical, commercial, and governance complexities that are likely to diminish uptake.
- The existence of a switch at the national level does not necessarily mean that it is relevant or optimal for successful mobile money interoperability - a **switch/scheme's governance model, commercial model, technical capacity and other factors should be assessed** to determine its overall suitability for mobile money interoperability.