

ELEMENT
LOGIC

COST

BENEFIT

WAREHOUSE AUTOMATION

CALCULATE YOUR ROI WITH SDI ELEMENT LOGIC



OPTIMIZING WAREHOUSE PERFORMANCE

Warehouse automation

Why is it worth it?



Krish Nathan, CEO - Americas
at SDI Element Logic

Return On Investment, or ROI, is an essential financial metric for any business to determine the worth of an investment. It is a way to measure performance through efficiency and profitability evaluations.

Businesses encounter many potential investment opportunities which could improve different aspects of their operations. You can learn how much the investment will pay off both in the short and in the long term by referring to a thorough analysis of when and how an investment pays off.

This begs the question; how do you calculate the ROI in an automated warehouse solution?

It is simple in theory. All you need to do is divide the financial benefit of the investment by the cost of the investment.

The tricky part, but just as important, is calculating your company's unique financial benefits from an automated warehouse solution.

SDI Element Logic can look at the necessary data and calculate the numbers for you in a ROI and payback analysis. Some of these key factors can entail saving on being more space-efficient and increased productivity.

However, it is important to remember that there are many benefits from automation on which you cannot put an exact price tag. For instance, the value of customer

satisfaction when you deliver the right product on time. In today's market, demands and definitions of "on time" are continuously developing.

An additional benefit is being able to process returns swiftly and refunding your customers within a reasonable timeframe. You can also expect savings from nearly eliminating picking errors and avoiding cancelling customer orders.

One of the most important questions to ask yourself is: What strategic business gains could the investment bring you?

The financial benefit of these qualitative values will vary on a case-to-case basis based on different circumstances, priorities, future ambitions, and needs to be considered along with the facts and figures.

In this whitepaper, we will outline perspectives and topics that can help simplify your decision to incorporate automation by showing how you can achieve ROI and growth with warehouse automation.

Ultimately, our customers' success is the basis of our existence. This is proven again and again by customers achieving or surpassing ROI by investing in automation from SDI Element Logic.

Enjoy your reading,

A handwritten signature in dark ink, appearing to read 'K. Nathan', is placed above the name Krish Nathan.

Krish Nathan, CEO - Americas



ROI explained: What you need to know



Lars Bek Jensen
Senior partner/director, Langebæk

Lars Bek Jensen is a Senior Partner and Director at Langebæk A/S. A Danish consulting firm specializing in supply chain management, logistics optimization and warehousing. Lars often collaborates with our customers to determine whether a warehouse automation solution, like AutoStore, is worth the investment.

"The first thing we do is to look at your current costs and operations. How much you pay in salaries, how many orders you have, products you offer, and the cost of rent are some examples of expenses we are interested in," he explained.

You can choose to calculate this by yourself, but Bek Jensen strongly recommends using experts with experience and knowledge of warehouse automation.

"You get an independent view on the math involved. Usually, we calculate three or four scenarios for your company's future. One without automating and two or three with automatic solutions from various system integrators. Today that very often includes an AutoStore solution," Jensen said.

Better quality and reduced costs

The ROI calculations and payback analyses on warehouse automation are complex and comprehensive. They consist of several variables that you can read about in detail in this [whitepaper](#).

For ROI expert Bek Jensen, two main variables shape your time to ROI; the increased quality you get with AutoStore and your reduced costs from rent and labor.

"Your growth plans are also critical to how your ROI calculations look. We see that customers with growth ambitions seem to achieve ROI faster. AutoStore solutions from Element Logic give flexibility and scalability through its basic modular design," Jensen said.



ROI TIP

Set realistic growth ambitions

For the ROI calculation and payback analysis to be accurate, you need to have a realistic estimate of how much your company will grow in the coming years, as well as an in-depth understanding of how your business operations are run.

The best way to secure a realistic growth plan is to consult with several people in the organization. Talking to employees in all departments with different roles will provide valuable insight.



ROI and warehouse automation

The factors that matter



Robert Humphry, VP Business Development and Sales at SDI Element Logic

“The key to calculating ROI has a technical answer, a complex calculation that can change from one business application to the next.” Robert Humphry, Vice President of Business Development and Sales at SDI Element Logic explained.

“Some of these items to be considered are the obvious factors: labor rates, operator utilization and efficiency, and space needed for an operation to run smoothly. These all play a role in calculating ROI, but **the simple answer for calculating your business’ ROI is having sufficient data.**”

“Our role is to be as involved with our customers as they require, which can range from calculating the right size of their solution, the number of storage bins they would require to reach ROI as fast as possible, and any other task needed to equip them for future growth,” Humphry added.

The most important thing is that the customer is fully invested, that they believe in the numbers and own the ROI calculations. To further develop this mutual trust, the SDI Element Logic team creates a payback analysis based on the company’s numbers and growth ambitions. We split your numbers into two categories: hard and soft values. Hard values are easy to calculate. Soft values depend on your ambitions and current operations.



Joel Díaz, VP Business Development
LATAM at SDI Element Logic

“When evaluating the financial benefits of the solution, it is necessary to consider hard values and soft values, both of which must be properly reviewed before making the decision to automate,” Joel Díaz, VP Business Development LATAM at SDI Element Logic, commented.

“While it is sometimes difficult to directly attribute a value to, for example, the expected increase in sales, SDI Element Logic works diligently with you to create estimates for both the short and long term of your business.”

Hard values when calculating ROI

#1 - Save Space

When investing in an AutoStore solution delivered by SDI Element Logic, you will save up to 80% of your available floor space. This equates to four times the storage capacity and footprint compared to a manual warehouse.

Depending on a business’s needs and growth plans, we calculate the size of the solution and thus can calculate the amount of space you will save. The reduced need for space has a lot of financial advantages

for businesses because they can:

- Move to a smaller warehouse.
- Rent out the extra warehouse space.
- Stay in the existing warehouse, thus saving money on moving costs.
- Save on utilities, as having less space means less heating and cooling.
- May save on cleaning costs, purely based on the reduction in space.
- Become more environmentally active since they’ll use less electricity and reduce their carbon footprint.



#2 - Reduced cost per transaction

With an AutoStore solution, employees will see large increases in overall productivity, efficiency, and picking and packing more orders per hour when compared to a manual warehouse operation. What these increases equal in terms of hourly rates differ greatly depending on the flow of goods, order processes, and complementary automation.

Financial gain depends on several factors. For example, whether you pick order by order or batch pick and whether other connected systems such as labelling and conveying systems are manual or automatic.

“One of the best parts of saving money on space and making your labor more efficient is that the benefits will continue to increase year over year,” Humphry said. “SDI Element Logic’s payback analysis

calculates what businesses will save in one, two, and even 10 years down the road.”

There are many potential savings from warehouse automation aside from a general increase in efficiency. Companies may also see savings on:

- Yearly salaries
- Seasonal workers
- Overtime work
- Recruitment resources

Soft values when calculating ROI

#1 - Shorter delivery time

It is no secret that customers expect fast deliveries. If your company has a longer delivery time than your competition, the likelihood of your competitors grabbing that business drastically increases.

The financial value of a shorter delivery time varies from customer to customer, depending on the specific industry's average versus current delivery time. If your company's overall logistics operations are optimized, they can go from an estimated delivery time of one week to same-day delivery with warehouse automation. This will most likely lead to an increase in customers, and more

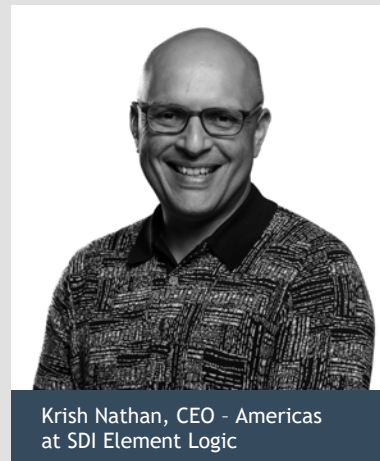
importantly - more satisfied customers.

#2 - Reduction in training time

AutoStore is notably easy to learn how to operate. On average, it is said that it takes only ten minutes to be able to pick orders from AutoStore.

"Training in AutoStore and becoming a super user takes a few weeks to complete, and we recommend that a select few individuals are trained this way," Nathan said.

The super user training sessions from SDI Element Logic focus on operations, safety, and solving issues that could occur once the system goes live.



Krish Nathan, CEO - Americas
at SDI Element Logic



#3 - Fewer picking errors

Picking the wrong item is an error that occurs more frequently in manual picking and can often have a minimum cost of US \$100 per item associated with it. It is not only the item itself you have to take into the calculation but also the cost of customer service staff and delivery costs for returning and transporting the correct item.

A negative factor that must not be forgotten is the potential long-term loss from unhappy customers

becoming bad ambassadors and complaining about you to their friends and family. With AutoStore, the risk of human errors is close to eliminated, the few errors that can be seen are related to picking the wrong number of items.

"Automation applies to highly standardized and repetitive processes, meaning doing tasks faster and more accurately than doing them manually," Diaz said.

"This is why AutoStore, which is an incredibly flexible solution, is a great choice for companies looking to reduce picking errors because of its ability to adjust to the current needs of your business."

#4 - Reduced cost of inventory control

AutoStore continuously keeps track of a business's inventory levels and logs it in real-time, so it's possible

to eliminate the need to put aside resources to do inventory control for the goods stored in AutoStore. For our customers, the goods stored in an AutoStore system averages at 80% of the Stock Keeping Unit (SKU).

#5 - Satisfied customers and Savings

We calculate the approximate value of a satisfied customer who shops from you again and chooses you as their preferred retailer.

Additionally, an automated warehouse can help businesses save resources on customer service because of fewer picking errors and shorter delivery times.

#6 - Ergonomic workplace

In a manual warehouse, workers tend to walk long distances up and down the aisles each day. With an AutoStore solution, the workday puts less strain on the body and decreases the chance of work-related injuries drastically.

“SDI Element Logic customers that have installed an AutoStore system have reported that their employees are much happier. They also have higher retention rates and their employees are more loyal,” Nathan said.

Employees are healthier and more energized by providing a more ergonomic work environment. The value of satisfied employees depends heavily on how many workers are employed, the physical strain from picking products, and the market where you are located.

If there is a high level of competition to attract excellent and loyal labor, the value of an ergonomic workplace is greater.

#7 - Increased control of inventory balance

With AutoStore and the SDI Element Logic software, eManager, you have constant control of potential excess or shortages in your inventory.

This enables you to make sound operational decisions to stay continuously profitable.

#8 - Reduced cleaning budget

An AutoStore solution keeps business's inventory dust free. This results in a reduced need for costs related to cleaning, making a big difference in your expenses over time.

#9 - Less theft and spoilage

With the inventory safely secured in the AutoStore bins, companies drastically reduce the chances of theft and other spoilage.

#10 - Money saved on fewer trucks

An AutoStore solution brings the orders directly to the ports. A system delivered by SDI Element Logic is space-efficient and requires less equipment like trucks and other potential additional equipment thereby generating extra costs.

ROI TIP

Heard in an automated warehouse:

“It amazes me how much my workday has improved!”

This was said by a young and healthy warehouse worker employed by one of our latest customers based out of Europe. This worker used to walk 25,000 steps each day while picking orders manually, and they were exhausted at the end of each workday.

After installing AutoStore with Element Logic they have gained their free time back and have the energy to live a normal life with their family and friends after work.





The numbers that **do not matter**

The equation to calculate your time to ROI is complicated and consists of many numbers, variables, and soft values.

“There are factors that all our customers are very keen on discussing when approaching the topic of ROI, especially the money saved on labor, and how much they can reduce their delivery time,” Humphry said.

“People tend to not consider how much they can save from reduced warehouse space and picking errors.”

Some companies also tend to think that automation is not suitable for their business due to turnover, inventory size, and the number of employees.

“There are numerous situations in which a company may believe that they are too small to invest in warehouse automation, especially if they are exclusively focused on short term profits,” Nathan said.

“However, this always changes when they see their payback analysis.”

The smallest warehouses currently benefiting from AutoStore have between 1,000 - 2,000 bins, while the median customer has around 24,000 bins.

We see increasingly better ROI calculations for systems in the 9,000 - 12,000 range now than in previous years. Our experience is that warehouse automation will most likely be worth the investment if your company has more than two employees. However, it is important to remember that the more employees within the company, the faster you will likely see a return on your investment.



ROI TIP

How to shorten the ROI timeline

There are a few things companies can do to control the time to reach ROI for warehouse automation:

- Develop a product strategy in line with what fits into the AutoStore bins.
- Collaborate with marketing to create campaigns on the products kept in the AutoStore system.
- Involve a dedicated Account Manager from SDI Element Logic to tune the company's eManager/WCS, WMS, ERP setup, and operations.



How SDI Element Logic works with ROI analyses: Calculating ROI with SDI Element Logic – When to automate and how



Jatin Lewis, Director of Robotics Solutions at SDI Element Logic.

“The saying goes that the best time to plant a tree is 20 years ago, and the second-best time is right this second.” Humphry said. “The same goes for incorporating an AutoStore solution in your company’s automation system.”

Warehouse automation is an investment in the future of your company.

“The math determining your company’s ROI is a formula which will prove itself in time. There is no magic number that can show whether you reach ROI on your AutoStore investment in six months or in two years.” Jatin Lewis, Director of Robotic Solutions at SDI Element Logic, said.

“It depends on the uniqueness of your business, and SDI Element Logic is there with you through every step.”

The first step is to estimate the value that an AutoStore system can bring to a company’s warehousing system. Once the calculations are completed, the SDI Element Logic team can begin to calculate your ROI.

Element Logic, who acquired SDI Element Logic, has optimized warehouses since 1985 and has developed substantial experience in warehouse automation with AutoStore. There have been countless payback analyses completed and solutions provided that answer the question, “When do companies reach ROI?”



The average ROI for a warehouse automation system delivered by SDI Element Logic is two to three years.

The best ROI we have seen is less than a year, and the longest is up to six years.

During our years of automating warehouses, our payback analysts have noticed three main areas that can affect the time it takes to get your ROI:

- The number of employees.
- Saved rent costs.
- Real growth.

What if you do not automate?

Calculating the ROI is also a way to look at the company's profitability over time. When SDI Element Logic calculates the time to achieve ROI, we always calculate profitability if you choose to not invest in warehouse automation and compare it to the numbers if you were to automate.

The distribution center's rent, salary, damages on inventory, cleaning, and other expenses will likely increase each year.

SDI Element Logic calculates how these expenses will change over time with and without automation. With time, the combined expense will, in most cases, be higher than

the cost of warehouse automation.

According to Lewis, there's rarely a potential customer who is not convinced warehouse automation is the right step to stay competitive after doing the ROI and payback analysis.

"ROI calculations are always, and will always be, an approximation. But there is never a doubt whether the investment will become profitable for our customers," he added. "We hope that the decision is made well before the pain points within your operation begin to become problematic, that way we can start to forecast for the next crisis."

3PL - on route to warehouse automation

The investment in warehouse automation is significant, and it seems like a daunting investment to many, especially before the growth is secured. SDI Element Logic has noticed a trend with companies who do not feel ready to make the entire investment.

"When a company is looking at investing in automation, there are plenty of factors that they must consider," Nathan explained. "Sometimes, while they are milling over the possibility of an AutoStore solution, they may consider collaborating with a third-party

logistics company (3PL) to be able to handle more orders."

This way, a company can benefit from a 3PL with an automated warehouse while they prepare to make their investment in an AutoStore solution.

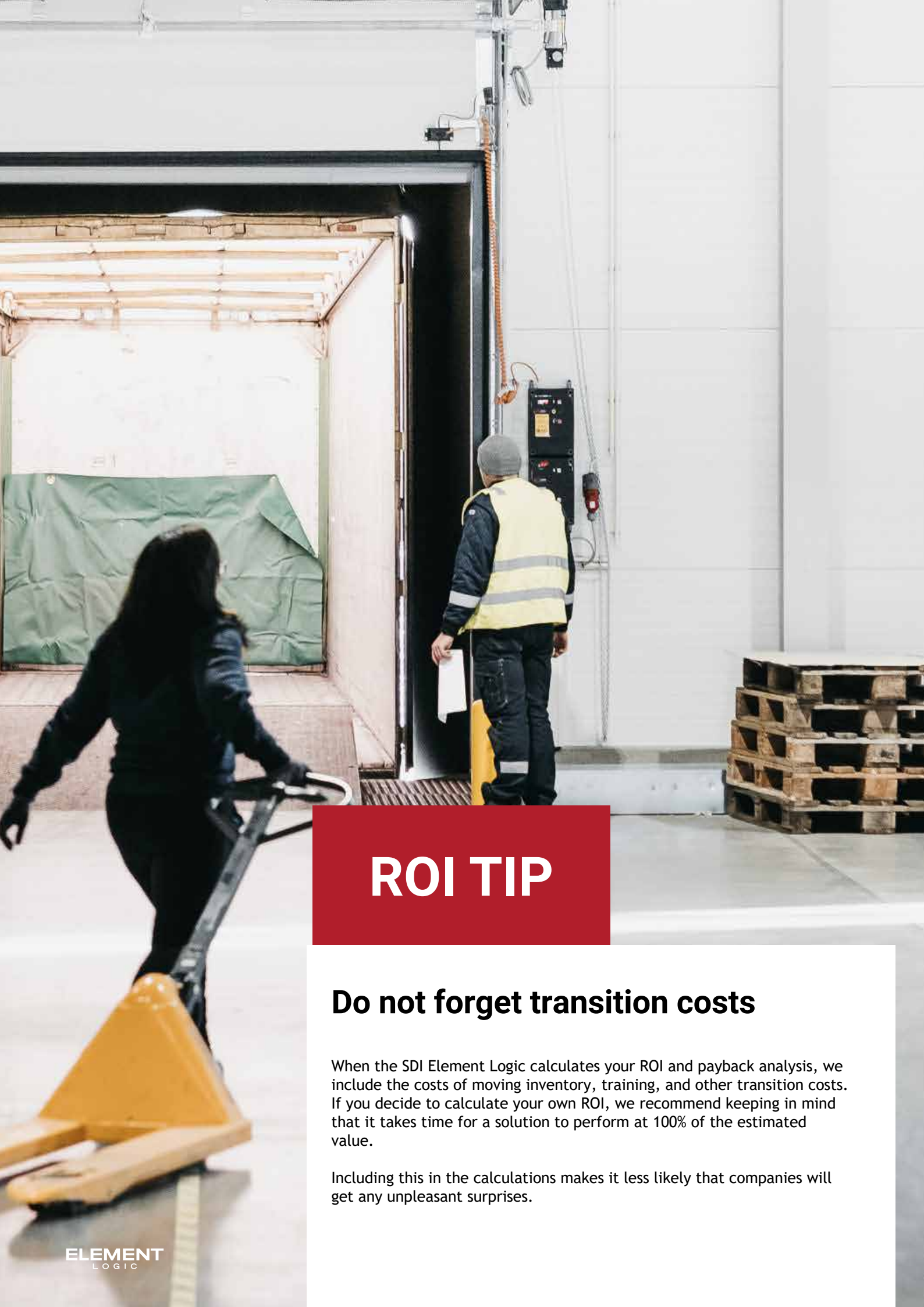
"Once the costs associated with using a 3PL company increases, and the company gains confidence in their growth ambitions, the company will touch base with us," Nathan added.

Is AutoStore the only option?

There are several other systems to choose between when deciding to automate. The main reason for choosing AutoStore is the unbeatable space reduction and scalability.

You can quickly scale up and down by adding or removing bins and robots, and the SDI Element Logic team will always make sure there is space to expand when the time for growth arrives.

The AutoStore solution, in combination with the SDI Element Logic software, eManager, is easy to install, and the time to market averages six months. "It is a large investment, so your careful decision-making is completely understandable," Nathan added. "The return on the initial investment is well-worth it."



ROI TIP

Do not forget transition costs

When the SDI Element Logic calculates your ROI and payback analysis, we include the costs of moving inventory, training, and other transition costs. If you decide to calculate your own ROI, we recommend keeping in mind that it takes time for a solution to perform at 100% of the estimated value.

Including this in the calculations makes it less likely that companies will get any unpleasant surprises.



Elektroimportøren

Achieved ROI on AutoStore in record time

After only two years, the growing company, Elektroimportøren, reached ROI on its AutoStore system from Element Logic.

Elektroimportøren is a supplier of all electrical equipment for B2B and B2C segments. The company has experienced large growth in recent years with the turnover increasing from 20 million to 100 million euros in only six years.

With this impressive growth, it became evident that there was a need for a new warehouse space and the streamlining of existing processes. They decided to build a new warehouse and utilize automation from an AutoStore system delivered by Element Logic.

Two years later the company had made a return on its investment. "We focused on our expenses and worked to not increase them parallel to our turnover," André Swensen, Logistics Director at Elektroimportøren said.

Compact and smart warehousing

After the decision to expand operations with a new warehouse had been made, it became natural to involve Element

Logic in the construction process to optimize it for AutoStore.

With thorough guidance from Element Logic, the process went quickly, and the result was above all expectations.

"It hurts when you hear the word automation in the logistics industry, because of the associated financial risk. However, now that we are familiar with the AutoStore system, we see that it primarily is a compact and smart storage system that helps us grow," Swensen said.

Expanded the AutoStore system

The growth of Elektroimportøren continued after automating, and the company decided to expand the AutoStore solution further after a few years. The expansion consisted of 9,600 additional bins, a picking tunnel, four port frames and eight new robots. This is close to double the size of the initial system. After the latest expansion, Elektroimportøren still has room for more bins, and the

warehouse is well equipped to handle further growth. Expanding an AutoStore solution comes with costs, but by having space to grow, Elektroimportøren saves money and time on expenses, such as electricians and installation during expansions.

ROI was a top priority

When Elektroimportøren first invested in AutoStore, cost and ROI were top priorities. The ROI calculations estimated that it would take three to four years before the investment was returned, but it took only two years.

When planning the extension, ROI was not a topic anymore. It was without a doubt going to be a profitable investment.

For other companies, the advice from Elektroimportøren is clear: "Take a possible expansion into account. If you are a company in growth, things go fast, and the key is to be prepared to handle it," Swensen said.

We help you prepare for growth

Calculating your company's time to get its ROI from warehouse automation is just dividing the financial benefit by the investment cost.

However, as this whitepaper has explained, there are many factors involved in this calculation. When meeting a new potential customer, the payback analysts at SDI Element Logic always have a practical approach to calculating the ROI. The goal is to help validate the investment in warehouse automation with AutoStore delivered by SDI Element Logic.

During these initial meetings, the SDI Element Logic team can discover that your company is unprepared to handle a significant investment in an

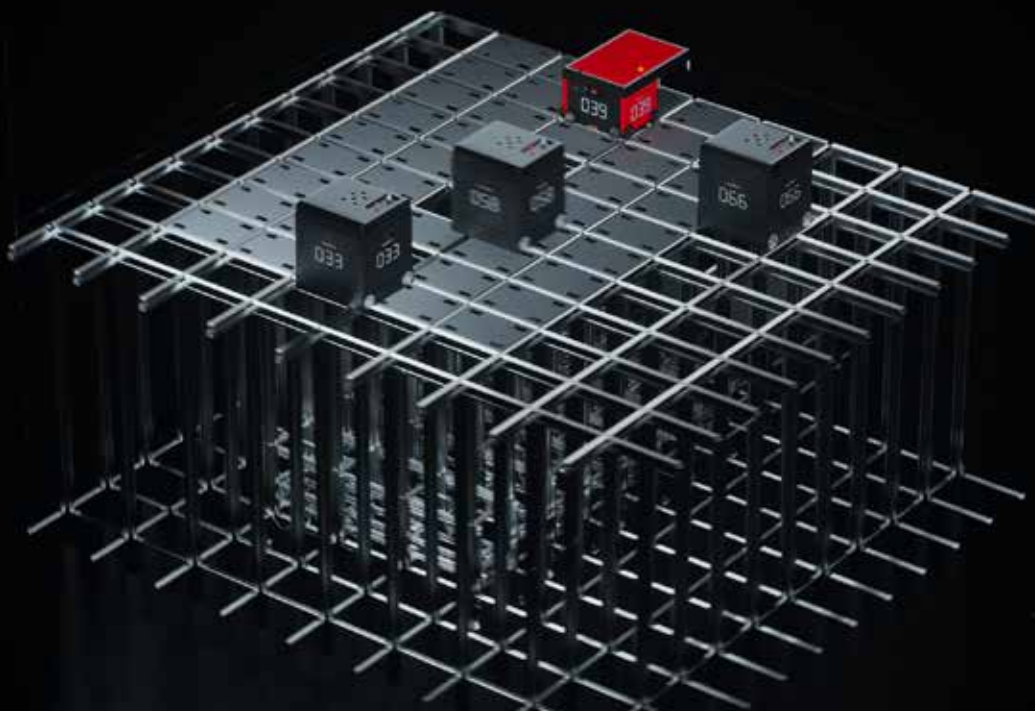
AutoStore solution. For some, it just might not be the right time to automate; it could be because of a lack of growth goals or because the growth plans are too far into the future, and the investment will not pay off.

One fact is non-negotiable, you can expect fast delivery and excellent customer service. If you want your business to survive, stay competitive and grow, you should consider investing in warehouse automation.

And with all the soft values playing a considerable part of your ROI, the investment is often returned faster than most would think.

If you plan to automate your warehouse, we recommend a scalable and flexible AutoStore solution with eManager software to stay competitive. But why take our word for it?

Contact us today to learn how much you can save with automation!



Want to learn more about how SDI Element Logic can optimize your warehouse performance?

Get in touch



A world map with a dark background and light gray landmasses. Numerous small red square logos are placed across the map, each containing the text 'SDI' above a stylized 'E'. The logos are distributed across North America, South America, Europe, and Asia.

For over 35 years Element Logic has been optimizing warehouse performance

We create smart solutions to help warehouses deal with the increasing demand for fast deliveries. Our robotic solutions, software and consulting helps businesses improve their value chains and to be more profitable. We optimize warehouses of all sizes in a wide range of industries including electronic components, parts distribution, consumer electronics, 3PL, pharmaceuticals, apparel, sports equipment, and more.

As the original AutoStore® partner, we have immense experience in designing, delivering, and installing tailor-made solutions to improve the customer workflow.

In 2022, SDI Element Logic was acquired by the Norwegian integrator, ElementLogic® – the world's first and largest AutoStore® partner. Their extensive experience in designing and installing tailor-made solutions that streamline customers' workflow, along with their robotic solutions; material handling systems; and software and consulting services, help improve customers' value chain become more profitable – meeting the end customer's expectation of fast delivery. Optimizing warehouses of all sizes in a wide range of industries, including electronic components, parts distribution, consumer electronics, 3PL, pharmaceuticals, apparel, sports equipment, and more. Element Logic® is headquartered in Norway and owned by employees, with the European Private Equity company Castik Capital as the majority owner.

Together, SDI Element Logic and Element Logic® operate worldwide. They had a total revenue of US \$523 million in 2022, while forming a robust integrator with numerous years of experience in diverse technologies across the world. Their combined regional expertise provides the most competitive solutions across the globe.

For more information go to www.SDI.SYSTEMS and www.elementlogic.net and follow us on Facebook, LinkedIn and Youtube

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