PowerApps – Deep Dive

@timopertila

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Kiitos, thank you our dear sponsors...

Hello!

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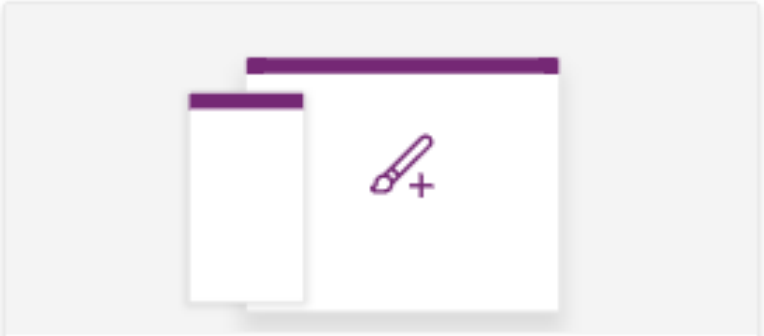
The Microsoft Power Platform

One high productivity platform that spans Office 365, Dynamics 365, and standalone applications

There are actually 3 different kind of PowerApps

Make your own app

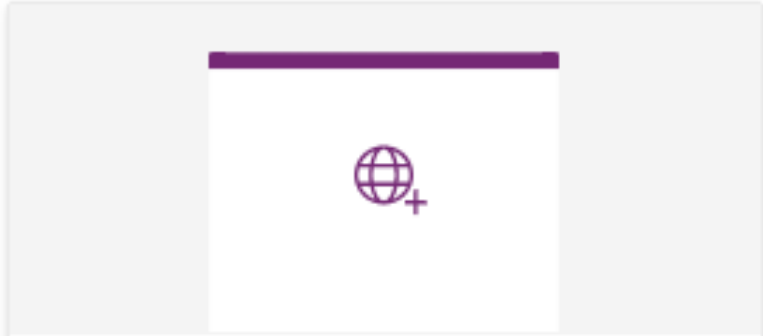


Canvas app from blank

Canvas app

Model-driven app from blank

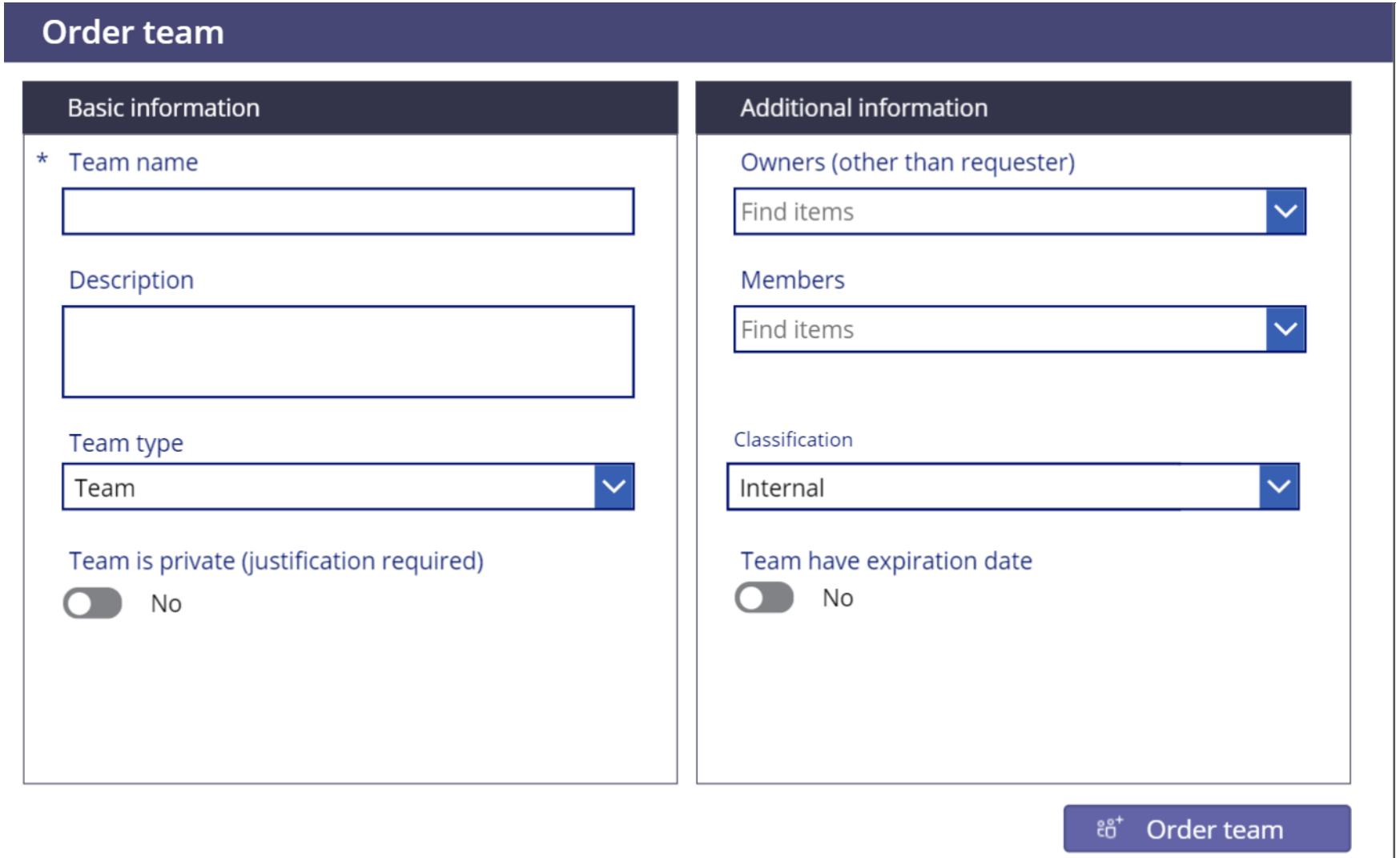
Model-driven app



Portal from blank (preview)

Portal

Canvas / Model-driven / Portal PowerApps



Licensing model changes.
Again.
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Licensing summary (starting from 1.10.2019)

PowerApps plans

PowerApps per app plan

Licensed by app
$10 user/app/month

Allow individual users to run a **single application** for a specific business scenario based on the full capabilities of PowerApps

PowerApps per user plan

Licensed by user
$40 user/month

Equip users to run **unlimited applications** based on the full capabilities of PowerApps

Seeded PowerApps

Licensed through Office 365 & Dynamics 365

Extend and customize Office 365 and Dynamics 365

What does it mean in practise?

- PowerApps plan required when having
  - Gateway(s)
  - Premium connectors (Azure services, PowerApps notifications, http-requests)
  - Common Data Service

- No sense to use SQL anymore -> go with CDS if you need real DB
- Daily Power Platform API request limit for every user
- Makers and admins don’t need any PowerApps plan

Expensive or not?

Figure 1. Magic Quadrant for Enterprise Low-Code Application Platforms

Source: Gartner (August 2019)

Lightning Platform Plus

MOST POPULAR

Digitize business processes for any department.

$100

USD/user/month*
(billed annually)

TRY FOR FREE

STANDARD LICENSING

Our standard application user.

€90

per user/month

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”Delegation?
What is that?”
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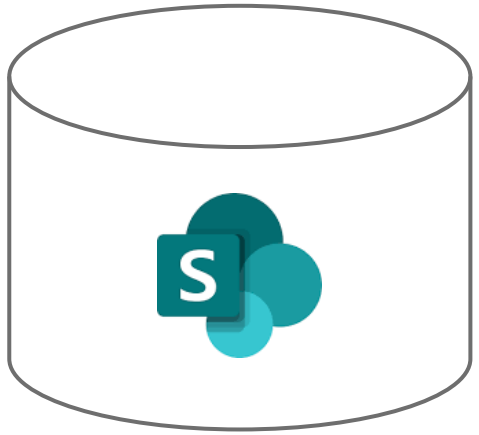
Example: Delegation supported

Give me all stores where location = Helsinki

Here you are. All 5000 stores located in Helsinki

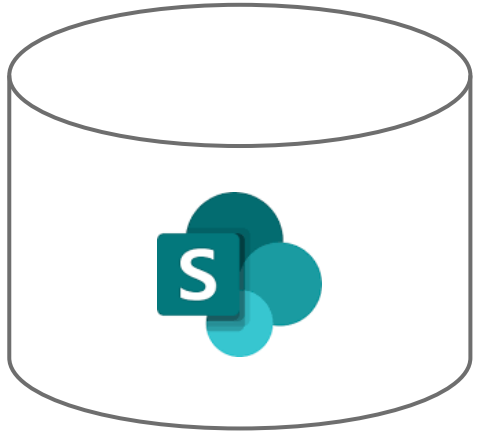


50 000 items

Example: Delegation not supported

Give me all stores location containing string ”Helsinki”

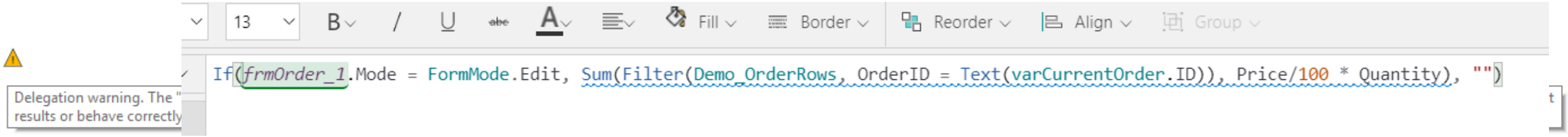
Here are 500 first stores. Please find what you want by yourself



50 000 items

Delegation support depends on used…

- **Data source** (SharePoint, SQL Server, Dynamics 365, CDS for Apps, Excel, Google Sheet…)
- **Function** (Filter, Search, LookUp, Sort…)
- **Predicates** (Not, In, StartsWith, +, -, <, <=, =…)



Read: https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/delegation-overview

Do I have more than 500 items?

Ever

But I have 50 000 items in SharePoint. Can PowerApps handle it?

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It’s all about getting rid of delegation issues

- Filter(AllStores, ‘Created By’.Email = User().Email) ✗
- Filter(AllStores , ‘Created By’.Email = varCurrentUserEmail) ✓
- Filter(AllStores , Text(ID) = varID) ✗
- Filter(AllStores , ID = Value(varID)) ✓
- Filter(AllStores, Created > Today() - 7) ✗
- Filter(AllStores, ‘Created time as number’ > var7DaysAgo) ✓

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Demo
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What datastorage I should use?

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Top 3 datasource options

SharePoint list

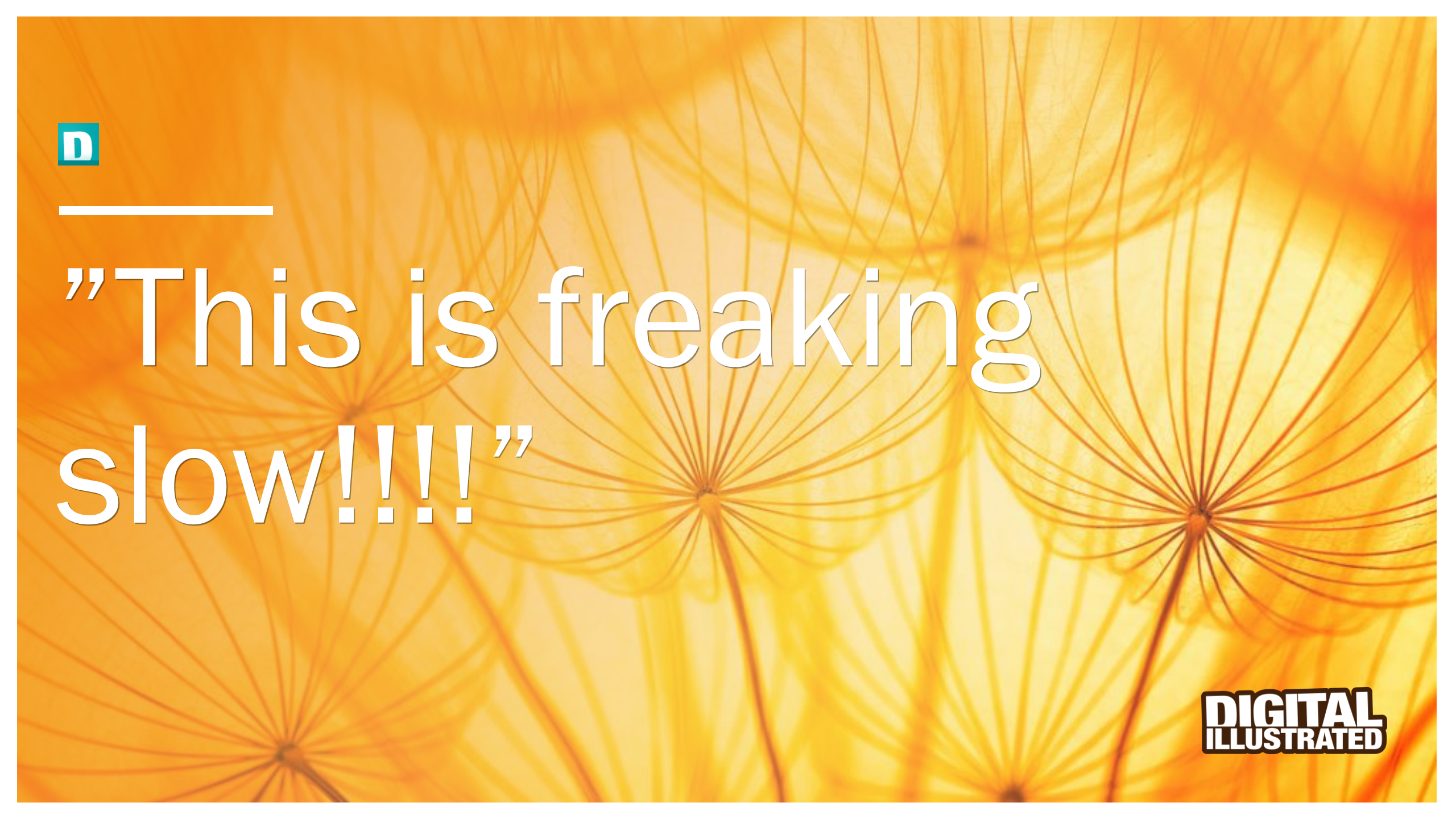
- Familiar for makers
- Easy to build row-level security
- Easy to work with attachments
- **Free**
- Limited support for delegation

SQL Database (Azure)

- **Search** can be delegated
- ”unlimited”
- Uses shared connections
- Cheap
- Can be extended with views and stored procedures
- Goodbye citizen developers!

Common Data Service

- **Best** parts from both SharePoint list and SQL Database
- Not free either cheap


”This is freaking slow!!!!”
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Check & to do

- Minimize stuff loaded on App OnStart
- Use concurrency when loading data
- Avoid dependencies between screens

- Expensive operations located
  - In ForAll
  - In Gallery
- Delegation warnings

Check & to do

- Save / update several items -> Use Flow
- Use galleries when suitable
- Use components when suitable

- PowerApp might run **extremely** slow on older mobile phone
  - Reduce number of screens
  - Reduce number of controls

“Yes yes, it IS a great tool. But all these PowerApps looks like SH!&#”

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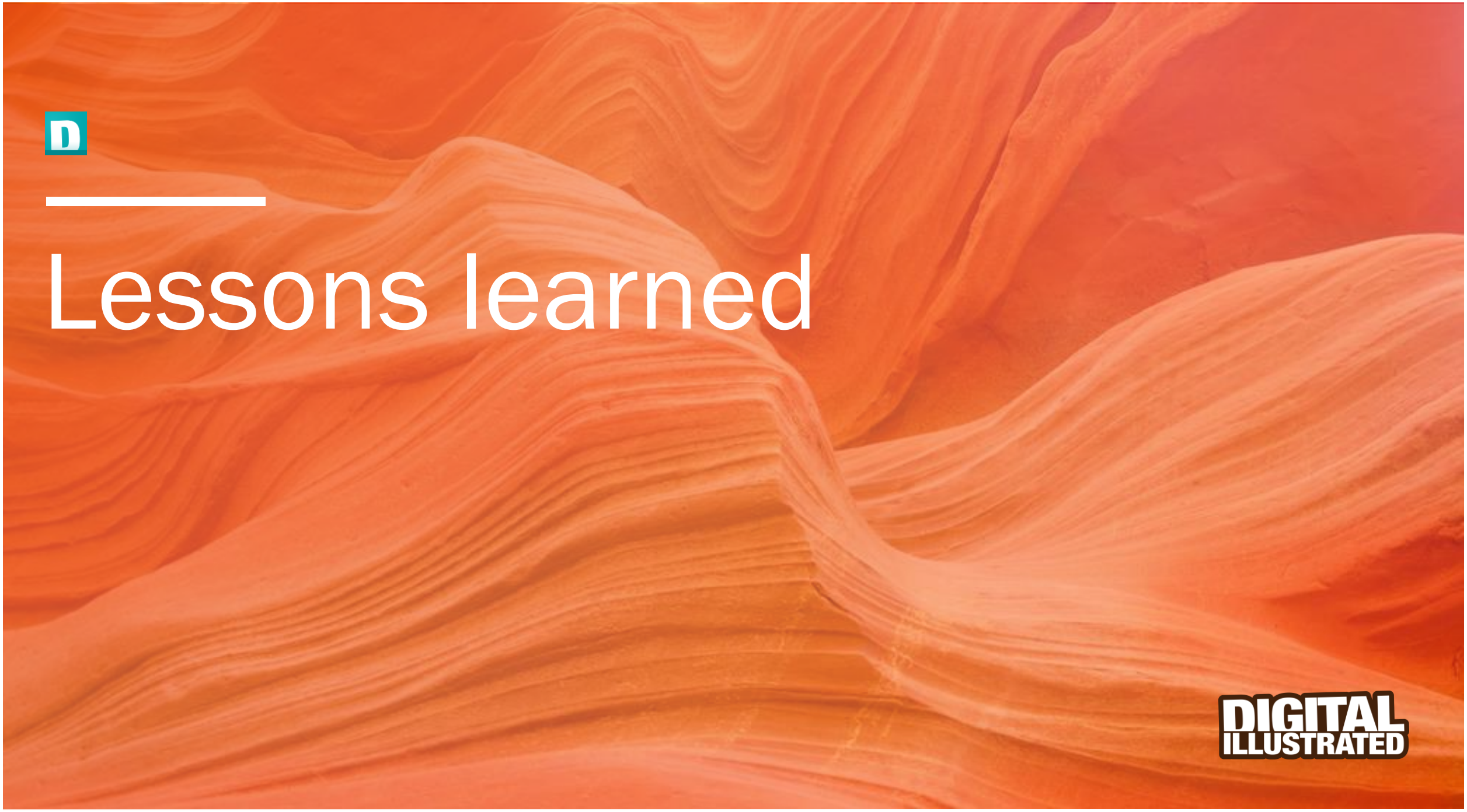
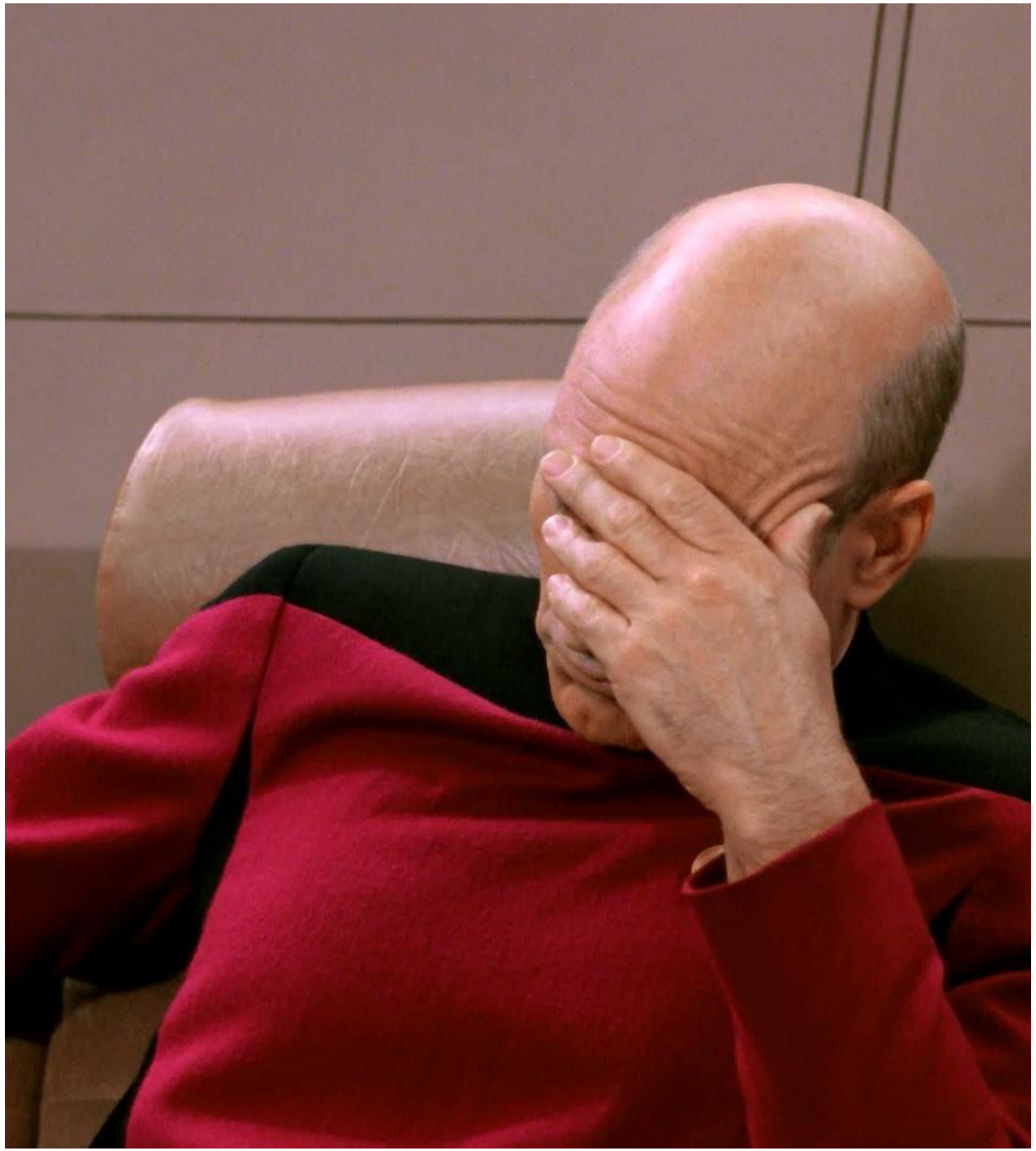
Lessons learned



1. Don’t underestimate SharePoint lists



2. Find out what mobile devices end users use

Image: Jorge Barrios

3. Preview is preview

4. Power Platform is much more than mobile app built on top of the SharePoint lists

5. Start planning governance now

Thank You!

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Please give some feedback <3