Digital Financial Services

Vijay Mauree,
Programme Coordinator,
ITU Telecommunication Standardization Bureau

Contents

1) *Digital Financial Services & Financial Inclusion*

2) *ITU-T Focus Group Digital Financial Services*

3) *Financial Inclusion Global Initiative (FIGI)*

Digital Financial Services & Financial Inclusion

2 billion unbanked …

=> … 1.6 billion have mobile phone

ITU-T Focus Group Digital Financial Services

ITU-T Focus Group Digital Financial Services (FG DFS)

- **Established** - June 2014; **Concluded** - 5 December 2016
- FG DFS facilitated effective consultation and collaboration on key DFS issues. For the first time, the Focus Group brought together financial and telecoms regulators at the global level to address DFS regulation and supervision, to:
  - **Increase and formalize** the collaboration between financial and telecoms regulators with respect to DFS
  - **Identify** key issues limiting the development of safe, enabling DFS ecosystems
  - **Analyze** how these issues have been addressed in practice and exchange information on best practices
  - **Develop** policy recommendations for regulators and other stakeholders

ITU-T Focus Group Digital Financial Services

FG DFS Deliverables

- **28 Technical Reports and 85 policy recommendations**
- **FG DFS recommendations**
- **DFS Ecosystem Technical Reports:**
    - The Digital Financial Services Ecosystem
    - Regulation in the Digital Financial Services Ecosystem
    - Review of National Identity Programs
    - Enabling Merchant Payments Acceptance in the Digital Financial Ecosystems
    - Merchant Data and Lending
    - Impact of Agricultural Value Chains on Digital Liquidity
    - Impact of social networks on digital liquidity
    - The Role of Postal Networks in Digital Financial Services
    - B2B and the DFS Ecosystem
    - Bulk Payments and the DFS Ecosystem
    - Over the counter transactions: A threat to or a facilitator for digital finance ecosystems?
    - DFS Glossary
- **Consumer Experience and Protection Technical Reports:**
    - Commonly identified Consumer Protection themes for Digital Financial Services
    - QoS and QoE Aspects of Digital Financial Services
    - Review of DFS User Agreements in Africa: A Consumer Protection Perspective

ITU-T Focus Group Digital Financial Services
FG DFS Deliverables

- **Technology, Innovation and Competition** Technical Reports:
  - Mobile Handset Use in DFS
  - Security Aspects of Digital Financial Services (DFS)
  - Identity and Authentication
  - DFS Vendor Platform Features
  - Distributed Ledger Technologies and Financial Inclusion
  - Technology evolution and innovation in DFS
  - Mobile Handset Use in DFS
- **Interoperability** Technical Reports:
  - Cooperation frameworks between Authorities, Users and Providers for the development of the National Payments System
  - Payment System Oversight and Interoperability
  - Payment System Interoperability and Oversight: The International Dimension
  - Access to payment infrastructures
  - The Regulator's Perspective on the Right Timing for Inducing Interoperability

Key concepts

- **DFS Ecosystem**
    - **Users** (consumers, businesses, government agencies and non-profit groups) with need for digital and interoperable financial products and services
    - **Providers** (banks, other licensed financial institutions, and non-banks) supplying those products and services through digital means
    - Financial, technical, and other **infrastructures** that make them possible
    - **Governmental policies, laws and regulations** which enable them to be delivered in an accessible, affordable, and safe manner

    The DFS ecosystem aims to support all people and enterprises within a country, and should support national goals including financial inclusion, economic health, and the stability and integrity of the financial system.

For additional definitions see [ITU-T Focus Group Digital Financial Services Glossary](#)
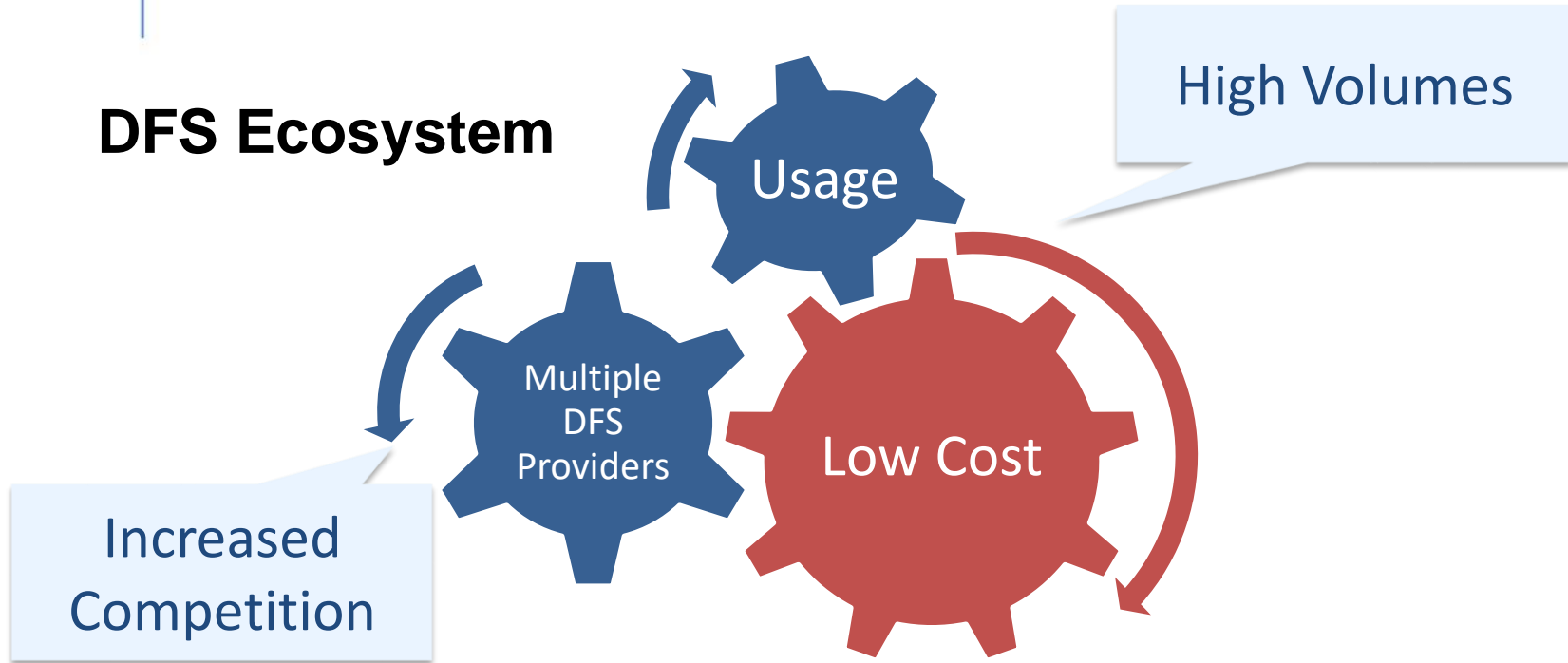
Key concepts

- **Transaction Account**
  - An account held with a bank or other authorized and/or regulated service provider (including a non-bank) which can be used to make and receive payments

For additional definitions see ITU-T Focus Group Digital Financial Services Glossary

Key concepts

DFS Ecosystem

High Volumes

Usage

Multiple DFS Providers

Low Cost

Increased Competition

What is the DFS Ecosystem?

The Digital Financial Services ecosystem consists of **users** (consumers, businesses, government agencies and other enterprises) who have needs for digital financial products and services; the **providers** (both banks and non-banks) who supply those products and services through digital means; the financial, technical, and other **infrastructures** that make them possible; and the governmental **policies**, **laws** **and** **regulations** which enable them to be delivered in an accessible, affordable, and safe manner.

The DFS ecosystem aims to support **all people and enterprises** within a country, and should support national goals including financial inclusion, economic health, and the stability and integrity of the financial systems.

Defining a Taxonomy: The DFS Glossary

- Concepts
- Processes
- Products & Services
- Use Cases
- Infrastructure
- Roles
- Technologies
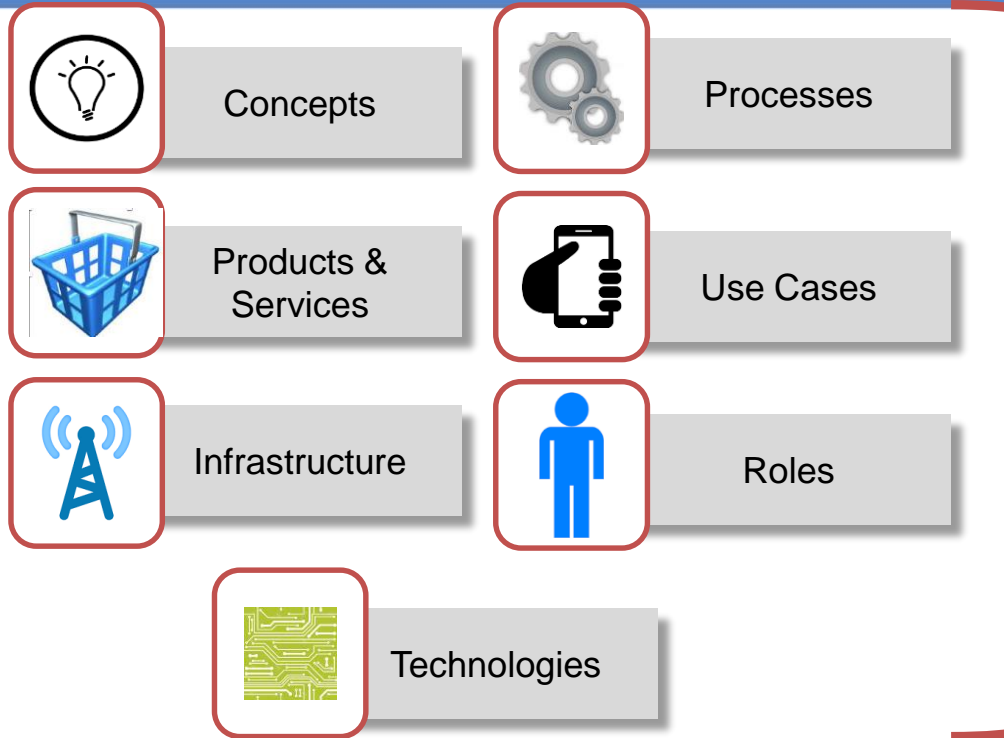
- 150 Terms
- 7 Categories
- 9 Source Glossaries
- To stay online as a "living document"

Barriers: Reaching Digital Liquidity
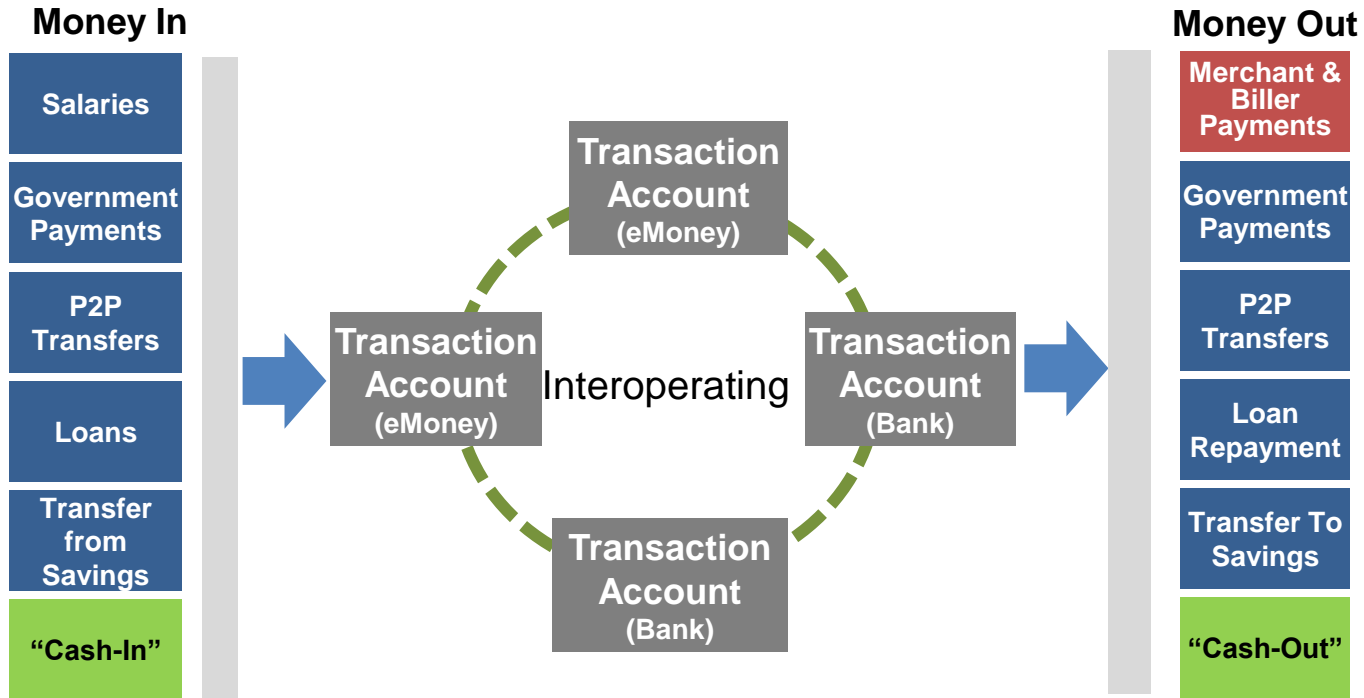
Reports: Removing Barriers to Merchant Acceptance

ITU FOCUS GROUP ON
DIGITAL FINANCIAL
SERVICES

Four Reports

- **Enabling B2B Payments**

- **Integrating with Agricultural Platforms**

- **Merchant Data and Lending**

- **The Impact of Social Networks**

Recommendations

1) **DFS Ecosystem**

2) **Interoperability**

3) **Consumer Experience and Protection**

4) **Technology, Innovation and Competition**

DFS Ecosystem

- *DFS Ecosystem Recommendations*
  - ✓ Support an open DFS ecosystem which promotes competition among Banks and non-Banks for DFS service provision
  - ✓ Use a digital identity linked to the national identity system to help with opening of transaction accounts and for eKYC purposes
  - ✓ Remove barriers for electronic merchant payment acceptance (e.g tax incentives)
  - ✓ Shared services such as fraud management services should be encouraged by the regulators
  - ✓ Policymakers should encourage to leverage existing infrastructures (e.g use of Postal networks) to support the DFS ecosystem

Interoperability

- *Interoperability Recommendations*
  - ✓ Vision: Interoperability should enable users to make electronic payments with any other user in an affordable, convenient, fast and secure way with just one transaction account.
  - ✓ Interoperability strategies and policies should be made public.
  - ✓ Interoperability schemes should be fair and transparent.
  - ✓ Telecommunication infrastructure service providers should commit to an open and level playing field for provision of DFS
  - ✓ DFS providers should ensure that their client contracts make the interoperability scheme rules transparent.
  - ✓ Access point interoperability should be implemented (non-exclusive agent agreements should be promoted).

Consumer Experience and Protection

- *Consumer Experience and Protection Recommendations*
  - ✓ Regulatory review of DFS provider contracts on a regular basis.
  - ✓ Summaries of key terms and conditions of DFS contracts
  - ✓ Fee disclosure by DFS providers required prior to completion of a transaction.
  - ✓ Risk management and fraud mitigation measures
  - ✓ Consumer complaints, error handling and dispute resolution process
  - ✓ Requirements for onboarding and training of agents
  - ✓ Quality of service obligations
  - ✓ Data protection requirements
  - ✓ Payments should be generally irrevocable with exceptions as indicated
  - ✓ Harmonize market conduct rules for digital credit

Technology, Innovation and Competition

- *Technology, Innovation and Competition Recommendations*
  - ✓ Jurisdiction for competition issues for DFS should be clarified either by law or through MoU among the regulatory bodies concerned.
  - ✓ Adopt strong authentication measures and secure software development best practices for DFS applications
  - ✓ Use digital ID for authentication and e-KYC
  - ✓ Standardize digital ID registration and ensure interoperability among DFS operators and service providers for digital ID use
  - ✓ Security measures to be implemented by mobile network operators to prevent unauthorized network access, fake base stations and SS7 attacks
  - ✓ SIM swap operations should be closely monitored
  - ✓ DFS providers should implement end to end encryption for DFS transactions

Financial Inclusion Global Initiative (FIGI)

Global Goal – UFA 2020

FIGI 3X3X3

Implementation Principles, Recommendations, Guidelines

| PAFI Guiding Principles | + | ITU DFS Focus Group Recommendations | + | Level One Design Principles |

BANK FOR INTERNATIONAL SETTLEMENTS
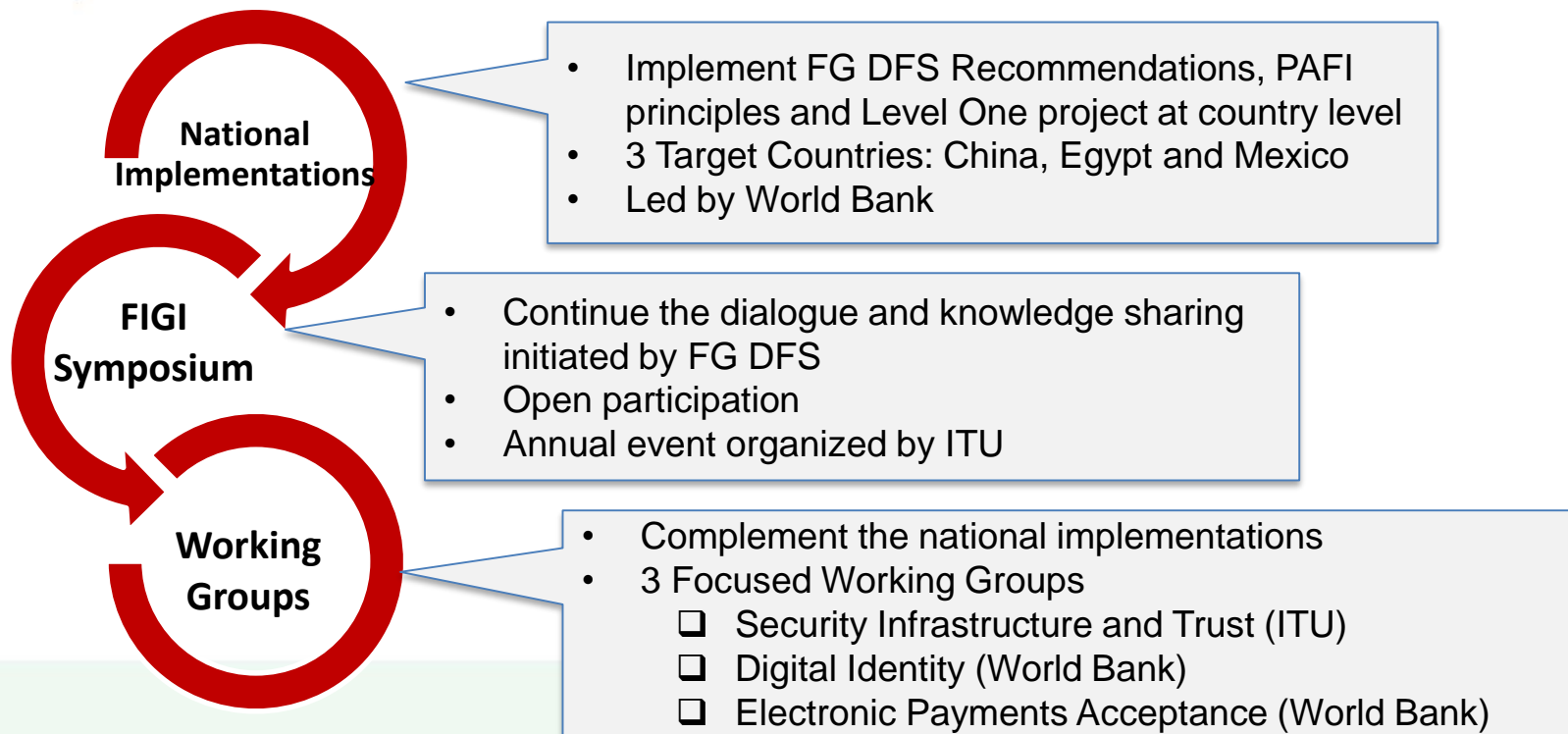
WORLD BANK GROUP

ITU

BILL & MELINDA GATES foundation

International Standards

FIGI Components

National Implementations
- Implement FG DFS Recommendations, PAFI principles and Level One project at country level
- 3 Target Countries: China, Egypt and Mexico
- Led by World Bank

FIGI Symposium
- Continue the dialogue and knowledge sharing initiated by FG DFS
- Open participation
- Annual event organized by ITU

Working Groups
- Complement the national implementations
- 3 Focused Working Groups
  - ❑ Security Infrastructure and Trust (ITU)
  - ❑ Digital Identity (World Bank)
  - ❑ Electronic Payments Acceptance (World Bank)

FIGI Symposium

- Annual event over the next three years
- **First symposium in Bangalore, India, 29 Nov – 1 Dec 2017**
- Main events:
  - 29 Nov: Working Group meetings and capacity building event for regulators
  - 30 Nov: FIGI Symposium begins; presentation from FIGI Working Groups
  - 1 Dec: Thematic Workshop on hot topics in DFS
- Next Symposium in Nov/Dec 2018
- More information:
  - Visit FIGI Symposium website
  - e-Mail: figi-symposium@itu.int

Security, Infrastructure and Trust (SIT)

ITU-led Working Group on Security, Infrastructure and Trust (SIT)

❑ Objectives
  - o Build confidence and trust in the use of DFS
  - o Develop technical guidelines and best practices for security
  - o Address cybersecurity issues in payments
  - o Prevention of unlicensed digital investment schemes
  - o Impact of new technologies on security and consumer protection

Terms of Reference

❑ Conduct systematic research to investigate security of USSD, STK toolkit and biometrics use in DFS to develop best practices for developers and security measures and controls for mitigating risks

❑ Establish lab/sandbox in ITU for security testing of DFS applications

❑ Develop security measures to mitigate the risk of SS7 vulnerabilities and other cybersecurity-related threats which could impact the DFS provider network and payment system infrastructure

Terms of Reference

Terms of Reference

❑ Develop tools to assess DFS provider security compliance, for user confidence, with respect to safeguarding the privacy of customer data, preventing fraud in DFS and resilience of the DFS system to cyberattacks (similar to PCI DSS).

❑ Develop regulatory and policy guidelines to address digital fraud and protect privacy of consumer data in DFS to create trust in consumer use of DFS (i.e. address cases of social engineering, Ponzi schemes, data security and privacy issues)

❑ Investigate interoperable authentication technologies for securing DFS

Terms of Reference

❑ Investigate distributed ledger technology security in DFS

❑ Undertake research to investigate KPIs for QoS monitoring based on FG DFS report on QoS

❑ Develop technical and regulatory toolkit on QoS measurement for telecom regulators

❑ Organize workshops on topics of interest to the Working Group to disseminate the outputs for adoption by DFS stakeholders

SIT WG Structure
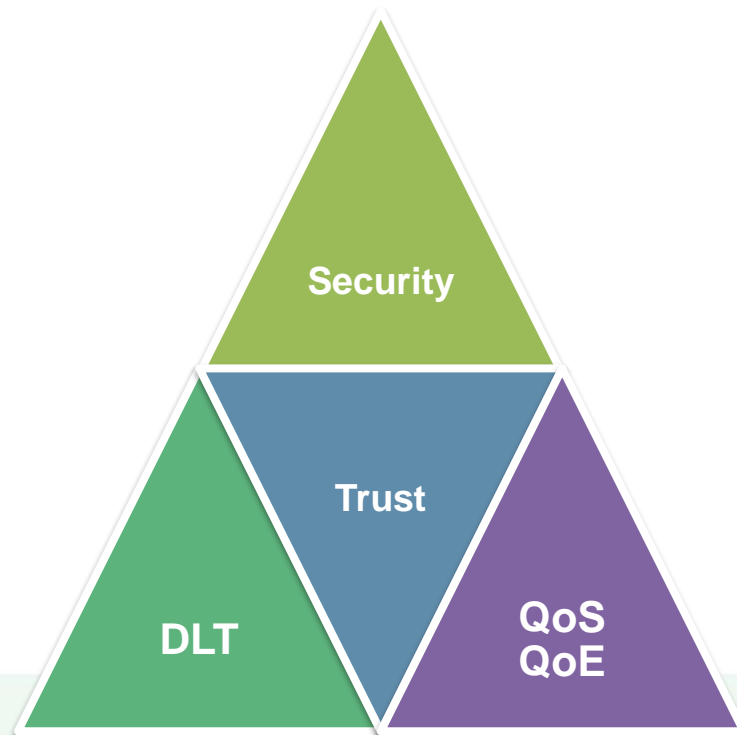
Join SIT WG

- Working Group Website
- Join group's Mailing List to be informed of future e-meetings

New: ITU-T Focus Group FG DFC

ITU Focus Group on Digital Currency including Digital Fiat Currency (FG DFC)

- Established May 2017

- First Meeting in Beijing, China, 12-13 October 2017

- Next meeting: 2nd week of July 2018, USA

- Chairman: David Wen, eCurrency

- Investigate digital currency including digital fiat currency platforms, focusing on the platform features and characteristics, security challenges to prevent counterfeiting of currencies in digital form, and overcome challenges of interoperability with other payment systems

- Terms of reference can be accessed here

More information on FG DFC website

www.itu.int