

# Digitalizing supervision activities and documentation

François Got



## François Got

- MSc IT engineering 2019
- Welado since Jan 2018
- 2018-2019 Database Developer
- 2019-Now Project Engineer



# Table of contents

1. Introduction
2. Technologies
3. The application
4. Using the data
5. Conclusion
6. Questions

# Introduction



# Drivers for change

**Outdated  
methods  
(Word  
document)**

**Data storage  
and analysis**

**Contract  
requirement**

**Time  
consuming**

# Requirements

**Keep it simple**

**Mobile  
platform**

**Low cost**

**Easy & timely**

# Technologies



- App development
- Power FX
- Low code
- 1 app per user

- Used for:
- Front and backend

## Microsoft PowerApps

# Power Apps





- Automation
- Background processes
- 1 shared trigger
- 3 report flows
- 1 datasource refresh flow
  
- Used for:
- Reports
- Dataset update

## Microsoft Power Automate








**Power Automate**  
(Microsoft Flow)

# Microsoft Excel & OneDrive

- Datasource
- Cloud based
- 1 source per user



- Used for:
- App & PowerBI datasource

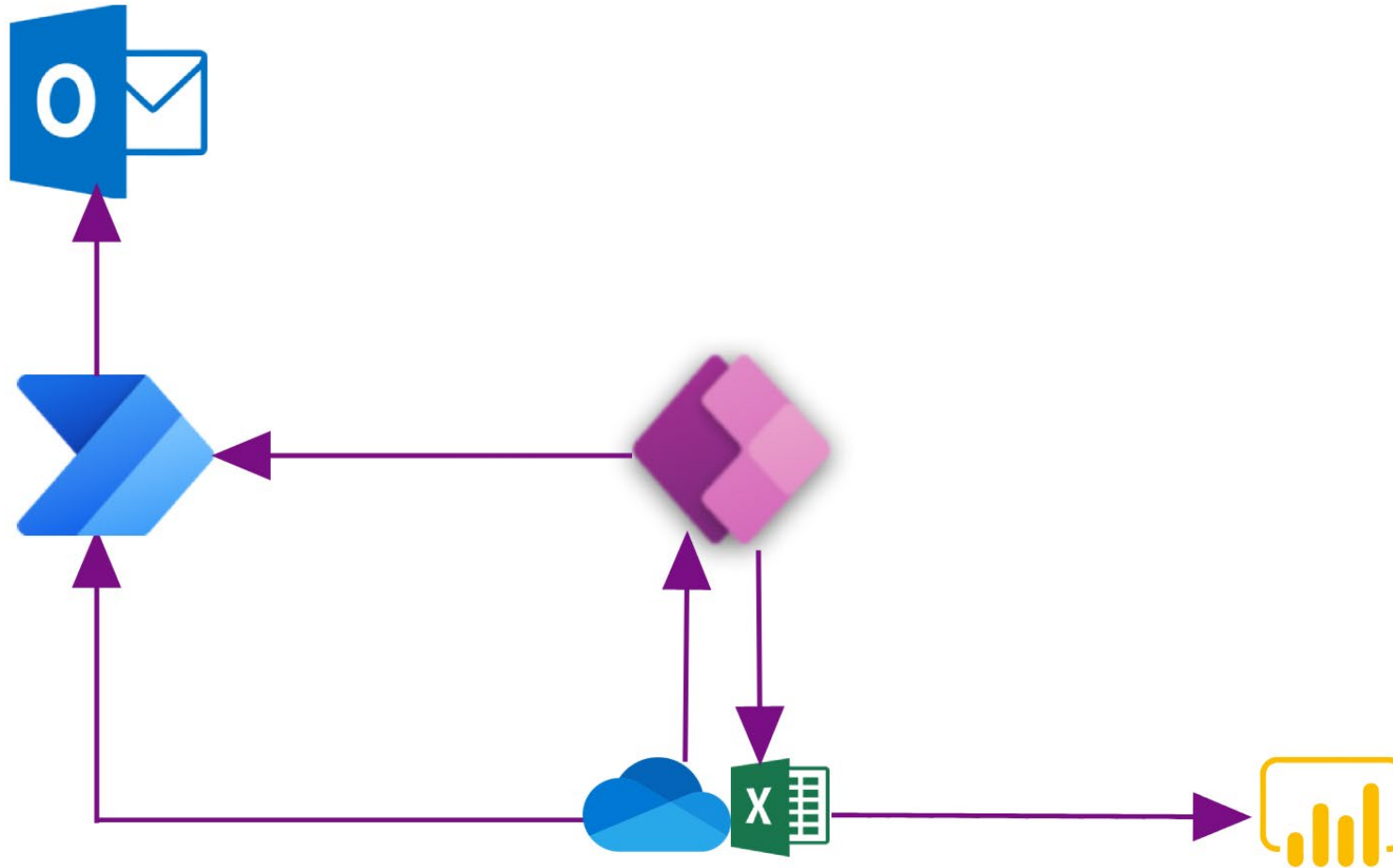
 Name ▾	Modified ▾	Modified By ▾	File size ▾	Sharing
 data_images	9 minutes ago	Francois Got	3 items	 Shared
 data.xlsx	A few seconds ago	Francois Got	29.8 KB	 Shared

## Microsoft Power BI

- Vizualisation software
  - 8€/month/user
  - 1 report per group
- 
- Used for:
  - Team reports



# Power BI



# Interactions

# The application

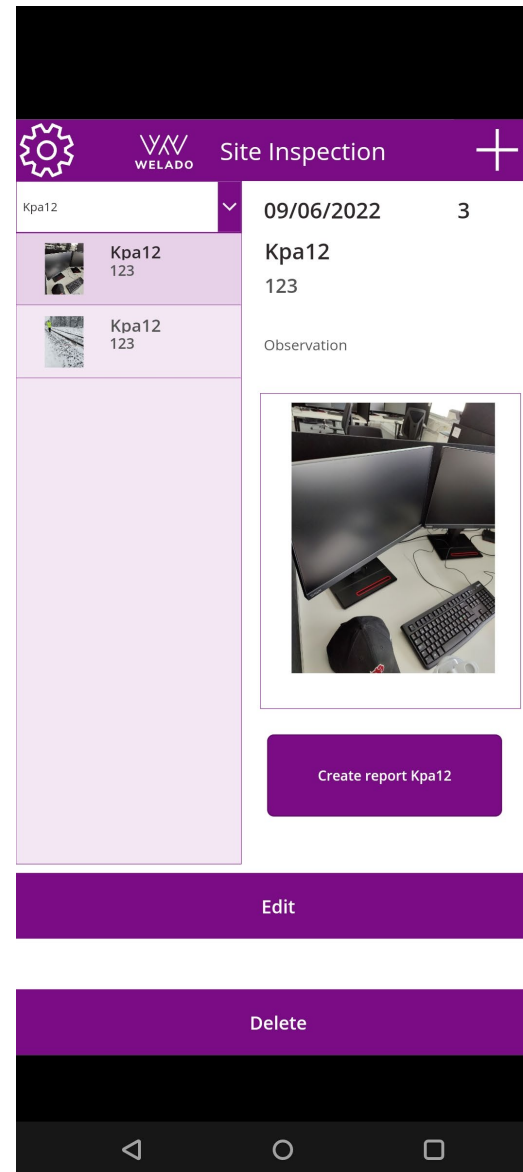


## General information

- **Microsoft Office 365**
- **No other cost**
- **Dev started March 2019**
- **~60 users**
- **15000+ observations**
- **Cross-platform**

- Observation gallery
- Focus on one observation
- All buttons

## Main screen



- Dropdowns
- Camera or upload
- Speech-to-text
- Image upload
- Datasources updated
- Automatic metadata:
- GPS coordinates
- Datetime
- Username

## Add an observation

New observation

Urakka  
Kpa12

Rataosanumero  
123

Paikan tarkennus  
Location

Havainto  
Some text describing the observation ☐ Vastaus pyydetään

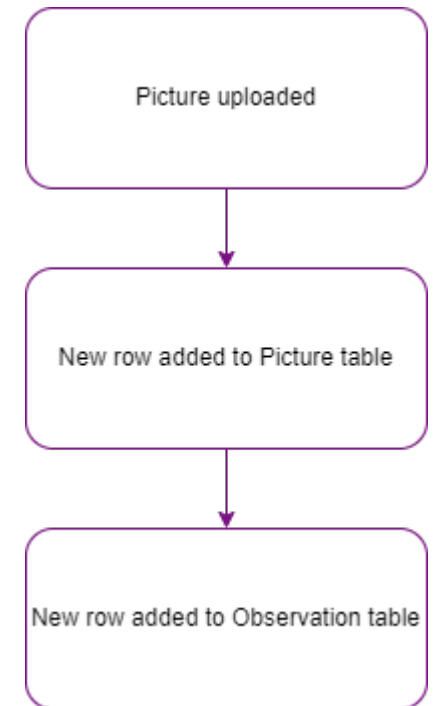
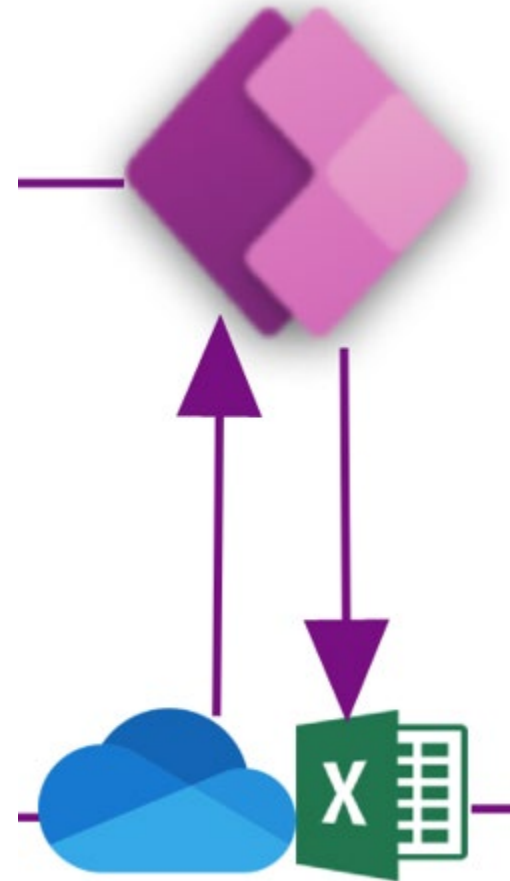
Havainto tyyppi  
Laatuhavainto

Tehtäväluettelo  
Alus-taipohjarakenne

Change Picture

Done

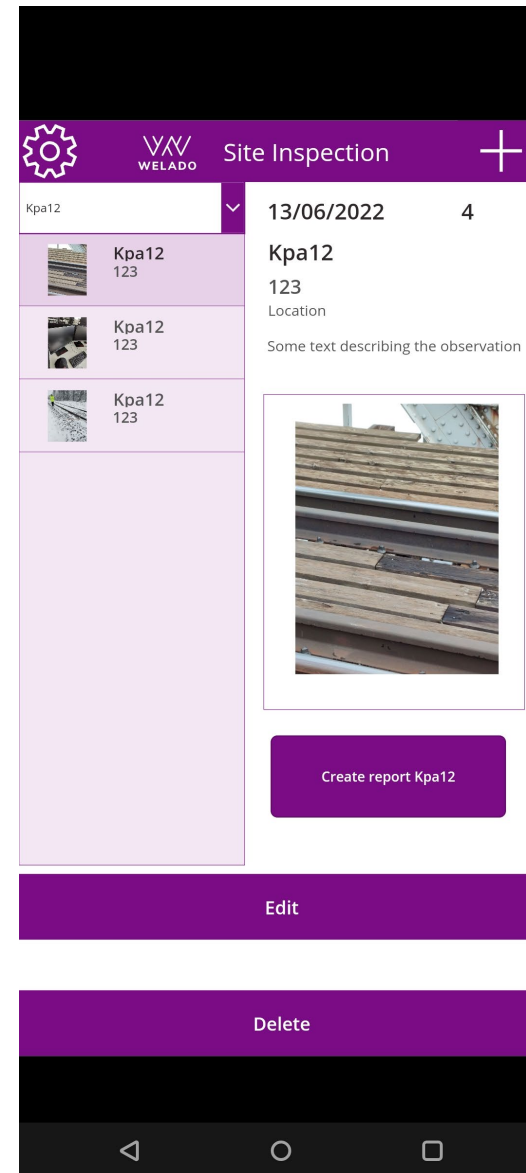
Cancel





- Back to main screen

## Edit an observation



- Datasource updated
- Datetime and GPS unchanged

## Edit an observation

Edit observation

Urakka  
Kpa12

Rataosanumero  
123

Paikan tarkennus  
Location

Havainto  
Some text describing the observation - edited

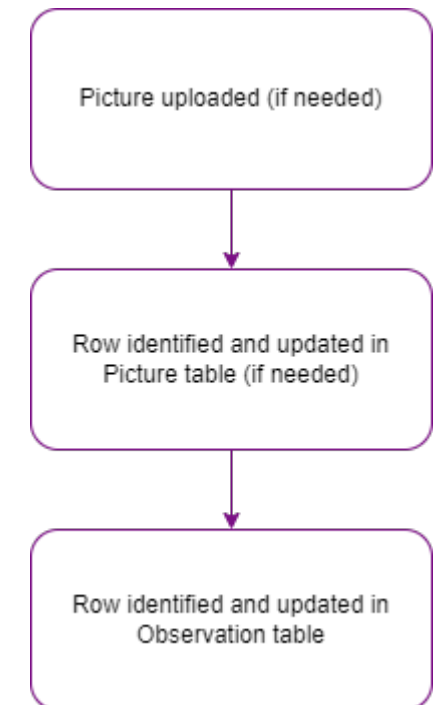
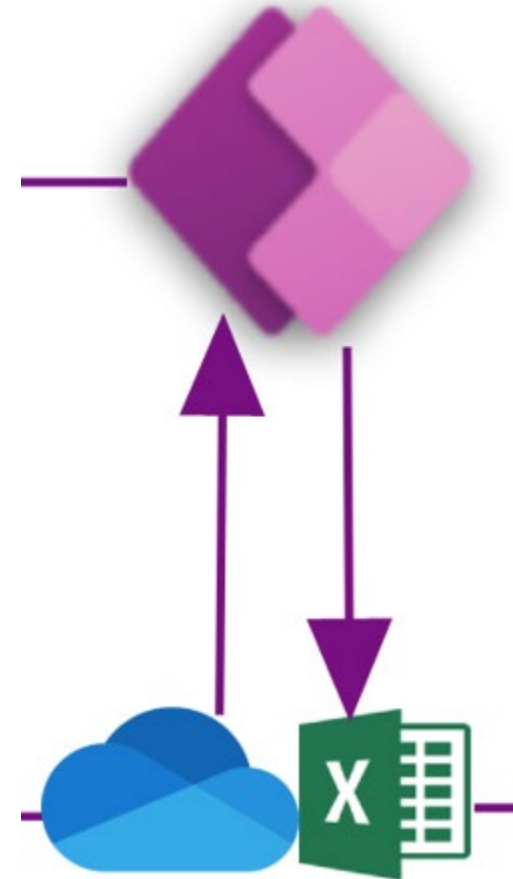
Havainto tyyppi  
Laatuhavainto

Tehtäväluettelo  
Alus-taipohjarakenne

Tap or click to add a picture

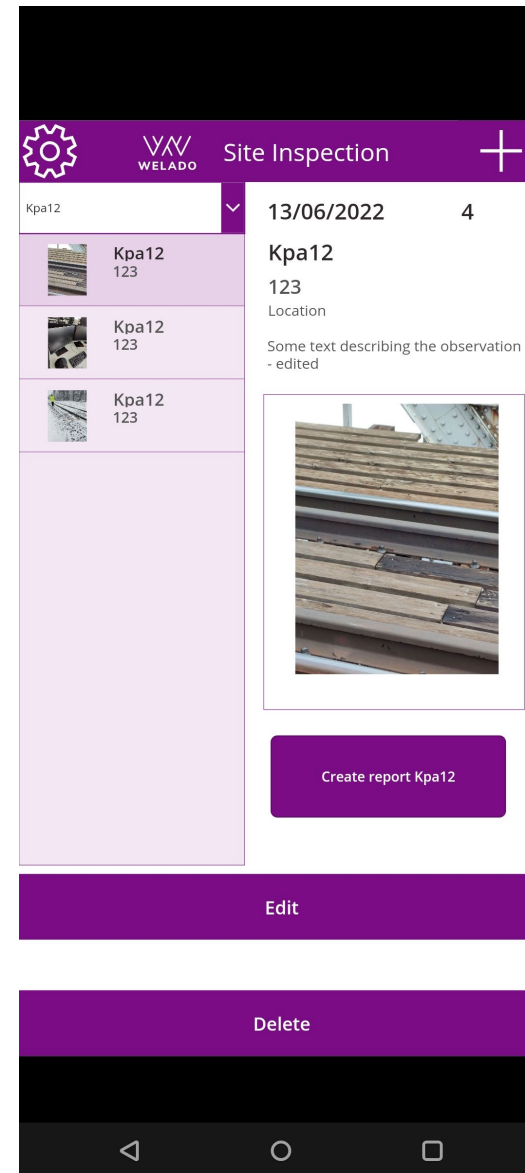
Done

Cancel



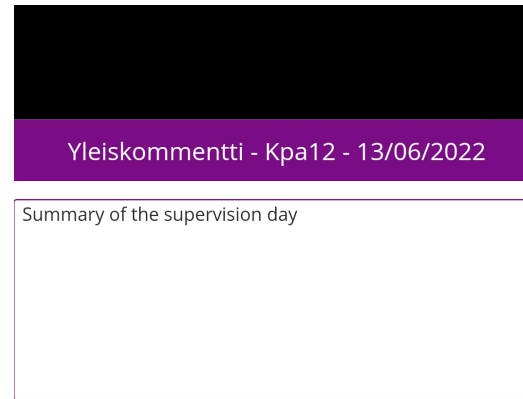
- Few clicks from main screen

## Generate a report



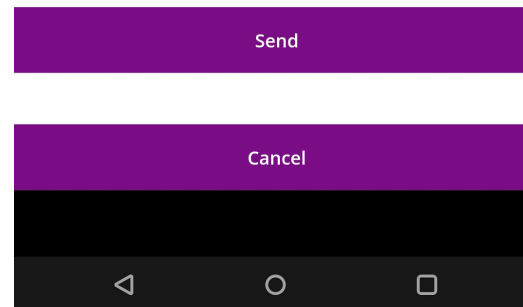
- Additional information

## Generate a report



Yleiskommentti - Kpa12 - 13/06/2022

Summary of the supervision day

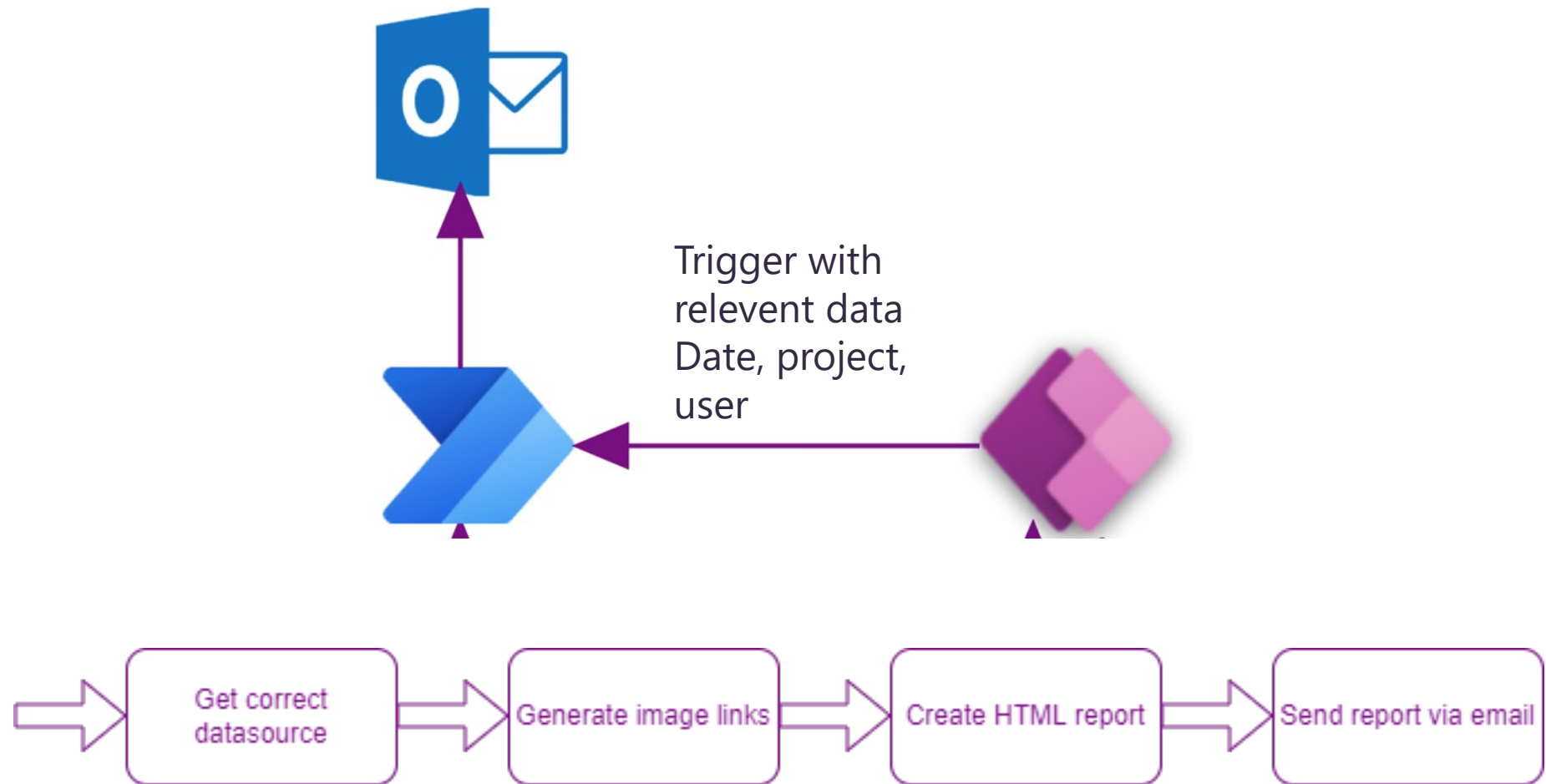


Send

Cancel

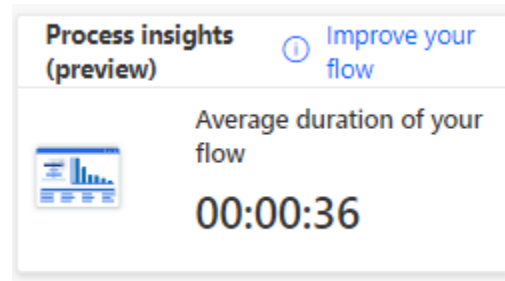
- Power Automate process

## Get a report

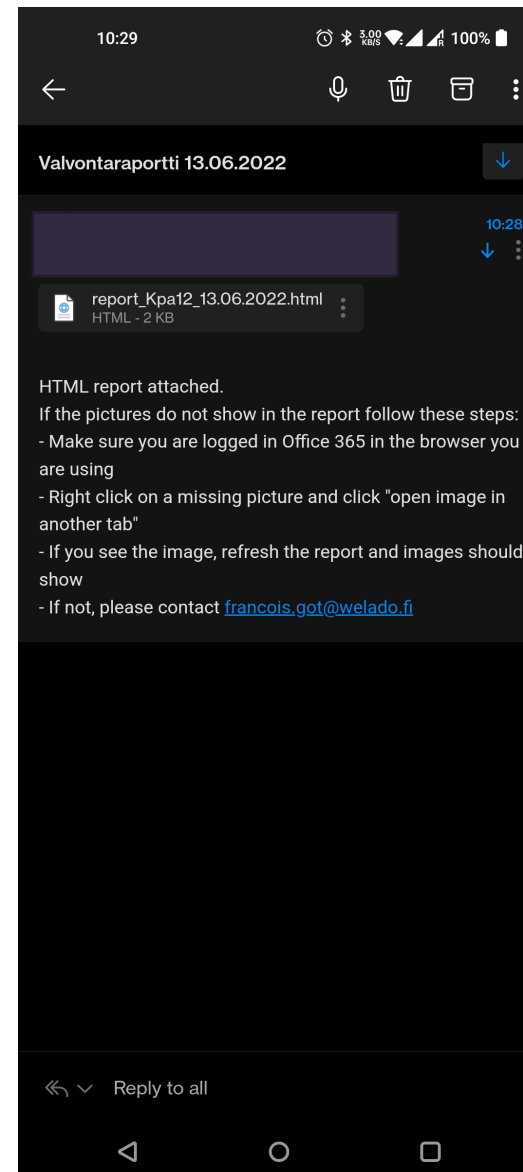


- Quick process

## Daily report



# Report



- Format based on customer's requirements
- First page
- Summary

# Report

## Valvontaraportti 13.06.2022

Pvm: 13.06.2022

Urakka: Kpa12

Valvoja: Francois Got

Tehtäväluettelo: Alus-taipohjarakenne

Turvallisuushavainnot: 0

Turvallisuuspoikkeamat:0

Turvallisuus-vaatimuksenmukainen:0

Ympäristöhavainnot:0

Ympäristöpoikkeamat:0

Ympäristö-vaatimuksenmukainen:0

Laatuhavainnot:1

Laatupoikkeamat:0

Laatu-vaatimustenmukainen:0

Muu:0

Yleiskommentit: Summary of the supervision day

# Report

ID	PVM	Rataosanumero	Paikannus	Tehtäväluettelo	Havaintotyyppi	Latitude	Longitude
4	13/06/2022 10:27:06	123	Location	Alus-taipohjarakenne	Laatuhavainto	63.57466413	29.05431878

Havainto: Some text describing the observation - edited

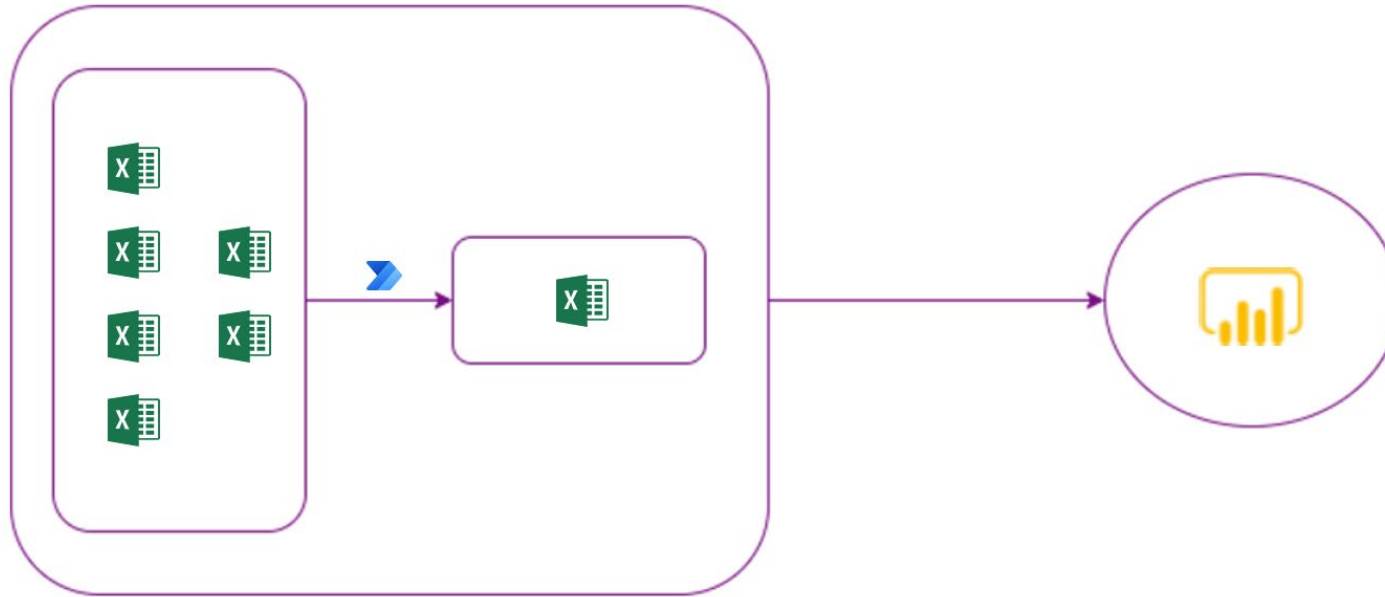


1 page per  
observation



# Using the data

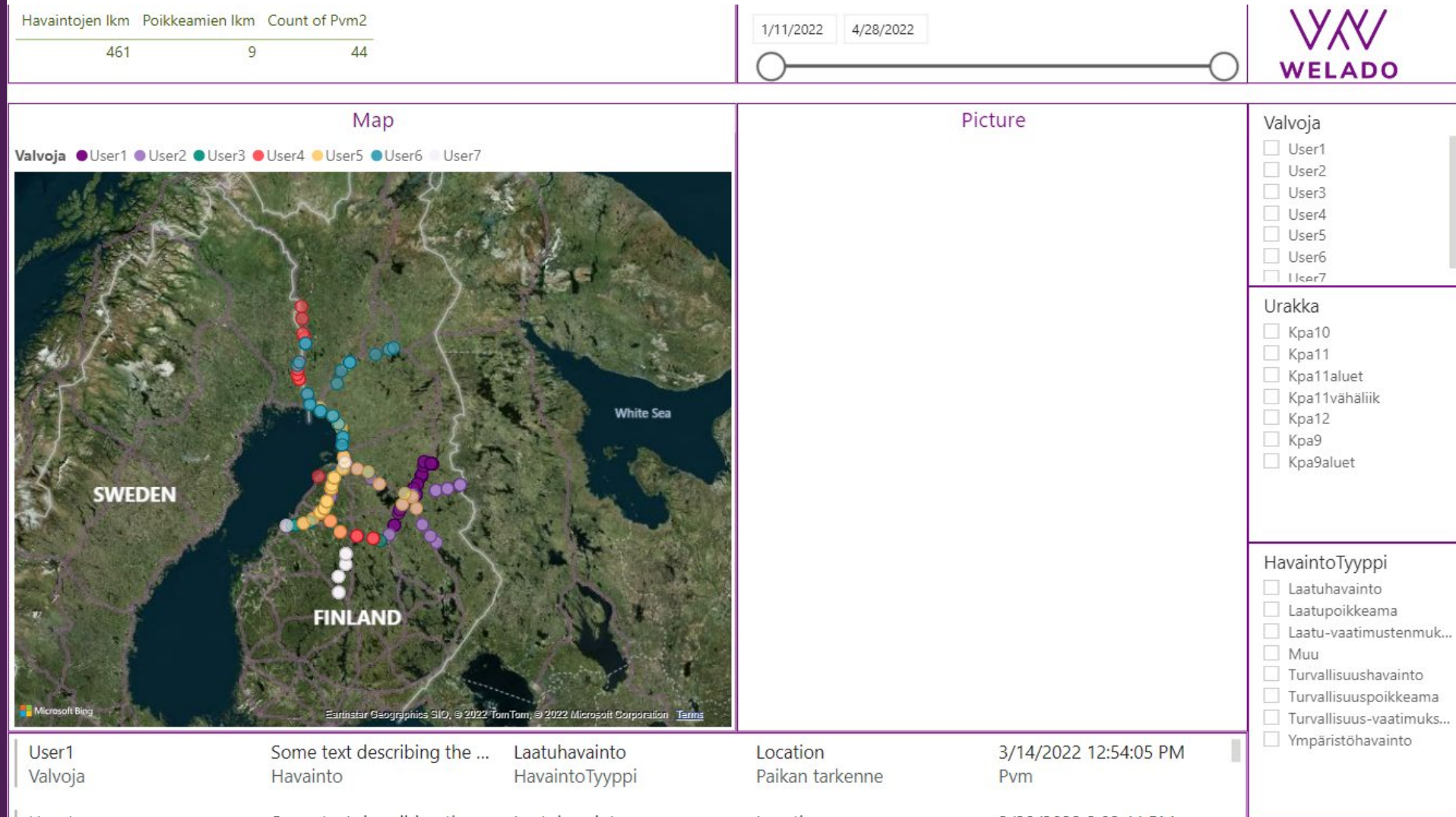




# Architecture

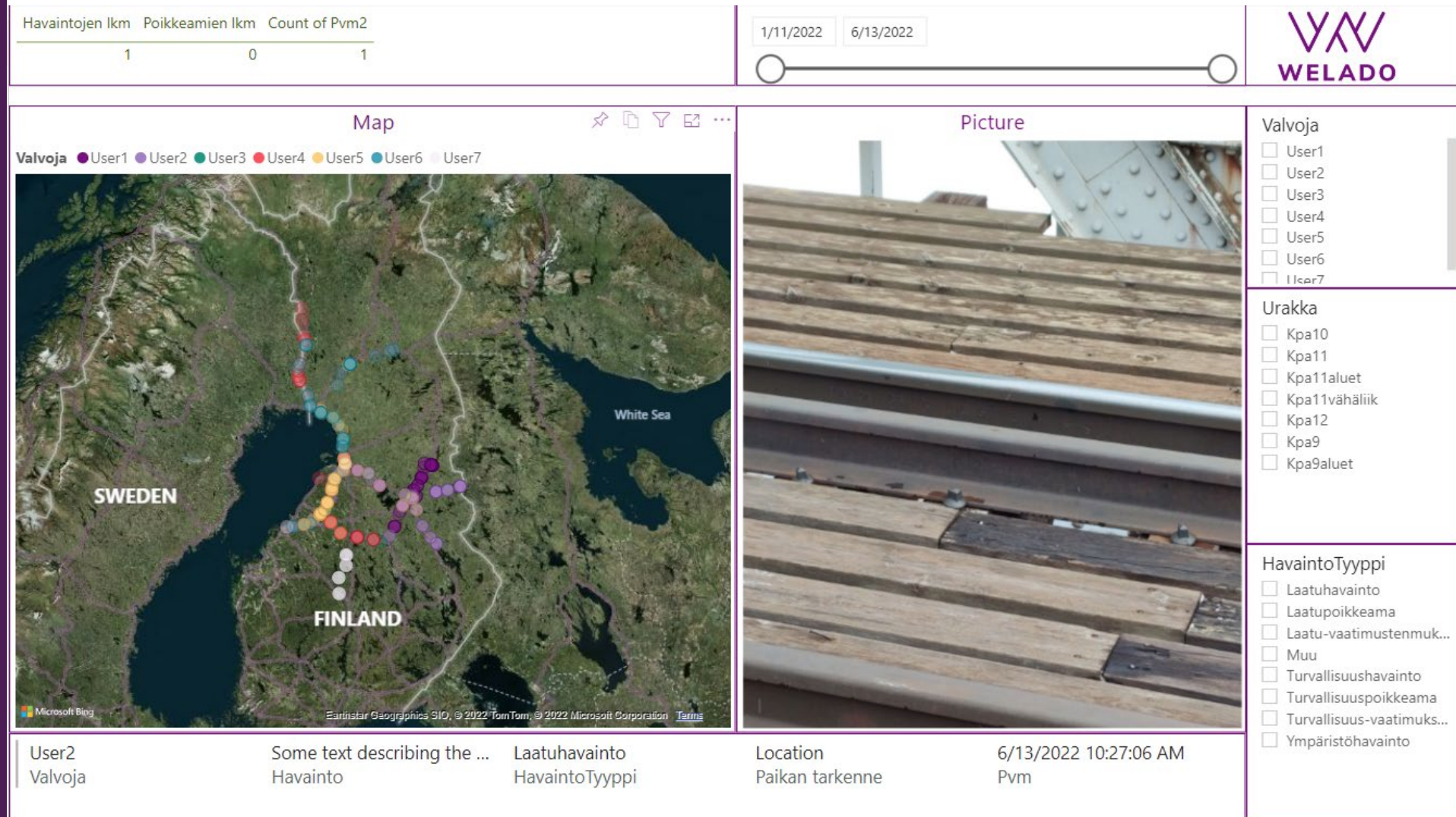
# Power BI report

## Overview



# Power BI report

Focus on one observation





# Power BI report

Origin	Havaintojen lkm	Poikkeamien lkm	Count of Pvm2
Welado	437	29	48
RAIKU	126	10	32
<b>Total</b>	<b>563</b>	<b>39</b>	<b>59</b>

Pvm

28.8.2022 15.12.2022

Origin

☐ RAIKU

☐ Welado

Valvoja

☐ User1

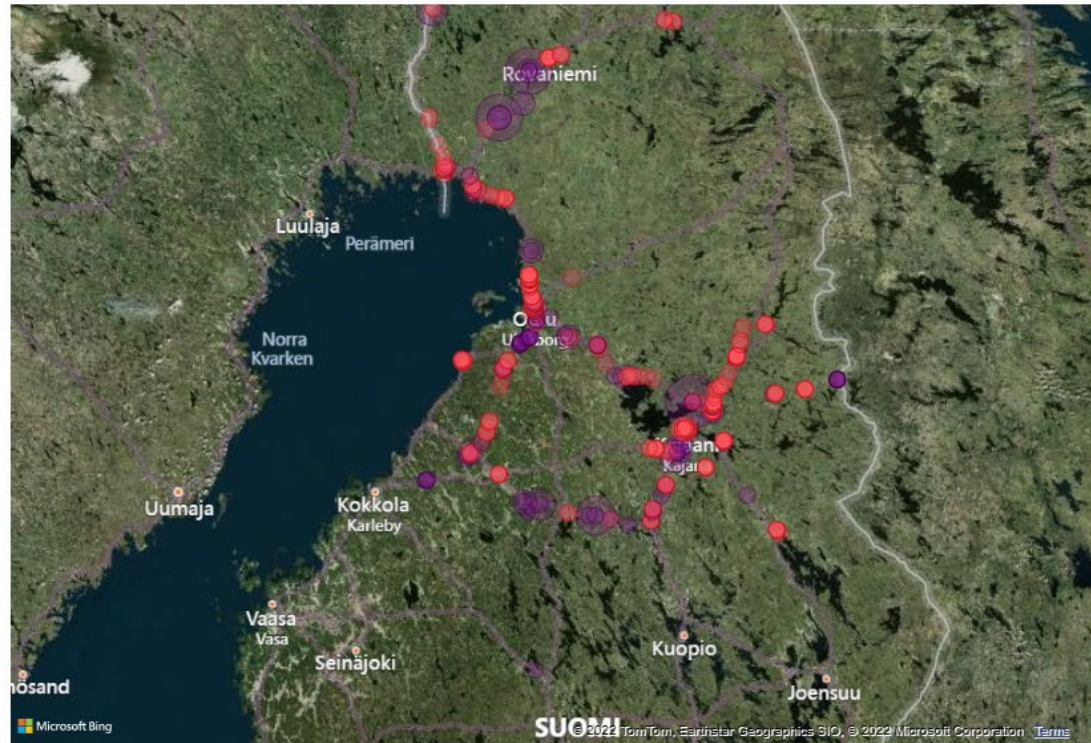
☐ User2

☐ User3

☐ User4

Map

Origin ● RAIKU ● Welado



Valvonta app

466

RAIKU

136

Pvm	HavaintoTyyppi	Linkki
8.11.2022 11:41:44	Havainto	<a href="#">[Redacted Link]</a>

Integration of  
the FTIA's data

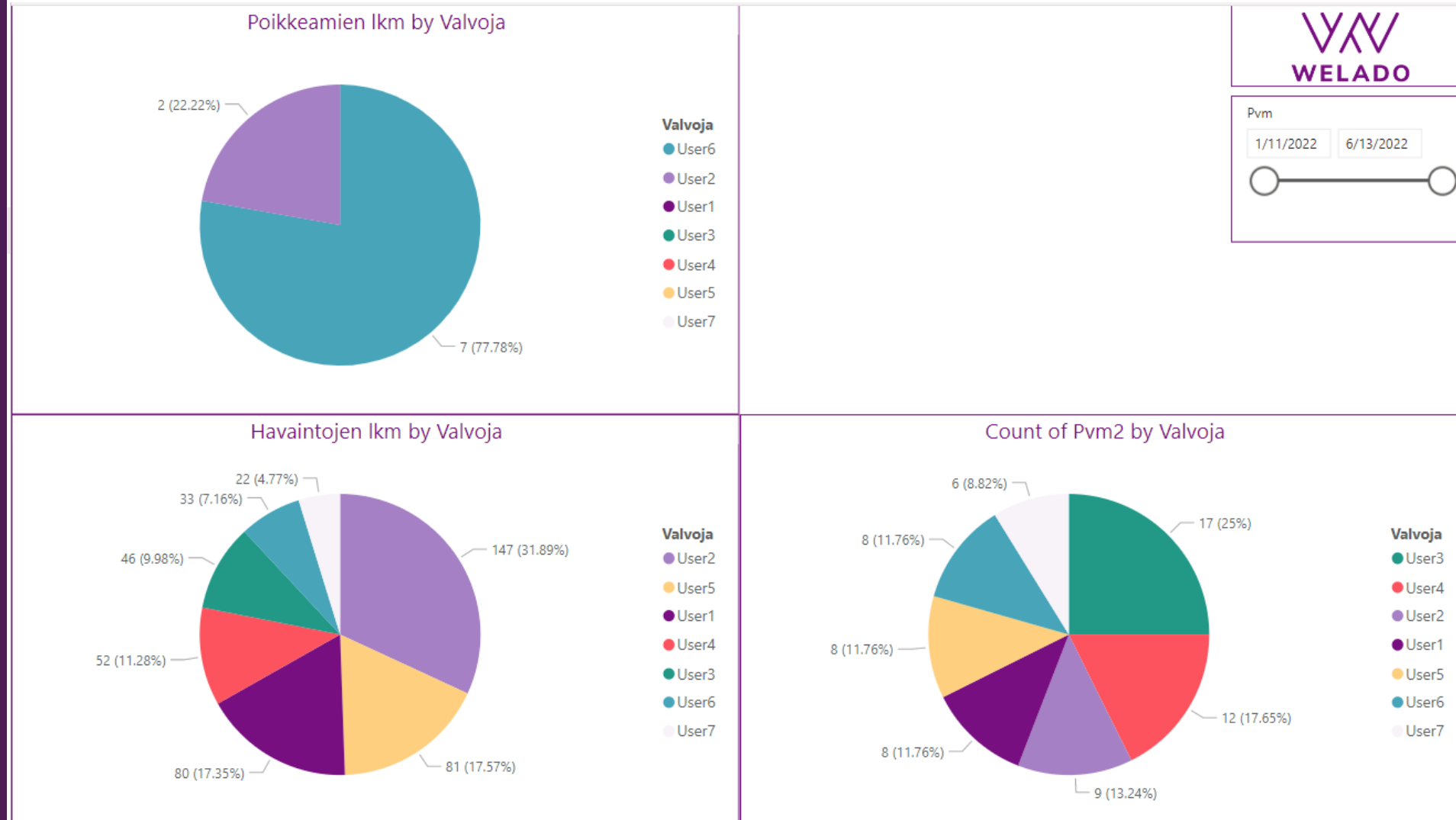
# Using the data

Project management



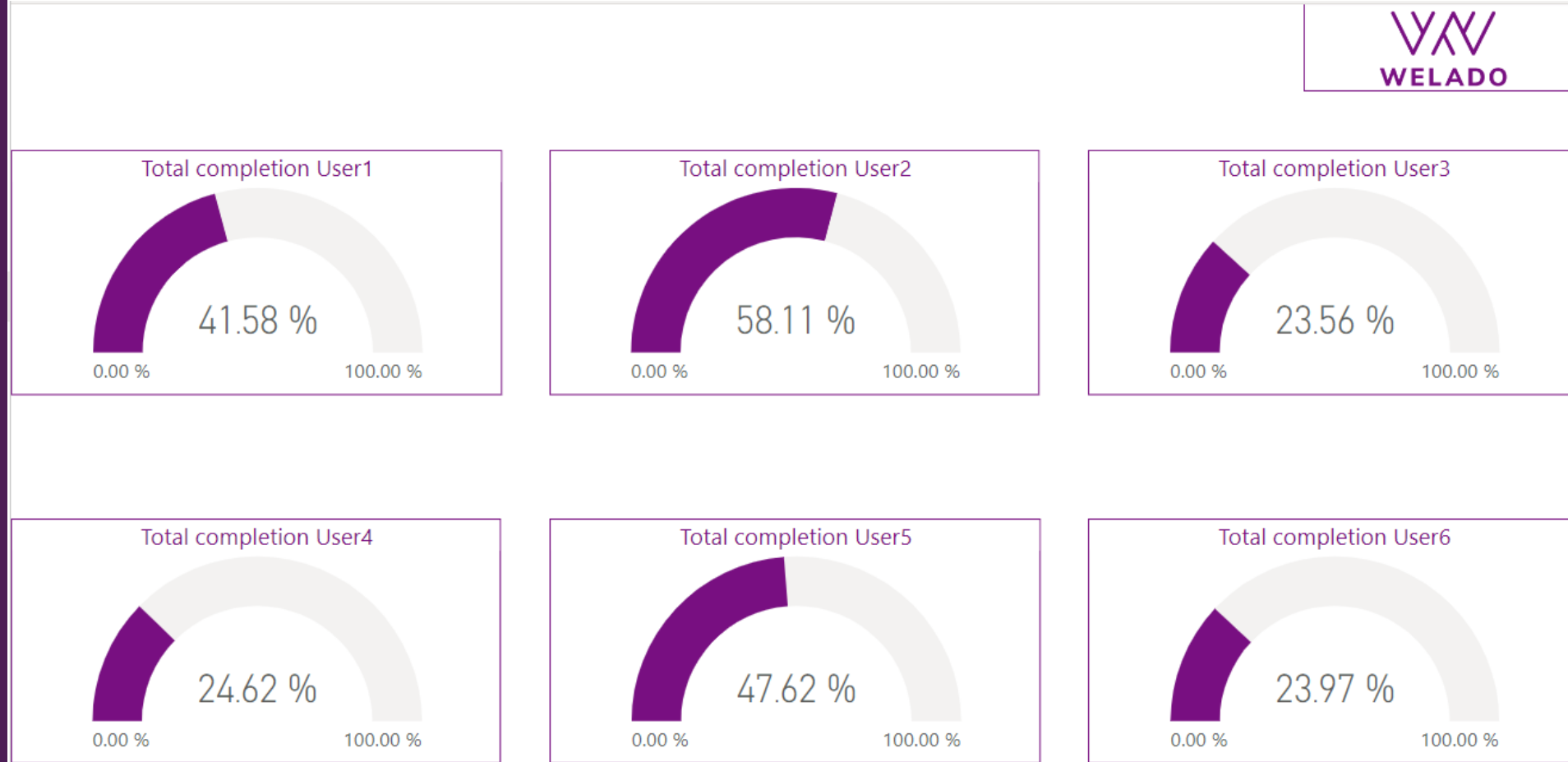
# Power BI report

## Team summary



# Power BI report

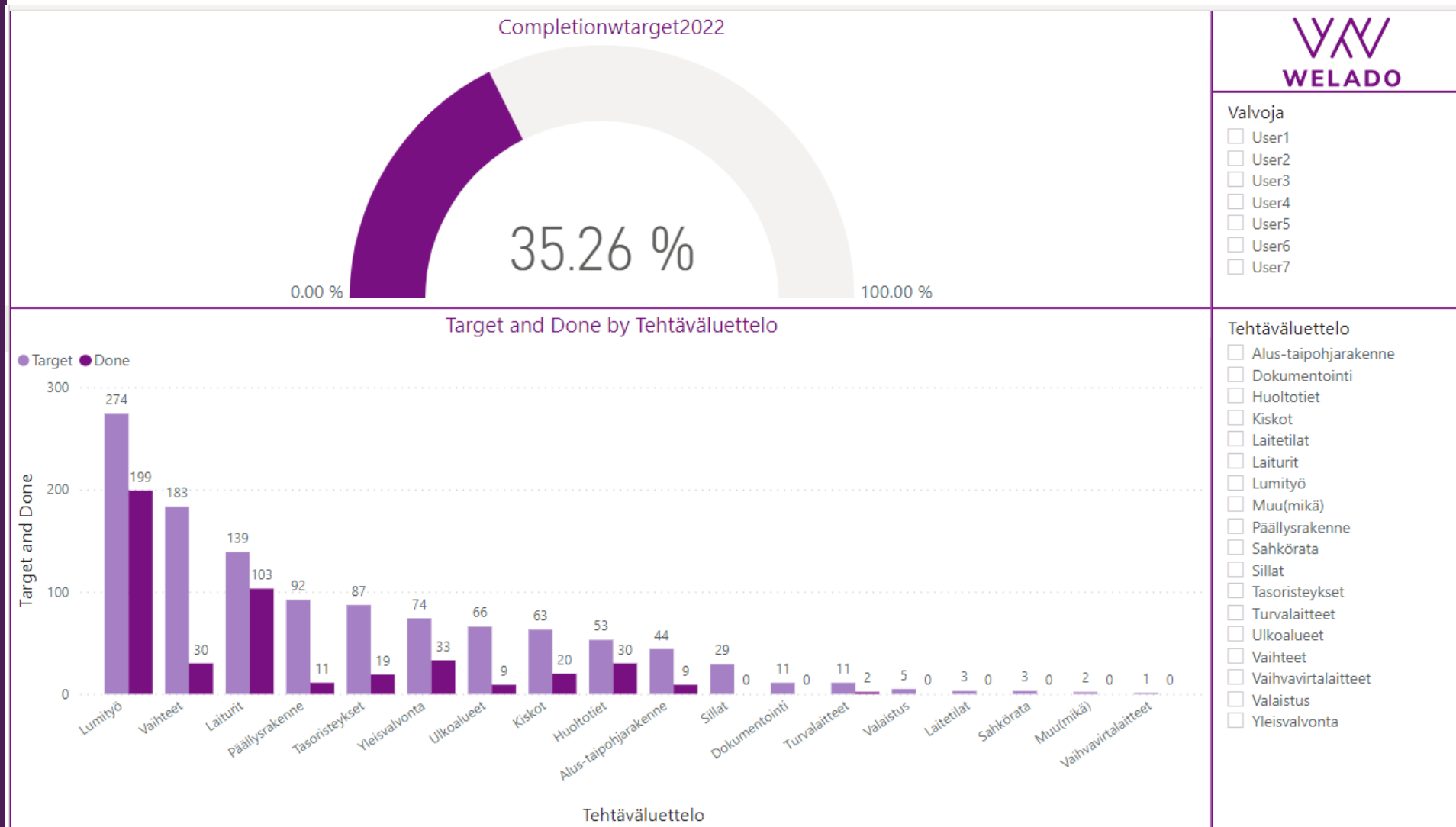
## Individual targets





## Team targets Predictive analysis

# Power BI report



# Conclusion



# Conclusion

## Key takeaways



**Reliable, cheap, useful**



**Success**

# Questions



François Got



francois.got@welado.fi

