

# Distributed Ledger Technology (DLT) beyond blockchain

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Blockchain DLT  
Summit Latam

# Takeaways for Today's Session

1

Blockchain & DLT Basics

2

Blockchain Applicability: Industry & Patterns

3

Microsoft Strategy Overview

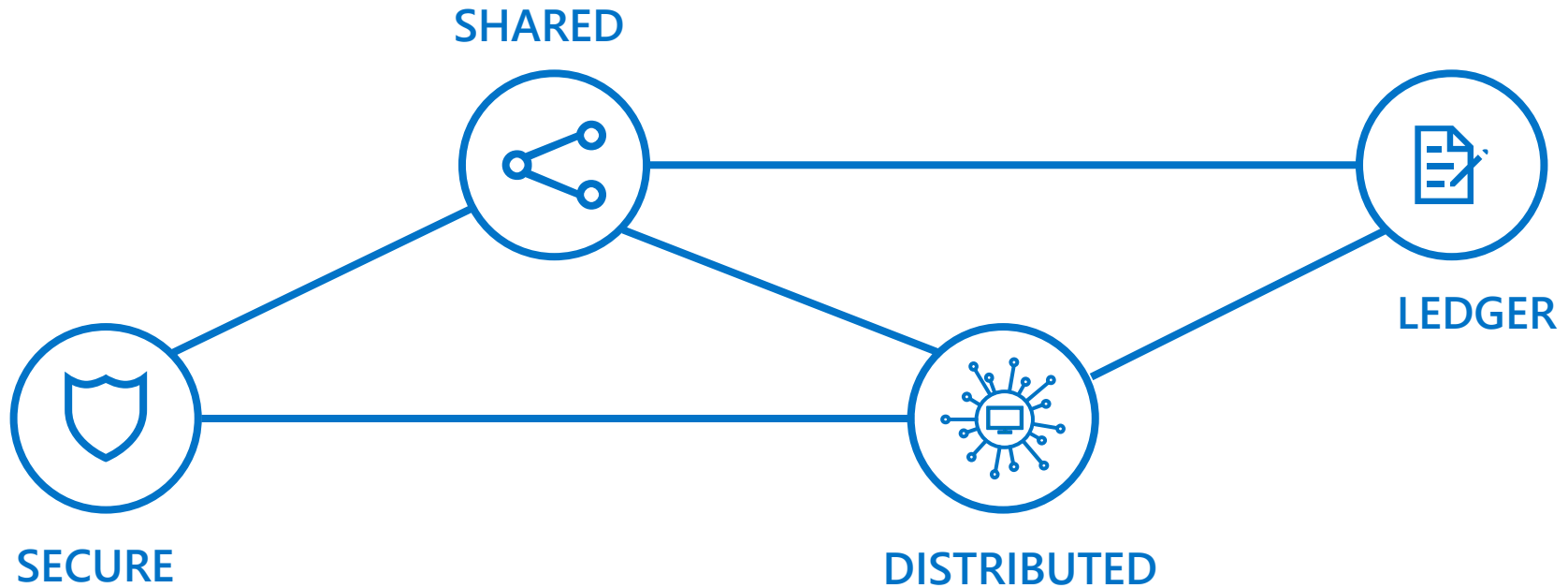
# Imagine if...

- You could **verify** the origin and location of materials and products in real-time, on demand, and anywhere
- You could fulfill and settle international digital value transfers in **near real time** while reducing operational costs and fraudulent transactions
- You had a **trusted immutable record** of asset ownership and transaction history
- Your **contracts are capable to self-recognize** the fulfilment of conditions, and automatically transfer assets at the agreed times with full **transparency**
- And much more...

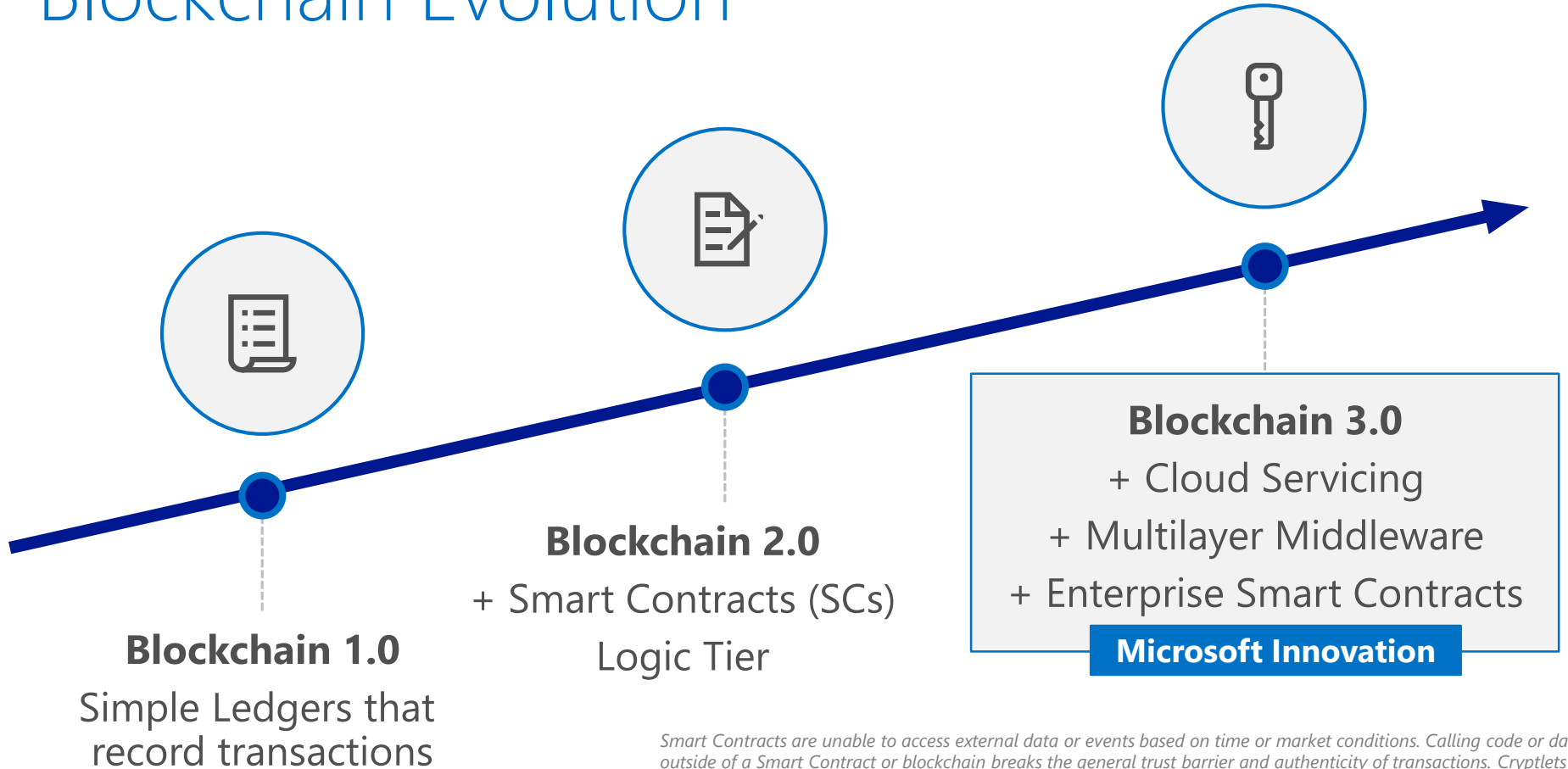


# Blockchain capabilities

A disruptive technology trend that enables a shared, authentic, decentralized ledger



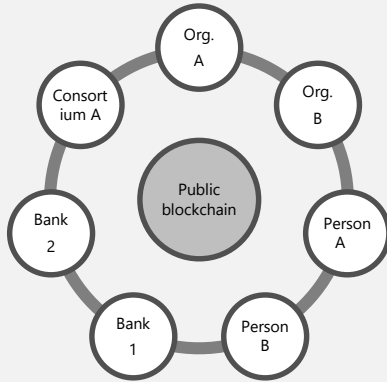
# Blockchain Evolution



*Smart Contracts are unable to access external data or events based on time or market conditions. Calling code or data outside of a Smart Contract or blockchain breaks the general trust barrier and authenticity of transactions. Cryptlets will allow the blockchain to access external data securely, while maintaining the integrity of the blockchain.*

# Blockchain Network Types

## Public Blockchain



Many, unknown participants

Anonymous or pseudonymous

Open read and write by all participants

Consensus by Proof of Work

## Enterprise Blockchain

### Private



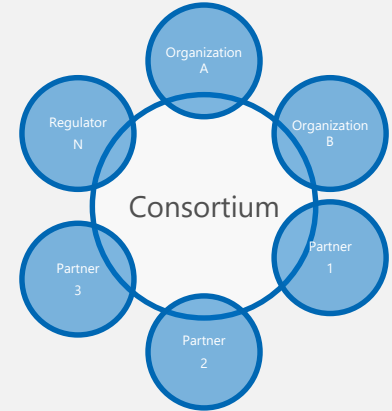
Approved participants

Users with known identities

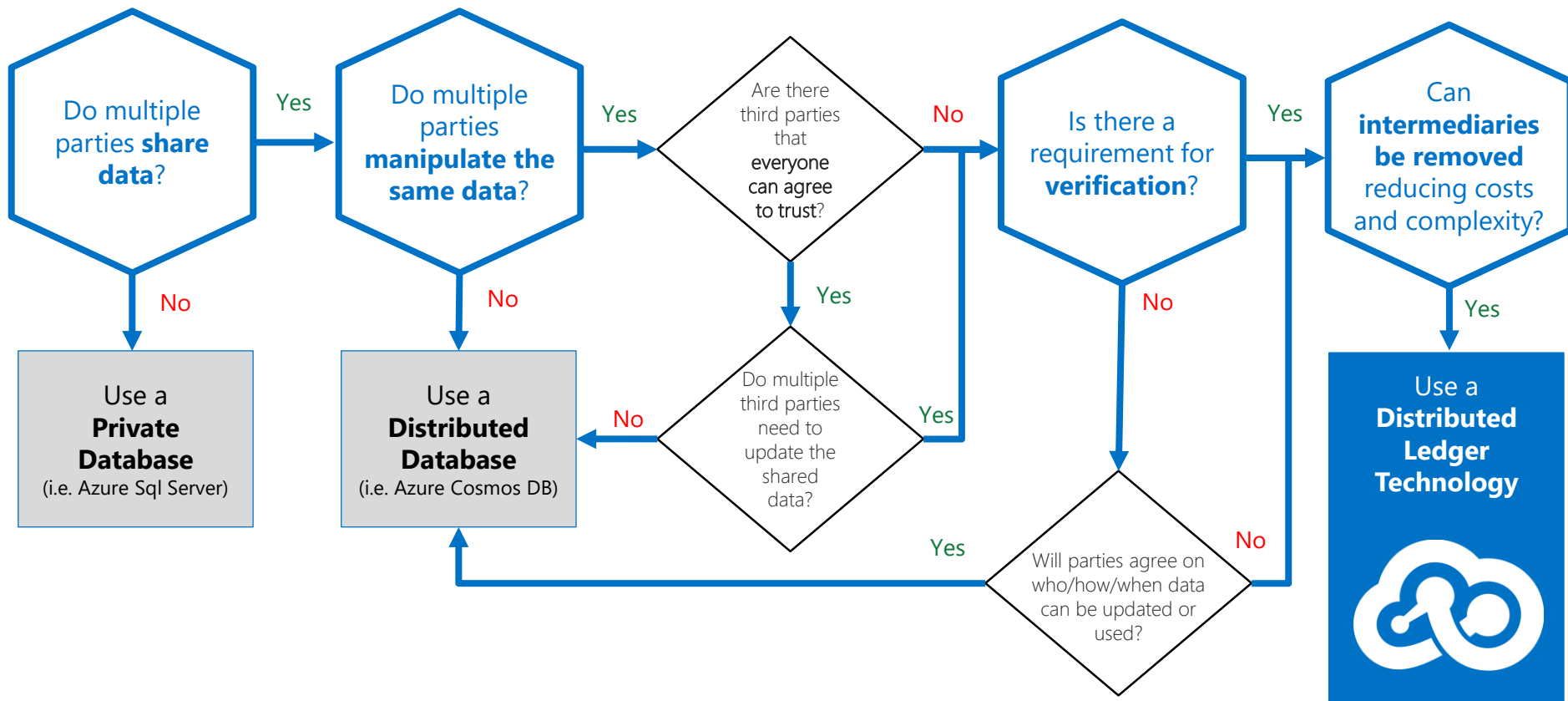
Permission is required to write, read and participate in confirming transactions

Multiple algorithms for consensus

### Consortium



# When to use blockchain?



# Blockchain and **Distributed Ledger Technologies (DLTs)**



# Blockchains and DLTs



slock.it



**HYPERLEDGER**



**ETHEREUM**



# Blockchain Scenarios for all Industries

## Industries

### Manufacturing



- Asset tracking
- Real time auction for supplier contracts
- Supply chain transparency

### Retail



- Loyalty tracking
- Product provenance
- Logistics management
- Product Pedigree

### Insurance



- Claims Management
- MBS / Property Payments
- On-demand / usage based insurance
- Fraud detection
- Automated underwriting

### Banking and Capital Markets



- Bond Issuance
- Trade Finance
- Loan Syndication
- Post Trade Settlement
- Cross Border Payments
- Derivatives Trading
- Know Your Customer

### Government



- Licensing and ID
- Land Registration
- Benefits distribution
- Voting
- Aid tracking
- Military security

### Health



- Personalized medicine
- Records sharing
- Compliance

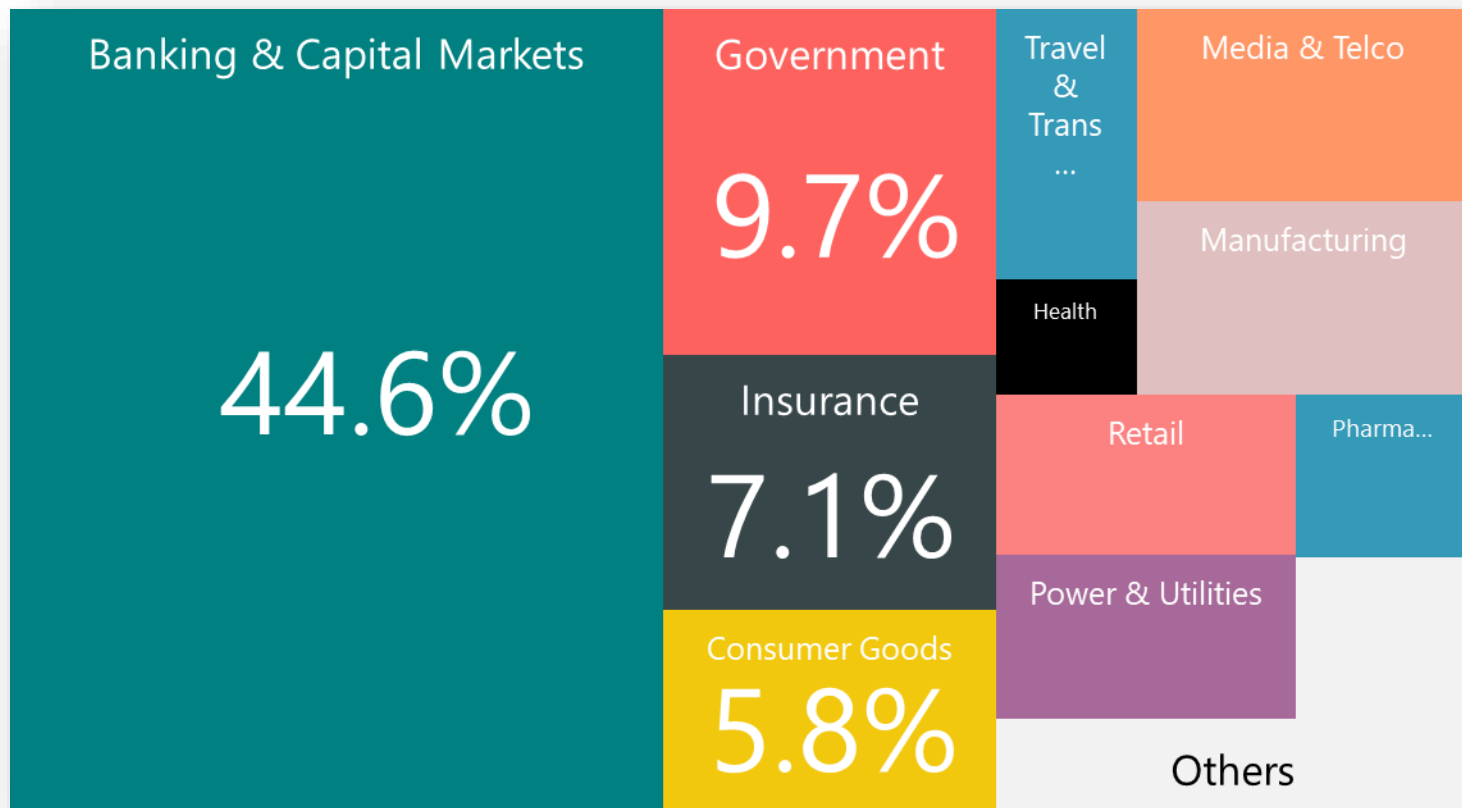
## Patterns

Digital Asset Transfer

Cross-Organizational Workflow

High Assurance Audit or Reconciliation

And, it's also reflected in our engagement data



# Blockchain Business Patterns



TRADE  
FINANCE



KNOW  
YOUR CUSTOMER



DIGITAL  
ASSET TRANSFER



SUPPLY CHAIN  
COLLABORATION



SUPPLY CHAIN  
FINANCING



GLOBAL  
PAYMENTS



REFRIGERATED  
TRANSPORTATION



FOOD  
PROVENANCE

# Groupe Renault | First Digital Car Maintenance Book



AUTHORIZED  
REPAIR SHOP



CAR OWNER



CAR BUYER



**RENAULT**

"This digital car maintenance book will enable us to provide our customers with new services in an ecosystem alongside insurers and dealers. Blockchain technology is able to create a reliable trust protocol"

"Beyond this project, this technology will be a major step forward for connected vehicles and the micro-transactions and security requirements associated with them"

— Elie Elbaz, Digital & Connected Vehicles Director for Groupe Renault



# Webjet | Reduce Booking Errors

## Challenge

- Webjet handles thousands of hotel bookings every day that pass through multiple operators. The high volume of transactions and number of parties involved in each transaction can lead to discrepancies.
- Booking errors negatively affect customers' experiences and undermine trust between Webjet and its partners, and can also have serious financial consequences.

## Strategy

- Webjet and Microsoft developed a first-of-a-kind blockchain solution.
- The solution creates secure, independent transaction records that all parties can see. Known as 'Smart Contracts', they streamlining the booking and payment process, and reducing errors.

## Results

- The use of blockchain removes the risk of data inaccuracy, boosts security and efficiency, and enhances trust and accountability between Webjet and its partners.
- The solution gives Webjet a competitive edge and could set a new industry standard.
- Webjet has an exciting opportunity to grow by facilitating transactions across the travel industry and selling its solution into other sectors.



"Microsoft's ongoing investments in building the industry's most trusted cloud platform around the principles of security, privacy and control, compliance and transparency, along with its deep heritage in guiding businesses, including Webjet, through periods of significant IT transformation made the decision to go on this journey with Microsoft a no-brainer."

— John Gusic, Managing Director, Webjet

# Maersk | Secure and Streamline Marine Insurance

## Challenge

- Duplication, inefficiency, lack of transparency, lack of data, fraud, and errors across lots of parties interacting in marine insurance
- Change is hard due to multiple regulators and jurisdictions
- Rates are under pressure and costs are becoming unmanageable
- Compliance is challenging

## Strategy

- EY, Maersk, Guardtime, and Microsoft developed a real-time blockchain enabled platform for marine insurance
- The solution streamlines claims and settlement processes, while reducing errors.

## Results

- Real-time visibility into the location, condition and safety of high-value assets moving around the world
- Accurate, dynamic and fair underwriting and pricing based on that visibility
- Streamlined regulatory reporting and compliance
- Accurate and transparent data sharing among all relevant stakeholders with audit trail
- Capital freed from poor credit system

"It is a priority for us to leverage technology to streamline and automate our interaction with the insurance market. Insurance transactions are currently far too tedious and frictional. The distance between risk and capital is simply too far."

— Lars Henneberg, VP, Head of Risk and Insurance of A.P. Moller-Maersk

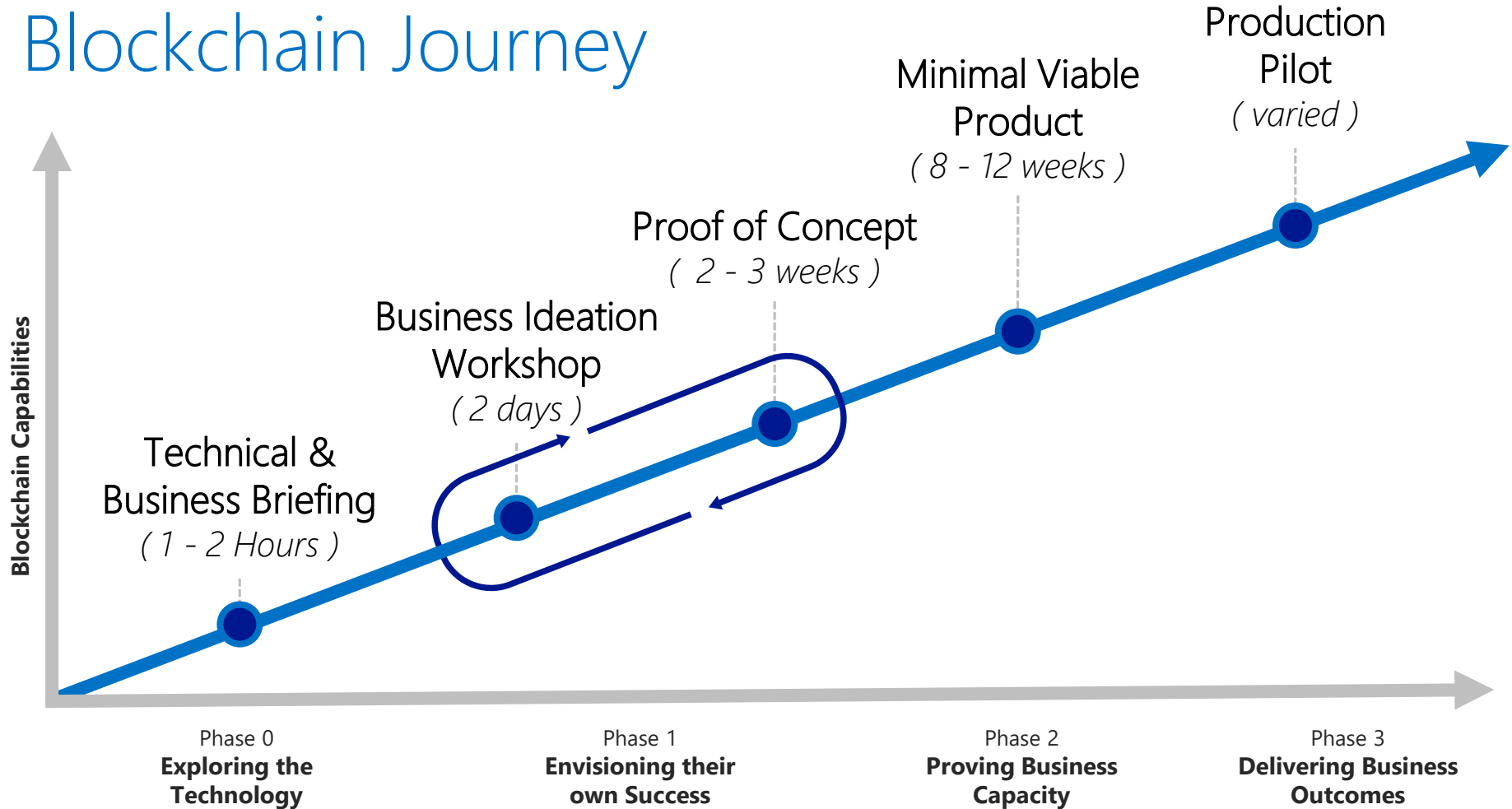


**MAERSK**

Where do I **begin**?



# Blockchain Journey



# Blockchain with Microsoft

# Blockchain with Microsoft

## Blockchain on your terms

- Open cloud
- The most regions
- True hybrid
- Deep partner bench

## Integrated with your business

- Identity & key management with AAD and Azure KeyVault
- Middleware support in Azure
- IaaS, PaaS & SaaS

## For the enterprise

- Secure off-chain integration
- Security, confidentiality, and scalability
- Compliance

# Microsoft Strategy

Ledger Core

## Fully-Managed Distributed Ledger

Partner  
Distributed Ledger  
A

Partner  
Distributed Ledger  
B

Partner  
Distributed Ledger  
C

## Hosted Compute (VM)

Partner  
Distributed Ledger  
D

Partner  
Distributed Ledger  
E

Partner  
Distributed Ledger  
F



+ New

Dashboard

Resource groups

All resources

Recent

App Services

SQL databases

Virtual machines (class...

Virtual machines

Cloud services (classic)

Subscriptions

Azure Active Directory

Monitor

Security Center

Billing

Help + support

More services &gt;

Panel

+ New dashboard

Edit dashboard

Share

Fullscreen

Clone

Delete

All resources

ALL SUBSCRIPTIONS

	AEGIS-ADFS-01	Cloud service (classic)
	AEGIS-ADFS-01	Virtual machine (class...
	AEGIS-ADFSP01	Cloud service (classic)

[See more...](#)

Service Health

Personalized guidance and support when issues  
in Azure services affect you. [Learn more](#)

Marketplace



Subscriptions

Forecast expenses and costs to optimize your  
apps

Help + support



Tour



What's new



Portal settings



Feedback

Azure classic  
portal

# Deploy in the topology of your choice

1

## **Dev/Test: Enable developers to get started**

Single node (virtual machine)

2

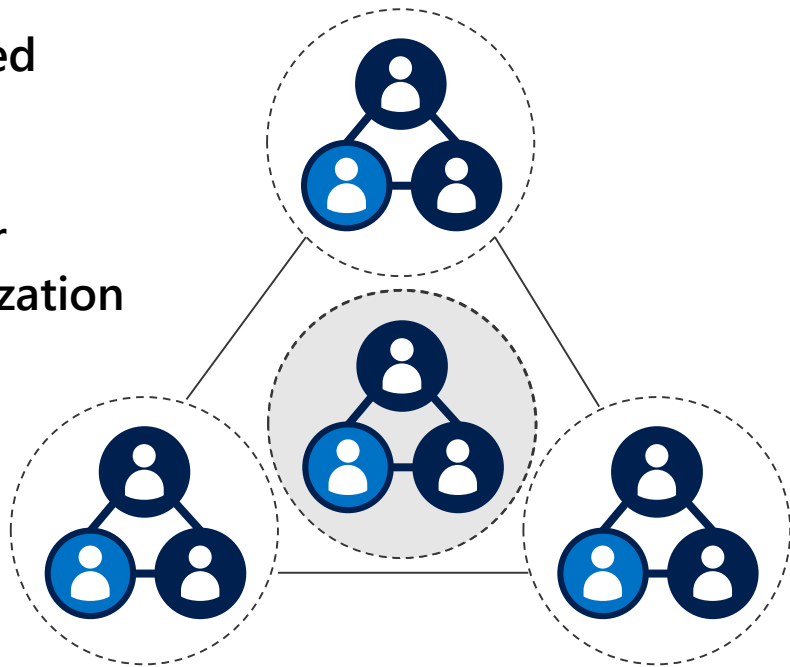
## **Single Member: Simulate production for multiple divisions within a single organization**

Multi-node across single region

3

## **Multi-member: Collaborate between multiple divisions and organizations**

Multi-node across multiple regions, Azure subscriptions, and/or organizations



# What enterprises need from blockchain?

## Scalability

Enterprises need  
database-like latency  
and throughput

## Confidentiality

Enterprises need richer  
more flexible  
confidentiality models

## Consortium Governance

Enterprises need built-  
in distributed  
governance

# Microsoft Strategy

## Horizontal SaaS & Adapters

**App Builder**  
**Workflow Design & Orchestration**



## Middleware

**Identity & Key  
Management**

**Data Platform  
(ML & BI)**

**Secure Off-Chain  
Execution**

**Monitoring &  
Security**

Third Parties  
Tools

## Ledger Core

### Fully-Managed Distributed Ledger

Partner  
Distributed Ledger  
A

Partner  
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B

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C

### Hosted Compute (VM)

Partner  
Distributed Ledger  
D

Partner  
Distributed Ledger  
E

Partner  
Distributed Ledger  
F

**Confidential Consortium (CoCo) Framework**



<https://aka.ms/enterprise-blockchain>

# Thank you

ευχαριστώ

Salamat Po

متشكرم

شكراً

Grazie

благодаря

ありがとうございます

Kiitos

Teşekkürler

谢谢

ขอบคุณครับ

Obrigado

شکریہ

Terima Kasih

Dziękuję

Hvala

Köszönöm

Tak

Dank u Wel

ДЯКУЮ

Tack

Mulțumesc

спасибо

Danke

Cám ơn

Gracias

多謝晒

Ďakujem

תודה

நன்றி

Děkuji

감사합니다

