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- 13
- Are you looking for intra-logistics expertise with paper industry experience?
  - Do you want to learn how AGV technology could reduce your costs?
  - Would you like to automate your internal transports with availability guarantee?
- 13
- 22

Rocla AGV solutions for

# Paper and Board Manufacturing

**Rocla**

# Rocla AGV solutions for Paper and Board Manufacturing

## Smart automation, intra-logistics expertise, and full-service support

### Optimized transports with a low total cost of ownership

When working in three shifts, expectations for internal logistics availability are high. The transport solution should be scalable, customizable, and able to meet your 24/7 product flow.

**Rocla AGV solutions for paper and board manufacturing** offer a combination of technology, maintenance, and expert skills. We will automate your internal transports and guarantee the AGV system availability. With Rocla, you will always have a real-time view of your AGV fleet and transport orders.

We will design and customize the solution according to your needs, including warehouse layouts, transport capacity, and availability requirements.

Our expert team will implement the AGV system without interruptions to your production. We will also train your operators with industry best practices.

Rocla service agreements cover all preventive maintenance needs. You can select a suitable service level from basic support to guaranteed availability.

Our FleetController software suite manages the AGV automation and real-time vehicle monitoring. We can also deliver the warehouse management system and manage the integrations on your behalf.

FleetController software can connect directly with the remote support, allowing cost-efficient remote diagnostics and support for your onsite maintenance.

### What are your benefits?



#### Logistics operator

- Increase control through real-time monitoring
- Availability guarantee
- Remote support for onsite maintenance
- Zero collisions



#### Logistics manager

- Increase warehouse turnover speed
- Fulfill customized orders
- Improve logistics quality and efficiency



#### Management

- Reduce costs through automation
- Optimize intra-logistics and warehouse operations
- Save energy and build sustainable operations
- Zero transport damage losses



#### Maintenance

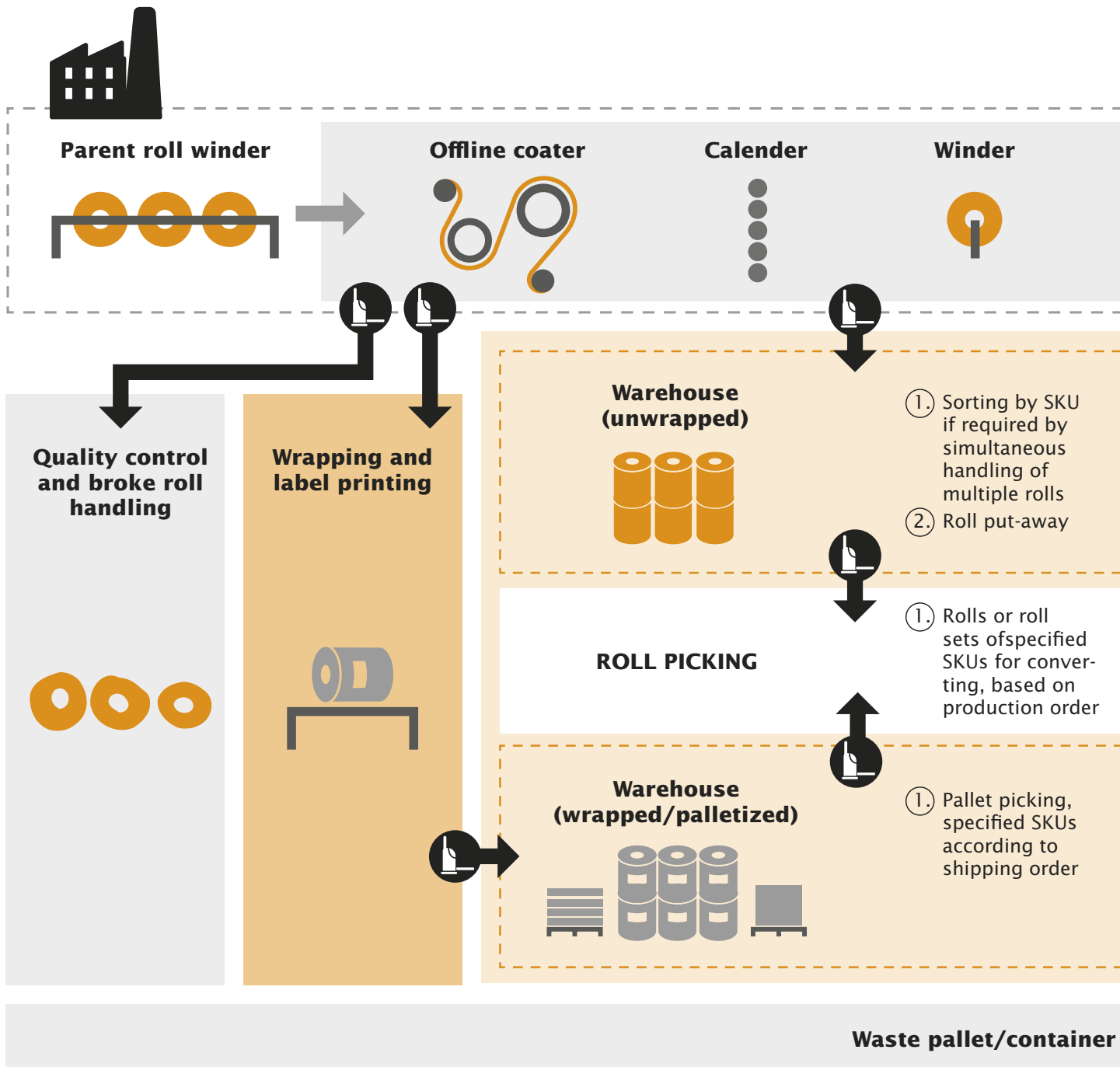
- Improve preventive maintenance
- Remote diagnostics
- Tools for enabling high availability
- Insight from maintenance data analysis



## The results-driven mindset with industry experience

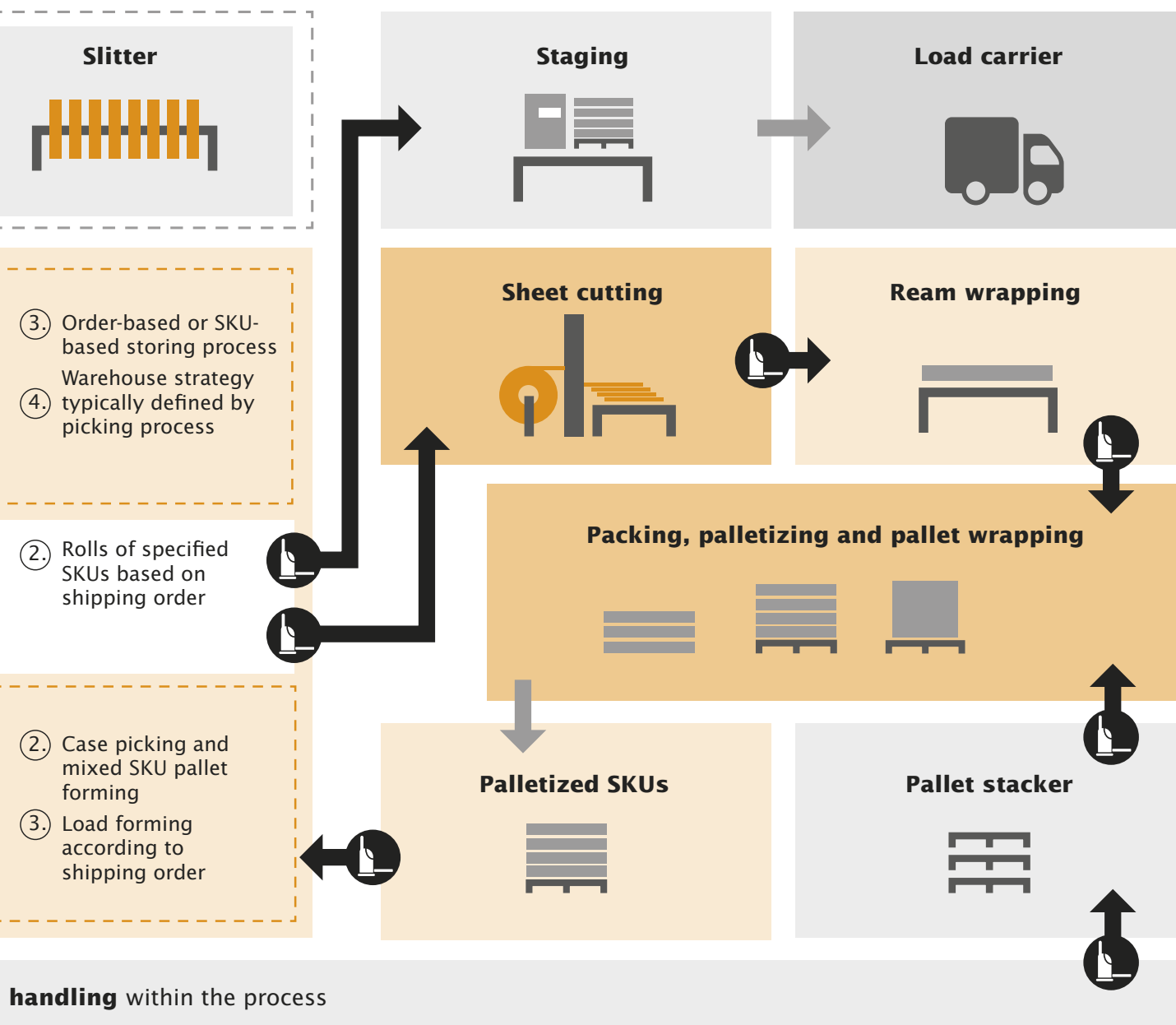
 <p><b>Paper industry know-how</b></p> <p>We guide our solution planning and maintenance with your logistics objectives. We make sure your total cost of AGV ownership stays down.</p>	 <p><b>Experience</b></p> <p>Over 35 years, we have delivered over 500 projects and thousands of vehicles, 75% of which are still in active use.</p>	 <p><b>Visibility</b></p> <p>The brand new Rocla Fleet-Controller lets your operators monitor, optimize and maintain your AGV fleet with real-time information.</p>
 <p><b>Global reach</b></p> <p>As a group company, Rocla's operations are backed up by Mitsubishi Heavy Industries and Mitsubishi Logisnext. Our support is at your service around the clock.</p>	 <p><b>Quality and design</b></p> <p>We manufacture 12,500 forklifts per year, including AGVs. Every vehicle goes through extensive testing. We have earned RedDot awards for design. Many of our AGV features are patented.</p>	 <p><b>24/7 support</b></p> <p>Rocla AGV Service Agreements offer availability guarantee and multiple results-driven options to meet your maintenance and support requirements regardless of time and place.</p>
 <p><b>Efficiency</b></p> <p>The new Rocla FleetController offers optimization algorithms that, among many other benefits, increase AGV efficiency by 20% compared to traditional system controllers.</p>	 <p><b>Data-driven optimization and maintenance</b></p> <p>Rocla's cloud-based data platform offers tools for cost-efficient remote diagnostics and incident resolution, data analysis, and process optimization.</p>	 <p><b>Original AGV design</b></p> <p>Our vehicles are purpose-built without compromises of the kitted vehicles. The modular structure allows the use of the same components as in forklifts, increasing cost-efficiency.</p>

# Rocla for Paper and Board Manufacturing: Automated



Rocla AGV transports

# transports with real-time monitoring



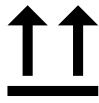


# Rocla AGVs with lifecycle services: Complete solution with full-service maintenance

SOLUTION DESIGN AND RAMP-UP	 <p><b>Audit</b></p>	<ul style="list-style-type: none"> <li>▪ Maintenance process assessment</li> <li>▪ Life-cycle assessment and spare part criticality assessment</li> <li>▪ KPI baseline for the service agreement</li> <li>▪ Financial assessment</li> <li>▪ Customization requirements, including vehicles, accessories, and 3rd party solutions</li> </ul>	
	 <p><b>Solution design</b></p>	<ul style="list-style-type: none"> <li>▪ Warehousing strategy</li> <li>▪ AGV system layout and route design</li> <li>▪ Vehicle options adjustment</li> <li>▪ Software integration plan</li> </ul>	
	 <p><b>Implementation</b></p>	<ul style="list-style-type: none"> <li>▪ Integration to information systems (e.g., Warehouse Management System)</li> <li>▪ Interfacing with facility equipment</li> <li>▪ Factory acceptance testing at Rocla factory</li> <li>▪ Installation and commissioning onsite</li> <li>▪ Site acceptance test</li> </ul>	
PRODUCTION	 <p><b>Maintenance and support</b></p>	<ul style="list-style-type: none"> <li>▪ Usage-based and scheduled maintenance</li> <li>▪ Software updates</li> <li>▪ Spare part logistics with optional consignment inventory</li> <li>▪ Onsite repairs</li> <li>▪ Training of your logistics personnel</li> <li>▪ Retrofits and upgrades</li> </ul>	<b>Rocla AGV Service Agreements</b>
	 <p><b>Monitoring, remote diagnostics and data analytics</b></p>	<ul style="list-style-type: none"> <li>▪ Route and order optimization</li> <li>▪ Increased capacity and automated upkeep routines</li> <li>▪ Equipment remote monitoring</li> <li>▪ Service dashboard with real-time operational monitoring</li> <li>▪ Maintenance and availability statistics</li> </ul>	<b>Rocla Fleet-Controller</b>



## How can you save with a Rocla AGV solution?



### Intra-logistics automation

- Avoid increases in personnel cost
- Deduct automation investment
- Increase the intra-logistics speed and capacity
- Speed up carrier loading by predictive staging



### Warehouse

- Increase warehouse turnover speed
- Utilize warehouse space efficiently
- Save money compared to manual warehouse operations
- Reduce the need to take inventory
- Implement without production stops



### Energy

- Save energy through efficient technology and route optimizing
- Environmental savings, such as warehouse lighting



### Durability

- The typical lifetime of AGV vehicle is 10 years
- Extend to 20 years with controlling electronics upgrade



### Safety

- Zero collisions
- Remove transport damage losses



### Monitoring and tracking

- Monitor operations in real-time, recognize incidents immediately
- Pinpoint process bottlenecks
- Locate handled goods and trace orders in real-time

## Rocla customers in the paper and board manufacturing

### Kabel Premium Pulp & Paper

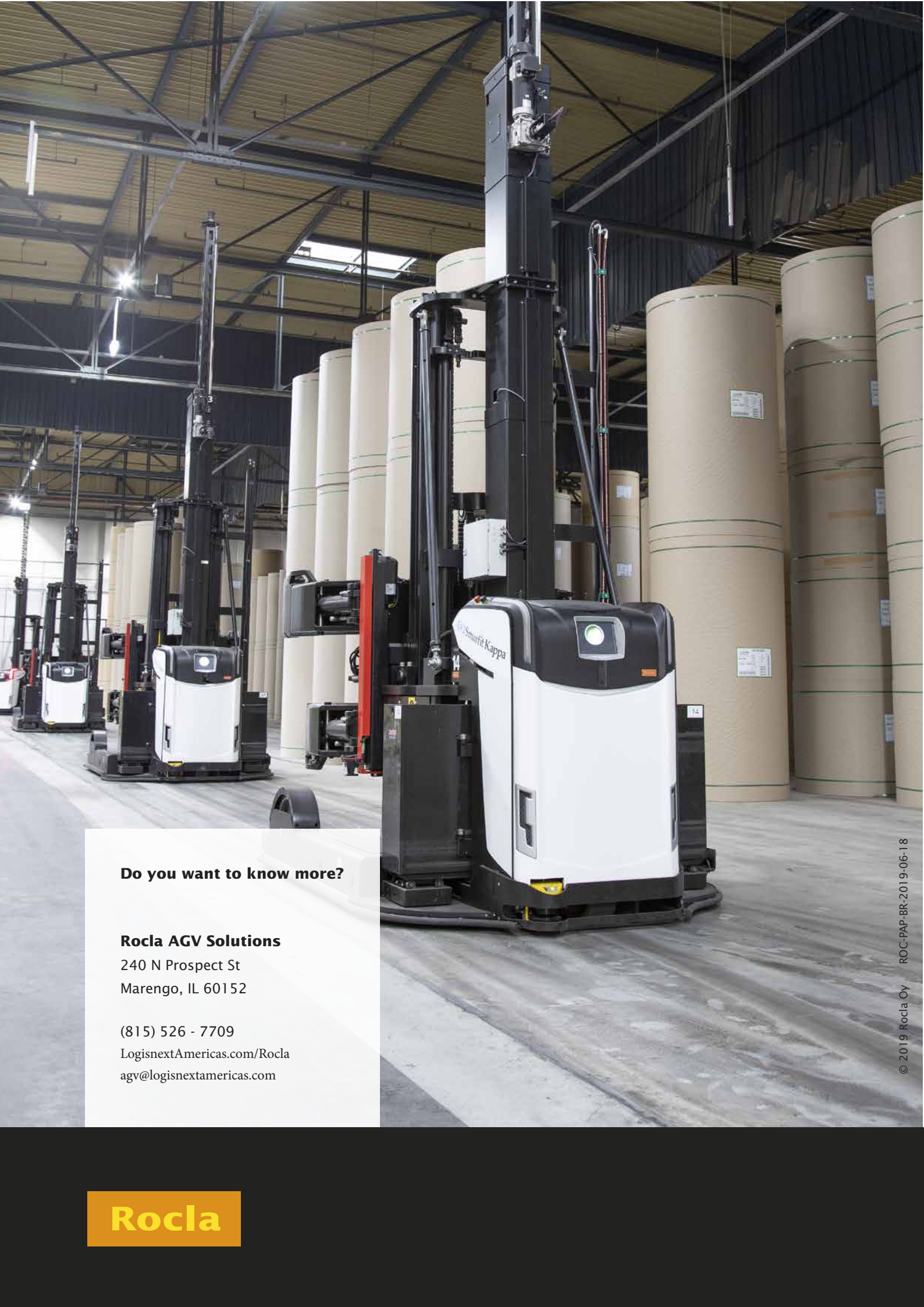
- Installation handling around a thousand different pallet sizes
- The intermediate warehouse holds 300–500 pallets
- In the mill, 3,000 tons of sheet paper is handled daily
- Key benefit: Cost reduction

### Smurfit Kappa Parengo

- Two paper machines produce graphical and packaging papers 600,000 tons per year
- A fleet of 16 Rocla AGVs, equipped with automated battery exchange system, move up to 4,500 tons of paper daily
- Previous annual transport losses of 100 tons cut to zero

### Sappi Alfeld

- Three-shift pattern
- Rolls of paper weighing up to 5 tons are transported using Rocla's AGVs
- History with zero accidents
- MetRo warehouse management system and interfaces to the roll conveyor system and the mill execution system



**Do you want to know more?**

**Rocla AGV Solutions**

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