



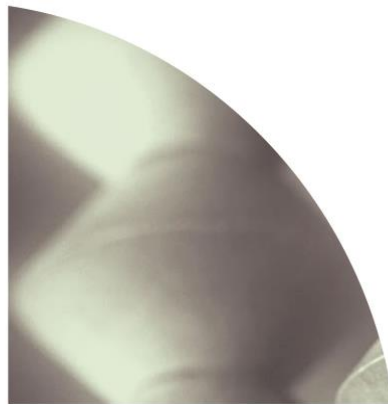
A4Everyone, български стартап с фокус върху аналитичните услуги има удоволствието да покани членовете на **Data Science Society**, както и изкушените от математическото моделиране професионалисти на неформална среща.



# DATA TALK & BEER



Analytics *for* everyone





Alexander Efremov

# DATA SCIENCE, RETAIL & OPPORTUNITIES





# Agenda

◎ Trends in DS

◎ DS & Retail

◎ Opportunities



- ◎ From Big Enterprises to SME
- ◎ Reduce human intervention
- ◎ Mixed Data



## ⦿ Retail Industry

### ○ Why A4Retail?

Demand forecast, Storage planning, Price Optimization, etc.

### ○ Retail System – Spec.

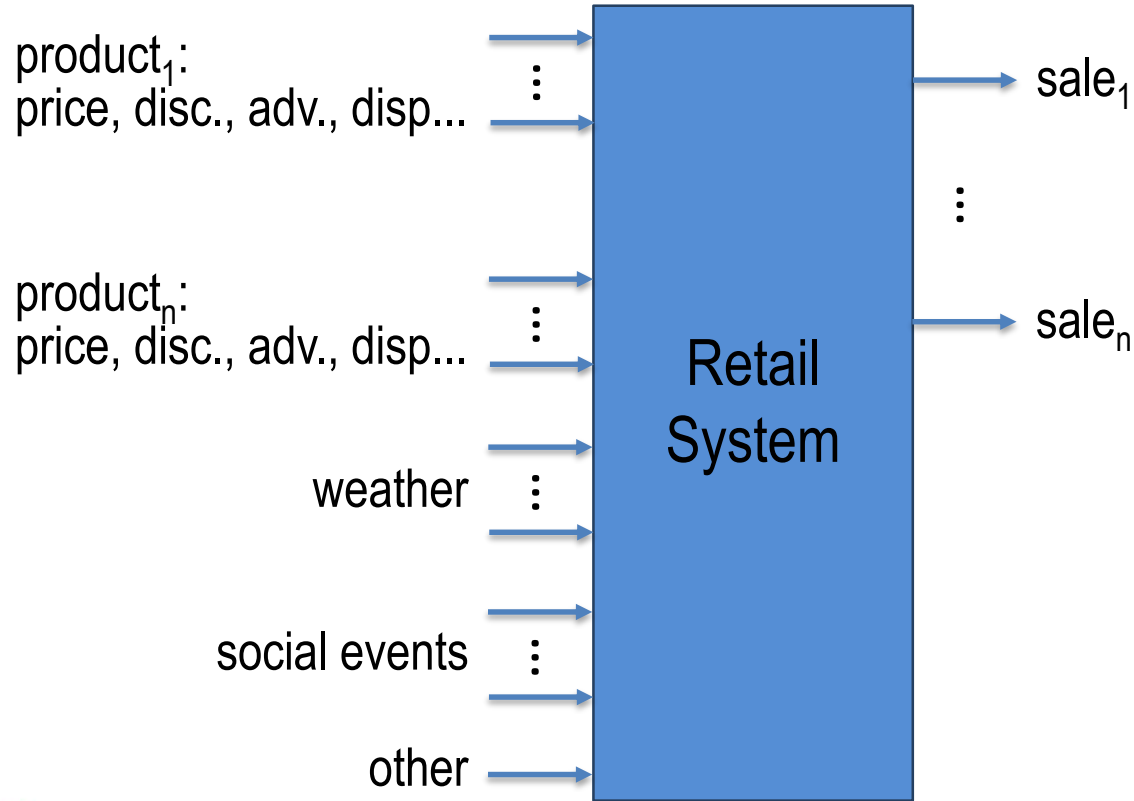
- Dynamic, Time-Varying, Non-Linear, MIMO system

### ○ Retail Data – Spec.

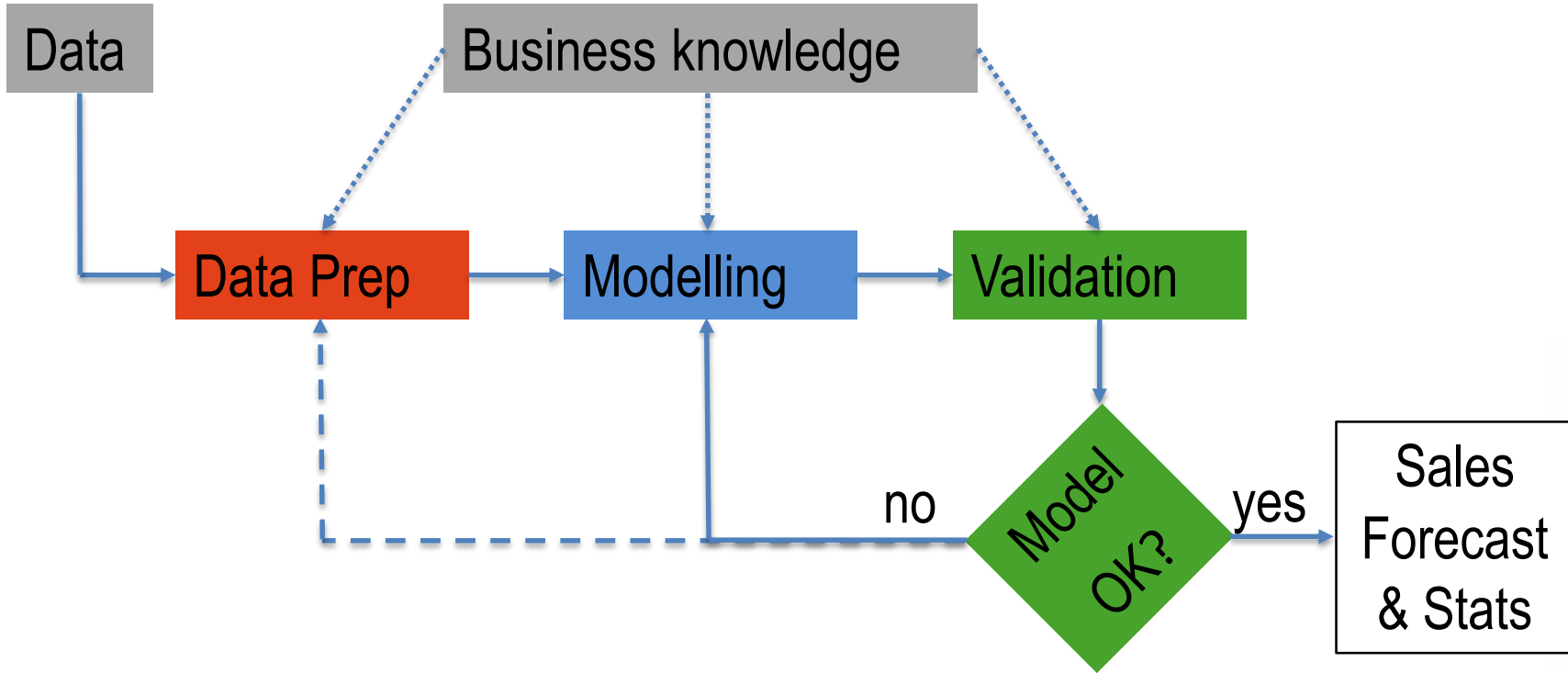
- Missings, Outliers, Uninformative vars, Seasonality, Trend, etc.



# Automated Workflow



# Automated Workflow





# Automated Workflow

## Data Prep

### Cleaning

- Miss, Outs, LowVar

### Preprocessing

- Vars decomp. /detrend, deseas./
- Transform
- Standardization
- Remove multicol., etc.

## Modelling & Validation

Multistage modelling

SWR - Model dev

Model val

## Sales forecast & Stats

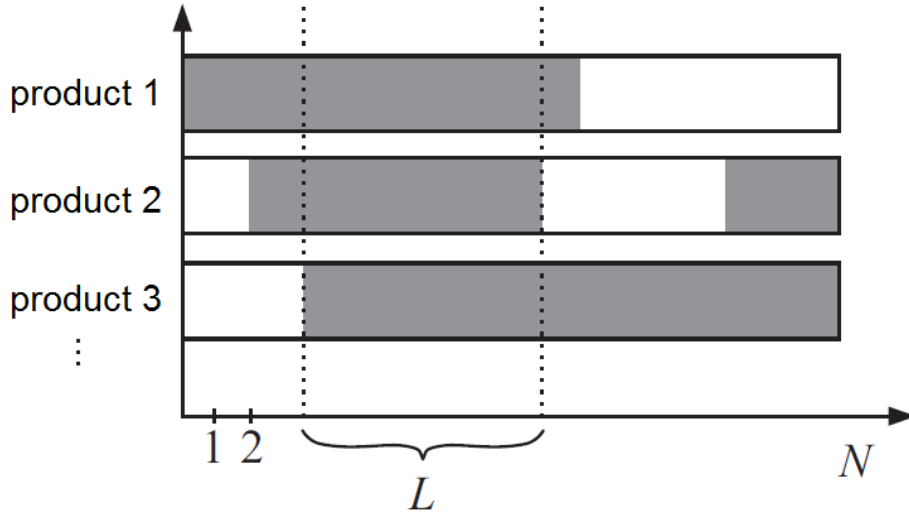
Model destandardization

Detransformation

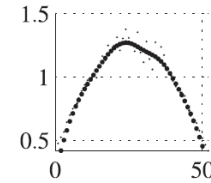
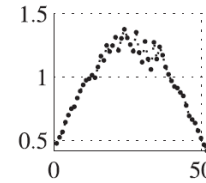
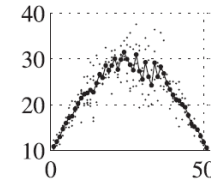
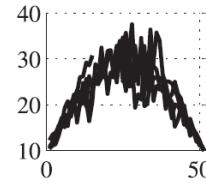
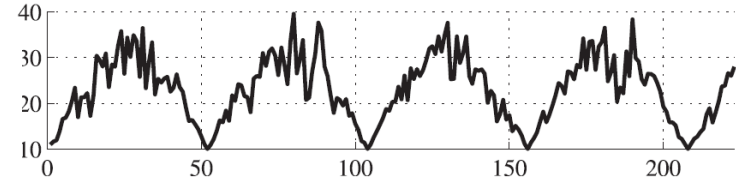
Add trend & seas



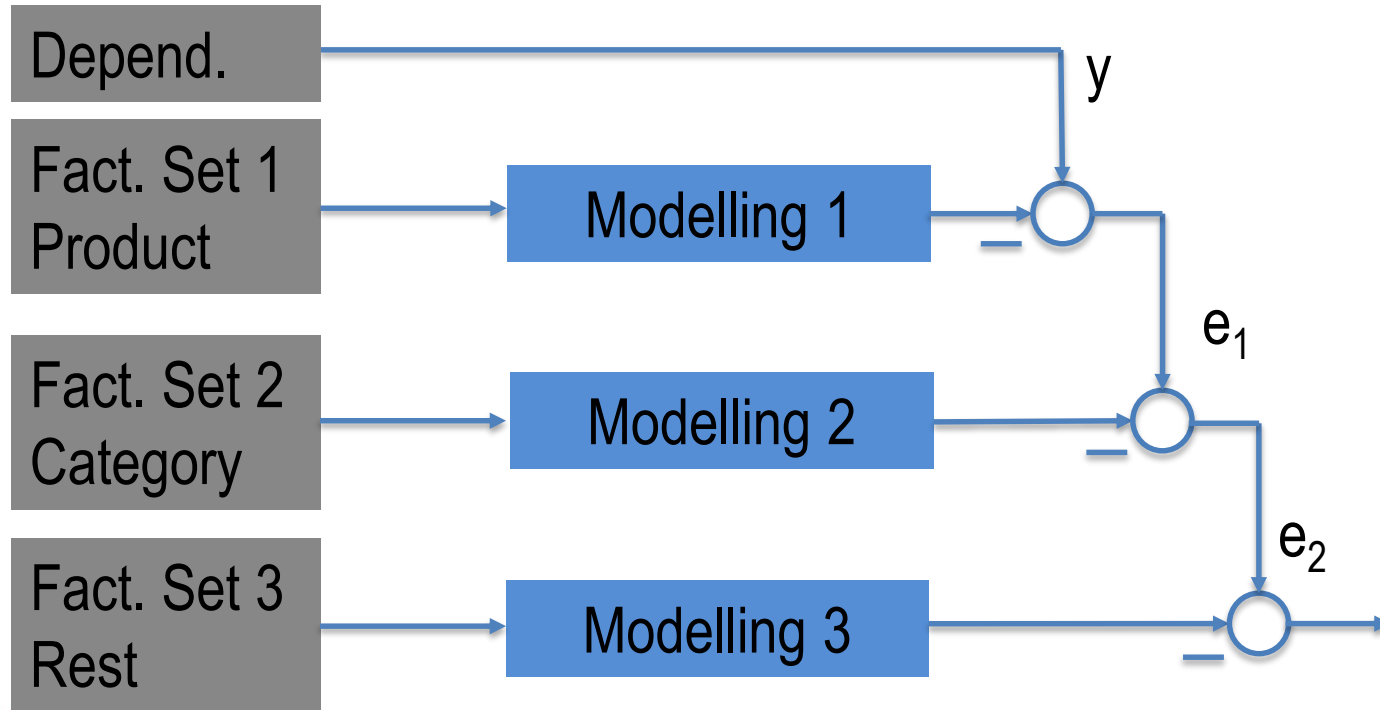
## Missings



## Seasonality



## ⦿ SWR & Multistage Modelling



## ◎ A4Retail – Results

[www.a4everyone.com](http://www.a4everyone.com)



# Opportunities

- ⦿ Opportunities
  - Education
  - Business
  - Science





# THANK YOU

Alexander Efremov

## DATA SCIENCE, RETAIL & OTHER OPPORTUNITIES

