



# **Decreasing Warehouse Costs**

## ECR Baltic

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# Optiscan Market Area

**Turnover** 12 million €  
**Personnel** 50

1 750 000 order lines picked every day

Norway

Finland

Sweden

Russia

Denmark

Baltics

**“Optiscan has improved our business”** (95% of customers, Optiscan Customer Survey)



# Voice-Directed Work



# How does Voice work?

- “Pick list” downloaded through WLAN to Talkman

Talkman: (Go to) Aisle 11  
Picker: Ready  
Talkman: (Go to location) 101 level 1  
Picker: 2 - 3  
Talkman: (Take) 5  
Picker: 5



- Very short “communications” with the Talkman
- Talkman uses built-in Speech Recognition software and Text-to-Speech Engine
- Talkman TASK = Application that guides picker through the work process



# Voice benefits- Accuracy

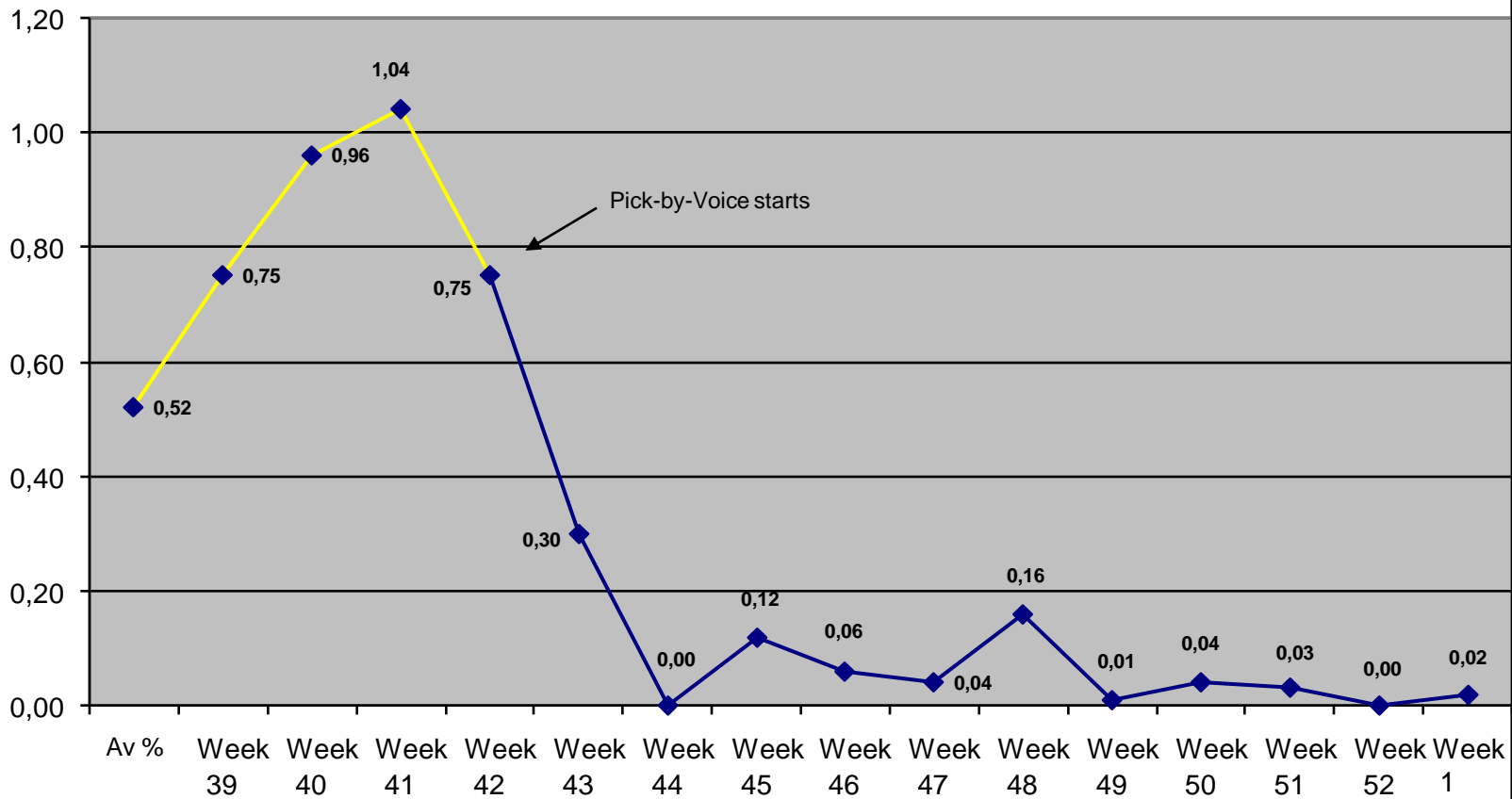
Accuracy increase to 99,98+%

- Check digits
- Eyes-free on the product while speaking check digit and taking product
- Avoid same check digit at adjacent isles on the same location



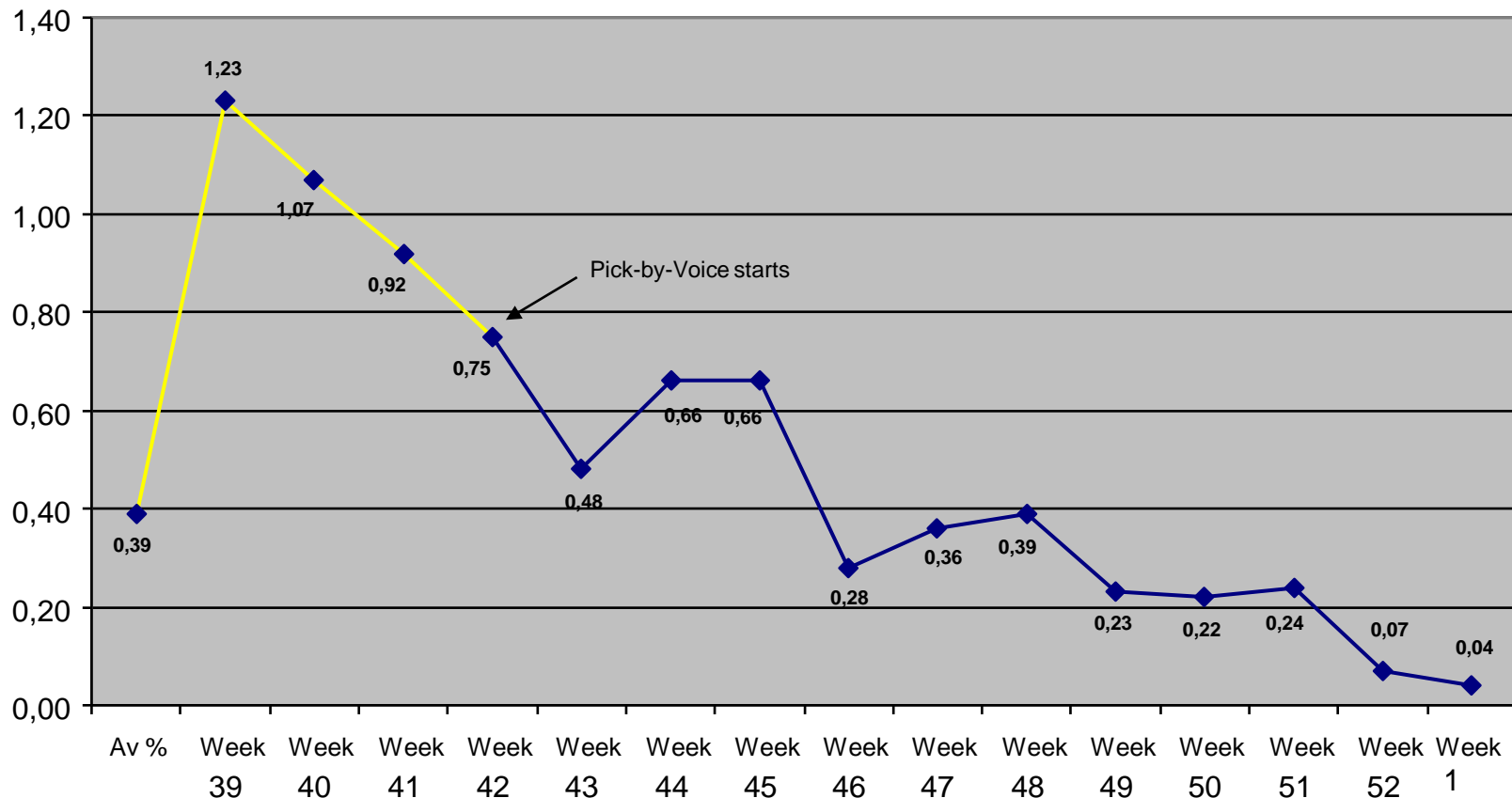
# Customer's reported Picking Errors

Picking Errors Development 2007



# Customer's reported Lack of Products

Lack of Products 2007



# Voice benefits- Efficiency

Productivity increase by 15 – 35%

- Start and end of picking routines
- Hands-free, Eyes-free
- Batch picking (multiple orders)
- Decreasing errors
  - Complaints, returns management and handling, re-picking/-sending, saldo corrections...
- Replenishment
- Reduced training time for new employees



# Voice benefits- Health & Safety

Work safety, health and ergonomics improved

- Pickers always on planned routes
- Eyes-free
  - concentrate on moving, not reading lists
- Hands-free lifting more ergonomic
  - less muscle strains etc.
- Less broken items when lifting with both hands



# Voice benefits- Process control

## Easier process management

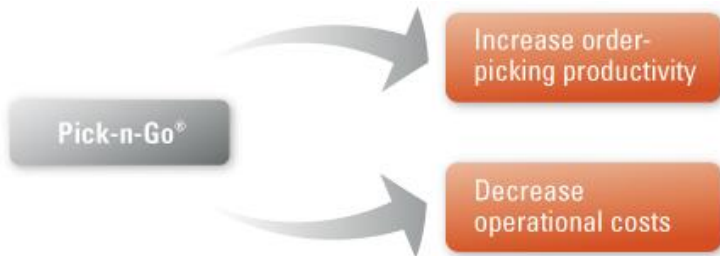
- Real-time picking control
- Automatic process control
- Automatic reporting



# Pick-n-Go®

## Boost productivity in order-picking

- Increase picker productivity by 50-100%
- Driverless trucks escort the pickers
  - Give the picker a **more efficient tool**
    - Automated pick-up of empty roller container / pallet
    - No Step On/Off vehicle
    - Automated dispatch of fulfilled customer order
- Perfect combination: 1 + 1 = 3 !!
  - AGV technology combined with Pick-by-Voice
- In existing environment
  - Same Infrastructure
  - Same Process and IT solution



# Pick-n-Go<sup>®</sup> Solution

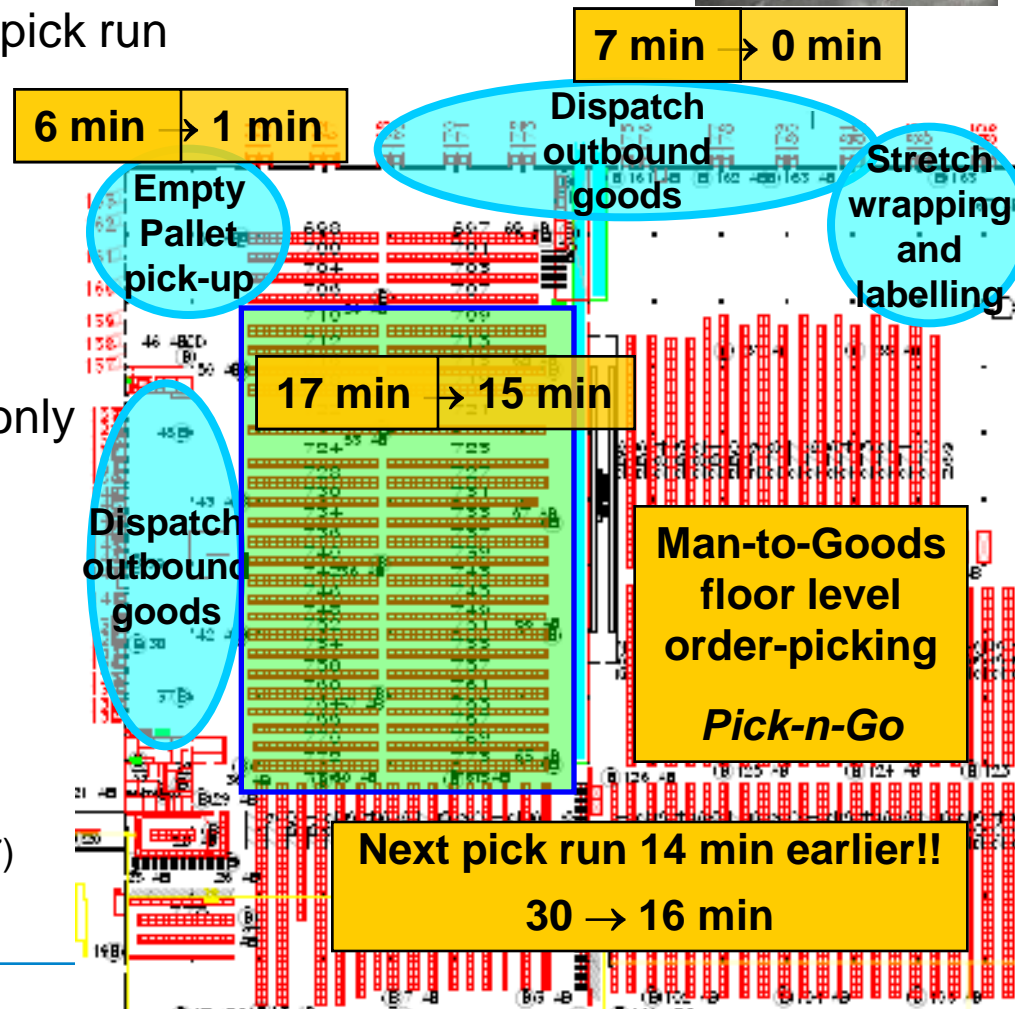
## Generic ROI model – example:



- Today pickers spend 30 min on a pick run
  - Preparation for pick run (6 min)
    - Order administration
    - Empty pallet pick-up
    - Travel to 1<sup>st</sup> pick location
  - Picking first to last pick (17 min)
  - Dispatching the goods (7 min)
    - Travel to stretch wrapper
    - Secure and label goods
    - Travel to and Drop at correct dock

- Pickers supported by *Pick-n-Go* only spend 16 min on same pick run
  - Preparation for pick run (1 min)
    - Walk to 1<sup>st</sup> pick location
  - Picking first to last pick (15 min)
    - No step on / off truck
  - Dispatching the goods (0 min)

- Gain:
  - $30 - 16 = 14$  min
  - $14 / 30 = 46,7\%$  cut time → **Productivity gain: 87,5%**  $1/(1-0,467)$
  - Each picker produce **87,5% more**



# Advantages of Voice & Pick-n-Go

Pick accuracy significantly improved 99.98+%

Faster picking, Voice 15-35+%

Faster picking, Pick-n-Go (Voice required) 50-100%

Work safety and ergonomics improved

**Improved customer satisfaction**





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