AZURE EXPERIENCES SHARED

actual examples from real-life implementations

Eric Berg

Experts Live Netherlands

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AGENDA

Why moving to the cloud?

Moving, Migrating, Building?

Where to start and what to consider?

Cloud Readiness – Bottom Up Approach

Cloud Roles – Top Down Approach

Azure Migration - Technical

Planning for the future…

What's next?!

Why moving to the cloud?

"Here we are, trapped in the amber of the moment. There is no why."

Kurt Vonnegut Jr.

AZURE

Individualize Everything

Mainstream

Standards

Large Scale

Be More Agile

Continuos Development

Build Cloud-Born Apps

Automation

DevOps At ITs Best

Windows NT No Longer Supported

New Opportunities

Cost Savings

Innovation Leader

Require Less Employees

Host Off-Site

Moving, Migrating, Building?

"The destination is one thing. Getting there is everything."

Unknown

Lift and Shift - Rehost

Easy going and what you already know

Common scenario in IaaS situations

Workload migration on SaaS scenarios

Higher cost

More individuality

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Migrate and Change - Refactor

Breaking with old standards

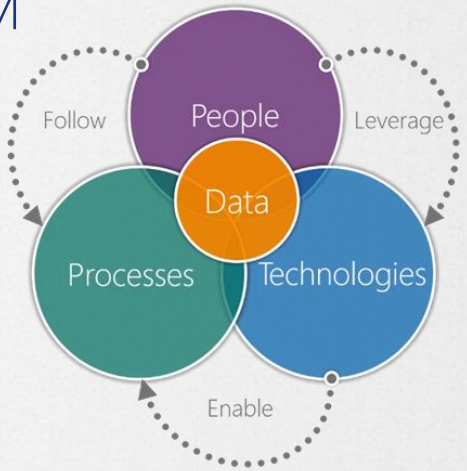
e.g. use SQL as a Service instead of IaaS VM

Application Layer decision

Cost saving

Transformation to a future model

More complex



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Cloud Born - Develop

Start over and rethink everything

Continous development

DevOps at ITs best

Leverage PaaS from start

Avoid IaaS

Stop developing existing things

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Where to start and what to consider?

"Stop doing what is easy. Start doing what is right."

Roy T. Bennett, The Light in the Heart

Scenario 1 – Office 365 ProPlus

Enable O365 for user for **O365 ProPlus**

IT deploys AAD and ProPlus

Everything seems fine

Users need more flexibilty

IT has own plans

Users start using…

HR O365 Tenant

Yammer

OneDrive

DropBox

ShareFile

Teams

Google Docs

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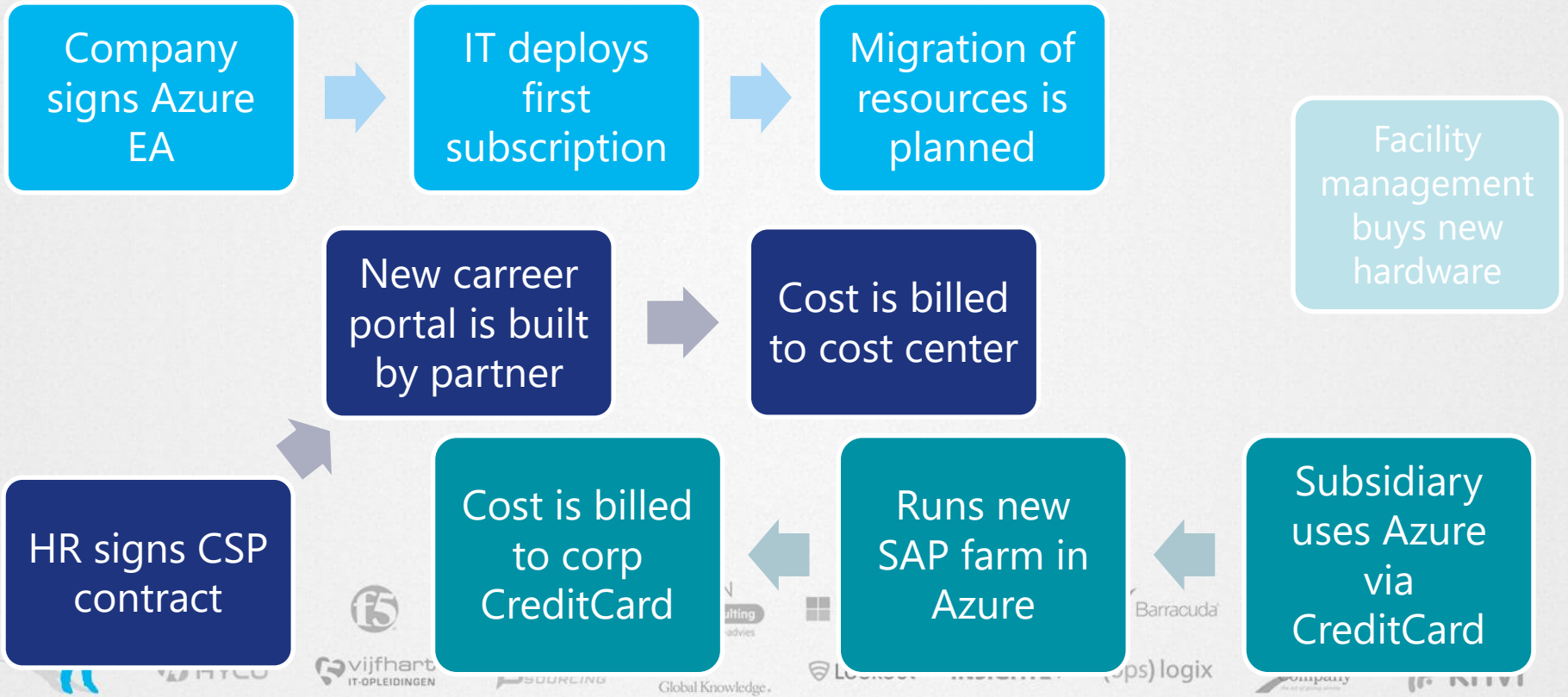
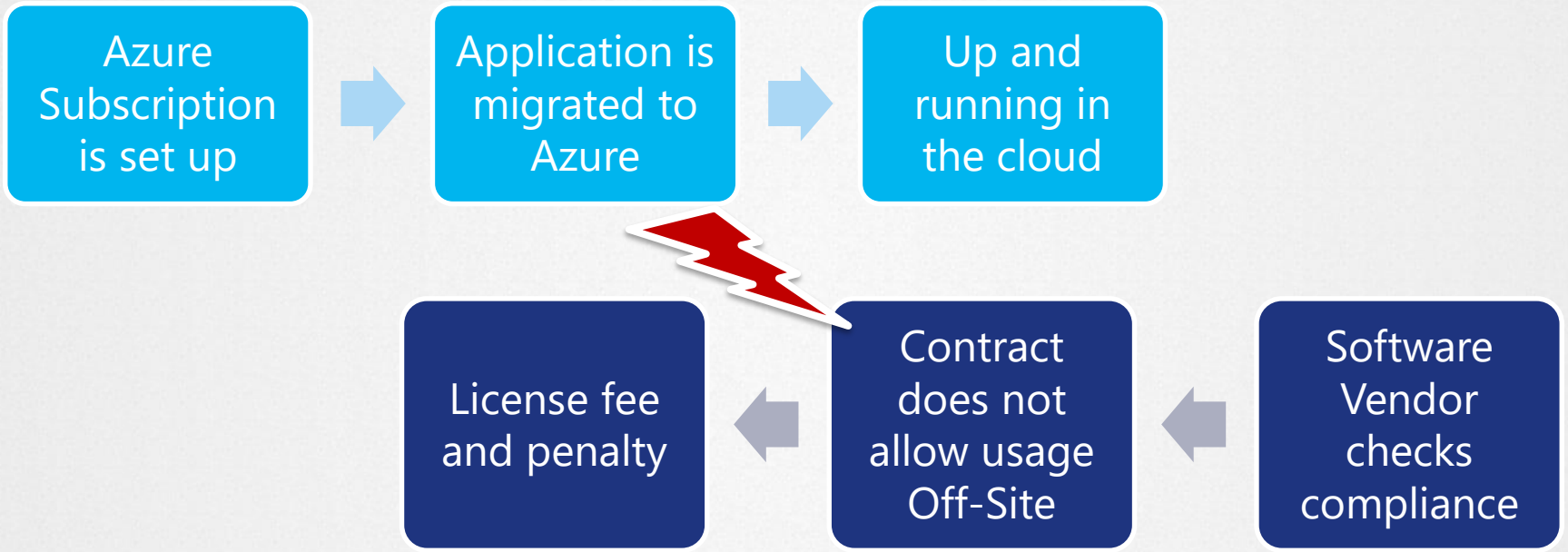
Scenario 2 – Azure Migration



Scenario 3 – Application Move



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Where to start?

Check your inventory

Check your contracts

Check your needs

Check your benefit

Check the solution

Information is the base of success

→ Azure Governance Concept

Documentation wins

Have a goal

stay up-to-date

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What to consider?

Azure is too simple → Everybody can use it

Define the rules and check it twice

Azure consumption is billed → there is no limit

Solution must fit your needs

Users are the key to success

Identity is the new perimeter

Moving to the cloud is a transformational process

Roles and Rules are key

> **"In Azure nobody cries for you!"**
>
> ***Eric Berg***

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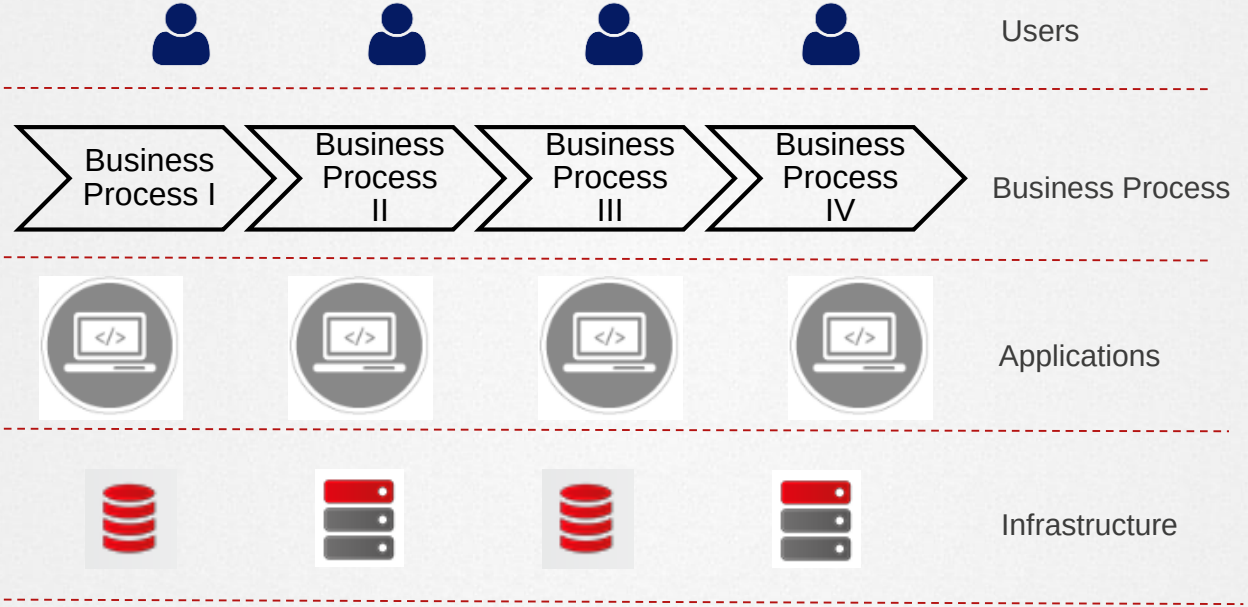
What to consider?



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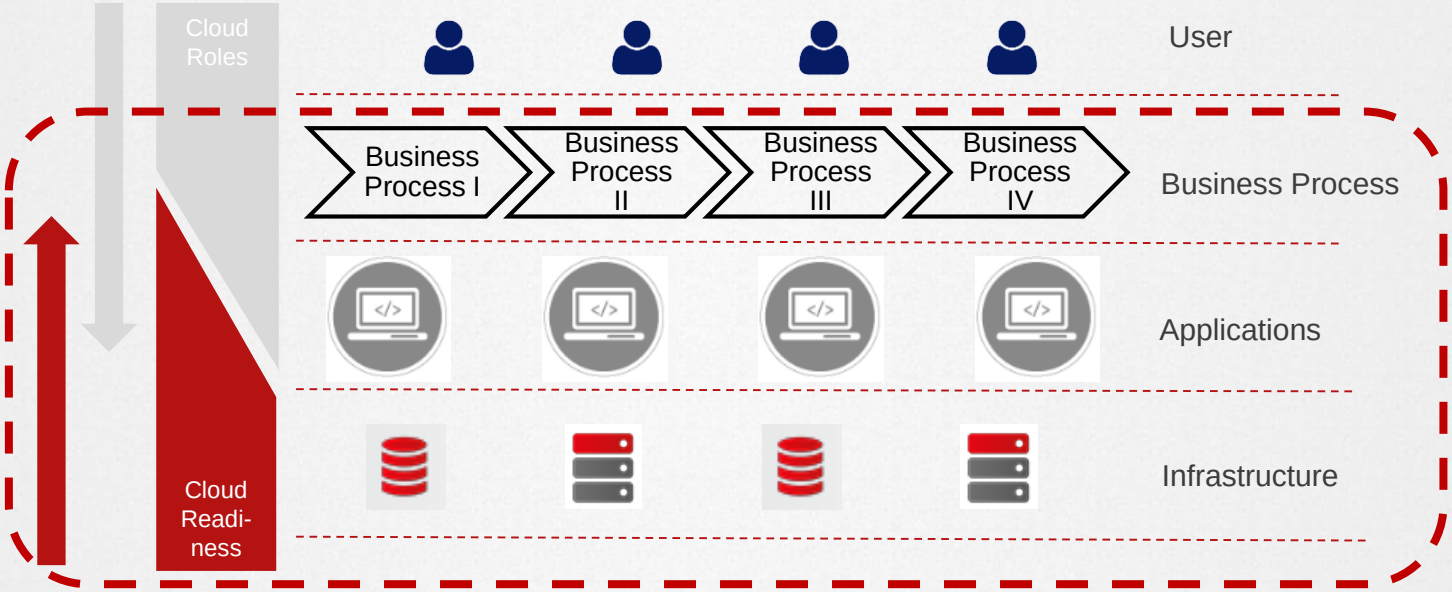
Cloud Readiness Bottom Up Approach

"Success is how high you bounce when you hit the bottom."

George S. Patton

Cloud Readiness



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Cloud Readiness

Inventory		Analysis			Result
Scope Definition	Scan	Architecture	CMO Cost	FMO Cost	Presentation
Define „Cloud“ „Know“ the customer Base Inventory	Assessment and Scan Define Current Mode of Operation (CMO) Define useful scenarios	Build Architecture Blueprint Define Governance Rules Analyse Scan Results	Map Cost to CMO Figure out pain points	Define future scenario Estimate cost Compare CMO to FMO cost	Define cloud potentials Explain FMO Develop and communicate roadmap

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Transformation

Build logical blocks → do not move ERP without DB

Technical and licensing show-stoppers

Define your infrastructure requirements

Check your application compatibility

Think about processes

- Development / Deployment
- Update / Upgrade
- Help-Desk
- SLAs

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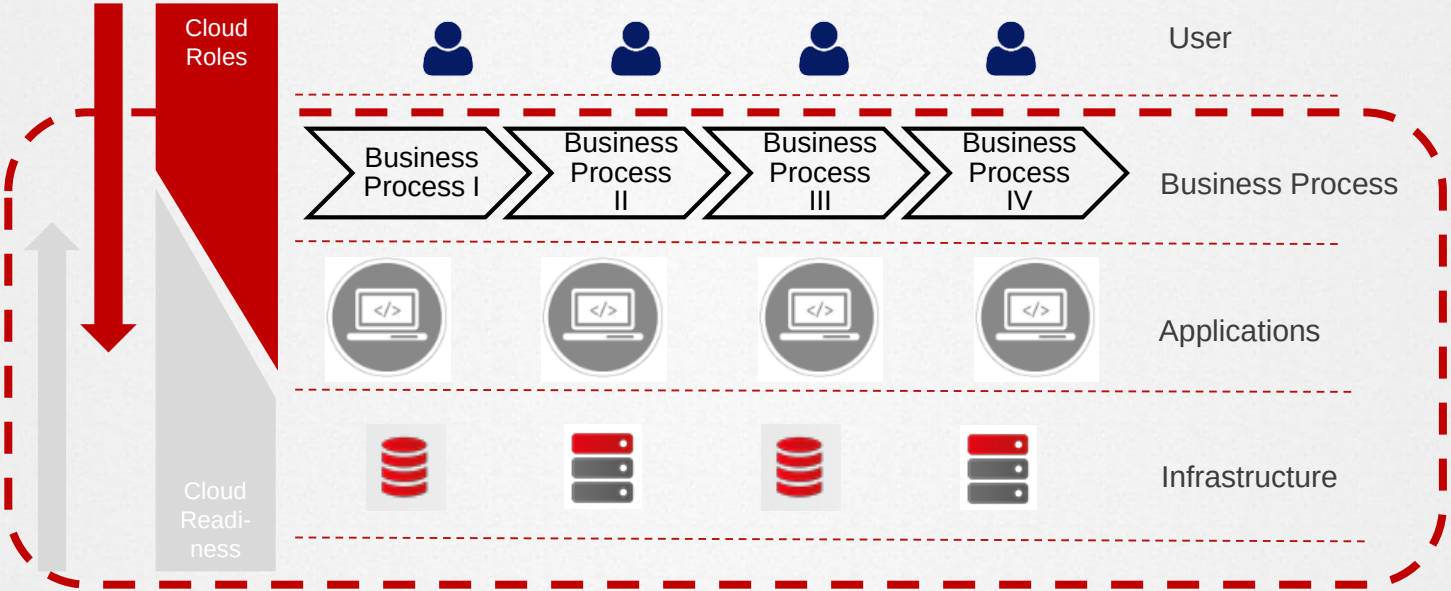
Cloud Roles
Top Down Approach

"It is good people who make good places."

Anna Sewell, Black Beauty

Cloud Roles



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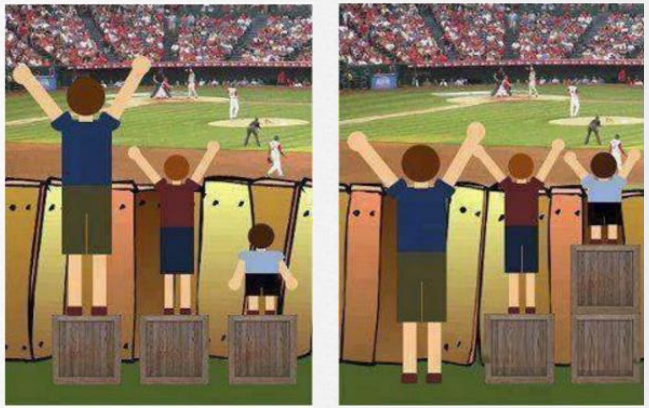
Cloud Roles

Users

- Mobile Workers
- Office Workers
- Security Workers

Admins

- Infrastructure Admins
- User Admins
- Developers



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Transformation of Users

Consider users needs

Involve users in project

Use Key-User Framework

Implement required solutions

Explain and communicate blockers

Focus on benefits

Scope on applications

No IT without users

Users expect more

Business is the goal

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Transformation of Admins

Check todays roles

Provide future perspective

Explain and evangelize

Train and educate

Check processes and consider change

Move on to DevOps

Managed Service helps focussing

Growth mindset

Cloud Custodian

Focus on Business not IT

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Azure Migration Technical

"Transformation literally means going beyond your form"

Wayne Dyer

Azure Migration Technical

- Networking
  - VPN / Express Route
  - DNS and Routing
  - Latency and Bandwith
- Sizing
  - Right Sizing
  - Long Term Assessment

Azure Migration Technical

Azure Site Recovery

Infrastructure requirements

Attention: Busy workloads

3rd Party

e.g. Veeam Restore to Azure

Premium Disks Type	P4	P6	P10	P15	P20	P30
Disk size	32 GB	64 GB	128 GB	256 GB	512 GB	1024 GB (1 TB)
IOPS per disk	120	240	500	1100	2300	5000
Throughput per disk	25 MB per second	50 MB per second	100 MB per	125 MB per	150 MB per	200 MB per

ASR Replication Storage Target	Source Disk I/O Size	Source Disk write churn that than can be handled by ASR Service per disk
Standard storage	8K	2 MB/sec per disk
Premium P10 disk	8K	2 MB/sec per disk
Premium P10 disk	16K	4 MB/sec per disk
Premium P10 disk	32K	8 MB/sec per disk
Premium P20/P30 disk	8k	5 MB/sec per disk
Premium P20/P30 disk	16K	10 MB/sec per disk
Premium P20/P30 disk	32K	20MB/sec per disk

Azure Migration Technical

- Copy VHDs of VMs
  - Easy and less infrastructure requirement
  - High downtime
- Use Application Methods
  - SQL Replication
  - AD Replication

Version	Edition	Deployment	On-prem to Azure
SQL Server 2014 or 2012	Enterprise	Failover cluster instance	Always On availability groups
	Enterprise	Always On availability groups for high availability	Always On availability groups
	Standard	Failover cluster instance (FCI)	Site Recovery replication with local mirror
	Enterprise or Standard	Standalone	Site Recovery replication
SQL Server 2008 R2 or 2008	Enterprise or Standard	Failover cluster instance (FCI)	Site Recovery replication with local mirror
	Enterprise or Standard	Standalone	Site Recovery replication
SQL Server (Any version)	Enterprise or Standard	Failover cluster instance - DTC application	Not Supported

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Azure Migration Technical

- Automation
  - Use Azure Automation
  - Functions for switch
- Migration
  - yes / no ?
  - Better build from scratch?!

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Planning for the future…

"The future depends on what you do today."

Mahatma Gandhi

Planning for the future

End to end planning

save money and forecast cost

keep an eye on resources

better adoption of services

Happy users

Serverless

Continous learning

IaaS to PaaS

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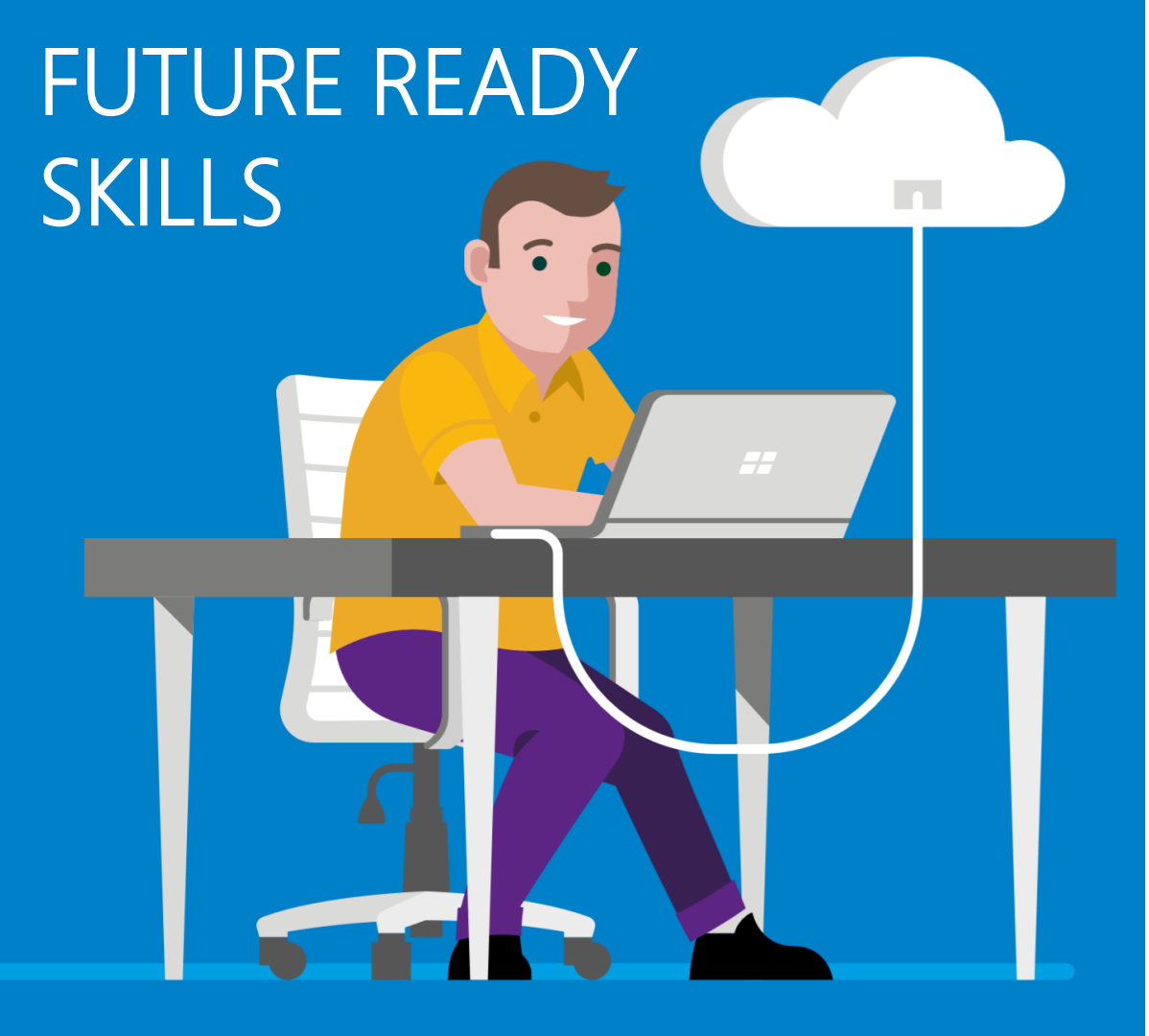
What's next?!

"On and on it goes, where it stops nobody knows."

The Kangaroo, Marc-Uwe Kling

FUTURE READY SKILLS



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Next Session 13:30 – 14:30

Infrastructure as Code

Marcel Zehner

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