

A large, diverse audience is seated in rows, facing a stage where a speaker is visible. The background shows the interior of a modern conference hall with a high ceiling and industrial-style lighting.

#ScottishSummit2021



Marc Lelijveld

Driving a Data Culture in your organization

Our Sponsors



*Data & AI
Consultant*

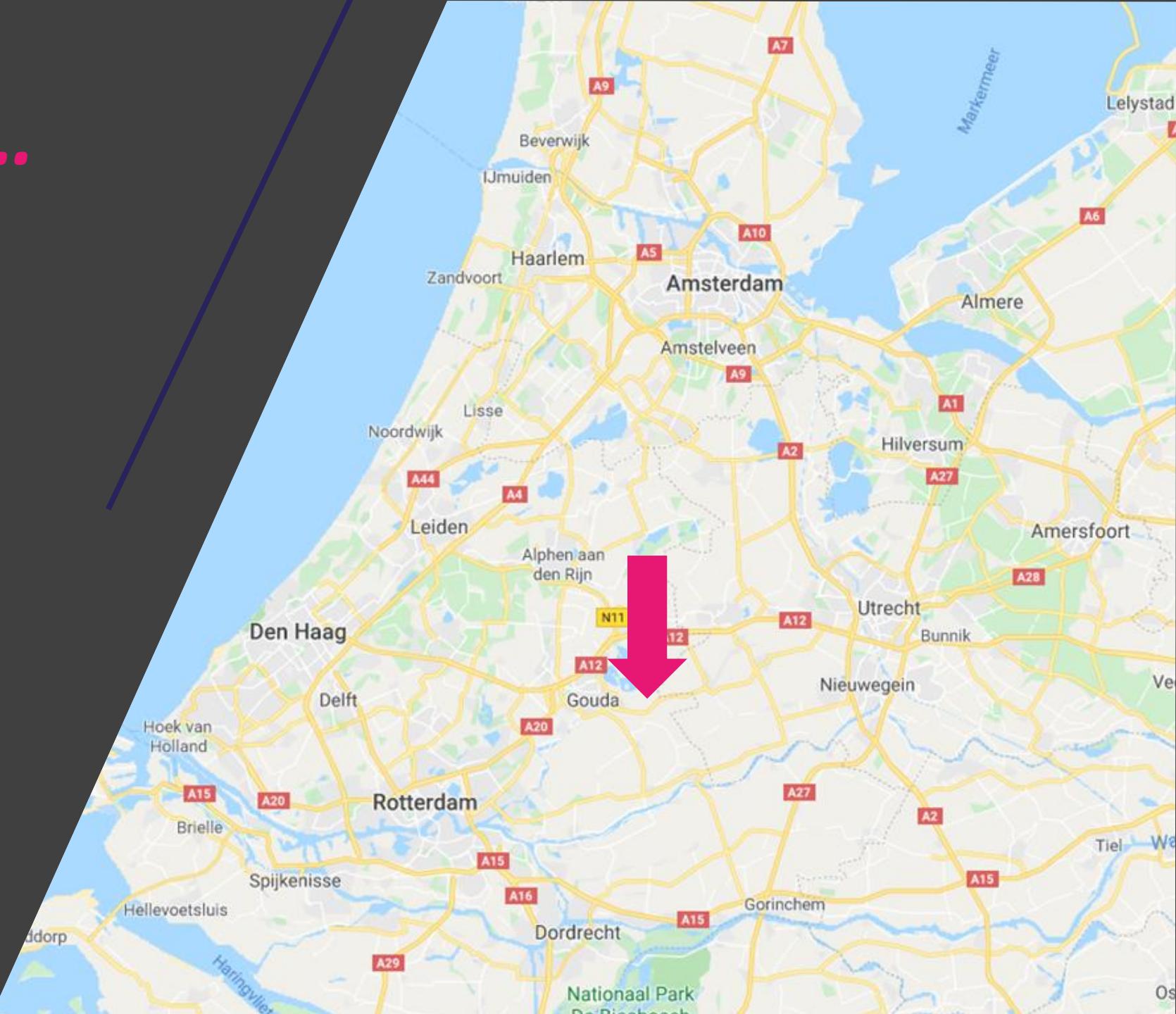
Macaw Netherlands

- ✉ Marc.Lelijveld@outlook.com
- 🐦 @MarcLelijveld
- linkedin.com/in/MarcLelijveld
- 🌐 Data-Marc.com

Marc Lelijveld



Where I'm from...





Driving a data culture

in your organization



Data-Marc.com

Data driven ambition



In this session...



Challenges we face today



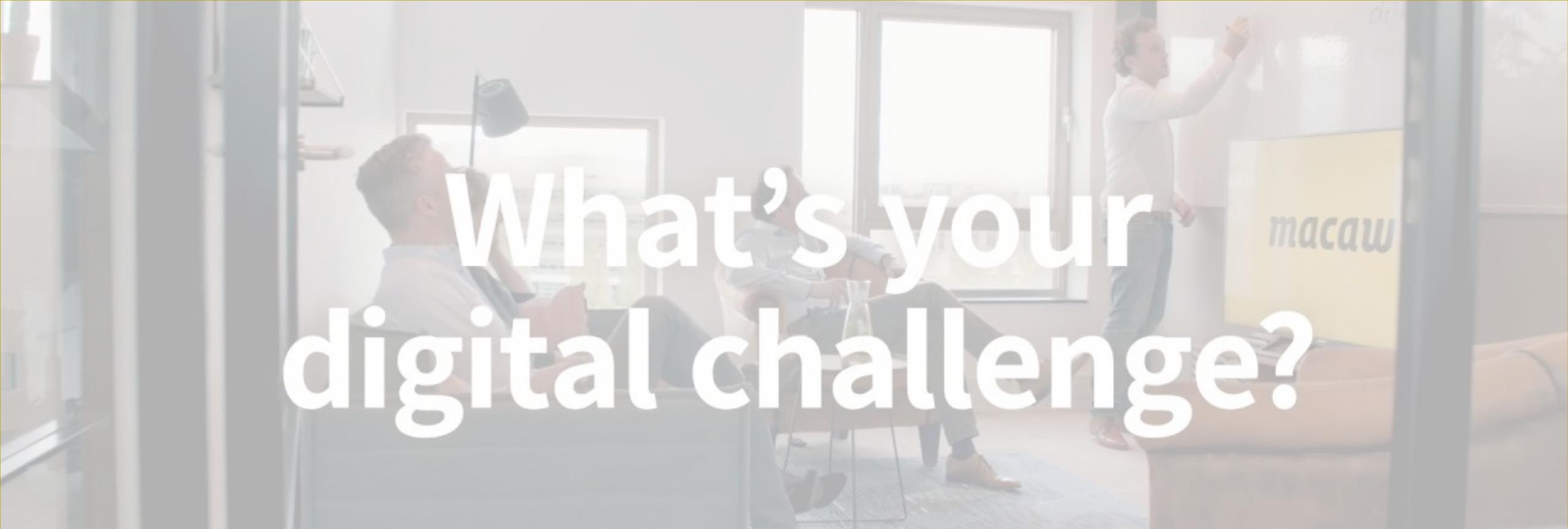
What exactly is a data culture



Center of Excellence as central driver



Tools and service offerings to help



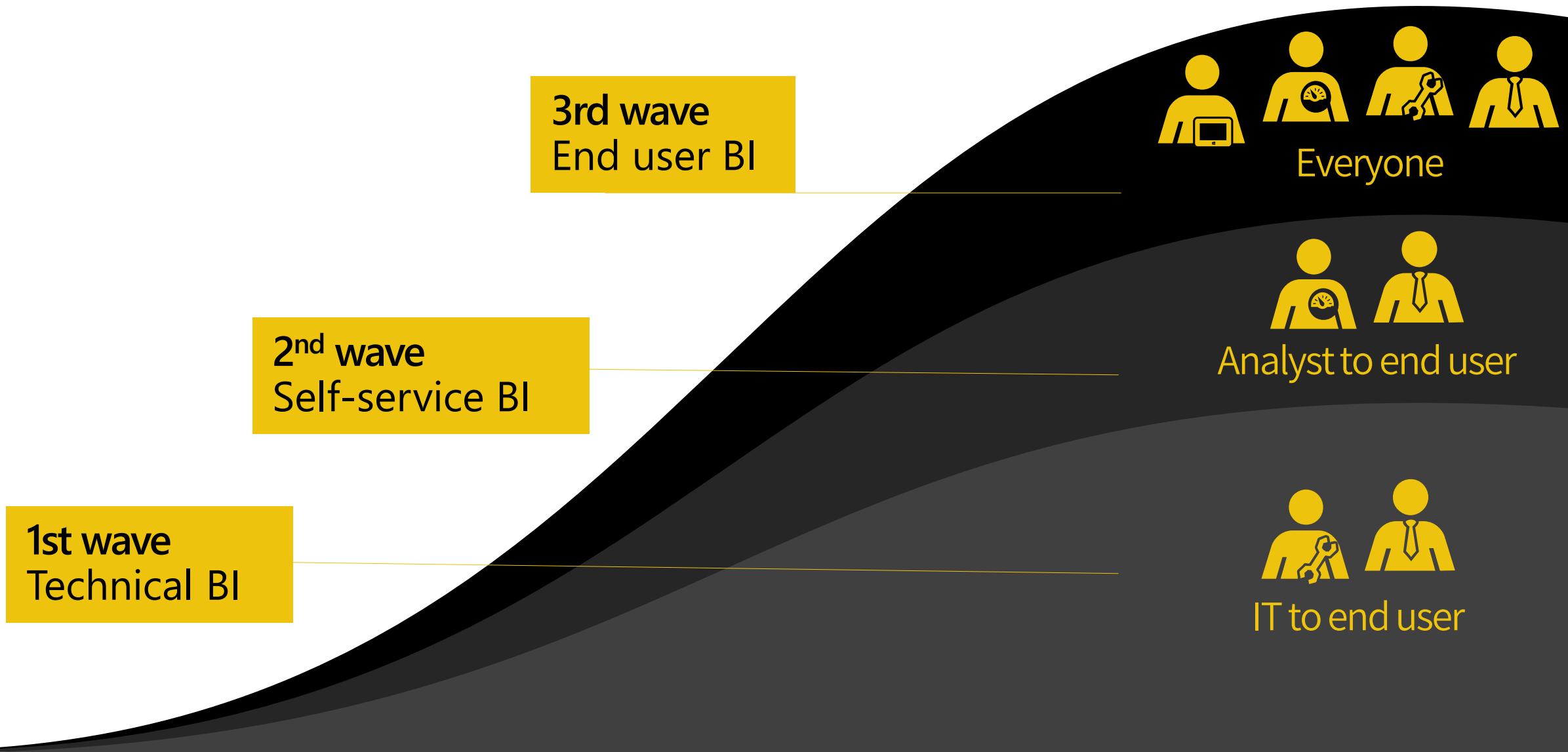
What's your digital challenge?

Challenges we face today

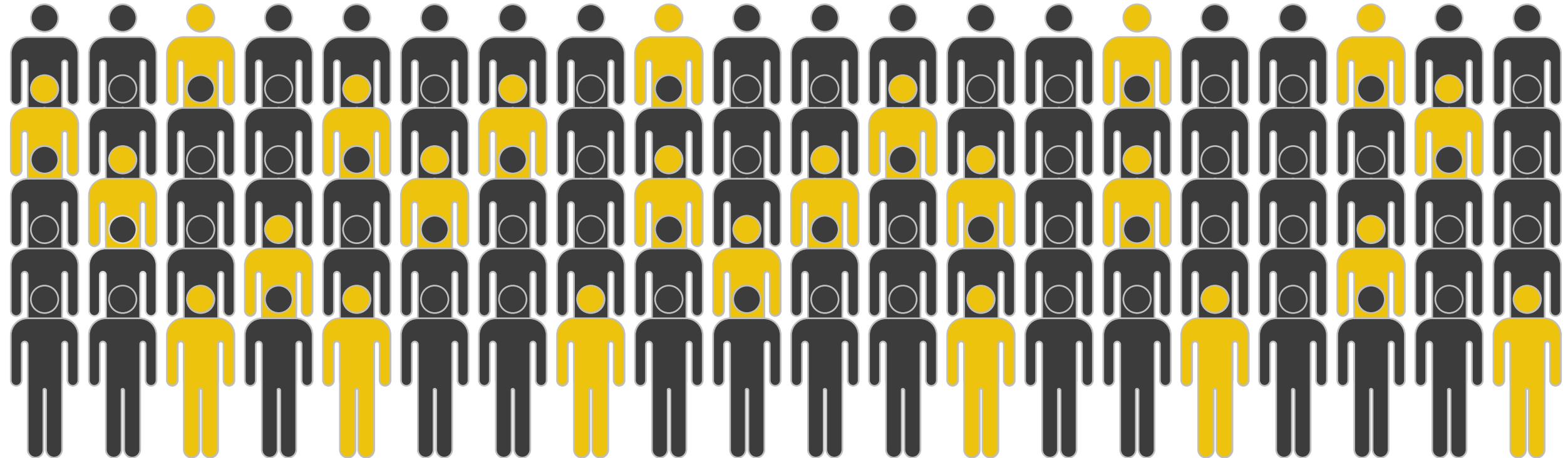
What is blocking us today in our data driven ambitions?



Power BI for everyone



Everyone engages with software Power BI

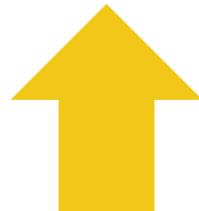


Implementing Power BI



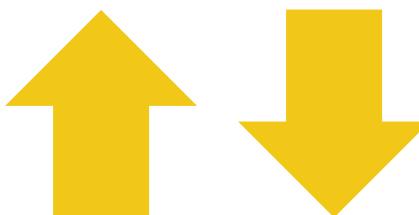
Delivery approaches

**Business-Led
Self-Service BI**



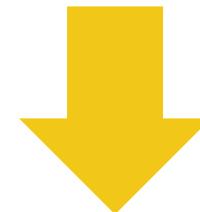
Bottom-Up

**IT- Managed
Self-Service BI**



Blended

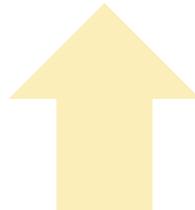
Corporate BI



Top-Down

Exponential growth of content

Business-Led
Self-Service BI



Bottom-Up



Dave
Finance



Anne
Human Resources



Leila
Marketing



Reza
Engineer



So what...?

Everyone can do their own analysis



But we're lacking in terms of...



Control



Data sensitivity



Correctness



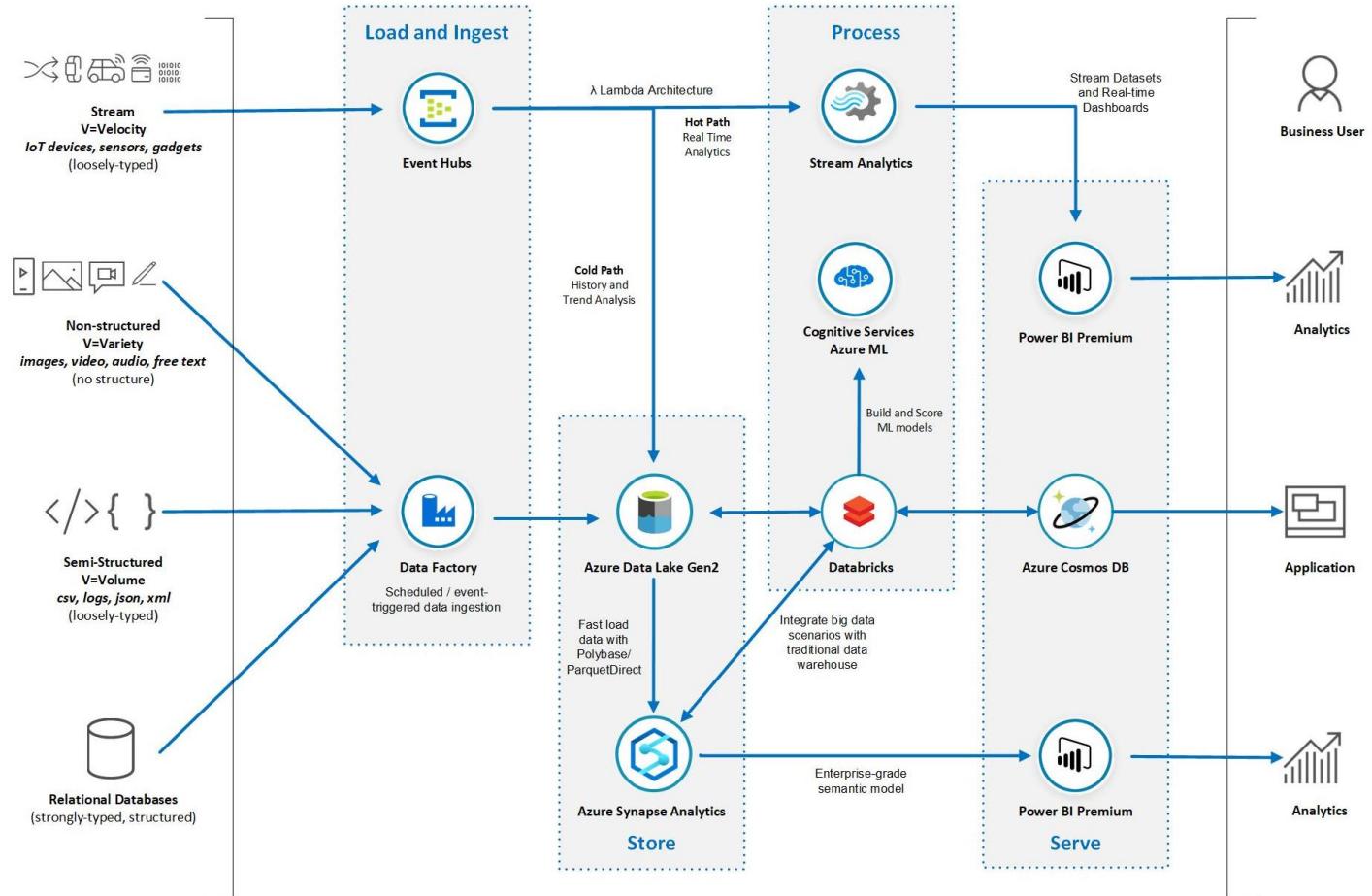
Solution health

... and more

What value do they add?



Architecture leading vs goal leading



Perfect architecture...

or



Fit for purpose?

COE is controlling and not facilitating



Monitoring

instead of



Informing and facilitating

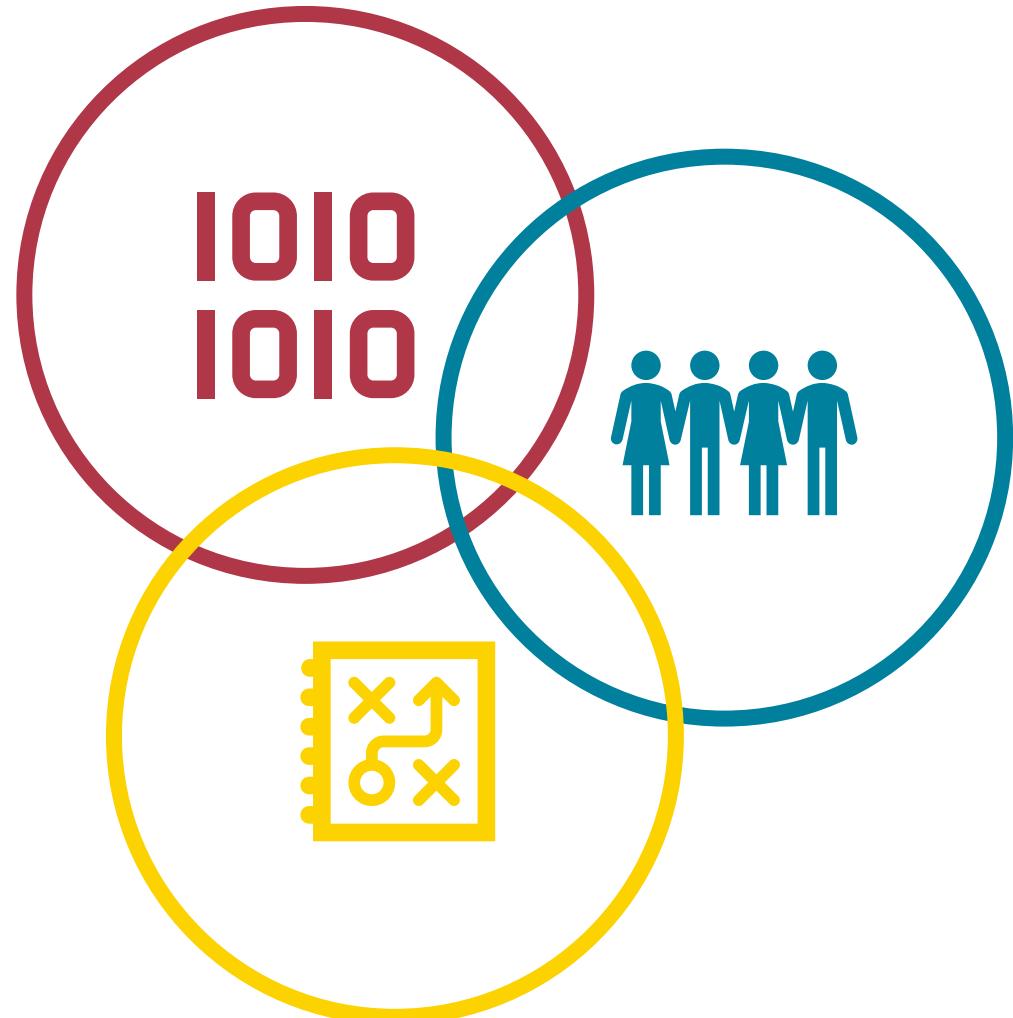




What exactly is a data culture

Combination of three components

- Data
- Analytics
- People



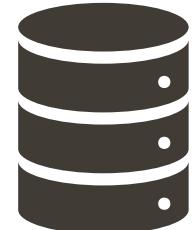
[data + analytics + people]



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[data + analytics + people]

- Cloud
- On-prem
- Hybrid



[data + analytics + people]



Discover

Search for data and combine different sources to one model



Share

Share insights and analytics across the organization



Analyze

Analyze tons of data in a few clicks and let it add value



Find & Explore

Find answers and explore data in visuals + Q&A capabilities



Visualize

Transform millions of rows of data in stunning visuals



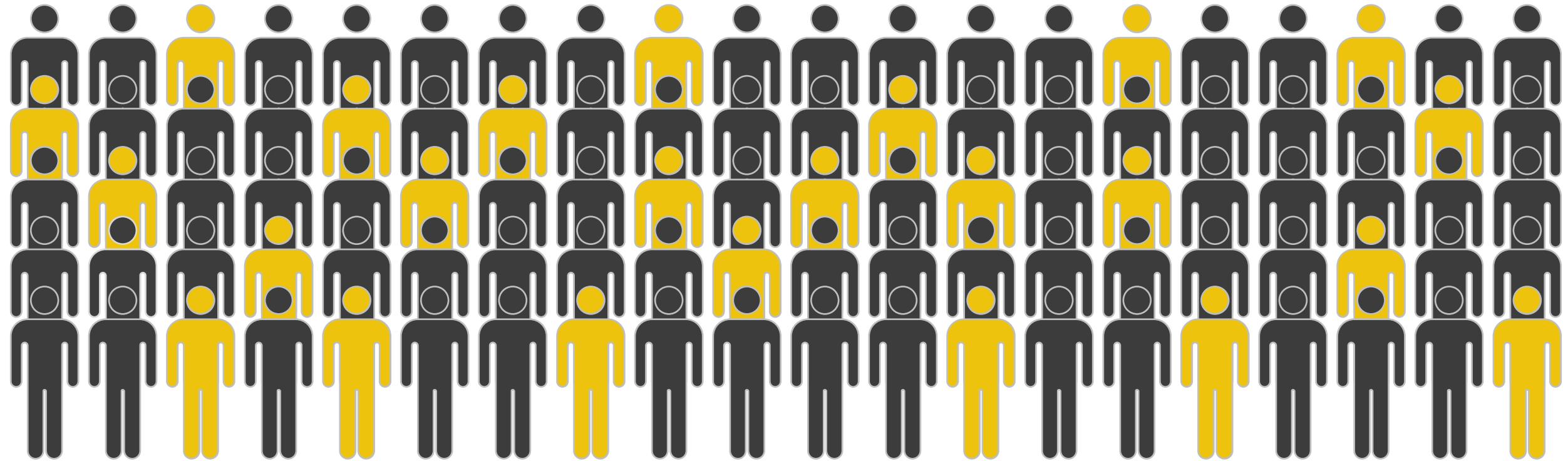
Anywhere

Your data on your fingertips on any device wherever you are.



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[data + analytics + people]



[data + analytics + people]



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[data + analytics + people]

= competitive advantage



Center of Excellence

as central driver behind the data culture



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What's in the name?

- Center of Excellence
- Center of Expertise
- Business Intelligence Competence Center (BICC)
- Competence Center

WHATEVER



Central position



Data in the heart of your organization



Pre-packaged artifacts to kick-start new initiatives



Data Driven Organization–
Taking decisions based on data



Data at your fingertips, being able to build new solutions



Improve results & grow margin over time



Empower individuals to use data in their day-to-day work



Continuous analysis and improvements of market value



Data as ideation & innovation driver in your organization

In the heart of your organization

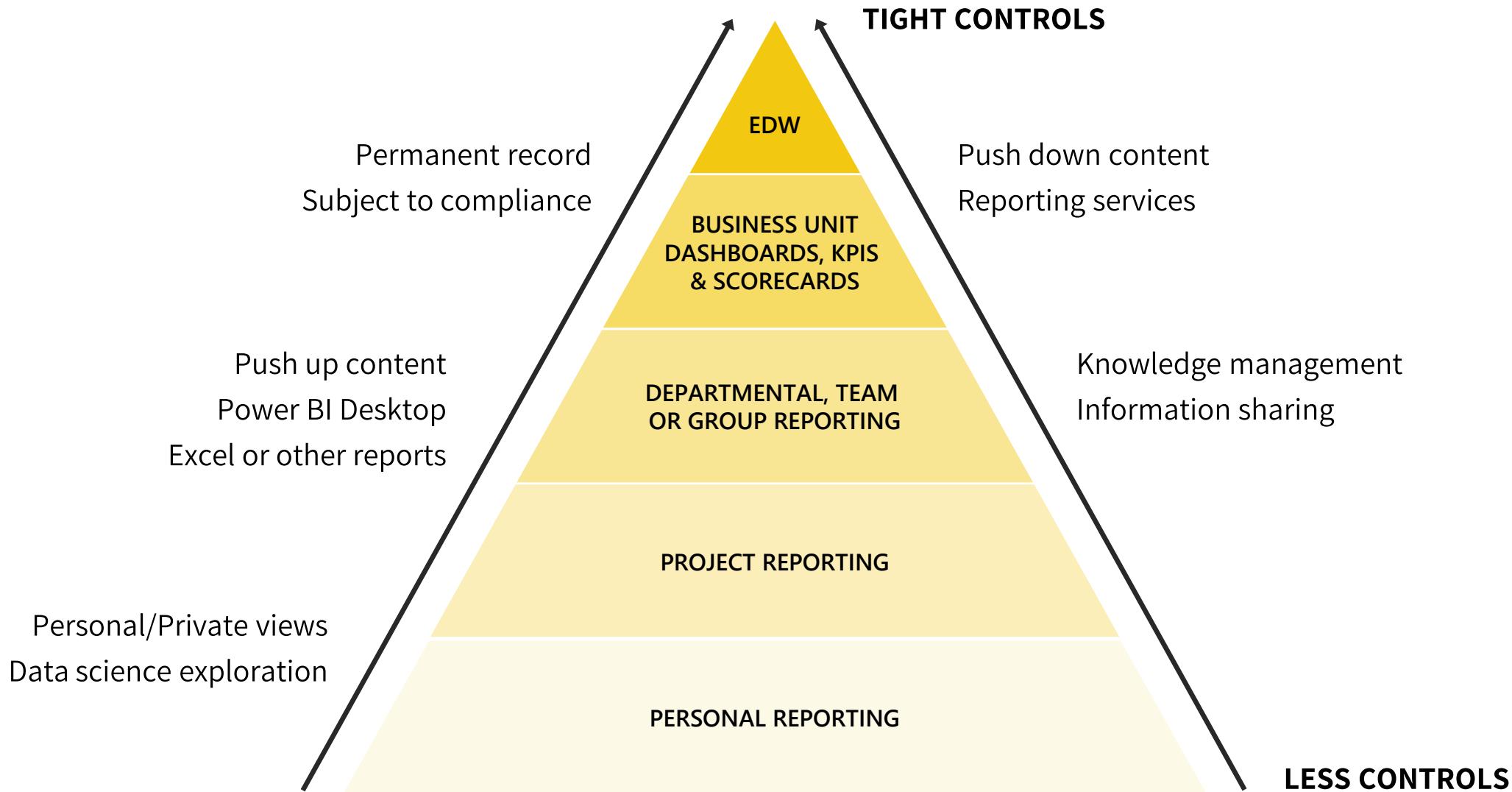


Roles

	Skills	Responsibilities
Corporate Sponsor	Influence strategy around BI tools	Tool assessment
Power BI Champion	Subject matter expert	Strategically deploy Power BI across the organization or team
Security Officer	Auditing, Data classification	Data & usage policy
Data Steward	Data modelling	Enhance data quality, create and maintain a data catalog and dictionary
Data Architect	Technical knowledge of data sources and how to connect to them	Matching business requirements to technical capabilities and architecture
BI Developer	Fully understanding of Power BI capabilities	Make sources available for self-service and develop corporate BI solutions
Administrator	Authentication, IT service management	License assignment, monitoring set-up, gateway management
Support	Full understanding of Power BI capabilities and communication skills	Supports users in self-service scenarios and creating templates



Governance Model



Exponential growth of content



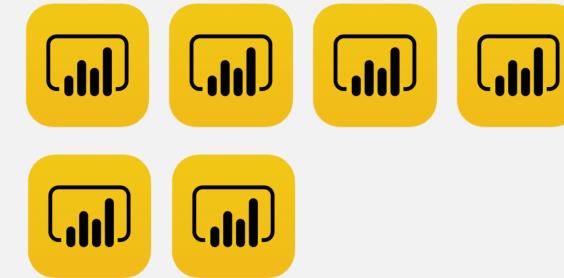
Get order in the chaos



Dave
Finance



Anne
Human Resources



Leila
Marketing



Reza
Engineer



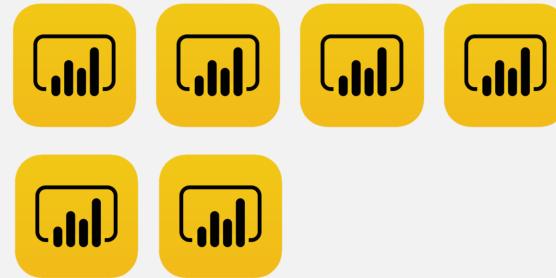
Separate people and content!



Dave
Finance



Anne
Human Resources



Leila
Marketing



Reza
Engineer



Monitor the environment



Content availability



Usage



Performance



Lineage



Environmental health

The screenshot displays the 'POWER BI OBJECT FLOW' interface from 'Power BI Monitor'. At the top, there's a navigation bar with tabs: 'Power BI Overview', 'Activities Over Time', 'Object Flow' (which is highlighted in yellow), 'Report Page 4', 'Report Page 5', and 'Report Page 7'. On the left, a table lists tenant information, workspaces, datasets, and reports. The 'Object flow' section contains a large, colorful graph where nodes represent Tenant ID, Workspace, Dataset, and Report, and edges show their relationships. A legend at the bottom identifies the colors: teal for Tenant ID, red for Workspace, yellow for Dataset, and light blue for Report. The graph is highly interconnected, showing many paths between different entities.

Tenant ID	Workspace	Dataset	Report
7d0f9217-0044-42fb-902b-ebc94e86add7	DIAD_ariel@m365x280911.onmicrosoft.com	DIAD Final Report	DIAD Final Report
	DIAD_gertjan@m365x280911.onmicrosoft.com	DIAD Final Report	DIAD Final Report
	Engineering	Operations	Operations
	Finance	Finance	Finance
		Report Usage Metrics Model	Report Usage Metrics Report
	HR	HR	HR
	IT	IT	IT Report
	Mark 8 Project Team	Report Usage Metrics Model	Report Usage Metrics Report
	Marketing	Operations Analytics	Operations Analytics
	PersonalWorkspace Megan	Marketing	Marketing
	PowerBIAdminGroupDisplayName	Contoso Q2 Division Sales	Contoso Q2 Division Sales
	Sales	Admin Usage Model	Admin Usage Report
	Test	Sales	Sales
	X1050 Launch Team	Customer Profitability Sample	Customer Profitability Sample
		X1050 Launch Team	X1050 Launch Team

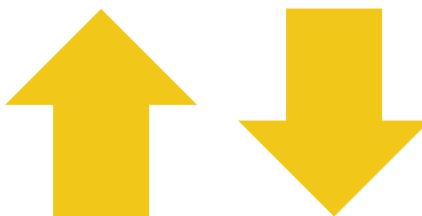
Delivery Approaches

**Business-Led
Self-Service BI**



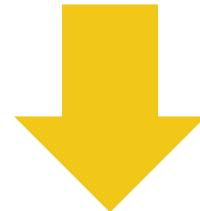
Bottom-Up

**IT- Managed
Self-Service BI**



Blended

Corporate BI



Top-Down

Delivery Approaches

	Business-Led Self-Service BI	IT-Managed Self-Service BI	Corporate BI
Approach	↑ Bottom-Up	↑↓ Blended	↓ Top-Down
Data sources	Any type of data source	Only governed sources	Published by IT
Ownership	Business supports all elements of the solution	IT for data model, Business for reports	Fully supported by IT
Governed by	Business	IT for data, business for reports	IT
Usage scope of business	Data prep, modelling, reports and dashboards	Creation of (custom) reports and dashboards	Only use of content

Delivery Approaches

	Business-Led Self-Service BI	IT-Managed Self-Service BI	Corporate BI
Approach	 Bottom-Up	 Blended	 Top-Down
Data sources	Any type of data source	Only governed sources	Published by IT
Ownership	100% Business supports all elements of the solution Business Driven	50/50 IT for data model, Business for reports IT for data, business for reports	100% Fully supported by IT IT-Driven
Governed by	Business		IT
Usage scope of business	Data prep, modelling, reports and dashboards	Creation of (custom) reports and dashboards	Only use of content



Tools and services to help

What can help you to reach your data driven ambition?



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Data catalog

Select a Data Source:

Search 

Azure Blob	Azure Table			
Azure Data Lake Store 	MySQL Database	HAN		
DB2 Database	Salesforce	Ftp	PostgreSQL Database	Odbc Database

New file format: .pbids

This month we are releasing a new file format: **.PBIDS**, to streamline the “Get Data” experience for report creators in your organization. It’s recommended that admins create these files for commonly used connections to help the getting started experience for new report authors.

When an author opens a **.PBIDS** file, Power BI Desktop will launch and prompt for authentication to connect to the data source specified in the file. Then the navigation dialog will pop-up and the user will need to select the tables to load into the model. They may also need to select the database(s) if one was not specified in the file. From there the user can start building visualizations or revisit “Recent sources” to load a new set of tables into the model.

For the admin to create this file, they will need to specify in the file the required inputs for a single connection and they can specify the mode of the connection. The mode can be either “DirectQuery” or “Import”. If “mode” is missing, all the user that opens the file in Desktop will be prompted to select DirectQuery or Import.

OCTOBER 2019

NEXT



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Master data management



Pre-build dataflows to be leveraged by end-users



Access to dimensional data in the Common Data Model (CDM)



Easy access to datalakes and data warehouses



Pre-build data models to be leveraged by end-users

Classification

Reuse of content

- Certified & promoted dataflows
- Certified & promoted datasets

Classified content

- Certified & promoted reports
- Featured content

Select a dataset to create a report

Name	ENDORSEMENT ↓	Owner	Workspace/App	Refreshed
Retail Analysis	Certified	Steve Myer	Retail	4 days ago
Customer Profitability	Certified	Susan Mailer	Customer	6/23/17
Vantage Global	Promoted	Lane Barnes	Vantage	3/3/18
IT Spend Analytics	Promoted	Ari Gold	IT	3 hours ago
Team Analytics	Promoted	Ana Smith	Analytics	7/12/18
Opportunity Analysis	Promoted	Lane Barnes	My Workspace	6/12/17
Retail		Lane Barnes	My Workspace	2 days ago
Procurement Analysis		Lane Barnes	My Workspace	7/22/18
Sales		Lane Barnes	My Workspace	1/24/17

OK Cancel

Freedom and end user

- Playgrounds / sandboxes (for AI insights for example)
- ...

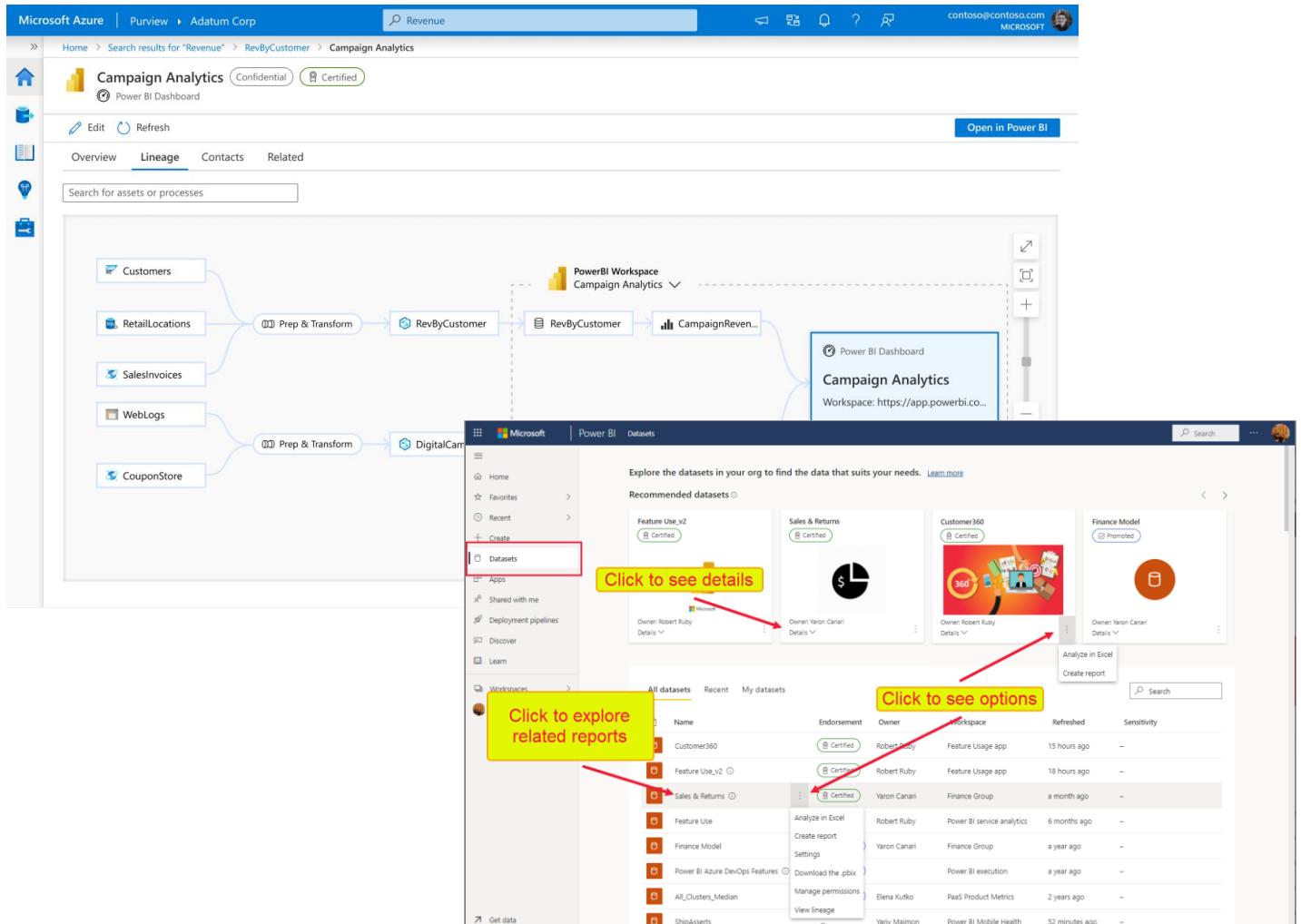
Discoverability

Power BI and Microsoft

- Azure Purview
- Power BI Service – Datasets hub
- Integration in Teams

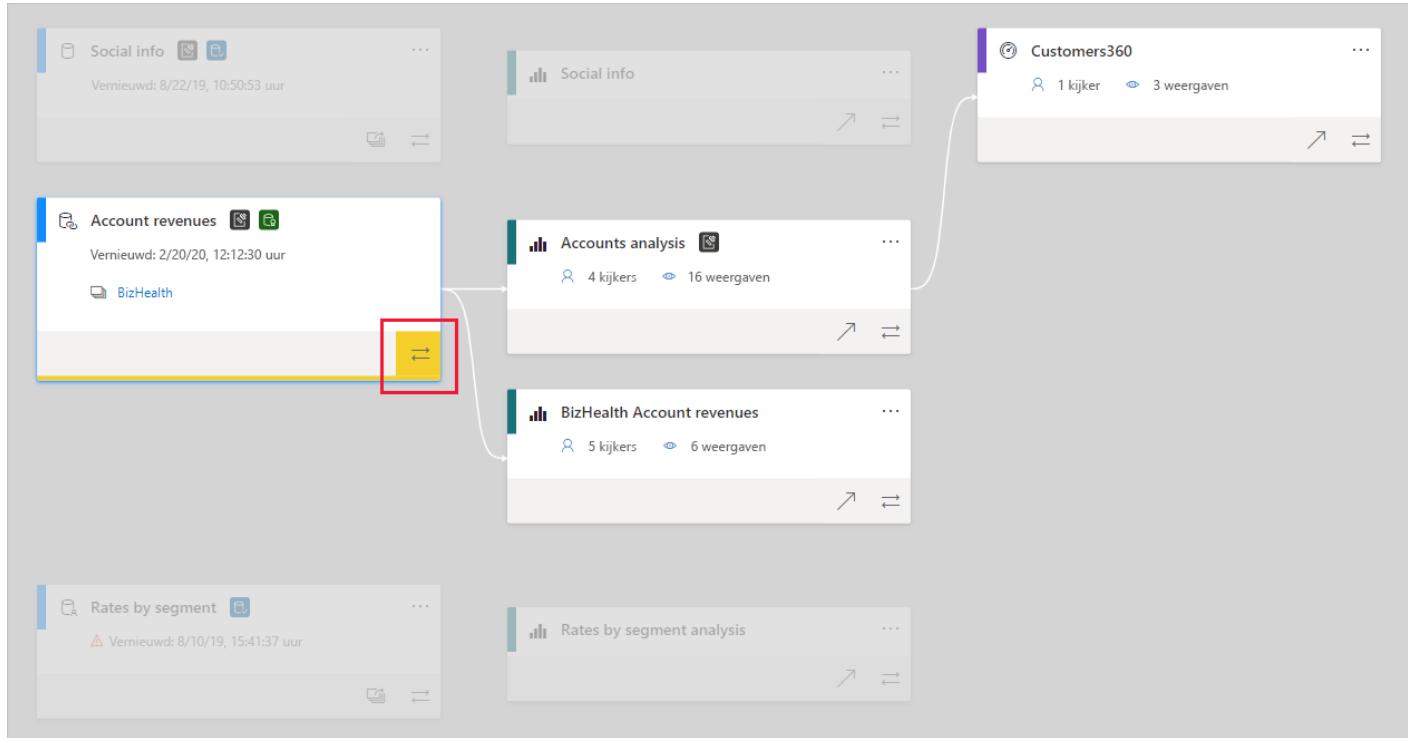
3rd party options

- Collibra
- Enquero PowerMe
- ...



Lineage

- Where is this data used already?
- What is the source of this dataset / dataflow?
- How reliable is this data source?
- Impact analysis



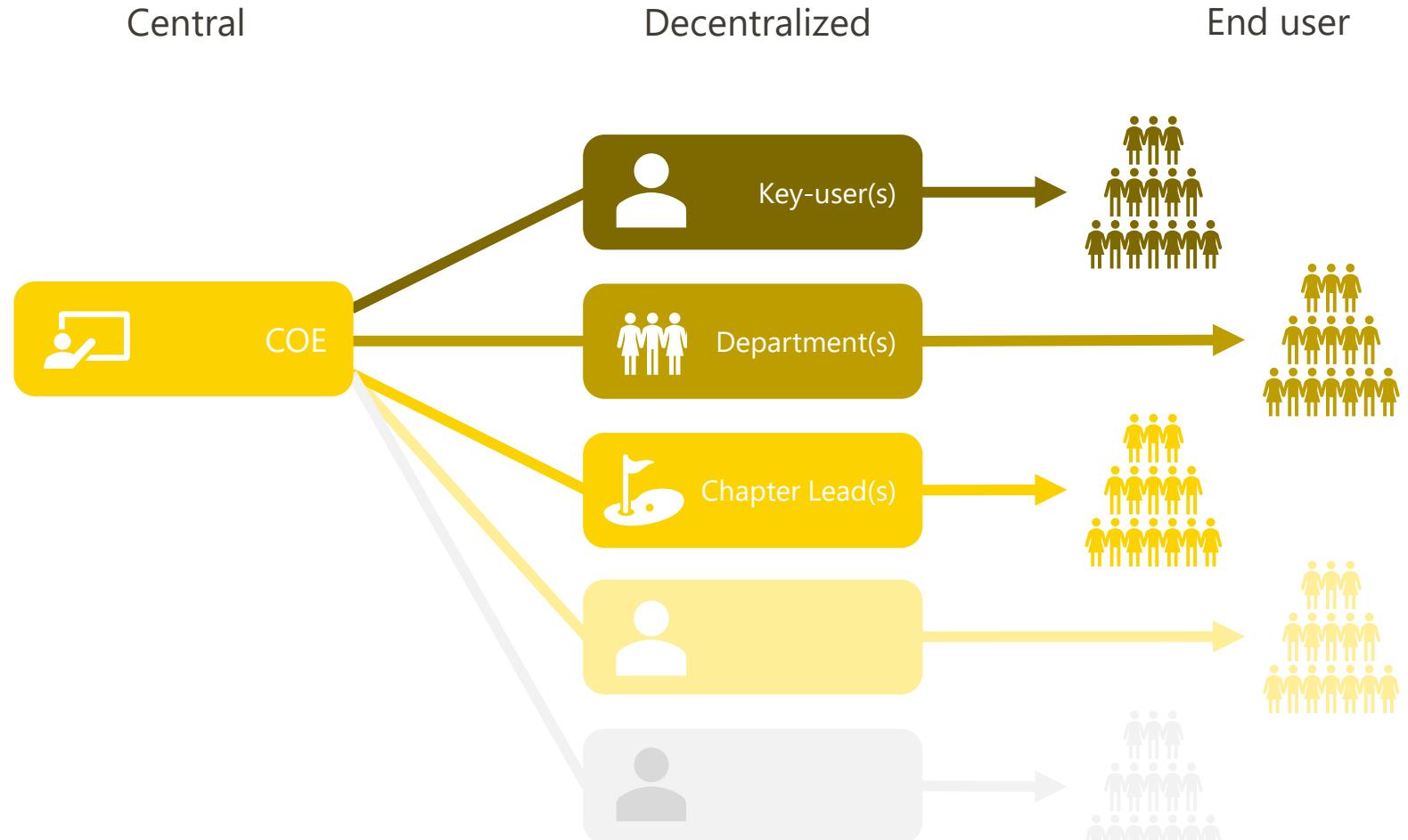
Training



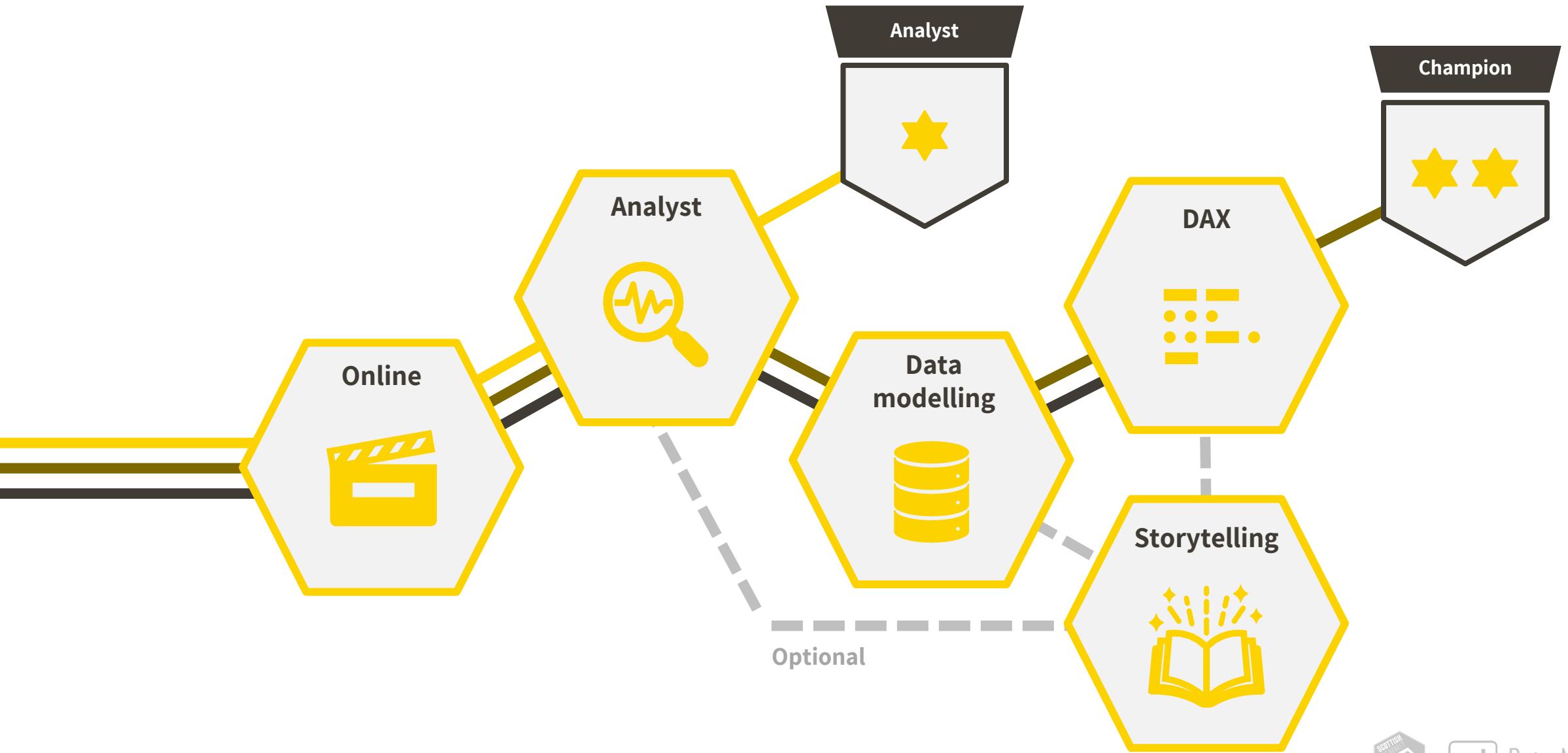
Online



Classroom



Value their effort



Best practices

Power BI Cheat Sheet

English version - October 2019
<https://bit.ly/cheatsheetpbip> (PDF download)
<https://bit.ly/PBICheatSheetGitHub> (Contribute to the cheat sheet)

Power Query

Tips & Tricks

- Give every step an explanatory name and merge steps of the same type, for better manageability.
- Some people prefer not to use spaces in the name of a step, for a better M coding experience.
- Give queries and columns user-friendly names, as they will become part of your data model.
- Make sure that each column has the correct data type. Making the model smaller and faster.
- Remove columns you are not going to use in your report. Prefer 'Remove Other Columns' above the 'Remove Columns' option, for lower risk that structural changes in your data source break the query.
- Maximize the use of Query Folding for faster and more efficient queries. With Query Folding, multiple transformations are merged as one query and then sent to the source. If 'View Native Query' is not available, Query Folding has stopped before that step.
- In general, prefer 'Import' over 'DirectQuery'. Unless the amount of data is too large to import, or there are other requirements (like real-time insights).
- Use Date.From instead of DateTime.Date to extract a date from another field, and to make sure query folding won't break. More info on this blog post: <http://bit.ly/DateFrom>.
- Turn off 'Enable Load' for queries/tables that you don't need in the Data Model.
- Re-use Power Query code and lower impact on your data source by using Power BI dataflows.
- Turn on the Formula Bar so you get familiar with Power Query (M) code.
- Automatically beautify all column names in a query, e.g. "CustomerName" → "Customer Name", by using the Power Query function Alex Powers shared on his Github repo: <http://bit.ly/PQSplitByCase>. Note: he also has a function to replace underscores in all column names automatically.

Code examples (don't forget that Power Query / M is case-sensitive)

```
if T > 0 then A else B
try A# otherwise 0
#table("X","Y",{{1,2},{3,4}})
DateTime.LocalNow()
Date.From(DateTime.LocalNow())
Excel.Workbook(Web.Contents("url"/[filename].xlsx"),null,true)
#dared to list all functions and get PQ documentation
```

Resources

- Power Query M Formula Reference: <http://bit.ly/PQMReference>.
- Repo by Imke Feldmann with a lot of custom Power Query functions: <https://github.com/ImkeF/M>.

I'VE GOT THE POWER BI

macaw

Power BI - Best practices

Take advantage of all our learnings and experiences. On this page you can find our Power BI best practices. Here we will provide you with examples, templates and much more!

Do you have anything useful to add? Let us know by sharing your idea with us and/or post it on Facebook Workplace.

Best Practices

+ New ▾ ... All Documents ▾

Name template.pbix -Color Theme.json

General

- Edit your report in Power BI Desktop and not in the Service. Making sure there is one golden version, which is your PBIX file but [Power BI desktop also offers more functionality](#).
- The best way to share your Power BI solution with others is [using Apps](#). Prefer to use Security Groups over named users. Also be aware of who you are sharing content with. Do not share content with the entire organization, but leverage an existing security group or setup a new one according to your report audience.
- It works well to have a shared [OneDrive location per Power BI solution](#), either provisioned via Microsoft Teams or SharePoint Online. Make sure all and only the accounts involved with the Power BI solution have access to this location. If possible, use the local OneDrive For Business client to sync the OneDrive location of the solution with your computer, and save the .pbix file(s) directly in the local synced directory. This way, every save in Power BI Desktop will be added to the file history and automatically saved in the cloud.
- Be aware that users can also access your data model through the Q&A, Quick Insights and Analyze in Excel functions. That's great but think about data protection using [\(dynamic\) row level security](#).

Power Query

- [Turn off 'Enable Load'](#) for queries/tables that you don't need in the Data Model for faster refreshes.
- In general, prefer 'Import' over 'DirectQuery'. Unless the amount of data is too large to import, or

Templates



Template.pbit

Microsoft Power BI Community > Galleries > Themes Gallery

Featured Top Kudos Recently Posted All Themes ▾

Submit a report theme Options ▾

Thumbnail	Name	Author	Likes
	Nowalls Analytics	belisqui	83
	Spring Day (Exposé Data)	aexley	67
	University of Melbourne	mike_honey	63
	Tumble Road Multicolor Theme	tregatte	58
	Finance Dashboard	Acterys Planning	
	Flat Colors Theme		
	Gartner Bakeoff Opioid Crisis Theme		
	Dynamics 365 Business Central inspired theme		

Community building

Screenshot of Microsoft Teams interface showing a team conversation.

The sidebar shows:

- Uw teams: Power BI User group (highlighted)
- Chat
- Teams
- Vergaderingen...
- Oproepen
- Bestanden
- App downloaden
- Apps
- Help

The main area shows a conversation in the "Power BI User group > Algemeen" channel. The message list includes:

- [Jan] is lid geworden van het team. (19 juli 2019)
- [Beantwoorden]
- [Beantwoorden]
- (Ruud) is lid geworden van het team. (22 juli 2019)
- (Nicole) is lid geworden van het team. (Gisteren)
- (Joost) is lid geworden van het team. (Vandaag)
- (Wim) is lid geworden van het team. (Vandaag)
- (Priscilla) en 3 anderen zijn lid geworden van het team. (Vandaag)

Bottom of the screen:

- Lid worden van een team of een te...
- Help

Screenshot of the "All Company" group in Workplace by Facebook.

Header: All Company (This is the default group for everyone in the Content and Code network)

Actions: NEW CONVERSATIONS, ALL CONVERSATIONS, FILES, NOTES, Search icon

Message input field: If you are mentioning a #client please add a # in front!

Post by Harry Sumpter: Hello! We have another event running on the 18th of May. This time, Tim Wallis assesses and compares Workplace by #facebook and #office365 Enterprise collaboration tools. If you know of anyone who would be keen to attend please feel free to pass on the event registration link: <https://www.contentandcode.com/events/workplace-by-facebook-or-office-365-enterprise/> Thanks!

cc: Tim Wallis

Image: A person giving a presentation to an audience in a conference room.

Caption: Workplace by Facebook or Office 365 Enterprise? | www.contentandcode.com

Members: (111) [List of 5 icons]

INFO: Please only post here if it's relevant to the whole company. We have lots of groups that might be better and then the post can be targeted to those who have said they are interested to receive it.

If there is a group missing then which is causing you to post in all company, please go ahead and create a new group.

COMPANY RESOURCES:

- Our Fresh Intranet
- Professional Services S..
- Dor... Online Now

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Q&A hours



Fill the knowledge gap



COE - Expert panels

Recap

- Data in the **heart** of the organization
- Architecture is **fit for purpose**
- **Every employee** should be able to work with data
- COE as **central driver** behind the Data Culture
- COE is **facilitating** the business
- Data + Analytics + People = **Competitive advantage**

LET'S
RECAP...



Download for free!

[Https://bit.ly/cheatsheetpbi](https://bit.ly/cheatsheetpbi)



Marc Lelijveld
Data & AI consultant
Macaw Netherlands

- ✉** Marc.Lelijveld@outlook.com
- 🐦** [@MarcLelijveld](https://twitter.com/MarcLelijveld)
- linkedin** linkedin.com/in/MarcLelijveld
- 🌐** Data-Marc.com

A yellow and white booklet titled "Power BI Cheat Sheet". It contains sections for "Power Query", "Data Model", and "DAX". Each section includes tips, tricks, and code examples. A "Resources" section at the bottom lists links for Power Query M formula reference, DAX Studio, and Tabular Editor. The booklet is dated April 2019 and has a "macaw" logo in the bottom right corner.

#ScottishSummit2021



Thank You