



Data driven decisions.

Better results.

Απόκτηση ανταγωνιστικού πλεονεκτήματος μέσω αξιοποίησης εργαλείων βελτιστοποίησης στο home delivery

Georgios Ninikas, PhD

**ORTEC**

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## ORTEC Global Vision: Optimize Your World

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# ORTEC Home Delivery



# Home Delivery

## What's on the pitch?



Consumers



Convenience



Clarity & Certainty



Benefits other than convenience



Operational

Improved efficiency



Dynamic VS Static



Automated & Adjustable



# Home Delivery

## The ORTEC way

### Consumer Influencing

**Dynamically** influence consumers to pick the **best delivery option** while maintaining or increasing **consumer experience**.

Accurate  
Timeslotting

Dynamic  
Pricing/Promo



#OptimizeYourWorld

### Operational Optimization

**Dynamically** adjust all planning variables to maximize **operational efficiency** and **consumer experience**.

Dynamic  
Routing

Store  
Agnostic





## ORTEC Home Delivery: The proposed solution



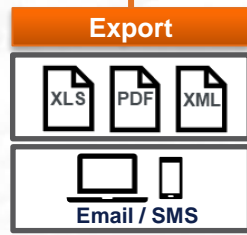
# Proposed solution (architecture)



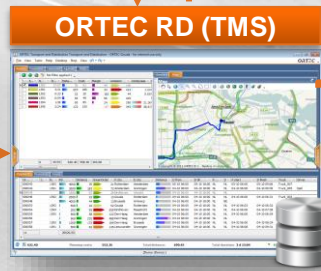
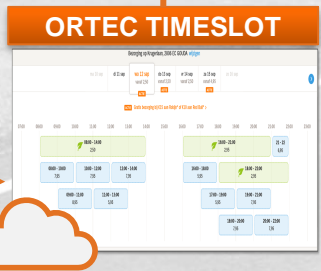
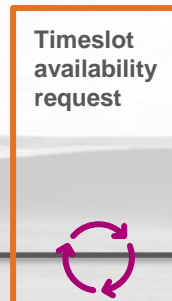
Consumer



Transactional Solutions



Optimization Solutions





# Proposed solution (architecture)



Consumer



Transactional Solutions



Timeslot availability request

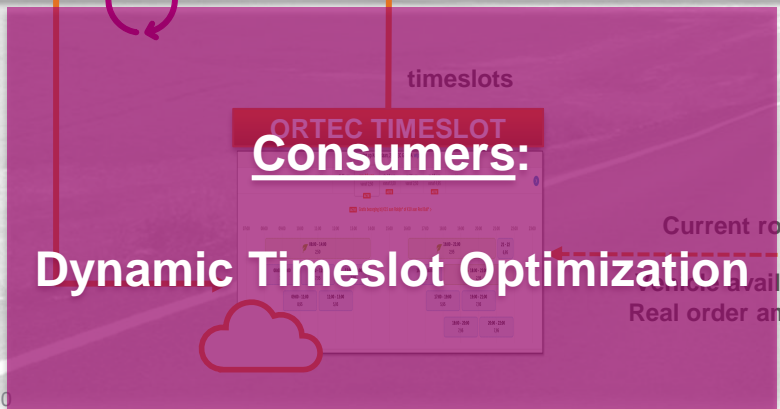
Confirmed order



Orders Volumes / amounts



Optimization Solutions



Dynamic Timeslot Optimization

Dynamic Route Optimization

A man with a beard and a young boy are in a kitchen, looking at a brown paper bag. The man is wearing a grey long-sleeved shirt and the boy is wearing a white and black striped shirt. They are standing in front of a kitchen counter with various items, including a bottle of wine, a bowl of fruit, and some vegetables. The background shows a window with a view of a city.

# Consumer Experience / Timeslotting



# Consumer Experience / Timeslotting service

What is offered?



Bezorging op Krugerlaan, 2806 EC GOUDA [wijzigen](#)

ma 10 sep

di 11 sep

wo 12 sep

vanaf 2,50

ACTIE

do 13 sep

vanaf 2,50

ACTIE

vr 14 sep

vanaf 2,50

za 15 sep

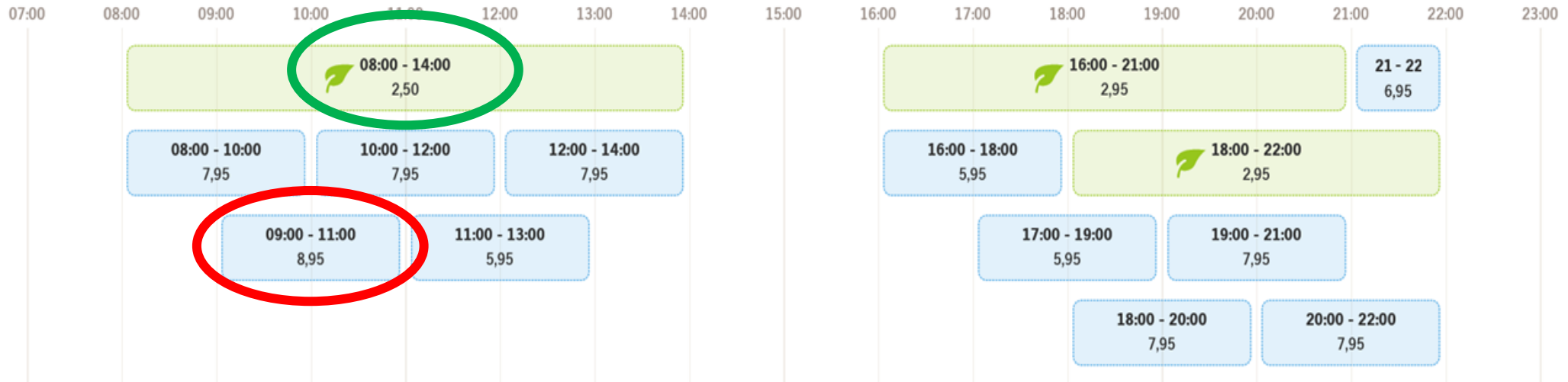
vanaf 4,95

ACTIE

zo 16 sep



ACTIE Gratis bezorging bij €15 aan Robijn\* of €10 aan Red Bull\* >

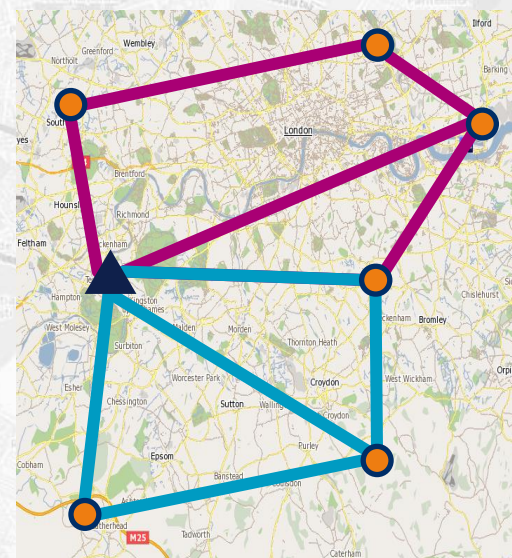
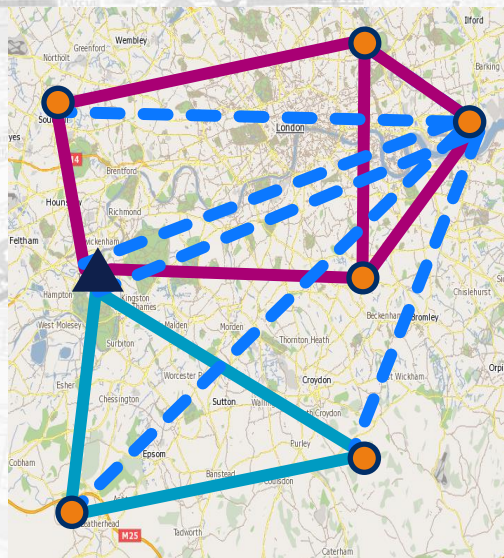
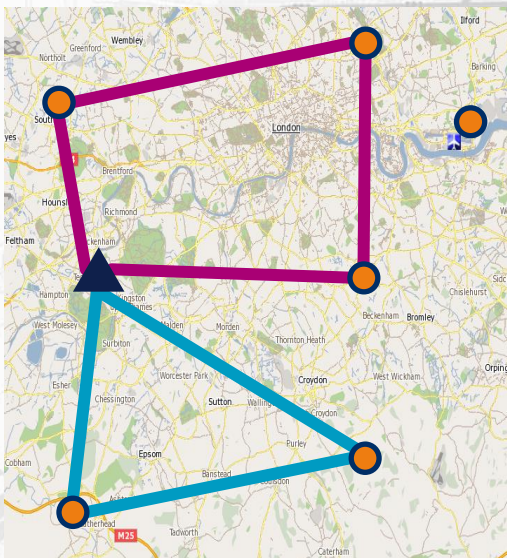




# Dynamic Time Slot Optimization solution

## How it works?

- Routes are given
- New order received
- All options calculated
- Customer selects
- System reoptimizes
- Customer slot remains



Route start/finish location

8:00 am - 10:30 am

10:30 am - 1:30 pm

1:30 pm - 4:00 pm

8:00 am - 4:00 pm

show routes

Straight Road

Leaflet | Map data © here, ORTEC

tasks/used routes/total routes

9 / 4 / 5

driving/task duration (h:mm)

2:17 / 6:45

distance (km)

106.5

tasks per route/fill rate

1.8 / 21%

actions

Optimize

Reset

# Dynamic Time Slot Optimization solution

## How it works?

### Success factors:

- Customer service level
- Availability and Response time
- Excellent solvers

### Approach:

- Extremely fast optimizer
- Delivers the extra cost per available time slot
- Continuous recalculating all routes

### Technology:

- SaaS / Cloud (for scalability)

Website customer

Slot  
request

Availability +  
cost per slot

< 1 sec  
response  
time

Optimizer

Routing engine

Orders

Routes

Continuously  
recalculating all  
routes based on  
booked and  
forecasted  
orders

tasks/used routes/total routes

9 / 4 / 5

driving/task duration (h:mm)

2:17 / 6:45

distance (km)

106.5

tasks per route/fill rate

1.8 / 21%

actions

Optimize

Reset





Optimized Operations / Routing



## What is offered?

## Intuitive interface & human override options



# ORTEC Route Optimization

What is offered?

Intuitive interface & human override options

Outstanding optimizer (vast number of constraints considered)

- ❑ The best in the long run
- ❑ The best at most things
- ❑ The best in the short run

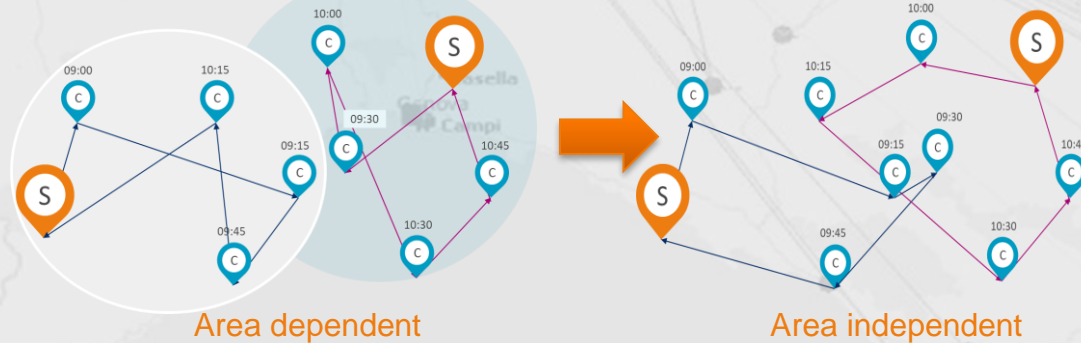
# ORTEC Route Optimization

What is offered?

Intuitive interface & human override options

Outstanding optimizer (vast number of constraints considered)

Depot agnostic





# ORTEC Route Optimization

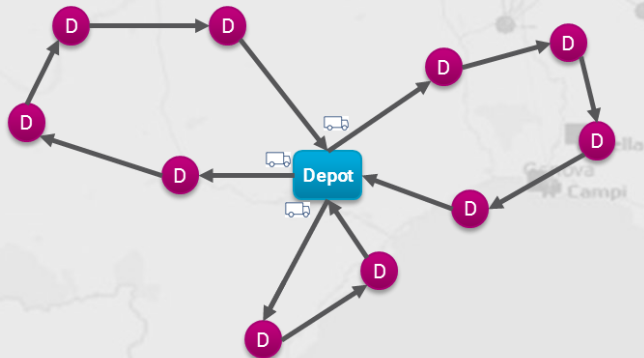
What is offered?

Intuitive interface & human override options

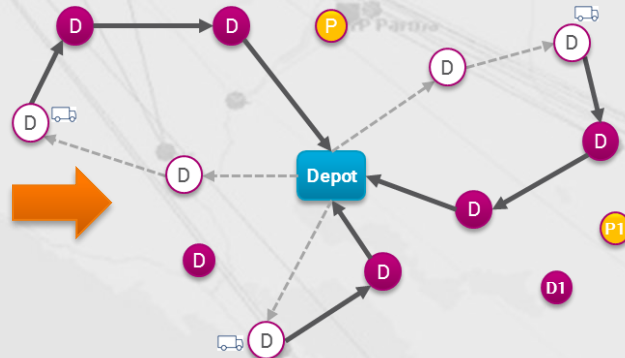
Outstanding optimizer (vast number of constraints considered)

Depot agnostic

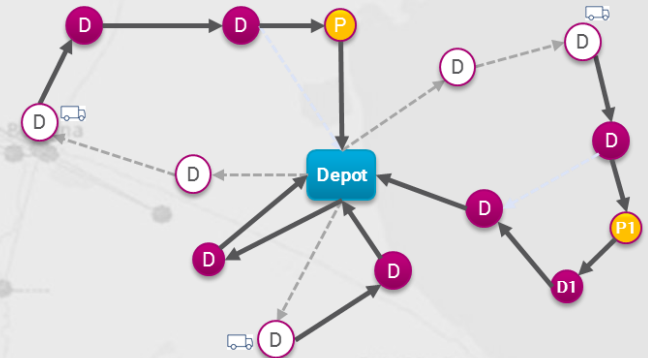
Dynamic re-optimization (mainly for same-day orders)



*Beginning of trip...*

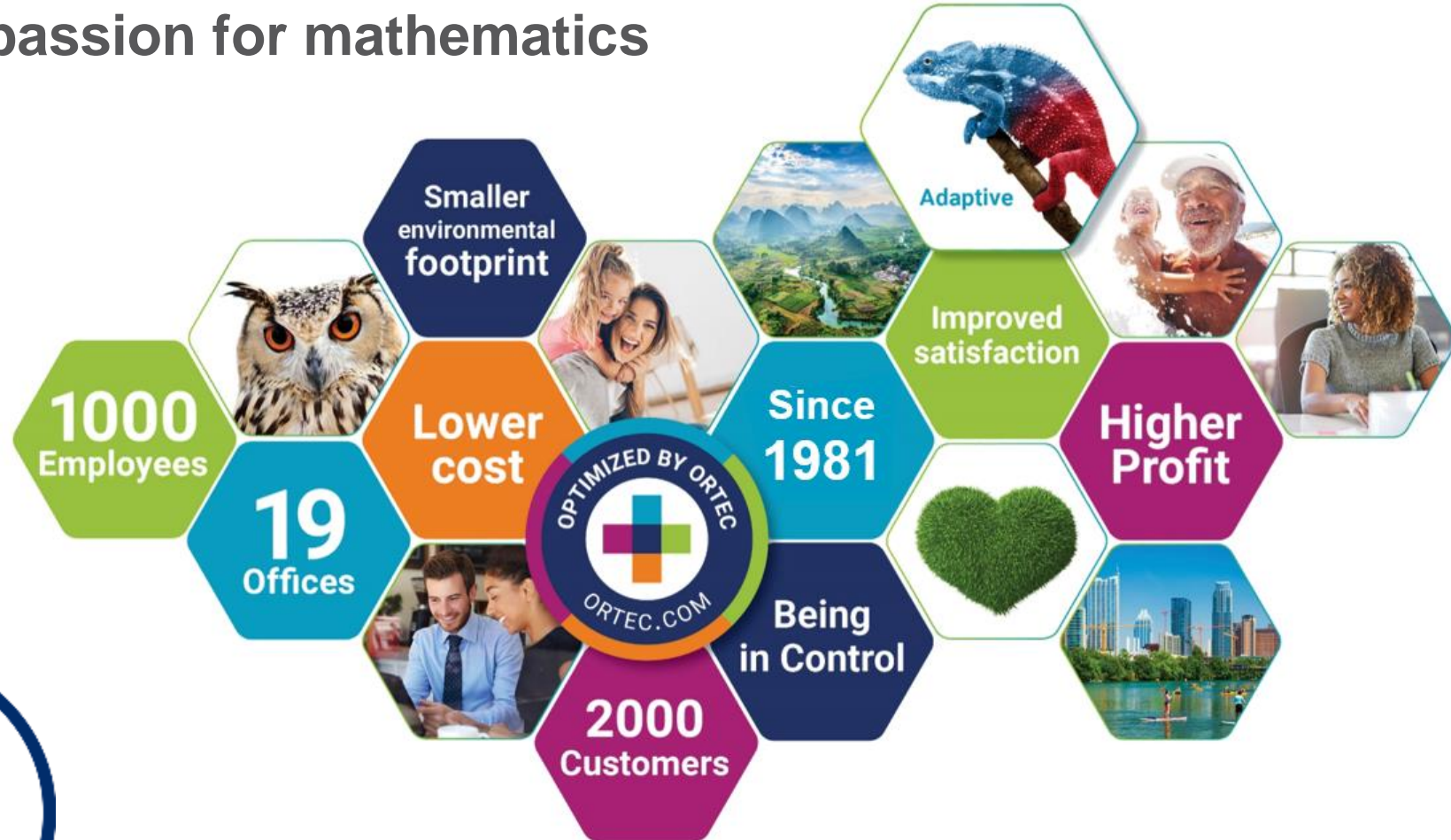


*During the trip...*



*After re-optimization*

**Purpose:** Improve the world using  
our passion for mathematics





# Let's optimize your world!

