

Cloud Computing mit Microsoft Azure

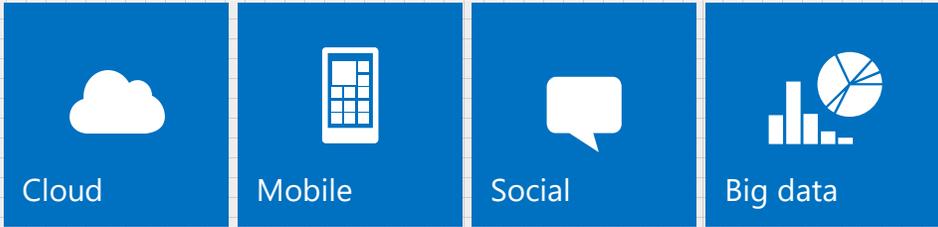


andreasschabus
TECHNICAL EVANGELIST | DX



Microsoft

The next strategic opportunity is here



IT

How do you use
technology
innovation...



to architect
business
innovation?

Business

Increased
productivity

Customer
growth

Real-time
insights

Embrace
new models

Business is powered by the cloud

“Cloud is a given. CIOs no longer ask whether they should use cloud, but rather How.”*

Improve efficiency

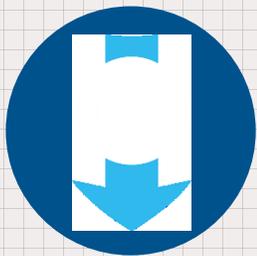
Enable innovation

Transform your business

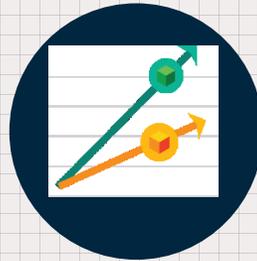
“Traditional on-premises data storage is four times the cost of cloud storage.”**

“55% of CIOs indicated they would source all their critical apps in the cloud by 2020.”***

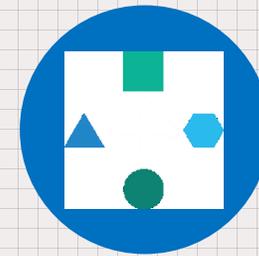
“Seventy percent of CIOs will embrace a cloud-first strategy by 2016.”****



Reduce costs and inefficiencies



Increase revenue with existing assets



Create new business models

*“Cloud Evolves From Point Solution To Strategic Enabler Of The New Connected Economy,” Forrester, Liz Herbert, January 2015

**Forrester, 2014

***Smith, David Mitchell et al. Predicts 2014: Cloud Computing Affects All Aspects of IT. Gartner, Inc. December 4, 2013.

****IDC, CIO webinar, 2014



What is Cloudcomputing?

Cloud Computing in a Nutshell

Approach to computing

- Internet-Scale
- Connecting a variety of devices

Services based

- Run applications
- Provide services

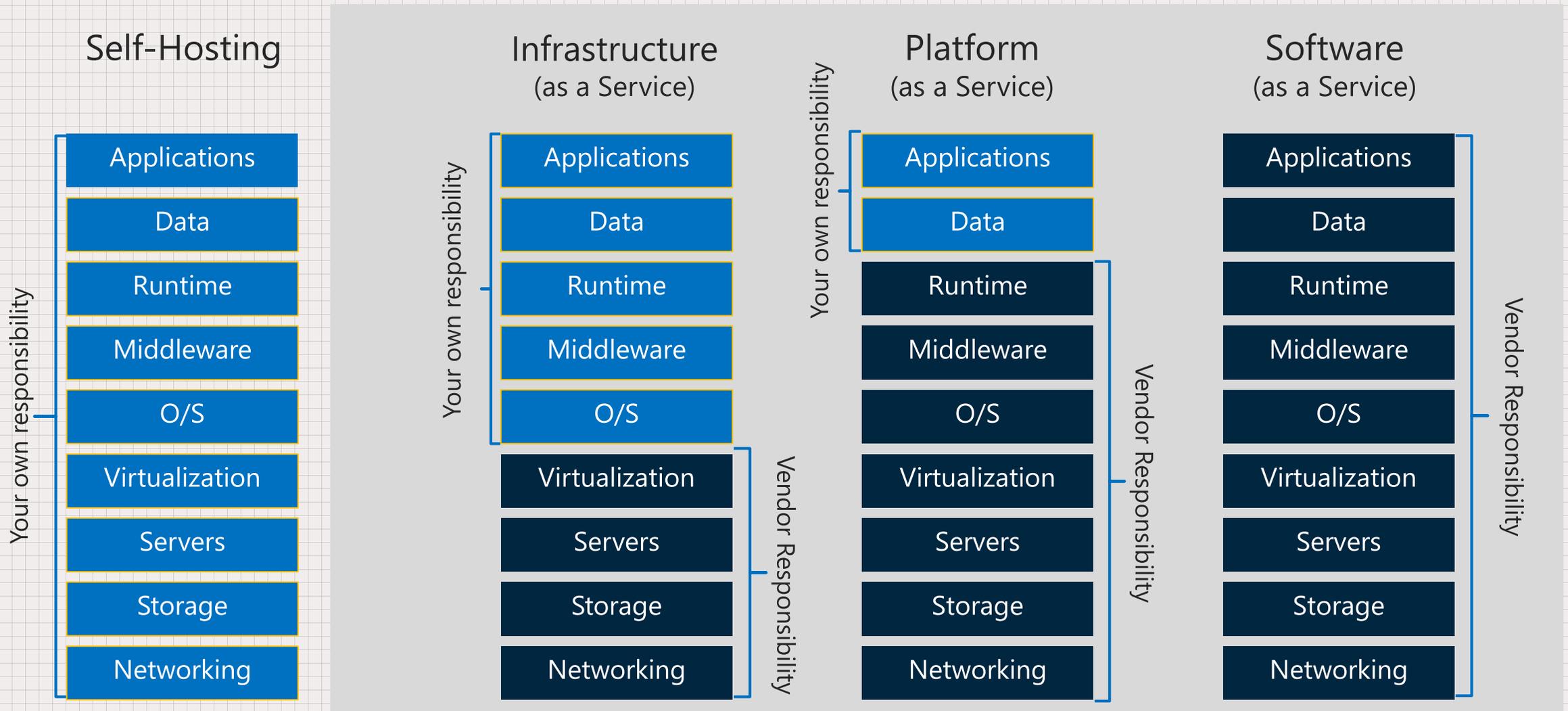
Like a utility

- Similar to power

Characteristics

- Elastic / dynamic
- Scalable
- Measured (pay-per-use)

Computing as a Service

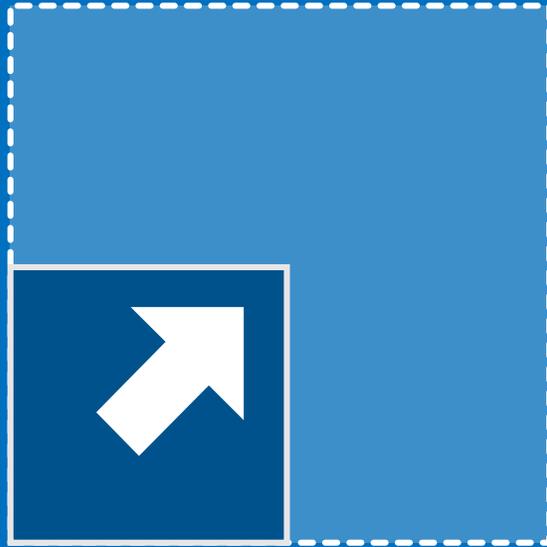


Why the Cloud?

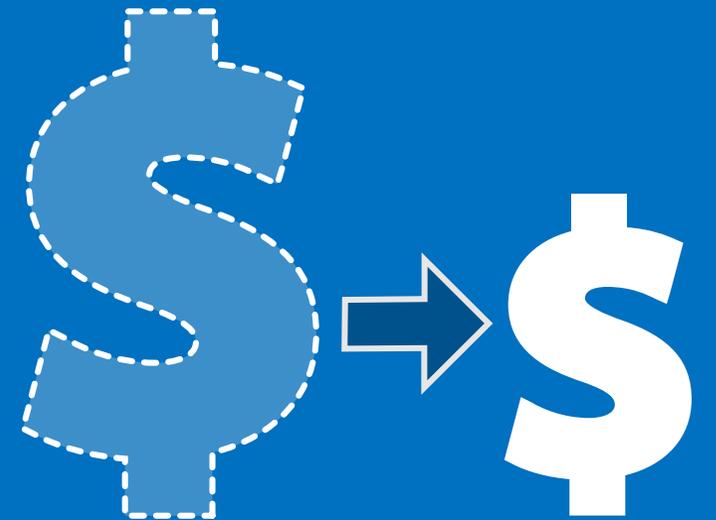
Speed



Scale



Economics



Where Cloud is a very good fit

Application
Characteristics

Examples

Where Cloud is a very good fit

Application Characteristics	Examples
Needs fast access to computing resources with no commitment	Marketing web sites, High-risk innovative apps

Where Cloud is a very good fit

Application Characteristics	Examples
Needs fast access to computing resources with no commitment	Marketing web sites, High-risk innovative apps
Requires massive or global scale	Consumer web applications

Where Cloud is a very good fit

Application Characteristics	Examples
Needs fast access to computing resources with no commitment	Marketing web sites, High-risk innovative apps
Requires massive or global scale	Consumer web applications
Has very spiky usage	Online ticket sales

Where Cloud is a very good fit

Application Characteristics	Examples
Needs fast access to computing resources with no commitment	Marketing web sites, High-risk innovative apps
Requires massive or global scale	Consumer web applications
Has very spiky usage	Online ticket sales
Running the application on-premises raises security issues	Mobile applications

Where Cloud is a very good fit

Application Characteristics	Examples
Needs fast access to computing resources with no commitment	Marketing web sites, High-risk innovative apps
Requires massive or global scale	Consumer web applications
Has very spiky usage	Online ticket sales
Running the application on-premises raises security issues	Mobile applications
Customers don't want in-house IT	Start-ups, progressive businesses



Microsoft Azure

“At our core...

Microsoft is the productivity and platform company for the **mobile-first and cloud-first** world.

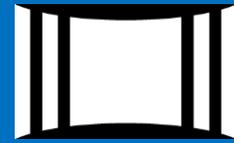
We will reinvent productivity to empower every person and every organization on the planet to do more and achieve more.”

—Satya Nadella, CEO



Microsoft Azure

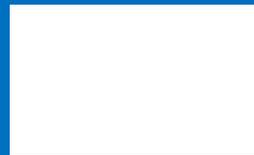
Comprehensive set of **services** that enable you to quickly **build**, **deploy** and **manage** applications across a **global network** of Microsoft-managed datacenters



Flexible



Open



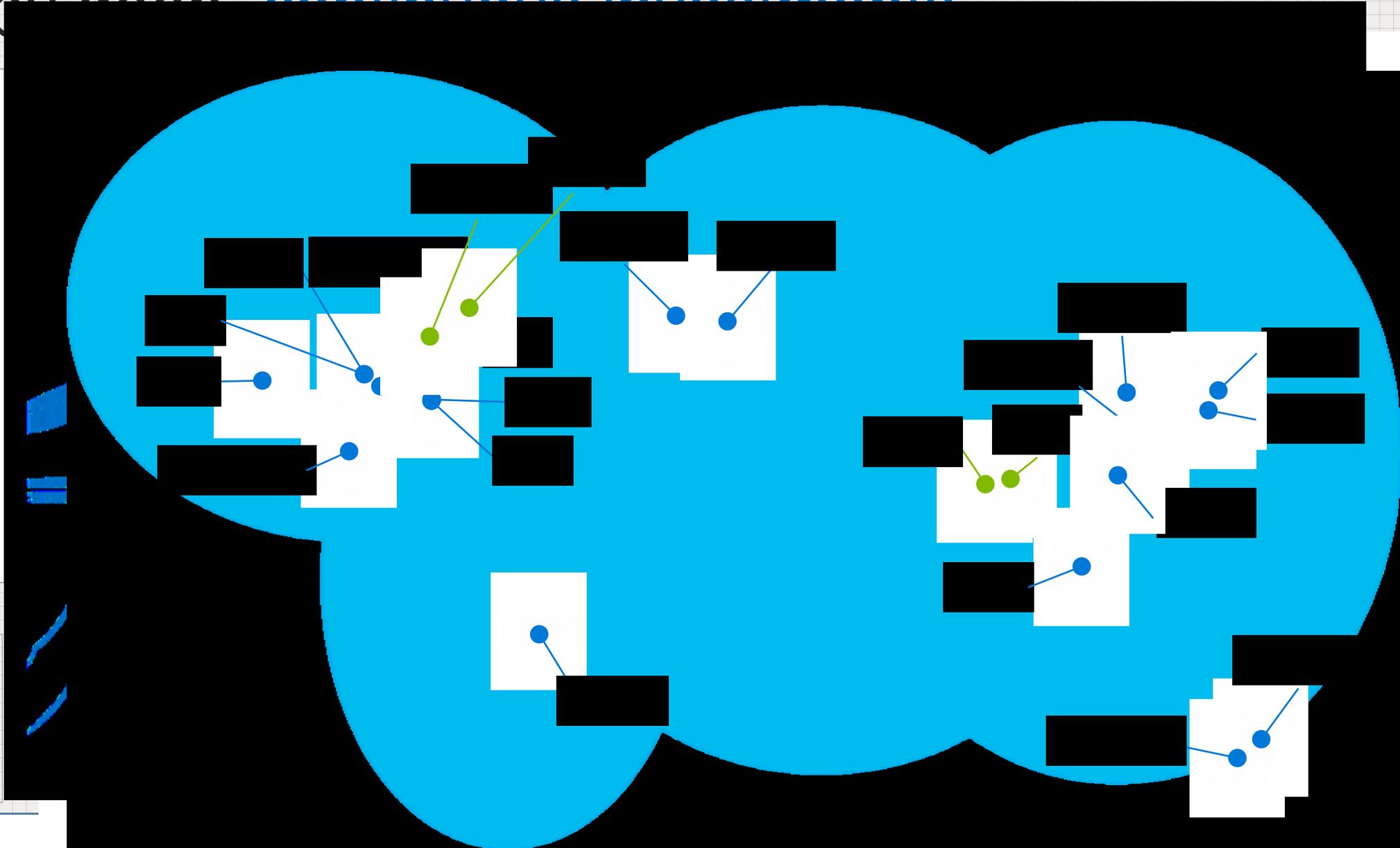
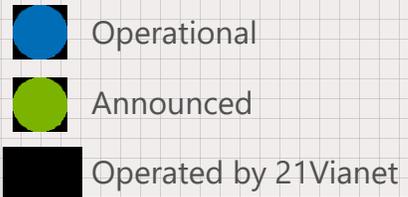
Solid

Impressions of a Datacenter



Backed by deep, continuous investments

- 100+ datacenters
- One of the top 3 networks in the world (coverage, speed, connections)
- 2 x AWS and 6x Google number of offered regions
- G Series – Largest VM available in the market – 32 cores, 448GB Ram, SSD



Platform Services

Security & Management

- Portal
- Azure Active Directory
- Azure AD B2C
- Multi-Factor Authentication
- Automation
- Scheduler
- Key Vault
- Store/Marketplace
- VM Image Gallery & VM Depot

Services Compute

- Cloud Services
- Service Fabric
- Batch
- RemoteApp

Integration

- Storage Queues
- BizTalk Services
- Hybrid Connections
- Service Bus

Media & CDN

- Media Services
- Content Delivery Network (CDN)

Web and Mobile

- Web Apps
- API Apps
- Mobile Apps
- Logic Apps
- API Management
- Notification Hubs

Developer Services

- Visual Studio
- Azure SDK
- VS Online
- App Insights

Data

- SQL Database
- Data Warehouse
- DocumentDB
- Redis Cache
- Azure Search
- Storage Tables

Analytics & IoT

- HDInsight
- Machine Learning
- Stream Analytics
- Data Lake
- Data Factory
- Event Hubs
- Data Catalog
- IoT Hub
- Mobile Engagement

Hybrid Operations

- Azure AD Health Monitoring
- AD Privileged Identity Management
- Domain Services
- Backup
- Operational Analytics
- Import/Export
- Azure Site Recovery
- StorSimple

Infrastructure Services

OS/Server Compute

- Virtual Machines
- Container Service

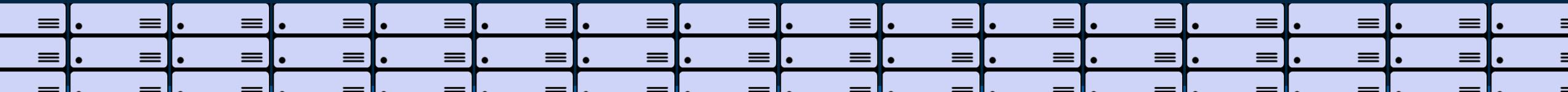
Storage

- BLOB Storage
- Azure Files
- Premium Storage

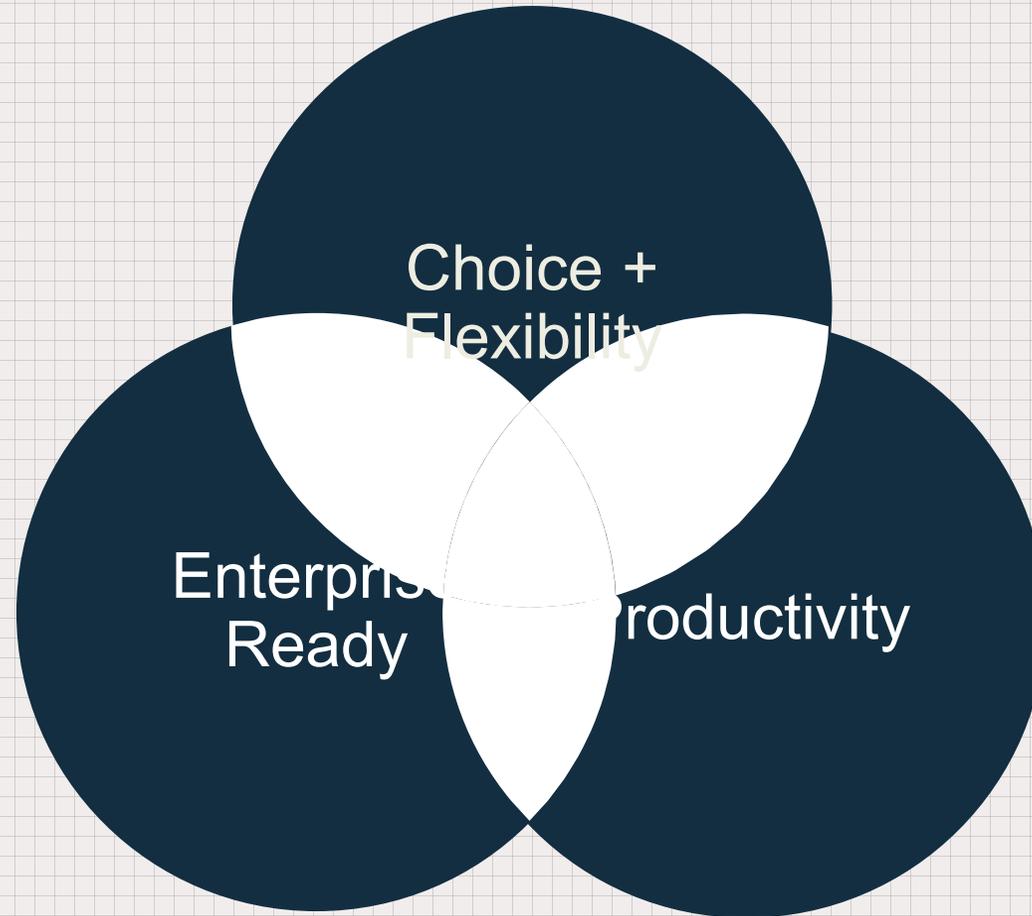
Networking

- Virtual Network
- Load Balancer
- DNS
- Express Route
- Traffic Manager
- VPN Gateway
- App Gateway

Datacenter Infrastructure (30 Regions, 22 Online)



Why Azure?



Azure compliance audits and certifications

Global



ISO/IEC 27001



SOC 1



SOC 2



PCI DSS L1 version 3



Cloud Security Alliance
Cloud Security Matrix



ISO / IEC 27018

United States



FedRAMP



HIPAA
(Healthcare)



FIPS 140-2



Life Sciences GxP



Family Educational Rights
& Privacy Act

Regional



United Kingdom
G-Cloud



China
Multi Layer Protection
Scheme



China
CCCPF



Singapore
Multi-Tier Cloud
Security



Australian Signals
Directorate I-RAP
Assessment

Coming soon



Sarbanes Oxley



Criminal Justice
Information System



Defense Information
Systems Agency L2



ITAR



Defense Information
Systems Agency L3-5

Azure Momentum

>120k

NEW AZURE CUSTOMER
SUBSCRIPTIONS/MONTH

>1.4Million

SQL DATABASES IN AZURE

2Trillion

MESSAGES PER WEEK
PROCESSED BY AZURE IOT

5Million

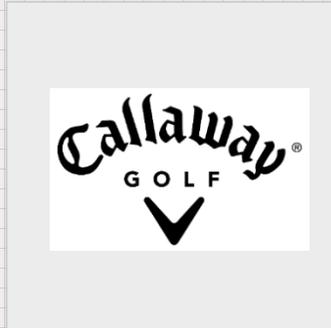
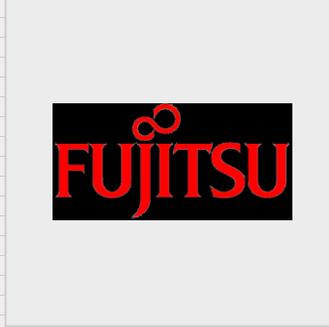
ORGANIZATIONS USING
AZURE ACTIVE DIRECTORY

>4Million

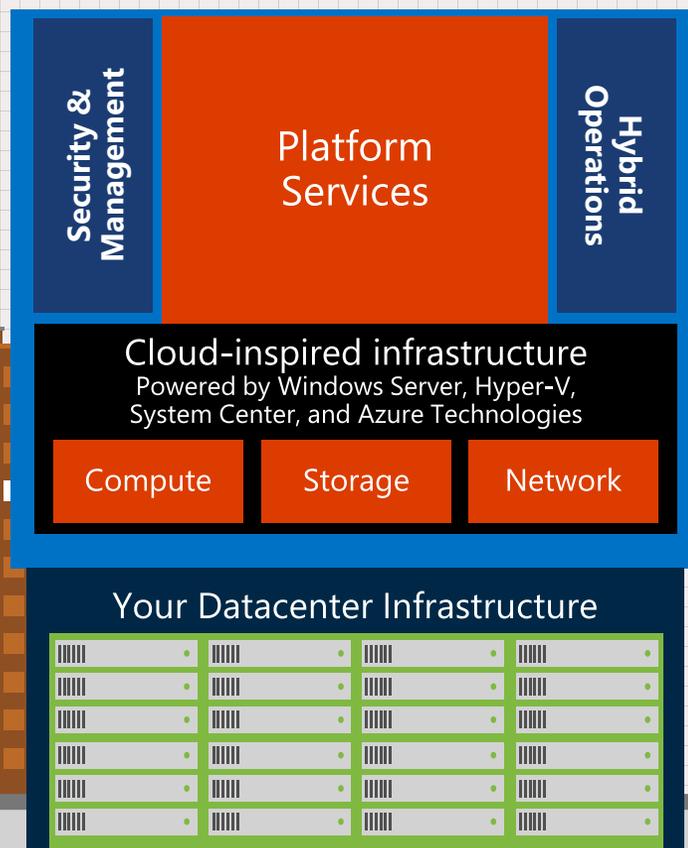
DEVELOPER REGISTERED WITH
VISUAL STUDIO TEAM SERVICES

>40%

REVENUE FROM
START-UPS AND ISVS



The Azure platform strategy

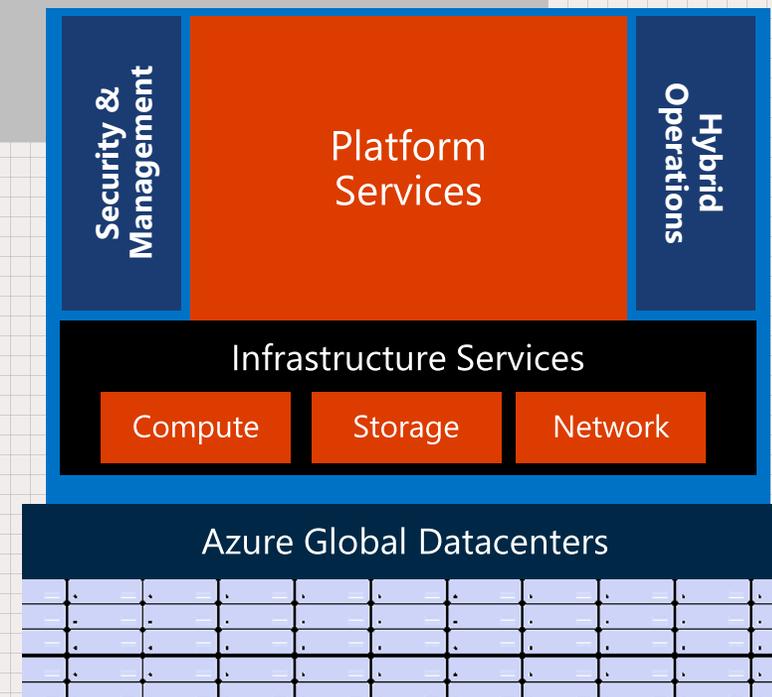


Microsoft Azure Stack & Cloud Platform System

INNOVATION



Public Cloud Platform



Microsoft Azure Public, Global, Shared Datacenters



Case studies

AVL List



Streaming Lösung als Start für viele Einsatzmöglichkeiten

Streaming der Hauptveranstaltung bildete den Einstieg für Lösungen wie Software-Verteilung, Intranet & RightsManagement



Herausforderung

AVL suchte nach mehreren Lösungen.

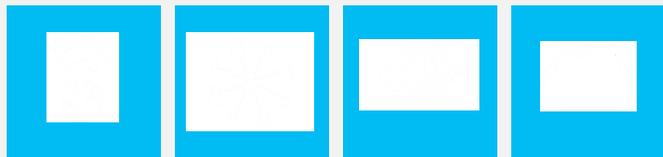
- Zu Anfang wurde eine Streamlösung für die Hauptversammlung benötigt.
- Durch den Erfolg wurde in Folge die weltweite Softwareverteilung an die Mitarbeiter in Angriff genommen.
- Derzeit sind eine Intranet-Lösung sowie das Thema Rights-Management mit einem Potential von 4.000 Usern am Tisch.

Lösung

- icomedias entwickelte eine Lösung, dank der jeder einzelne Mitarbeiter die Conference in HD verfolgen konnte, egal, ob Smartphone, Laptop oder PC mit schlechter Internetverbindung. Von Master-Servern in der Cloud wurde das Signal auf 30 Cloud-Server verteilt.
- Durch Softwareverteilung über die Azure Cloud und direkter SharePoint-Anbindung kann der weltweite Zugriff schneller, transparenter und kontrollierter erfolgen. Gleichzeitig wurde für den Hybrid-Betrieb der interne Storage konsolidiert, was weitere Einsparungen brachte.

Mehrwert

- Vor allem die Mitarbeiter konnten hier großen Nutzen ziehen, denn auch die interaktive Teilnahme an der Versammlung wurde ermöglicht.
- Die Integration in die lokale Sharepoint-Struktur schafft für die weltweit verteilten Produktentwicklungsteams und der globalen Serviceorganisation schnelle und flexible Freigabeprozesse.



Streaming: „Wir brauchten kurzfristig höchste Leistung. Fast 5250 Zuseher mussten weltweit, zuweilen mit sehr geringer Bandbreite, versorgt werden“

Weltweite Software-Verteilung leicht gemacht: «Dank Windows Azure konnten wir ein hoch komplexes Projekt kurzfristig und kosteneffizient umsetzen. Das Feedback aus dem ganzen Konzern war ausgezeichnet.»

Hannes Czamai, Manager IT Security AVL



IaaS, Test/Dev und EMS in der Bauindustrie

Kurzfristige Entscheidungen schaffen langfristiges Vertrauen in die Cloud



Über Grenzen hinweg

Herausforderung

In Doha galt es, als Teil einer internationalen Arbeitsgemeinschaft die technische Ausstattung für das Greenline-Projekt zu realisieren und innerhalb kürzester Zeit eine hochskalierbare, flexible IT-Infrastruktur für unterschiedliche Projektkonstellationen vor Ort bereitzustellen.

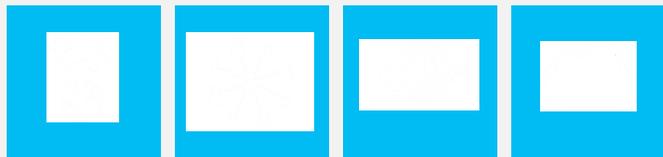
Lösung

Mit der Microsoft Cloud-Lösung ist die PORR AG in der Lage, schnell zu wachsen, dynamisch auf wechselnde Anforderungen zu reagieren, nahtlos über Zeit-, Klima- und Kulturzonen hinweg zu kommunizieren und eine mobile Device-Landschaft jederzeit sicher und zentral zu managen.

Im laufenden Projekt wiederum zeigt sich die Flexibilität darin, dass man auf Knopfdruck Office-Lizenzen vergeben, über Windows Azure Serverkapazitäten bereitstellen oder mit Windows Intune sofort reagieren und den Zugriff mobiler Endgeräte sperren kann, wenn eines auf einer Baustelle verloren geht.

Mehrwert

Es konnten große Hardware—Investitionen eingespart werden. Es besteht kein Grund mehr, Infrastruktur direkt auf der Baustelle aufzubauen sondern Wartung und Betrieb mit einem Klick aus Wien. Dies schafft schnellere Verfügbarkeit & Flexibilität.

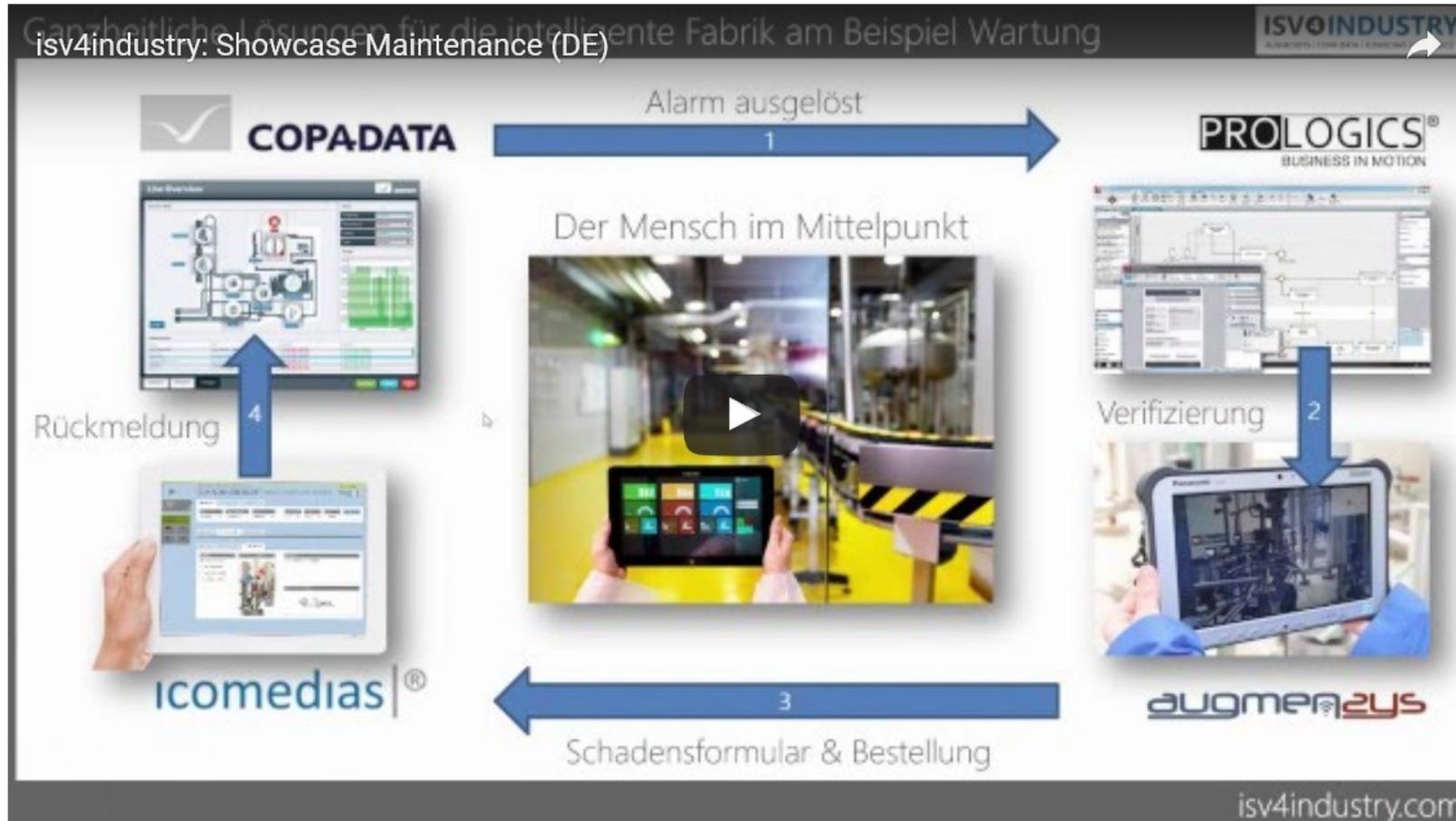


„Entscheidend ist für uns, dass wir in diesem Bauprojekt sehr flexibel agieren. Und da ist die Cloud einzigartig, weil wir bei Bedarf innerhalb einer halben Stunde einen Server bereitstellen oder einen Mitarbeiter auf Knopfdruck mit einem Office-Paket ausstatten können.“

Harald Kriesche, CIO der PORR AG

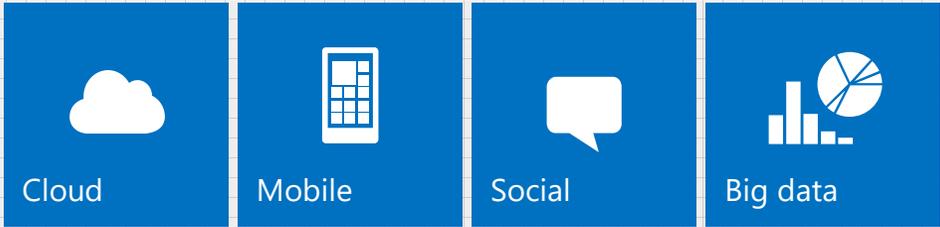


Ganzheitliche Lösungen für die intelligente Fabrik am Beispiel Wartung/Instandhaltung.





Summary



IT

How do you use
technology
innovation...



to architect
business
innovation?

Business



Platform Services

Security & Management

- Portal
- Azure Active Directory
- Azure AD B2C
- Multi-Factor Authentication
- Automation
- Scheduler
- Key Vault
- Store/Marketplace
- VM Image Gallery & VM Depot

Services Compute

- Cloud Services
- Service Fabric
- Batch
- RemoteApp

Integration

- Storage Queues
- BizTalk Services
- Hybrid Connections
- Service Bus

Media & CDN

- Media Services
- Content Delivery Network (CDN)

Web and Mobile

- Web Apps
- API Apps
- Mobile Apps
- Logic Apps
- API Management
- Notification Hubs

Developer Services

- Visual Studio
- Azure SDK
- VS Online
- App Insights

Data

- SQL Database
- Data Warehouse
- DocumentDB
- Redis Cache
- Azure Search
- Storage Tables

Analytics & IoT

- HDInsight
- Machine Learning
- Stream Analytics
- Data Lake
- Data Factory
- Event Hubs
- Data Catalog
- IoT Hub
- Mobile Engagement

Hybrid Operations

- Azure AD Health Monitoring
- AD Privileged Identity Management
- Domain Services
- Backup
- Operational Analytics
- Import/Export
- Azure Site Recovery
- StorSimple

Infrastructure Services

OS/Server Compute

- Virtual Machines
- Container Service

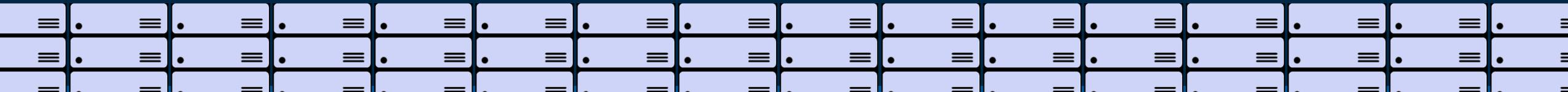
Storage

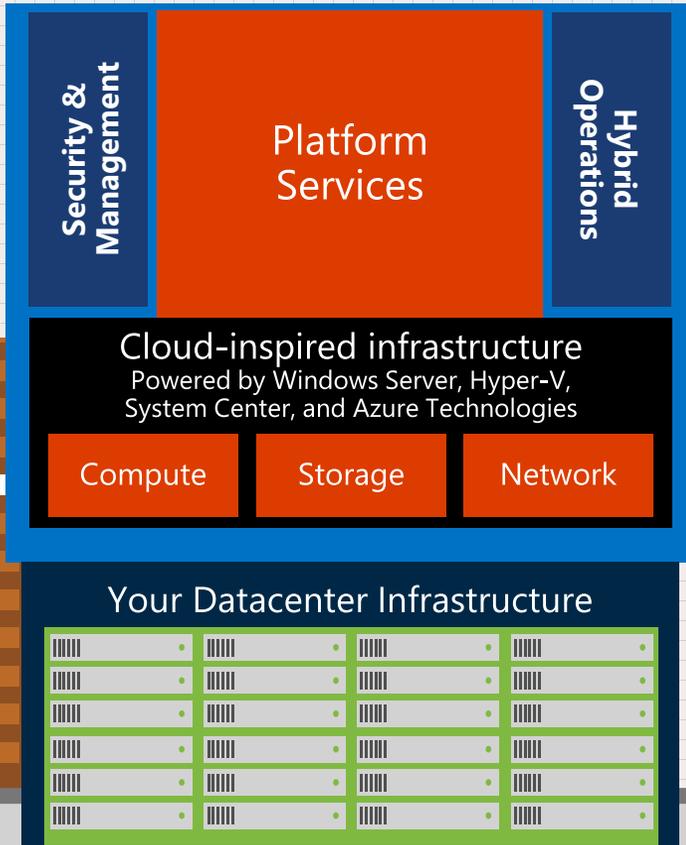
- BLOB Storage
- Azure Files
- Premium Storage

Networking

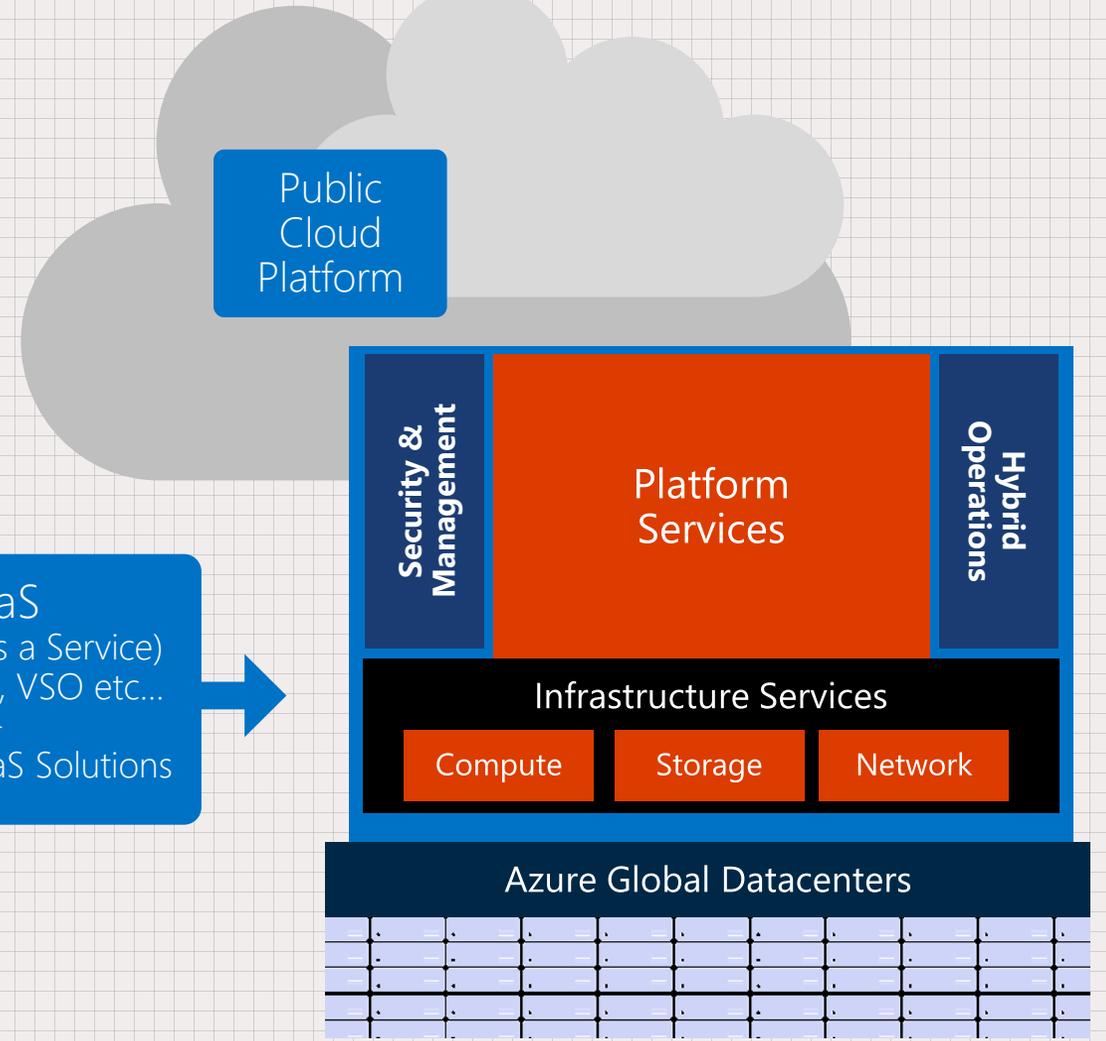
- Virtual Network
- Load Balancer
- DNS
- Express Route
- Traffic Manager
- VPN Gateway
- App Gateway

Datacenter Infrastructure (30 Regions, 22 Online)





Microsoft Azure Stack & Cloud Platform System



Microsoft Azure
Public, Global, Shared Datacenters



