



JYSK DCR High Bay Warehouse Assessment of Novelty, Diffusion and High-Quality Employment Impact

April/May 2026



Agenda

1. Executive Summary
2. Introduction and purpose of the report
3. Technical aspects of innovation
4. Productivity improvement
5. Diffusion potential
6. Labour market impact
7. Contribution to knowledge-based economy

Appendix

JYSK DCR Contribution to Innovation, Diffusion and High-Quality Employment

Technical Aspects of Innovation

- JYSK DCR represents **most advanced High Bay Warehouse implementations** developed in Poland at that time
- The solution combines **advanced system features**, exceptional **throughput performance** and high-capacity **integrated logistics execution platform** becoming the **first such solution at the time of implementation**.
- The integrated IT architecture extended beyond traditional warehouse control toward **WES functionality**, being **the first mover in Poland** to set up industry standard that became widely adopted in the 2010+ years.
- Benchmark analysis confirms that JYSK **outperformed comparable HBW installations** in functional coverage, system maturity, throughput and capacity.

Productivity Improvement

- The implementation of the integrated HBW solution transformed warehouse operations **from labour-driven to system-driven performance with integration of WES-systems**.
- Automation enabled **substantial increases in throughput, storage density (footprint needs) and operational efficiency** while **improving output per employee**.
- The solution combined scale, automation and process integration in a way that anticipated future requirements of large-scale retail distribution logistics.

Diffusion Potential

- The DCR project demonstrated **strong innovation diffusion** effects both externally and internally.
- **Externally:**
 - the successful implementation contributed to **accelerated adoption of HBW technologies** and **stimulated logistics infrastructure investments** in Poland.
 - The project also contributed to **development of regional logistics and intermodal transport ecosystems**.
 - **Internally:**
 - DCR established the “Version 3” logistics concept that later became the **reference model** for subsequent JYSK distribution centers in Europe, including Bulgaria and Hungary.

Labour Market Impact, Contribution to Knowledge-Based Economy

- Automation at DCR **increased demand for technical, analytical and system-oriented competencies**, transforming the workforce toward **higher-skilled roles** in IT, engineering, planning and process management.
- The project contributed to **workforce upskilling, knowledge transfer** and dissemination of advanced logistics practices across multiple industries.
- Through conferences, study visits and cooperation with market participants, DCR became an **important reference site supporting the modernization and competitiveness** of the Polish logistics sector.

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Appendix

Definition and interpretation of „Novelty”

Project:

- High Bay Warehouse
DCR JYSK
Radomsko
Poland

Purpose:

- To evaluate the broader economic and technological impact of a large-scale logistics investment exceeding prevailing market standards.

Novelty = Innovativeness + Diffusion

- Innovativeness = introduction of new or significantly improved solutions
- Types of innovation:
 - Product
 - **Process (primary relevance here)**
 - Organisational
 - Marketing
- Diffusion:
 - Product
 - **Process (primary relevance here)**



Focus on:

- **Technical aspects of innovation**
 - Technologies applied
 - Capacity and throughput
 - System integration & IT features
- **Productivity improvement**
 - Per site
 - Per capita
- **Diffusion potential**
 - Internal
 - National
- **Labour market impact – high-quality jobs**
 - Structural impact
 - Upskilling
- **Contribution to knowledge-based economy**
 - Cooperation with educational institutions
 - Benchmark site for logistic sector

Key HBW Terminology

Term	Explanation
HBW (High Bay Warehouse)	Automated warehouse with very high storage racks for palletized goods
SRM / Stacker Crane	Automated machine storing and retrieving pallets from rack locations
WMS (Warehouse Management System)	Software managing inventory, storage logic and warehouse operations
MFS (Material Flow System)	Real-time control layer coordinating conveyors and automation devices
MFC (Material Flow Control)	Basic automation control focused on equipment movement
WES (Warehouse Execution System)	Advanced execution layer integrating WMS, automation and operational optimization
RGV (Rail Guided Vehicle)	Automated rail-based transport vehicle for pallet movement
AS/RS	Automated Storage and Retrieval System = High Bay Warehouse
Cross-Docking	Direct transfer of goods from inbound to outbound flow with minimal storage
Wave Picking	Grouping orders into optimized picking batches
DC	Distribution Center

Evolution of High Bay Warehouse Technology

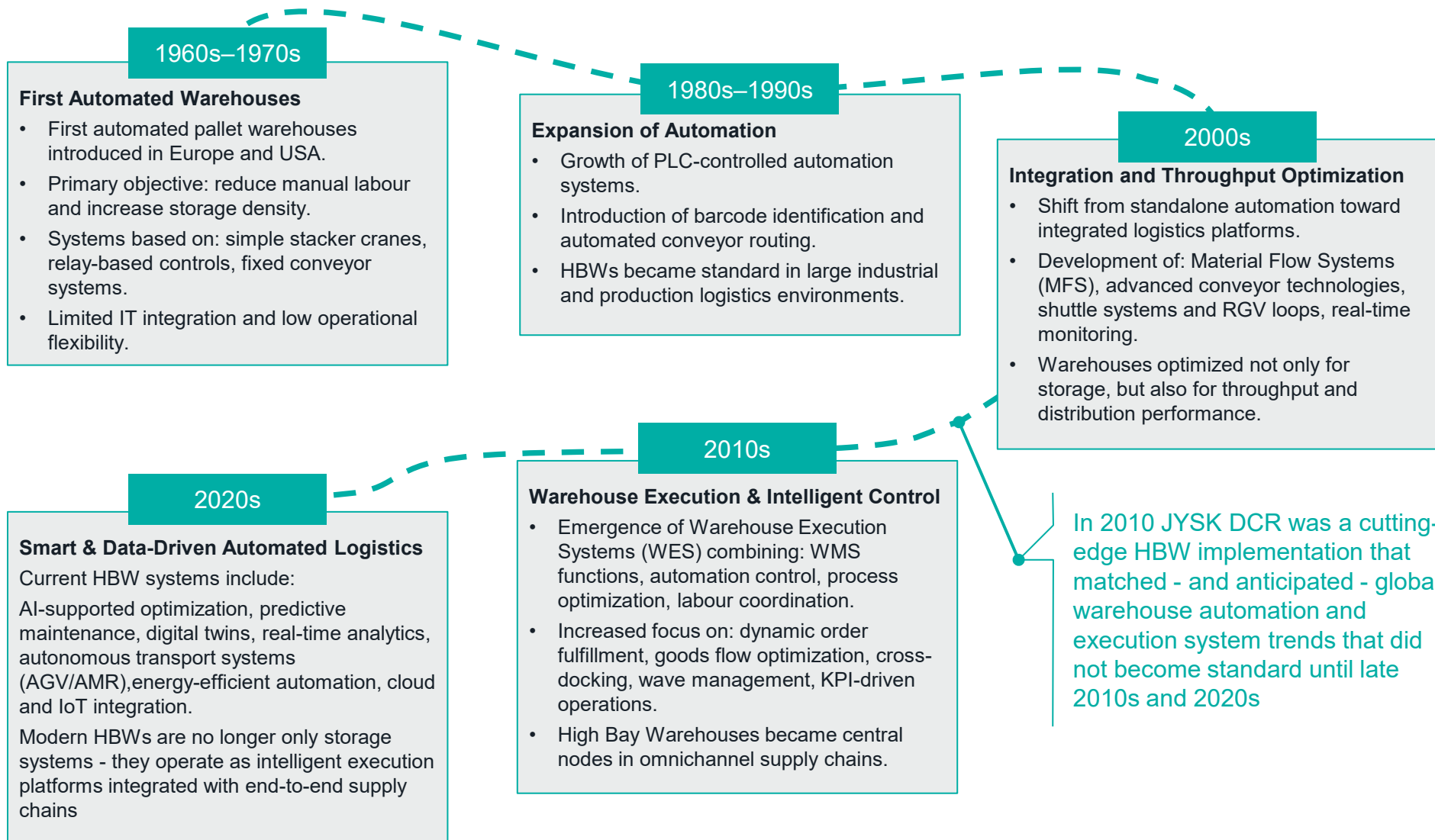
High Bay Warehouse (HBW) is a highly automated storage system designed for high-density pallet storage and fast material handling.

Typically, HBWs use:

- stacker cranes (SRM – Storage & Retrieval Machines),
- conveyor systems,
- shuttle or RGV transport systems,
- integrated warehouse control software.

HBWs are commonly used in:

- retail distribution,
- manufacturing logistics,
- food & beverage,
- FMCG,
- e-commerce operations.





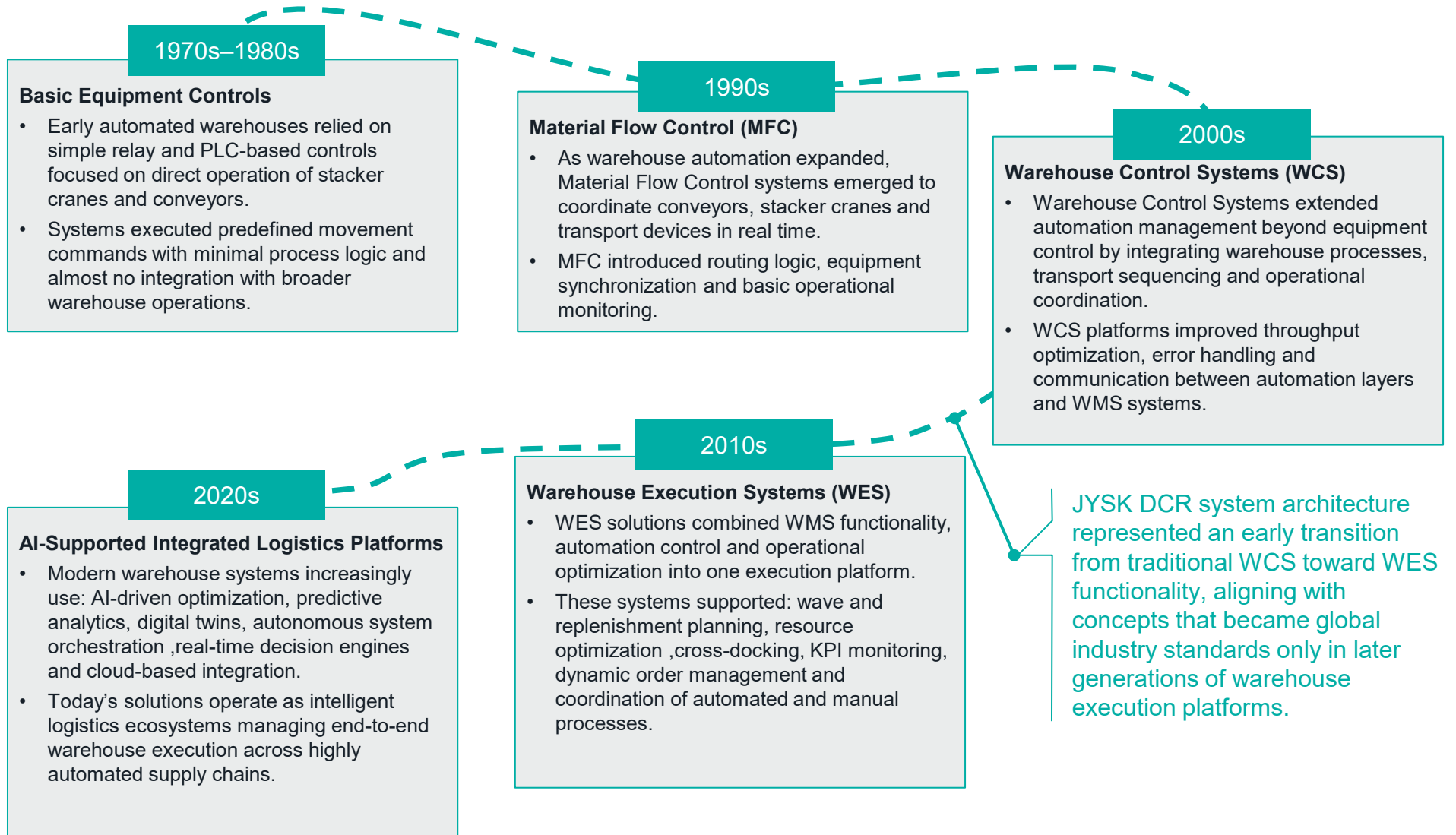
Evolution of IT Systems Supporting High Bay Warehouse Technology

Technology Legacy and WAMAS Development

For SSI Schaefer (supplier and integrator of DCR solution), JYSK project also became an important milestone in software development.

The Warehouse Control System ANT implemented for DCR evolved far beyond traditional automation control and became one of the foundations for the later development of the WAMAS Warehouse Execution System platform.

In this context, the JYSK DCR can be viewed not only as an advanced logistics facility, but also as a pioneering reference project influencing the development of automated warehouse and warehouse execution technologies in Poland.



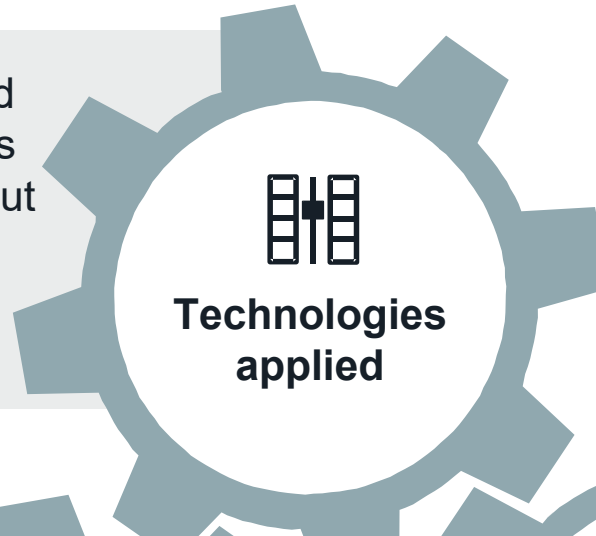
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Appendix

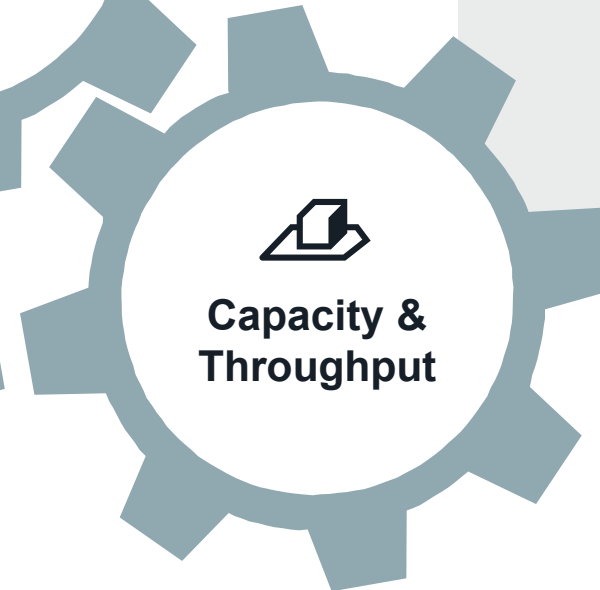
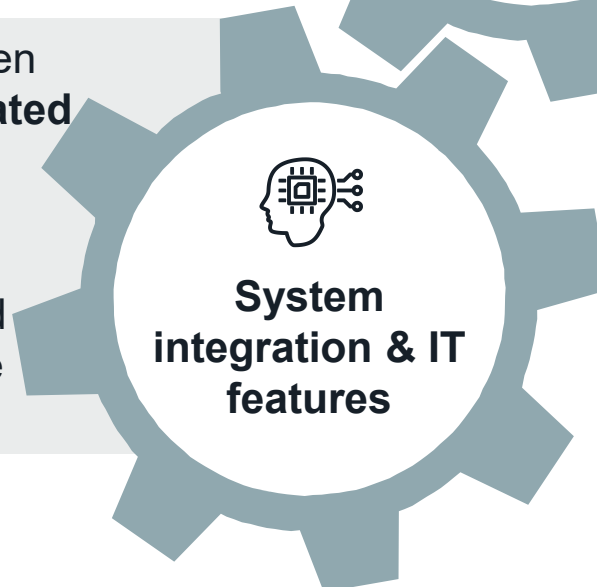
Key Technical Dimensions of Innovation: From Labour-Driven to System-Driven Performance

Specific tools, **automation solutions** and engineering approaches implemented. It's not just about adopting new technology but selecting the right technology stack that aligns with operational goals and scalability requirements.



Innovation must translate into measurable **performance improvements**. This includes higher processing volumes, reduced cycle times and better resource utilization, ultimately driving efficiency and cost-effectiveness.

Innovation delivers value when technologies are fully **integrated** into operations. Strong IT architecture and data flows enable visibility and control, covering both automated and manual processes within one integrated solution.



The Journey of HBW technology in Poland: from simple automated pallet storage to intelligent, integrated logistics execution platforms

2004-2005. Early Stage: Basic Automated Buffer Warehouses

- The first High Bay Warehouses implemented in Poland were primarily designed as **production support buffers**.
- Their functionality was limited to **basic pallet storage and retrieval**, with simple material flow control focused on stacker cranes and conveyor operations.
- These systems provided automation mainly at the **mechanical handling level, with limited operational intelligence** and narrow process scope.

2007-2010. JYSK DCR: Breakthrough in Scale and Functional Complexity

Way ahead of the standard market, JYSK positioned the WES architecture which represented a major step forward in the evolution of HBW technology in Poland. Compared with earlier installations, the project introduced an unprecedented combination of:

- **advanced functional IT integration,**
 - **operational flexibility,**
 - **high throughput**
- enabling **large-scale international distribution operations**, which consequently required and justified exceptionally high storage capacity.
- Beyond physical automation, JYSK **significantly expanded the role of warehouse IT systems**. Instead of using only basic Material Flow Control (MFC), the solution integrated WMS, MFC and automation control into one coordinated operational platform. The system included advanced functionalities such as:
- transport and resource planning,
 - replenishment management,
 - goods issue optimization,
 - picking and pre-picking wave support,
 - monitoring and KPI management.

2011+ Market Impact and Industry Diffusion

- After the JYSK go-live, other automated warehouse projects in Poland increasingly **followed the direction established by the DCR concept**.
- Later facilities adopted higher levels of automation, **broader integration** and more **advanced warehouse control concepts**.
- However, benchmark analysis shows that subsequent implementations still did not achieve the same overall combination of:
 - functional IT integration,
 - distribution scale,
 - operational flexibility,
 - throughput,
 - capacity
 that characterized the JYSK solution.

Benchmark Comparison Methodology: HBW installations in Poland compared to JYSK integrated solution

1. General Benchmark Comparison

Broad set of Polish HBW installations was compared based on:

- automation technologies,
- IT system features.
- throughput,
- storage capacity,

The analysis used information gathered from suppliers, operators and available technical references. Benchmark sites were selected mainly based on comparable Go-Live period and automation generation.



Year of Go-Live	Warehouse functions	Industry
2005	Production WH	Production (constr. components)
2007	Production WH	Production (food)
2008	Distribution WH	Retail (furniture)
2009	Production WH	Production (packaging)
2010	Production WH	Production (stationery)
2010	Distribution WH	Retail (furniture)
2011	Distribution WH	Retail (drugstore)
2013	Distribution WH	Chemical
2013	Distribution WH	Production
2015	Production WH	Production (food)
2015	Production WH	Production (food)
2017	Production WH	Production (household goods)
2018	Distribution WH	Retail (drugstore)
2021	Distribution WH	Retail (FMCG)

Focus

2. Detailed Functional Comparison

Smaller group of selected HBWs with available detailed design specifications was analyzed in depth, focusing on projects with operational profiles comparable to JYSK DCR.

The comparison covered:

- WMS/WCS/WES functionalities,
- automation integration,
- planning and optimization capabilities,
- coordination of automated and manual processes.



Year of Go-Live	Warehouse functions	Industry
2004	Production WH	Pharma
2010	Production WH	Production (stationery)
2010	Distribution WH	Retail (furniture)
2013	Distribution WH	Chemical
2018	Distribution WH	Retail (drugstore)
2021	Distribution WH	Retail (FMCG)

Focus



1. General Benchmark Comparison

JYSK significantly outperforms benchmark sites in throughput & capacity

General comparison of DCR JYSK with benchmark sites:

- Maximum tested throughput: 660 pal/h IN & OUT → **still highest in Poland**
- Capacity in pallet places: 169 600 → **still No.1 in Poland**
- All other sites handle EUR and IND standard pallets, while JYSK manages oversize (double EUR-pallet) handling unit formats as well.

Go-Live	High Bay Warehouse function	Industry	Capacity in EUR PAL	Number of LU types in HBW	Height class	Transport MHE system	Max throughput In/h	Max throughput Out/h
2005	Production WH	Production (constr. components)	8 000	2	2	Conveyor	40	40
2007	Production WH	Production (food)	20 000	1	2	Conveyor	125	125
2008	Distribution WH	Retail (furniture)	90 000	2	3	Conveyor	500	500
2009	Production WH	Production (packaging)	12 000	2	2	Conveyor	80	80
2010	Production WH	Production (stationery)	59 100	1	2	Conveyor	150	150
JYSK	2010 Distribution WH	Retail (furniture)	169 600	6	5	Monorail	660	660
2011	Distribution WH	Retail (drugstore)	7 300	2	2	Conveyor	80	80
2013	Distribution WH	Chemical	10 000	2	3	Conveyor	70	70
2013	Distribution WH	Production	125 000	1	3	Monorail	200	200
2015	Production WH	Production (food)	16 000	1	1	Conveyor	100	100
2015	Production WH	Production (food)	5 500	1	1	Conveyor	100	100
2017	Production WH	Production (household goods)	26 000	2	2	Conveyor	180	180
2018	Distribution WH	Retail (drugstore)	36 000	2	2	Monorail	300	300
2021	Distribution WH	Retail (FMCG)	29 000	1	3	Monorail	200	200

- JYSK in 2021 still used advanced and efficient warehouse solutions compared to regular Polish systems

- Instead of relying only on standard conveyors, JYSK uses more advanced technologies like monorail systems, which allow faster and more flexible movement of goods. Compared to other automated warehouses JYSK's solution is significantly more advanced in both automation and capacity utilization.

- The solution was specifically designed around JYSK's operational needs, creating a strong competitive advantage through the combined handling of furniture and carton goods, enabling higher CBM utilization per loading meter in outbound trucks. At the time of construction, most major regional competitors had outsourced operations to 3PL providers and typically managed separate logistics flows for cartons and furniture.

- Overall, JYSK stands out by combining **high capacity, smart automation and strong performance**. Integrated HBW solution implemented in JYSK combines scale, automation, flexibility and throughput in a way that anticipates future (furniture) retail logistics demands.



JYSK significantly exceeds benchmark sites in functional coverage - independent of implementation year and market sector

Go-Live	High Bay Warehouse function	Industry	Inbound area and dock/lane planning	Integrated wave + resource + lane planning	WMS-driven goods issue planning (including backward scheduling from loading to picking)	Cross-docking support	Pre-picking & Campaign picking (goods-to-man)	Replenishment orders from satellite warehouses	External warehouse management (inventory visibility and management)	Outbound quality inspection in WMS – automatic checks	Coverage of JYSK unique functionalities
2005	Production WH	Production (constr. components)	x	x	x	x	x	x	x	x	0%
2007	Production WH	Production (food)	x	x	x	x	x	x	x	x	0%
2008	Distribution WH	Retail (furniture)	✓	x	✓	✓	x	x	x	✓	50%
2009	Production WH	Production (packaging)	x	x	x	x	x	✓	x	x	13%
2010	Production WH	Production (stationery)	✓	✓	x	x	x	x	x	x	25%
JYSK	2010 Distribution WH	Retail (furniture)	✓	✓	✓	✓	✓	✓	✓	✓	100%
2011	Distribution WH	Retail (drugstore)	x	x	x	x	x	x	x	x	0%
2013	Distribution WH	Chemical	x	x	x	x	x	x	x	x	0%
2013	Distribution WH	Production	✓	x	x	✓	✓	✓	x	✓	63%
2015	Production WH	Production (food)	x	x	x	x	x	x	x	x	0%
2015	Production WH	Production (food)	x	x	x	x	x	✓	x	x	13%
2017	Production WH	Production (household goods)	x	x	x	x	x	✓	x	x	13%
2018	Distribution WH	Retail (drugstore)	x	x	x	x	x	x	x	x	0%
2021	Distribution WH	Retail (FMCG)	✓	x	✓	x	✓	✓	x	✓	63%

The benchmark comparison confirms that the JYSK integrated logistics execution solution was significantly more advanced than other analyzed warehouse systems, which typically covered only a limited scope of comparable functionalities. The results demonstrate that JYSK implemented a distinctive and highly innovative approach to warehouse management and system integration.

- JYSK High Bay Warehouse management system was ahead of its time.
- The system implemented for JYSK Radomsko High Bay Warehouse supports functions that had not been implemented in checked comparable sites in Poland in similar time (HBW from 2012 & 2017).
- Even compared systems implemented in more recent High Bay Warehouse (from 2021) still does not fully support the same functionalities.
- JYSK had implemented a **highly mature and comprehensive WMS architecture earlier than the industry norm**, particularly in areas like system integration, process management and analytics.

2. Detailed Functional Comparison



Detailed functional design benchmark confirms JYSK advanced system maturity

Coverage of JYSK WMS functionalities compared with benchmark sites [

Site/ Functionalities group	1. Inbound / Goods Receipt	2. Storage & Inventory	3. Out-bound / Goods Issue	4. Replenishment	5. Warehouse Operations & Material Flow	6. Order & Process Management.	7. Inventory Control & House-keeping	8. System Integration	9. Monitoring & Analytics	10. User Interface & Operational Support
HBW 2005	56%	83%	33%	0%	100%	50%	0%	50%	0%	75%
JYSK 2010	89%	83%	67%	75%	100%	75%	83%	75%	100%	100%
JYSK 2010	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
HBW 2013	56%	83%	67%	75%	75%	75%	67%	50%	67%	100%
HBW 2017	44%	67%	44%	50%	75%	75%	50%	50%	67%	100%
HBW 2021	89%	83%	67%	75%	100%	100%	100%	100%	100%	100%

Percentage representing of JYSK System functionalities covered by other High Bay system functionalities,

Example: 89% in HBW 2021: 8 functionalities out of 9 in functionality group 1 (Inbound / Goods Receipt) are fully covered in HBW 2021 system



Innovative functionalities of JYSK integrated logistics execution system, referring to 2010+ and 2020+ industry standards

Innovative & unique functionalities as per standards 2020+

- **Replenishment from satellite warehouses** (network-driven). Only JYSK among analysed systems supports active replenishment requests across warehouse network with operational WMS control (others lack or do not use this concept)
- Fully **WMS-driven goods issue planning** (backward from loading to picking). Others do not support it at comparable maturity or rely on ERP/manual planning
- Combination of **campaign picking + pre-picking** (goods-to-man). No other system supports this combined concept at comparable maturity
- Integrated **outbound quality inspection in WMS**. JYSK has WMS-native, rule-based outbound quality inspection; other analysed systems either lack this functionality or it is inbound-focused or quality management-dependent.
- End-to-end **WMS-driven DC planning** (lanes, gates, waves, resources). JYSK provides an unusually broad WMS-supported planning layer covering goods issue planning, waves, resources and operational warehouse coordination

Innovative & unique functionalities as per standards 2010+

- **Inbound staging lanes planning (ERP + resources)** In 2010, most WMS did not plan inbound flows with resource alignment → often Excel/manual)
- **Multi-level replenishment (HBW → pick → buffers)**. Basic replenishment existed, but multi-layer logic was limited
- **Operational use of ABC (slotting + replenishment + housekeeping)** ABC existed, but mostly static classification, not actively used operationally
- **Integrated housekeeping processes (reorg, balancing)**. In other systems often manual / periodic, not continuous system-driven



Innovative System Landscape beyond HBW control into WES* Scope

The JYSK solution goes beyond HBW control - positioning itself as an innovative, WES-like execution platform.

Functionalities beyond basic HBW control & management:

- Integrated WMS-MFS-automation control layer
- Native planning capabilities embedded in WMS
- Real-time monitoring and process transparency
- Robust system integration and communication architecture
- Unified control of automated and manual resources
- Extended functional scope beyond the high bay warehouse
- Customizable and system-specific functional extensions
- Innovative palletizing application to optimize HBW fill ratio

Evaluation against WES functional characteristics:

- The system includes WES* elements:
 - Resource planning (GR/GI)
 - Transport order optimization (“jobs optimization”)
 - Integration with automation (via MFS)
 - Monitoring and KPIs
 - Cross-docking, replenishment logic

***WES (Warehouse Execution System)** is an advanced layer of warehouse control software that sits operationally between a Warehouse Management System (WMS) and automation control systems. Formalized and widely adopted in the industry starting from 2010.

Overview of technological novelties applied in DCR

- **RGV 2-level double loop**

The Rail Guided Vehicle (RGV) system designed with a two-level, double-loop configuration, allowing independent or coordinated material flow on each level. This setup significantly increases throughput and redundancy, as vehicles can circulate continuously in both loops without interference.

- **Multi-format: Euro-pallets and platforms in 2-deep technology**

The system supports multiple load types, including standard Euro-pallets and specialized platforms, within a 2-deep storage configuration.

- **Pallet checking and sorting station with automatic stackers / de-stackers**

An integrated pallet inspection and sorting station automatically verifies pallet condition – especially dimensions, integrity and mechanical check of durability of planks (possible weakened by damage or moisture). This improves process reliability and minimizes downtime caused by pallet issues.

- **Stacker cranes with 2-person maintenance operator cabin**

The stacker cranes are equipped with a dedicated maintenance cabin designed for two operators, allowing safe and efficient servicing at height. The dual-operator capability supports more complex maintenance tasks and inspections without requiring external lifting equipment.

- **Fire doors with sealing to RGV rails**

The installation includes fire-rated doors specifically engineered to seal around RGV rails, ensuring full compartmentalization in case of fire. This design was new to the Polish market and had to be certified in Poland – details see appendix page 34



Manual pallet inspection



Automatic pallet check stations

Agenda

1. Executive Summary
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Productivity Transformation: From Labour-Driven to System-Driven Performance

Automation transforms productivity from labour-dependent scaling to technology-enabled, high-throughput operations with superior output per FTE.

	BEFORE HBW (2009)	AFTER HBW (2026)	Growth (2026/ 2009)
Blue collars (FTE)	221	422	1,9
White collars (FTE)	63	104	1,7
White col. shared services* (FTE)	0	53	
Total personnel (FTE)	284	526	1,9
Daily throughput (m ³ /day)	1.600	8.000	5,0
End-2-end productivities:			
Total Personnel (m ³ /FTE/day)	5,6	15,2	2,7
Blue collars (m ³ /FTE/day)	7,2	18,9	2,6

- Shared Services: specialists in area of IT, reporting, customs, Master Data working for JYSK Group

FTE = Full Time Equivalent

- Before automation, productivity is primarily driven by labour intensity, with output scaling linearly with workforce size and constrained by manual handling, variability and supervision needs.
- After automation, productivity becomes system-driven, with **throughput decoupled from direct labour input** and significantly increased through automation, optimized flows and reduced process variability.
- The organization shifts from labour efficiency to system efficiency, where **fewer operators manage higher volumes** through technology and exception handling.
- As a result, the warehouse achieves **higher output per FTE**, supported by a **more skilled workforce** operating and optimizing automated systems.

Agenda

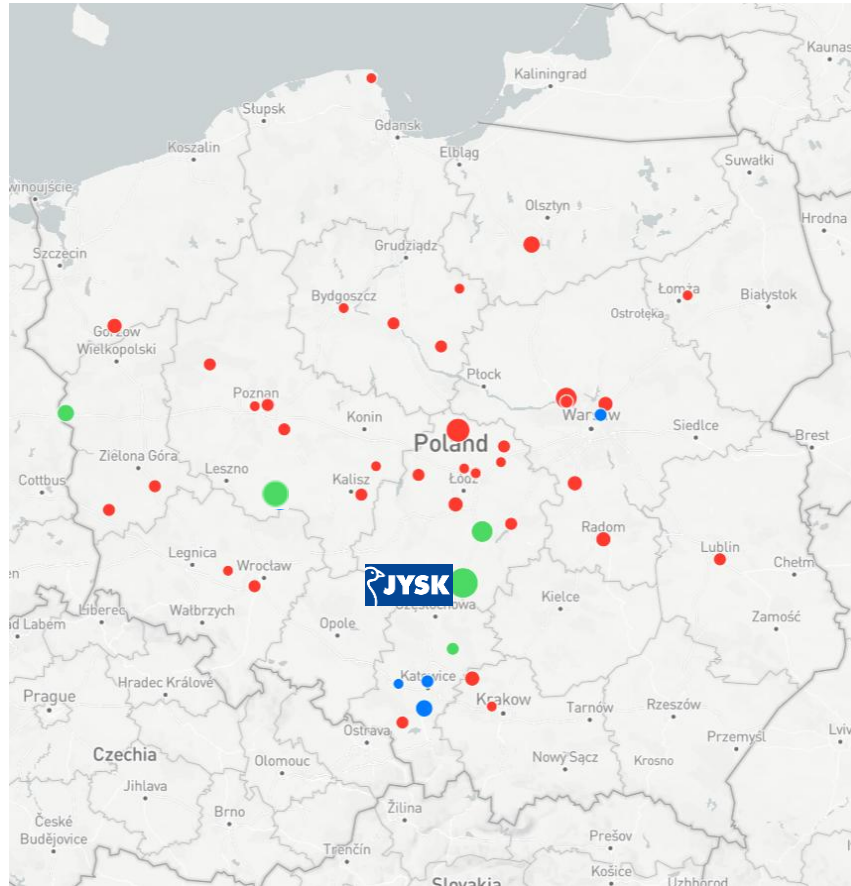
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5. Diffusion potential
6. Labour market impact
7. Contribution to knowledge-based economy

Appendix

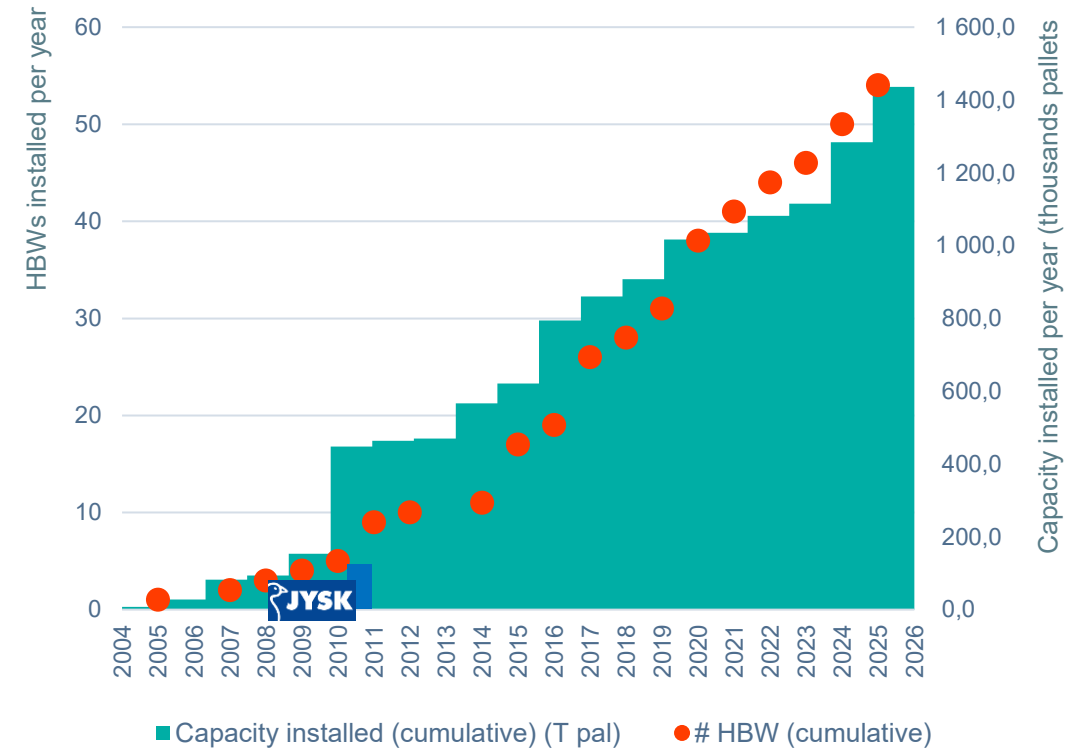


JYSK Go-Live as a Catalyst for HBW construction in Poland

Clear surge in HBW investments after DCR go-live. DCR can be seen as one of the relevant triggers for rapid market adoption of HBW technology, leading to a sharp rise in both installations and installed capacity.



- until 2009
- 2009-2011
- 2011-2025





System-Level Diffusion Dynamics

External diffusion of JYSK DCR is not limited to knowledge transfer - it manifests as tangible economic spillovers, including:

- creation of logistics infrastructure
- formation of a regional transport cluster
- job creation and SME development (see Labour Market Impact)
- widespread adoption of advanced logistics technologies

This positions DCR as a **systemic enabler of industrial upgrading and competitiveness in Poland**, rather than just isolated logistics facility.

External diffusion of JYSK DCR follows multi-layer propagation model:

- **Direct (1st order)**
 - Suppliers and logistics partners (Loconi, DSV, ATC)
- **Indirect (2nd order)**
 - Other firms using shared infrastructure (230+ companies)
 - Local carriers and service providers
- **Induced (3rd order)**
 - Cross-industry replication of automation and logistics solutions

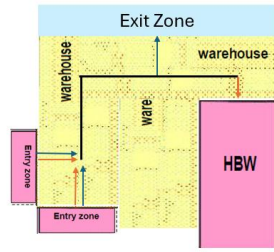
JYSK DCR acts as an anchor node in a regional economic system, where:

- **Initial demand** triggers infrastructure investment,
- **Infrastructure** enables broader market access,
- **Market access** drives firm competitiveness and adoption of innovation.

DCR sets new standard for all JYSK distribution centers in Eastern Europe

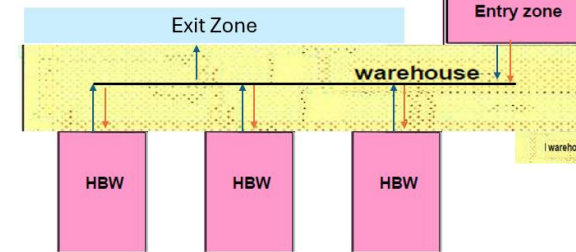
- DCR established a new operational standard for JYSK distribution centers in Europe by introducing the Version 3 logistics concept based on an I-shape material flow, replacing the earlier U/L-shape.
- The new configuration significantly improved internal logistics efficiency through shorter transport distances, simplified material flows and better scalability for automation, while supporting much larger operational scale
- DCR concept subsequently became the reference model for later JYSK distribution centers in Bulgaria and Hungary, demonstrating strong internal diffusion of innovation within JYSK's European logistics network

Before DCR:



DC Setup Version 1:

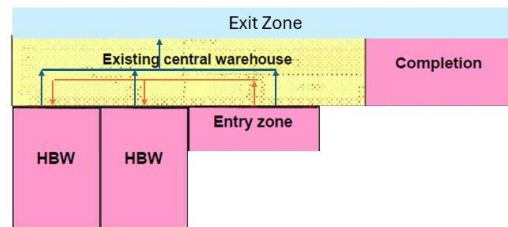
- DC Nässjö, Sweden
- 1998-2000
- 35.000 m² footprint
- 30.000 pal. HBW capacity
- U/L-shape material flow



DC Setup Version 2:

- DC Uldum, Denmark
- 2007-2009
- 64.539 m² footprint
- 130.000 pal. HBW capacity
- U-shape material flow

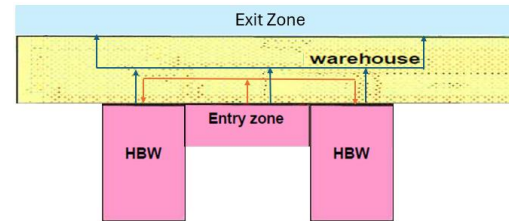
DCR:



DC Setup Version 3:

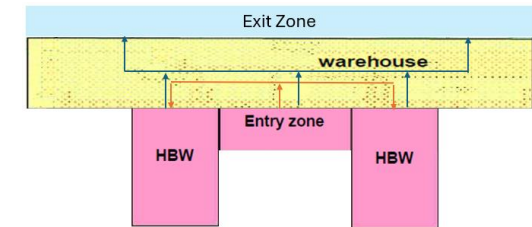
- DC Radomsko, Poland
- 2009-2011
- 135.210 m² footprint
- 169.000 pal. HBW capacity
- I-shape material flow

After DCR:



DC Setup Version 3.1:

- DC Bozhurishte, Bulgaria
- 2017-2019
- 111.579 m² footprint
- 120.000 pal. HBW capacity
- I-shape material flow



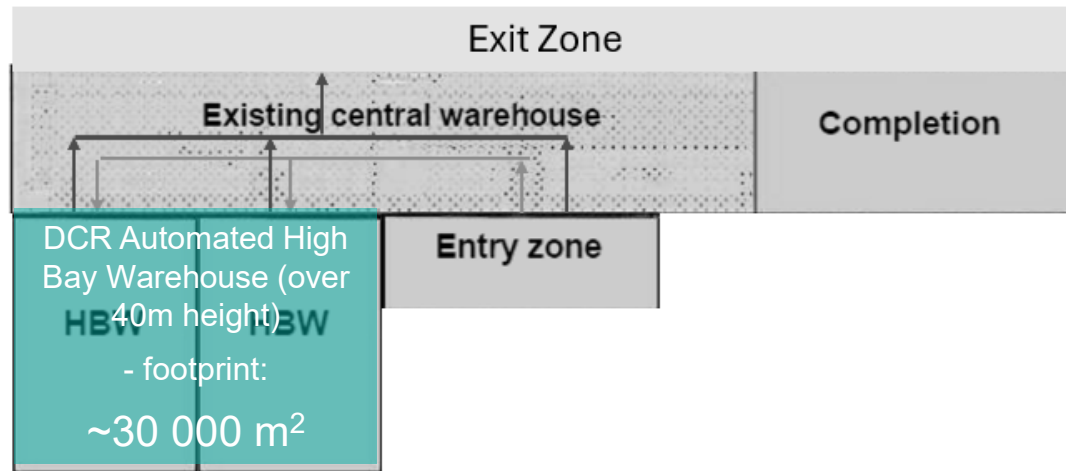
DC Setup Version 3.2:

- DC Ecser, Hungary
- 2020-2022
- 159.943 m² footprint
- 120.000 pal. HBW capacity
- I-shape material flow

Footprint considerations of DCR

- Sustainable through storage density

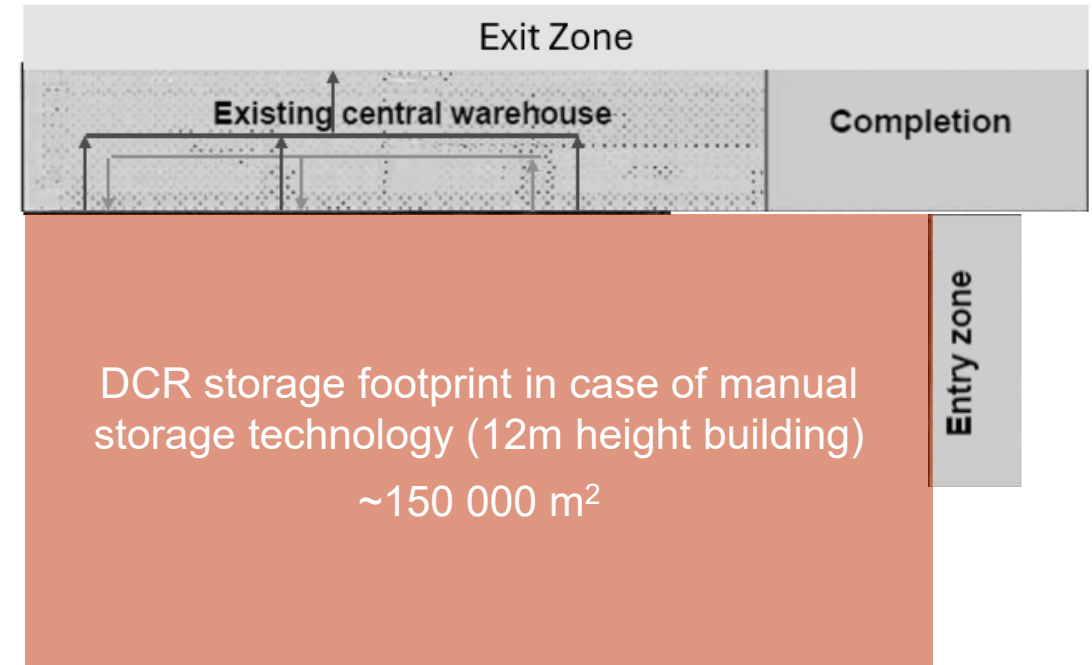
Automated warehouse



Storage density in High Bay Warehouse
~5,6 EUR pal/ m²

The automated High Bay Warehouse reduces the required storage footprint by ~80%, significantly lowering land use and supporting a more sustainable distribution center design.

vs Manual warehouse



Storage density in theoretical Very Narrow Aisle storage (hall up to 12m height) **~1,1 EUR pal/ m²**

Agenda

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Appendix

Workforce transformation in automated warehouse: key structural shift.

Automation increases number of functions (+8 functions in automation, +24 functions in total) but shifts the workforce from labour-driven to technology-driven.

Rather than reducing complexity, it elevates it - replacing manual roles with more technical, analytical and system-oriented capabilities, resulting in a higher-skilled, more resilient organization.

Functional transformation: Before (2007) → After Automation (2010):

- **Operations (Manual)/ manual maintenance**
 - 13 → 10 (-23%)
Shift from physical execution to exception handling & system interaction
- **IT / Systems**
 - 5 → 6 (+20%)
From support function to core operational backbone
- **Automation / Engineering/ Automation maintenance**
 - 0 → 8 (+8 functions)
Introduction of specialized technical roles (PLC & MHE maintenance)
- **Planning & Coordination**
 - 8 → 22 (+175%)
Evolution to data-driven planning and flow optimization
- **Quality / Compliance / Inventory**
 - 8 → 11 (+38%)
Increased need for control, traceability & system governance
- **Supervision**
 - 9 → 10 (~stable)
Shift from people management to process & KPI control

Upskilling impact

- **Manual → Technical**
(operators interact with automation)
- **Reactive → Analytical**
(planning & decision-making improves)
- **Local → System-wide**
(end-to-end process visibility)
- **Execution → Control & Optimization**
(automation executes, people control)



CV-Based Evidence: Changing Skill Requirements in Automated Warehousing

3 sample CVs have been analyzed.

The CVs show that automated warehouses rely on employees who combine IT, process, automation and decision-making skills, which justifies targeted upskilling programs.

- CV1 · CV2 · CV3** ● **Automation = complex IT landscape**
 - Work involves SAP EWM, ERP, WMS/MFS integrations and multi-DC infrastructure.
 - **Employees need solid system and integration knowledge.**
- CV2 · CV3** ● **Roles evolve toward ownership and decision-making**
 - Career paths progress from System Analyst / Project Engineer to Product Owner and Business Process Owner roles managing backlog, risks, priorities and teams.
 - **Upskilling in decision-making and process ownership is required.**
- CV2 · CV3** ● **Strong IT–business translation role is critical**
 - Defining requirements, aligning stakeholders, supporting SCRUM teams and ensuring solution coherence are key responsibilities.
 - **Hybrid logistics + IT competencies are essential.**
- CV1 · CV2** ● **Operations depend on system stability**
 - Responsibility for high availability, disaster recovery, operational readiness and infrastructure continuity across DCs.
 - **Skills in incident management and resilience are essential.**
- CV2 · CV3** ● **Continuous implementation and change**
 - Multiple WMS implementations and automation projects across PL, S, DK, BUL, HUN, NL.
 - **Employees must continuously learn and adapt.**
- CV2 · CV3** ● **Data and process optimization are core tasks**
 - Use of QlikView, process analysis, reporting and continuous improvement initiatives.
 - **Data literacy and analytical skills are required.**
- CV1 · CV2 · CV3** ● **Internal career growth shows skill scarcity**
 - All 3 CVs show progression from technical or operational roles into leadership, project management or product ownership positions.
 - **Companies must develop talent internally.**

Expansion of Labour Market Reach Following DCR Automation

- Automated DCR evolved from a locally staffed warehouse into a **regional high-quality employment hub** with a much wider labour catchment area.
- Increase in workforce scale and geographical diversity suggests that warehouse automation and advanced logistics operations generated **demand for more specialized and attractive jobs**, improving the ability of DCR to attract personnel from a broader regional labour market.

Comparison of employment geography BEFORE (2007) and AFTER implementation of automation in DCR (2026) shows a **substantial expansion of the labour market reach** and attractiveness of the facility:

Indicator	Employees 2007	Employees 2026	Change
Total personnel	127	509	+301%
Number of represented ZIP code areas	29	50	+72%
Employees from Radomsko area	99	408	+312%

Examples of growth in surrounding municipalities

ZIP code area	Employees 2007	Employees 2026
97-545	6	28
97-565	4	30
97-561	2	20
97-512	1	14
42-270	0	14

Broader geographical reach

In 2007, recruitment was concentrated mainly around Radomsko and nearby municipalities. By 2026, the employee base expanded significantly across Central and Southern Poland, including locations from:

- Łódź region (90-, 91-, 92-, 93- ZIP codes)
- Silesia region (41-, 42- ZIP codes)
- Małopolska region (32- ZIP code)
- Additional municipalities across Łódzkie province (97- and 98- ZIP codes)

Agenda

1. Executive Summary
2. Introduction and purpose of the report
3. Technical aspects of innovation
4. Productivity improvement
5. Diffusion potential
6. Labour market impact
7. Contribution to knowledge-based economy

Appendix



DCR acts as strategic knowledge hub, accelerating automation maturity and competitiveness of Polish industry

Knowledge Creation and Transfer Mechanisms

Knowledge transferred through structured initiatives such as conferences and study visits (e.g., *Tour de Magasins 2013 and 2015*):

- 44 companies took part in knowledge-sharing events Participants observed real operations

JYSK DCR build long-term cooperation with universities, vocational schools and employment institutions.

- Since 2011, the company has supported practical education in logistics, automation, IT, electronics and quality management through internships, apprenticeships and training programs.
- More than 200 students, teachers, unemployed people and trainees participated in these initiatives between 2009–2015.

Innovation Diffusion and Capability Building

DCR drives cross-sector diffusion of automation and logistics innovation:

- Participating firms included retail, FMCG, manufacturing and logistics
- Following visits, several companies implemented automation projects with High Bay Whs), such as:
 - Rossmann (7.400 pal.)
 - Sokpol (27.000 pal.)
 - NIK-POL (14.600 pal.)
- Event participants represented senior and technical roles, including: Supply Chain Directors, Project Engineers, Investment Directors, Consultants

Systemic Economic Impact and Scaling Effects

- DCR demonstrates large-scale operational excellence and functions as a benchmark and catalyst for investment in advanced logistics infrastructure:
- Recognized by visiting firms as an example of innovation and modern technology in Poland
- Triggered follow-on investments in automation across multiple regions and industries
- Its influence is super-regional, attracting companies nationwide and enabling replication of solutions at scale

Contribution to knowledge-based economy:

Transforms operational expertise into codified, transferable knowledge, enabling large-scale learning-by-observation and strengthening the regional knowledge-based economy

Accelerates technology adoption, managerial learning and workforce upskilling, strengthening innovation capacity.

Drives capital investment, standard-setting and nationwide diffusion of innovation, reinforcing Poland’s competitiveness.

JYSK DCR contributes to knowledge-based economy by enabling:

- *knowledge creation and transfer,*
- *innovation diffusion,*
- *workforce upskilling,*
- *investment in advanced technologies,*
- *cross-industry collaboration,*

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Appendix

Technical aspects of innovation

Fact sheets & details

Summary of the detailed comparison of functional specifications of High Bay Warehouse management systems

Definition of each functionalities group – see next pages

Functionalities group	HBW 2005	HBW 2010	JYSK 2010	HBW 2012	HBW 2017	HBW 2021
1. Inbound / Goods Receipt Management	56%	89%	100%	56%	44%	89%
2. Storage & Inventory Management	83%	83%	100%	83%	67%	83%
3. Outbound / Goods Issue Management	33%	67%	100%	67%	44%	67%
4. Replenishment Management	0%	75%	100%	75%	50%	75%
5. Warehouse Operations & Material Flow	100%	100%	100%	75%	75%	100%
6. Order & Process Management	50%	75%	100%	75%	75%	100%
7. Inventory Control & Housekeeping	0%	83%	100%	67%	50%	100%
8. System Integration	50%	75%	100%	50%	50%	100%
9. Monitoring & Analytics	0%	100%	100%	67%	67%	100%
10. User Interface & Operational Support	75%	100%	100%	100%	100%	100%

JYSK High Bay Warehouse management system can be considered ahead of its time. The system implemented for JYSK Radomsko High Bay Warehouse supports functions that had not been implemented in checked comparable sites in Poland in similar time (HBW from 2012 & 2017). Compared system implemented in more recent High Bay Warehouse (from 2021) shows better coverage of JYSK functionalities but still don't fully support the same functionalities.

JYSK had implemented a highly mature and comprehensive WMS architecture earlier than the industry norm, particularly in areas like system integration, process management and analytics.

Detailed comparison of FDS (1)

1. Inbound / Goods Receipt Management							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Inbound delivery notifications	✓	✓	✓	✓	✓	✓	All comparable
Inbound staging lanes planning (ERP gates + resources)	✗	✓	✓	⊘	⊘	✓	Limited functionality in HBW 2013& HBW 2017 , No functionality in HBW 2004
Resource scheduling and forecasting	✗	✓	✓	⊘	✗	✓	Limited functionality in HBW 2005, HBW 2013& HBW 2017
Registration of Good receipt	✓	✓	✓	✓	✓	✓	All comparable
Labeling & printing	✓	✓	✓	✓	✓	✓	All comparable
Put-away strategies	✓	✓	✓	✓	✓	✓	All comparable
Quality inspection	✓	✓	✓	✓	⊘	✓	Limited functionality in HBW 2017
Cross-docking support	✗	✗	✓	✗	✗	✓	Only JYSK and HBW 2021 supports this functionality
Yard management	✗	✓	✓	✗	✗	⊘	Only JYSK and HBW 2010 supports this functionality

Inbound / Goods Receipt Management - covers all processes related to receiving goods into the warehouse, from inbound delivery notifications to unloading, registration and quality inspection. It also includes planning of staging lanes, dock assignments and cross-docking decisions, ensuring efficient handling of incoming goods and smooth transition into storage or outbound flows.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (2)

2. Storage & Inventory Management							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
SKU & HU t.	✓	✓	✓	✓	✓	✓	All comparable
Location t.	✓	✓	✓	✓	✓	✓	All comparable
Put-away rules	✓	✓	✓	✓	✓	✓	All comparable
HU & pallet t.	✓	✓	✓	✓	✓	✓	All comparable
Traceability	✓	✓	✓	✓	⊘	✓	Limited functionality in HBW 2017
External / satellite warehouses integration (Visibility & Inventory management)	✗	✗	✓	✗	✗	⊘	Only JYSK fully supports this functionality

Storage & Inventory Management - focuses on how goods are stored, organized and tracked within the warehouse. This includes location and bin management, handling unit (HU) control, traceability and optimization of storage (e.g. slotting, ABC classification). The goal is to ensure high space utilization, visibility and efficient access to stock.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (3)

3. Outbound / Goods Issue Management							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Orders from ERP	✓	✓	✓	✓	✓	✓	All comparable
Order release	⊘	✓	✓	✓	⊘	✓	Limited functionality in HBW 2017
Goods issue planning (backward calculation)	✗	✗	✓	⊘	✗	⊘	Only JYSK fully supports this functionality
Standard picking	✓	✓	✓	✓	✓	✓	All comparable
Pre-picking / campaign picking (GtM)	✗	✗	✓	✗	✗	⊘	Only JYSK fully supports this functionality
Consolidation	✗	✓	✓	✓	✗	✓	No functionality in HBW 2004 & HBW 2017
Staging & loading	⊘	✓	✓	✓	✓	✓	Limited functionality in HBW 2004
Shipping docs	✓	✓	✓	✓	✓	✓	All comparable
Outbound quality inspection	✗	✗	✓	✗	✗	⊘	Only JYSK fully supports this functionality

Outbound / Goods Issue Management - includes all activities required to prepare and ship customer orders, such as order release, picking (manual, pallet, campaign), consolidation, staging and loading. It also covers goods issue planning and outbound quality checks, ensuring timely, accurate and efficient order fulfilment.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (4)

4. Replenishment Management							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2012	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Replenishment (multi-level)	✘	✓	✓	✓	✓	✓	No functionality in HBW 2004
Replenishment strategies	✘	✓	✓	✓	✓	✓	No functionality in HBW 2004
Satellite WH replenishment	✘	✘	✓	✘	✘	✘	Only JYSK supports this functionality
Special replenishment	✘	✓	✓	✓	⊘	✓	Limited functionality in HBW 2004 & HBW 2017

Replenishment Management - manages the internal flow of goods between storage and picking areas, ensuring that stock is available where needed. This includes multi-level replenishment strategies, as well as integration with external or satellite warehouses to support continuous supply and avoid stock shortages.

Symbol	Interpretation
✓	Functionality supported by the system
✘	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (5)

5. Warehouse Operations & Material Flow							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Transport orders	✓	✓	✓	✓	✓	✓	All comparable
Movement orders	✓	✓	✓	✓	✓	✓	All comparable
MFS integration	✓	✓	✓	✓	✓	✓	All comparable
Optimization of transport jobs	✓	✓	✓	⊘	✗	✓	Limited functionality in HBW 2012, no functionality in HBW 2017

Warehouse Operations & Material Flow - Controls the physical movement of goods within the warehouse, including transport orders for forklifts, conveyors and automated systems. It also includes MFS (Material Flow System) integration, optimization of transport tasks and coordination between manual and automated operations.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (6)

6. Order & Process Management							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Reservation handling	✘	✓	✓	✓	✓	✓	No functionality in HBW 2004
Forecast tools (GI, waves, resources)	✘	✘	✓	⊘	✘	✓	Only JYSK and HBW 2021 fully supports this functionality
Workflow control	✓	✓	✓	✓	✓	✓	All comparable
Exception handling	✓	✓	✓	✓	✓	✓	All comparable

Order & Process Management - Coordinates the end-to-end execution of warehouse processes, from inbound through storage to outbound. This includes planning activities (e.g. waves, resources), workflow control and exception handling, ensuring that processes run smoothly and can adapt to disruptions.

Symbol	Interpretation
✓	Functionality supported by the system
✘	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (7)

7. Inventory Control & Housekeeping							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Cycle counting	⊘	✓	✓	✓	✓	✓	Limited functionality in HBW 2004
Inventory adjustments	⊘	✓	✓	✓	✓	✓	Limited functionality in HBW 2004
ABC classification	✗	✓	✓	✓	✓	✓	No functionality in HBW 2004
Reorganization of storage	⊘	✓	✓	✓	⊘	✓	Limited functionality in HBW 2017
Pallet account management	✗	✗	✓	✗	✗	✓	Only JYSK and HBW 2021 supports this functionality
Operational use of ABC classification (slotting, optimization, housekeeping)	✗	✓	✓	⊘	⊘	✓	Limited functionality in HBW 2013& HBW 2017, no functionality in HBW 2004

Inventory Control & Housekeeping - Ensures accuracy and consistency of stock data, including cycle counting, stocktaking and inventory adjustments. It also covers warehouse housekeeping activities, such as reorganization and operational use of ABC classification for slotting and optimization, helping maintain an efficient warehouse layout.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (8)

8. System Integration							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
ERP interface	✓	✓	✓	✓	✓	✓	All comparable
Data exchange	✓	✓	✓	✓	✓	✓	All comparable
ERP Business Intelligence / analytics integration	✗	⊘	✓	⊘	✗	✓	Only JYSK and HBW 2021 fully supports this functionality
Yard management integration	✗	✓	✓	✗	✗	✓	No functionality in HBW 2004, HBW 2013& HBW 2017

System Integration (ERP & External Systems) - Handles the exchange of data between the WMS and external systems, such as ERP, Yard Management and analytics platforms. This includes orders, stock updates, confirmations and master data, ensuring end-to-end process integration across the supply chain.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (9)

9. Monitoring & Analytics							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
KPI tracking	⊘	✓	✓	✓	✓	✓	Limited functionality in HBW 2004
Statistical reports	⊘	✓	✓	⊘	⊘	✓	Limited functionality in HBW 2004, HBW 2013& HBW 2017
Monitoring dashboards	✗	✓	✓	✓	✓	✓	No functionality in HBW 2004

Monitoring & Analytics - Provides visibility and performance tracking of warehouse operations, including KPIs, dashboards, logs and statistical reports. This enables data-driven decision-making, issue identification and continuous improvement of warehouse performance.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⊘	Limited/ partial support

Detailed comparison of FDS (10)

10. User Interface & Operational Support							
Functionality	HBW 2004	HBW 2010	JYSK 2010	HBW 2013	HBW 2017	HBW 2021	Key Differences (vs JYSK)
Workstation dialogs	✓	✓	✓	✓	✓	✓	All comparable
Mobile RF	✗	✓	✓	✓	✓	✓	No functionality in HBW 2004
Printing	✓	✓	✓	✓	✓	✓	All comparable
User workflows	✓	✓	✓	✓	✓	✓	All comparable

User Interface & Operational Support - Covers how warehouse staff interact with the system in daily operations, including RF/mobile devices, workstation screens and printing of labels and documents. It ensures efficient, user-friendly execution of tasks and clear operational guidance.

Symbol	Interpretation
✓	Functionality supported by the system
✗	Functionality not supported by the system
⚠	Limited/ partial support

Labour market impact

Fact sheets & details

List of functions: BEFORE Automation (function/category)

Administrator Techniczny Obiektu	Operations (Manual)
Analityk ds. Systemów Logistycznych	IT
Analityk Systemowy	IT
Asystentka Logistyki - Koordynator ds. Procedur	Planning & Coordination
Brygadzysta	Supervision
Dyrektor Logistyki	Supervision
Dyspozytor	Planning & Coordination
Kierownik Transportu	Supervision
Kierownik ds. Obsługi Zamówień	Supervision
Kierownik ds. Operacyjnych	Supervision
Kierownik ds. Rozwoju Systemów i Administracji	IT
Kierownik działu IT	IT
Kierownik działu przyjęć	Supervision
Kierownik działu transportu wewnętrznego	Supervision
Kierownik działu wydań	Supervision
Kierownik zmiany	Supervision
Konserwator obiektu	Operations (Manual)
Kontroler Magazynowy	Quality / Compliance / Inventory
Koordynator ds. Dystrubucji	Quality / Compliance / Inventory
Koordynator ds. Kontroli Jakości	Quality / Compliance / Inventory
Koordynator ds. Obsługi Klienta	Quality / Compliance / Inventory
Koordynator komórki ds. inwentaryzacji	Quality / Compliance / Inventory
Magazynier	Operations (Manual)
Magazynier-Kontroler Jakości	Quality / Compliance / Inventory

p.o. Brygadzysta	Operations (Manual)
p.o. Pracownik Biura Magazynu	Operations (Manual)
p.o. Pracownik ds. systemu WMS	Operations (Manual)
p.o. Starszy Magazynier	Operations (Manual)
Pracownik biura magazynu	Operations (Manual)
Pracownik ds. utrzymania wózków widłowych	Operations (Manual)
Pracownik działu obsługi klienta	Planning & Coordination
Pracownik Działu Spedycji	Planning & Coordination
Pracownik magazynu	Operations (Manual)
Samodzielny Księgowy	Planning & Coordination
Specjalista ds. gospodarki magazynowej	Operations (Manual)
Specjalista ds. IT	IT
Specjalista ds. kadrowych	Planning & Coordination
Specjalista ds. obsługi klienta	Quality / Compliance / Inventory
Specjalista ds. Spedycji	Planning & Coordination
Spedytor	Planning & Coordination
Sprzątaczką	Operations (Manual)
Starszy kontroler magazynowy	Quality / Compliance / Inventory
Starszy magazynier	Operations (Manual)

List of functions: AFTER Automation (function/category)

Administrator Systemów IT	IT
Asystentka Biura Administracji	Planning & Coordination
Automatyk MHE PLC/IT	Automation / Engineering/ Automation maintenance
Brygadzysta	Planning & Coordination
Dyrektor Logistyki na Europę Środkowo-Wschodnią	Planning & Coordination
Dyspozytor	Planning & Coordination
Informatyk ds. Systemów ERP	IT
Kierownik ds. administracyjno-biurowych	Supervision
Kierownik ds. Obsługi Zamówień	Supervision
Kierownik ds. Operacyjnych	Supervision
Kierownik ds. Wdrożeń	Supervision
Kierownik ds. Wdrożeń Automatyki Magazynowej	Supervision
Kierownik działu przyjęć	Supervision
Kierownik Działu Quality	Supervision
Kierownik Działu Transportu	Supervision
Kierownik działu wydań	Supervision
Kierownik IT DCR/Koordinator IT Nordic Logistics	IT
Konserwator obiektu	Operations (Manual)
Kontroler Jakości	Quality / Compliance / Inventory
Kontroler Logistyki	Quality / Compliance / Inventory
Kontroler Magazynowy	Quality / Compliance / Inventory
Koordinator Automatyk MHE PLC/IT	Automation / Engineering/ Automation maintenance
Koordinator ds. Administracyjno - technicznych	Planning & Coordination
Koordinator ds. dostaw	Planning & Coordination

Koordinator ds. Kadr i Płac	Planning & Coordination
Koordinator ds. Obsługi Klienta	Planning & Coordination
Koordinator ds. technicznych obiektu	Planning & Coordination
Koordinator ds. Wdrożeń	Planning & Coordination
Koordinator działu ds. Obrotu Opakowaniami i Utrzymania Czystości	Planning & Coordination
Koordinator Działu Kontroli Wewnętrznej	Planning & Coordination
Koordinator komórki ds. inwentaryzacji	Quality / Compliance / Inventory
Koordinator Magazynu Zewnętrznego	Planning & Coordination
Koordinator Mechatronik MHE	Automation / Engineering/ Automation maintenance
Magazynier	Operations (Manual)
Magazynier-Kontroler Jakości	Operations (Manual)
Mechanik Konserwator MHE	Automation / Engineering/ Automation maintenance
Mechatronik MHE	Automation / Engineering/ Automation maintenance
Młodszy Kontroler Jakości	Quality / Compliance / Inventory
Młodszy Mechanik Konserwator MHE	Automation / Engineering/ Automation maintenance
Młodszy Mechatronik MHE	Automation / Engineering/ Automation maintenance
Operacyjny Kierownik Zmiany	Supervision
Planista	Planning & Coordination
Pracownik biura magazynu	Operations (Manual)
Pracownik ds inwentaryzacji	Quality / Compliance / Inventory
Pracownik ds. utrzymania wózków widłowych	Operations (Manual)
Pracownik Działu Kontroli Jakości	Quality / Compliance / Inventory
Pracownik Działu Spedycji	Operations (Manual)
Pracownik magazynu	Operations (Manual)

Specjalista Biura Magazynu	Planning & Coordination
Specjalista ds HR	Planning & Coordination
Specjalista ds. celnych	Planning & Coordination
Specjalista ds. gospodarki magazynowej	Planning & Coordination
Specjalista ds. IT	IT
Specjalista ds. obsługi klienta	Planning & Coordination
Specjalista ds. transportu	Planning & Coordination
Specjalista ds.dostaw kontenerowych	Planning & Coordination
Specjalista Obsługi Klienta	Quality / Compliance / Inventory
Sprzątaczką	Operations (Manual)
Starszy Automatyk MHE PLC/IT	Automation / Engineering/ Automation maintenance
Starszy Inspektor ds. BHP	Quality / Compliance / Inventory
Starszy Konserwator	Operations (Manual)
Starszy kontroler magazynowy	Quality / Compliance / Inventory
Starszy magazynier	Operations (Manual)
Starszy Planista	Planning & Coordination
Starszy Pracownik ds. Inwentaryzacji	Quality / Compliance / Inventory
Technik Wsparcia IT	IT
Trener WMS	IT

CV1 – part 1



<p>⊕ Imię Nazwisko</p>	
<p>Najważniejsze umiejętności</p>	<ul style="list-style-type: none"> ■ Zarządzanie zespołami IT (zarządzanie talentami, delegowanie zadań, rozwiązywanie konfliktów). ■ Zarządzanie projektami informatycznymi (wdrażanie systemów, budowa nowych centrów dystrybucji, dostosowywanie obiektów do potrzeb). ■ <u>Zarządzanie operacyjne</u> (Disaster Recovery, Business Continuity) ■ Zarządzanie budżetem IT (opracowywanie budżetu IT, optymalizacja kosztów, nadzór nad wykonaniem) ■ Kompetencje techniczne (On-Prem vs Chmura, <u>Cyber Bezpieczeństwo</u>, Automatyizacja, Zarządzanie siecią i infrastrukturą...)
<p>Doświadczenie zawodowe</p>	
<p>01.2018-...</p>	<p>JYSK Sp. z o.o. Radomsko Team Manager Infrastructure Logistics</p> <ul style="list-style-type: none"> ■ Leading Logistics IT infrastructure team & "global service" for JYSK 10 Distribution Centers ■ Ensure that Logistics IT Infrastructure team keeps high availability of IT systems in JYSK Logistics ■ Logistics IT Budget management ■ Project responsible: Oversee the full lifecycle of Logistics IT infrastructure projects, from initial planning and scoping to final implementation and delivery. ■ Team management: Responsible for leading, mentoring, and developing a team of IT infrastructure professionals. ■ Quality assurance ■ Resource coordination & allocation ■ Budget/investments responsible ■ Ensuring technology alignment ■ Ensure progress in projects ■ JYSK Values: Tradesman, Colleague, Corporate Spirit
<p>04.2014-12.2017</p>	<p>JYSK Sp. z o.o. Radomsko Local IT Team Leader</p> <ul style="list-style-type: none"> ■ Leading DC Radomsko IT team ■ DCR IT team, which is a part of Logistics IT ■ IT Project management within Logistics-IT ■ Hardware and software contracts preparation and prolonging. ■ Logistics IT budget preparation and monitoring ■ Co-operation with internal and external partners ■ Develop requirements, outlines, budgets, and schedulers for information technology projects.

<p>03.2013 – 04.2014</p>	<p>ITC Infologic Sp. z o.o./Crevo Łódź</p> <ul style="list-style-type: none"> ■ Główny Informatyk/Kierownik IT ■ współtworzenie i realizowanie <u>nowej strategii</u> informatycznej w grupie kapitałowej ■ realizowanie powierzonych projektów: <ul style="list-style-type: none"> ○ przeprowadzenie kilkunastu spółek do nowej siedziby ○ przeprowadzenie zmian <u>operatorów teleinformatycznych</u> ○ prowadzenie negocjacji z <u>dostawcami usług</u> ■ zarządzanie opieką <u>informatyczna spółek</u> grupy kapitałowej <u>Complex S.A.</u> ■ zarządzanie zespołami: <ul style="list-style-type: none"> ○ zespół ds. <u>HelpDesk</u> ○ zespół ds. systemu Axapta ○ zespół ds. Administracji <u>Systemami Informatycznymi</u>
<p>08.2012 – 02.2013</p>	<p>Centrum Komputerowe ZETO S.A w Łodzi Kierownik wydziału badań i rozwoju IT</p> <ul style="list-style-type: none"> ■ zarządzanie zespołami programistów oraz testerów ■ wdrożenie i realizowanie <u>strategii rozwoju</u> zespołów ■ realizowanie powierzonych projektów ■ rozwój tworzonych produktów ■ rozwiązywanie problemów techniczno-merytorycznych
<p>02.2010 – 07.2012</p>	<p>Centrum Komputerowe ZETO S.A w Łodzi kierownik działu programistów</p> <ul style="list-style-type: none"> ■ Zarządzanie projektami ■ zarządzanie zespołem programistów ■ Tworzenie aplikacji desktopowych oraz typu klient-serwer przy wykorzystaniu języka Java ■ Tworzenie dokumentacji ■ Projektowanie baz danych dla systemów zarządzania bazami danych MySQL, <u>SOlite</u>, Apache Derby, Microsoft SQL dla potrzeb tworzonych oprogramowania. ■ Administracja serwerami deweloperskimi oraz testowymi
<p>02.2007 – 08.2010</p>	<p>Wyższa Szkoła Humanistyczno-Ekonomiczna Łódź Kierownik działu programistów</p> <ul style="list-style-type: none"> ■ Zarządzanie zasobami IT ■ Zarządzanie projektami działu IT ■ Tworzenie aplikacji <u>desktopowych</u> oraz typu klient-serwer przy wykorzystaniu języka Java. ■ Tworzenie i/lub rozwój <u>aplikacji internetowych</u> opartych o <u>technologie PHP</u>, Java, JavaScript, MySQL. ■ Tworzenie dokumentacji. ■ Projektowanie baz danych dla systemów zarządzania bazami danych MySQL ■ Administracja serwerami testowymi z <u>systemami Linux</u>.

CV1 – part 2



09.2006 – 03.2009	Wyższa Szkoła Humanistyczno-Ekonomiczna Łódź <ul style="list-style-type: none"> ■ Prowadzenie zajęć ćwiczeniowych: z sieci komputerowych, sieciowych systemów operacyjnych (Windows oraz Linux), metody i języki programowania oraz systemy baz danych
01.2001 – 01.2007	Wyższa Szkoła Humanistyczno-Ekonomiczna Łódź Serwisant administrator systemów, obsługa sieci teleinformatycznej <ul style="list-style-type: none"> ■ Objęcie odpowiedzialności za lokalizację (powyżej 100 stanowisk komputerowych), obsługa i serwis komputerów, drukarek, serwerów wydruku, aktywnych urządzeń sieci, skanerów, praca z programami kadrowo-płacowymi, graficznymi, szkoleniowymi. ■ Administracja systemami rodziny Windows oraz przydzielonymi serwerami Windows i Linux.

1999 – 2004	Wyższa Szkoła Humanistyczno-Ekonomiczna Łódź Tytuł inżyniera <ul style="list-style-type: none"> ■ Studia inżynierskie, kierunek: Sieci komputerowe, studia ukończone z oceną celującą.
1994 – 1998	XXIX Liceum Ogólnokształcące Łódź

Wykształcenie	
2007 – 2008	Wyższa Szkoła Humanistyczno-Ekonomiczna Łódź Studia podyplomowe <ul style="list-style-type: none"> ■ Kierunek: Zarządzanie innowacyjne.
2004 – 2006	Wyższa Szkoła Humanistyczno-Ekonomiczna Łódź Tytuł magistra <ul style="list-style-type: none"> ■ Uzupełniające studia magisterskie na Wydziale Informatyki, Zarządzania i Transportu, kierunek: Inżynieria systemów informatycznych, studia ukończone z oceną celującą.
2002 – 2003	Uniwersytet Valladolid Valladolid (Hiszpania) <ul style="list-style-type: none"> ■ Wyjazd w ramach programu wymiany studentów - Erasmus. ■ Opracowanie web-portalu/aplikacji dla Uniwersytetu – projekt oceniony celująco.

Kursy	Ukończone kursy IBM potwierdzone certyfikatami: <ul style="list-style-type: none"> ■ Linux Implementation for zSeries (kod kursu ZL10) ■ z/VM and Linux Connectivity and Management ■ Installing, Configuring and Servicing z/VM for Linux Guests (ZV06) ■ Fundamental Skills in z/OS (ES10) ■ z/OS JCL and Utilities (ES07) ■ CICS Fundamentals (CI01) ■ Fundamentals of COBOL Programming (AD40) ■ z/OS VSAM and Access Method Services (SS83) ■ DB2 UDB for z/OS System Administration (CF85) Ukończone kursy Oracle (Certyfikat): <ul style="list-style-type: none"> ■ Administracja bazą danych Oracle Ukończone kursy Microsoft: <ul style="list-style-type: none"> ■ 2780 Maintaining a Microsoft SQL Server Database ■ 2779 Implementing a Microsoft SQL Server Database Ukończone kursy Cisco Academy: <ul style="list-style-type: none"> ■ Kurs Cisco CCNA (Cisco Certified Network Assistant) ■ FNS (Fundamentals of Network Security)
Dodatkowe umiejętności	<ul style="list-style-type: none"> ■ Prawo jazdy kat. B ■ Bardzo dobra znajomość języka angielskiego.
Cechy osobowe	Cierpliwość, dokładność, solidność, zaangażowanie, duża szybkość przyswajania wiedzy, punktualność, odpowiedzialność, komunikatywność, łatwość w nawiązywaniu kontaktów, odporność na stres, umiejętność przystosowania do nowych warunków, samodzielność i konsekwentne działanie.
Zainteresowania	Nowe technologie, film.



<p>CONTACT</p> <p>E-mail: @jysk.com</p> <p>Phone:</p> <p>Date of birth:</p> <p>Location:</p> <p>SKILLS</p> <ul style="list-style-type: none"> • Product Owner • Project management • SAP EWM • SAP ERP (LE, MM, WM, SD, QI, BI) • WMS / MFS systems • Working under time pressure • QlikView <p>LANGUAGES</p> <p>English – advanced</p>	<p>Anonymous</p> <p>PROFESSIONAL EXPERIENCE</p> <p>03/2026 – Present Business Process Owner – JYSK Sp. z o.o.</p> <ul style="list-style-type: none"> • Own end-to-end logistics process integrity across systems, integrations, and organizational units. • Act as the single point of accountability for process adherence and solution coherence within Logistics ART. • Translate business needs into clear, prioritized requirements and ensured alignment between business strategy and IT delivery. • Assess change requests for business impact, dependencies, and operational risk; ensured a stable and scalable solution design. • Proactively identify and escalate risks and cross-team dependencies to protect delivery and operational continuity. • Drive continuous improvement initiatives and maintain process documentation, end-to-end flows, and integration touchpoints. • Collaborate closely with Product Owners, Business Owners, Logistics Management, and Distribution Center stakeholders. <p>09/2023 – 02/2026 Product Owner (Logistics ART) – JYSK Sp. z o.o.</p> <ul style="list-style-type: none"> • Owned and prioritized the product backlog to maximize business value and operational impact. • Elicited, refined, and validated requirements; created epics/user stories with clear acceptance criteria. • Aligned stakeholders on scope, priorities, and trade-offs; ensured shared understanding across business and IT. • Supported delivery from discovery to release, including defect triage, bug prioritization, and change request management. • Partnered with development and business teams to ensure high-quality delivery and readiness for go-live and stabilization. • Contributed to business process optimization by evaluating improvements and measuring outcomes against agreed goals. <p>03/2022 – 08/2023 Project Leader – JYSK Sp. z o.o. Netherlands</p> <ul style="list-style-type: none"> • IT project leader in implementation of WMS system (SAP EWM) integrated with SAP ERP for a manual warehouse. • Functional specifications and user requirements. • Technical and functional unit tests. • Data migration and go-live support. • Issue and error tracking (Jira), finding work-arounds. <p>Hungary</p> <ul style="list-style-type: none"> • IT project member in implementation of complex WMS system (SAP EWM) integrated with SAP ERP for a semi-automated warehouse (2 High Bays). • Functional specifications and user requirements. • Technical and functional unit tests. • Data migration and go-live support. • Issue and error tracking (Jira), finding work-arounds. <p>06/2019 – 02/2022 Project Coordinator – JYSK Sp. z o.o. Netherlands</p> <ul style="list-style-type: none"> • IT project leader in implementation of WMS system (SAP EWM) integrated with SAP ERP for a manual warehouse. • Functional specifications and user requirements. • Technical and functional unit tests. • Data migration and go-live support. • Issue and error tracking (Jira), finding work-arounds. <p>10/2012 – 05/2019 Project Engineer – JYSK Sp. z o.o. Bulgaria</p> <ul style="list-style-type: none"> • IT project member in implementation of complex WMS system (SAP EWM) integrated with SAP ERP for a semi-automated warehouse (2 High Bays). • Functional specifications and user requirements. • Technical and functional unit tests. • Data migration and go-live support. • Issue and error tracking (Jira), finding work-arounds. <p>Sweden</p> <ul style="list-style-type: none"> • IT project member in implementation of WMS system (WAMAS – SSI SCHAEFER) integrated with SAP. • Retrofit semi-automated warehouse with 3 High Bays. • Functional specifications and user requirements. 	<ul style="list-style-type: none"> • Technical and functional unit tests. • Data migration and go-live support. • Issue tracking and maintenance support. <p>02/2011 – 09/2012 WMS Manager – JYSK Sp. z o.o. People & Team Management</p> <ul style="list-style-type: none"> • Managed and coordinated a WMS Team during project phases. • Delegated tasks, monitored performance, and ensured on-time delivery. • Responsible for resource planning, workload distribution, and absence planning. <p>Project & Delivery Responsibility</p> <ul style="list-style-type: none"> • Coordinated finalization of WMS implementation, including bug fixing and stabilization. • Led defect prioritization and resolution with internal teams and external stakeholders. • Managed change requests, alignment with business requirements, and system adjustments. • Ensured system stability and operational readiness. <p>09/2009 – 02/2011 (1 year 6 months) Coordinator – JYSK Sp. z o.o.</p> <ul style="list-style-type: none"> • Implementation of WMS (ANT – SSI SCHAEFER). • Testing, data migration, go-live support. • End-user trainings. <p>11/2006 – 09/2009 System Analyst – JYSK Sp. z o.o.</p> <ul style="list-style-type: none"> • SAP ERP Super User. • WMS SattStore implementation. • Reporting, process analysis, user support. <p>EDUCATION</p> <p>Technical University of Lodz (2001–2007) Computer Science – Master of Engineering</p> <p>CERTIFICATIONS</p> <ul style="list-style-type: none"> • Certified SAFe® 6 Product Owner/Product Manager • ISTQB Foundation
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Curriculum Vitae

Personal details:

Name:
Address:
e-mail:
Mobile:

Professional experience:

03.2026 – now: Product Owner

Key responsibilities and tasks

Product Ownership, Vision & Backlog Management

- Own, maintain, and prioritise the Team Backlog to maximise business value and ensure stable flow.
- Translate strategy, business inputs, and user and stakeholder needs into clear, actionable User Stories.
- Ensure work readiness (Definition of Ready) and validate completion (Definition of Done).
- Balance business value, enabler work, technical needs, dependencies, and technical debt in backlog prioritisation.
- Set direction and maintain a clear team-level product vision and roadmap aligned with strategic priorities.
- Support the PM and contribute to the overall product vision and ART backlog within the agreed strategic direction.

Team Enablement & Delivery Collaboration

- Lead product breakdown and refinement on team-level to ensure shared understanding of scope, logic, and dependencies.
- Provide timely clarifications and product decisions to maintain flow and delivery momentum.
- Collaborate closely with the IDL on risks, impediments, and prioritisation implications for delivery predictability.

People Leadership & Stakeholder Management

- Act as line manager for Business Solution Specialists, ensuring clear direction, performance follow-up, and competence development.
- Foster a strong team culture aligned with JYSK values and JYSK Leadership and ensure capacity and skills support delivery commitments.
- Engage proactively with stakeholders and support readiness for change by clarifying impacts, value, and adoption needs.

01.2021 – 02.2026: Project Manager

Projects:

- Implementation of the picking of online goods, including labelling, in the WMS system in Distribution Center Radomsko (Poland), adjusting workflows in Collie picking and Full pallet picking
- Implementation of the picking of online goods, including labelling, in the WMS system in Distribution Center Radomsko (Poland), adjusting workflows in Collie picking, Picking Stations, Sorter and Full pallet picking
- Implementation of the changes for extension of the automation (full pallet transports) in Distribution Center in Nässjö (Sweden)
- coordination, test responsible for Best Practice project to align WMS in Distribution Centers Poland, Denmark, Sweden

Responsibilities:

- Define objectives, framework, roles, project plans and general execution
- Communication with Steering Group, SCRUM teams & other stakeholders
- Ensure corporation across JYSK organisation
- Lead & manage project members according to JYSK values and Leadership & communication.

03.2016 – 12.2020: Project Engineer

Projects:

- participation in end of project phase and support of new WMS system WAMAS in Jysk Distribution Centre in Nässjö (Sweden)
- participation in extension of the WMS system for Distribution Center in Uldum (Denmark) – test responsible for WMS tests (FAT, SAT), SAP integration testing and support; ongoing project
- integration for new Trailer trucking system Gatehouse with SAP system – project leader, test responsible – ongoing
- coordination, test responsible for Best Practice project to align WMS in Distribution Centers Poland, Denmark, Sweden

Responsibilities:

- support of logistic users and local super user in area of SAP SD and SAP WM
- defining new routines within area of responsibility
- actively suggesting, defining, testing and support of new solutions for overall JYSK logistics systems and flows

01.2008 – 03.2016: System Analyst

Responsibilities:

- support and training of Logistics Users in Areas of used IT Logistics Applications: WMS ANT, SAP, Web Store System, QlikView
- assure continuous operation of IT Logistics Systems used in DCR with cooperation with IT Department
- analysis of functional and performance requirements of the systems, defining and reviewing the change requests for adoption to current procedures and flows
- taking part in implementation of changes in procedures and functional areas of IT Logistics Application (testing, manuals, training)
- cooperation with external ANT WMS Support (SSI) to assure quality of implemented solutions
- cooperation with DCR R&D Department and operational departments in analysis and research of new processes, tools and solutions
- root cause analysis to solve tasks reported by users and improve processes
- development and maintenance of DCR and Logistics QlikView Reports

Projects:

- participation in Implementation of ANT WMS in Radomsko Distribution Centre (testing FATs, SATs, Education & Support)
- on Site Support for SattStore WMS in Distribution Centre in Nässjö (April 2012 – September 2012)
- taking part in Improvement Project – Planning Workshops, Productivity and Flexibility DCR Workshop

Education:

2003 – 2008 Technical University of Częstochowa, Faculty of Mechanical Engineering and Computer Science
Master of Science
Major: Computer Science
Specialization: Software Engineering and IT Systems

Workforce Upskilling: from manual execution to system-driven operations

Automation drives a clear redistribution of functions:

- –56% manual roles → replaced by automation
- +200% IT/system roles → core operational backbone
- Strong growth in engineering, planning and compliance functions

Net effect:

- **A shift from labour-driven organization to technology- and knowledge-driven organization**

The table shows overview of DCR personnel functions before and after implementation of automated warehouse:

Category	Before	After	Δ	Upskilling interpretation
Operations (Manual / Execution)	18	8	-10	Strong reduction of manual roles (Magazynier, Pracownik magazynu - Warehouse Operator). Remaining roles require interaction with automated systems and exception handling, not physical execution
Supervision / Operational t.	9	10	+1	Role shifts from direct workforce supervision (Brygadzysta – team leader) to process, KPI and system flow management
Planning & Coordination	3	7	+4	From basic scheduling (Planista - planner) to data-driven planning, coordination and flow optimization across automated processes
IT / Systems	5	15	+10	Major upskilling: from ERP support (Informatyk ERP) to embedded operational IT (WMS, SAP, systems integration, data management)
Automation / Engineering / Maintenance	4	9	+5	Introduction of specialized engineering roles (Automatyk MHE PLC/IT, maintenance technicians) requiring advanced technical and control system skills
Project / Implementation	2	4	+2	Growth of project and implementation roles, enabling continuous improvement, automation rollout and system evolution
Quality / Compliance / Inventory	6	12	+6	Expansion from inspection to system-based quality control, inventory accuracy and compliance management in automated environment
Support (HR, Admin, SSC)	9	13	+4	Shift from administrative support to process-aware, system-integrated support functions (HR, SSC, coordination roles)

Functional structure: overview of relevant changes

BEFORE Automation:

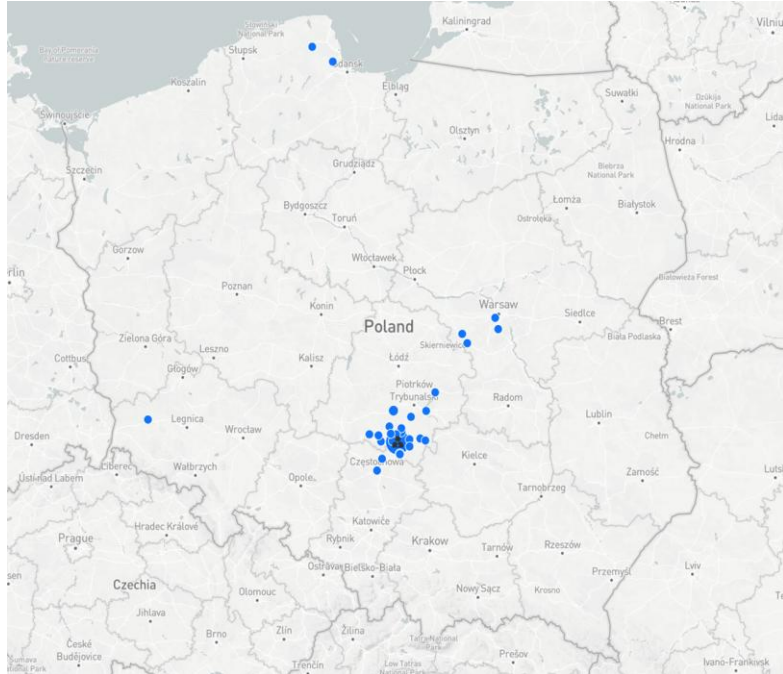
- **A. Manual operations & supervision**
 - Magazynier (Warehouse Operator)
 - Brygadzysta (Team Leader / Foreman)
 - Kierownik zmiany (Shift Manager)
 - Dyspozytor (Dispatcher)
- **Focus: labour-intensive execution and direct supervision**
- **B. Basic planning & coordination**
 - Planista (Planner)
 - Kierownik ds. Obsługi Zamówień (Order Management Manager)
- **Planning is operational and reactive**
- **C. Limited IT / support**
 - Informatyk ds. Systemów ERP (ERP Systems Specialist)
 - Kierownik działu IT (IT Department Manager)
- **IT acts as a support function**
- **D. Standard management hierarchy**
 - Kierownik działu przyjęć (Inbound Manager)
 - Kierownik działu wydań (Outbound Manager)
 - Kierownik ds. Operacyjnych (Operations Manager)
- **Functional silos dominate**



AFTER Automation:

- **A. Manual operations & supervision (REDUCED & SIMPLIFIED)**
- **B. Automation & engineering layer (NEW)**
 - Automatyk MHE PLC/IT (MHE Automation Engineer PLC/IT)
 - Elektryk (Electrician)
 - Kierownik ds. Technicznych i Systemowych (Technical & Systems Manager)
- **Introduction of engineering-driven operations**
- **C. IT & systems integration (EXPANDED)**
 - Administrator Systemów IT (IT Systems Administrator)
 - Analityk Systemowy (Systems Analyst)
- **IT becomes embedded in operations**
- **D. Analytical & planning functions (UPGRADED)**
 - Kierownik ds. planowania i wsparcia (Planning & Support Manager)
 - Analityk Systemowy (Systems Analyst)
- **Shift to data-driven planning**
- **E. Project & change management (NEW)**
 - Kierownik projektu (Project Manager)
- **Enables continuous improvement and system evolution**
- **F. Specialized operational management (NEW)**
 - Kierownik Działu Wysyłki Sklepu Internetowego (E-commerce Dispatch Mgr)
 - Kierownik ds. celnych (Customs Manager)
- **Operations become more segmented and channel-specific**

Expansion of Labour Market Reach Following DCR Automation Data BEFORE automation go-live (2007)

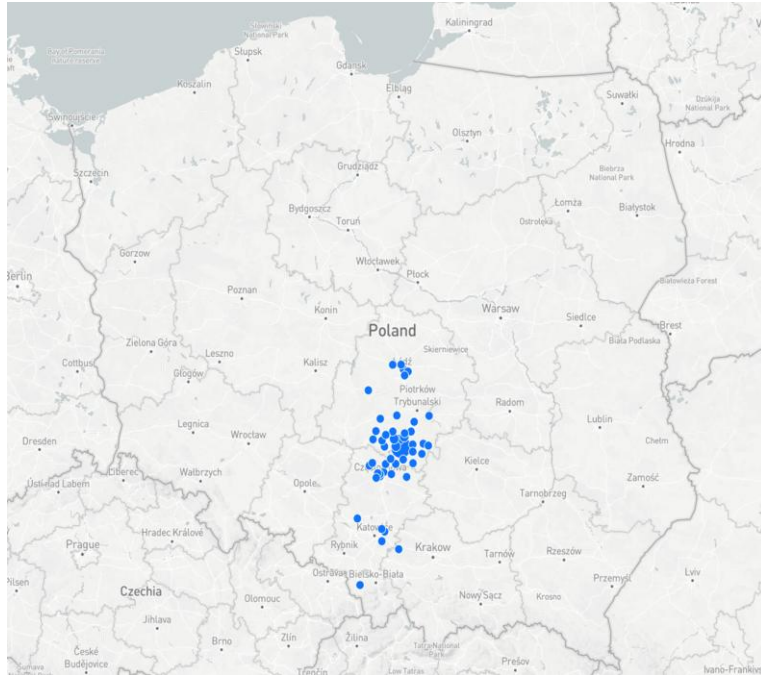


Zip code	Employees
02-384	1
05-500	1
42-200	1
42-233	1
59-700	1
80-209	1
84-242	1
96-300	2
96-320	1
97-330	1
97-340	1
97-360	3
97-400	7
97-410	2

Zip code	Employees
97-500	73
97-505	2
97-512	1
97-515	1
97-524	2
97-540	5
97-541	1
97-545	6
97-561	2
97-565	4
97-570	2
97-651	1
98-330	1
98-331	1
98-337	1



Expansion of Labour Market Reach Following DCR Automation Data AFTER automation go-live (2026)



Zip code	Employees
32-500	1
41-219	1
41-404	1
42-100	1
42-125	1
42-202	1
42-209	1
42-217	1
42-218	1
42-220	1
42-231	2
42-233	2
42-244	1
42-248	2
42-270	14
42-280	1
42-282	8
42-500	1
42-677	1
43-430	1

Zip code	Employees
90-229	1
91-498	1
92-519	1
93-328	1
95-070	1
97-330	2
97-340	3
97-350	5
97-360	10
97-400	3
97-410	3
97-420	1
97-500	249
97-505	23
97-512	14
97-515	8
97-524	12
97-525	7
97-532	7
97-540	9

Zip code	Employees
97-545	28
97-561	20
97-565	30
97-570	1
98-200	1
98-330	6
98-331	7
98-332	1
98-337	7
98-338	4

Contribution to knowledge-based economy

Fact sheets & details



Knowledge Transfer Activities

Formats of knowledge dissemination:

- Conferences and industry events (e.g., Tour de Magasins 2013, 2015)
- On-site study visits (“case study” format)
- Presentations of:
 - warehouse automation technologies
 - logistics processes and system architecture
 - implementation lessons learned

Scale of engagement:

- 44 companies participated in events

Geographical scope:

- Companies from across Poland
- Multi-industry representation (retail, FMCG, manufacturing, logistics)

JYSK DCR enables knowledge transfer through conferences, site visits and practical demonstrations, engaging 44 companies across multiple industries in Poland.

Profile of Participating Companies

Retail / FMCG:

- Lidl Polska
- Rossmann
- Eurocash
- Coca-Cola
- Unilever
- Colgate-Palmolive
- Kompania Piwowarska

Manufacturing / Industrial:

- Philips Lighting
- Ceramika Paradyż
- Amica
- Fakro / Fakro-related (via listing context)

Logistics / Supply Chain:

- Raben Polska
- Logzact
- Martenx Logistics
- Poczta Polska
- Neuca Logistyka

The initiative attracted a diverse mix of leading firms from retail, FMCG, manufacturing and logistics sectors.



Participant Roles and Seniority

Executive level:

- Chairman of the Board
- Board Members

Strategic / senior management:

- Supply Chain Directors
- Logistics Directors
- Investment Directors

Operational management:

- Warehouse Managers
- Distribution Center Managers
- Customer Service Managers

Technical / specialist roles:

- Project Engineers
- Logistics Development Managers
- Packaging Specialists
- IT Directors

Events involved high-level decision makers and technical experts, ranging from board members and directors to engineers and logistics specialists.



Demonstrated Technologies and Processes

Participants were exposed to:

- Automated high-bay warehouse systems (HB storage)
- Automated material flow systems
- Integrated warehouse management and control systems
- End-to-end supply chain processes
- High-throughput distribution operations

Operational characteristics of DCR:

- Large-scale automated facility
- High storage density and throughput
- Multi-country distribution coverage (Central & Eastern Europe)

Participants were exposed to advanced logistics solutions, including automated high-bay warehouses, integrated systems and high-throughput distribution operations.

Measured Innovation Spillovers (Post-Visit Implementations)

Company	Location	Year	Scale (HBW capacity)
Rossmann	Łódź	2011	7,400 pallet places
Piątnica Dairy	Piątnica	2015	5,040 pallet places
Sokpol	Myszków	2013	27,000 pallet places
NIK-POL	Ruda Śl.	2015	14,600 pallet places

Further companies influenced (no detailed scale provided):

- WIX-Filtron
- Cersanit
- Fiskars
- Amica
- Orzeł S.A.
- PGF S.A.
- 7R Logistic
- Clip Group

DCR influenced multiple companies to adopt automation solutions, with additional firms across industries impacted by its logistics and technology concepts.

This creates also Diffusion effect: Transfer of logistics design concepts and automation standards, acceleration of investment decisions in modern supply chain infrastructure and spread of process innovation beyond the logistics sector.

JYSK's Impact on Regional Talent Development and Innovation

Key Impacts of JYSK Distribution Center in Radomsko

Strengthening logistics and technical education

- Continuous cooperation with universities and vocational schools since 2011.
- Practical training programs in logistics, automation, IT systems, electronics and quality management.

Knowledge transfer between business and education

- Students gained direct exposure to modern warehouse technologies and automated storage systems.
- JYSK shared operational know-how, logistics processes and innovation practices with academic institutions.

Building local human capital

- More than **200 students, unemployed people, teachers and trainees** participated in internships, apprenticeships and training initiatives between 2009–2015.
- Programs included logistics technicians, electronics engineers and computer science students.

Supporting employment and social inclusion

- Cooperation with local employment offices and special education centers created opportunities for unemployed people and students with disabilities.
- Seniority and practice programs improved employability and workforce readiness.

Long-term regional innovation ecosystem

- Permanent partnerships with schools and universities helped develop a skilled regional workforce aligned with modern supply chain and e-commerce needs.
- JYSK positioned Radomsko as a local competence hub for logistics and distribution operations.

Diffusion potential

Fact sheets & details

Infrastructure-Driven Diffusion (Intermodal & Logistics Assets)

DCR created anchor demand that triggered large-scale infrastructure investments:

- Loconi Intermodal invested ~13 million PLN in a container terminal in Radomsko specifically due to JYSK's logistics requirements
- The terminal handles ~83,000 TEU over 3 years, shifting freight from road to rail and enabling intermodal transport over ~400 km routes
- JYSK accounts for ~70% of inbound volume, providing the critical mass needed to establish the terminal
- EronTrans invested in container terminal infrastructure and dedicated services and employs 6–7 people locally



Diffusion effect:

- Infrastructure initially built for JYSK becomes shared capacity for the wider market
- Enables >230 companies within 150 km to improve competitiveness via lower transport costs (5–15%)
- Supports 160 importers and 70 exporters using intermodal solutions

This is a classic anchor-investment spillover, where one large logistics player enables system-wide efficiency gains.

Development of Local Transport & Logistics Ecosystem

New market entry and expansion:

- DSV opened a new branch in Radomsko due to JYSK relocation:
 - grew from 2 to 5 employees locally
 - now provides national and international transport services to other firms
 - ATC (customs agency) established operations to handle export flows to non-EU markets (e.g., Balkans, Ukraine)

Growth of regional carriers:

- Omega Transport:
 - created own fleet and employs 5 drivers
- Antor:
 - employs 14 drivers
 - generates additional demand for local maintenance, parking and service companies



Employment effects:

- 32 permanent jobs at Loconi terminal
- 50+ driver jobs in last-mile transport

Diffusion effect:

- Creation of a specialized logistics cluster around DCR
- Development of supporting industries (customs, maintenance, intermodal operations)
- Expansion from single-client dependency to multi-client service provision



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