

**WAREHOUSE AUTOMATION**

**COST**

**VERSUS**

**BENEFIT**

**CALCULATE YOUR ROI WITH ELEMENT LOGIC**



Warehouse automation  
– **why is it worth it?**



ROI explained:  
**What you need to know**



ROI and warehouse automation:  
**The numbers that matter**



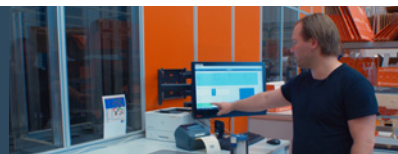
The numbers that  
**do not matter**



Calculating ROI with Element Logic  
– **When to automate and how**



Achieved ROI on AutoStore  
**in record time**



# Warehouse automation

## – why is it worth it?

ROI, or return of investment, is an essential financial metric for any business. ROI can be explained as a performance measure to evaluate the efficiency and profitability of an investment.

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 referencing a thorough analysis of when and how an investment pays off.

But 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.

We can easily calculate several numbers for you in an ROI and payback analysis. For example, what you will save on being more space-efficient and increased productivity.

However, it is important to remember that there are many benefits from automation that you cannot put an exact price tag on. 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.

Another benefit is being able to process returns swiftly and giving customers their money back within a reasonable timeframe. You can

also expect savings from nearly eliminating picking errors and avoiding cancelling customer orders.

Perhaps most importantly, what strategic business gains could the investment bring you?

The financial benefit of these qualitative values varies from case to case, based on different circumstances, priorities, future ambitions, and needs to be considered along with the facts and figures.

This whitepaper outlines perspectives and topics that can help simplify your decision by showing how you can achieve ROI and growth with warehouse automation.

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

Enjoy your reading,



Terje Skjølberg  
Group Sales Director  
Element Logic



# 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 specialising in supply chain management, logistics optimisation 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 explains.

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 maths. 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, he says.

### **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 labour.

“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,” Bek Jensen adds.





## 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.

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



# ROI and warehouse automation: The numbers that matter



Niklas Poulsen  
Sales Manager, Element Logic NO

**“The key to calculating ROI accurately is sufficient data. After a workshop, we calculate the right size for your solution and the number of storage bins your unique solution requires to reach ROI fast and equip you for future growth,”** Sales manager in Element Logic Norway, **Niklas Poulsen**, explains.

“We give our customers as much input as they want and require. It is essential that the customer is onboard, and that they believe in the numbers and own the ROI calculations,” he adds.

The Element Logic team will create a payback analysis based on your 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.

“There are multiple soft values compared to hard values. Before any decision to automate is made, we calculate the worth of each automation benefit for your operations. Now and several years from now,” Poulsen says.



## Hard values when calculating ROI

### #1 – You save space

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

Depending on your needs and growth plans, we calculate the size of your solution and thus can calculate the amount of space you save. The reduced need for space has a lot of advantages financially:

- You can move to a smaller warehouse.
- You can rent out the extra warehouse space.
- You might be able to stay in your existing warehouse and save money on not moving.
- There is less space to heat up and keep clean.
- You use less electricity (and reduce your carbon footprint).

### #2 – Reduced cost per transaction

With an AutoStore solution, your employees will increase productivity, pick and pack more orders per hour.

In general, you increase your efficiency by at least 100 per cent compared to a manual warehouse when you automate your pick and pack processes, often even more.

What that equals in terms of hourly rates differs greatly depending on the flow of goods, order processes and complementary automation.

The 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.

“The best part of saving money on space and more efficient labour is that it increases yearly. Our payback analysis calculates what you will save in years one, two, and 15 after automating,” Poulsen elaborates.

Potential savings from warehouse automation are many, and when you get more efficient, you automatically also save 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 you have a longer delivery time than your competition, the likelihood that they will take their business elsewhere increases.

The financial value of a shorter delivery time varies from customer to customer, depending on your industry's average and your current delivery time.

If your overall logistics operations are optimised, you 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 – you will get more satisfied customers.

### #2 – Reduced 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.

“We always recommend training a selected few to become super users of the AutoStore solution. This takes a few weeks to complete,” Poulsen explains.

Our super user training sessions focuses on operations, safety, and solving issues that could occur once the system goes live.

### #3 – Fewer picking errors

Picking the wrong item often has a minimum cost of 100 Euros. 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.





And do not forget 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 we see are related to picking the wrong number of items.

#### **#4 – Reduced cost of inventory control**

The AutoStore solution continuously keeps track of your inventory and logs it in real-time. Thus, you eliminate the need to put aside resources to do inventory control for the goods stored in AutoStore.

For our customers the goods stored in AutoStore averages at 80 per cent of the stock keeping unit (SKU).

#### **#5 – Reduced work for customer service**

With an automated warehouse, you save

resources on customer service.

This is a result of fewer picking errors and shorter delivery time.

“How much you save on this depends on how many complaints your customer service team receives today,” Poulsen adds.

#### **#6 – Satisfied customers**

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

This value is also related to the shorter delivery time and fewer picking errors.

#### **#7 – 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.

“Our customers report back to us that they have happier employees who are more loyal,” Poulsen says.

Employees are healthier and more energised by providing a more ergonomic work environment.

The value of satisfied employees depends heavily on how many workers you have, the physical strain from picking your products and the market where you are located. If there is a high level of competition to attract excellent and loyal labour, the value of an ergonomic workplace is greater.

**#8 – Increased control of inventory balance**  
With AutoStore and the Element Logic software, eManager, you have constant



control of potential excess or shortage in your inventory. This allows you to make sound operational decisions to stay continuously profitable.

**#9 – Reduced cleaning budget**

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

**#10 – Less theft and spoilage**

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

**#11 – Money saved on fewer trucks**

An AutoStore solution brings the orders directly to the ports. A system delivered by 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. He used to walk 25 000 steps each day while picking orders manually. At the end of each workday, he was exhausted.

After installing AutoStore with Element Logic he has gained his free time back and has the energy to live a normal life with his 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 some numbers our customers are very keen on bringing into the ROI workshop. Especially the money saved on labour, and how much they can reduce their delivery time," Poulsen says.

"People tend to not consider how much they can save from reduced warehouse space and picking errors," he adds.

Some companies also tend to think that automation is not suitable for their

business. This is mostly because of **turnover, inventory size and the number of employees.**

"There have been numerous situations where companies think they are too small for the investment in warehouse automation to be profitable. However, this always changes when they see their payback analysis," Poulsen explains.

The smallest warehouses currently benefiting from AutoStore has between

1000 – 2000 bins. The median customer is around 24 000 bins. We see increasingly better ROI calculations for systems in the 9000-12 000 range now than in previous years.

Our experience is that warehouse automation will most likely be worth the investment if you are more than two employees. However, it is important to remember that the more employees you have, the faster you most likely will reach ROI.



## ROI TIP

### How to shorten your time to ROI

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

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



## How Element Logic works with ROI analyses:

# Calculating ROI with Element Logic – When to automate and how



Isabelle Bion  
MD, Element Logic France

**“The best time to invest in an AutoStore solution from Element Logic is before needing it,” Poulsen states.**

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

The managing director at Element Logic France, Isabelle Dubois Bion, agrees with Poulsen.

“We have had a large increase in companies who want to automate in recent years. They understand that it is necessary to stay competitive and grow,” she says.

“If you plan to grow, I recommend looking into warehouse automation sooner rather than later”,

Dubois Bion adds.

Dubois Bion has seen first-hand how eCommerce has changed drastically in the last few years. This is primarily related to the COVID19 pandemic and tough competition leading to higher customer expectations.

“It only takes one wrong or late delivery for you to lose several current and future customers. That is why you need to prepare for future needs and increase the quality of your logistics,” she explains.





“However, it is important to remember that it is never too late to automate,” Dubois Bion adds.

### **The average ROI for warehouse automation**

According to Dubois Bion, when considering warehouse automation with Element Logic, most companies have the same question – how many years until ROI?

“This is a complex question. As explained earlier, it depends heavily on the price we put on each soft value,” Bion Dubois says

How much does a picking error cost you?  
How much will you save on satisfied employees? How much do you save on reducing customer service complaints?

“The first step is to estimate the value. Once the workshop is done, the Element Logic team calculates your ROI,” she says.

The calculation itself takes less than an hour.

Element Logic has optimised warehouses since 1985 and has developed substantial experience in warehouse automation with AutoStore. We have completed countless payback analyses and provided solutions to the question of “When do I reach ROI?”.

### **An average ROI for a warehouse automation system delivered by 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 affect the time to 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 your company’s profitability over time. When

Element Logic calculates your time to ROI, we always calculate your profitability if you do not invest in warehouse automation and compare it to your numbers if you automate.

Your rent, salary, damages on inventory, cleaning, and other expenses will likely increase each year.

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.

Dubois Bion has never experienced a potential customer who is not convinced warehouse automation is the right step to stay competitive after doing the ROI and payback analysis.

"Our calculations are always approximate. But there is never a doubt whether the investment will become profitable for our customers," she says.

### **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.

Dubois Bion has noticed a trend with companies who do not feel ready to make the entire investment.

"We have several companies who chose to collaborate with a third-party logistics company (3PL) to be able to handle more orders while they contemplate investing in warehouse automation," she explains.

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 of using the 3PL company increase, and the company gains confidence in their growth ambitions, the company



comes back to us," Dubois Bion says.

### 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 Element Logic team will always make sure there

is space to expand when the growth has arrived.

The AutoStore solution, in combination with the Element Logic software, eManager, is easy to install. The time to market is relatively short, averaging at about six months.

"It is a large investment, but the return on the investment is worth it," Dubois Bion says confidently.





## ROI TIP

### **Do not forget transition costs**

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

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

## CASE: 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 to automate with 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, says.

**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 optimise 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 says.

### **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."

[Learn more](#) 

# We help you prepare for growth

**Calculating your time to 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 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 Element Logic.

During these initial meetings, the Element Logic team can uncover that the 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 ambitions or because the growth plans are too far into the future, and the investment will not pay off.

One fact is non-negotiable, customers 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.

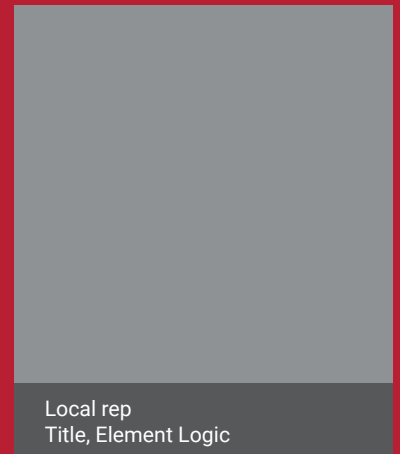
And with all the soft values playing a considerable part of your ROI, the investment is often returned faster than most would think.

To ensure the ROI is going according to the estimated timeline, each customer is assigned an after-market representative from Element Logic who actively engages with you to make your solution and operations profitable.

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 for your non-binding ROI and payback analysis.**



Local rep  
Title, Element Logic



Visit [elementlogic.net](http://elementlogic.net) for more information on our solutions and services.

Get in touch ▶

# Since 1985, Element Logic® has been optimizing warehouse performance.

We are the world's first, and largest AutoStore® partner. In 2022 Element Logic acquired SDI, making us one of the largest system integrators in the world.

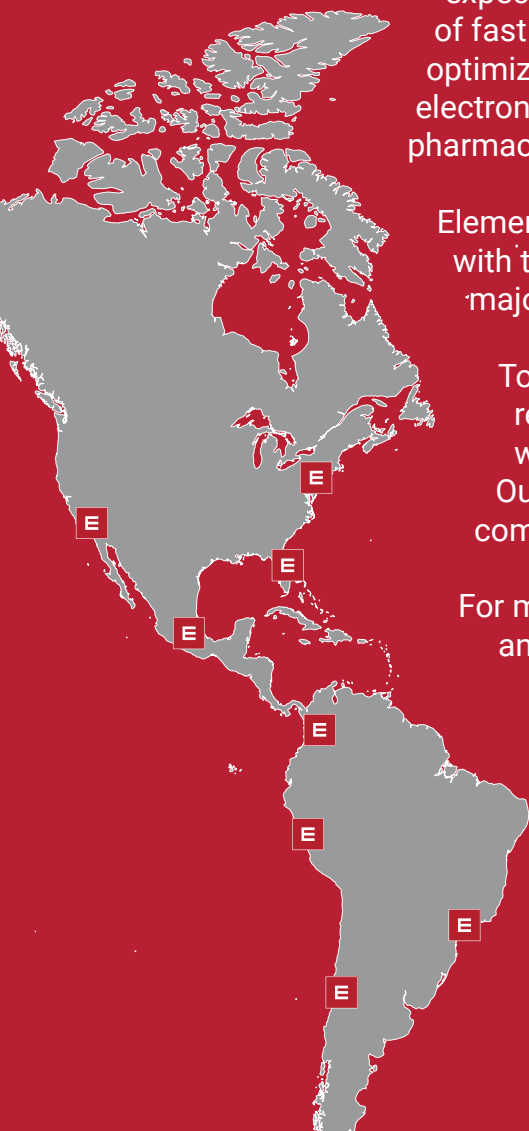
We specialize in storage and retrieval, unit fulfilment systems, and designing and installing tailor-made solutions that streamline our customers' workflow. Our robotic solutions, material handling systems, software and consulting services help improve our customers' value chain become more profitable and meet the end customer's

expectation of fast delivery. 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.

Element Logic® is headquartered in Norway and owned by employees, with the European Private Equity company Castik Capital as the majority owner.

Together, SDI and Element Logic® operate worldwide with a total revenue of EUR 294 million in 2021 and form a robust integrator with numerous years of experience in diverse technologies. Our combined regional expertise provides customers the most competitive solutions across the globe.

For more information about our automated warehousing solutions and services, go to [elementlogic.net](https://elementlogic.net) and follow us on Facebook, LinkedIn and Youtube.



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