MTNCOIN

Building Africa's Universal
Financial Services & Rewards Ecosystem

"There are only two sources of competitive advantage, the ability to learn more about our customers faster than the competition and the ability to turn that learning into action faster than the competition"

Jack Welch, Former chairman and CEO of General Electric

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The African Financial Sector is ripe for disruption

Global Fintech

- New entrants (start-ups, Tech companies, MNOs) threaten to disrupt traditional value chains across verticals
- Aim to eliminate inefficiencies, extend service reach and increase consumer choice
- Heavy use of data-driven, digital-only approach
- Key verticals are Financial Services, Transportation, Commerce, Logistics
- Digital payments fuel growth for all key platforms

African Specifics

- Africa's banking sector structurally weak
- Low banking and financial services penetration
- Lack of credit history prevents access to formal financing
- 60bn$ remittance market with highest costs, long transaction times overripe for disruption
- SMEs, esp. Agriculture, despite being the economy backbone, lack access to funds
- Interoperability of mobile money platforms, access to broader financial system, local regulations as major challenge

Beyond Mobile Payment

- Mpesa pioneered the mobile transfer of funds from person to person
- Nowadays, 130 mobile money providers enable 100mio active MFS users
- Next frontier is to move beyond simple P2P money transfer with focus on advanced use cases around alternative credit scoring & lending, trade financing
- Driven by MNOs and new Fintech entrants, also forcing convergence between MNOs and banks

Disruptive Technology

- AI and Blockchain listed as the Top 2 disruptive forces in Telco
- Blockchain revolutionizes the nature of finance exchange platforms
- Distributed ledger model provides ultimate trust to facilitate transactions and interactions between parties
- Provides fast, low-cost transactions, cutting out intermediaries
- AI as the cornerstone to create advanced customer insights as basis for data-driven offers
- MNOs with their vast data pool in prime position to profit

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Mobile Money & Remittance at a glance

$ 450 Bn ➡️ **$ 1 Bn** ➡️ **$ 2,4 Bn**

Of formal remittance flow, with the true size being higher, including informal channels

Average value processed daily by the mobile money industry

Generated revenue from mobile money processing

A typical mobile money customer:

Moves **$ 188.00** a month;

At an average cost of **9,4%** in sub-Saharan Africa

And takes an average of **2 days**

Due to money needing to transfer across multiple systems through multiple currencies

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New FinTech business models categories

DIRECT BANK AND INSURANCE

Offering digitally and through agents the full range of traditional banking and insurance products, without brick-and-mortar branches

- Direct banks: Ally Bank, Microcred
- Direct insurances: Oscar, Direct General

PAYMENTS

Offering digital wallet, payments and transfer services but with a broad variety of approaches, including over mobile, internet or vouchers.

- Provided by technology firms: Google, WeChat, Apple, Samsung, Alibaba
- Provided by MNOs: M-Pesa, Orange, Money, Airtel Money
- Provided by cash networks: Zoona, Wari, Cash Service
- Remittance: BitPesa, Afrimarket, Transferwise

LENDING & INSURING

Offering only niche lending (consumer, leasing or business loans) or insurance products in an innovative and more efficient way than traditional banks or insurances

- Peer-to-peer lending: Lending Club, PaipaiDai
- Nano mobile loans: M-Shiwari, KCB M-Pesa
- Machine-to-machine leasing: M-Kopa, Mobisol, Upowa
- Big data insurance: Progressive (car), Climate corporation (farming)

FINANCIAL MANAGEMENT

Offering services to manage one's finances (such as aggregation of accounts, and comparison of financial offers), often building on these to cross-sell additional financial products.
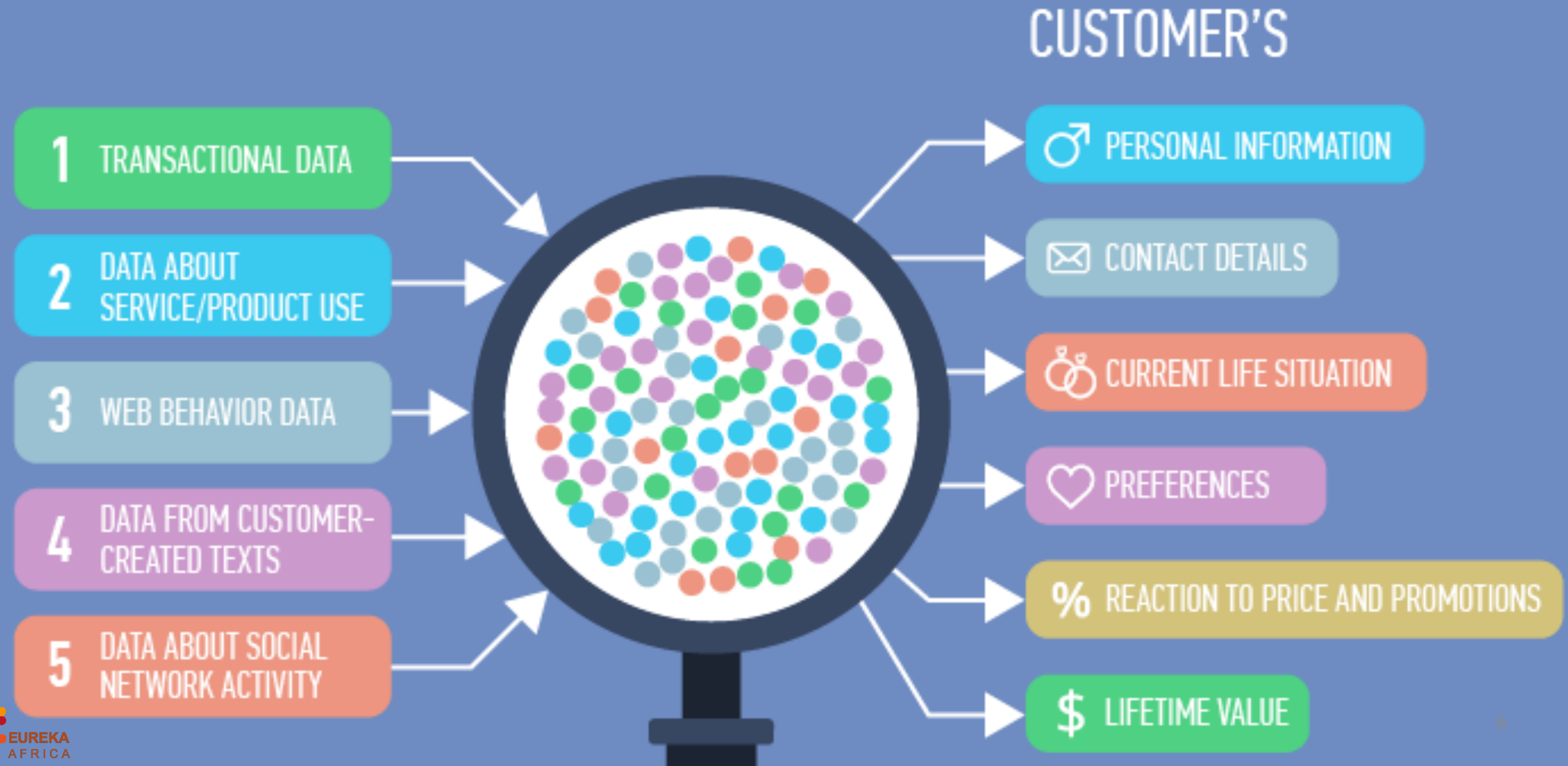
- Personal/SME Financial Management: Acom, Mint
- Price Comparison Services: Moneysupermarket, Loan/Insurance Comparison services

PURE TECHNOLOGY PROVIDERS

B2B players, Who offer innovative software and hardware solutions that help businesses provide financial services to end users.

- Payment processing: Square, Tagatitude
- Credit scoring: Experian, CashCredit
- Other pure technology providers: Vanso (mobile banking software), Cardabel, Sysnet (Reg Tech)

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Telco data is the key to create the digital customer profile & insights for superior MFS propositions

CUSTOMER'S

1 TRANSACTIONAL DATA

2 DATA ABOUT SERVICE/PRODUCT USE

3 WEB BEHAVIOR DATA

4 DATA FROM CUSTOMER-CREATED TEXTS

5 DATA ABOUT SOCIAL NETWORK ACTIVITY

♂ PERSONAL INFORMATION

✉ CONTACT DETAILS

CURRENT LIFE SITUATION

♡ PREFERENCES

% REACTION TO PRICE AND PROMOTIONS

$ LIFETIME VALUE

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Lead the disruption of Africa's financial services industry to redefine financial inclusion
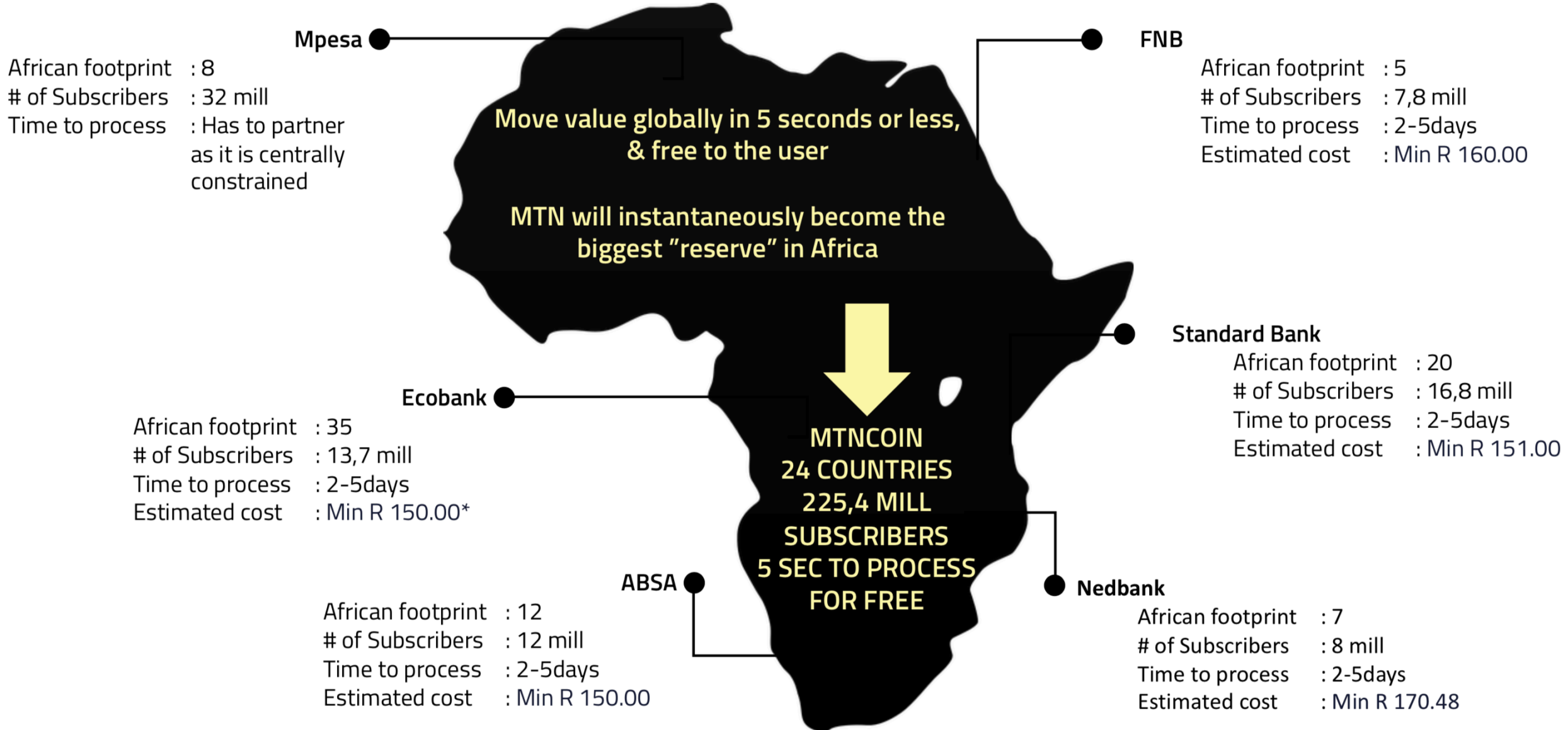
- **Solidify and expand MTN's position** as Africa's leading Communication Services Provider by staying at the forefront of Digital Transformation

- **Capitalise on the Global Fintech revolution** and lead the disruption of the traditional financial and insurance sector in Africa to protect current and create new revenue streams.

- **Establish MTN as Africa's dominant and universal Mobile Financial Services & Rewards Provider**, giving access to affordable and awesome financial products to all Africans.

- **Launch MTNCoin as universal digital settlement currency** for all financial use cases for all parties.

- **Create a pan-african open platform and ecosystem**; set the de-facto standards for trusted, direct, low-cost and instant financial transactions; bring together banks, insurances, Fintechs, Retailers and major Technology providers to drive interoperability and convergence.

- **Become the kingpin in Africa's next-generation digital financial value system** open for everybody.

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MTNCoin
Digital Currency

- Digital Currency established on Stellar blockchain protocol
- Purpose of being the **universal exchange currency** for all MFS use cases and financial providers within MTNCoin network
- **Highly stable, secure bridging currency** across Africa, supported by established MTN treasury functions and, importantly, by its data and airtime redemption assurance, which reduces the counterpart risk as holder of currency
- **High value-add currency** through inherent of fast, no-cost remittance, automatic loyalty program benefits, embedded e-commerce shopping advantages
- **Controlled by MTN** with an explicit utility to be usable within its network

What an MTN Digital Currency can enable

Mpesa

African footprint : 8
# of Subscribers : 32 mill
Time to process : Has to partner
as it is centrally
constrained

FNB

African footprint : 5
# of Subscribers : 7,8 mill
Time to process : 2-5days
Estimated cost : Min R 160.00

Move value globally in 5 seconds or less,
& free to the user

MTN will instantaneously become the
biggest "reserve" in Africa

Standard Bank

African footprint : 20
# of Subscribers : 16,8 mill
Time to process : 2-5days
Estimated cost : Min R 151.00

Ecobank

African footprint : 35
# of Subscribers : 13,7 mill
Time to process : 2-5days
Estimated cost : Min R 150.00*

MTNCOIN
24 COUNTRIES
225,4 MILL
SUBSCRIBERS
5 SEC TO PROCESS
FOR FREE

ABSA

African footprint : 12
# of Subscribers : 12 mill
Time to process : 2-5days
Estimated cost : Min R 150.00

Nedbank

African footprint : 7
# of Subscribers : 8 mill
Time to process : 2-5days
Estimated cost : Min R 170.48

**Why could the MTN coin not become the single settlement currency
across Africa, in all banks and mobile wallets?**

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MTNCoin as superior payment solution

	MTNCoin		MTN Money		M-pesa
Digital Wallet	✓	Universal Wallet	✓		✓
Digital Currency	✓		✗	Country dependent	✗ Country dependent
P2P Transfer	✓		✓		✓
Cross border enabled	✓		✗	Partner dependent	✗ Partner dependent
Remittance	✓		✗	Partner dependent	✗ Partner dependent
- Remittance processing time		2-5 sec		2-5 days	2-5 days
- Remittance costs		0		>10% of transfer	>10% of transfer
Micro Lending	✓	Personalised, calculated	✗		✗
Micro Insurance	✓	Personalised, calculated	✗		✗
Bank integration	✓	Xx banks, growing	✗		✗
Currency exchange enabled	✓		✗		✗
Adoptable by 3rd party apps	✓		✗		✗
Loyalty enabled	✓	Embedded (xx+ partners)	✗		✗
Digital Vouchering	✓		✗		✗
Digital Marketplace	✓		✗		✗
E-commerce benefits	✓	Embedded (PayLater, SafePay)	✗		✗

Through MTNCoin services *Through MTNCoin services*

MTN subs will be migrated onto MTNCoin
Top-Up balance will be also shown as MTNCoin
Immediate access to new MFS services

MTN Money services stay from user perspective
Process in background run through MTNCoin
Immediate access to new MFS services

M-pesa can choose to carry MTNCoin in wallet
Immediate access to new MFS services
Can be labelled M-pesa

Stellar as our best blockchain multi-currency transaction platform of choice

- Stellar is a platform that connects banks, payments systems, and people.

- Integrate to move money quickly, reliably, and at almost no cost. A common financial platform that is designed to be open and accessible to everyone.

- Allows for fast, cross-border transactions between any pair of currencies.

- Much faster and cheaper than bitcoin, for example, because of its unique consensus protocol.

- Stellar transactions are nearly free. This opens up use cases, like micropayments, that aren't feasible with other systems.

	Stellar	Bitcon	Ripple	Ethereum
Primary Function	Payments	Alternative Currency	Payments	Scripting & Programming
Governance	Non-Profit	Decentralised	Profit	Non-Profit
Transaction Speed	3-5 sec	Several mins	3-5 sec	14 sec
Scalability	1000+ trx/sec with 1 billion accounts	7 trx/sec	1500 trx/sec with ? accounts	25 trx/sec
Cost/Transaction	< 0.0001$	Ca 42$	0.0003$	> 0.76$
Accepts Multi-Assets	Yes	No	Yes	No
Energy Efficiency	Yes	No	Yes	No
Compliance Protocol	Yes	No	Messaging	No

Regulatory overview

As per the SARB's position paper:

"Digital representation or token of value that can be used for payments within a private community"

What is it:
- Instrument with the ability to be used for payment of goods and services;

- Instrument with the ability to be used as a store of value for investment

What is it not:
- It is not regarded as currency, legal tender or e-money in South Africa;

- It is not deemed as money, and thus not deposit taking

Because the **MTN Currency** will be a digital token of its own it is free to move globally across the entire **MTN global footprint** and be used by all of it's subscribers. Allowing it to be exchanged on the edges, within each respective country.

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MTN Universal MFS & Rewards Platform

Become the kingpin in the future digital payment ecosystem across Africa

Become Africa's trusted digital currency	Access to affordable, awesome financial services for all	Drive Blockchain and AI as disruptive forces	Leverage MTN assets	Drive Industry cooperation and convergence

Become Africa's trusted digital currency
- Launch own digital currency MTNCoin
- Become Africa's biggest "reserve" overnight
- Position as universal settlement currency for all financial use cases for all parties
- Enrich with value-added services for a superior payment experience
- Use as reserve currency for internal treasury management

Access to affordable, awesome financial services for all
- Disrupt the financial services market in Africa
- Provide instant, personalized, low-cost services for all and drive financial inclusion
- Move beyond P2P mobile payments, cover key sectors Remittance, Consumer & SME Lending, Micro-Insurance, Savings
- Create solutions with partners where needed

Drive Blockchain and AI as disruptive forces
- Leverage technologies better than anybody else
- Create an automated, self-learning environment
- Deploy AI to create the rich customer insights as basis for superior MFS offers
- Leverage Blockchain to create a trusted, secure, transaction platform, directly connecting all parties. Cut out all intermediaries
- Leverage Stellar for the fastest, cheapest transactions across all currencies and countries

Leverage MTN assets
- Build on MTN's high brand trust to offer financial products
- Leverage Africa footprint for continent-wide offers
- Build on the MTN Money experience
- Use massive agent network as cash in/out and goods collection points, also for partners
- Leverage direct customer access to push through new products
- Fully use breadth of internal data to create superior data insights
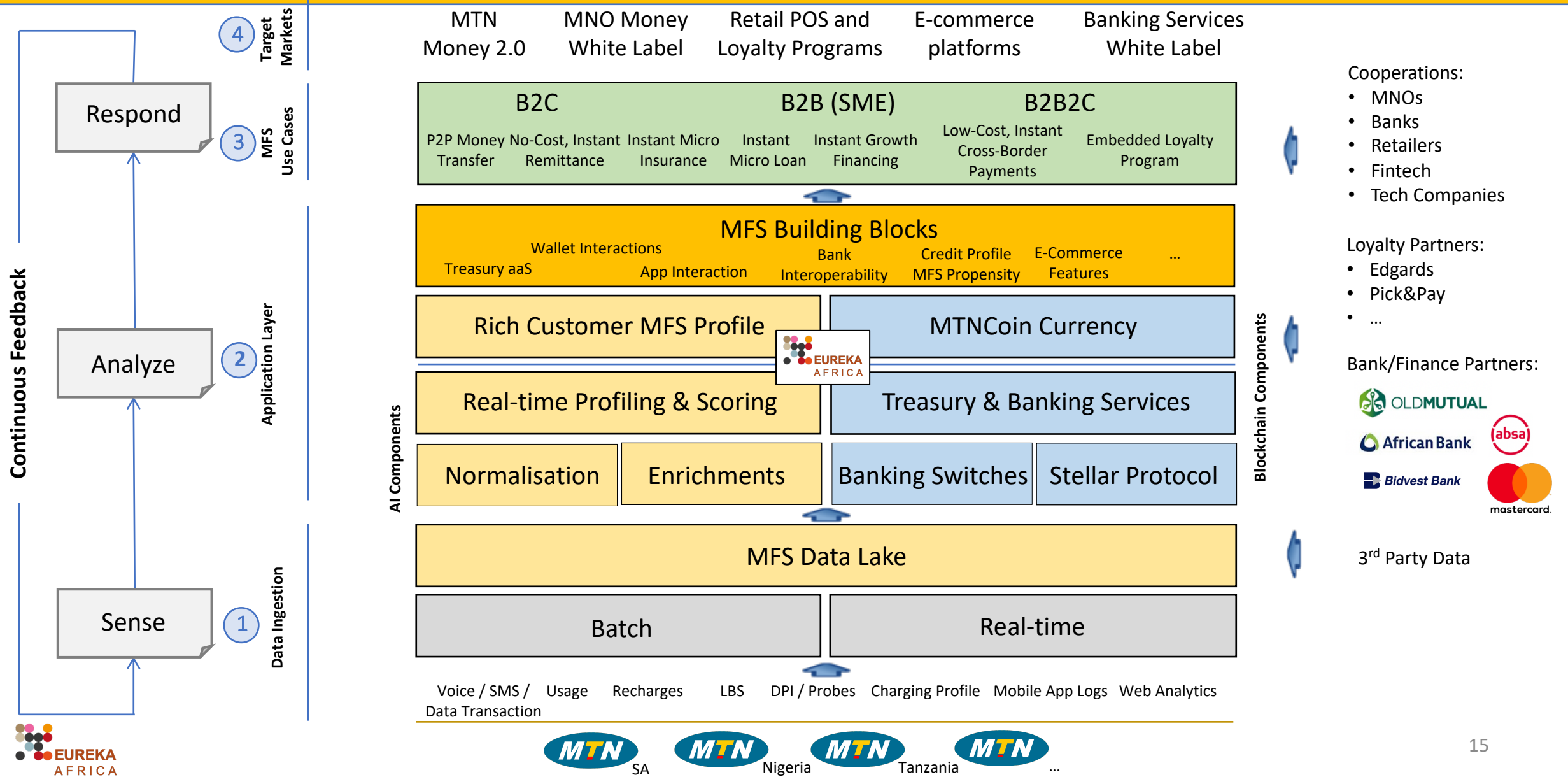
Drive Industry cooperation and convergence
- Drive convergence with banks by partnering where necessary
- Drive interoperability
- Drive ecosystem through platform open for Fintech startups, universities

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MTN Universal MFS Ecosystem Building Blocks

Full AI- and Blockchain-driven open digital stack to power high-impact MFS use cases, alone and through partners

BOT Digital Platform	Stellar Blockchain Currency & Treasury	AI Customer Analytics	Payment Building Blocks aaS	MFS Use Cases	Cooperations
▪ **Stand-alone Digital Stack** on top of MTN infrastructure ▪ **Build-Operate-Transfer Model**; Managed by partners for immediate ramp-up and capability transfer ▪ **Backend connect** via APIs ▪ **Real-time data ingest** of OSS/BSS/Network data ▪ **Full digital stack** with Data Lake, AI/Analytics Layer, Mobile Payment Engine, MFS Use Cases ▪ **APIs** for easy partner integration	▪ **Lauch own Digital Currency MTNCoin** ▪ **Use Stellar** protocol for fastest, lowest-cost transactions between any currencies across borders ▪ **Be the bridging currency** for African financial systems ▪ **Enable an efficient settlement currency** for all MFS use cases ▪ **Retain cash liquidity** and interest bearing reserves ▪ **Provide core services** to manage digital currency issuance, distribution, account management, wallet interactions	▪ **Deep AI layer** to deploy machine-learning algorithms ▪ **Dynamically create full 360 degree customer view** with 1000s of advanced attributes ▪ **Permanent and real-time customer profiling and scoring** as basis for key MFS use cases ▪ **Dynamic customer segmentation** for Next Best Action recommendation or MFS offers	▪ **Provide core features** for awesome MFS experiences ▪ **Used by internal and 3rd parties** ▪ **Blockchain Identify management** for secure, seamless user authentication ▪ **Customer Profiles** (Credit Scores, Product Propensity) for user selection and offer calculation ▪ **MTNCoin value adds** ("PayLater", "SafePay", MTN POS drop-off/pick-up) for superior shopping experience ▪ **MTNCoin Loyalty Program** across partners	▪ **Run portfolio of high-value, high-impact MFS propositions** ▪ **Beyond P2P money transfer,** cover all key financial services in Africa ▪ Remittance ▪ Alternative Credit Scoring & Lending ▪ SME Loans ▪ Agriculture Financing ▪ Micro-Insurances	▪ **Provide broad API set** for easy partner integration and foster MTNCoin adoption ▪ Actively engage with and manage key ecosystem partners ▪ **Manage industry relations** with key regulatory bodies, banking and financial institutions and Global Tech platform providers

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Open Digital Stack finetuned to empower awesome MFS propositions

Continuous Feedback

Respond	③
Analyze	②
Sense	①

- ④ Target Markets
- ③ MFS Use Cases
- Application Layer
- ②
- Data Ingestion
- ①

Target Markets: MTN Money 2.0 | MNO Money White Label | Retail POS and Loyalty Programs | E-commerce platforms | Banking Services White Label

MFS Use Cases

B2C	B2B (SME)	B2B2C
P2P Money Transfer / No-Cost, Instant Remittance / Instant Micro Insurance	Instant Micro Loan / Instant Growth Financing	Low-Cost, Instant Cross-Border Payments / Embedded Loyalty Program

MFS Building Blocks

Wallet Interactions — Treasury aaS — App Interaction — Bank Interoperability — Credit Profile — MFS Propensity — E-Commerce Features — …

AI Components / Blockchain Components

Rich Customer MFS Profile	MTNCoin Currency
Real-time Profiling & Scoring	Treasury & Banking Services
Normalisation / Enrichments	Banking Switches / Stellar Protocol

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MFS Data Lake

Batch	Real-time

Voice / SMS / Data Transaction — Usage — Recharges — LBS — DPI / Probes — Charging Profile — Mobile App Logs — Web Analytics

Cooperations:
- MNOs
- Banks
- Retailers
- Fintech
- Tech Companies

Loyalty Partners:
- Edgards
- Pick&Pay
- …

Bank/Finance Partners:
OLDMUTUAL, African Bank, absa, Bidvest Bank, mastercard

3rd Party Data

MTN SA — MTN Nigeria — MTN Tanzania — MTN …

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Enabling the MTN Currency through enterprise-ready solutions

A single point of integration to adopt an MTN digital currency;

Through which to manage the entire tokenized MTN ecosystem on the Stellar Blockchain

Integrated to the traditional banking system

Full Customer View with 1000+ attributes as basis for personalized MFS offers

- One analytical record for each customer

- Consolidation from multiple data sources

- Dynamically calculated and updated attributes

- Basis for all contextual, intelligent, real-time MFS decisioning

Products
- Subscription of add-on data pack
- Unsubscription from data pack in last 1 hour
- Subscription to roaming package
- >80% consumption of data pack
- Predicted exhaustion of data pack in next 6 hours
- Predicted forfeiture of voice pack MOUs
- Propensity to take up add-on data package
- Subscription VAS pack
- Active VAS pack
- Last VAS pack subscription
- …

Geo
- ARPU by Area
- ARPU by Home City and Plan Category
- Current or last known positioning
- List of top 10 locations
- Visited shops, cafes, restaurants
- Roaming frequency
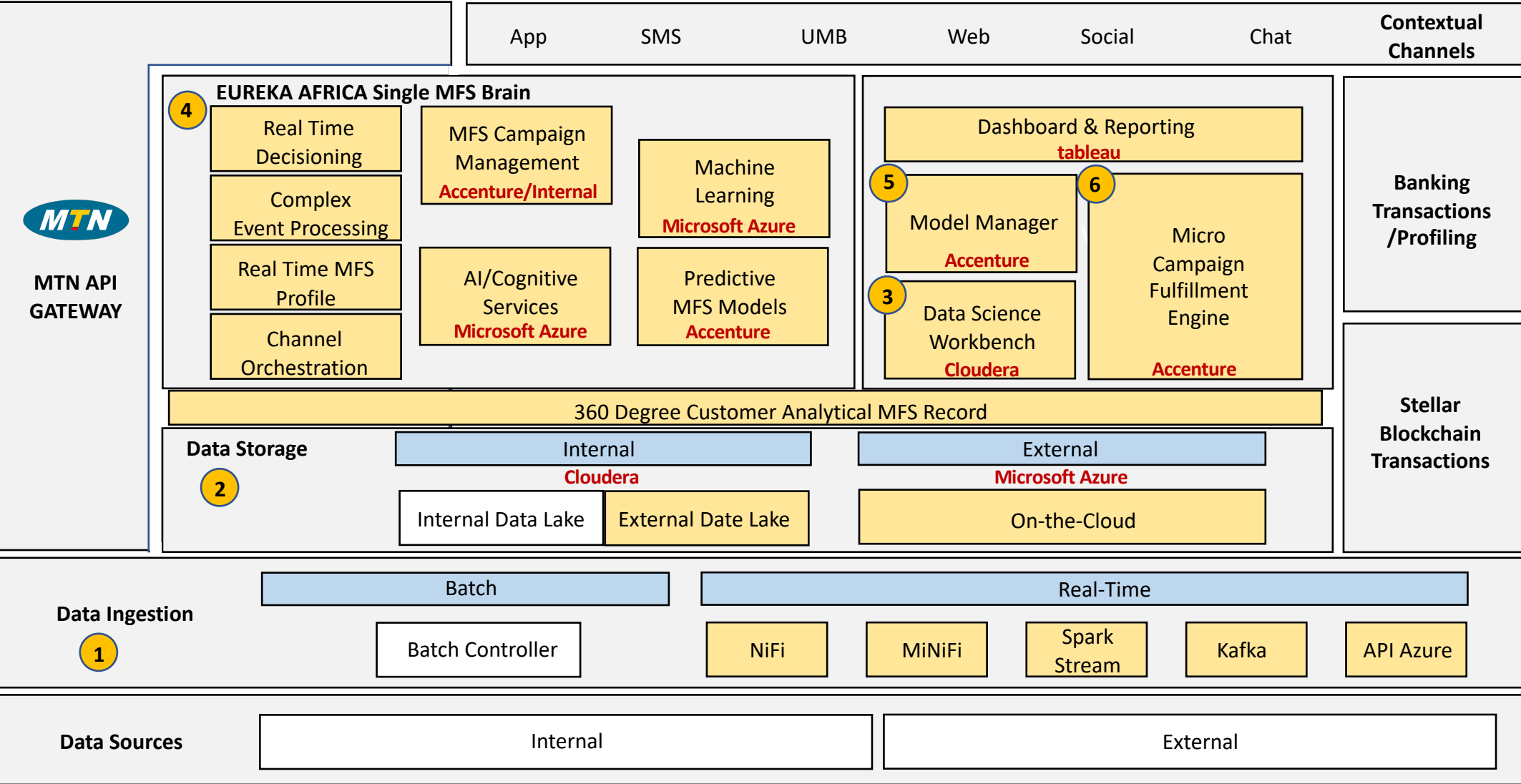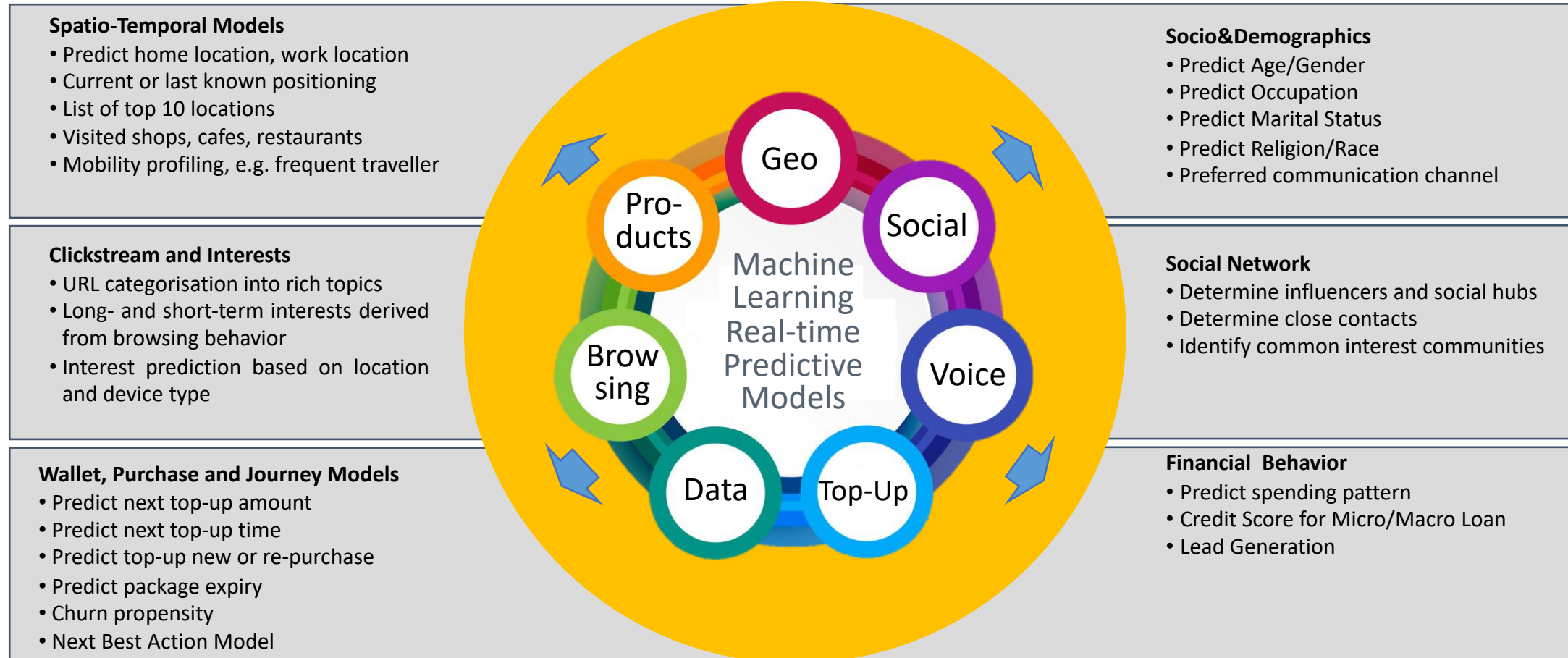- …

Social / Voice
- Last O/G call duration
- Total O/G MOU in last 1 hour
- Total amount on O/G calls in last week
- Decrease O/G calls > 20% in last 1 week
- Total O/G MOU in peak hours
- Incoming/Outgoing ratio
- Total spend on voice calls in last week
- No. of unsuccessful call attempts
- Social signature info (FB/Twitter/Instagram/LinkedIn a/c, email, LINE/BBM u/n, etc.)
- Usage of messengers
- …

Browsing
- Most visited website in last 24 hours
- Most time spent on any website in last week
- Favorite interest topic in last month
- Most used web browser in last 3 months
- List of top 10 used applications
- Use of social networks - preferences, frequency
- List of "black list" sites visited (casino, gambling, etc.)
- Mobile games
- …

Data
- Most recent data session
- Avg. no of sessions in last hour
- Total data usage volume in last week
- Change in data usage volume in last vs previous week
- Total spend on data PPU in last week
- Decline in data usage > 30%
- Access quantity (#session, vol., dur.; uplink, downlink)
- Access quality (latency, packet loss, throughput, network; sum/min./max./avg.)
- App/web domain in the last X periods (e.g X = 1/7/30/60/90 days;…)
- App/web category in the last X periods (e.g X = 1/7/14/30/60/90 days; …)

Top-Up
- Last Top-Up denomination
- No. of Top-Ups in last month
- Change in Top-Up frequency in last month
- Avg. Top-Up denomination over last 10 recharges
- Maximum recharge denomination
- No. of recharges > avg. recharge amount in last 6 months
- Top up channel preference
- …

Digital Customer DNA

Geo · Social · Voice · Top-Up · Data · Browsing · Products

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Telco-grade AI architecture to provide intelligent MFS solutions on top of existing MTN infrastructure

Schematics of MFS AI architecture for MTNCoin and differentiating capabilities, based on best of breed partner solutions (here: Accenture)
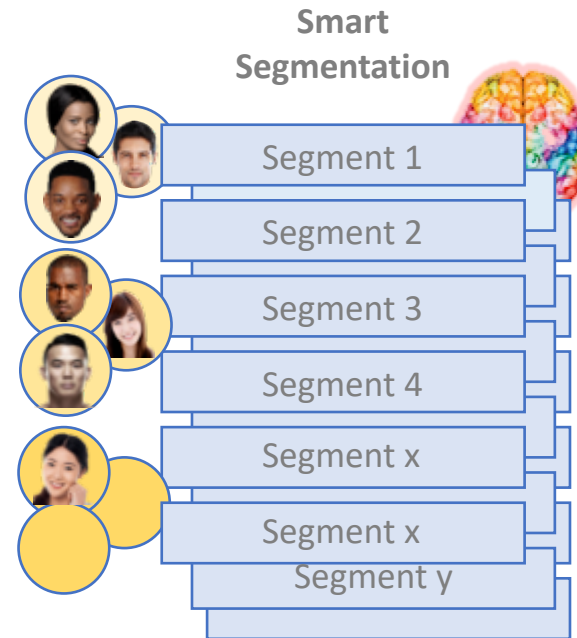
Contextual Channels

App   SMS   UMB   Web   Social   Chat

EUREKA AFRICA Single MFS Brain (4)

MTN API GATEWAY

- Real Time Decisioning
- Complex Event Processing
- Real Time MFS Profile
- Channel Orchestration

- MFS Campaign Management
  Accenture/Internal
- AI/Cognitive Services
  Microsoft Azure

- Machine Learning
  Microsoft Azure
- Predictive MFS Models
  Accenture

Dashboard & Reporting
tableau

- (5) Model Manager
  Accenture
- (3) Data Science Workbench
  Cloudera
- (6) Micro Campaign Fulfillment Engine
  Accenture

Banking Transactions /Profiling

Stellar Blockchain Transactions

360 Degree Customer Analytical MFS Record

Data Storage (2)

Internal	External
Cloudera	**Microsoft Azure**
Internal Data Lake / External Date Lake	On-the-Cloud

Data Ingestion (1)

Batch	Real-Time
Batch Controller	NiFi	MiNiFi	Spark Stream	Kafka	API Azure

Data Sources

Internal	External

Legend:
1. Real-time data ingestion architecture
2. Data storage expansion + attribute enrichment
3. Enabler for "Agile Data Science"
4. AI Powered Single Brain
5. Enabler for "Automation of Analytics Management"
6. Time to market Acceleration

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Advanced ML models calculate enriched attributes in real-time

Spatio-Temporal Models
- Predict home location, work location
- Current or last known positioning
- List of top 10 locations
- Visited shops, cafes, restaurants
- Mobility profiling, e.g. frequent traveller

Clickstream and Interests
- URL categorisation into rich topics
- Long- and short-term interests derived from browsing behavior
- Interest prediction based on location and device type

Wallet, Purchase and Journey Models
- Predict next top-up amount
- Predict next top-up time
- Predict top-up new or re-purchase
- Predict package expiry
- Churn propensity
- Next Best Action Model

Socio&Demographics
- Predict Age/Gender
- Predict Occupation
- Predict Marital Status
- Predict Religion/Race
- Preferred communication channel

Social Network
- Determine influencers and social hubs
- Determine close contacts
- Identify common interest communities

Financial Behavior
- Predict spending pattern
- Credit Score for Micro/Macro Loan
- Lead Generation

Machine Learning Real-time Predictive Models

Geo · Social · Voice · Top-Up · Data · Browsing · Products

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AI-driven advanced analytics and credit risk management platform for optimal real-time offer calculation

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Real-time Profiling & Credit Scoring

Digital Customer DNA

- Geo
- Social
- Voice
- Top-Up
- Data
- Browsing
- Products

- Eureka Africa leverages 2000+ advanced attributes as basis for credit score for micro product loan
- Time till run out of balance
- Call, SMS & Data usage pattern
- Financial profile
- Top-up frequency
- Churn propensity
- Sociodemograhics

Smart Segmentation

- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment x
- Segment x
- Segment y

- Eureka Afrika powers AI clustering of customers with similar score, usage behavior and other attributes
- Up to 1.200 parallel segments
- Dynamically being adjusted

Customized best loan

- 10$ credit
- 40$ credit
- 125$ credit
- 2 MB credit
- 4 MB credit
- y MB credit
- y MB credit

- Immediately available
- Paid with next top-ups
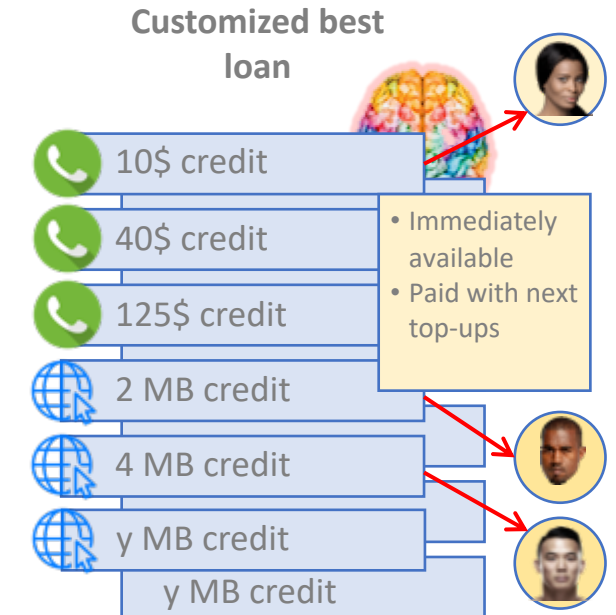
- Eureka Afrika computes AI customised micro product loan for each customer
- Best mix of cash, data/airtime for each customer to optimally balance response rate, amount, credit risk
- Transparent, fair, clear product pricing
- If accepted, product is immediately activated and credited to customer
- Customer simply resumes their usage, consuming the credited product value

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- Our mission is to digitalize Africa's economies

- Strategic Partnership between Doshex (Blockchain Services), DirectTransact (Banking Services), Summore (Loyalty & Distribution Services), IBM/Accenture* (Big Data & AI Services) as single point of contact for MTN Group

Services:

- Strategy development (supporting MTN Head of Digital Services)

- Digital Platform creation and management

- MTNCoin Digital Currency and Treasury management on Stellar

- Traditional banking & switching services

- Loyalty program mechanics, distribution and management

- Loyalty program partner agreements and expansion (Edgars, Engen, Huawei etc)

- Blockchain Building Blocks Development and APIs for key MFS use cases

- 3rd party partner selection and management

- AI Platform management incl. Data ingestion, ML library, advanced analytics, customer profiling and scoring

Agreements:

- MTN SA Airtime Distribution and Loyalty Program Agreement

- MTN Group Digital Currency Agreement

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*Ultimate partner selection to be adjusted to MTN needs

Be the next generation of **Global Bankers** & an early innovator in the **$ 601 Billion Mobile Payments industry**

Expand your **reach into other sectors** by enabling a digital currency that holds value beyond MTN's products

Build **sustainable and loyal** relationships directly with your customers

Increased ARPU by enabling value and goods exchange directly with your customers in your own currency.

Achieve **financial inclusion** in a way that no traditional financial product has been able to

Reward customers with a digital assets that is more powerful than any loyalty programme

Enable a financial value system that anyone can rely on and build market share by **enhancing customer value**

Move value, globally, as easy as data over the internet

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Thank You

Let's together build Africa's next-generation financial ecosystem.

Addendum

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Blockchain 101

- Tremendous impact on many industries and companies, with potentially large effects on the national economy

- Most important function is to build trust in facilitating transactions and interactions

- New trust model, away from traditional centralized approach, through distributed ledger technologies that does not rely on 3rd party intermediaries such as banks, associations, clearing houses (encryption, consensus protocol, decentralized storage, smart contracts)

- Blockchain establishes a shared, immutable record of transactions within a network. Each digital transaction is agreed by consensus and transaction is time-stamped, becoming a block in a chain of blocks. In this way, a blockchain represents a true, accurate and trusted record of each transaction being made.

- Does not allow data to be altered or deleted, hence making fraud very difficult and ensures authenticity and integrity of any data.

- Smart contracts allow automated authentication and self-execution of contract clauses to create a credible transactions without 3rd parties., radically increasing speed, transparency, control and trust.

- Initially focusing on cryptocurrency applications, Blockchain moves to cover entire financial services industry, education, logistics, retail, agriculture and telecom, government services.

- Gartner forecasts that the global business value-add of blockchain will grow to 176bn$ in 2025 and 3tr$ by 2030

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Stellar 101

- Stellar is an open-source, decentralized payment protocol that allows for fast, cross-border transactions between any pair of currencies.

- Like other cryptocurrencies, it operates using blockchain technology. Its native asset, a digital currency, is called *lumen* (XLM). XLM powers the Stellar network and all of its operations, similarly to how ether (ETH) powers the Ethereum network. Anyone can issue assets, settle payments, and trade.

- Stellar is much faster and cheaper than bitcoin, for example, because of its unique consensus protocoll. And it uses far less electricity.

- Stellar is a network of peers. It lets any user talk (transact) with any other user. So, for example, banks can work directly with one another, rather than "corresponding" through middlemen.

- Stellar is ownerless and belongs to everyone. No one organization controls the network, so no one can shut it off, monopolize its functionality, or hoard its data.

- Stellar is a global, rather than a national, payment system. It handles any asset. Unlike many distributed systems, Stellar is currency agnostic. In fact, Stellar's most important feature is that tethering a token to a traditional asset like a dollar is easy. So Stellar can support all the currencies that the world cares about, not just crypto.

- Stellar is cheap. In fact, transactions are nearly free. Low fees mean more benefit for Stellar's users. And Stellar's low cost opens up use cases, like micropayments, that aren't feasible with other systems.

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Stellar Overview

Transaction confirmation time	2,5 – 5 seconds
Transactions per second	3000+ tps
Consensus Mechanism	Stellar Consensus Protocol

Use cases that Stellar was built for

Micropayments: Small transfers should not incur big fees, Stellar makes small transactions easier and cheaper by removing intermediaries and centralized cost structures that drive up transfer costs.

Low Cost Remittances: Use the Stellar network to send money quickly and for a fraction of a cent!

Mobile Money: In many countries, different telecom companies do not maintain any kind of interoperability between themselves. Meaning that you can transfer money to someone on the same network as you, but not to a user of a different network. Stellar bridges this gap by creating a interoperable mobile money platform that allows people to send money to those using different providers.

Currency Exchange: Use Stellar to exchange coins and fiat even when no trading pair exists. Stellar's native cryptocurrency, the Lumen, will act as a bridge between cryptos and even fiat when there is no pair to get the currency you have into the currency you want.

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Key blockchain use cases in Telecom

	Potential use cases	Description	Key Benefits		
			Cost reduction	Efficiency improvement	Fraud Mitigation
OPERATIONAL ENABLEMENT	**Supply chain management**	• Automated smart contracts for business partners in supply chain, inventory management etc.	• Elimination of intermediaries • Better experience for all parties	• Simple record keeping across lifecycle • Faster settlement with vendors/ suppliers	• Safe exchange of value
INDUSTRY ENABLEMENT	**Roaming**	• Automated roaming transactions using smart contracts	• Reduction in backhaul bandwidth • Elimination of clearing houses	• Higher throughput or roaming calls (reduction of traffic routed through the home network operator)	• Reduction of roaming fraud loss
	Mobile Number Portability	• Standard decentralized ledger for data & routing access across operators	• Single store of data • Centralised database management	• Instantaneous porting • Seamless user experience without disruption	• Elevated transparency & security
	Inter-carrier settlement	• Automated call termination settlement using smart contracts • Automated verification & settlement	• Labour cost reduction for verification & settlements	• Realtime settlement	
SERVICE INNOVATION	**Identity Management**	• Management of customer's personal information using Decentralized Identifiers (DiDs) to be offered as-a-service to the customer and business partners	• Reduced cost of ID verification	• Easy implementation of ID management systems • Single ID storage for customers	• Increased security & protection against fraud
	Loyalty Programs	• Unified single loyalty program interconnected with business partners	• Convenient single loyalty program • Simple settlement process	• Fast & secure earning & redemption • Larger pool of redemption options	• Churn reduction as VAS increases customer stickiness
	Micro-payments	• Common currency for digital transactions • B2B Payments-as-a-Service • Micropayment storage for bulk settlement	• Cheaper international remittances	• Faster & convenient transfers • Universal wallet enablement	• Secure payments with ID verification
	IoT device ID	• Use of distributed ledger to allow identification and activities of IoT devices			• Higher security enabled by instantaneous and orchestrated recognition of connected devices
	Online Advertising	• Digital advertising marketplace enablement, where customers control degree of information shared.	• Data acquiring cost eliminated • Ad KPIs automatically captured	• Data conveniently stored on ledger • Increased targeting precision for advertisers	• Enhanced data & privacy protection

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