TeamViewer

Mastering Digital Transformation in Logistics with Augmented Reality

Webinar

Meet our speakers

Eric Abbruzzese

Research Director at ABI Research

Paul Berendsen

Manager Operations at Samsung SDS

Julian Doelfs

Manager AR/MR Solution Sales at TeamViewer

Today's agenda

1 **Which role plays augmented reality in transforming logistics processes?**
Eric Abbruzzese | Research Director at ABI Research

2 **What does vision picking look like and how does it create value?**
Julian Doelfs | Team Manager AR/VR at TeamViewer

3 **Which role plays augmented reality in transforming logistics processes?**
Paul Berendsen | Manager Operations at Samsung SDS

4 **Discussion**
Open round

5 **Q&A**
Please drop your questions in the box!

Which role plays augmented reality in transforming logistics processes?

Eric Abbruzzese | Research Director at ABI Research

SAMSUNG SDS

ABIresearch
THE TECH INTELLIGENCE EXPERTS℠

TeamViewer

Digitization and XR

Eric Abbruzzese

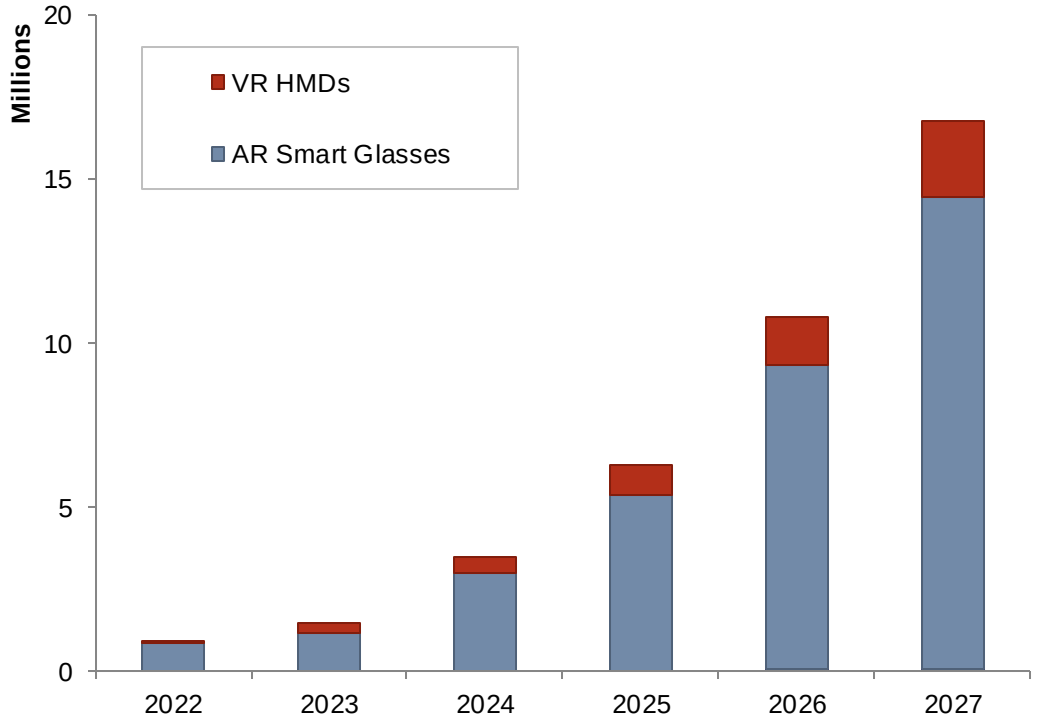
Research Director

June 2023

Digitization and XR

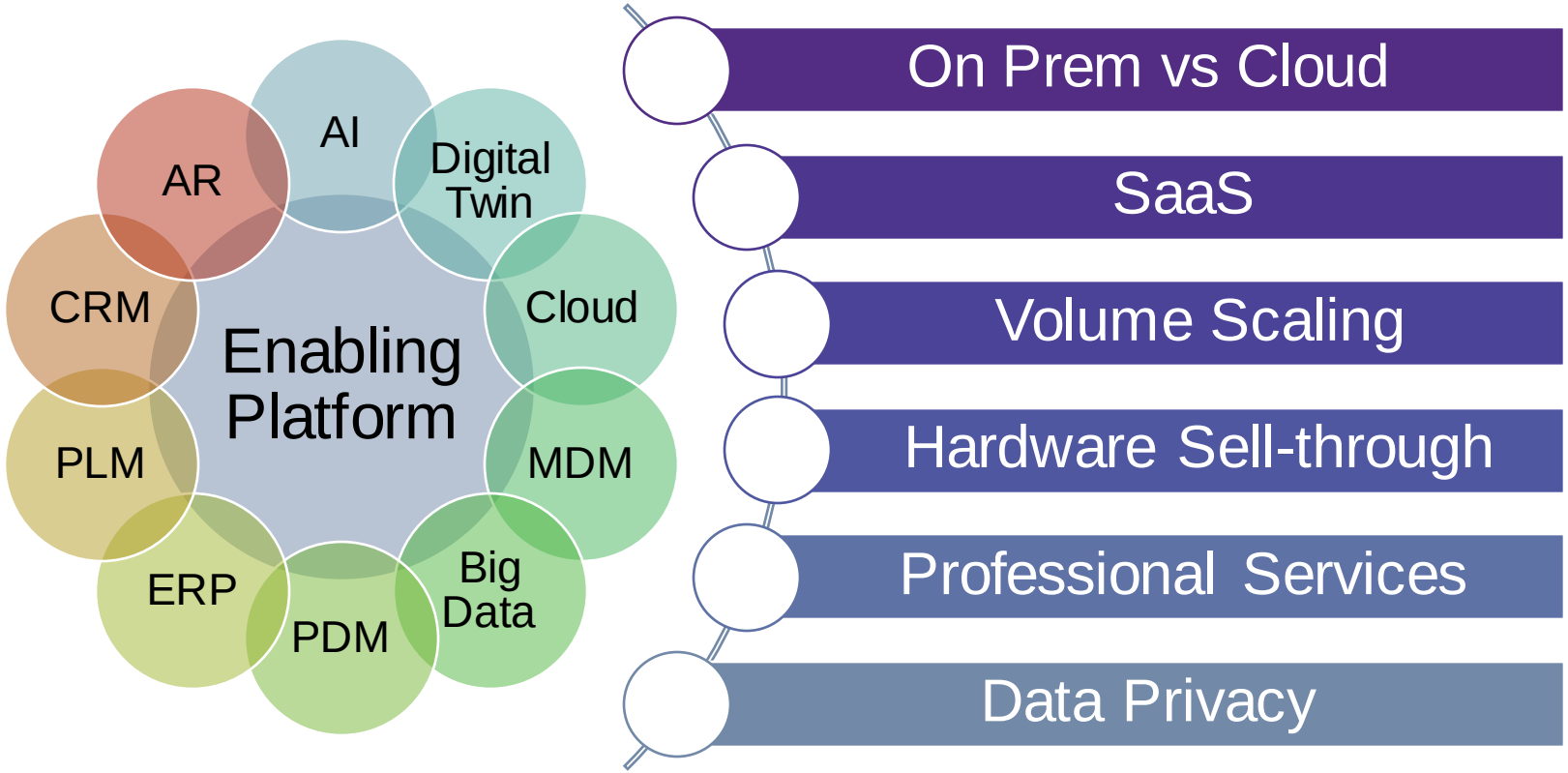
- AR and VR have seen slow but steady growth in enterprise, with industrial segments leading the way: **manufacturing, Logistics, Energy & Utilities, Automotive, TIC**
- AR devices led adoption early, primarily enabling **remote assistance** and **step by step instruction** use cases.
- More tailored use cases begin being implemented, like **pick and pack** in **logistics**
- VR is growing with enterprise **learning** and **training** a growth area

Industrial XR Device Shipments



Enabling Technologies and Integration Needs

- AR has known and proven ROI, but every company is different
- Varying levels of digitization maturity and speed of change
- Unique usage environments, users, and device support
- Enabling technologies like **AI, cloud, and connectivity** create opportunity alongside core solutions



Key Markets and Trends

Manufacturing

- Leading XR use cases: Remote Assist, Work Instruction, Training
- High complexity, high operational cost
- Aging workforce and engrained knowledge

Energy & Utilities

- Leading XR use cases: Training, Remote Assist
- Safety and cost reduction with offsite XR deployments

Logistics

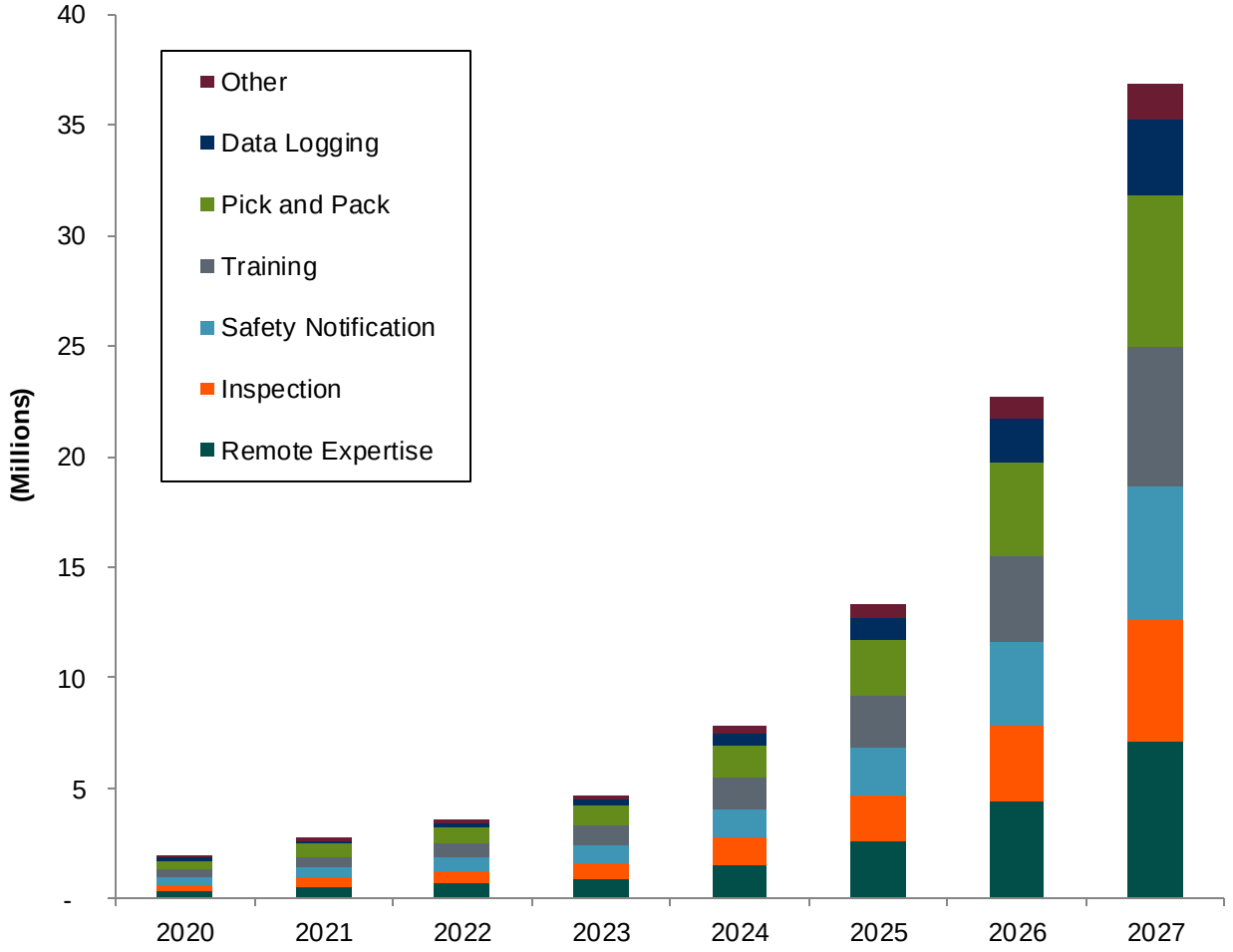
- Leading XR use cases: Step by Step (e.g. Vision Picking), Training
- Error reduction paramount

AR in Logistics Facts and Figures

- **8 million** smart glasses installed base in logistics by 2027
- **$22.3 billion** total AR Logistics Market Value in 2027
- **39.4% CAGR** for AR Logistics Value Chain through 2027
- **36 million monthly active AR users** across smart glasses and mobile

AR Logistics Active Users

Smart Glasses and Mobile



Logistics and AR

Use Cases, KPIs, and Competition

Vision Picking

- Picking requires both speed and accuracy
- AR delivers error reduction and process speed increase
- KPI: 30% faster picking workflow, and zero errors

Remote Assistance

- Downtime is expensive and support can be slow
- AR delivers instant expertise access anywhere
- KPI: 60% reduction in operations downtime

Training

- Upskilling is time consuming and continuous
- AR can enable faster and fewer training sessions
- KPI: 3 weeks less training time per year

- AR is competing with paper, tablets, and wearable scanners
- AR is seen as higher risk (cost) but higher return
- Wearable scanners are prolific, meaning there is wearables precedent
- AR is not single use, smart glasses can serve multiple applications

ABI Research Recommendations

- Recognize exactly what platforms and technologies are currently in use that will interact with XR. Technologies in use for existing operations may or may not touch XR depending on target use cases or work groups. Mapping out touchpoints and needs before pursuing XR, or before scaling existing XR operations further, can limit integration barriers and speed time to value.
- Identify actual XR device needs. Hands-free needs will dictate much of the discussion afterwards. Smart glasses serve hands free, either smartphones/tablets or smart glasses serves the rest. Vision picking is most powerful hands-free.
- Robust analytics support adds value with little investment. Looking forward, automation of AR content and tasks with AI leverages captured data and analytics. Error rate, trends in errors, workflow efficiency, and more can be monitored and acted on.

Eric Abbruzzese

Thank You

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What does vision picking look like and how does it create value?

Julian Doelfs | Team Manager AR/VR at TeamViewer

Inefficient methods lead to lack of productivity, high costs and dissatisfied workforce

Productivity

"More order in less time" is the focus of more than

2/3

of supply chain executives because of the ever-increasing volume of orders

Quality

Only 1% more commissioning errors increase the whole handling costs by

+10%

Flexibility

More complex orders, market fluctuations and the trend towards

Lot size 1

demand easily scalable solutions

Workforce

Despite the crisis and inflation, the demand for personnel in warehouse work grows by

+30%

Sources: BVL, Handelsblatt, Capgemnini

Status quo

Outdated technology dominates warehouses globally

OUTDATED

BULKY

CONFUSING

Vision Picking

A new way to think about logistics operations

MODERN

ERGONOMIC

INTUITIVE

Vision Picking

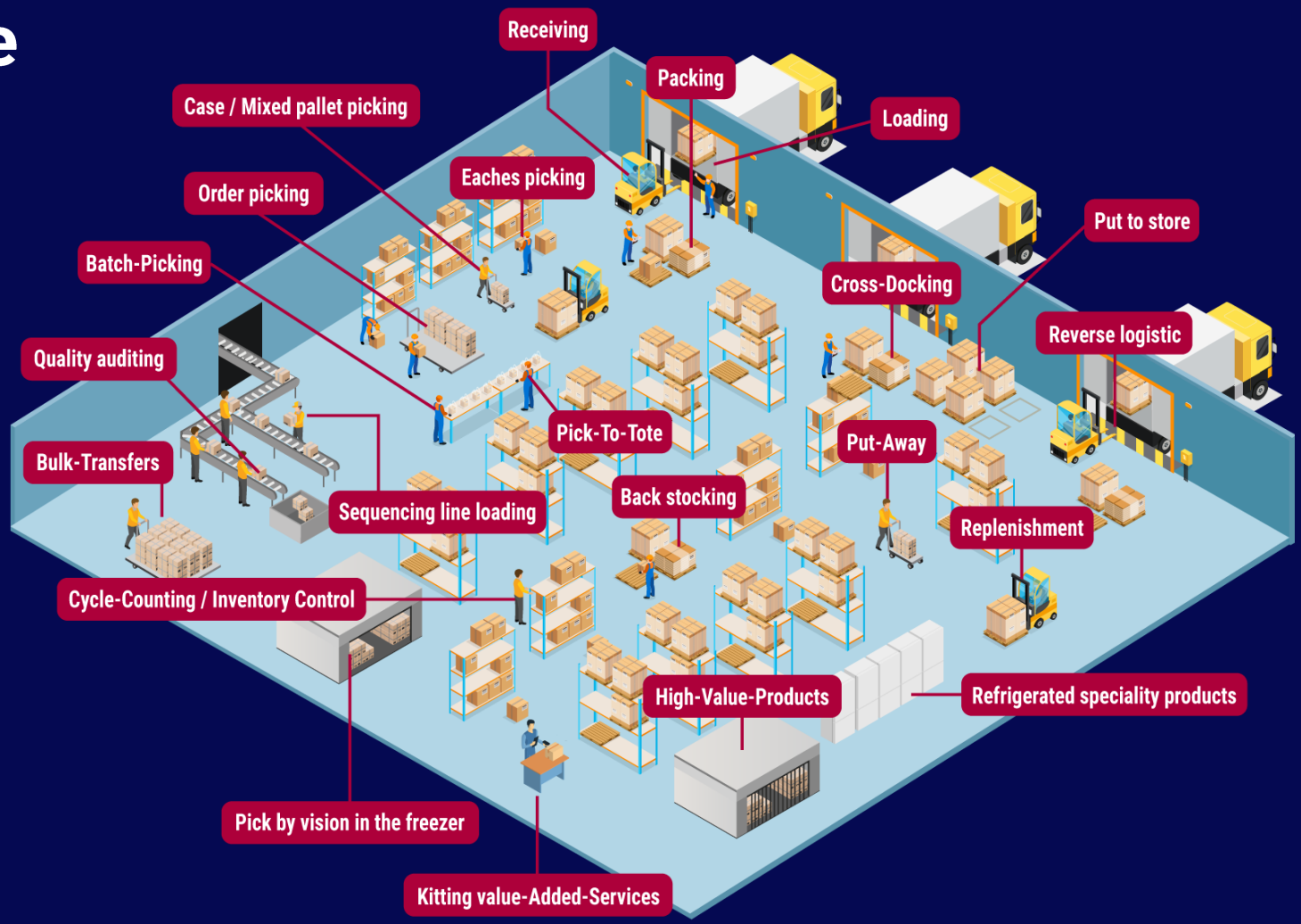
Solving the most prominent problems in your warehouse

	Workforce is inefficient	Errors have high cost	Outdated and inefficient technology	Training time too long	Process is inefficient
Solution Characteristics	**Fully hands-free information right in field of view**	**Information is visually displayed always in front of the eyes**	**State-of-the-art smart glasses and scanners are used**	**Hardware and software follows well-known usage principles**	**Solution delivery organization consults on process improvements**
Advantage	Worker is not distracted by looking away to another device or speak to a headset	Only the relevant information is being displayed, so the worker easily understands what to do	Technology is much faster, ergonomic, and intuitive	Using technology that is closer to what workers use in their private life daily is easier to understand	Processes are holistically optimized, and technology adapts to it
Benefit	**Workers are faster, as their hands can focus on actual work with access to information**	**Because confusion is eliminated, errors are reduced, and significant costs are saved**	**New technology makes processes and workers more efficient**	**Training time and costs are reduced, workers are ready to create value faster**	**Same resources are utilized better, resulting in a higher delivery quantity**

Logistics Operations 4.0: xPick in the warehouse

Manual processes are the core of warehousing operations, but they often rely on outdated, bulky, or confusing methods.

The next logical step: Support your workforce with effective and ergonomic state-of-the-art technology.



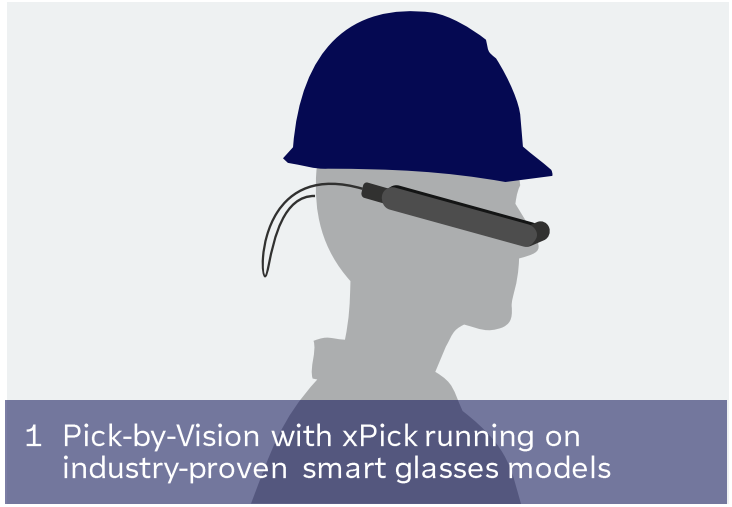
Forget complex instructions, use visual information

1

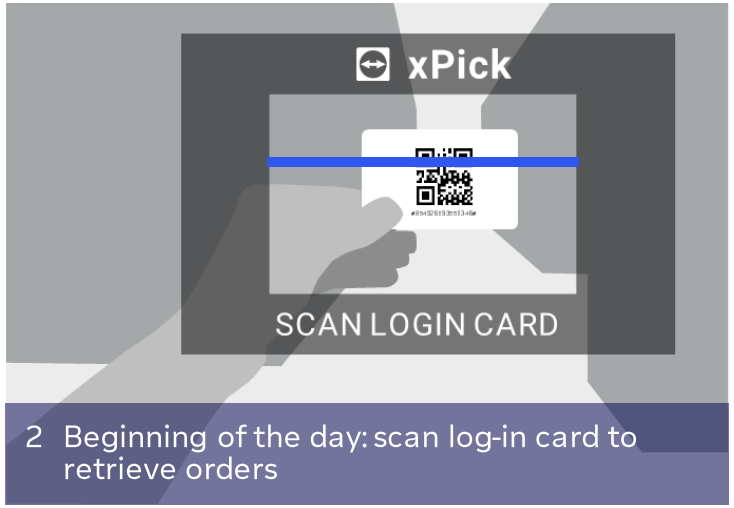
2

3

Easy step-by-step instructions streamline processes and leave no margin for error

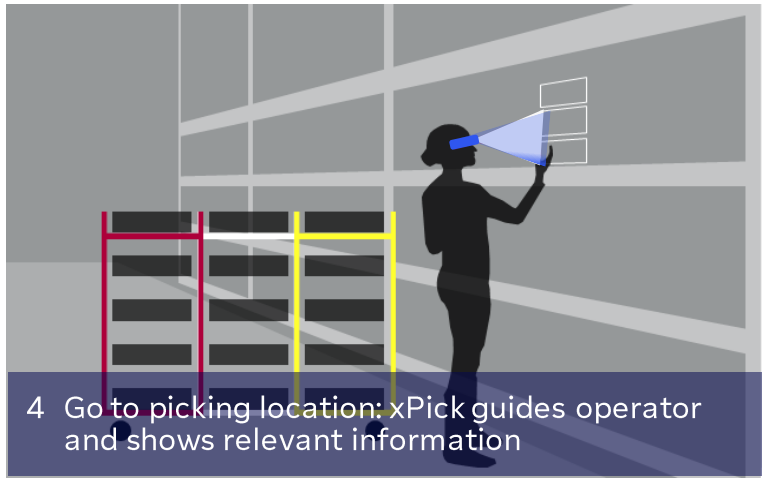


1 Pick-by-Vision with xPick running on industry-proven smart glasses models

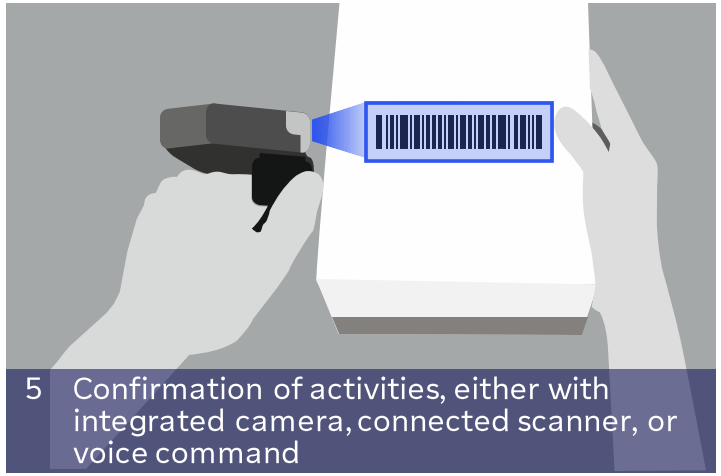


2 Beginning of the day: scan log-in card to retrieve orders

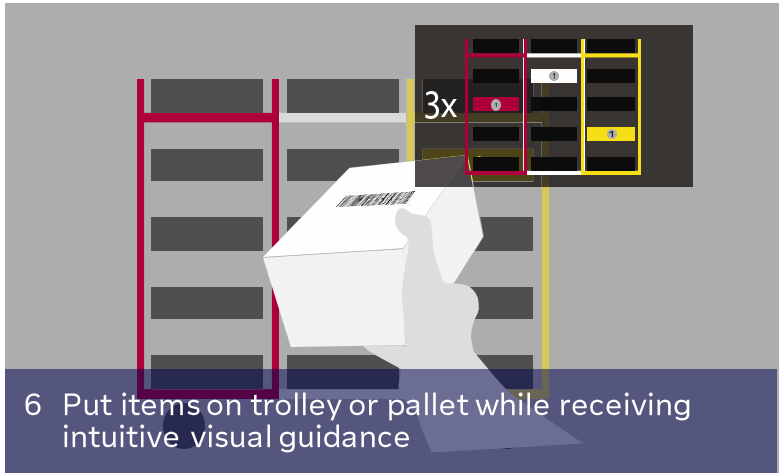
3 User-specific interface and workflow is started (language, expert / beginner mode, etc.)



4 Go to picking location: xPick guides operator and shows relevant information



5 Confirmation of activities, either with integrated camera, connected scanner, or voice command



6 Put items on trolley or pallet while receiving intuitive visual guidance

Streamline picking processes by paralleling processes without distractions

Double checking item details while managing store **environment distractions**

Issue pick

Typical order picking processes
Consists of time-consuming, consecutive steps

Seek | Pick | Place | New item

Navigate through the warehouse while **managing items and devices**

Juggling multiple items along with a handheld device

Stay focused on the task with limited distractions and built in mechanisms to prevent errors

Issue pick

Order picking with visual support
enables a blended process that delivers error-free results

Seek | Pick | Place | New item

Easily navigate the warehouse **without** needing to carry extra equipment

Seamlessly place items without having to manage additional equipment or processes

15 – 40% productivity increase

Frontline easily integrates into your existing environment

Customer backend system

- Standard connectors (e.g. to WMS, ERP, MES, PLM, etc.)
- Flexible integration options
- Active Directory Integration

Capture valuable transactional and analytic data from the point of work making the digital enterprise more intelligent

Frontline Command Center

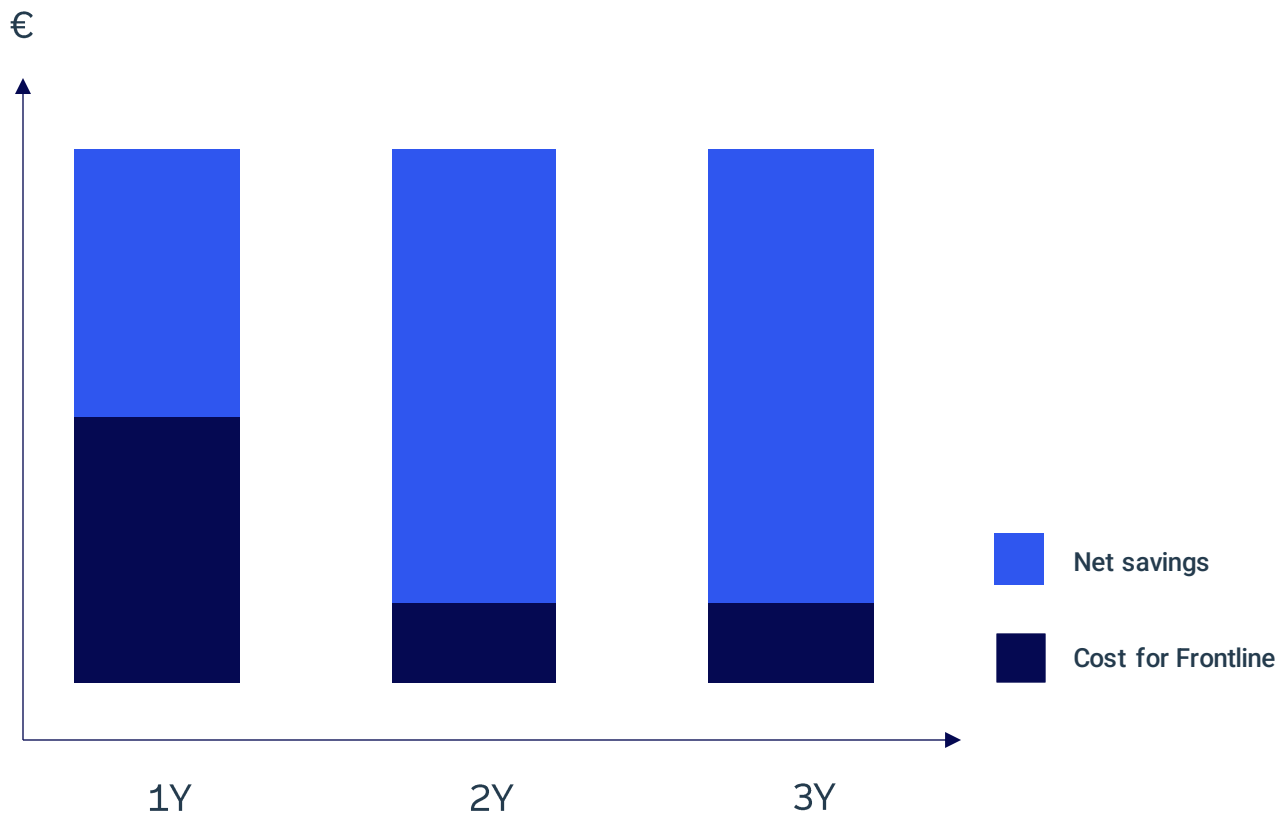
- On-premise or cloud server
- Web-based admin frontend (no installation)
- Graphical workflow editor
- Failover support

Digitalize processes and deliver solutions to multiple device form factors. Integrate once, deploy anywhere

Frontline Workplace App

- Native clients for different OS and different realities
- Browser-only support calls
- Offline mode

Multiple saving potentials for an ROI of less than a year



- Faster order processing
- Fewer incorrect deliveries
- Reduced need for quality inspection
- Faster familiarization (time to productivity)
- Less staff costs
- Less costs for consumables, e.g. paper

Set up your own project and scale fast

Start

1. Project Start
- Defining project scope
- Picking process mapping
- Identify stakeholders

2. Set up & Deployment
- Hardware provision
- Infrastructure set-up & tests
- Key & end user training

3. Go Live
- Full live deployment
- Equipment of all operators

4. Usage & Scaling
- Full live deployment
- Equipment of all operators
- Maintenance & Support

How is Samsung SDS building out their digital transformation of logistics processes?

Paul Berendsen | Manager Operations at Samsung SDS

Samsung SDS boosts productivity and efficiency through vision picking

- Warehouse workers equipped with vision picking through xPick
- Use of ring-scanners as a wearable to streamline confirmation process
- Seamlessly integrated into WMS for access to real-time data

25-30% increase in speed

LESS errors & mistakes

EASIER and quicker onboarding

“We are also looking to implement the vision picking solution in other European warehouses based on the success story we’ve had in this facility.”

Paul Berendsen, Manager Operations at Samsung SDS, Breda/NL

Samsung SDS selects RealWear

- RealWear is a device developed for the industry
- RealWear is integrated device
- RealWear can be adjusted to the wishes of the user

Glass Enterprise Edition II

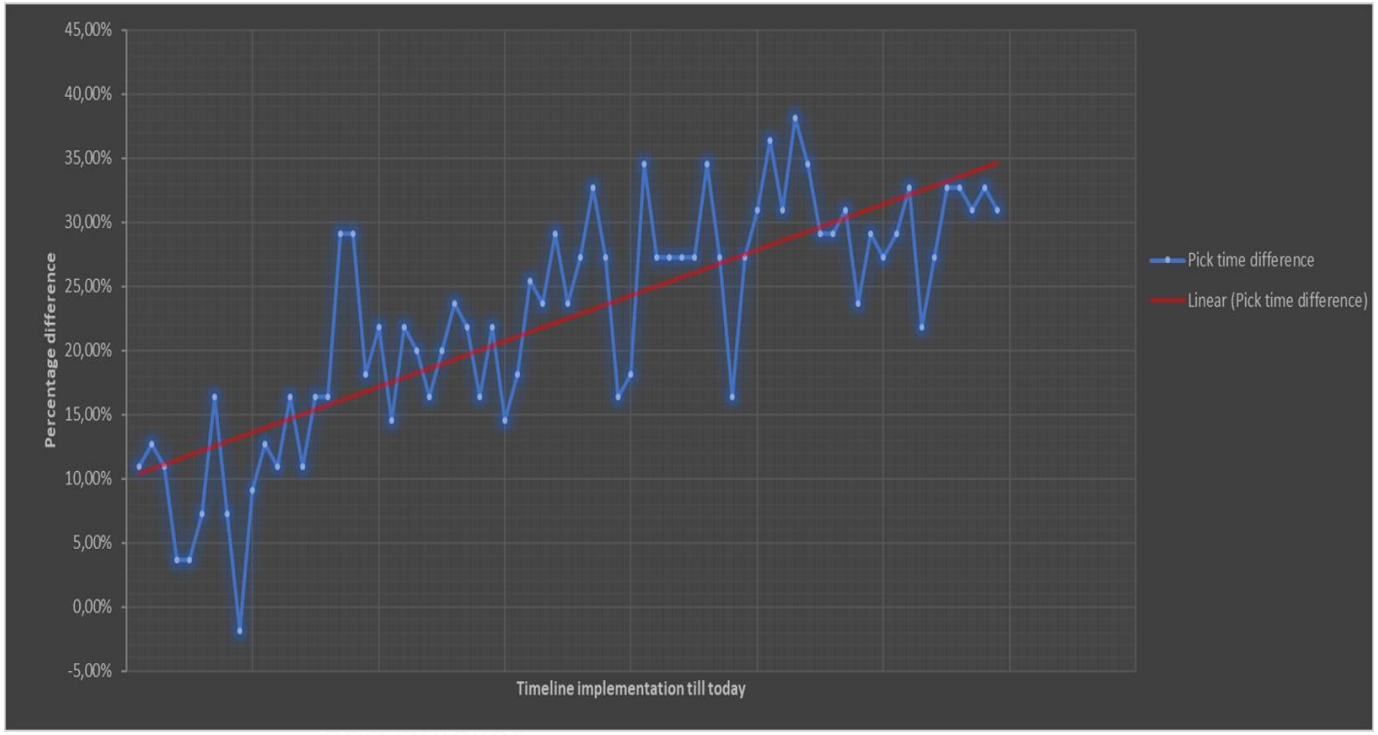
RealWear Navigator 500

CUSTOMIZED
to user

EASIER
and quicker onboarding

> **“The old glass devices had many issues like broken hardware, low life cycle, and poor battery life, on top of this the glasses were causing headache and eye problems, the new devices developed in a way they do not have these problems.”**
>
> *Paul Berendsen, Manager Operations at Samsung SDS, Breda/NL*

Samsung SDS ramp-up



“From the start the productivity increase directly was 10% the ramp-up to 30% took 17 weeks, from of that time the increase was structural between 25% till 35%.”

Paul Berendsen, Manager Operations at Samsung SDS, Breda/NL

Discussion

Which key trends do you see in the digital transformation of the logistics space?
Which other XR use cases are companies exploring within the logistics space?
How has digitalization impacted traditional warehousing practices, and what are the key benefits?

Q&A

Key takeaways from today‘s webinar

1

Market insights

Vision picking is a leading use case when it comes to XR deployments in logistics as it serves key objectives: faster processes at reduced error rates

2

Vision Picking

Reap the benefits of industry-proven solutions that adjust to your needs to increases your productivity, keep your processes safe, and your employees happy

3

Customer Insights

Learn from existing, sucessful implementations across the globe

Let’s connect

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Using xPick, it was the first time I was having fun doing order picking!
Warehouse Operator

It's not a futuristic thing, it's the present, it's happening now, and we are loving it!
Warehouse Team Lead

Most mature and most experienced Partner for vision picking
Vice President Logistics

TeamViewer

Thank You