

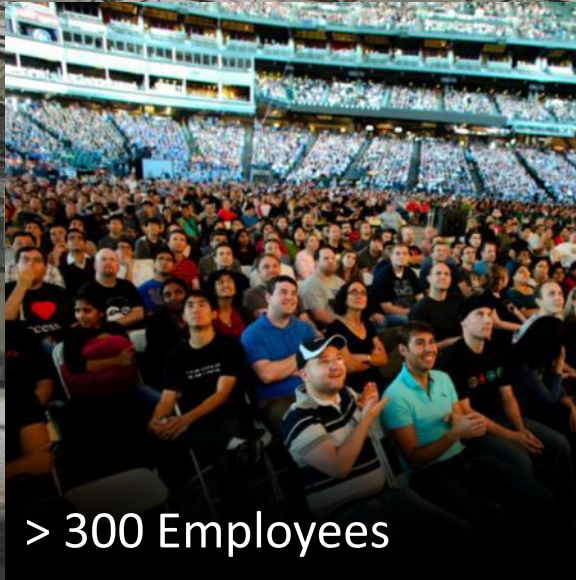


# Blockchain @ Microsoft

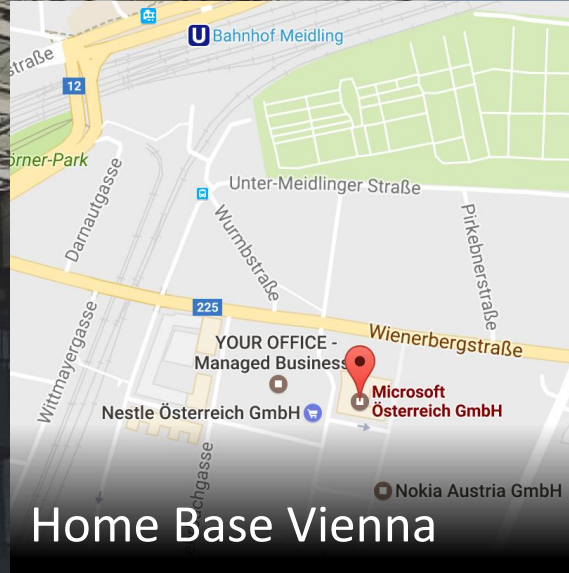
Thomas Conte (Senior SDE)  
Johannes Zessin (TSP Azure)



# Microsoft in Austria



> 300 Employees



Home Base Vienna




New World of Work




# Interested in working @ Microsoft?

Get in touch with Gosia Baczewska  
via LinkedIn or directly via  
a-mabacz@microsoft.com ...

... and tell her why you want to  
work for Microsoft.



The profile banner features a dark blue background with white line art depicting a globe, a network diagram, and a sunburst. The Microsoft logo is in the top right corner.



1st

**Gosia Baczewska**  
Global Talent Acquisition at Microsoft  
Microsoft • University of Warsaw  
Warsaw, Masovian District, Poland • 500+ &

[View in Sales Navigator](#) [Message](#)

[See more](#) ▾

# Microsoft Azure

**The cloud platform for digital transformation**



# What is Cloud?

It provides the ubiquitous, on-demand network access to a shared pool of configurable IT resources (e.g. compute, network, storage, services like machine learning or hosting of applications...)

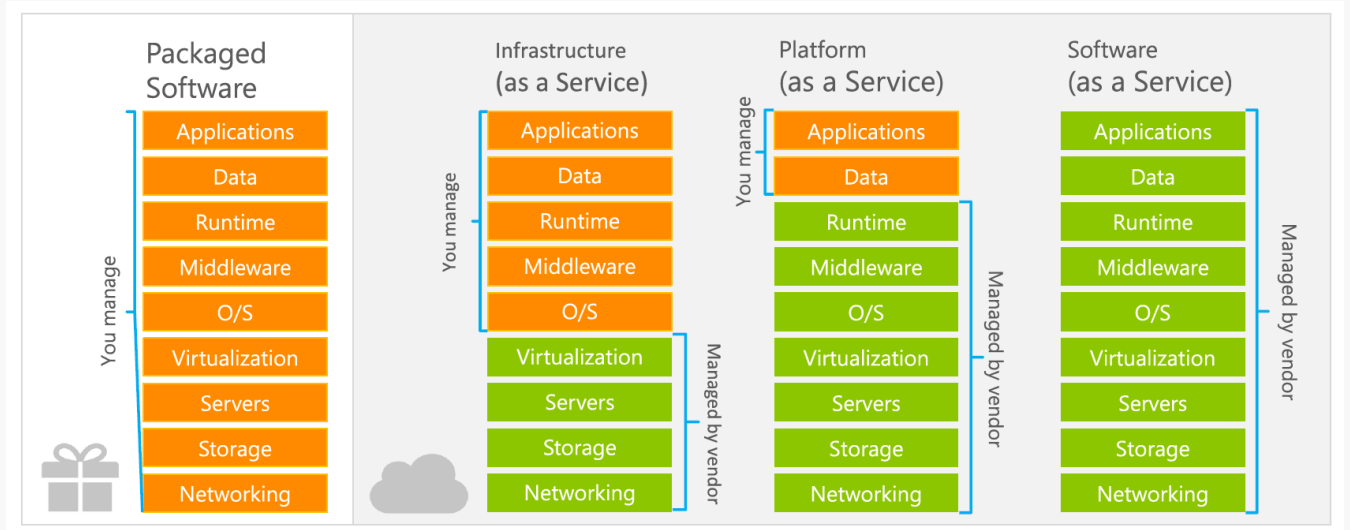
# Cloud Types

Public

Private

Hybrid

# Service Types



# Why Cloud?

On-Demand / Pay-as-you go

Flexibility

Scalability

Resiliency / Redundancy / Failover

Broad set of services directly and ubiquitously  
usable



# What is Azure?

The public cloud offering from Microsoft.

# Key Pillars



## **Compliance & Security**

Thrive in a protected environment



## **Openness and flexibility**

Build freely, deploy anywhere



## **Diversity**

Leverage a broad set of highly integrable services



## **Hyperscale cloud**

Massive resources – globally distributed



# Get started

## Azure Passes

90 days, 100 \$

## Sign up

Just sign up, get a subscription and pay as you go

## MSDN / Dev Subscriptions

Get free credit for dev purposes

## Corporate

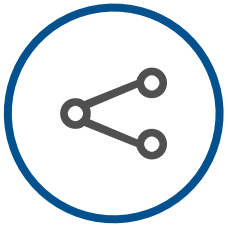
Get in contact with us



# Blockchain @ Microsoft

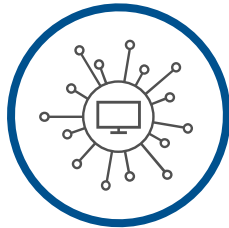


# Microsoft's Strategy



## Openness

Have the freedom to choose which stack and which dev tools to use



## Integration

Leverage synergies by integrating a broad range of services



## Cloud

Leverage the advantages of Azure



## Compliance & Security

Get started quickly &  
Reduced risks &  
Reduced costs

# Offerings

Current

Blockchain as a Service

Under Development

Blockchain Fabric

Cryptlets

PoC Framework



# Why Blockchain on Azure?

## Platform Support

Support of multiple ledger types (Ethereum, Chain, Corda, Quorum...) and tooling.

## Openness

Not bound to any specific ledger type or tooling.

## Deployment Model

Easy deployment via templates. Fail fast and cheap. Cloud only & Hybrid.

## Compliance

Industry leading compliance program.

## Azure Marketplace

Offering of many ledger types and dev tools. Also own offerings possible.

## Azure Services

A broad range of services to be used with.

## Partner Ecosystem

Engage with business and implementation partners.

## Innovation

Project Bletchley (incl. Cryptlets)

# Why private chains?

	<b>Permissioned</b>	<b>Permissionless</b>
<b>Speed</b>	Faster	Slower
<b>Flexibility</b>	Higher degree of customizability, access to newest features and easier to execute changes	Quite static, changes difficult
<b>Ownership</b>	Managed	Public
<b>Membership</b>	Private & Controlled	Open & transparent
<b>Trust</b>	More trust-bound	Trust-free

# Why private chains?

	<b>Permissioned</b>	<b>Permissionless</b>
<b>Legal Aspects</b>	Legal, more control	Nebulous
<b>Get started</b>	Quite a challenge & from scratch	Relatively simple & already a big, reliable, secure network & use synergies with existing participants, Smart Contracts...
<b>Privacy</b>	At the moment the way to go if privacy is important (e.g. Quorum)	Almost no privacy, Pseudonymity (depends on the chain / implementation)

# Trade Finance Scenario

## Business Situation:

A manufacturing company in Netherlands wants to import certain parts from a supplier in Singapore

### Blockchain Authentication nodes



International Shipping



Bank of Netherlands



Bank of Singapore



Port of Amsterdam



Port of Singapore

### Blockchain Ledger Participants



International Shipping



Bank of Netherlands



Bank of Singapore



Port of Amsterdam



Port of  
Singapore



EXPORTER



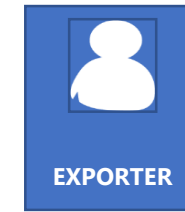
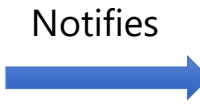
IMPORTER



## Request for SBLC



Advisor Bank  
reviews the LoC



## Issuing bank creates LoC



**SB Letter of Credit**

## Automatically validated by trusted members



**Port of  
Amsterdam**



**Shipping  
company**

**CONSENSUS**



**Port of  
Singapore**

This document needs to be validated by all or majority of the trusted members

Document is added to blockchain

## SHARED LEDGER

Letter of Credit created

Letter of Credit received



Letter of Credit

Letter of Credit created

Letter of Credit received

SHARED LEDGER

eBoL created

Customs

Package

Payment received

# Use Cases

1. **Know-Your-Customer (KYC), information storage and validation**

Information is shared and validated via the blockchain.

2. **Post-trade processing – clearing and settlement**

Clearing and settlement processes are replaced via blockchain. The safe transfer of assets via the blockchains makes the processes of clearing and settlement obsolete and therefore enables cost saving and faster processing.

3. **Derivatives**

Automated blockchain-based derivatives are generated via smart contracts. Processes can be automated and secondary markets can be implemented.

4. **Asset securitization**

The ownership structure and transaction history of assets can be displayed via the blockchain.

5. **Bonds & loans**

Blockchain-based bonds and loans can be administered via the blockchain. Blockchain-based secondary markets are enabled.

6. **(Cross-border) Payments**

Payments can be processed close to real-time with low transaction costs.

7. **Asset tokens**

Any form of value can be represented and transferred via a blockchain-token.

8. **Trade finance**

Processes like the Letter of Credit, the Bill of Lading or guarantees are automated and made cost efficient via the use of blockchain and smart contracts.

9. **Crowdfunding**

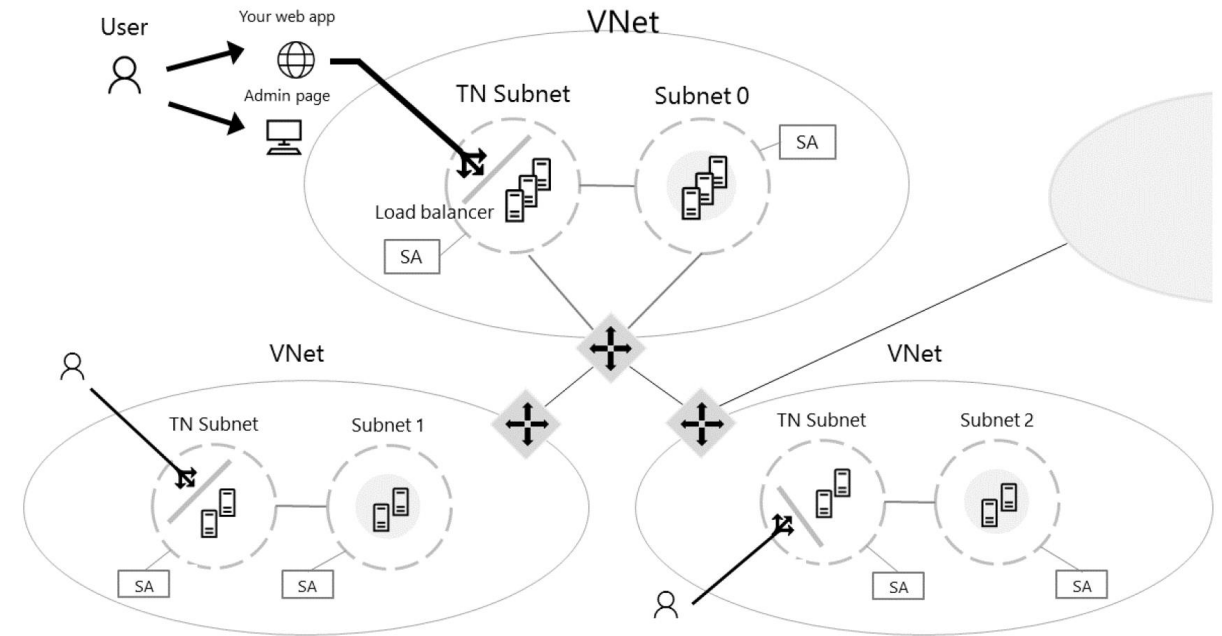
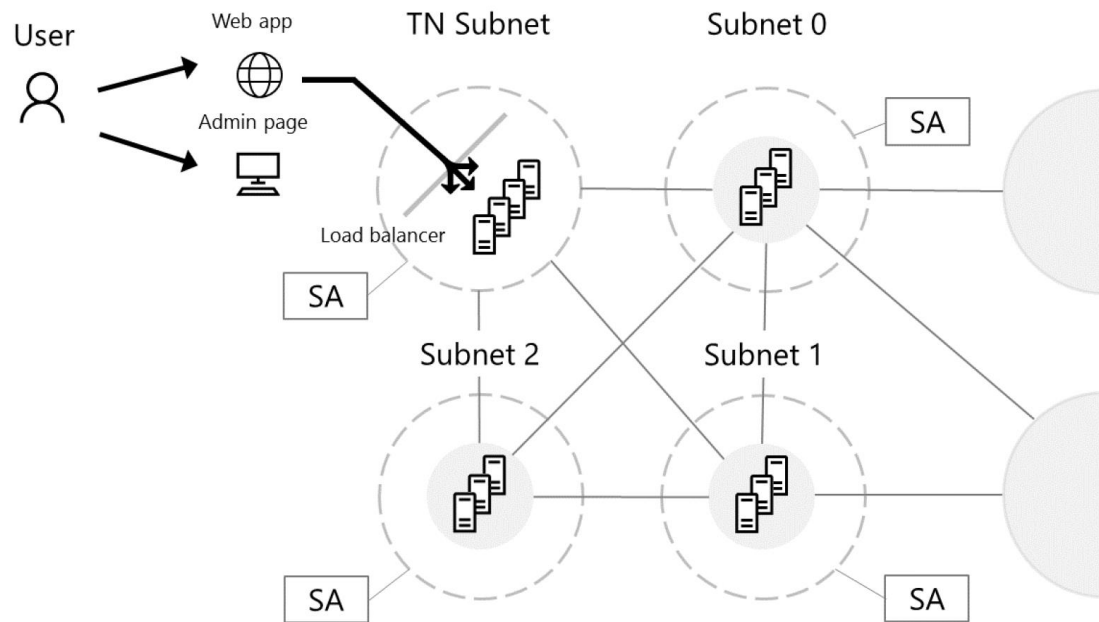
Entities are able to gain access to financing as they sell blockchain-tokens that resemble some kind of value or equity.

10. **Micropayments**

Blockchain-based payments enable micro-transactions, which represent the foundation for various new business models.

<http://blockchain-monitor.com/>

# Get Started with BaaS





# Next steps

## → Get informed

→ [Blockchain Fabric Paper](#)

→ [Cryptlets Paper](#)

## → Try it yourself

→ <https://azure.microsoft.com/en-us/solutions/blockchain/>

→ <https://portal.azure.com/>

→ <https://github.com/BlockchainRepos>