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Power Apps Deep Dive



SharePoint and Office 365 Saturday Munich

30 November 2019 | Microsoft Munich



SharePoint and Office 365 Saturday Munich

GOLD



PLATINUM



SILVER

Hello!



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Microsoft Power Platform

The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications



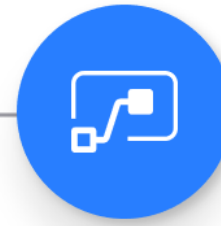
Power BI

Business analytics



Power Apps

Application development



Power Automate

Process automation



Power Virtual Agents

Intelligent virtual agents



**Data
connectors**



AI Builder

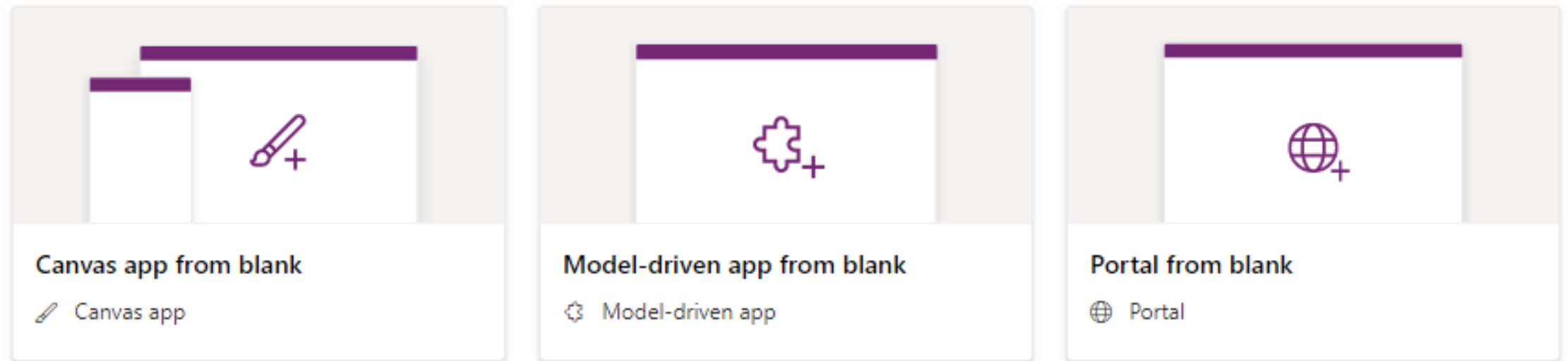


**Common
Data Service**

There are actually 3 different kind of Power Apps

Three ways to make an app

Start from blank ⓘ



Portal / Model-driven / Canvas Power Apps

Order team

Basic information

* Team name

Description

Team type

Team

Team is private (justification required)

☐ No

Additional information

Owners (other than requester)

Find items

Members


Find items

Classification

Internal

Team have expiration date

☐ No

 Order team

Licensing...

Power Apps 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

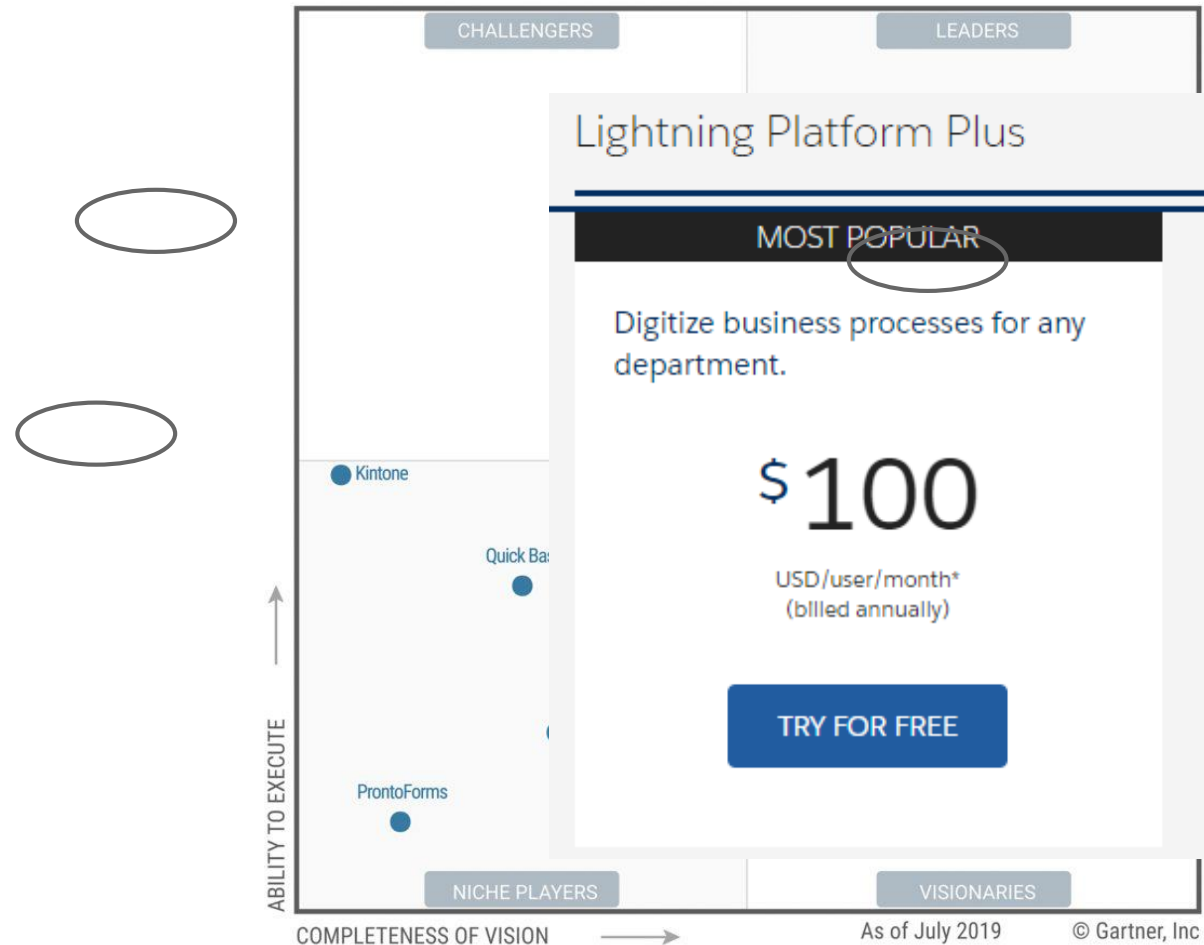
Extend and customize Office 365 and Dynamics 365

In practise

- Users needs Power Apps plan if any **premium connector** is used
 - Azure services
 - Power Apps notifications
 - Custom connectors
 - Common Data Service
- Users needs Power Apps plan if using data from on-premises (**Gateway(s)**)
- 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 Power Apps plan

Expensive or not?

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



Source: Gartner (August 2019)

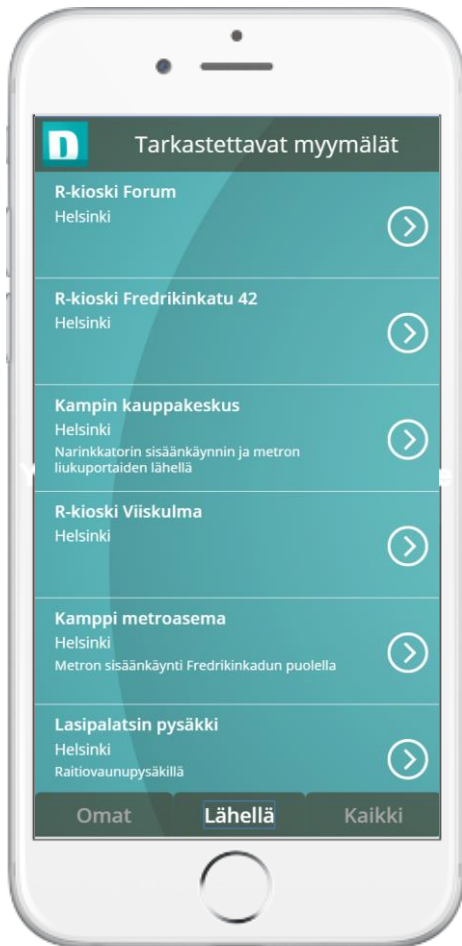
STANDARD LICENSING
Our standard application user.

€90
per user/month

CONTACT US

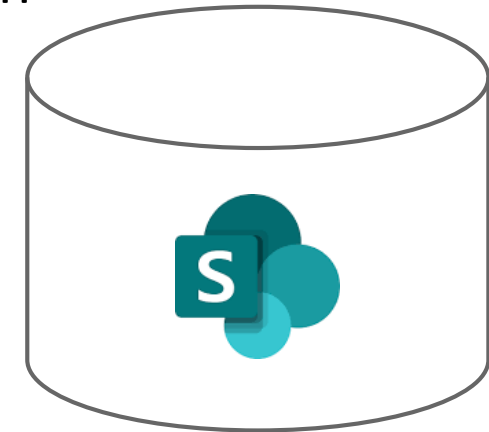
"Delegation?
What is that?"

Example: Delegation supported



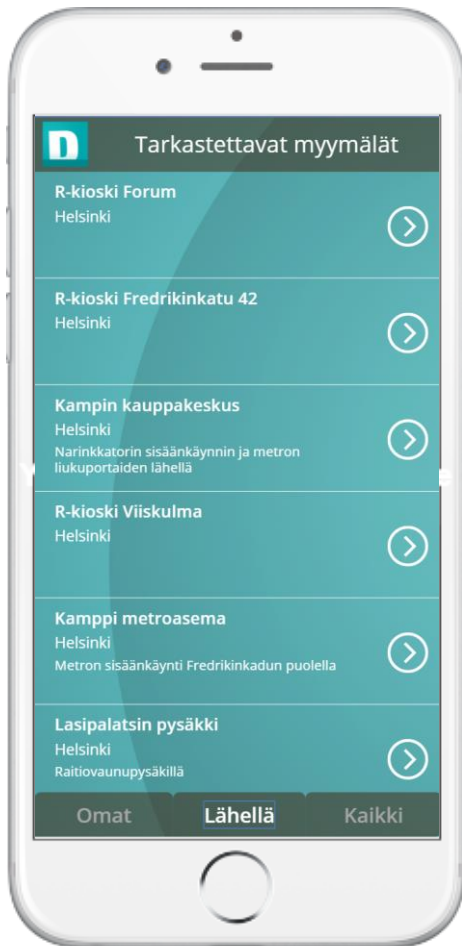
Give me all stores where location = Munchen

Here you are. All 5000 stores located in Munchen



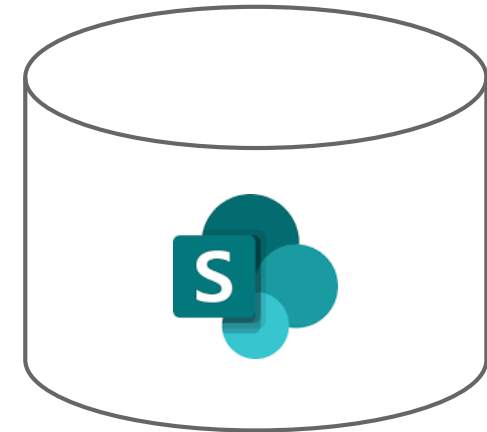
50 000 items

Example: Delegation not supported



Give me all stores location containing string
"Munchen"

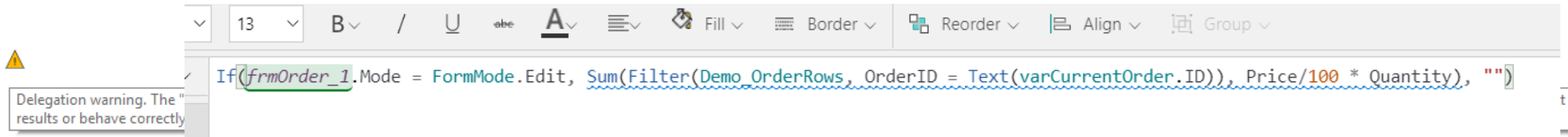
Here are 500 first stores. Please find what
you want by yourself



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 Power
Apps handle it?

It's all about getting rid of delegation issues

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

20191125

20191123

Demo

What data storage I should use?

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

The background of the image is a close-up, high-angle shot of several dandelion seed heads. The seeds are a vibrant yellow-orange color, and their fine, hair-like structures are clearly visible, creating a complex, radial pattern across the frame. The lighting is soft and even, highlighting the texture of the seeds.

—
"This is freaking
slow!!!!!"

Check & to do

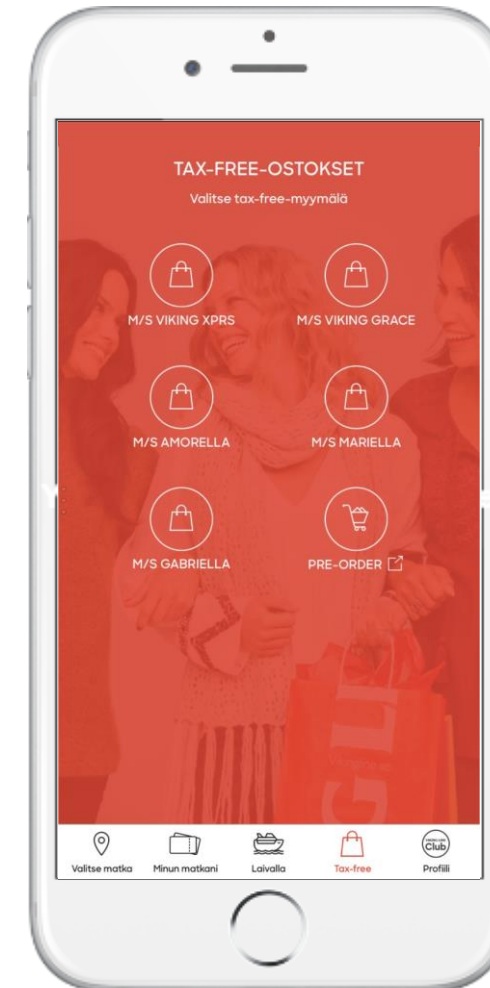
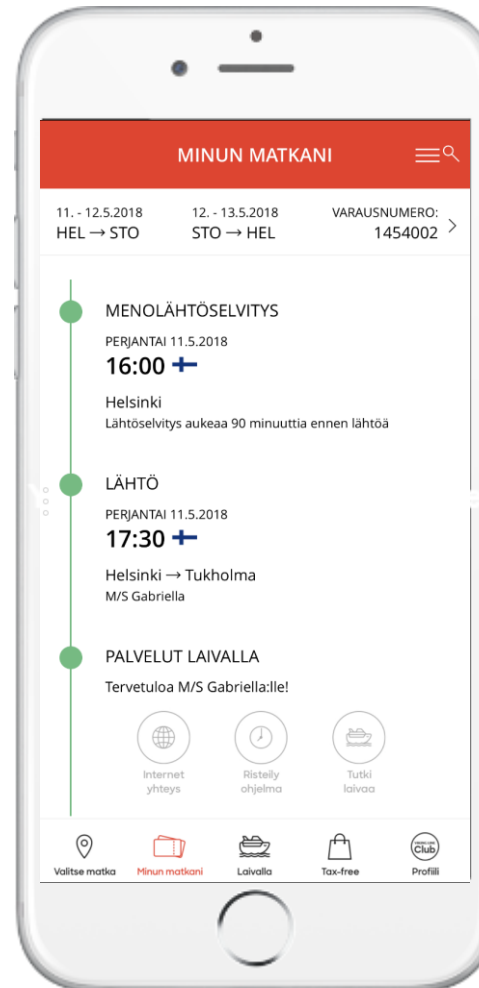
- Minimize stuff loaded on App **OnStart**
- Use concurrency when loading data
- Avoid dependencies between screens
- **Expensive operations** located
 - In ForAll
 - In Gallery
- **Delegation** warnings

Check & to do

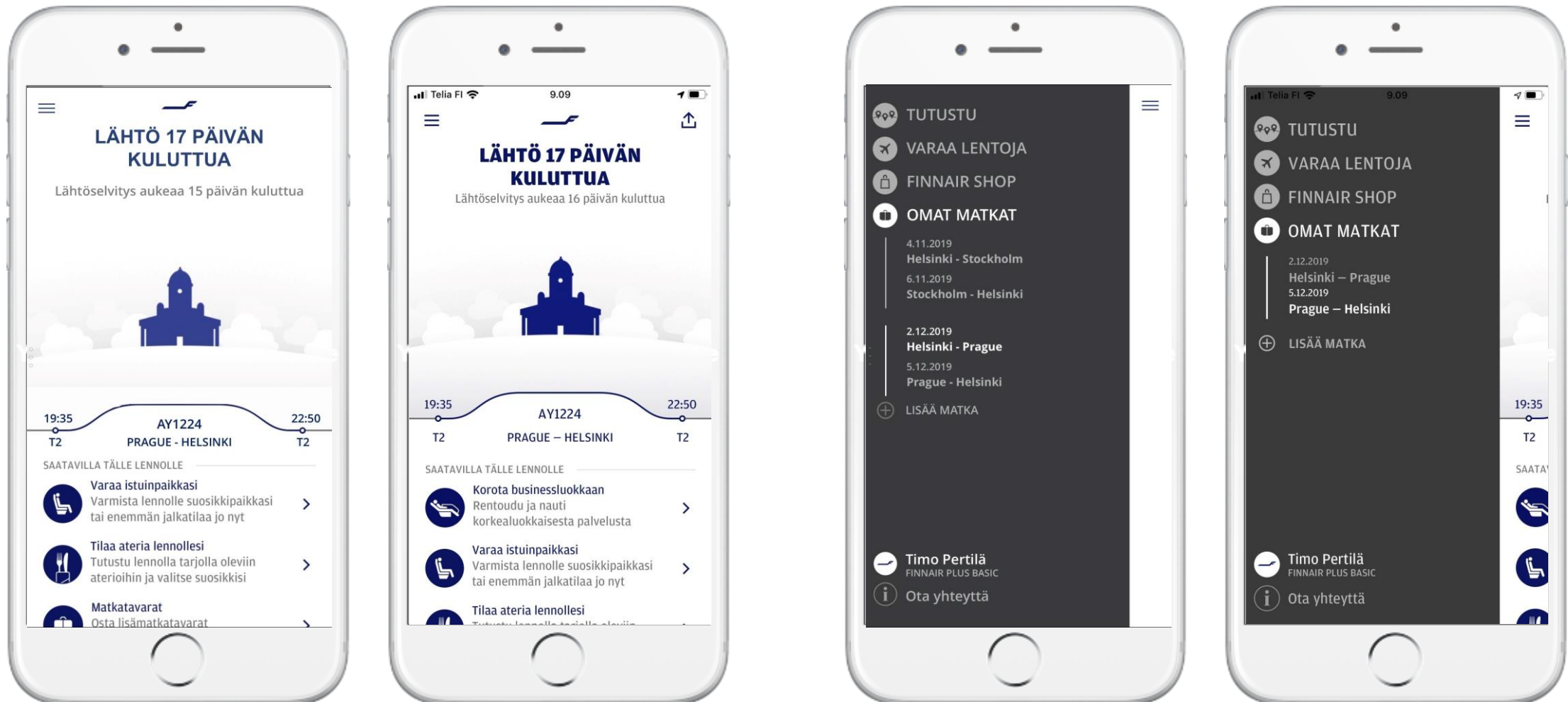
- Save / update several items -> Use Flow
- Use **galleries** when suitable
- Use **components** when suitable
- Power App might run **extremely** slow on older mobile phone
 - Reduce number of screens
 - Reduce number of controls
- Use **Monitor** (or Fiddler or developer tools) to find out network traffic App generates

“Yes yes, it iS a great tool. But all these Power Apps looks like SH!&#”

Case Viking Line



Case Finnair

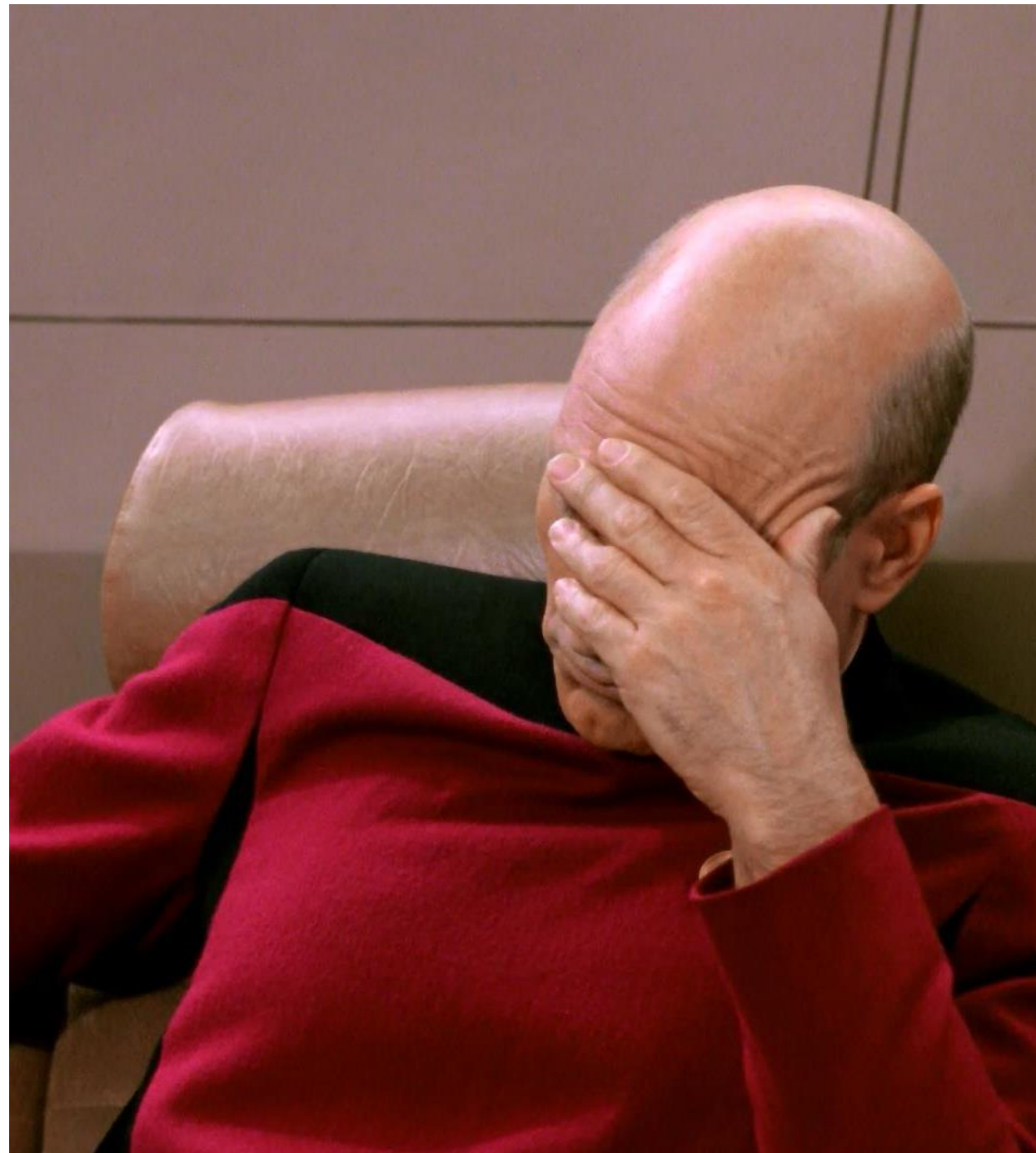


Demo



Lessons learned

1. Don't underestimate SharePoint lists



2. Find out what mobile devices end users use



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!

Don't forget to
rate the session!



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