

# MÁV Delays vs Weather

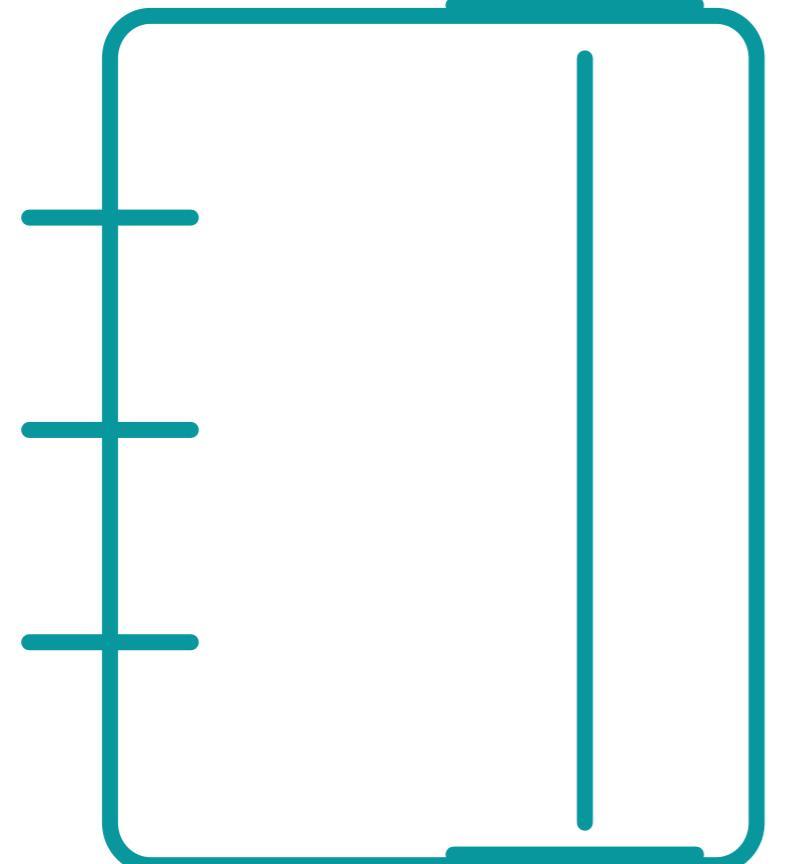
Final Project Outline

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# Agenda



- 01 **Business Case**
- 02 **Data Sources**
- 03 **AWS Services & Cost Summary**

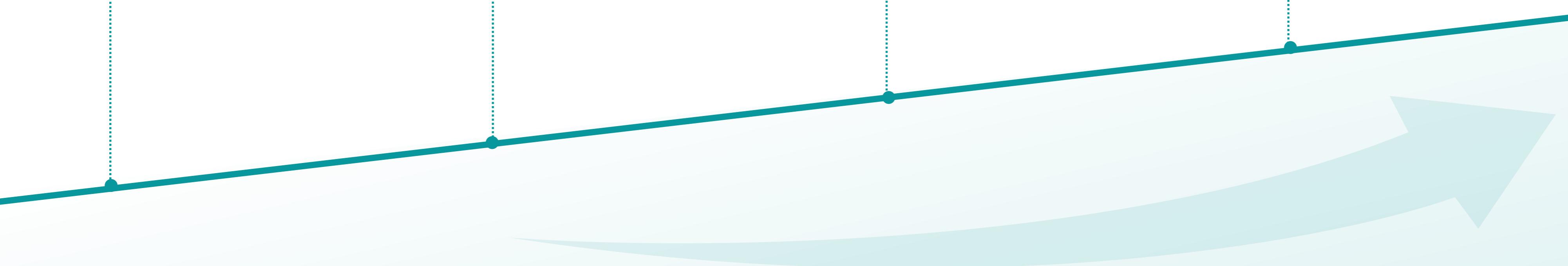
# 01

# Business Case

*(Technology)*

# Project Background

- ◆ Delays are often caused by adverse weather
- ◆ See which lines are most affected, when do the delays usually occur etc.
- ◆ MÁV does not have enough funds to fix every line everywhere
- ◆ Targeted upgrades where the impact is the greatest

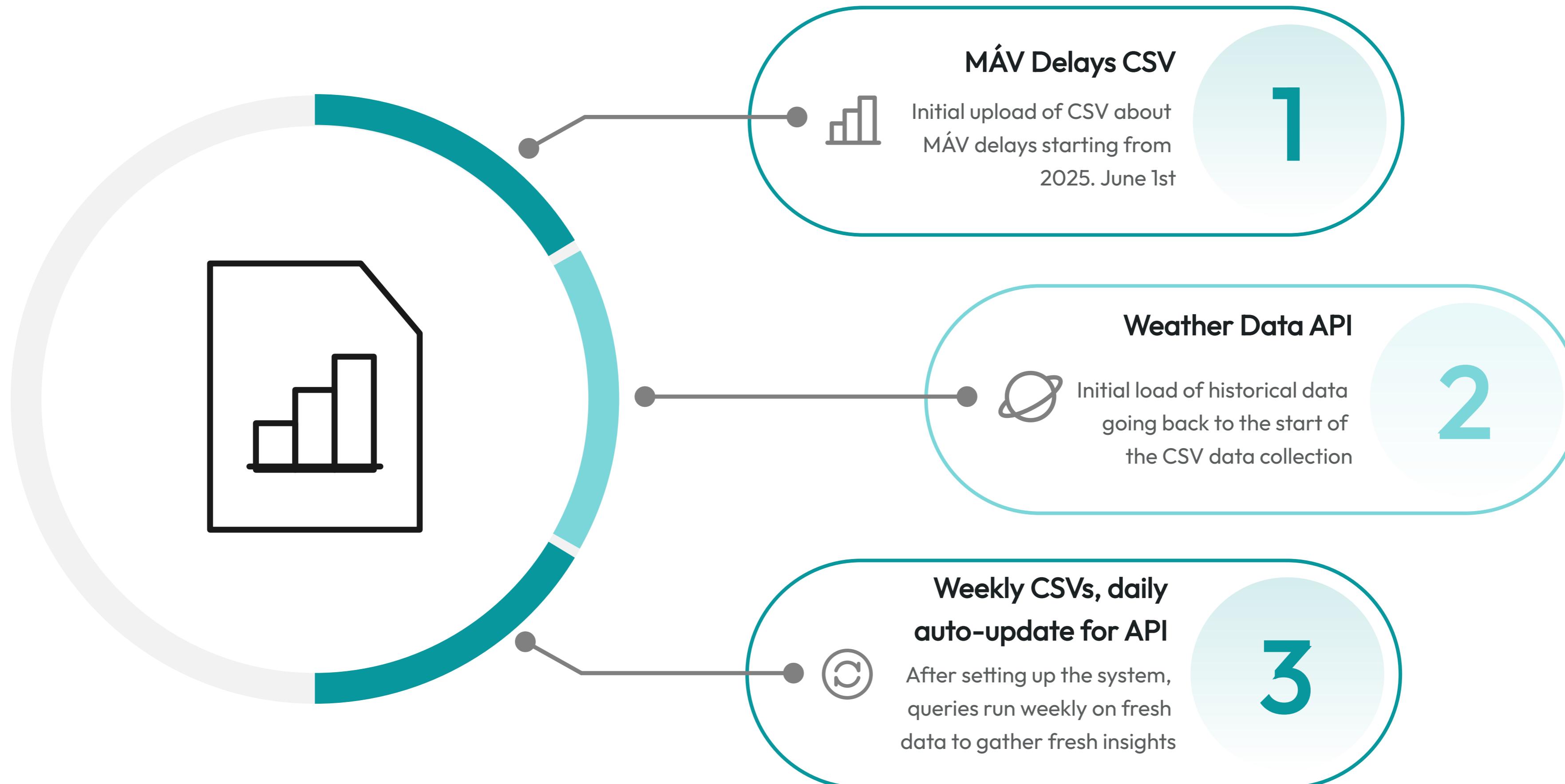


# 02

# Data Sources

*(Technology)*

# Two data sources, both with weekly updates after initial load



# 03

# AWS Services &

# Cost Summary

*(Technology)*

# Detailed Service Roles

## S3 Storage

delay data from CSV  
historical and daily updating weather data from API  
storing the results of the queries

- > monthly price: 0.05\$
- > 120+36+156 MB stored yearly

## Amazon Athena

queries on the unified database  
list of most affected lines  
effect of extreme weather to delays

- > monthly price: 0.01\$
- > weekly queries



## AWS Lambda

data fetching (weather from API)  
merging the source datas (from CSV and API)

- > monthly price: 0.02\$
- > weekly ETL

## EventBridge

triggers daily weather data fetch  
triggers lambda to append database + re-run query during weekly uploads of new delay data CSV

- > monthly price: 0\$
- > daily and weekly triggers



**Thank you  
for your  
attention!**

I hereby declare that AI tools (Perplexity, presenti.ai) were used to develop this project plan and the presentation itself.