INTRODUCTION

Supply Chain Replenishment

KIVOS

I am Argiris Mokios, the CEO at Kivos, an engineer (PhD), a certified Project Management Professional (PMP) and a doting husband and father.

As the Chief Decision Scientist heading Kivos's data science team, I am also involved in research, focusing primarily on the uncertainty impact in retail supply chain networks, to mitigate risk and increase business value.

Agenda

Introduction – Relative Experience

Technology – Services

Implementation Scope – Timeline

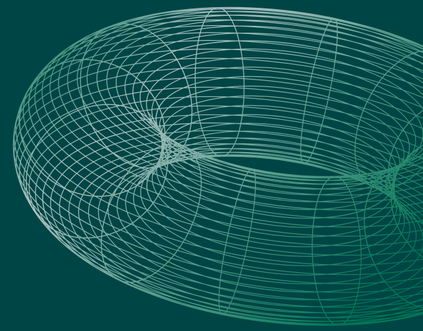
Introduction – Relative Experience

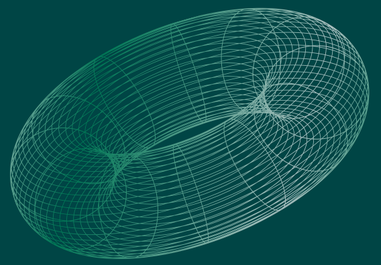
Smart decisions to operate

efficient, profitable, and sustainable retail supply chains

Kivos help retailers achieve their digital transformation initiatives with our state-of-the-art decision support systems, where every single assortment, price, and purchase decision maximizes the ROI.

Every day, we deliver decisions to our customers that boost revenues, increase profits, reduce waste and enable rapid responses to changing market dynamics.
We are an innovative service provider of cloud-based intelligent retail solutions, supporting buying, merchandising and supply chain processes.





KONZUM

Expertise

Managing replenishment

Konzum is the leading retail chain in Croatia with a revenue of €1.4 billion and presence in over 300 towns and villages in the interior, on the coast and islands.

- 500.000 daily customers
- 630+ retail stores
- 20 cash & carry
- 30.000+ items
- 10.000+ employees
- €1.4 billion revenue

Our work at Konzum as summarized by our customer:

"The implementation of Kivos Replenishment platform has reduced response times, increased efficiency in decision making and reduced overall workload through better communication."

Adrian Alajkovic
Supply Chain Planning and Inventory Management Director

Expertise

Consumer Centric Category Management

ICA is the Leading Supermarket chain in Sweden having more than 1250 stores across the country with 4 main store formats ranging from Hypermarkets to Convenience stores. ICA is both a Wholesaler and a Retailer. The grocery business is using a Franchisee business model whereas the Division of ICA Special which includes Fashion, Electronics, Books, Kitchen as well as Seasonal Assortment is using a hybrid model of owned stores in the hypermarkets but franchisee in the other store formats.

36% market share

1250+ retail stores

4 formats

100.000+ items

23.000+ employees

€8.7 billion revenue

Expertise

Consumer Centric Category Management

Kivos has been successfully supporting ICA through their journey over the last 7 years in a variety of business functions (150 business users) around a more efficient and Consumer Centric Category Management. During the last couple of years, we have been extending our solutions to be more focused on omnichannel and we are now supporting not only the assortment decisions on the physical stores, but also the ICA Online Assortment that is presented on the e-commerce channel.

Work areas: Long Term Strategic Planning, Item Listing - Delisting Decisions, Competitor Market Analysis, Consumer Decision Trees - Item Attribute Management, Store Clustering, Consumer Centric Assortment Offerings, Central Fulfilment Centre Assortment Offerings to handle e-commerce, Buy Online - Pick In Store Assortment Offerings etc.

al tayer الطاير

Expertise

Optimizing replenishment

Al Tayer Insignia has firmly anchored its position as a regional leader in retail, representing leading brands in the Beauty, Home, Fashion and Hospitality sectors.

Headquartered in the UAE, the retail division has expanded operations to the Kingdom of Saudi Arabia, Kuwait, Bahrain, Qatar and Oman, and currently operates nearly 200 stores across the region.

- 6 countries
- 200 retail stores
- 80+ brands represented
- 100.000+ items
- 8.000+ employees

al tayer الطاير

Expertise

Optimizing replenishment

Al Tayer has been our customer for the past 2 years, using our services to optimize store and warehouse replenishment (warehouse-to-store, direct-supplier-to-store, supplier-to-warehouse etc.).

We predict the future demand considering 40+ demand attributes (price, promotions, holidays, local events, calendar, item and location attributes etc.) and model the physical supply chain nodes and network flows, considering all available constraints (store/shelves capacities, receipt schedules, LOT multipliers, warehouse capacities and throughput, supplier MOQs, lead times, track capacities etc.) to efficiently replenish the network.

4%
sales increase

5%
stock-out reduction

22%
Inventory reduction

14%
Employee time savings

Technology - Services

Technology Platform

4 generations of forecasting & replenishment

Our technology is evolving constantly to reflect the latest discoveries in mathematics and computer science along with day-to-day feedback of real supply chain work experience.

2013 › **2018** › **2020** › **2022**

- **2013**: Automate statistical models
- **2018**: Machine learning
- **2020**: Stochastic modelling
- **2022**: New technology stack

Forecasting

Demand Factors

Sales

School holidays

Day of week

Public holidays

Seasonality

Weather forecast

Day of the month

Realations

Stock availability and listings

Markdowns

Location based parameters
(GPS, region, type...)

Print/online promotions

Price

Competitive items

Product parameters
(product group, brand, attributes...)

Cannibalization

Decisions-as-a-Service

Earn more time to service your customers

1

Receive Client Data

The main requirement from our customers is their data. We leverage your existing ERP systems to collect the required data.

2

Generate Orders

We generate demand forecasts and utilize it to provide demand driven & constraint optimized order recommendations.

3

Execute Orders

Business users can rely their decisions on data driven generated orders, to plan their operations and align with their company strategy.

Implementation Scope – Timeline

Scope

Store auto replenishment

- The objective is to gradually automate store replenishment.
- The target for the 1st year is to rollout 40 retail stores
- The plan is to rollout the rest of the stores in the 2nd year
- In the 3rd year the focus will be to bring the “fresh” assortment in auto replenishment

Processes

Who owns, creates and manages data?

Product lifecycle & Assortment management

- A new item is introduced: Who is involved? What are the steps required? Where is the information stored? Is there a system used?
- Existing item is discontinued.
- What/When is and will be sold in each location?

Catalogues & Promotions

- A new catalogue is launched.

Data

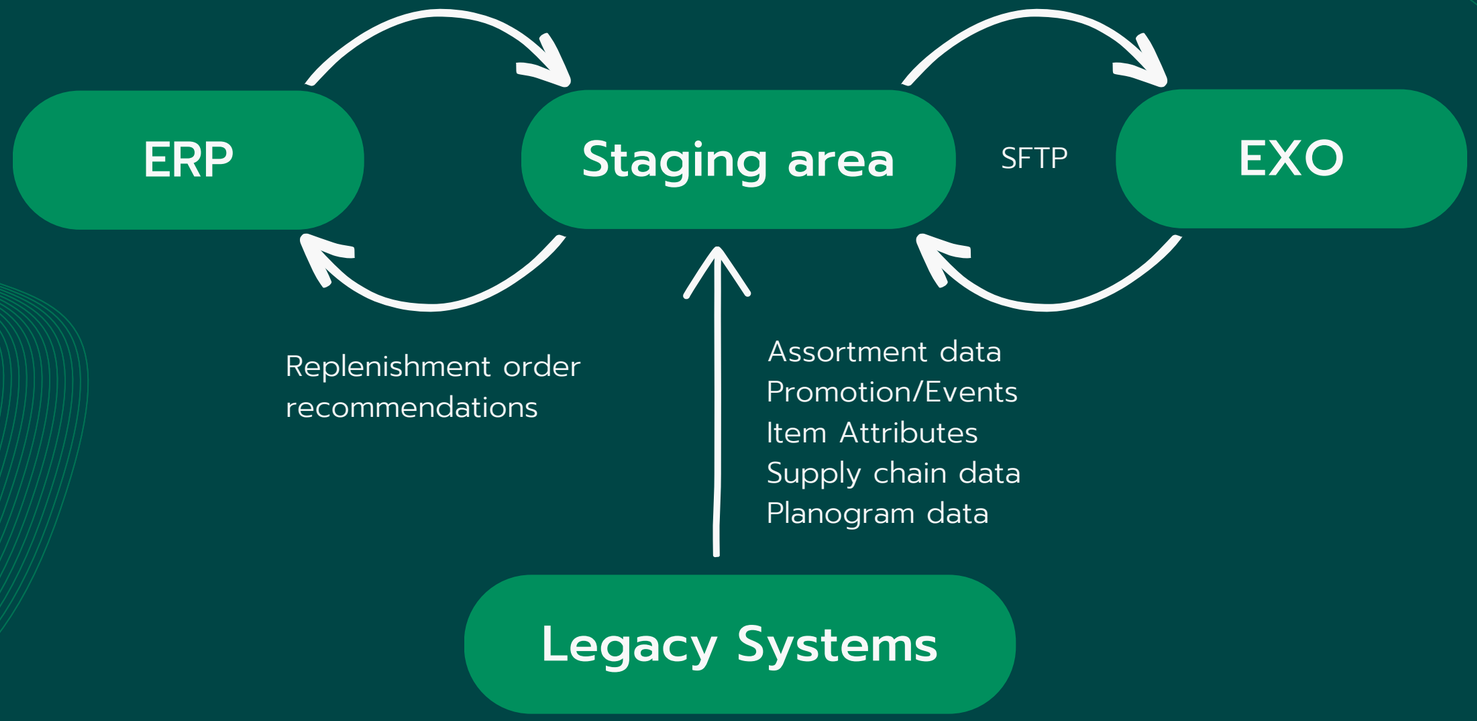
- POS data e.g. Regular and promotional sales in Units and Value
- Inventory data e.g. End-of-day stock
- Price and promotion data e.g. Regular price, promotional price, promotion activity
- Assortment and planogram data e.g. Product selling start & end dates, item’s shelves capacity
- Attributes e.g. Flavor, Size, Color, Brand, Price Tier etc.
- Supply Chain network, flows & constraints

2020 2021 2022 2023 2024

Systems

Where should we find the data?

Sales Units
Retail price
Item cost
Regular price
Prod & Loc hierarchies
On Hand Inventory
On Order



Timeline

Get on board in less than 5 months

Week 1

Discovery

Our team is working side-by-side with the business users to identify all the elements that affect demand and define the structure of the supply chain.

Week 3

Data Validation

Our data engineers and data analysts start working with your data. A few iterations are expected to reach the desired data quality.

Week 7

System Preparation

The data are integrated with the system, demand influencing factors are engineered and the supply chain network and flows are created.

Week 13

Simulation

Once the core information is in place, demand predictions and order recommendations simulation runs are initiated. When the required maturity is reached, we’re ready to start the roll-out.

Week 21

Roll-out

Roll-out candidate product categories and locations have been selected, the business processes are updated, communicated, and the journey begins!

Summary

Take control of your business not an IT system!

- 14 years experience and numerous supply chain projects have proven that the typical implementation approach doesn’t deliver the expected value to the end customer.
- We bundle our tools, methods and expert teams under a service that delivers optimized replenishment decisions, to be (optionally) reviewed and executed.
- We don’t charge implementation fees nor enforce long term commitments, because we base relationships on trust not clauses.

Next Steps

Wolt assortment

How to get the best 5000 items?

- Rank all eligible items within each category, for each store
- For each item calculate the Item Priority Index (IPI) score, using at least POS sales and margin
- Optionally, adjust weight for wolt-channel transactions in the IPI score
- Select top ranking items in each category, for each store
- Optionally, use Consumer Decision Trees (CDTs) to ensure that the assortment width, covers all consumer behaviours
- Kivos replenishment ensures availability of wolt assortments to physical stores.

Thank You!

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CEO – Chief Decision Scientist

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