arvesta
Experts in the field

Optimizing transport: Balancing operations and the voice of the customer

Our experts go into the field every day with a mission. To increase the profitability of our farmers and horticulturists in sustainable and innovative ways, so we can grow together.

In our Aveve and Eurotuin stores we strive to give our customers the best professional advice through our agricultural expertise.

A rich history spanning more than 120 years, characterised by a passion for farming

1880 1900 1920 1940

1887:
Pastor Mellaerts establishes a purchasing cooperative within his farmers' guild

1901:
Establishment of AVV NV to further develop purchasing activities

1923:
Opening of first cattle feed factory in Merksem

1960 1980 2000 2020

1969:
Opening of the very first garden centre in Kampenhout

1984:
AVV becomes "AVEVE"; a group of companies

2018:
Groep Aveve becomes Arvesta

2020:
Strong brand Aveve gets new logo

About Arvesta

121 years
the leading partner for agriculture and horticulture

2,300
Experts in the field

International activities

with locations in The Netherlands, Germany and France

More than 40 strong brands
divided over 3 business sectors

RETAIL

200 Aveve stores

3 Eurotuin stores

Aveve
Eurotuin

MEILLEURE ENSEIGNE DE MAGASINS DE BELGIQUE 2022 - 2023 PET SUPPLY STORES
15 consecutive years

MEILLEURE ENSEIGNE DE MAGASINS DE BELGIQUE 2022 - 2023
3 consecutive years

50 stores under own management

210,000 m²
shopping fun

ANIMAL NUTRITION

1.6 million tonnes
global distribution per year

14 production sites

Specialist in both professional and hobby feed

AGRI & HORTI

John Deere **importer** and **distributor**

Global leader in Mobile Gully Systems with Hortiplan and greenhouse systems with Van der Hoeven

Belgian market leader
in seeds, grains and plant nutrition & protection for all crops

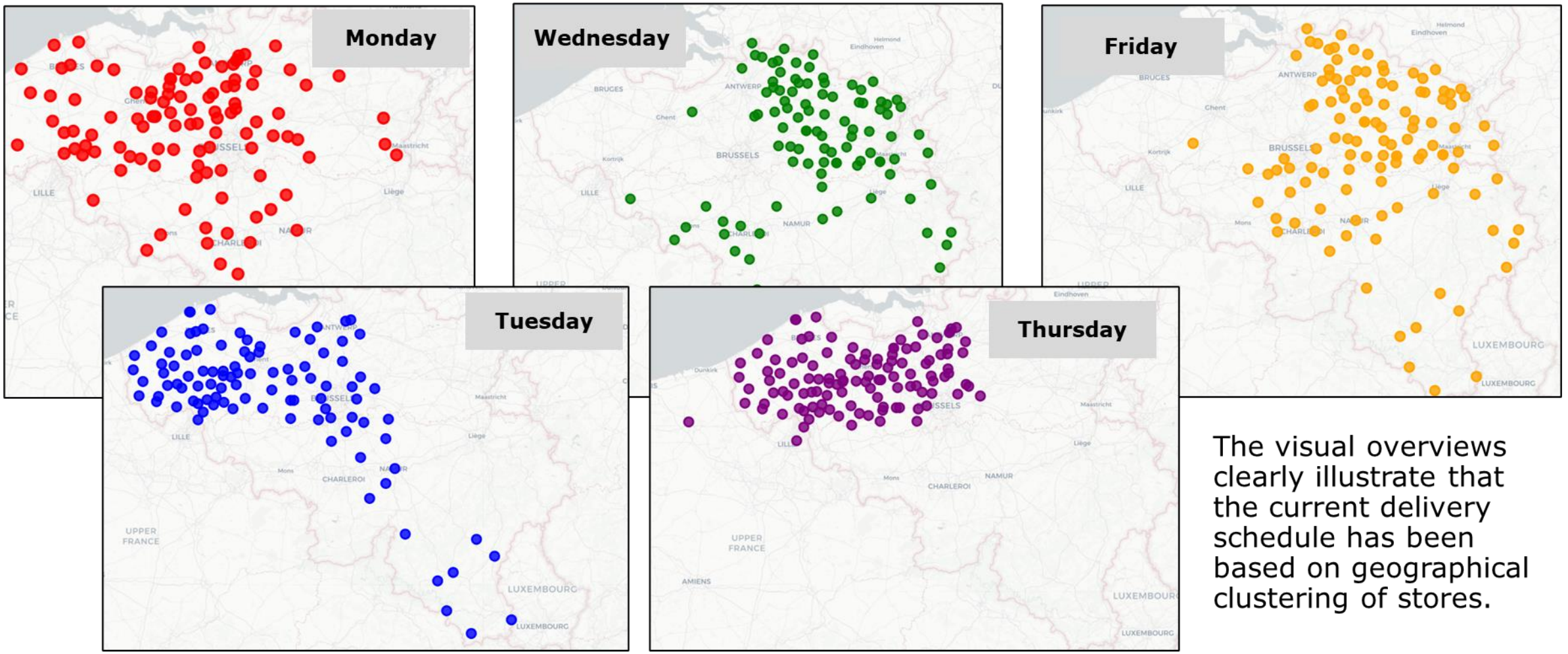
Why we need to optimise transport

- Sustainability
- Restrictive delivery hours
- Congestion
- Large road infrastructure works
- Seasonal highs and lows
- Warehouse capacity
- Dependant on external transport company
- Trailer availability
- Driver shortages and dissatisfaction
- All parties involved want stability and predictability

Due to these reasons we turned towards Groenewout to help optimize our transport with the help of Greenplan

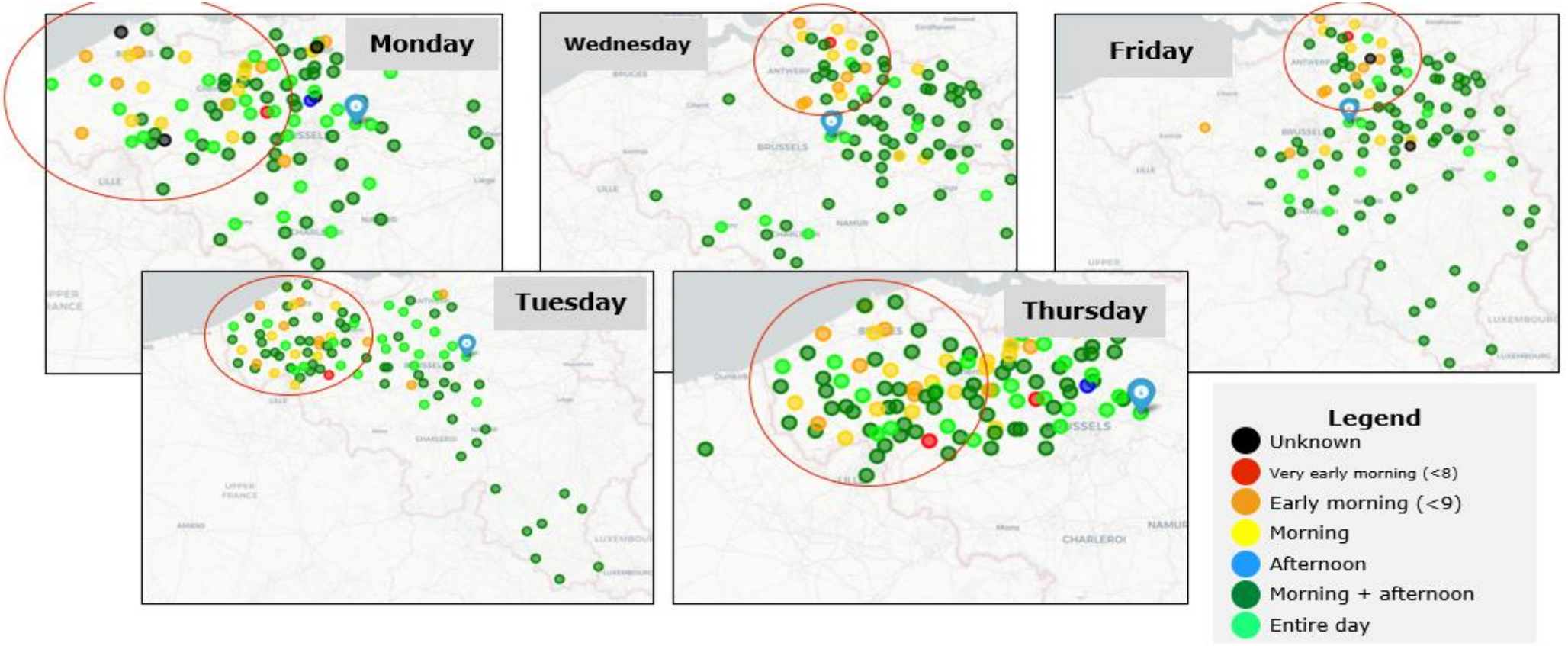
Variability visualized

Delivery schedule AS-IS



The visual overviews clearly illustrate that the current delivery schedule has been based on geographical clustering of stores.

Visual overview of delivery windows AS-IS



The visual overview shows the time-window on that day of the stores with these preferred delivery days. Regions with narrow time windows are circled red. There appear to be many shops in West Belgium that are only opened in the morning, some of them even only before 9 AM, on Mondays, Tuesdays and Thursdays. Furthermore, shops in and near Antwerpen are also time-limited to the mornings, which occurs on Wednesdays and Fridays.

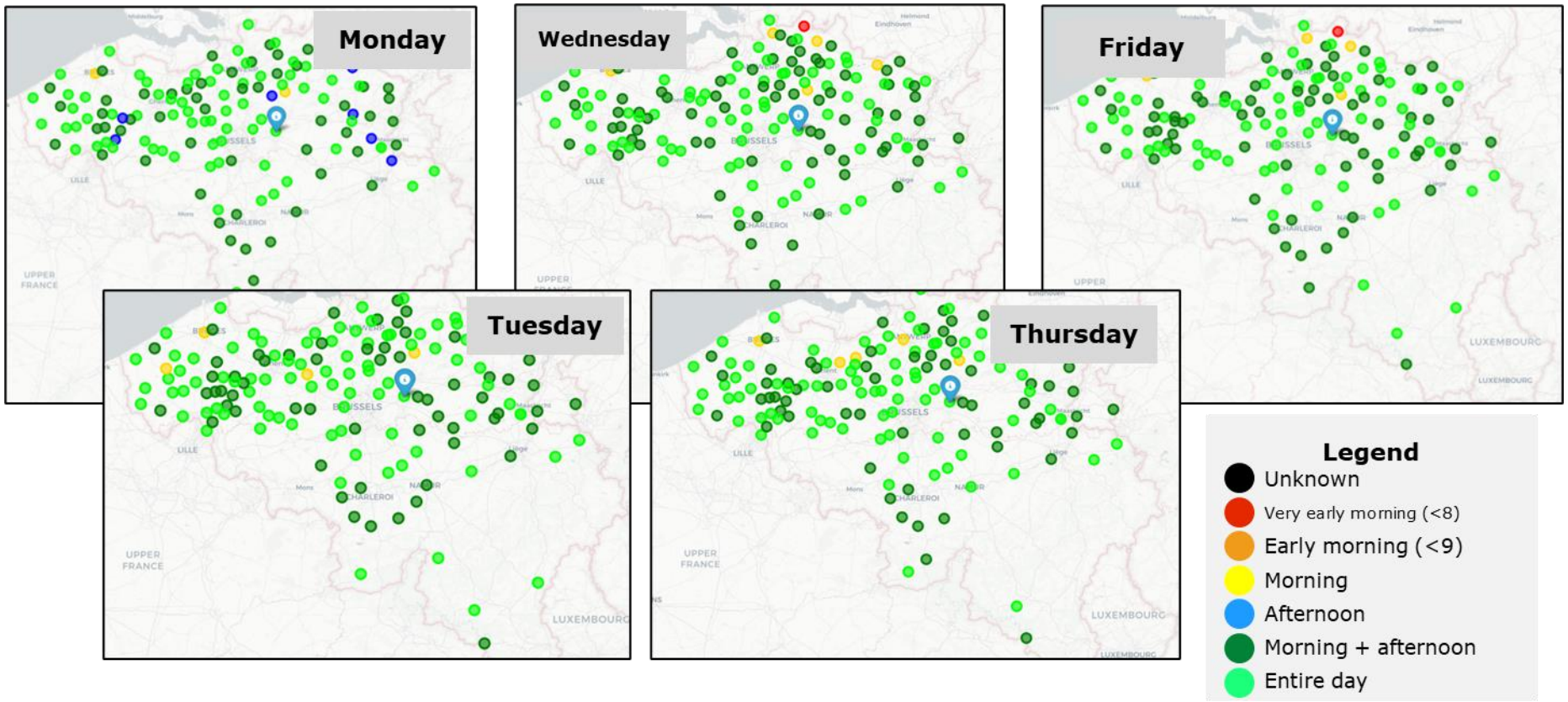
Optimization through sustainable collaboration

External transportation partner

Stores

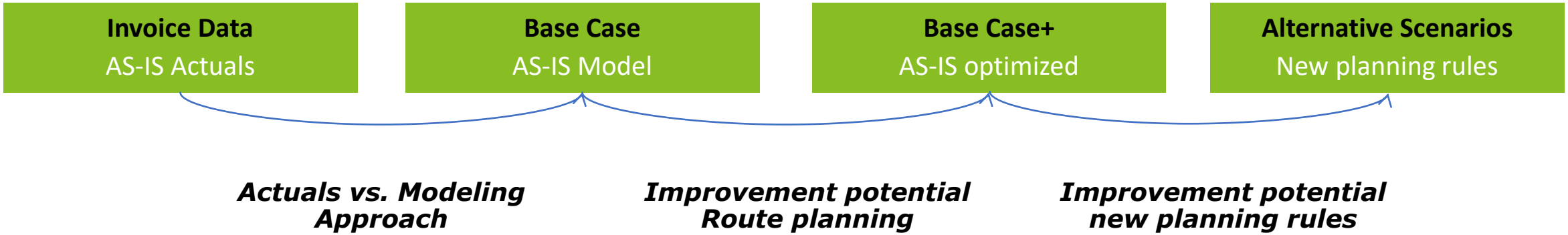
Central warehouse

Visual overview of the time windows of stores TO-BE



Clustering is not evident anymore.
In general, we see more green stores, meaning that delivery time windows are broader (at least for stores in scope)

Optimization in 4 steps

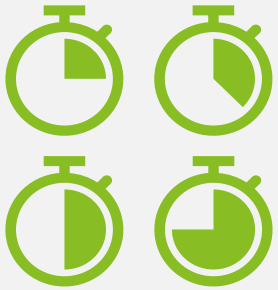


Different scenarios

In-Night Deliveries

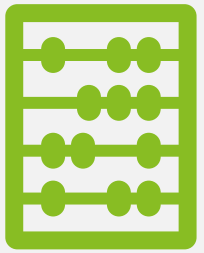
Saturday Deliveries

Delivery Frequency based on Actuals or SLA?



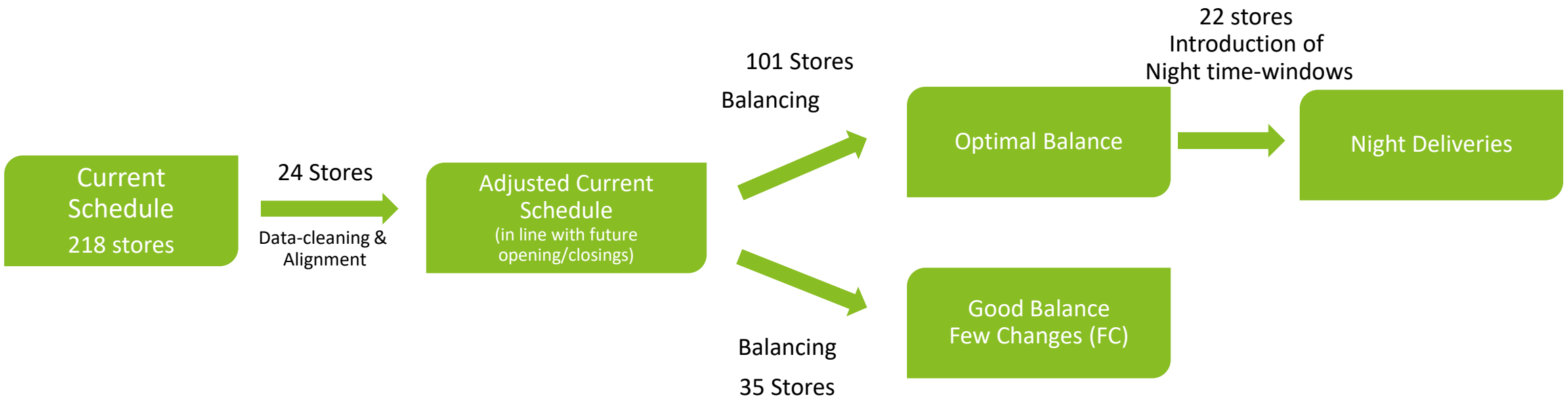
Relaxation of Time-windows

Impact Inbound Flows

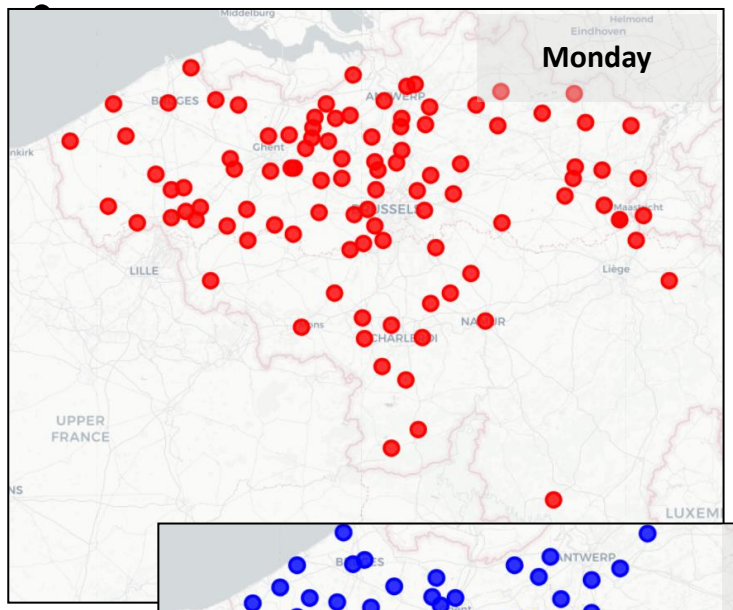


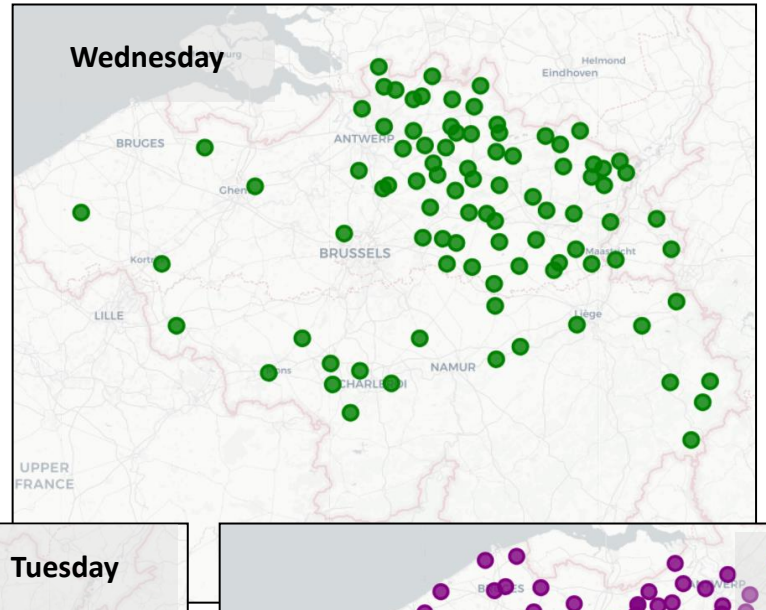
Load Balancing vs. Capacity

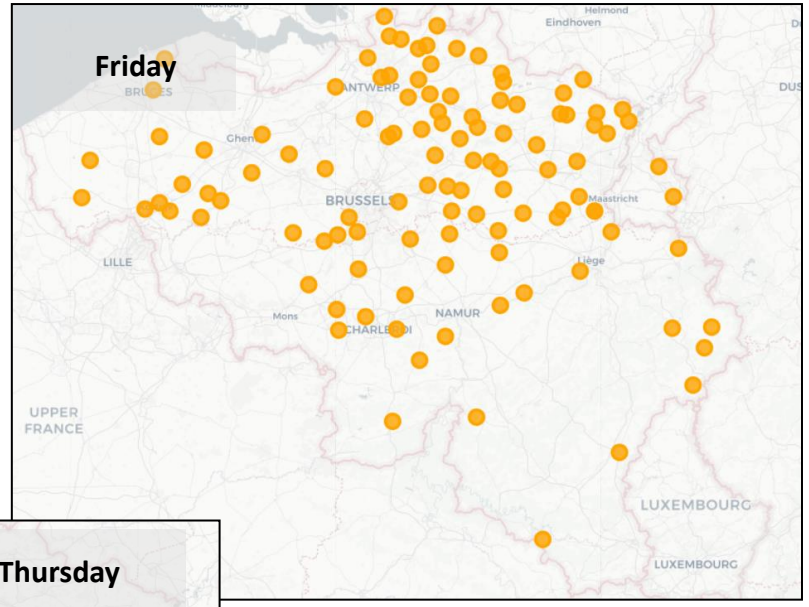
Balancing the delivery schedule

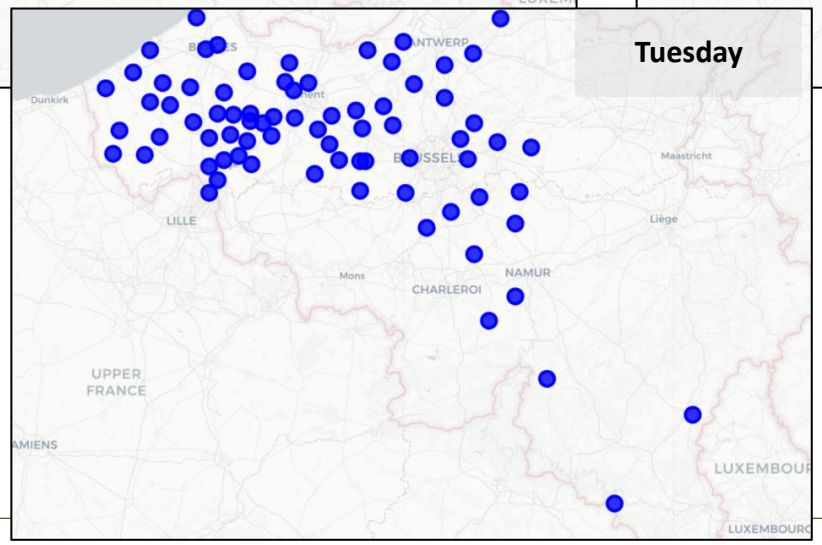


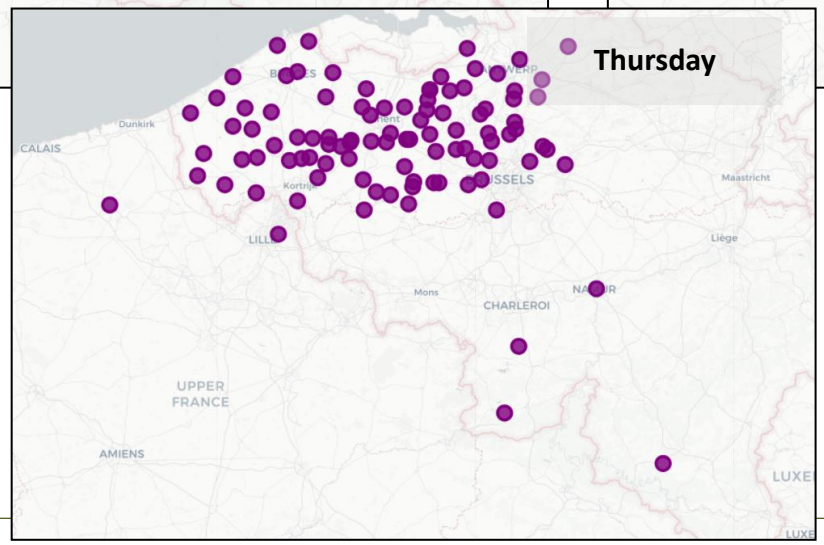
Balancing the delivery schedule – good balance





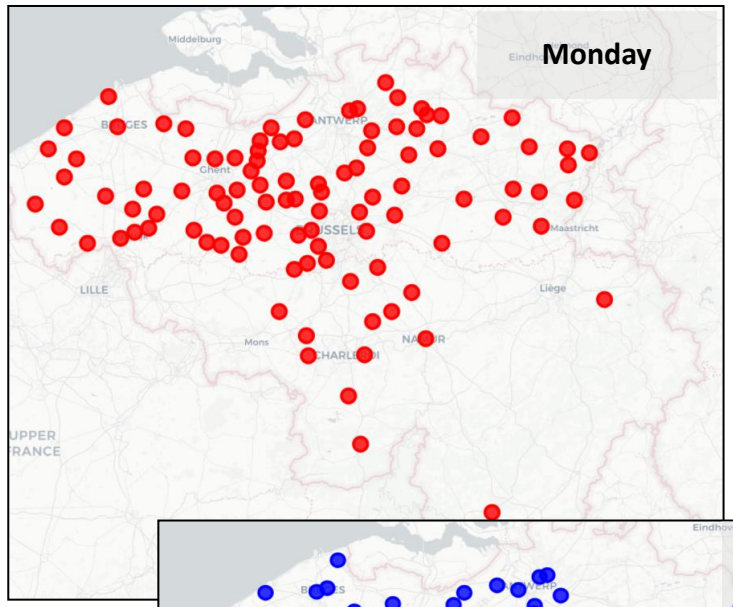


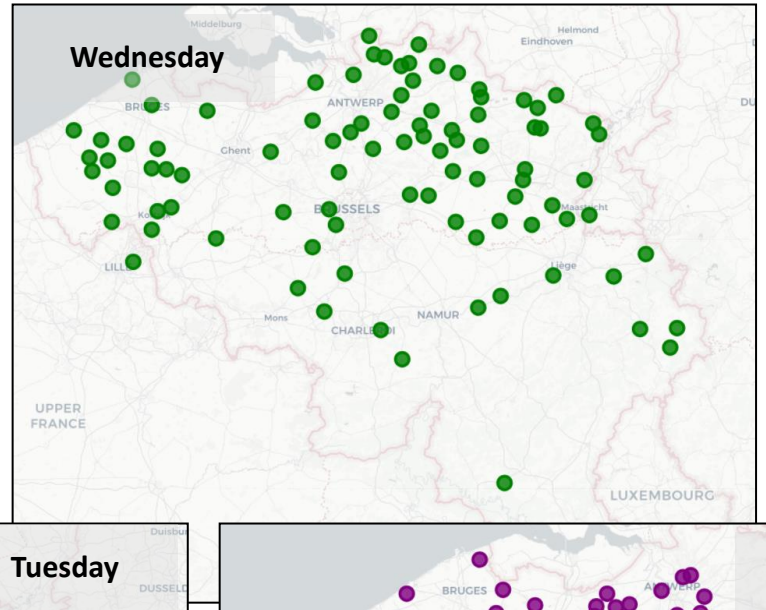


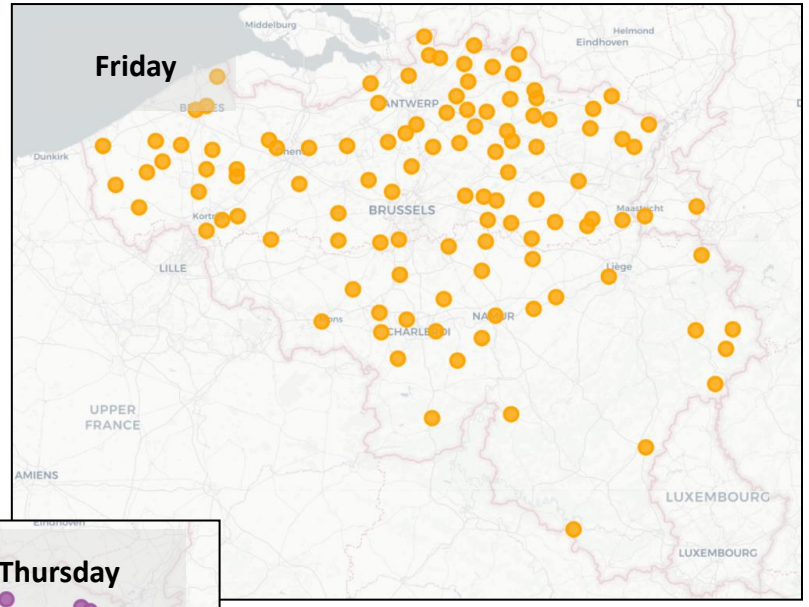


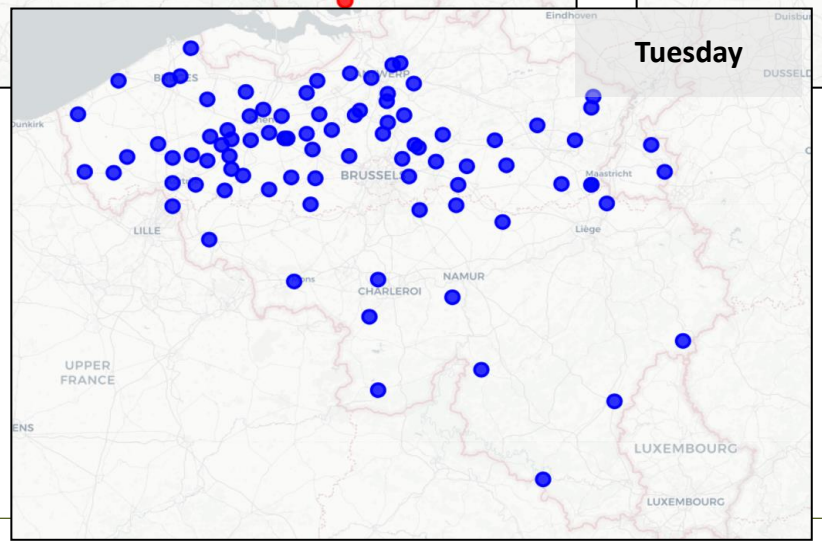
With the new balanced schedule, with small changes, the geographical clustering is mostly still intact.

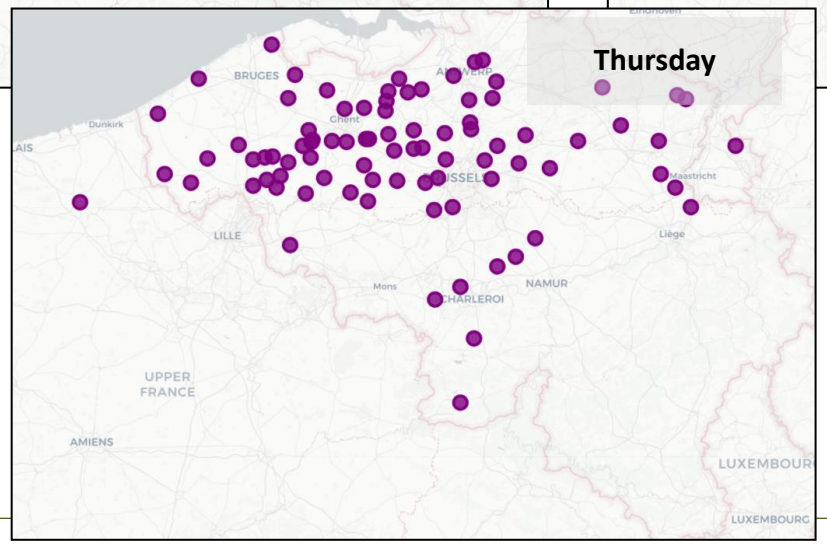
Balancing the delivery schedule – optimal balance





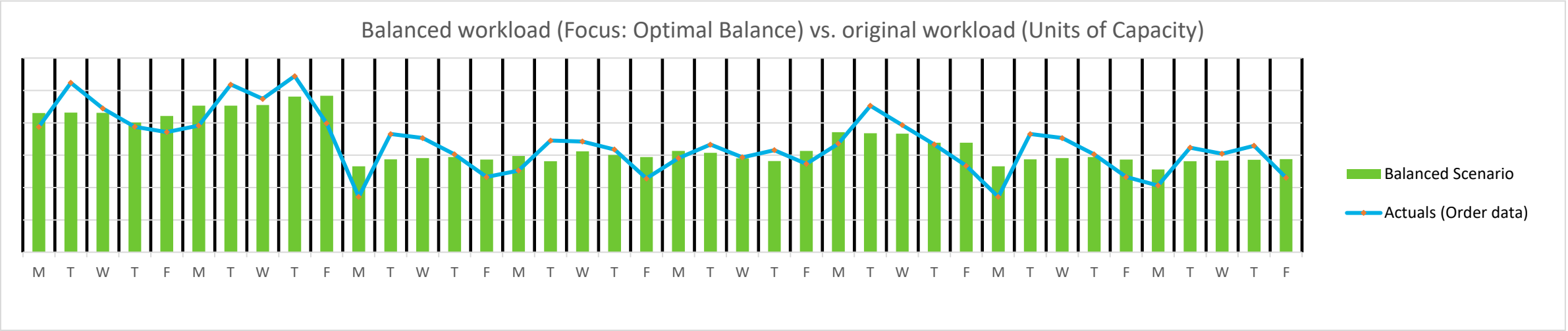


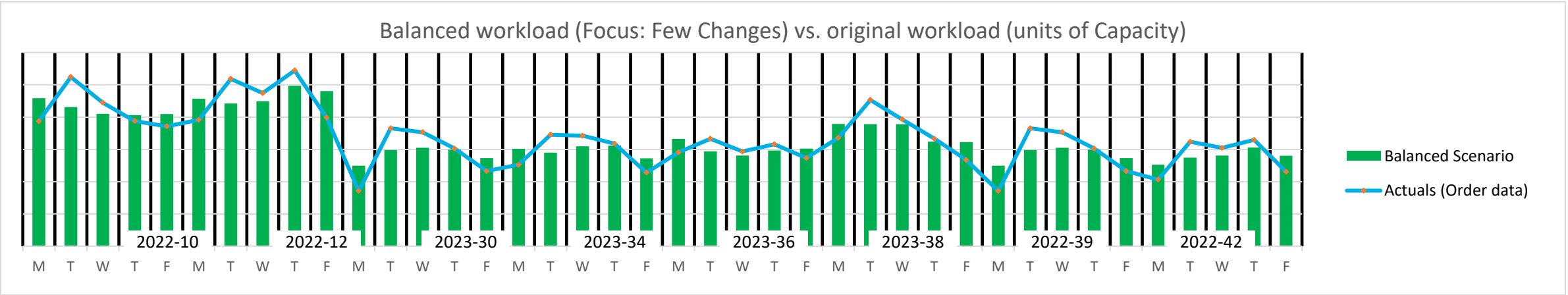




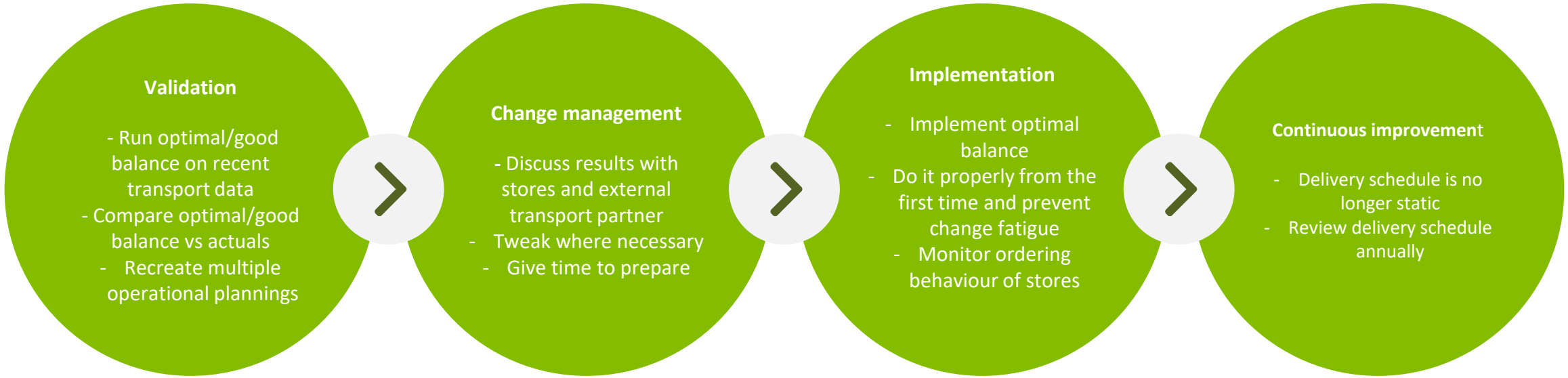
With the new balanced schedule, there is no geographical clustering anymore.

Visualization of the results





The road ahead



Insights & lessons learned

- Collaboration creates opportunities for all parties involved
- Geographical clustering can be let go and enables new opportunities to further optimize the supply chain through the combination of outbound and inbound flows
- Using a different routing engine (Greenplan) shows saving potential in better optimized routes
- New delivery schedule shows that increasing the average amount of trips a driver does lead to lower transport costs
- Increased driver satisfaction due to better usage of working hours
- The optimal route (cost wise) isn’t always the executed route
- Workload balancing leads to a minor cost increase for transport per trip but a better service, however this can be offset due to the more stable warehouse operations
- The modelling result will likely differ from results in practice, through gathering information and acquiring feedback we can make changes where possible and necessary

Q&A

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