3 DIMENSION TIME ASPECT IN CAPACITY ALLOCATION

RÉKA NÉMETH, MANAGING DIRECTOR, VPE

VPE

The company

- State owned with 35 employees
- Responsible for the core functions listed by EU law
- Defines access conditions in the Network Statement
- Sets up infrastructure charges
- Compiles the timetable (48.428 for 2015/2016)
- Coordinates possessions (15.502 for 2015/2016)
- Operates a 24 hours OSS services
- Allocates capacity both for train paths and services (233.750 for 2015/2016 out of which 107.863
- Analyses performances in the Performance Regime

01 Fax

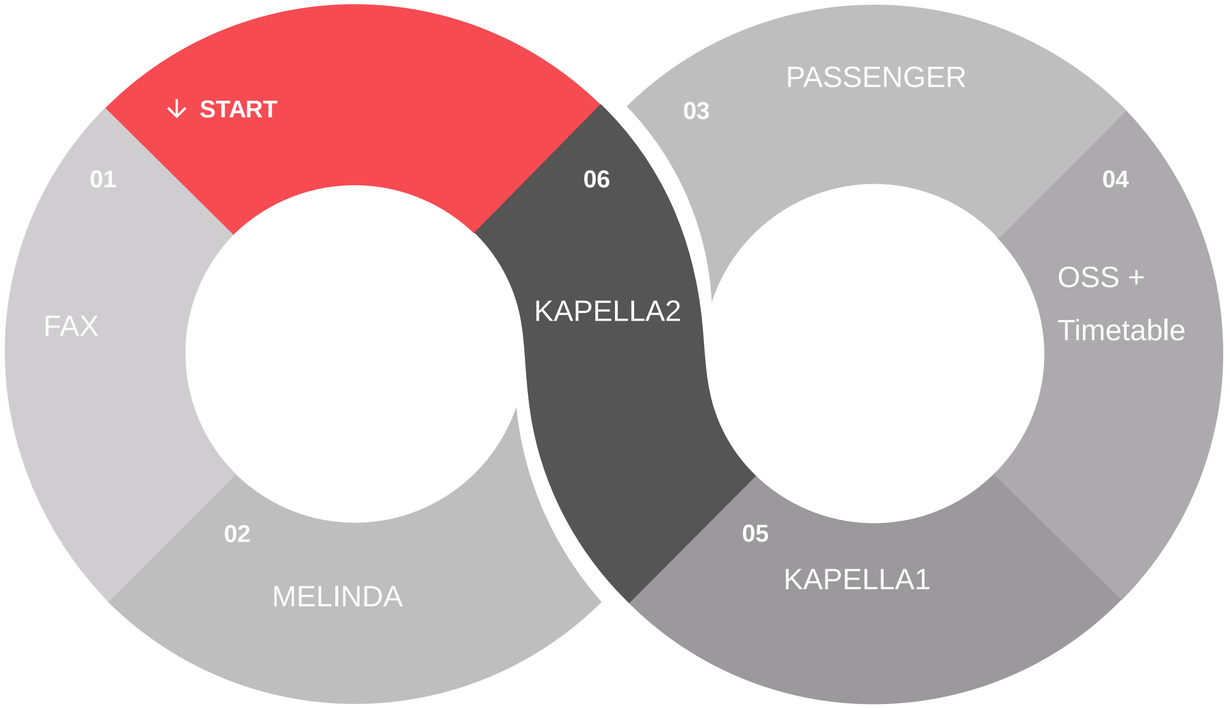
- Capacity allocation by fax
- Only for ad hoc cargo
- Timetabling at the IM
- In working hours

02 MELINDA

- 1st capacity allocation tool
- Rare interface connections

03 Passenger

- Passenger trains in system



04 OSS + Timetable

- Timetabling inhouse
- OSS in working hours

05 KAPELLA1

- Capacity allocation tool
- Non-stop OSS
- Possessions in system

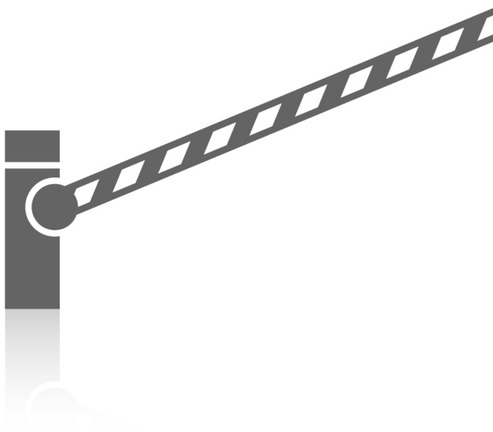
06 KAPELLA2

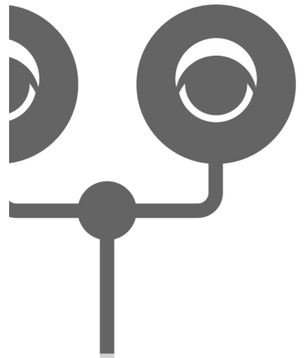
- 3D time aspect
- New processes

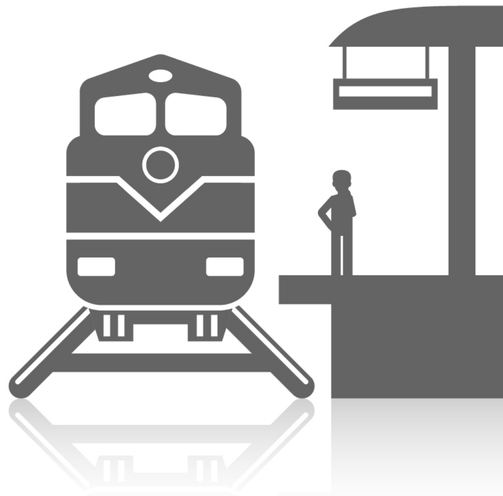
KAPELLA 2

3D time aspect?

- Network Statement – x-2
- Timetabling process from annual to ad hoc
- 2D time aspect: from a given date to a timetable period (scope and validity)
- Changes in infrastructure data
- Limited time for analysing effects of changes
- Uncertain situation both for RUs and IMs
- 30 days process for changes
- Very limited the „untouchable” time slot in process
- „shadow” time aspects → IT validity

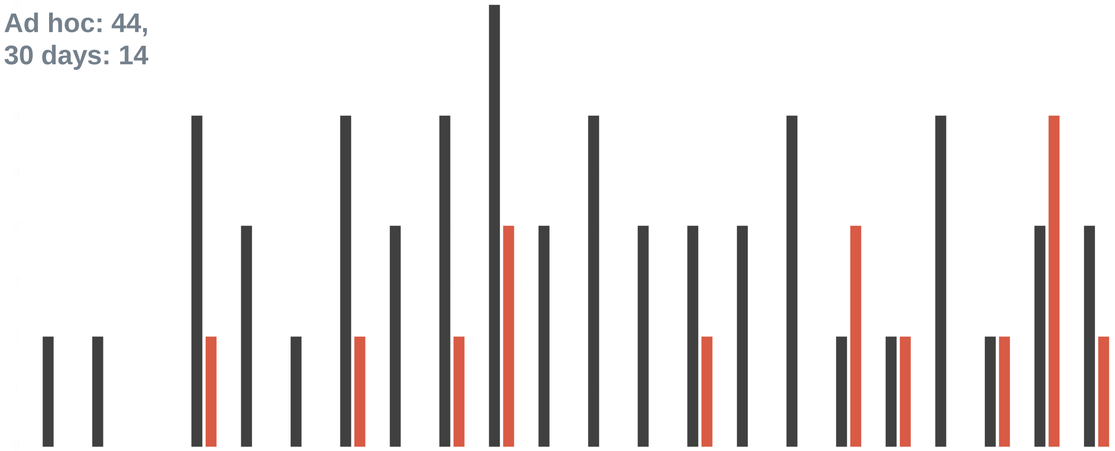






Nr of changes in NS 2016/2017

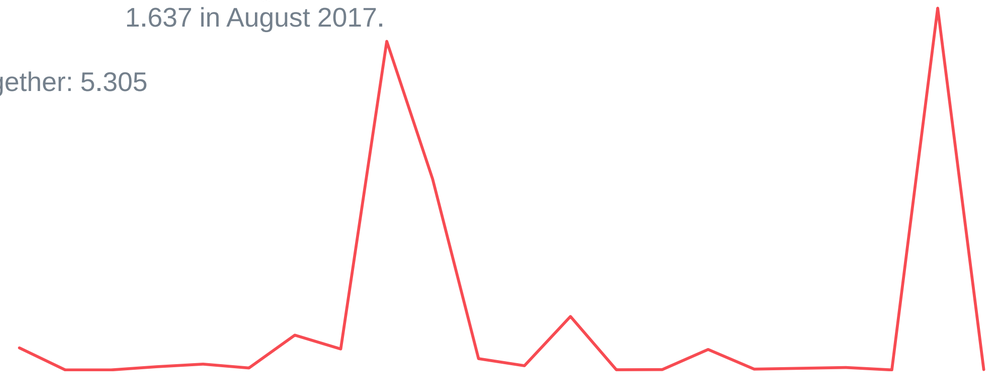
Ad hoc: 44,
30 days: 14



Nr of items that can result in infra change

Maximum points:
1.802 in August 2017.
1.637 in August 2017.

Altogether: 5.305



NETWORK STATEMENT

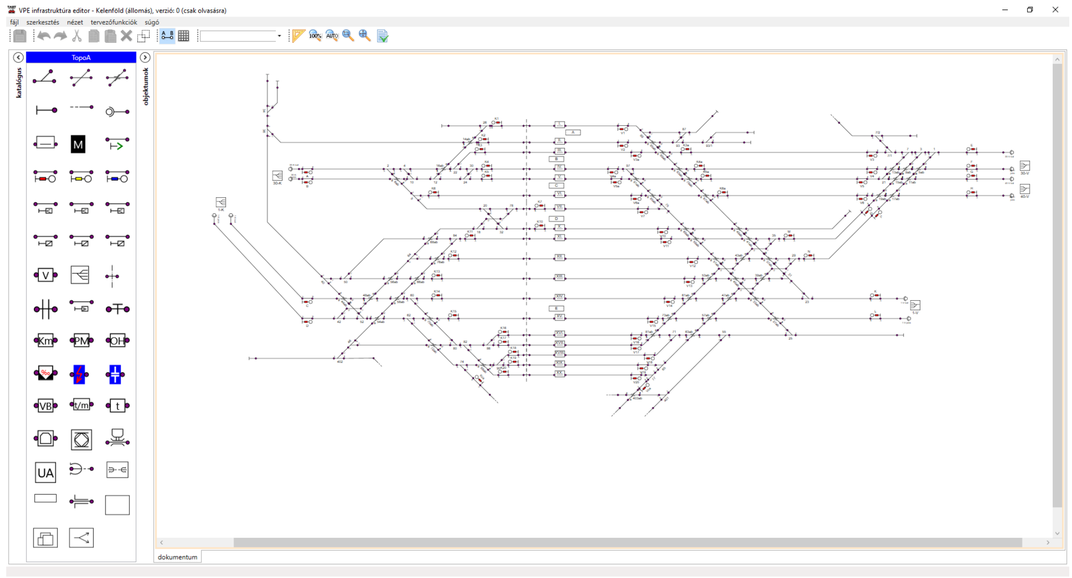
Changes in data

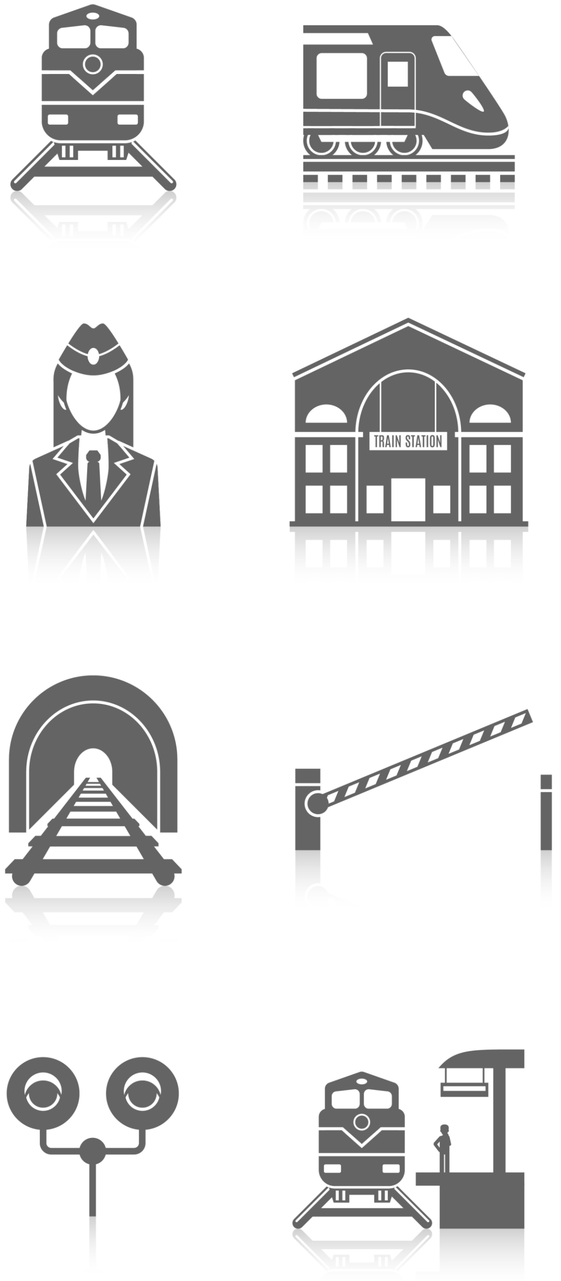
- Network Statement is legally binding
- Infrastructure and other access type data are published in x-2
- Longer timetable planning for the yearly timetable
- Changes in data during the ordering period and the timetable year
- Some data has effect on capacity, technology or access
- Timetable graph should be under one data regime
- Modification of earlier timetables and services might be neccessary

KAPELLA 2

Data with effect

- Not all data change have any effect on the allocated capacity
- Some result in administrative but necessary changes (like the name of the station)
- There are data that have impact on the prize quotation (station category)
- Some would require a modified timetable (new timetabling point)
- Rarely the capacity cannot be kept the way it was allocated (change in O/D station status)



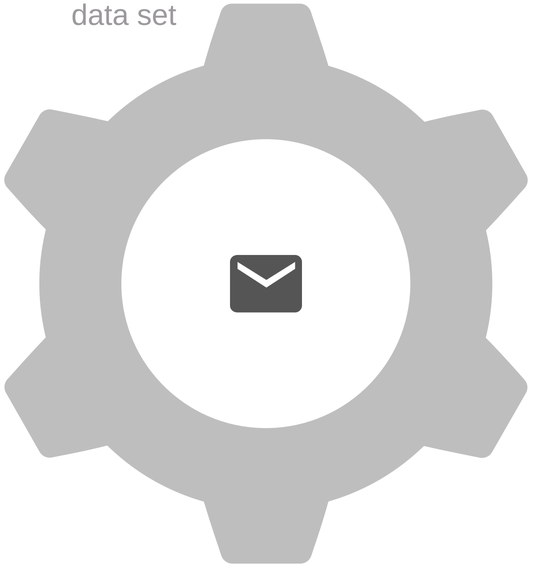


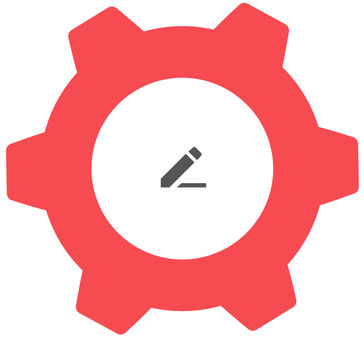
Path request

Capacity request

Might be in conflict with other requests, possessions

Might be affected by changes in data set





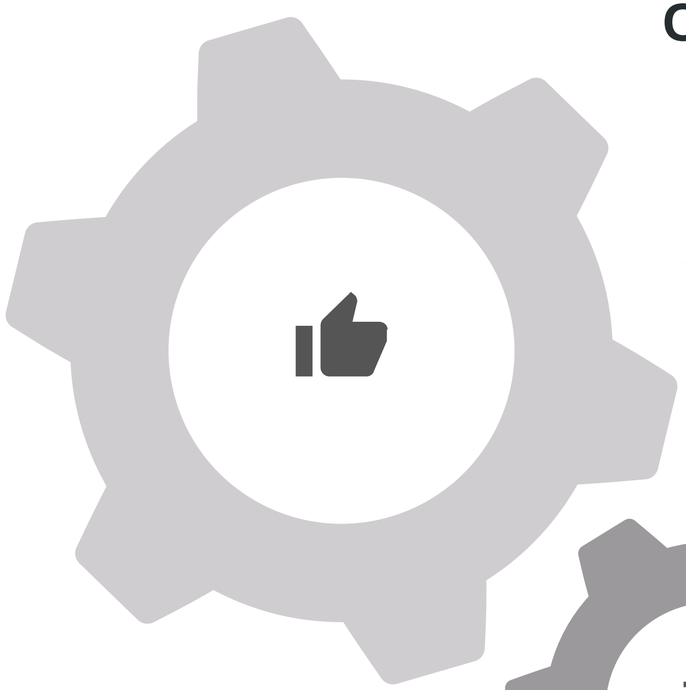
Data

Homogenious data set for certain period

Heterogenious data for the timetable period

3 dates are examined before allocation:

- The date of placing the request
- The period when the train would run
- If there is a data set change foreseen in a short period of time



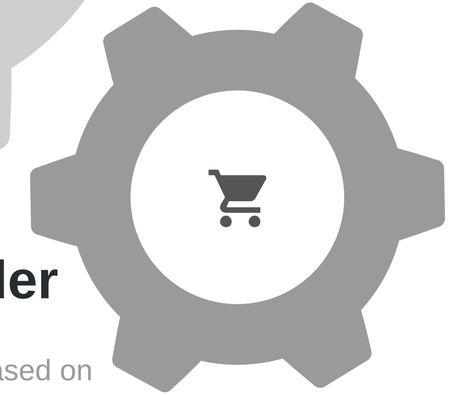
Capacity allocation

1 request – 1 or 1< answers

Breaking points defined by data

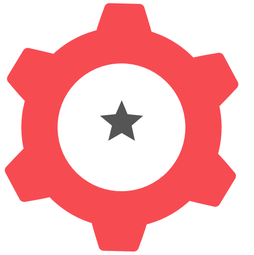
Homogenous parameters under one version

Main identification number remains the same



Order

Valid order based on fragmented data sets



IM

New data published x-30 days

Original timetable was created before the change

It does not include the new timetabling point

Timetabling points should be in the timetable

IT validity X-10 days

List of timetables that needs to adjust

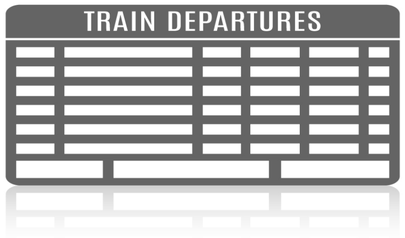
Preliminary preparation of new timetables

New data is in effect x

Re-allocation with a new timetable including the new timetabling point

Order keeps original order type (like yearly)

Original timetable



New timetabling point

KAPELLA 2

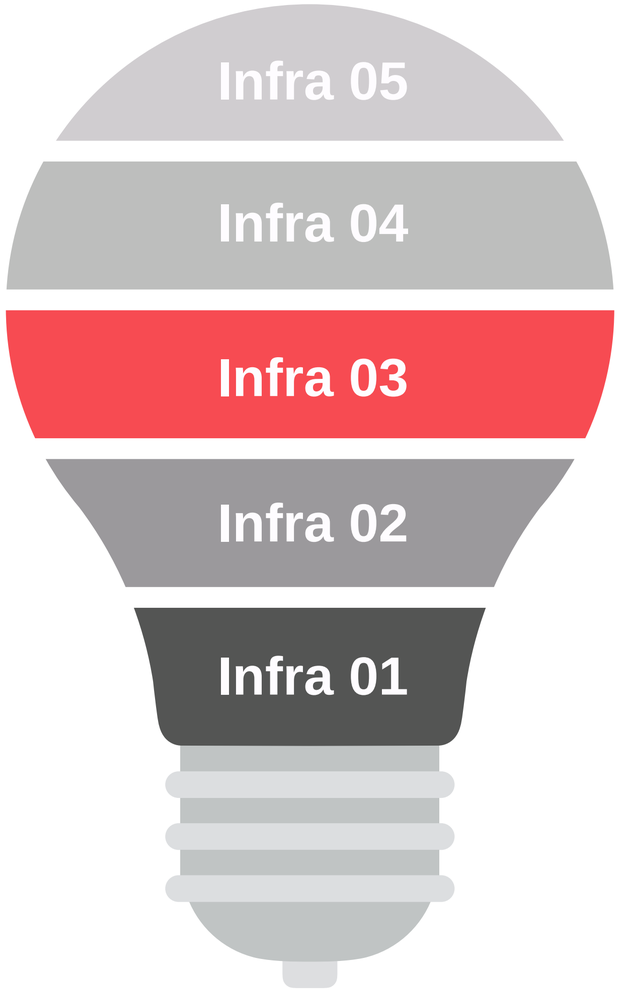
Time dimensions

The date of request – from the date when the requests is placed (scope)
The date of future service – the date when the services will be utilised (effectivity)

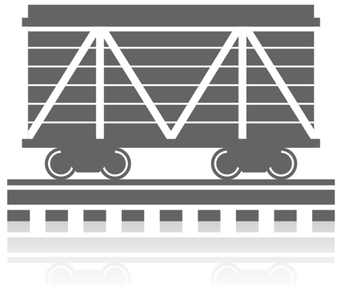
IT validity – a short threshold when data as considered as effective before its real effectivity in order to allow time to check if there is any request needs to be modified and if there is any there should be enough time for modification.

Infrastructure versions

- One at a time
- All orders are in line with it
- Infrastructure is handled as a whole
- RUs/IMs can rely on timetables

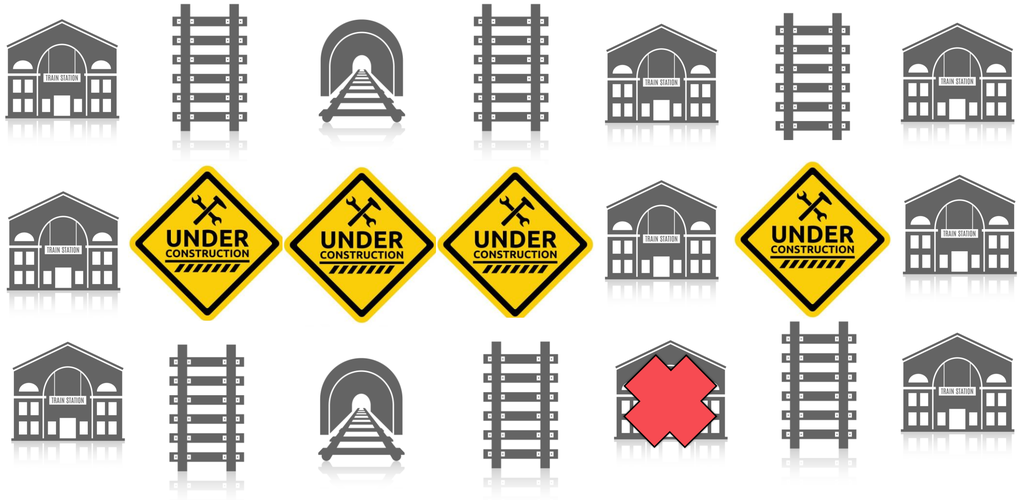


- No overlapping
- No foreseenable derogation from timetable
- Not allocated if cannot be provided
- Non-existing capacity cannot be sold



Capacity Request

RUs do not need to be aware of the different infrastructure versions that are valid within the period their train would run.

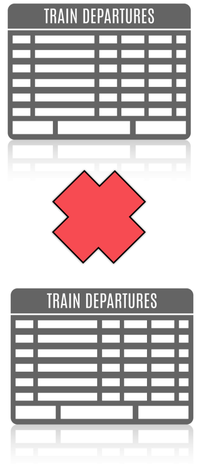


Infra check

The availability and the parameters of infrastrucure are checked by KAPELLA2.

Answer to request

One request – multiple answer based on infrastructure availability and parameters



Timetable version 1.

2017/76121/0

Refusal of request due to possession

2017/76121/1

Timetable version 2.

2017/76121/2

Differentiation

Timetable is homogenous when the infrastructure can allow it. The lifecycle of requests can be seen under one identification number.

Thank you for your attention!

RÉKA NÉMETH, MANAGING DIRECTOR, VPE