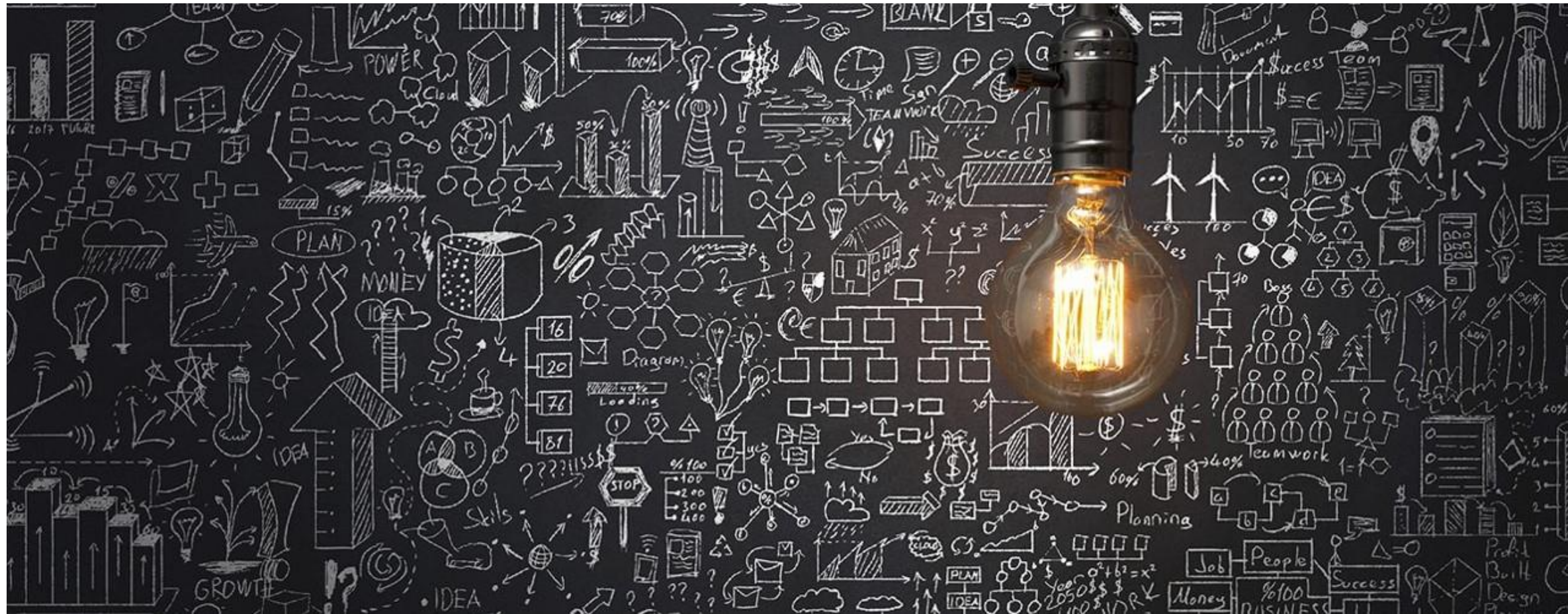


Power BI Embedded

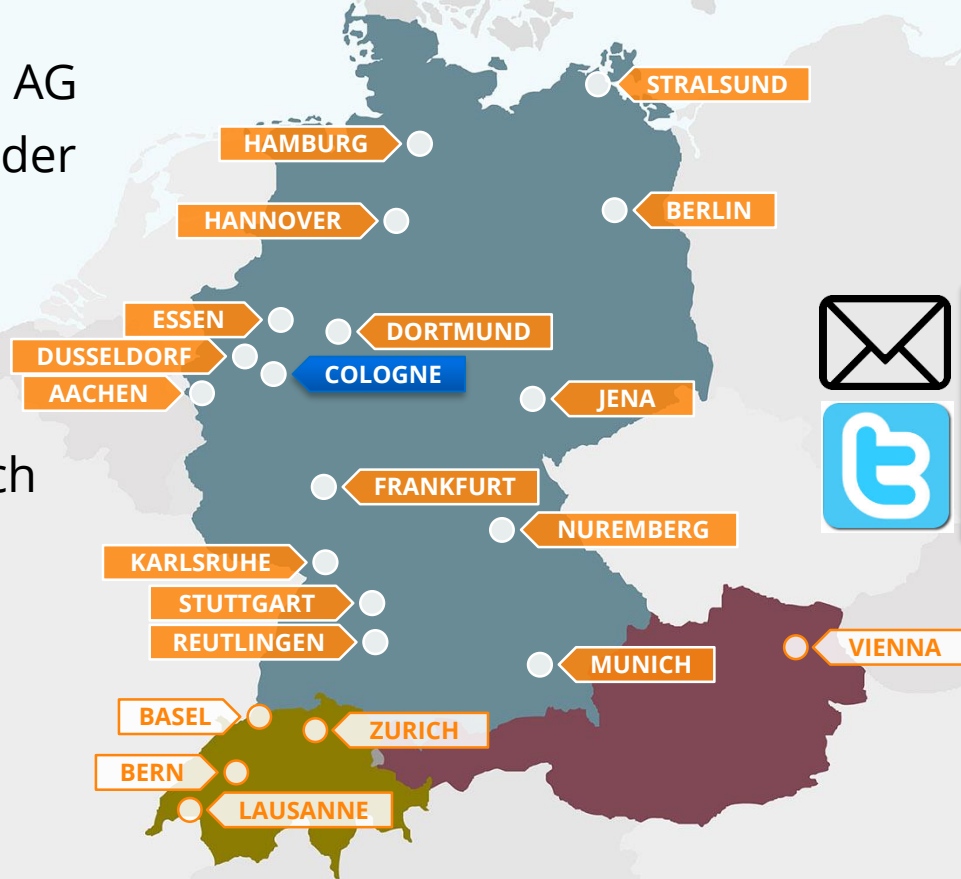
... a technical introduction



adesso AG

Philipp Lenz

- Senior Consultant
Microsoft BI @ adesso AG
- SQL PASS Chapter Leader
Mittelrhein, Coblenz
- Power BI User Group
Founder & Leader,
Cologne
- Scrum Master, IR Coach
- Speaker & Author



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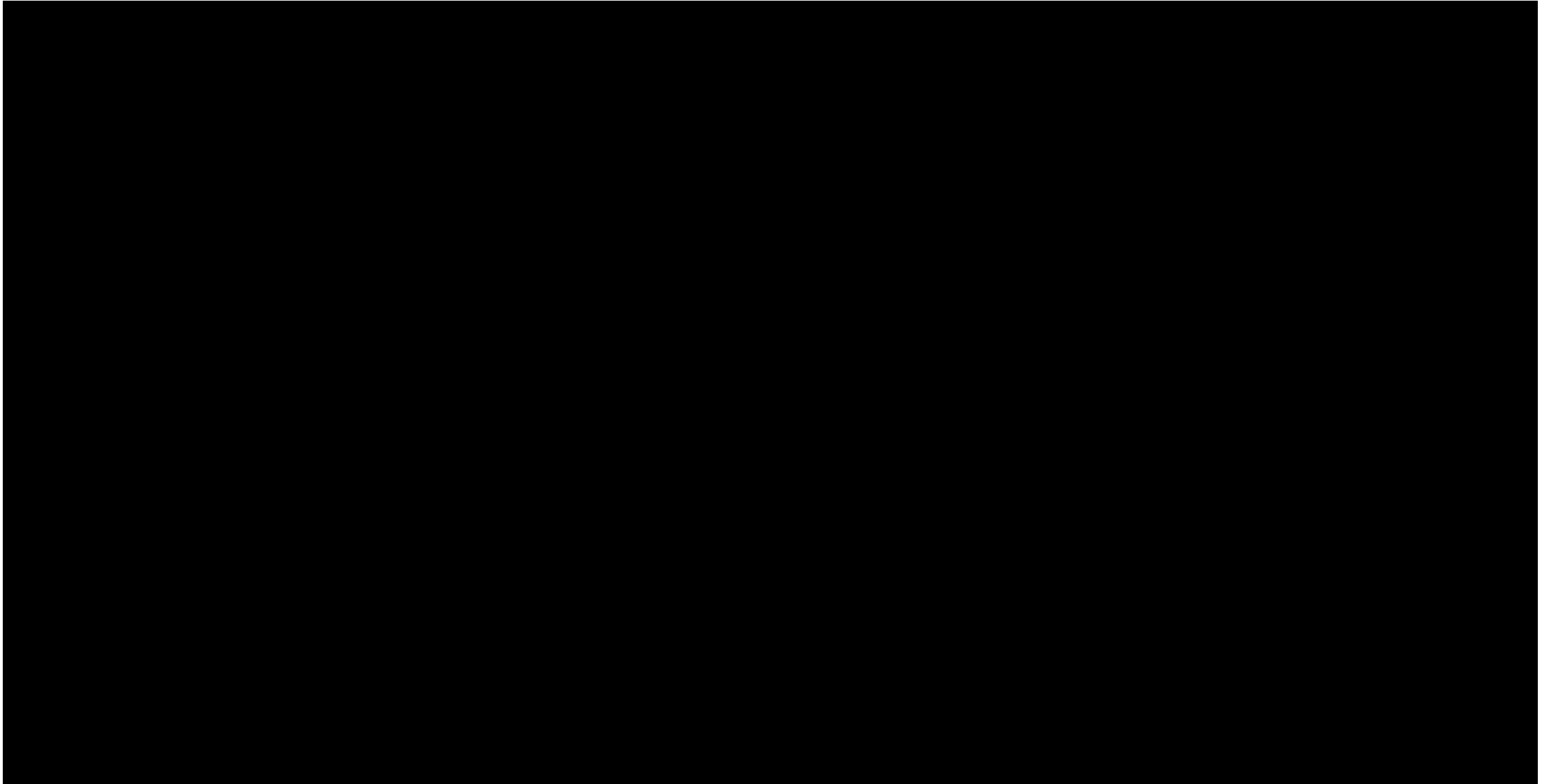


@lenz_philipp

Agenda

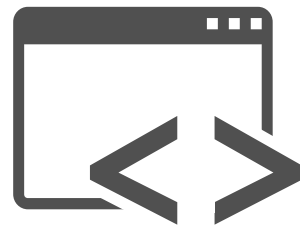
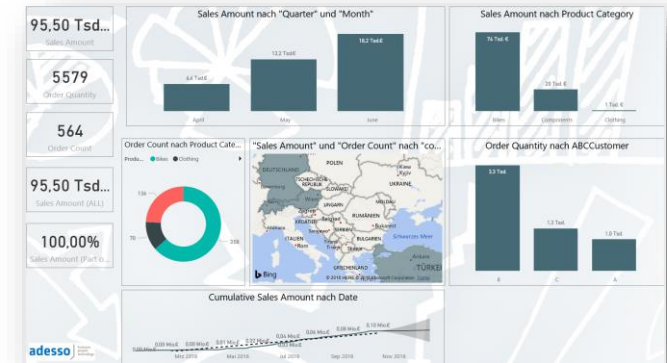
- › Embedding
 - » Options
 - » Demo
 - » Licensing
- › Developer Capacities
 - » Demo
- › Administration
 - » Monitoring

No fantastic presentation without a cute kitten video?

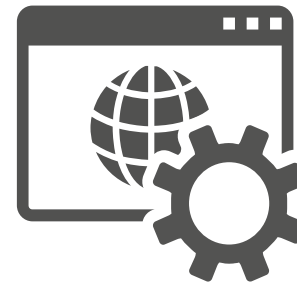


Power BI – Some main facts that belong to embedding:

- Cloud based infrastructure
 - » Offline compatibilities cannot be used (Reporting Services)
- Self-Service-BI Platform can be integrated
- Simple and intuitive frontend
- Support for mobile devices
- Continuous Development – every month an update (online)



ISV Application



Power BI Embedded

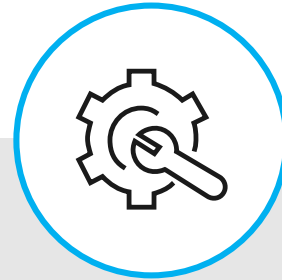
Why embedded analytics?



For your business

Achieve faster time to market with your application by minimizing development efforts

Stand out in the market place by harnessing the power of a world-class analytics' engine

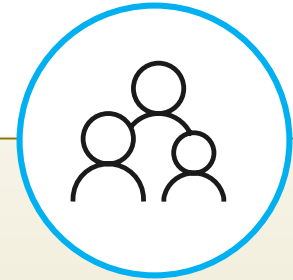


For your developers

Spend time focusing on your product instead of developing analytics features

Rapidly meet customer report demands without development

Leverage seamless integration with other Microsoft technologies like Visual Studio



For your customers

Generate insights through easy-to-navigate data-exploration based on their requirements from anywhere

Help customers make quick, informed decisions in context

Provide actionable insights all users including business executives, power users, and analysts

Embedding – the right choice matters

App owns data

- › Your report
 - » ... doesn't need any (hard) authentication
 - » ... doesn't (need) to know the user in your AAD
- › You want to embed for your customers

→ Embedding for ISV's

- requires minimum one Pro-License for the service account and capacity licensing

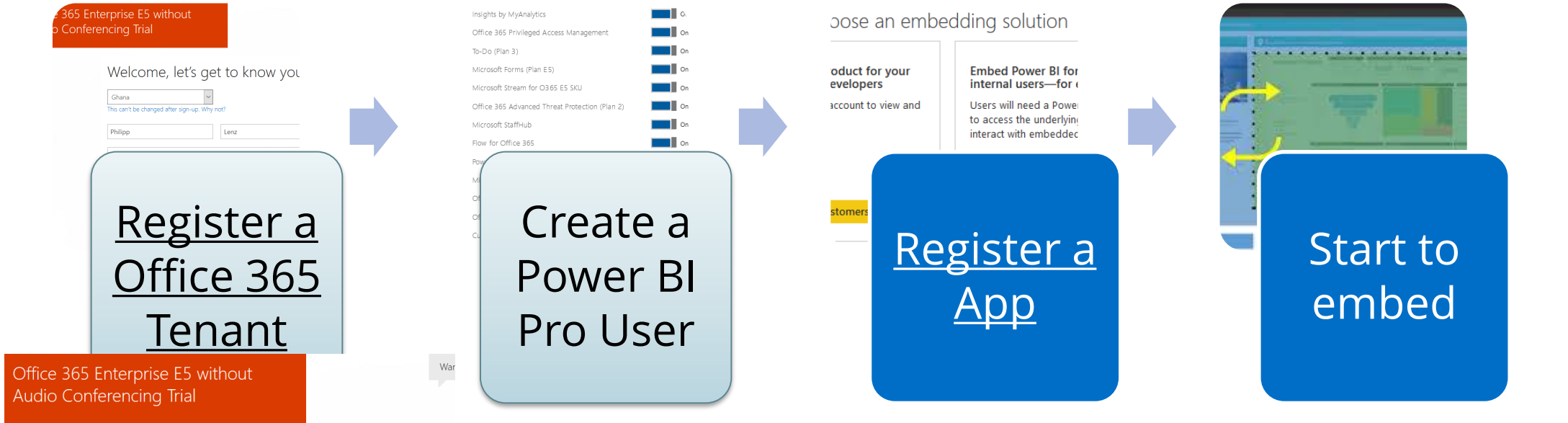
User owns data

- › Your report
 - » needs to know the users in your AAD
- › You want to embed for your organization
- › Your users have Pro-License or Premium compatibilities

→ Embedding for your organization

- Requires Pro-Licenses for every user or Premium capacities

Infrastructure / The needed base – Step by Step



Office 365 Enterprise E5 without Audio Conferencing Trial

Registration Form: Welcome, let's get to know you. Location: Ghana. Name: Philipp Lenz. Email: philipp.lenz@adesso.de. Phone: 0152 22 63 44 29. Company: adesso AG. Size: 1000+ people.

Active users: Home > Active users. List includes Philipp Lenz (philipp.lenz@pbim001.onmicrosoft.com).

Product licenses: Location: Ghana. Office 365 Enterprise E5 without Audio Conferencing (24 of 25 licenses available). Other licenses include Insights by MyAnalytics, Office 365 Privileged Access Management, To-Do (Plan 3), Microsoft Forms (Plan E5), Microsoft Stream for O365 E5 SKU, and **Power BI Pro**.

Demo

a)





Which is right for you

SKUs tailored for your needs

	"A" SKU	"EM" SKU	"P" SKU
Purchase	Azure	office	office
Use cases	<ul style="list-style-type: none"> 1. Embed content in your own application 	<ul style="list-style-type: none"> 1. Embed content in your own application 2. Share content with Power BI FREE users outside Power BI 	<ul style="list-style-type: none"> 1. Embed content in your own application 2. Share content with Power BI FREE users outside Power BI 3. Share content with Power BI FREE users through Power BI
Billing	Hourly	Monthly	Monthly
Commitment	No Commitment	Monthly/ Yearly	Monthly/ Yearly
Differentiation	Full elasticity- can scale up/ down, pause/ resume resources in Azure portal or through API	Can be used to embed content in SharePoint Online and Microsoft Teams	Combine embedding in applications and use the Power BI Service in the same capacity

Power BI Capacity Pricing

Pricing starts at \$750/month, or about a \$1/hour

Name	Virtual Cores	Memory	Peak Renders per hour
Power BI Embedded A1	1	3 GB RAM	1–300
Power BI Embedded A2	2	5 GB RAM	301–600
Power BI Embedded A3	4	10 GB RAM	601–1,200
Power BI Embedded A4	8	25 GB RAM	1,201–2,400
Power BI Embedded A5	16	50 GB RAM	2,401–4,800
Power BI Embedded A6	32	100 GB RAM	4,801–9,600

Dedicated capacity – A-SKU

Home > Power BI Embedded > em01

Power BI Embedded
adesso Group

+ Add Edit columns More

Filter by name...

NAME ↑↓

- em01
- em02

em01
Power BI Embe...

Search (Ctrl+...)

- Overview
- Activity log
- Access control
- Tags
- Diagnose and

Scale

- Pricing tier

Settings

- Quick Start

Edit workspace

Name
PBI_PLE

Privacy
Private - Only approved members can see what's inside

Members can edit Power BI content

Workspace members
Enter email addresses
Add

philipp.lenz@adesso.de Admin

Advanced ^
Dedicated capacity ⓘ
 On

Choose an available dedicated capacity for this workspace
em01 - North Europe

[Learn more about Premium capacity](#)

Workspace Connection
powerbi://api.powerbi.com/v1.0/myorg/PBI_PLE
Copy

*** Starti
Starting...

Assign workspaces

em01

Apply to:

- Workspaces of which you are an admin
- Specific workspaces
- The entire organization's workspaces ⓘ

Workspaces

PBI_PLE X Enter name of workspace

ⓘ You can only assign workspaces of which you are an admin to be part of a dedicated capacity. Power BI admins can assign any workspace to be part of a dedicated capacity. [Learn more](#)

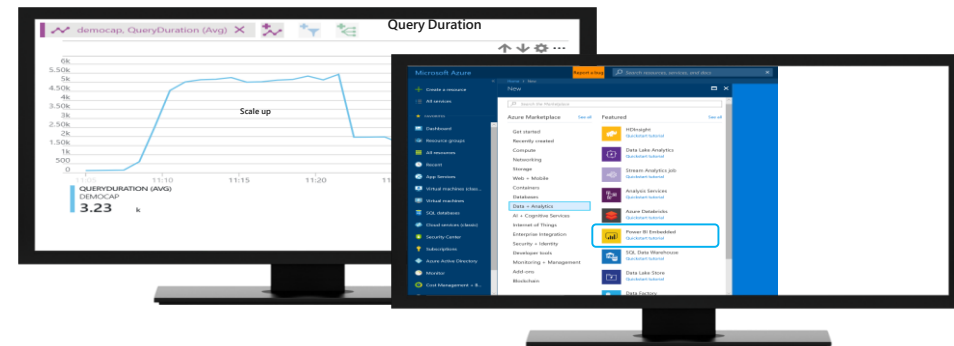
Demo

JavaScript APIs



Scaling & Monitoring

- › Power BI Premium Capacity Metrics App
- › Monitoring via the Azure Portal
 - » Audit Logs
 - » Up- and Down Scaling via Azure Automation
 - » Automatic scaling via Azure Automation, scale up or down by user metrics, depending by the workloads
 - » Shutdown on non working times - start services on working times



Developer resources

Developer docs

<https://powerbi.microsoft.com/en-us/documentation/powerbi-developer-embedding/>

App Samples

<https://github.com/microsoft/powerbi-developer-samples>

Live JS Sample

<https://aka.ms/pbijs>

Power BI REST API

<https://msdn.microsoft.com/en-us/library/mt147898.aspx>

Power BI JavaScript

<https://github.com/Microsoft/PowerBI-JavaScript/wiki>

Azure Capacity PS

<https://docs.microsoft.com/en-us/powershell/module/azurermp.powerbiembedded/?view=azurermps-5.4.0>

Thank you!



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