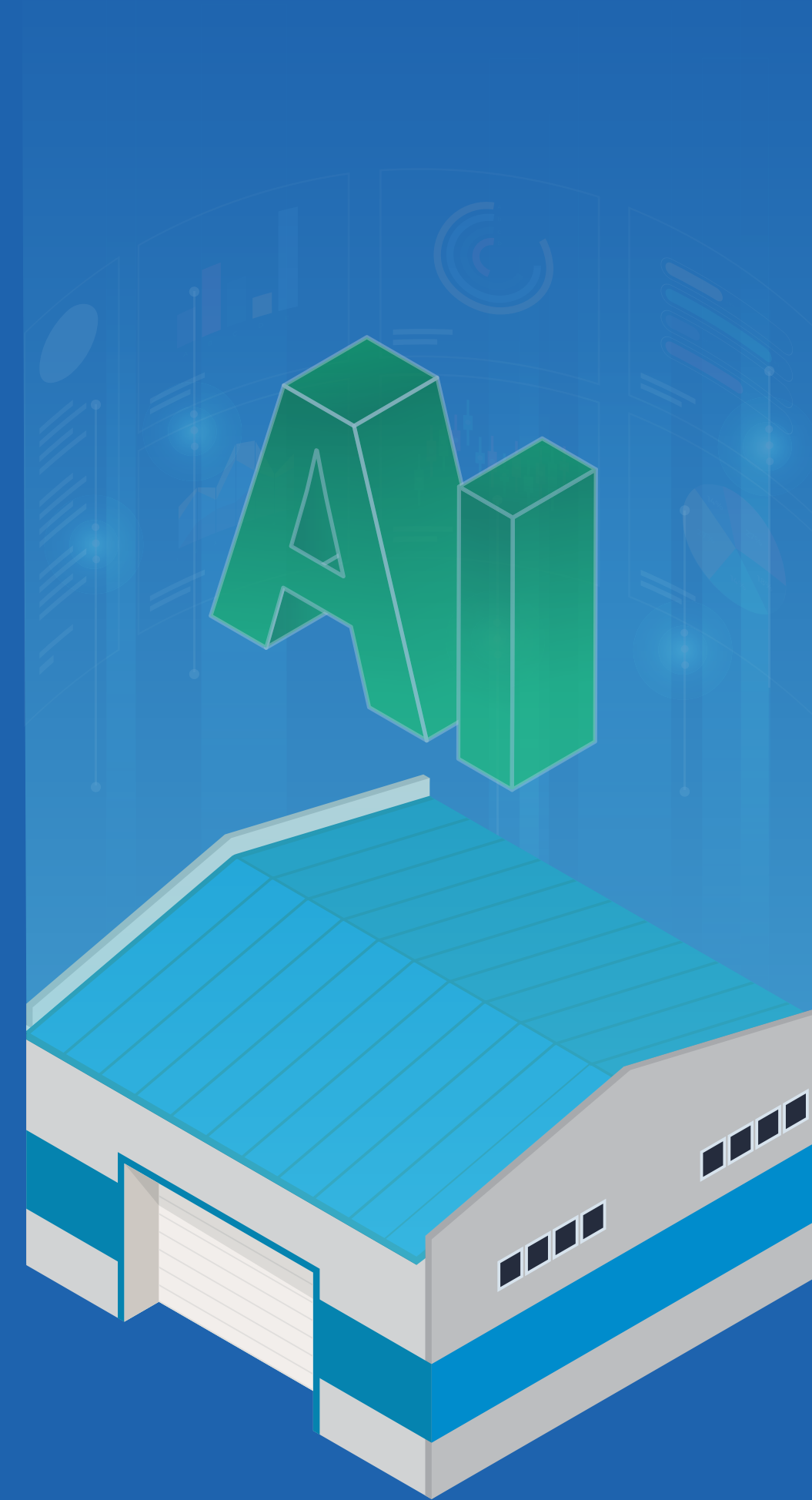


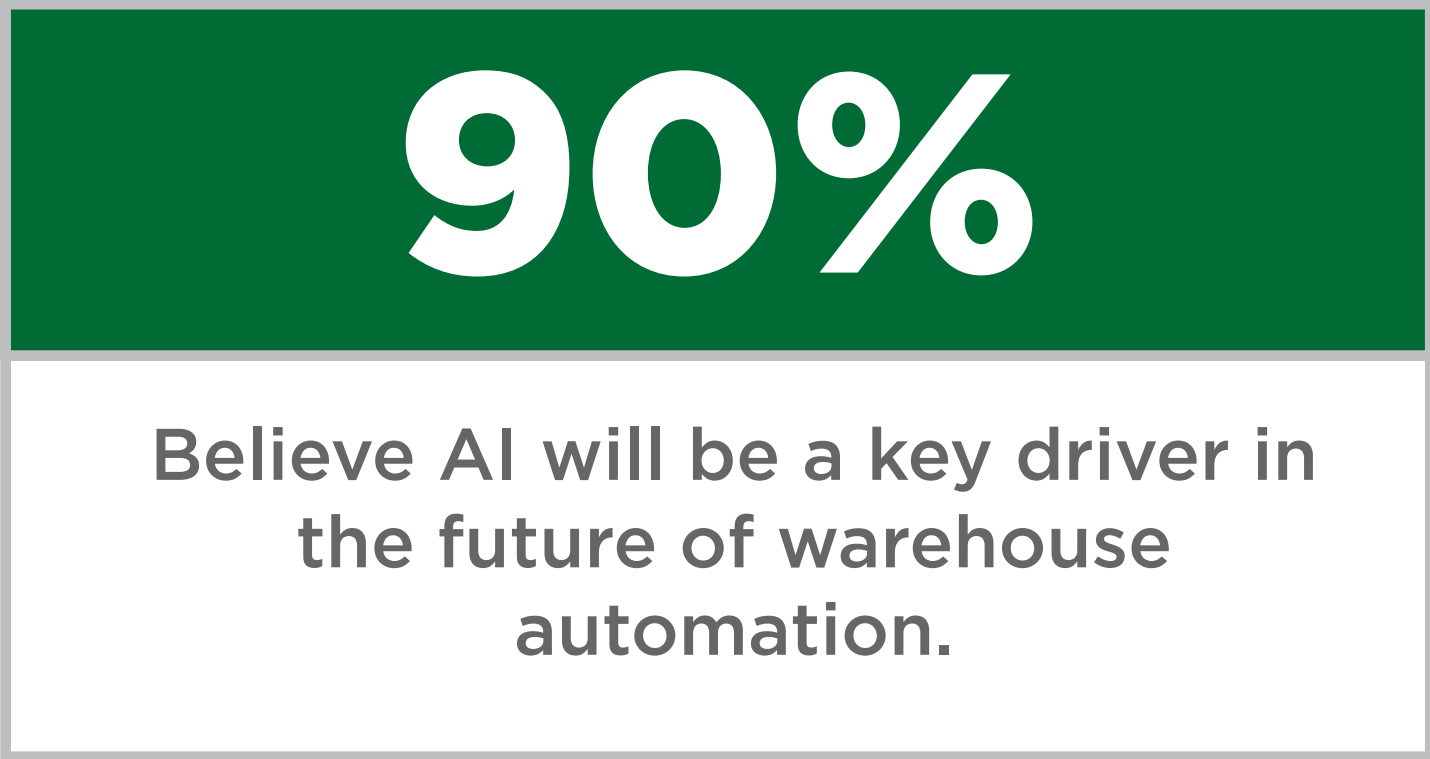
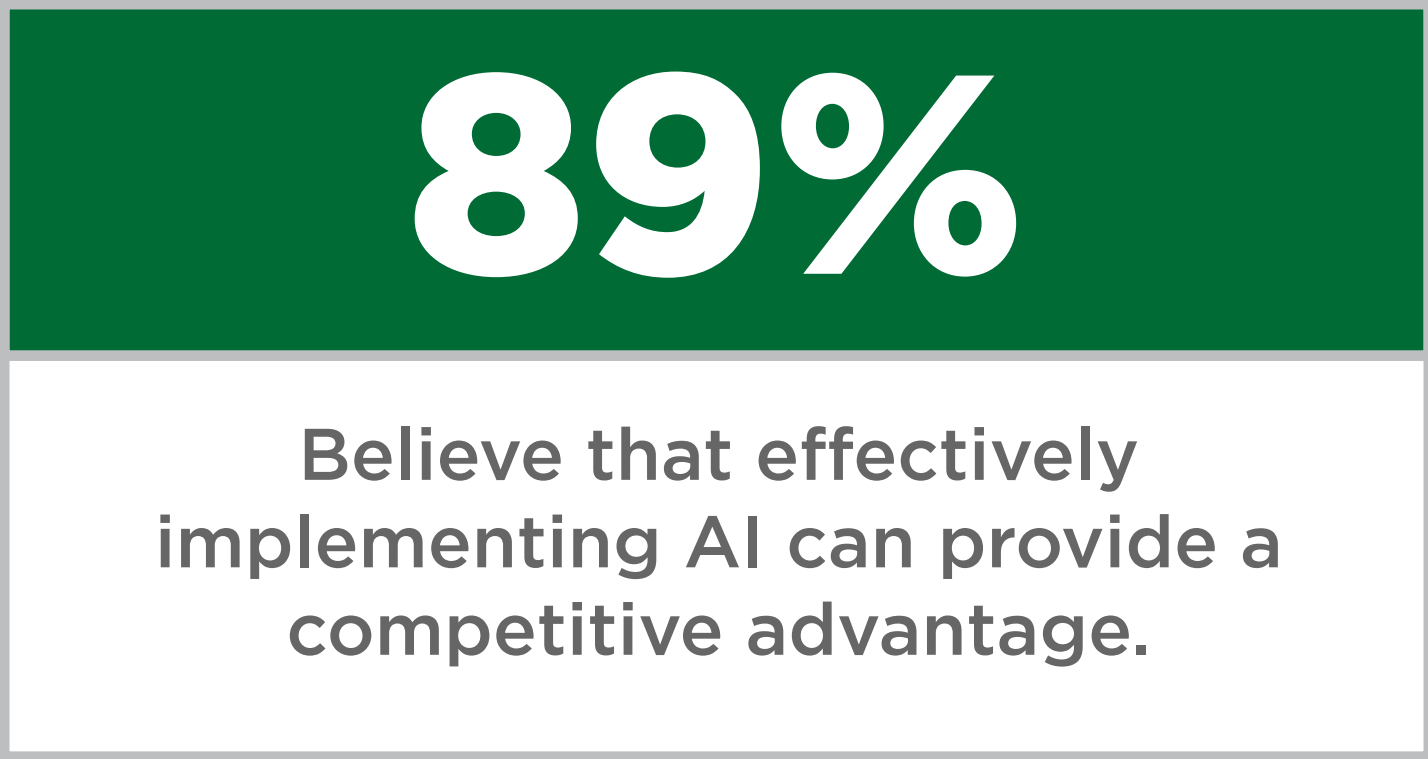


Lucas Insights: Achieve Your AI Potential



Artificial Intelligence in the DC - A Strategic Game Changer

A recent Lucas commissioned market study revealed that warehousing and distribution companies are quite bullish on the potential for artificial intelligence to deliver game-changing strategies and results.



Lucas Systems Market Research: Lucas Systems commissioned with Vanson Bourne to perform a market research study. The study consisted of surveying 350 companies across the US and UK, across a variety of industry verticals, and across of variety of relevant titles. Companies surveyed all had DC and warehouse operations with 1 or more warehouses in operation.

AI Offers Massive Potential Paybacks

The distribution center is a target rich environment to use AI to optimize performance. Respondents see a big potential to drive significant operational and customer experience gains.



75-90%

Expected increase in
productivity



65-90%

Expected increase in
accuracy



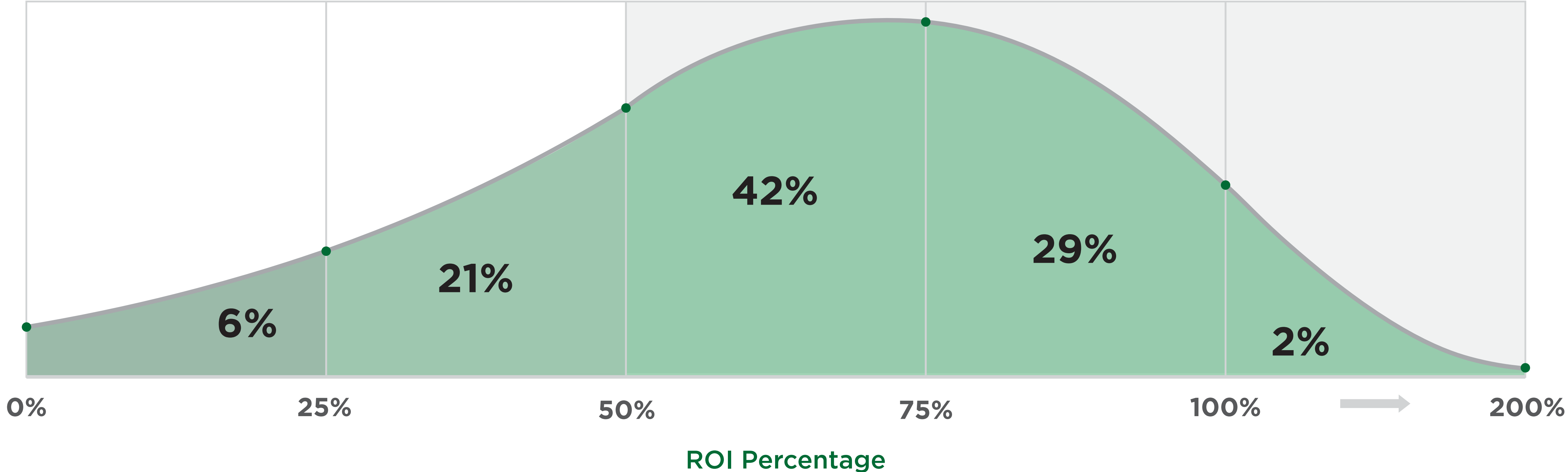
60-90%

Expected increase in
responsiveness

Creating a Very Compelling Return on Investment

Expectations for AI-based software are high. Over 70% respondents believe their ROI will be greater than 50% in the next 5 years.

Expected return on investment from AI-based software



Respondents See the Next 5 Years as a Critical Pivot Point

80% of DC operators believe warehouses of all sizes will be maximizing the potential of AI in the next 5 years.

	Less than 100,000 sq ft	100,000 to 249,999 sq ft	250,000 to 499,999 sq ft	500,000 or more sq ft	Total across all warehouses
Within the next 2 years	48%	21%	15%	24%	25%
2-5 years	48%	49%	62%	62%	55%
5-10 years	5%	30%	23%	14%	20%
More than 10 years	0%	0%	0%	0%	0%

How long will it take warehouses/distribution centers to maximize the potential of AI?

Operators are Targeting These Hot Spots for Implementing AI Solutions



Productivity of warehouse workers



Reduce errors from warehouse workers



Decision making for managers and supervisors



Material handling equipment management



Maintenance and repair operations



Manage robots and other machines

But Perceptions on Expertise, Costs, and Control Are Holding Companies Back

91% of respondents want to use AI and Machine Learning to drive warehouse and DC performance improvements, but they admit that they lack the knowledge and expertise required to achieve the full potential of AI.



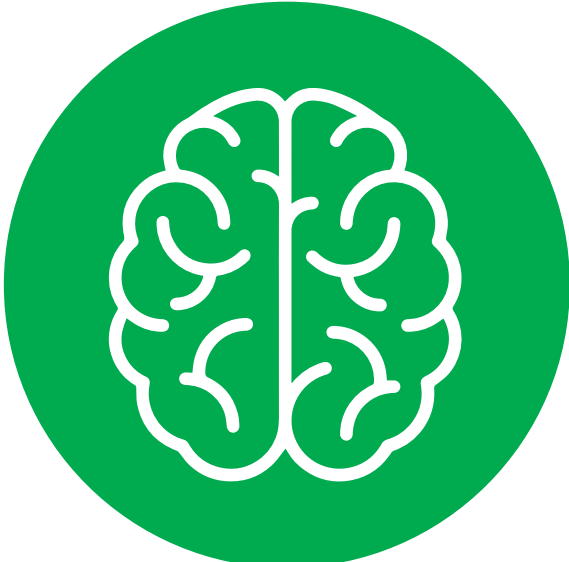
46%

Perceived costs of AI are too high compared to the benefits



46%

Perception that AI would reduce jobs for workers and managers



45%

Lack understanding of how AI-based software can be used

Lucas Recommends Five Fast Start Opportunities

	Dynamic Slotting	Workflow Orchestration	Workforce Planning	Performance Management	Travel Optimization
Potential	<ul style="list-style-type: none"> • 10-20% savings in labor costs • 1-5% improvement in accuracy • 20-40% increase in throughput 	<ul style="list-style-type: none"> • 10-20% savings in labor costs • 5-10% improvement in accuracy • 20-40% increase in throughput 	<ul style="list-style-type: none"> • 50% savings in overtime costs • 5-10% increase in throughput 	<ul style="list-style-type: none"> • Reduce implementation costs by 50% (vs. ELS) 	<ul style="list-style-type: none"> • Up to 50% savings in labor costs • Up to 100% increase in throughput
Description	AI-based slotting solutions enable DC managers to inject current data into their slotting adjustments. By feeding a sales forecast into a machine learning model, slotting can be tweaked based off of future information, rather than historical.	AI enables a DC to automatically orchestrate and optimize the movement of people, assets and machines through their work. With AI, managers can be stress-free, knowing their workers and automation equipment are working together in the most efficient way.	AI-based workforce planning solutions run near-real time simulations to determine how to best complete remaining work to ensure shipping deadlines are met.	AI algorithms automatically learn the normal pace to complete tasks given real-world performance data collected from within the operation. These AI-driven labor standards are dynamic, more accurate and easier to implement compared to ELS.	AI and machine learning algorithms exploit large amounts of pick data, order priorities, and travel patterns to optimize pick paths and order batches, ensuring all shipping deadlines are met with high confidence.

Delivering Compelling Benefits across Key Warehouse Metrics

	Management Effectiveness	Picking Accuracy	Safety & Ergonomics	Agility	Labor Costs	Employee Satisfaction	Throughput
Dynamic Slotting							
Workflow Orchestration							
Workforce Planning							
Performance Management							
In-Warehouse Travel Optimization							

= Strong Benefit = Partial Benefit

Don't Miss Out - Achieve Your AI Potential

While it is natural to have concerns about implementing new technologies such as AI and Machine Learning, the benefits are substantial. In many cases, Lucas has seen 10-30% improvements in productivity and accuracy, generating very attractive ROI's.

*“The productivity and efficiency gains from **Lucas allowed us to continue to deliver the levels of service our customers expect.**”*

Chris Rufa

Senior Director of Global Distribution at Apex Tool Group

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Get Started With AI Today

Since 1998, Lucas Systems has helped companies transform their distribution center operations with AI-based software solutions. Are you ready to reap the transformational benefits of AI?

To dig deeper into AI, use cases, and industry specific insights, download the full report and schedule an AI consultation.

[Download the Full Report ▶](#)