Prerequisite check

1. Active Azure Subscription & Administrative Access
2. Visual Studio 2017 (Latest Update)
3. Azure SDK for Visual Studio 2017 (Latest Update)
4. Software Installation / Code to build / Binaries to deploy
5. Azure Storage Explorer (https://azure.microsoft.com/en-us/features/storage-explorer/)
6. Download Hack Workbook from https://github.com/SoftwareONETS/AzureWorkshops
7. SQL Server Management Studio

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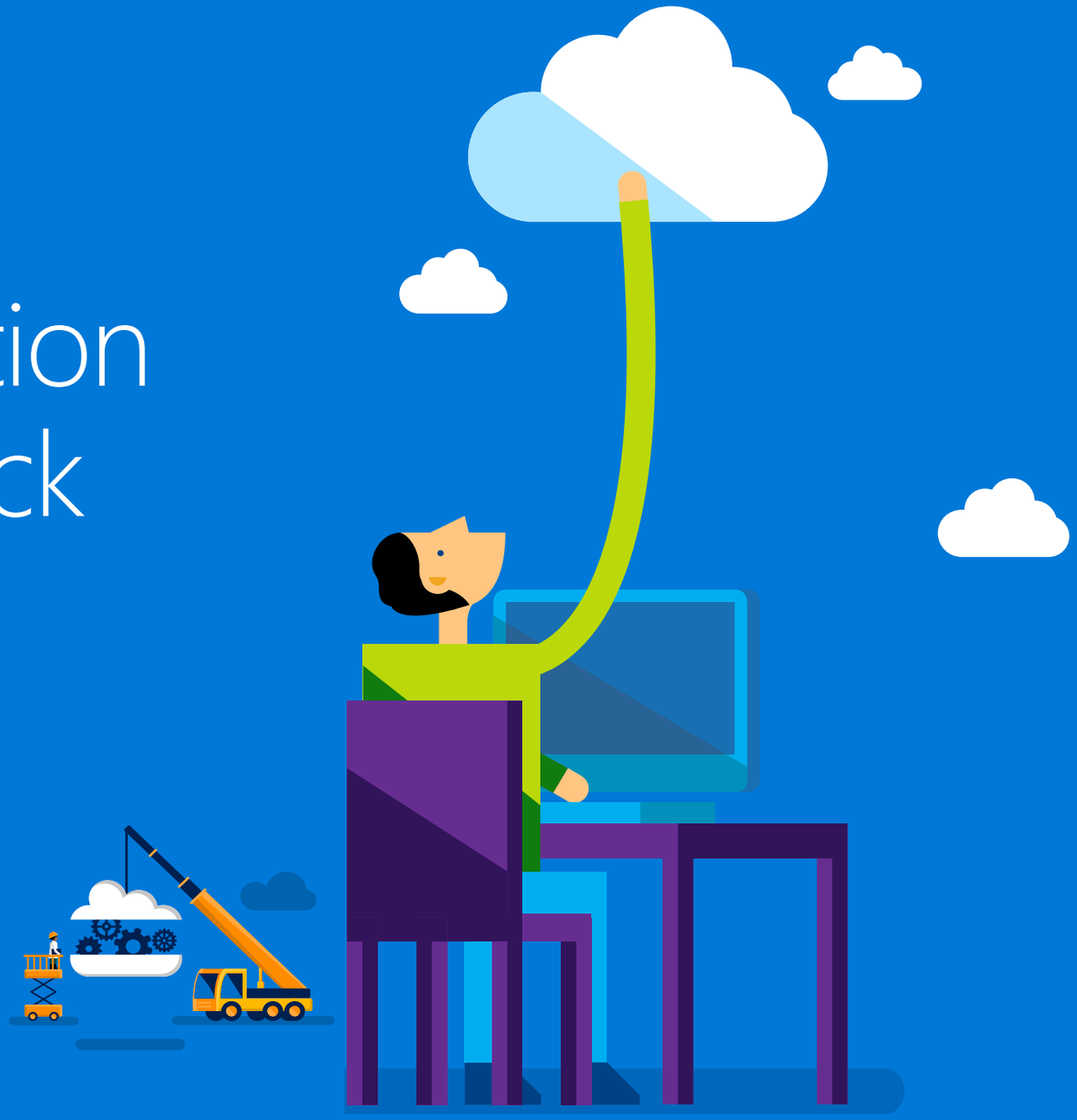
WIFI Access

Connect to the wireless network **MSFTGUEST**

- Open a browser and navigate to a web site to be redirected to the Captive Portal
- Click on Event Attendee Code and enter the access code:

Azure ISV: Application Migration (PaaS) Hack

Welcome to Microsoft, Reykjavik



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Introduction and Housekeeping

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Housekeeping

1. Fire Alarms
2. Emergency Exits
3. Toilets
4. Lunch and Dietary Requirements
5. Feedback forms
6. Working Environment

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Meet the team

Who we are and what we do

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30+ Years as a Trusted Advisor

Scale, Stability and Presence

Over **1,000,000** Users Migrated to Cloud

10,000+ Software Vendors

Acronis, Adobe, Autodesk, ca, Citrix, EVault, IBM, Kaspersky, McAfee, Microsoft, mimecast, mindjet, Oracle, Sophos, Symantec, TechSmith, Trend Micro, Veeam, vmware

Local Presence in **80+** Countries

- Global HQ in Stans, Switzerland
- Covering 145 countries
- 30 years of experience in software licensing
- 3000 certified technical & licensing consultants

SWO Company Facts

- $7B Revenue company, growing over 30% year over year
- 3,000+ Technology Experts; 35,000+ Customers
- Over 3,500 Engagements per Year for SAM, Procurement Services and Technology Services
- Seasoned Leadership with additional expertise added by KKR in 2015

Meeting your team

Who are you and what you do?

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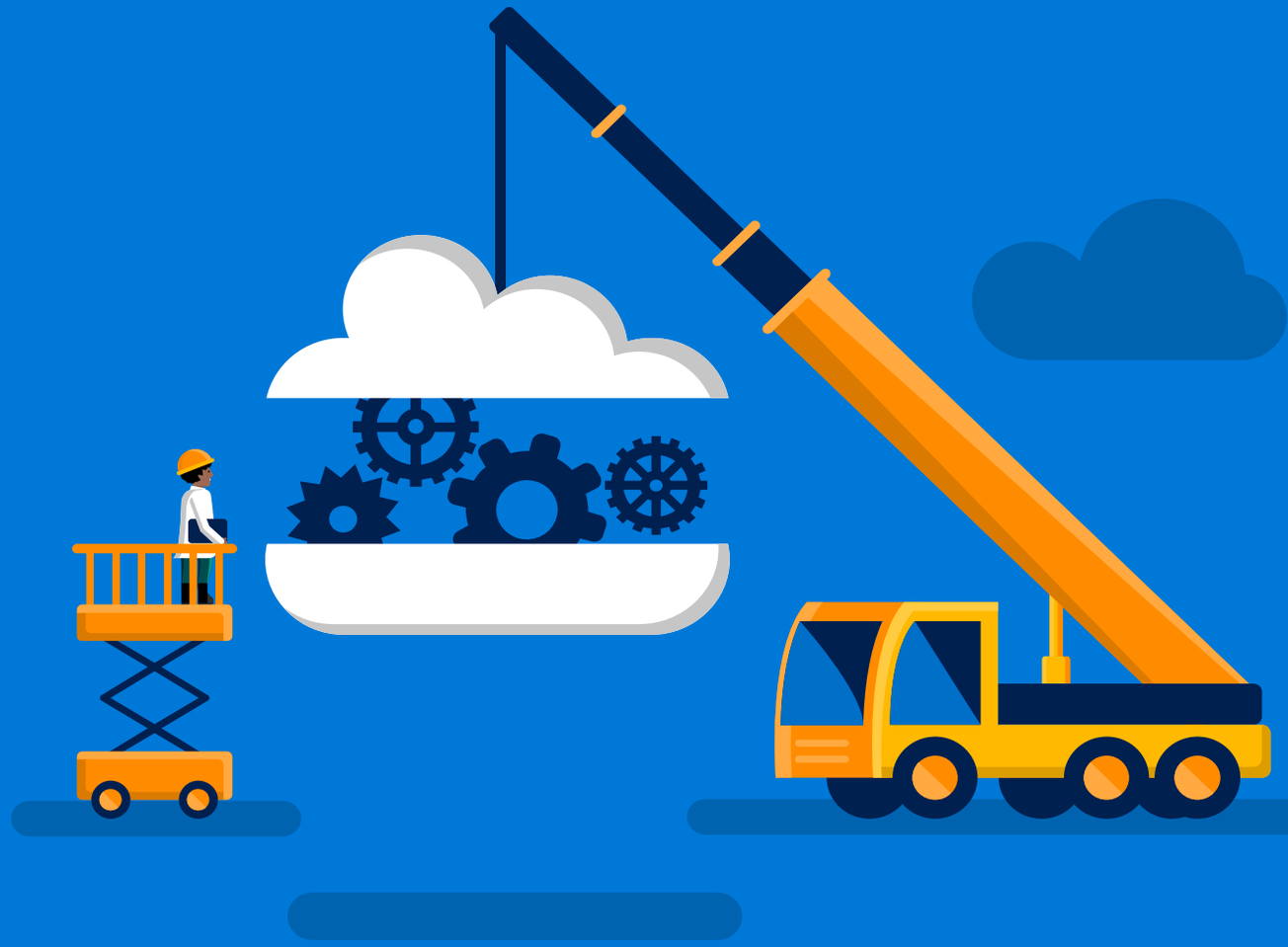
Day 1



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Day 1 Agenda

Let's show you how to build out Azure Solutions so you can build a pilot application workload.

Theory:
Azure Background (Regions, Services)
Azure Portal 101
Web Apps 101
Azure SQL 101
Hybrid Connection Options 101
API Apps 101

Practical: Then let's take a workload and move it.

Day 2 Agenda

Let's take your infrastructure and application scripts and use the platform and DevOps features of Azure to accelerate your deployments.

Theory:
Application Insights
Azure Functions, Logic Apps, & Power Apps

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Azure Background Regions, Availability, Services

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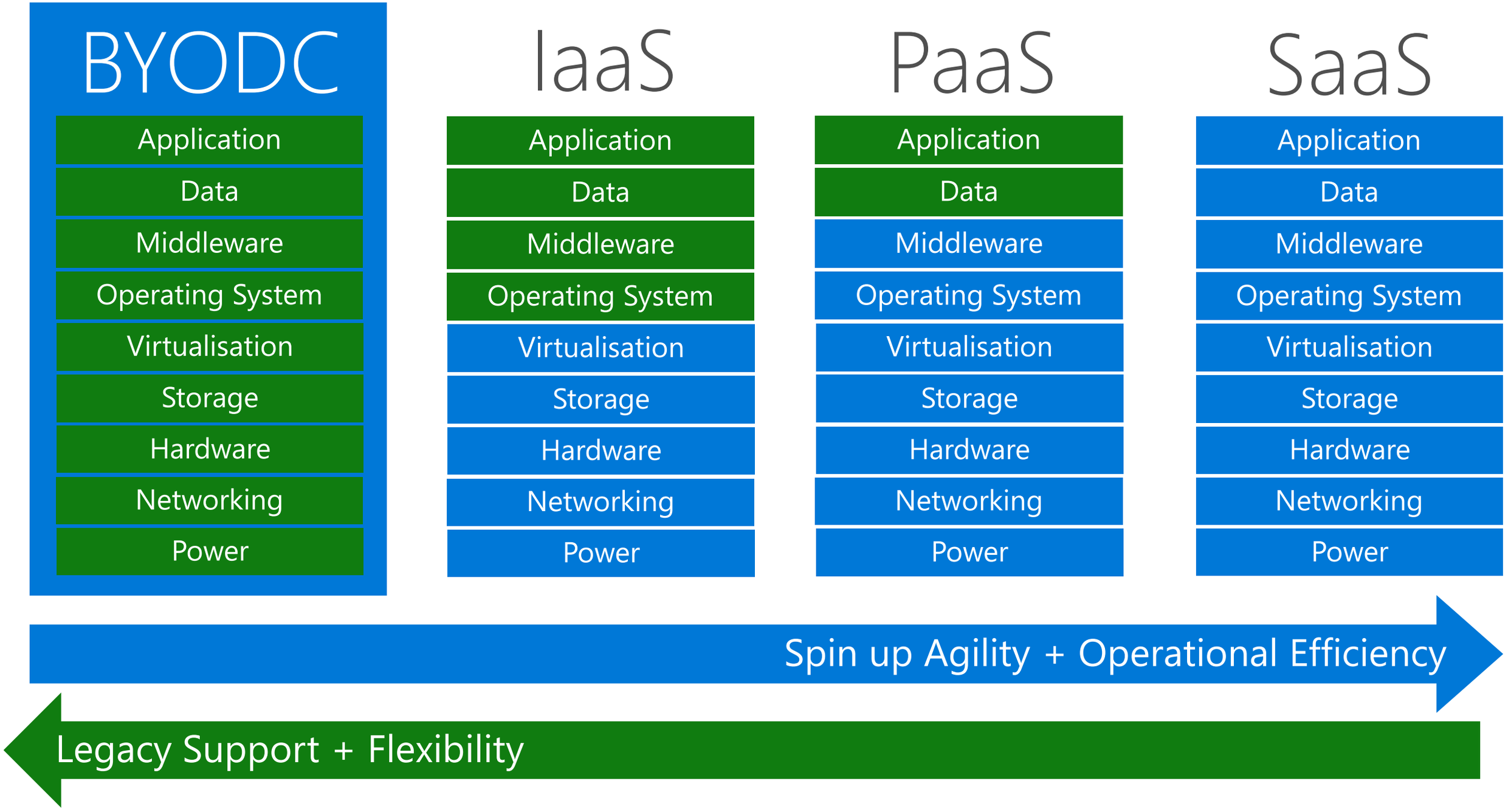
BYODC
Application
Data
Middleware
Operating System
Virtualisation
Storage
Hardware
Networking
Power
IaaS
Application
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Virtualisation
Storage
Hardware
Networking
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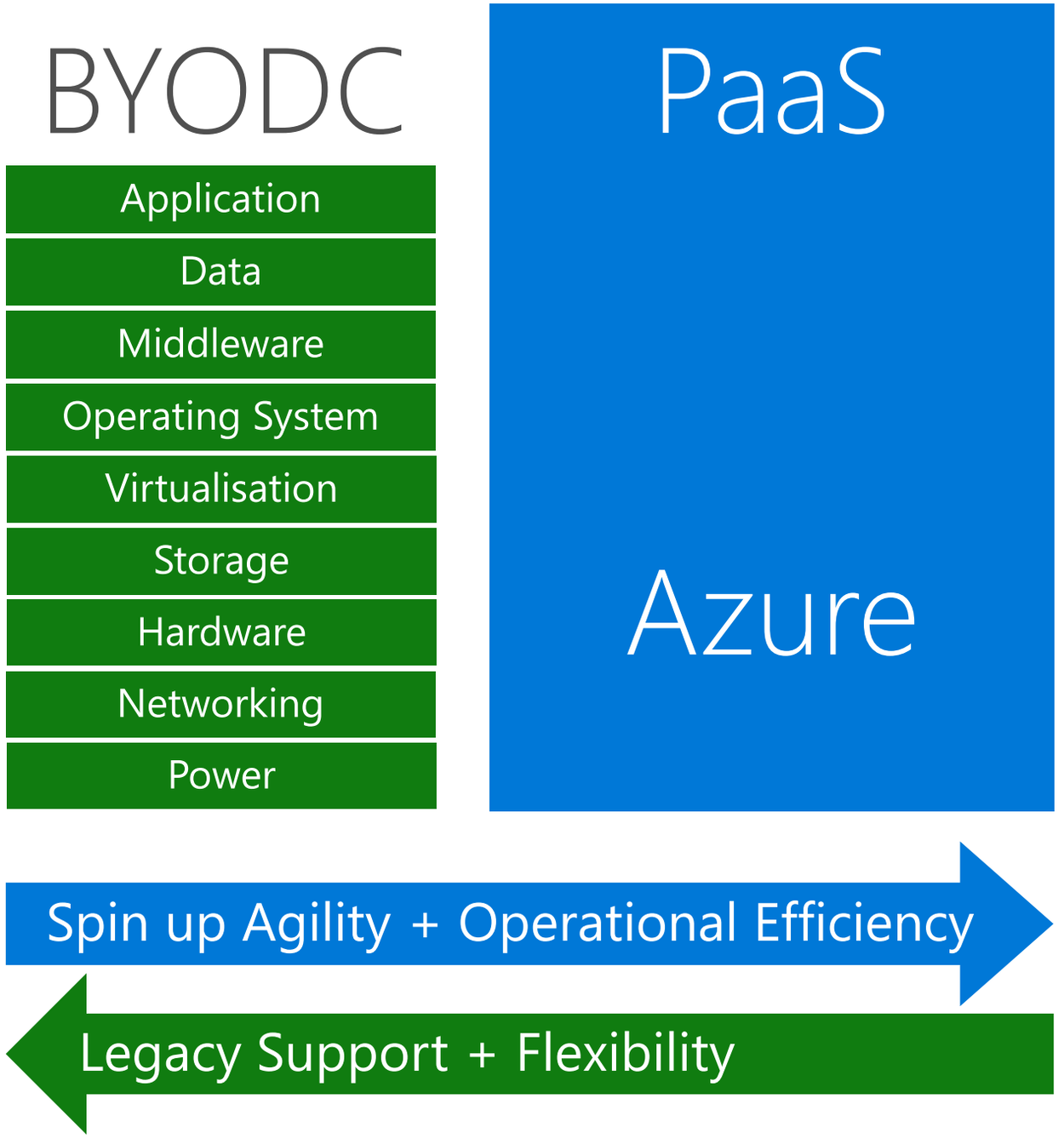
Spin up Agility + Operational Efficiency
Legacy Support + Flexibility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BYODC

Application

Data

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Operating System

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BYODC

PaaS

Application

Data

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Hardware

Networking

Power

Azure

Spin up Agility + Operational Efficiency

Legacy Support + Flexibility

Azure Regions

Azure has 34 regions globally available, with another 4 announced. Today we will focus on the European regions.

Main Regions in Europe currently consist of :-

- West Europe (Amsterdam)
- North Europe (Dublin)
- UK South (London)
- UK West (Cardiff)
- Germany Northeast
- Germany Central

With 2 French Regions coming soon

https://azure.microsoft.com/en-us/regions/

Azure Service Availability per region

Not all services are available in each region, a matrix is available from the below link.

West Europe is the most feature complete, followed by North Europe, then UK South.

For most IaaS workloads this doesn't matter, as most of the significant network and storage features are available across the board in Europe, only the compute instances available differ between regions as far as IaaS is concerned.

https://azure.microsoft.com/en-us/regions/services

Power and Hardware resilience

Azure datacentres are designed to be the most cost and power effective they can possibly be at enormous scale, this results in a design that is optimised to recover quickly from hardware failures, rather than prevent them from ever happening.

As a result of this design you need to consider your application architecture carefully in terms of service level.

We will now give an SLA for a single-instance virtual machine, but ONLY if you use Premium Storage disks to allow the Virtual Machine to reboot quickly in the case of an outage, and this SLA will exclude maintenance windows.

Consider the concepts of fault and update domains within availability sets.

New* - Consider availability zones for future deployments! (Preview - East US 2 & West Europe)

If you can use 2 instances of your application behind a load-balancer this will give significant benefits in terms of uptime and availability.

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https://azure.microsoft.com/en-us/regions/

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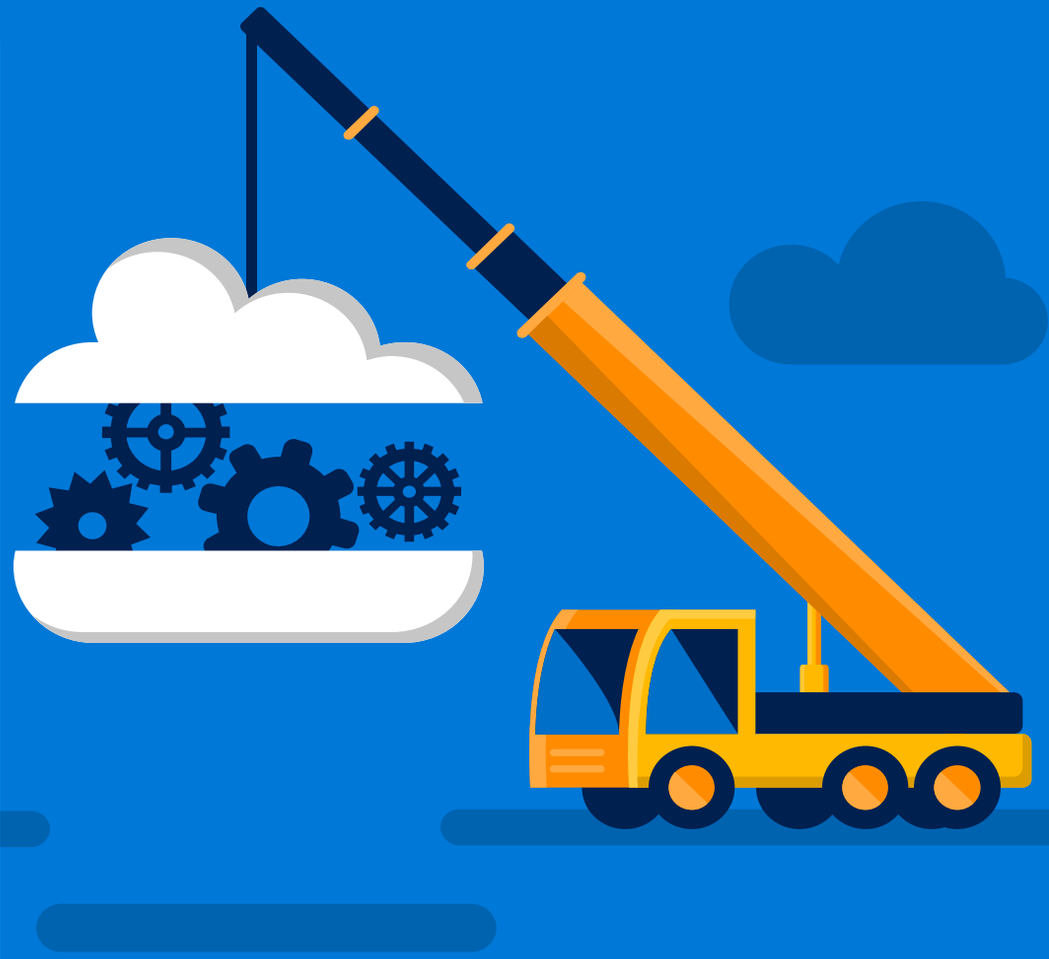
Azure Portal 101

- Identity and logon
- Resources and groups
- Marketplace
- Role Based Access Control



https://portal.azure.com

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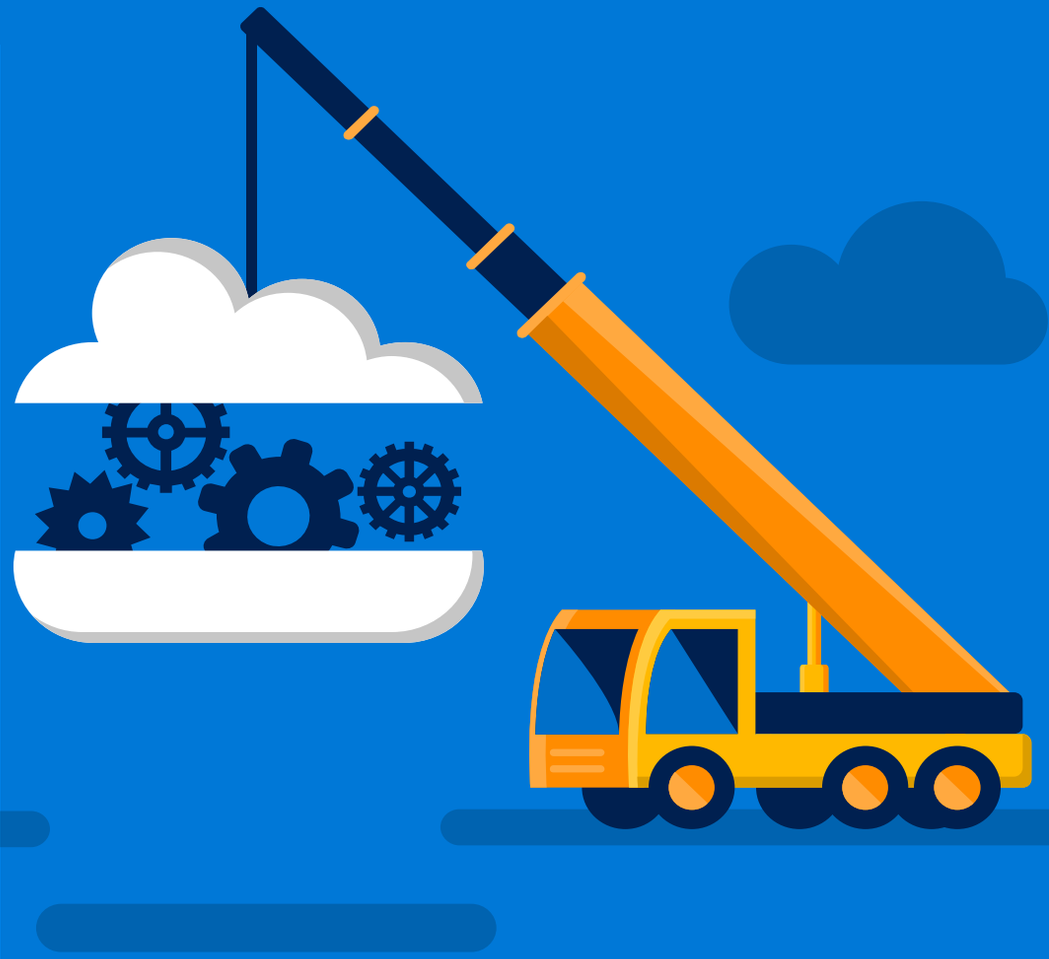
Web Apps 101

- App Service Plans
- Windows or Linux
- Built-in Auto-scale and load balancing
- Deployment Slots
- Continuous Deployment



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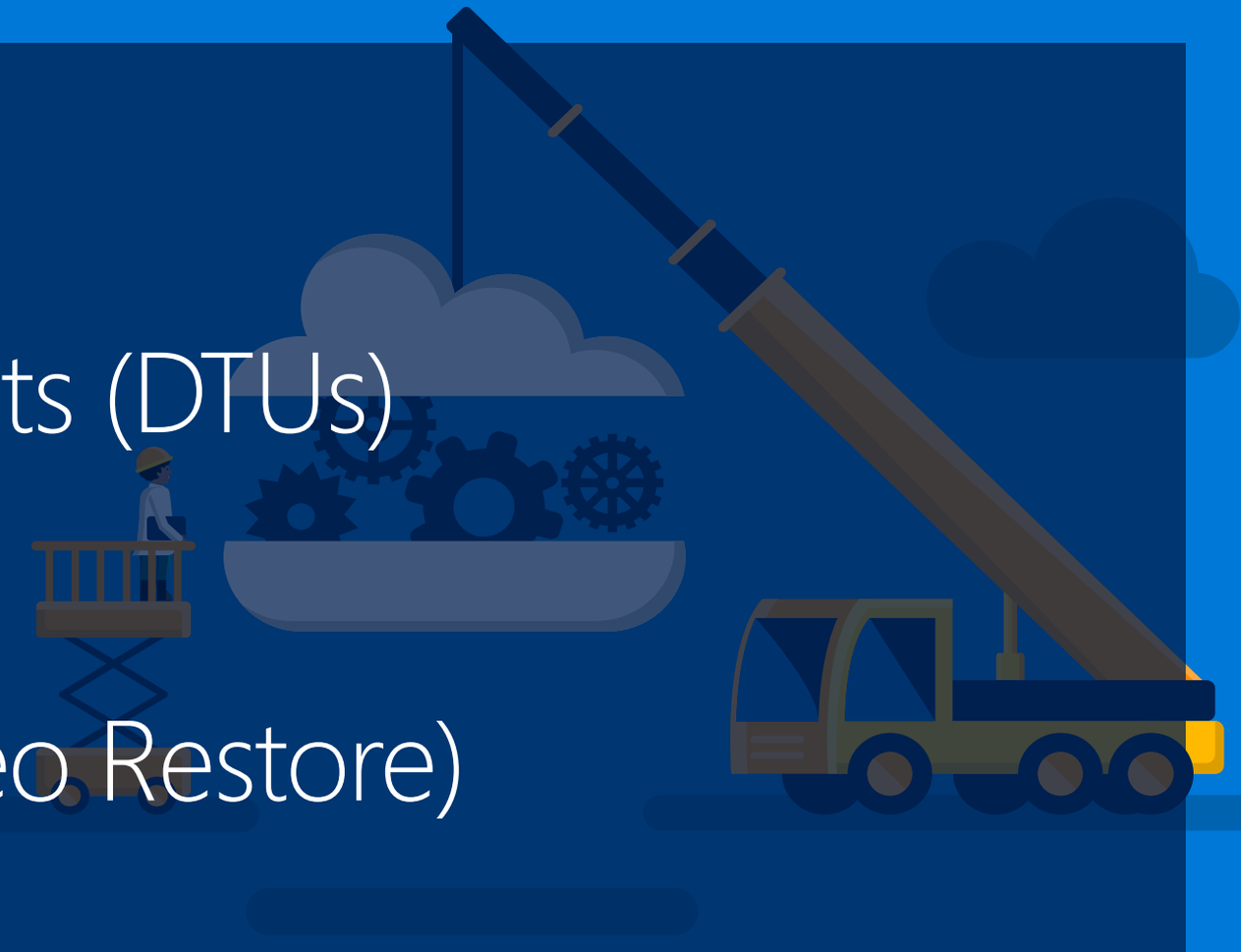
Azure SQL 101

- SQL-as-a-Service
- Database Transaction Units (DTUs)
- Elastic Pools
- 3 Service Tiers
- Point in Time Restore (Geo Restore)
- Long Term Retention
- Geo-replication (Up to 4 readable secondary DBs)



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Azure SQL For The Win?

- Azure SQL
- SQL in VMs (IaaS)
- Managed Instance Azure SQL (Preview)

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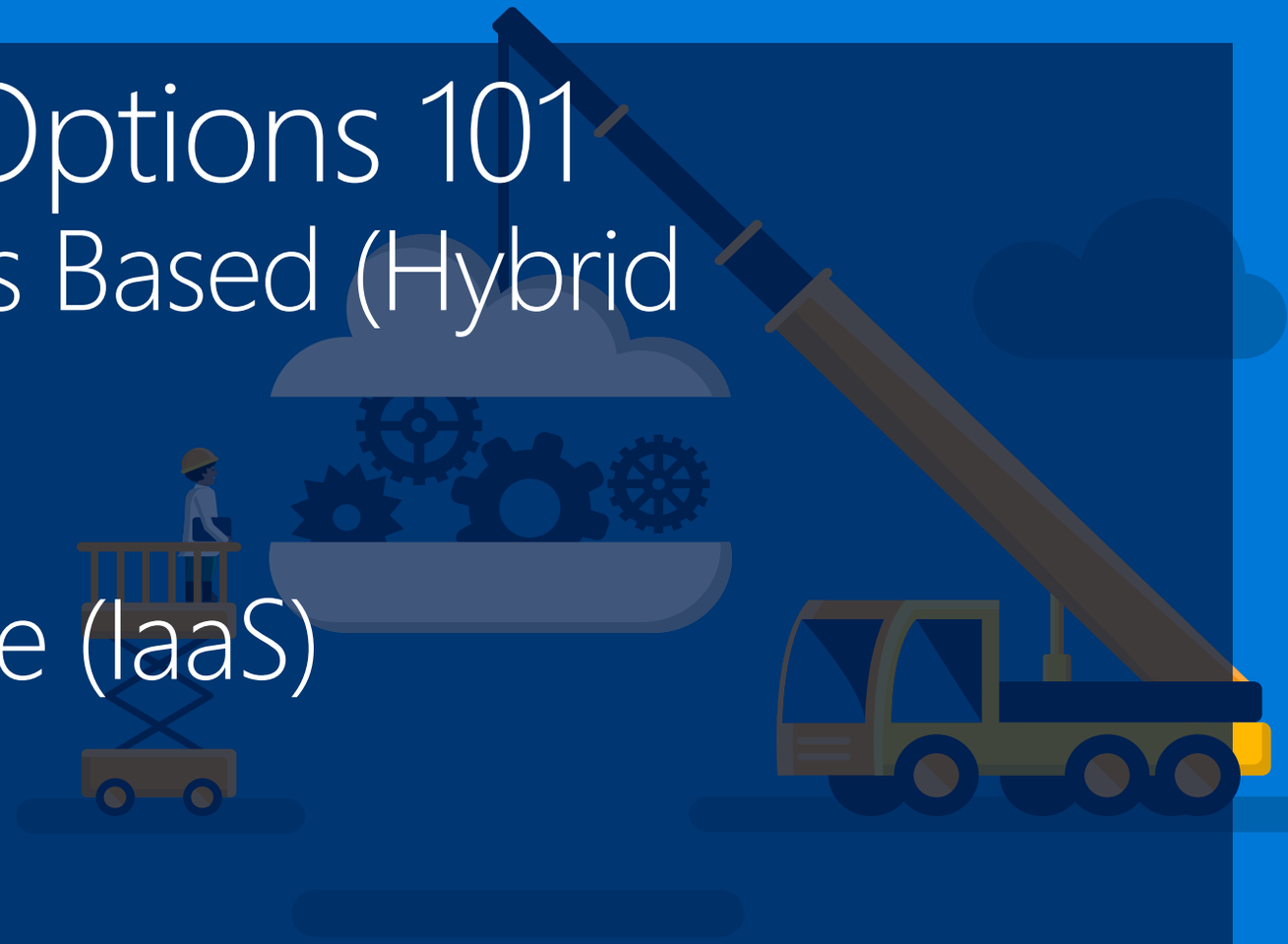
Hybrid Connection Options 101

- TCP Bridge / Service Bus Based (Hybrid Connections)
- Service Bus WCF Relay
- S2S VPN & ExpressRoute (IaaS)



Deploying the PoC – Exercise 1

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Azure AD 101

- IDaaS
- Seamless integration with MFA
- 3 Service Tiers
- Integration with SaaS apps
- Sync existing Active Directory users

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Identity & Security – Exercise 2

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B2C 101

- Use Social Accounts, emails and custom IdPs
- Customise customers experience
- Integrates with existing systems (CRM etc)
- Support Open Standards

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Code Samples here:
https://github.com/Azure-Samples?q=b2c

Azure B2C – Exercise 3

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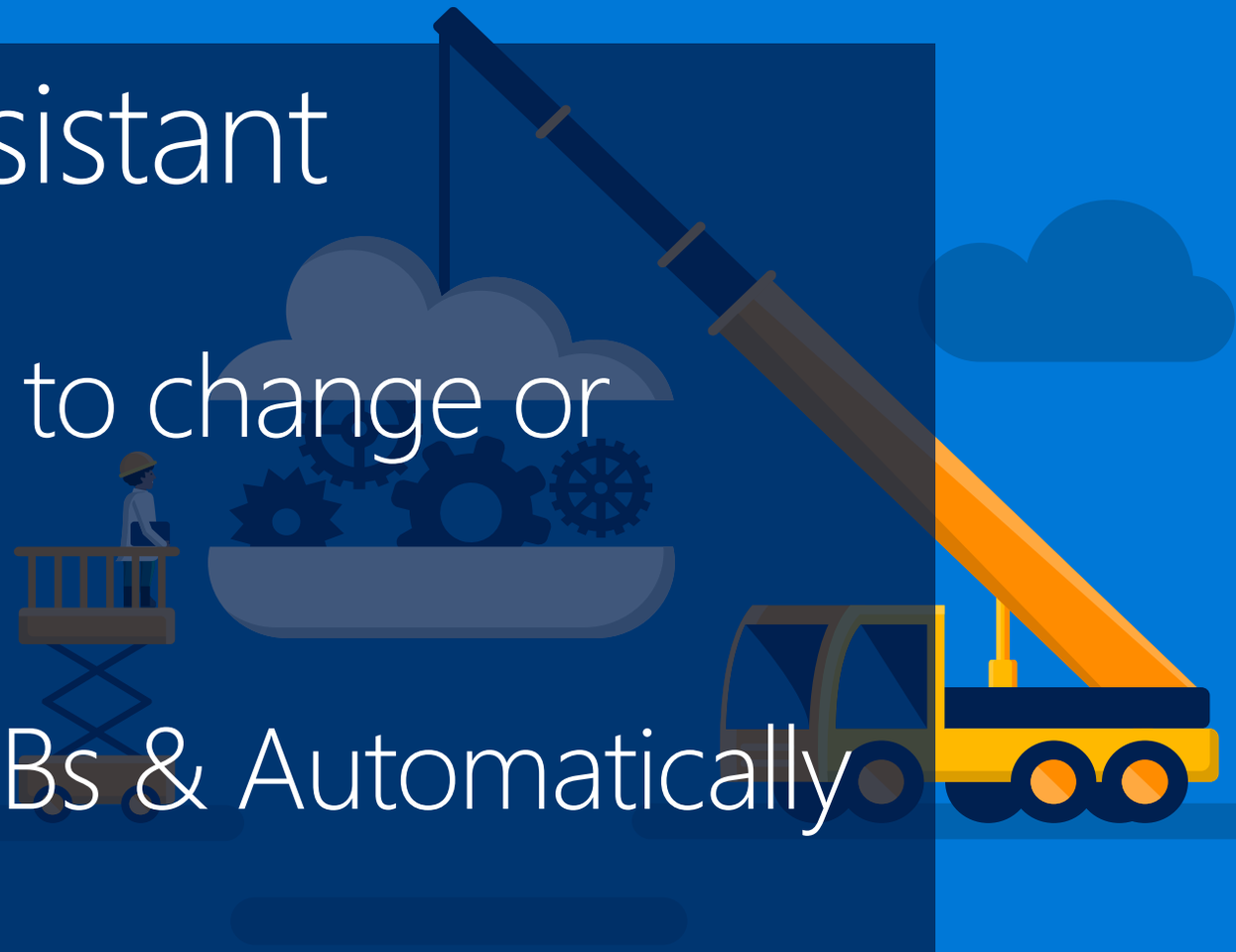
Website Migration Assistant

- High Level Assessment
- Details elements required to change or unsupported features
- Provide an output report
- Creates Web Apps and DBs & Automatically Syncs content



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Data Migration Service & Assistant

- Assessment & Pre-migration steps
- Self-guided migration method
- Fixes performance and stability issues
- Use larger Azure SQL for migration effort then scale down
- Support SQL 2005 +

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Exercise: Planning and Whiteboarding

Planning Your App on Azure

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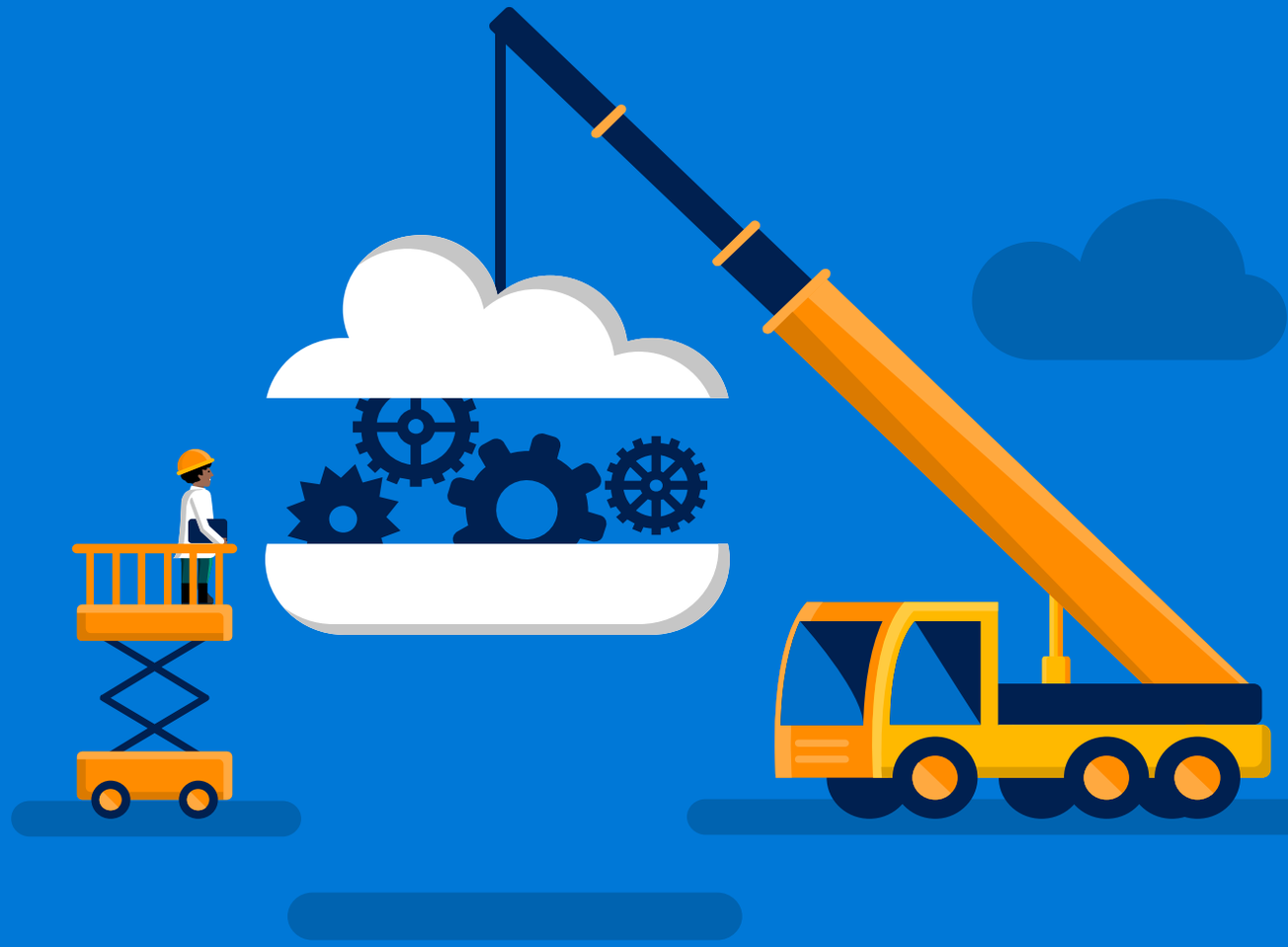
Let's do it !

Manually Deploying Your App on Azure

Day 2



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Day 2 Agenda

Let's take your infrastructure and application scripts and use the platform and DevOps features of Azure to accelerate your deployments.

Theory:
Application Insights
Azure Functions, Logic Apps, & Power Apps

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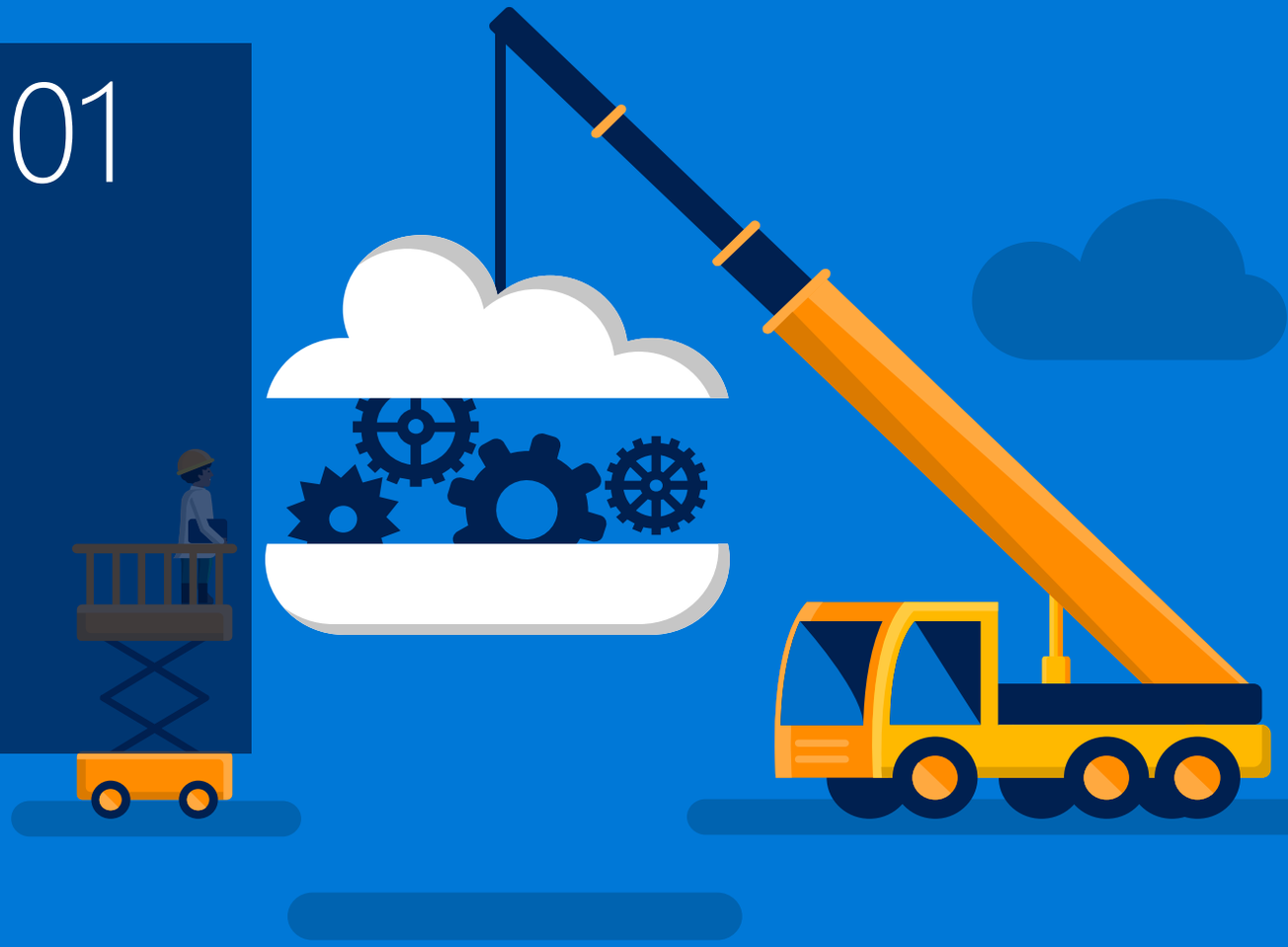
Application Insights 101

- Powerful diagnostic Instrumentation
- Cloud based
- Troubleshoot on the fly



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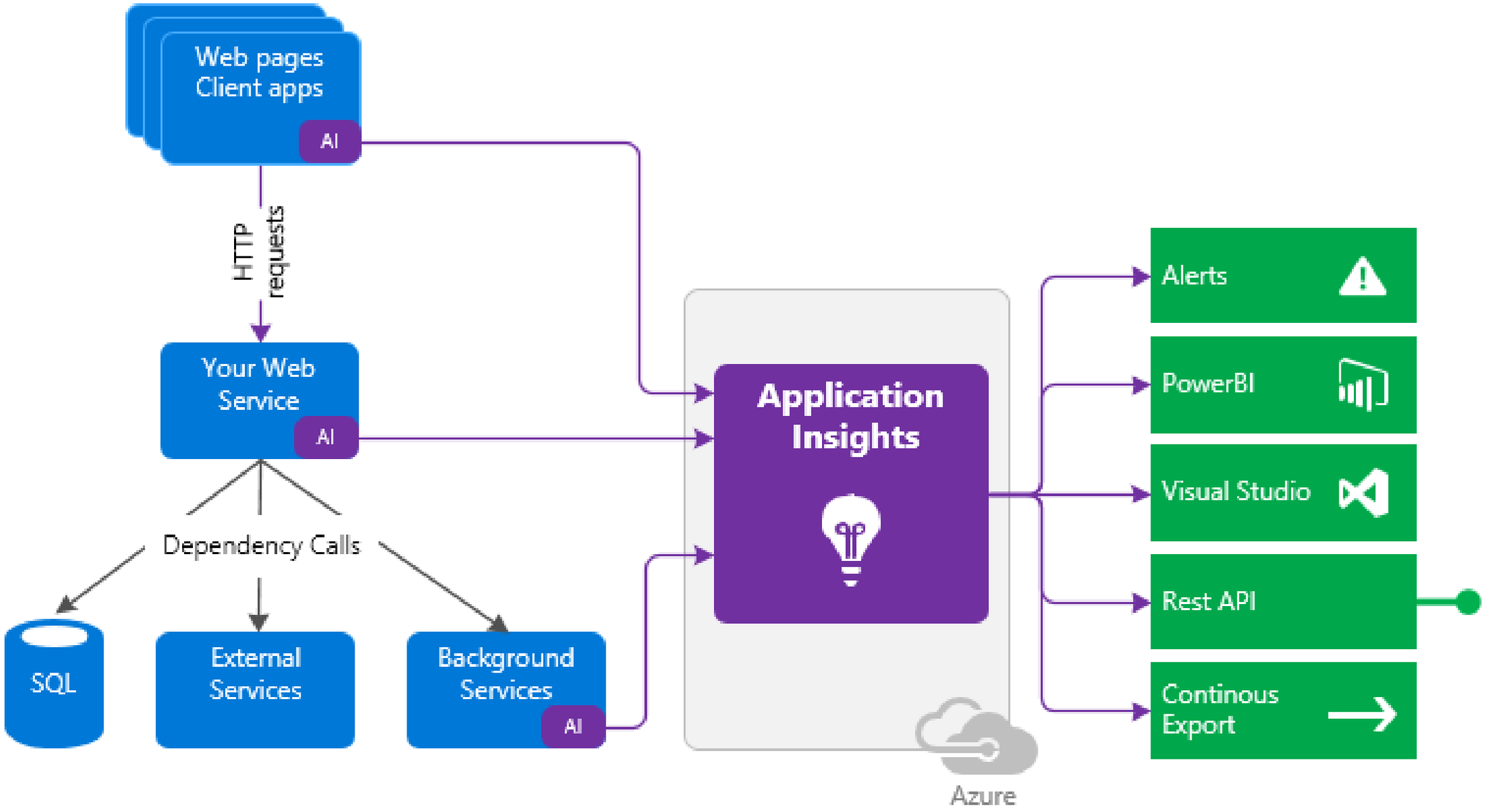
Web pages
Client apps
AI
HTTP requests
Your Web Service
AI
Dependency Calls
SQL
External Services
Background Services
AI
Application Insights
Azure
Alerts
PowerBI
Visual Studio
Rest API
Continous Export

- **Request rates, response times, and failure rates** - Find out which pages are most popular, at what times of day, and where your users are. See which pages perform best. If your response times and failure rates go high when there are more requests, then perhaps you have a resourcing problem.
- **Dependency rates, response times, and failure rates** - Find out whether external services are slowing you down.
- **Exceptions** - Analyse the aggregated statistics, or pick specific instances and drill into the stack trace and related requests. Both server and browser exceptions are reported.
- **Page views and load performance** - reported by your users' browsers.
- **AJAX calls** from web pages - rates, response times, and failure rates.
- **User and session counts**.
- **Performance counters** from your Windows or Linux server machines, such as CPU, memory, and network usage.
- **Host diagnostics** from Docker or Azure.
- **Diagnostic trace logs** from your app - so that you can correlate trace events with requests.
- **Custom events and metrics** that you write yourself in the client or server code, to track business events such as items sold or games won.

Application Insights– Labs pt 4

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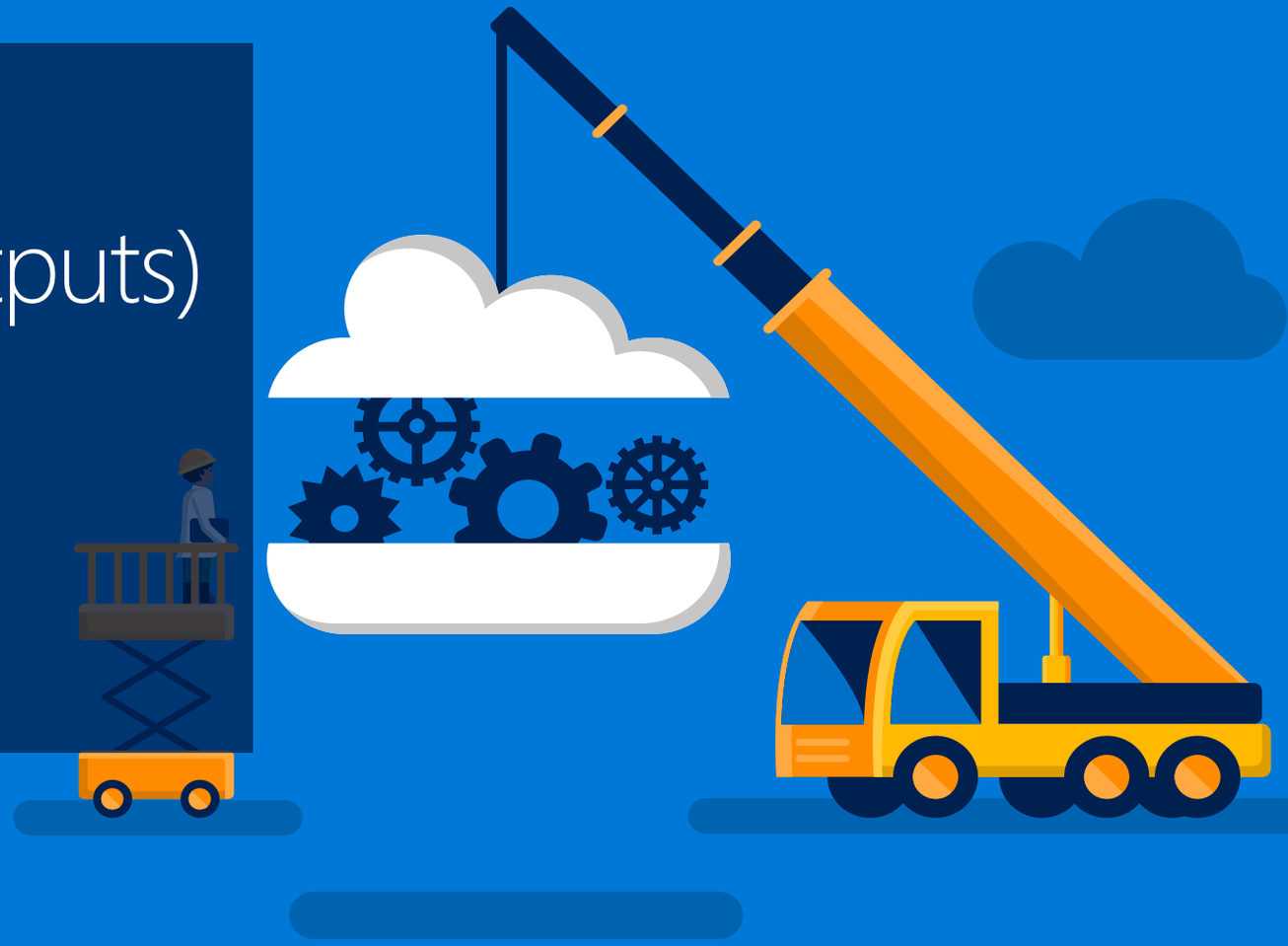
Azure Functions 101

- Event Driven (Inputs & Outputs)
- Multi-language Support



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Common Use Cases

- **REST APIs**
- **Integration logic and “glue”**
- **Scheduled tasks & app maintenance jobs**
- **Data ingestion / transform**
- **Monitoring**
- **Manage Alerts**
- **Auto Scaling**

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Logic Apps 101

- Codeless
- Visual Designer
- Pre-built Templates
- Built-in API Connectors (Triggers or Actions
- Connect On-Prem & Cloud Apps

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Functions vs WebJobs & Logic Apps

- **Logic Apps are codeless and workflow based, optimised for integration tasks**
  - **Aimed at non-developers**
- **If you require highly customised/specialised logic use Functions**
- **Functions are natural evolution of WebJobs**
  - **For simple task scheduling on existing Web Apps you can still use WebJobs**
- **Logic Apps & Functions are designed to be used together**

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Power Apps 101

- Even More(!) Codeless
- Point and click app builder (Cloud and Windows)
- Pre-built Templates
- So easy you can give it to anyone to build apps

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Azure Functions & Logic Apps – Exercise 5

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Exercise: Planning and Whiteboarding

Automatically Deploying Your App on Azure from a template

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Let's do it !

Automatically Deploying Your App on Azure from a template

Cloud SMART Architecture

Architect for the Cloud

Have you moved a Workload to Azure?

- Our Cloud SMART Architecture will review and assess your existing workloads you've deployed to cloud
- Why? To give you insights into how to improve your workloads design and use of cloud services
- We provide advice & best practice to enable you understand if your workloads align to cloud best practices
- We offer this as a one-off or as part of an ongoing managed service

Cloud SMART Architecture

Architect for the Cloud

Don’t need it?.....

- 100% of our engagement have identified critical security issues
- 100% of our engagements have shown financial improvements
- 75% had inadequate DR
- 80% had one or more virtual machines with no anti-virus
- 75% didn’t even have Multi-factor authentication configured
- 10% said they’d do the remediation's themselves…
- …of that 10%, 100% had made less than 3 changes in the following 3 months

Can you afford not to do it?

Evaluation Forms

We hope you have enjoyed the days, we have one last ask of you.

Please out your evaluation forms to give us feedback on what we did right and how we can improve the sessions next time.

Your feedback is critical to making more of these sessions a success !