

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



Contract requirement



Outdated methods (Word document)



Time consuming



Data storage/analysis

Requirements



Keep it simple



Mobile platform



Low cost



Easy & timely

Technologies



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

Microsoft PowerApps

Power Apps



- Used for:
- Front and backend

Microsoft Power Automate

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








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

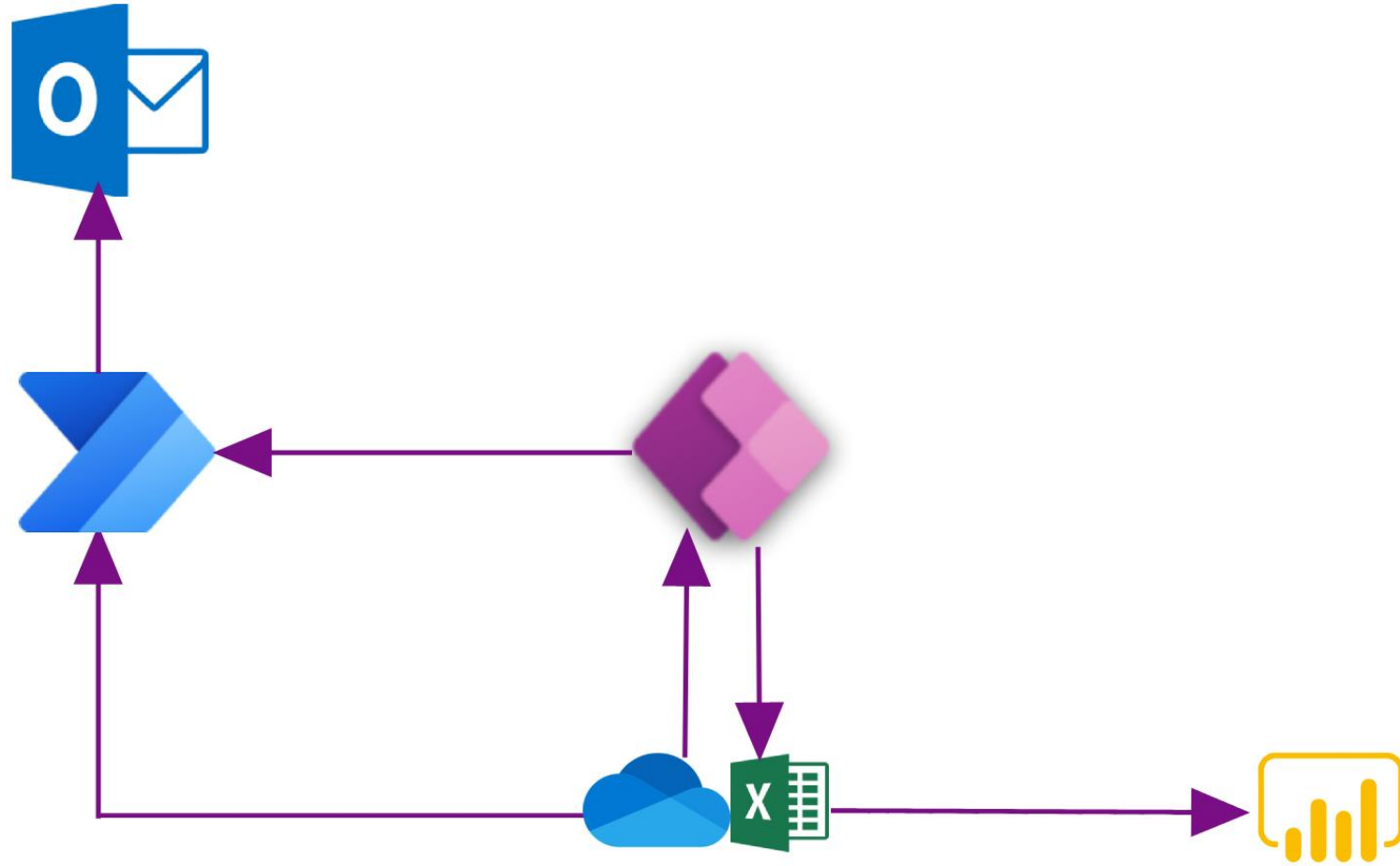
Microsoft Power BI

- Visualisation software
- 8€/month/user
- 1 report per group



Power BI

- Used for:
- Team reports



The application

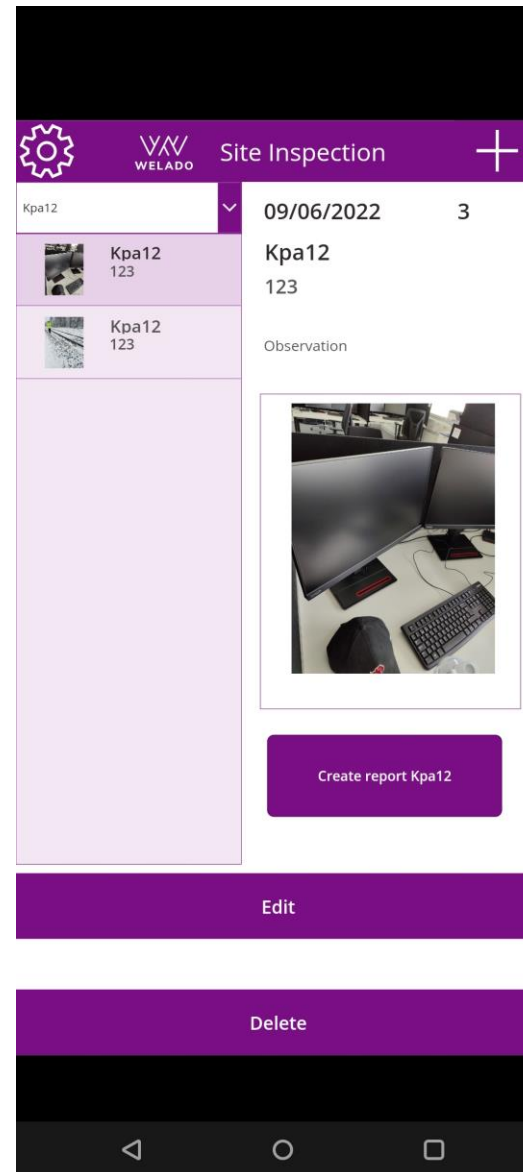


General information

- **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

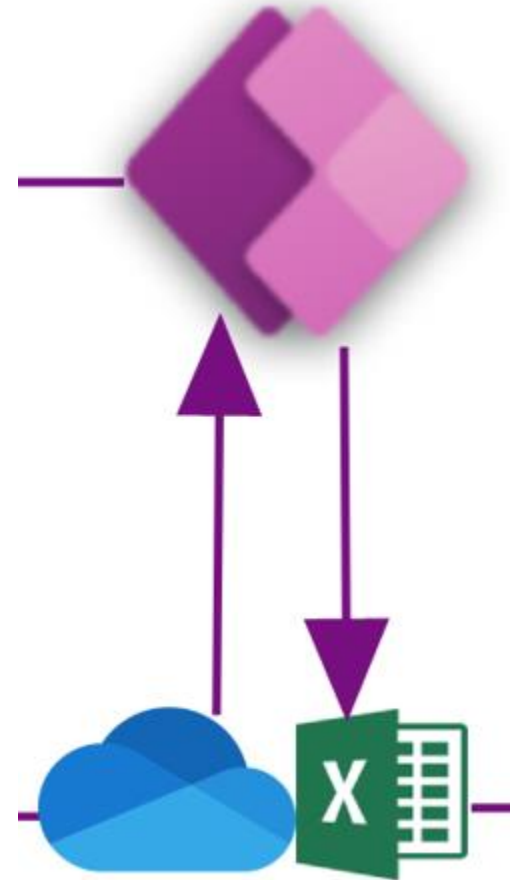
Havainto tyyppi
Laatuhavainto

Tehtäväluettelo
Alus-taipohjarakenne

Change Picture

Done

Cancel



- Back to main screen

Edit an observation

The image shows a mobile application interface for editing an observation. At the top, there is a purple header bar with a gear icon, the 'VXV WELADO' logo, the text 'Site Inspection', and a plus icon. Below the header, the interface is divided into two main sections. The left section is a list of observations, each with a small thumbnail image and the text 'Kpa12 123'. The right section displays the details of the selected observation, including the date '13/06/2022', a count '4', the location 'Kpa12 123', and a description 'Some text describing the observation'. A large image of a wooden structure is shown below the description. At the bottom of the right section is a purple button labeled 'Create report Kpa12'. Below the main content area are two purple buttons: 'Edit' and 'Delete'. The bottom of the screen features a black navigation bar with three icons: a back arrow, a circle, and a square.

VXV WELADO Site Inspection +

Kpa12 13/06/2022 4

Kpa12 123 Location

Some text describing the observation

Create report Kpa12

Edit

Delete

Edit an observation

- Datasource updated
- Datetime and GPS unchanged

Edit observation

Urakka
Kpa12

Rataosanumero
123

Paikan tarkennus
Location

Havainto
Some text describing the observation - edited

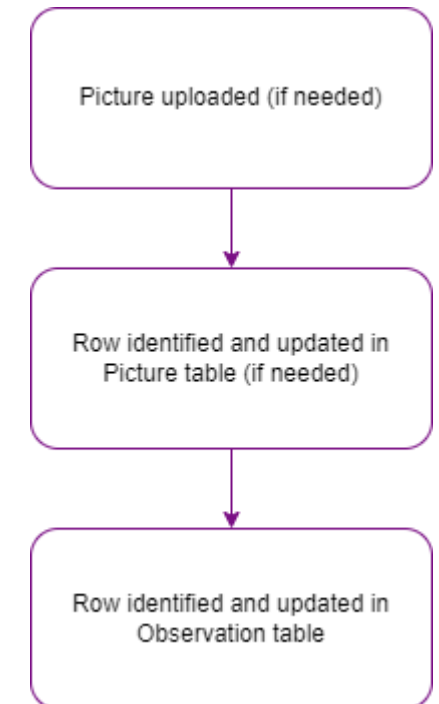
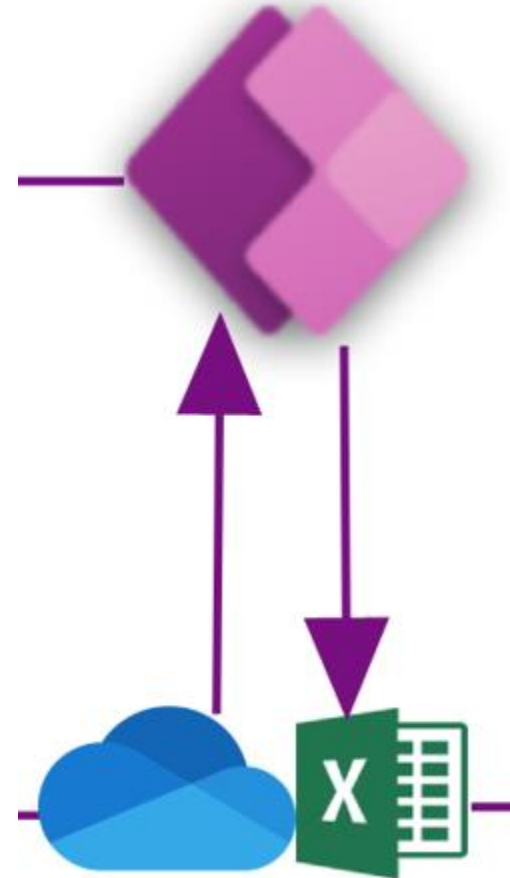
Havainto tyyppi
Laatuhavainto

Tehtäväluettelo
Alus-taipohjarakenne

Tap or click to add a picture

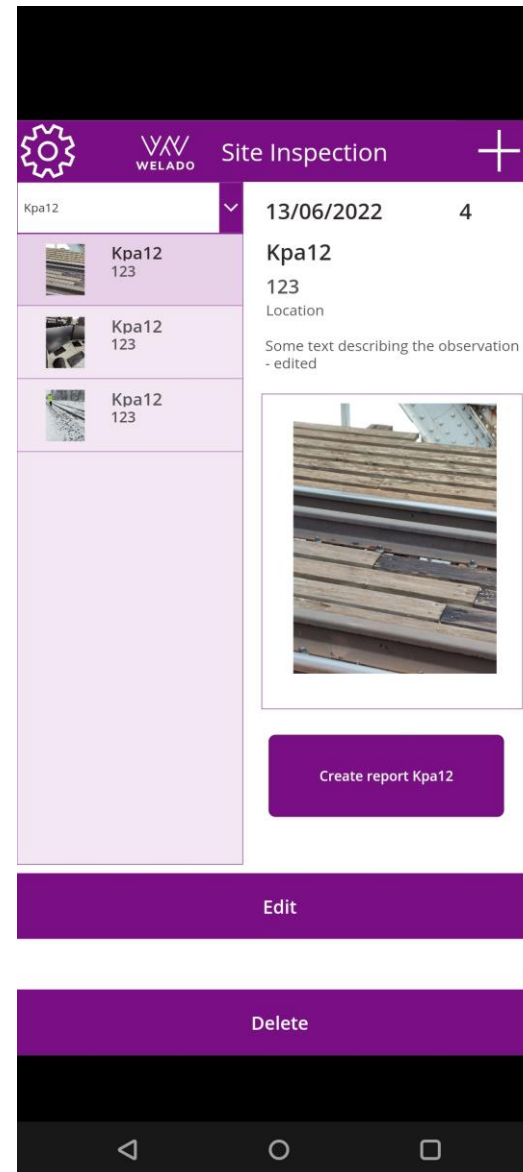
Done

Cancel



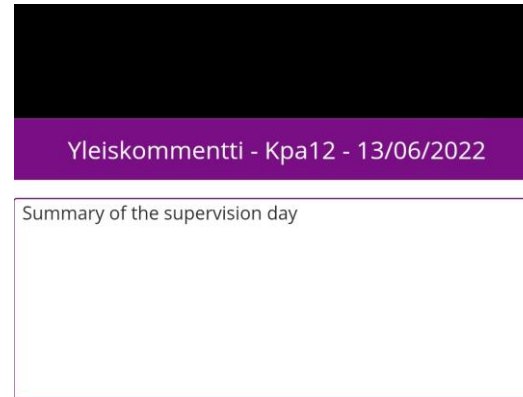
- Few clicks from main screen

Generate a report



- Additional information

Generate a report



The image shows a mobile application interface for generating a report. At the top, there is a black header bar. Below it is a purple bar with the text "Yleiskommentti - Kpa12 - 13/06/2022". Underneath this is a white box with a thin purple border, containing the text "Summary of the supervision day".

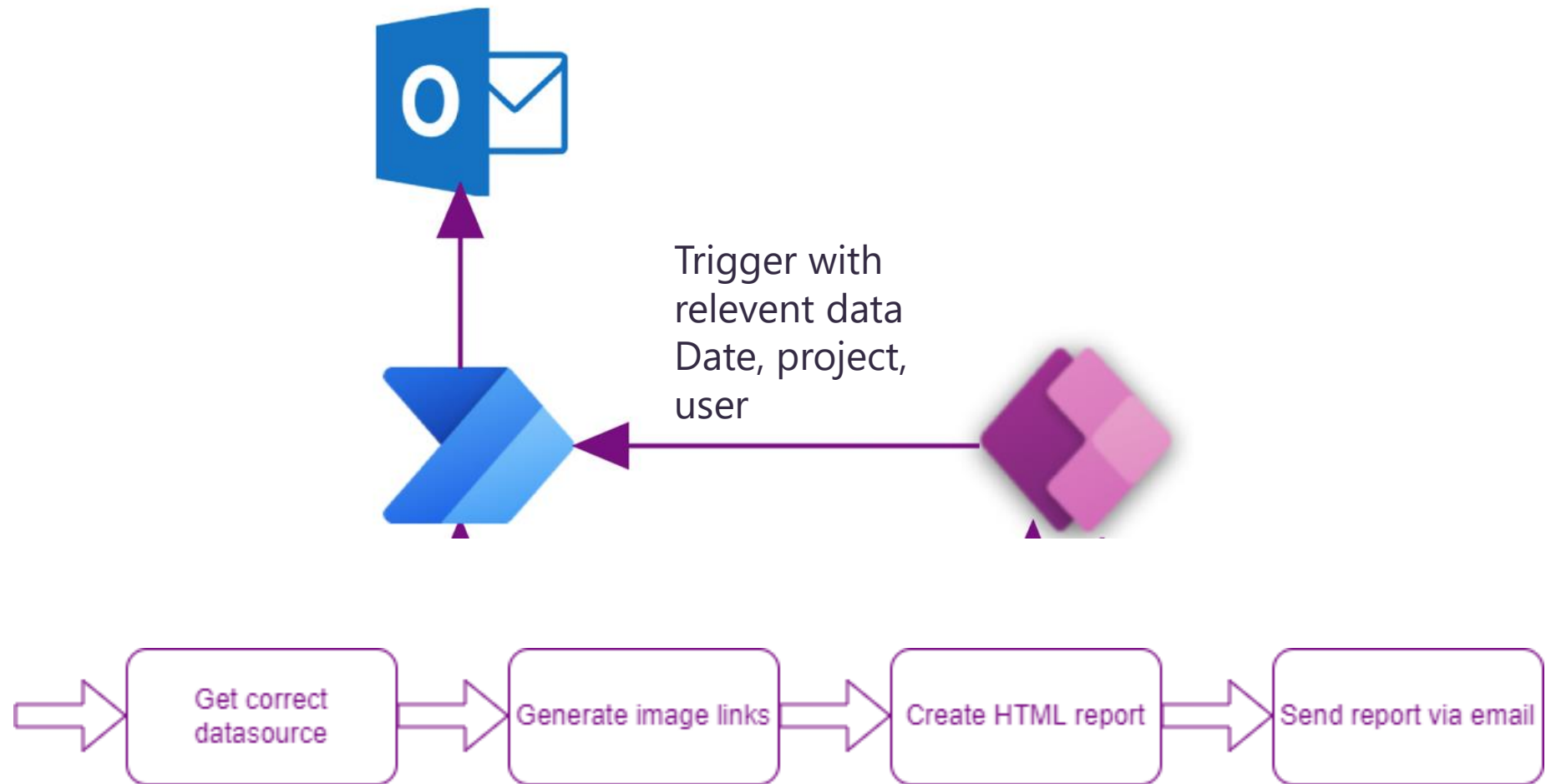
Send

Cancel



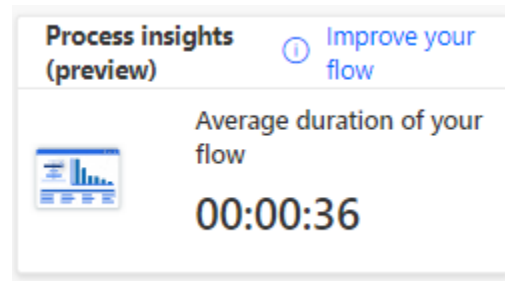
- Power Automate process

Get a report

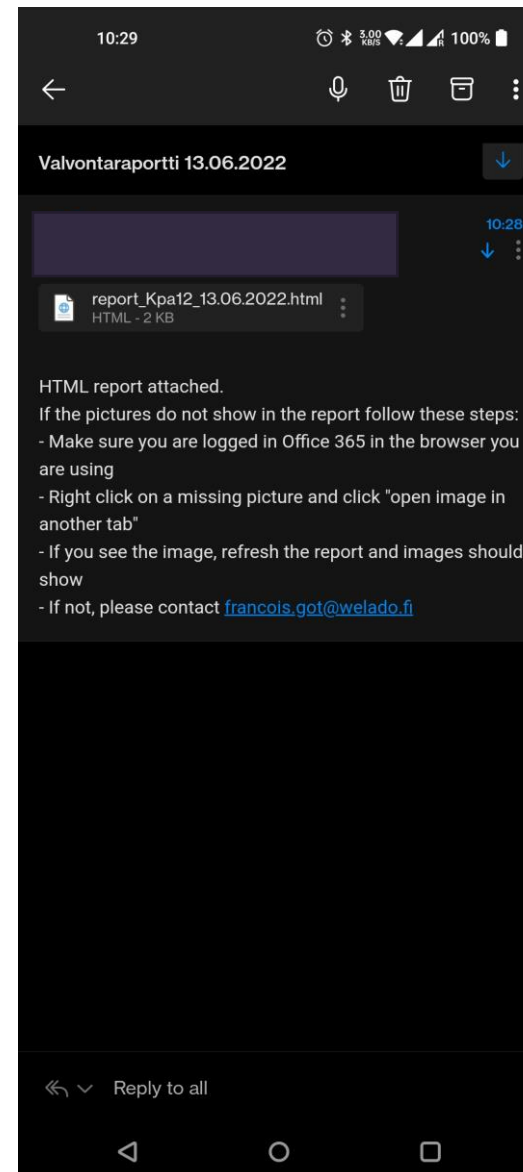


- Quick process

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

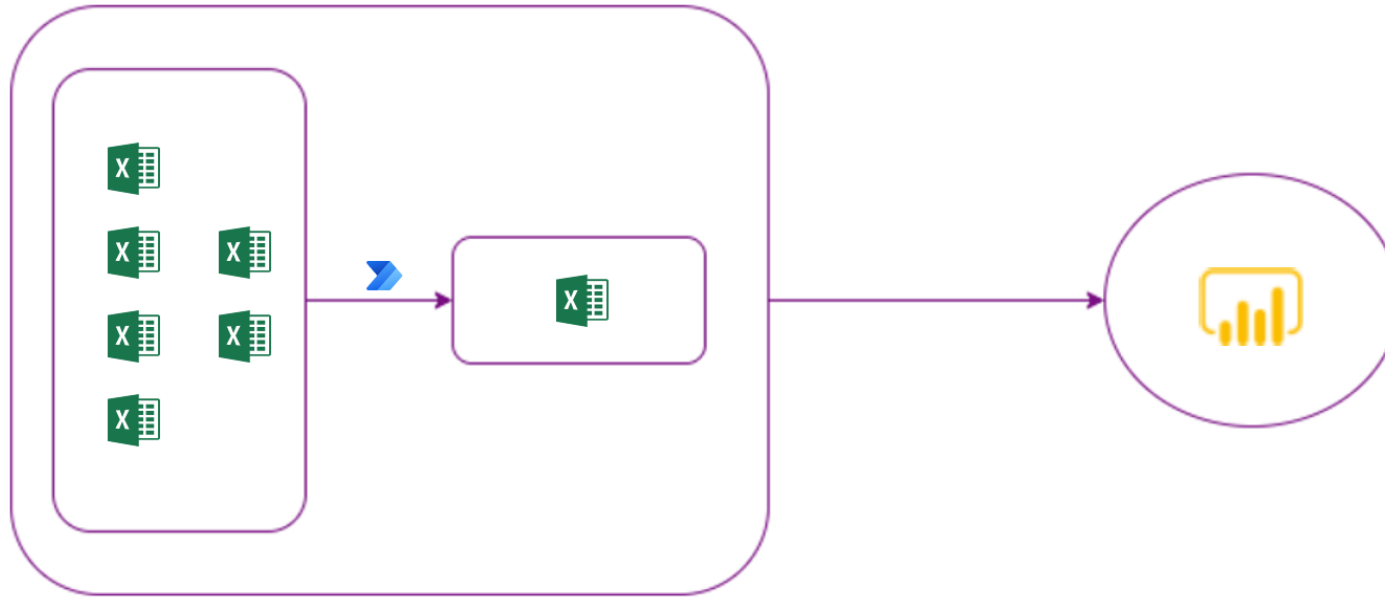
Havainto: Some text describing the observation - edited



1 page per
observation

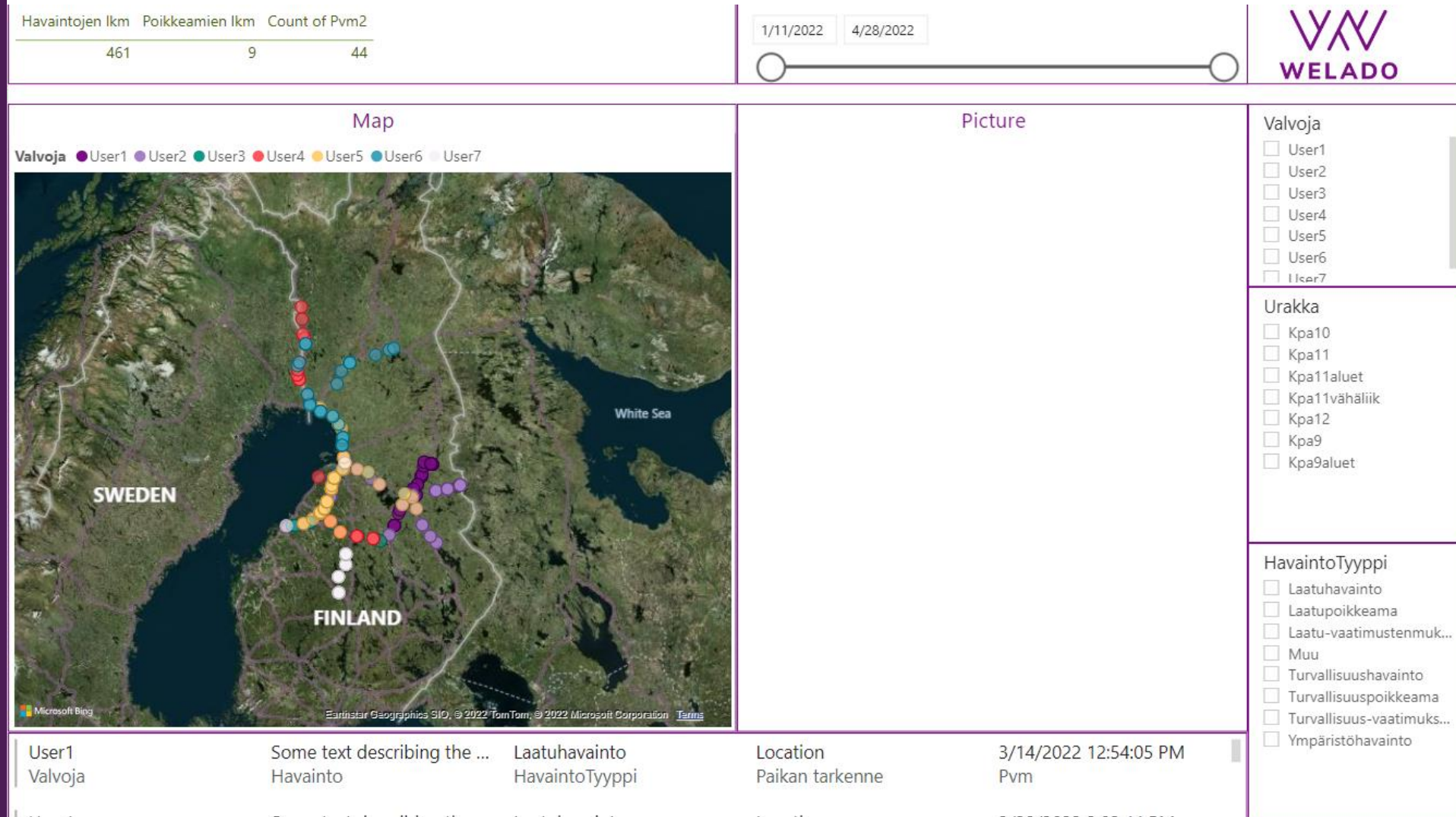
Using the data





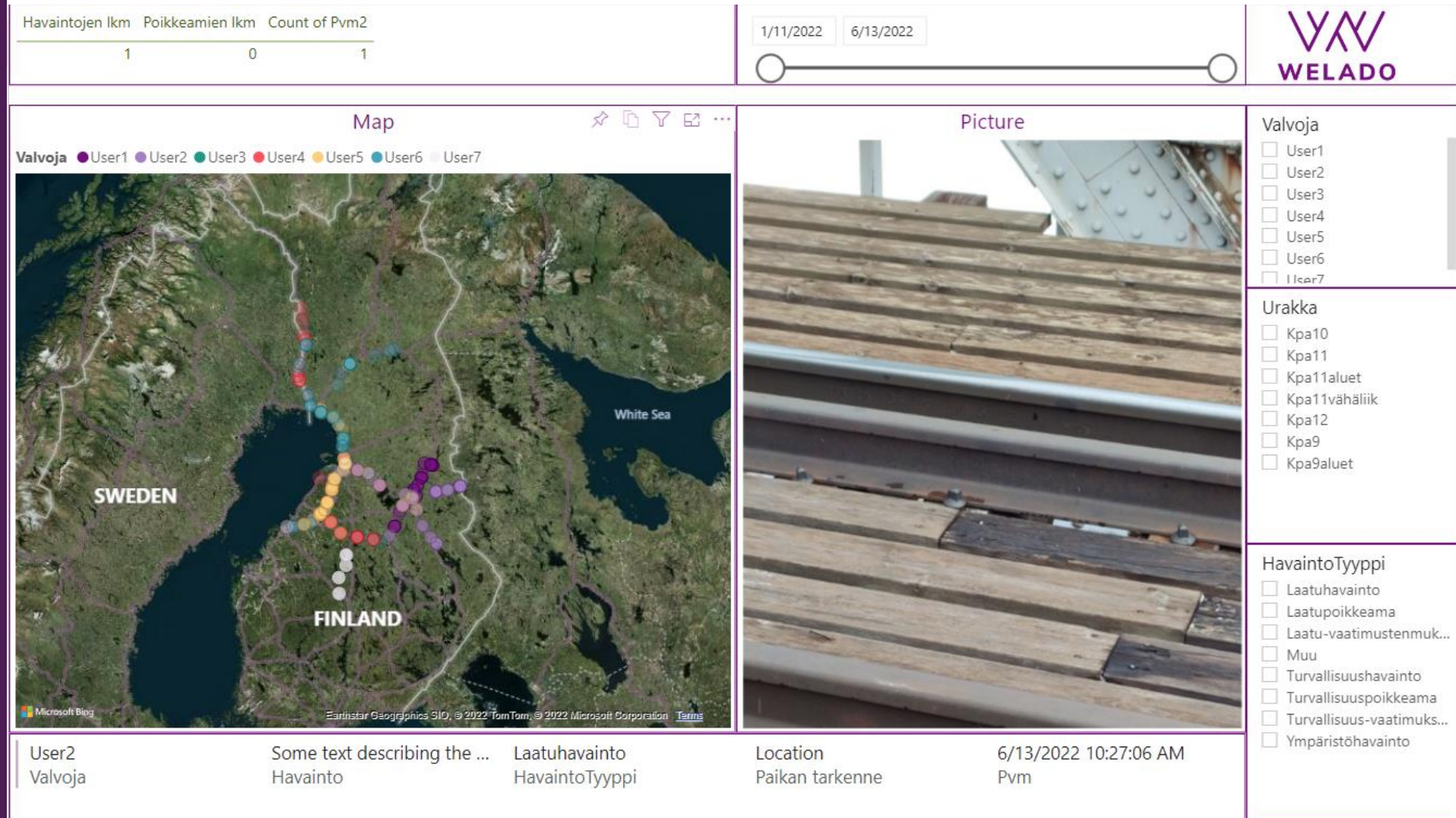
Power BI report

Overview



Power BI report

Focus on one observation



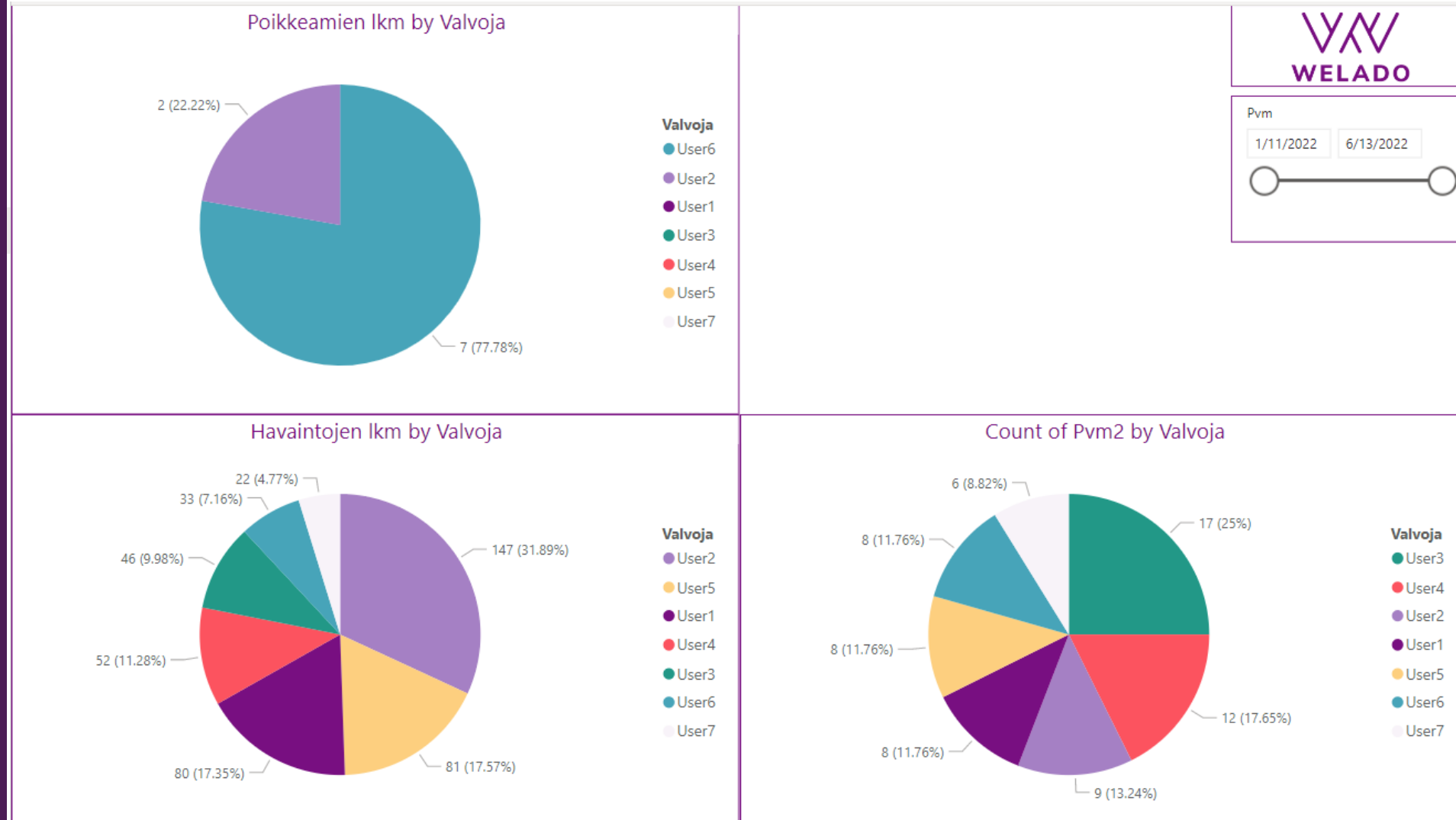
Using the data

Project management



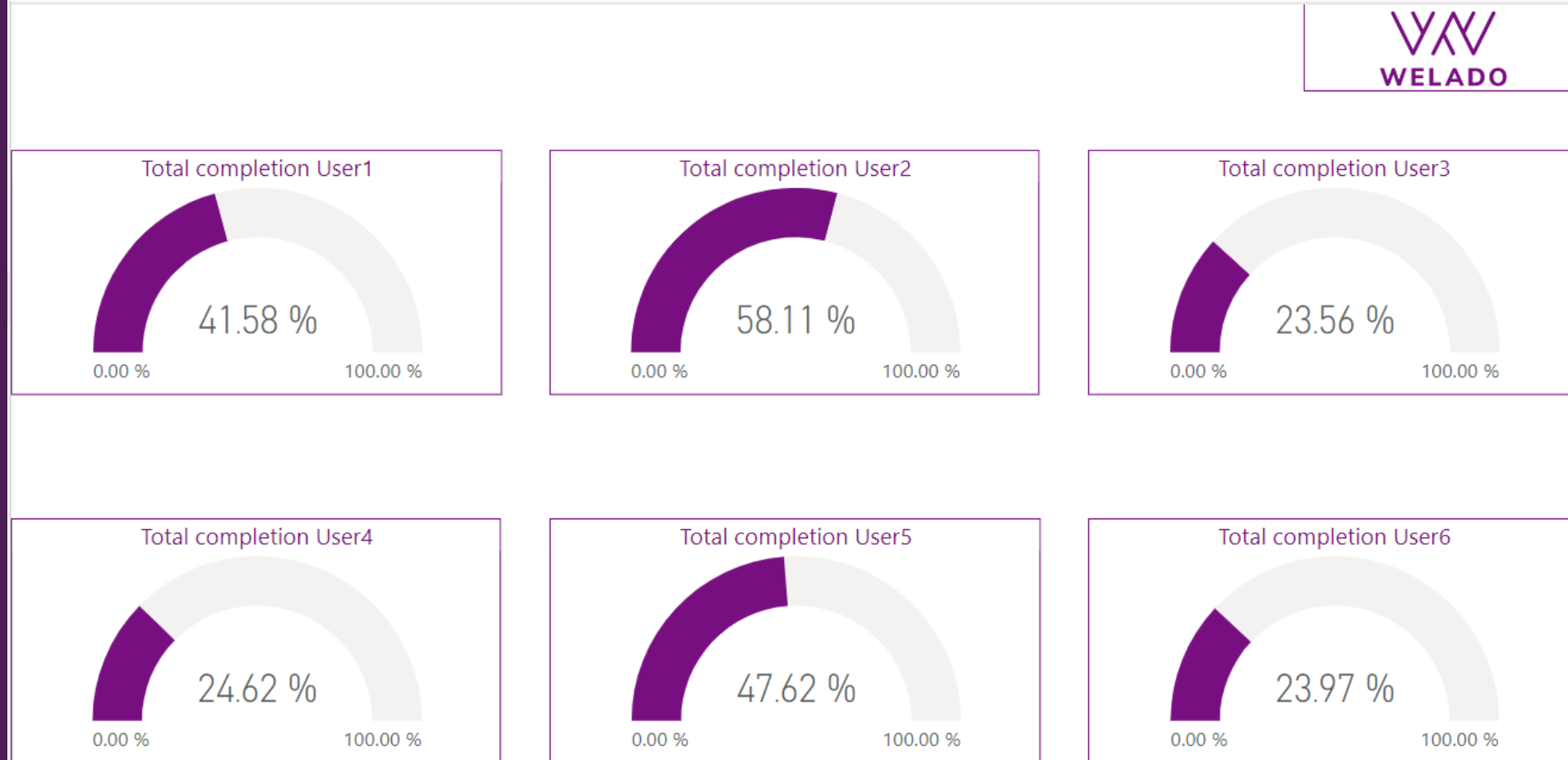
Power BI report

Team summary



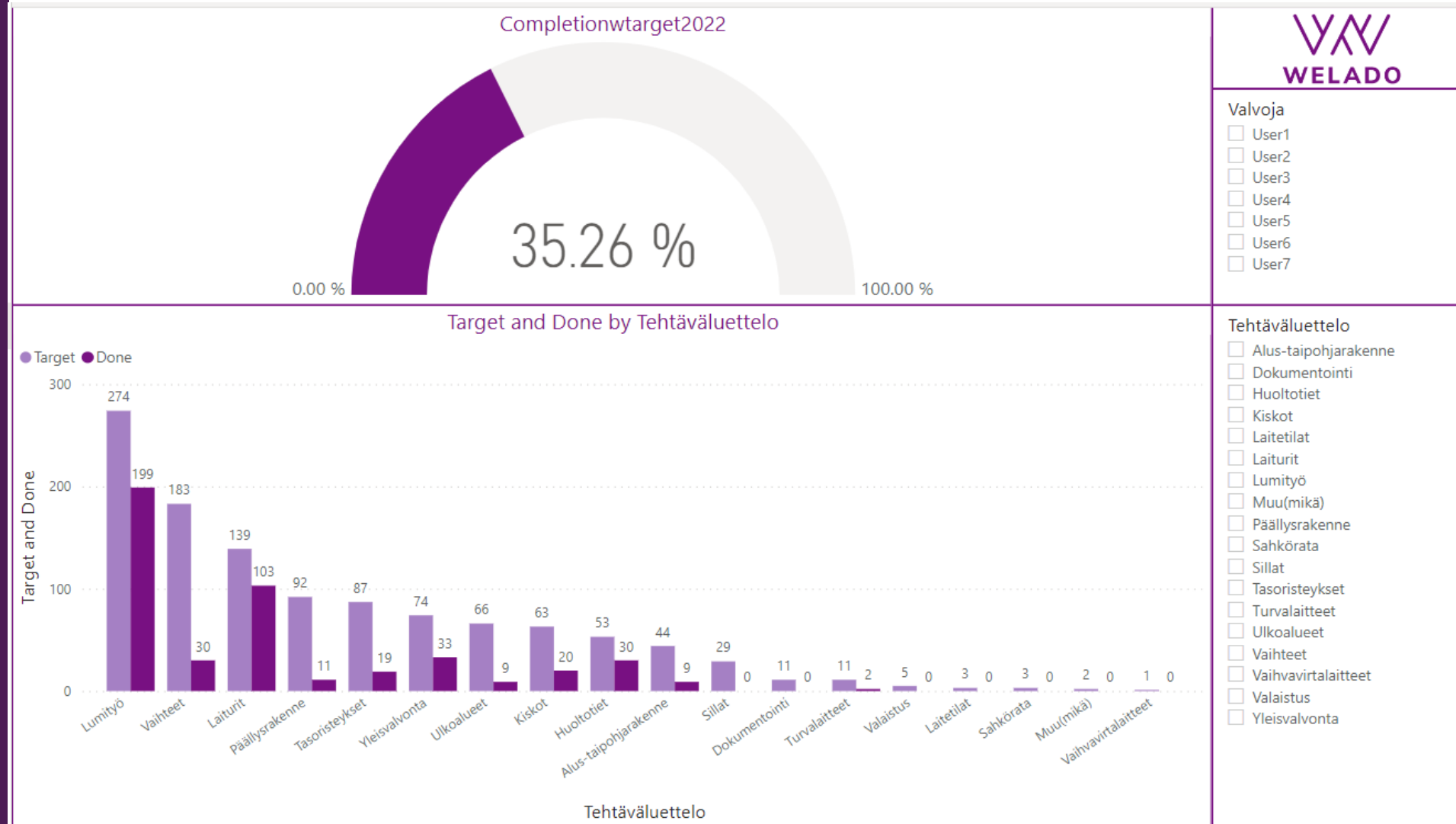
Power BI report

Individual targets



Power BI report

Team targets
Predictive analysis



Conclusion



Conclusion

Pros



Useful tool



Cheap solution



Reliable



Insightful

Conclusion

Limits



Network



Scalability?

Questions

