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Blockchain as driver for digitization

Basel, 30.04.2018

Blockchain Maturity

Security & Privacy	Open source standard.	Double blind: blinding between participants Central repository of transactions Central identity broker Obfuscation protocols on top of open standard to achieve privacy	Triple blind: Central blind identity broker No private data leaves country No transaction data stored centrally Fully dark protocol; no noisy, or malicious state power can get acces
Audit & Compliance	Full transparency out of the box Full secrecy out of the box	Specific audit reporting to provide XBRL type reporting. Specific functionality to comply with topical regulation (GDPR; EU161)	Platform business KPIs in a blind world (how do we bill) solved Throughput interrogation and analytics solved
Adoption	If we build it, they will come	Community consortium of industry leaders Node Strategy with separate channels Community out reach efffective Consensus withstands challenge	Brand neutral joint venture Incentivized adoption Tumbling Separate settlement layer Interopperability

Commodities Trade

Industry Segments		Live Production Use Cases	Tools
1: Trading	“When the technology becomes available, you have to embrace it.” Nader Naeimi, AMP Capital Investors	**A** **January 19, 2017** Mercuria introduces blockchain to oil trade with ING, SocGen	Digital Asset Holdings technology
		B **November 6, 2017** BP, Shell lead plan for blockchain-based platform for energy trading	Hyperledger
	"The use of this technology will permit fintechs and other financial actors to offer new solutions for exchanging securities, solutions that are faster, cheaper, more transparent and more secure," Finance Minister Bruno Le Maire	**C** **November 17, 2017** Over 20 Banks Join Singapore-Hong Kong Blockchain Trade Network	Undisclosed
		D **December 7, 2017** ASX Ltd. will start using blockchain -- to process equity transactions.	To be determined
		E **December 8, 2017** France to allow blockchain for trading unlisted securities	To be determined

Trade Finance

Industry Segments		Live Production Use Cases		Tools
1: Logistics	“ By using this blockchain-enabled platform, clients are able to benefit from the extended ecosystem that trade finance brings, but with a reduction in friction and cost and an improvement in speed and transparency.” Marilyn Blattner-Hoyle AIG’s head of supply chain and trade finance	A	**September, 2016** Barclays and Wave become first to execute global trade using blockchain technology.	Wave
2: Insurance		B	**October 04, 2017** New collaboration on trade finance platform built on blockchain Batavia, CaixaBank, Commerzbank and Erste Group	Hyperledger
3: Financing		C	**October 06, 2017** AIG partners with TradeIX, Standard Chartered for blockchain-enabled trade finance transaction	Not disclosed
		D	**October 18, 2017** CGI integrates blockchain with conventional trade finance platform Bank of Montreal, Royal Bank of Canada and MUFG	Not disclosed
		E	**October 25, 2017** Hong Kong, Singapore to link up trade finance blockchain platforms	Bespoke Ledger

Provenance

Industry Segments		Live Production Use Cases		Tools
1: Logistics	"It was painfully obvious to me that the blockchain could be used to track objects, and of course one of the largest pain points that runs through the supply chain is provenance," Everledger CEO Leanne Kemp	A	**August 1, 2015** Everledger Brings Blockchain Tech to Fight Against Diamond Theft	Hyperledger
		B	**December 4, 2017** De Beers to invest in blockchain-based diamond platform	Hyperledger
		C	**August 22, 2017** IBM Forges Blockchain Collaboration With Nestlé & Walmart In Global Food Safety	Hyperledger
		D	**September 8, 2017** Blockchain at Walmart: Tracking Food from Farm to Fork	Hyperledger

Identity

Industry Segments		Live Production Use Cases		Tools
1: Logistics	"This is transformational for identity. It makes it easier for me to prove it's me and harder for the 'bad guy' to masquerade as me.“ Greg Wolfond, CEO of SecureKey	A	**May 4, 2017** U.S. credit agencies test Canadian blockchain identity network	Hyperledger
		B	**October 11, 2017** IBM, Hyperledger Join Blockchain Identity Consortium	Hyperledger
		C	**October 11, 2017** National Bank of Canada joins SecureKey digital identity network	Hyperledger
		D	**November 15, 2017** SecureKey Taps IBM Blockchain for Digital Identity System Launch	Hyperledger

Banking Services

Industry Segments		Live Production Use Cases		Tools
1: Remittance	"To send a £1000 through the Barclay's to a non-EEA country, the total will be £1040 + receiver fee, plus £20 they charge for tracking. Plus anadditional £7 fee for paperwork. A trans-Atlantic transaction took almost a week and required the receiver to visit the bank branch to prove his identity. The same payment in BTC with Cryptopay results in 0.0005 BTC (£0.89) fee and would be delivered in an hour or three."	A	**November 23, 2016** Over 100 Migrant Workers Test Blockchain Remittance in Thailand	EVEREX / CryptoCash
		B	**May 25, 2017** Everex Announces Mobile Blockchain-Powered Microfinance and Fiat Transfer Platform	Hyperledger
		C	**July 31 2017** SBI Reveals Joint Blockchain Remittance Venture With South Korean Startup	Coinplug
		D	**August 30, 2017** UAE Remittance Giant Taps Ripple Blockchain for Instant International Payments	Ripple

Deep Dive – Counterfeit Pharmaceuticals

Dying people per year in Africa

120,000

Counterfeit drug market annually

$200 billion

Most counterfeit drugs manufactured

India or China

Internet sales of counterfeit drugs

$75 billion

Counterfeit drugs in some countries

up to 50%

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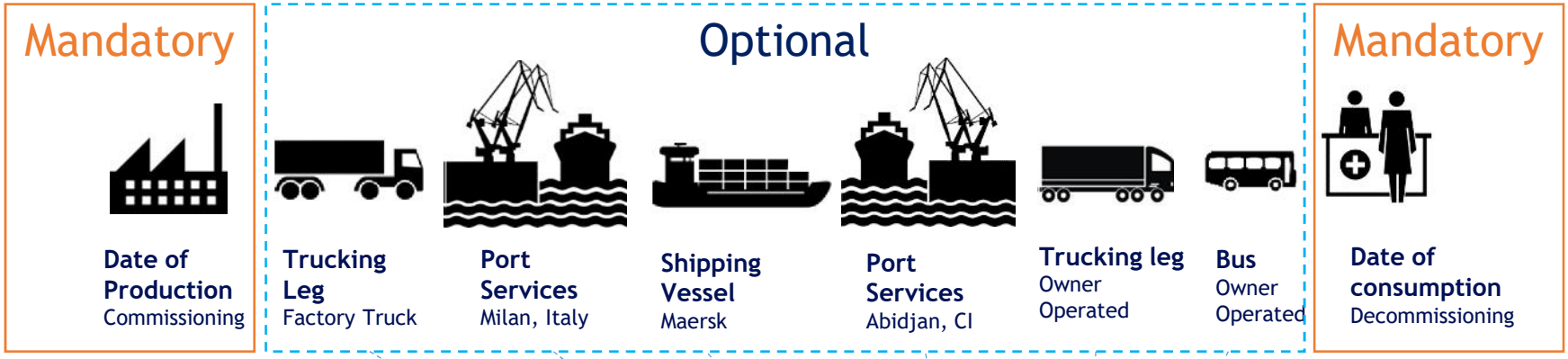
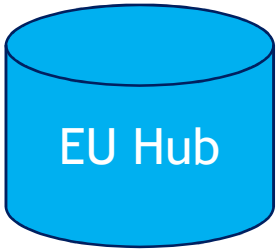
Pharma Serialization, EMVO – Counterfeit Pharmaceuticals



Commissioning
equires Authentication



Verification &
Decommissioning
Requires Authenticatio

No blockchain, no distributed ledger

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Why Blockchain – Counterfeit Pharmaceuticals

Three Key Advantages of Distributed Architecture for Serialization

Immutable Trust

Proof of identity, and business identity, as well as the ability to quickly add new members to the supply chain would not be possible with legacy architecture

Legacy architecture for the same build becomes cost prohibitive due to security and authorizations

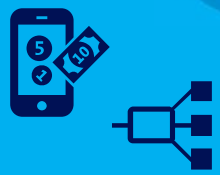
Tracking & Feedback

The smart contract execution allows for a full visibility at every stage of the product supply chain

Increases trust and differentiates the manufacturer

Incentivizing desired behaviour

The smart contract execution and crypto currency aspects of the blockchain can be used to steer behaviours through loyalty



Incentivizing the adoption of the membership in clear fungible currency.

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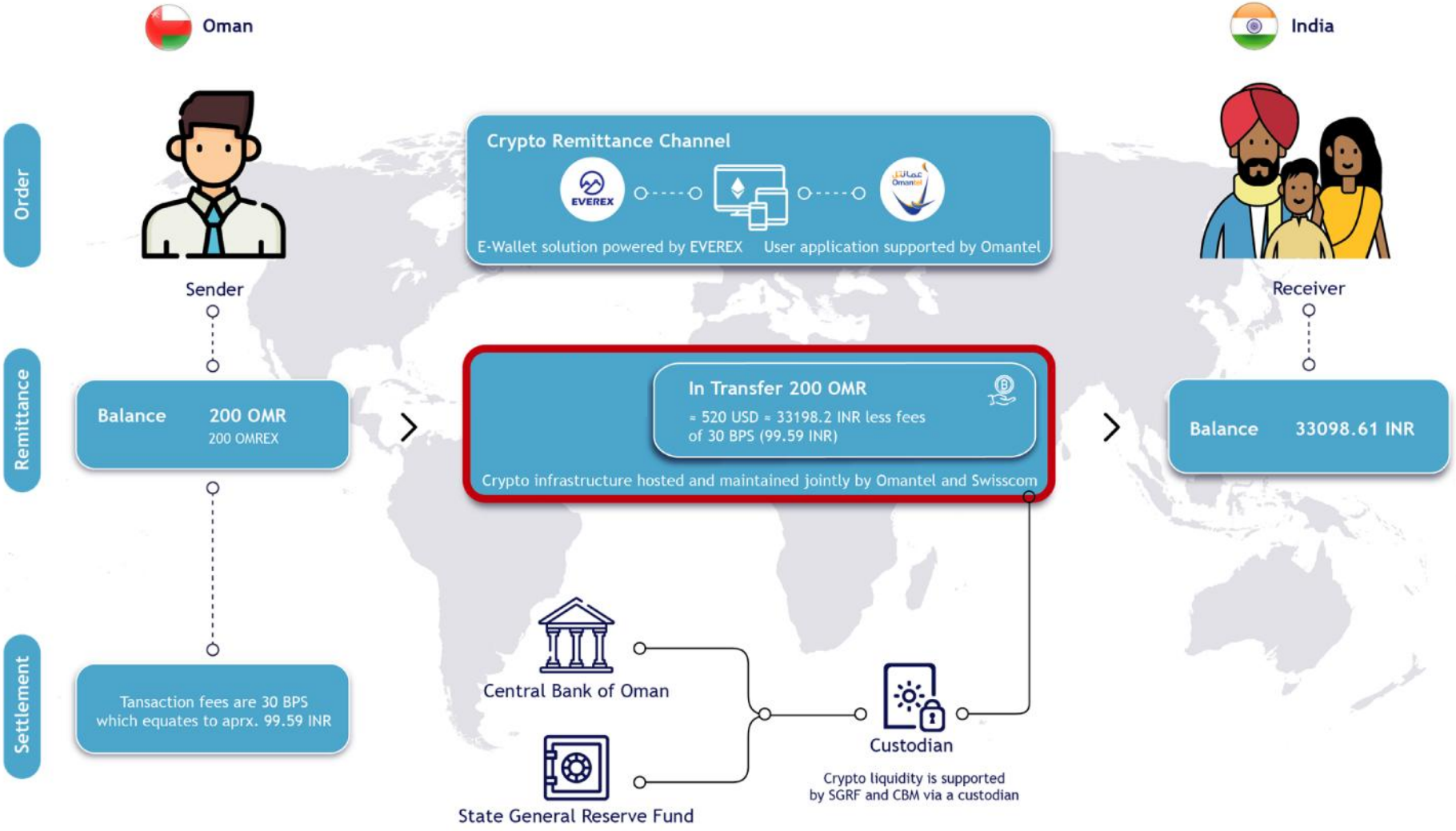
Deep Dive – Currency Remittance