

OPTIMISING SELF-STORAGE OPERATIONS THROUGH DATA ANALYSIS



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Purpose of this White Paper

This paper aims to give self-storage operators a comprehensive overview of the recent trends and developments around data analysis and AI in self-storage. This paper argues that despite the growth and profitability of the self-storage industry, operators need to embrace a holistic, data-based strategy to stay relevant and competition-proof in the market.

Executive Summary

Operators face new challenges as the self-storage industry is undergoing rapid growth and change. Many are embracing the power of data analysis to provide answers and strategies backed up by facts. There can be no two opinions on the benefits of data analytics for self-storage, and even the most simple management software tools come with built-in data analytics features. The challenge lies not in understanding that big data is crucial for the business but in having a successful implementation or organisational transformation to make the most of the data available. By using AI tools, operators can gain valuable real-time insights into their business as well as models and predictions of future developments.





Introduction

Self-storage was thriving in the pandemic era and continues to do so despite the geopolitical and economic challenges of the post-pandemic era. Worldwide, in 2024, the market size is estimated to be 58 billion USD and is projected to grow to 72 billion USD by the end of this decade [1]. This, in many markets rather than the traditional, industry is undergoing rapid change as new automation technologies and customer expectations are taking hold: Over 75% of self-storage visits and bookings already come from mobile devices, websites, and apps [2]. With this ever-growing digital footprint, more and more companies are interested in big data analysis. The self-storage industry can harness the power of vast amounts of information to gain a deeper understanding of its customers, optimise operations, and make data-driven decisions. By embracing data analysis and implementing a data-driven culture, operators can gain a competitive edge, unlock new revenue streams, and ultimately achieve long-term success.

Big-Data and self-storage

Why big data is a must

Ever since the number of mobile devices and tablets surpassed the number of PCs and Laptops sometime around 2011 [3], companies have gotten very serious about big-data analysis. The abundance of behavioural information available made it possible to mass-manufacture individually tailored products and service offerings. Companies started to collect and analyse enormous amounts of structured and unstructured data in an attempt to learn more about their customers and gain a competitive advantage.

Typically, the approach is a layered process: Data is collected during day-to-day operations, cleaned and analysed, and the result is finally used to build statistical models to predict consumer behaviour patterns. Especially in times when the industry is undergoing large-scale disruptions, as self-storage is now, a solid big-data strategy can ensure that management makes informed decisions and steers the business in the right direction.

While self-storage does not always feel like a high-tech industry, big data analysis is not a strange concept. Historically, facility owners have struggled to collect and analyse key information about the customers. But, the increasing levels of automation don't only impact facility management. In recent years, more and more information has become readily available as the digital footprint of self-storage facilities has become bigger. Even the most basic self-storage management software these days comes with data analysis functionalities. These analytics have the potential to provide crucial answers to improve the overall business strategy:

Optimise pricing strategies

- Market trend analysis can yield insights for more competitive pricing strategies.
- Dynamic pricing – understanding the ebb and flow of demand in each facility location, it is possible to set dynamic pricing to maximise profits.
- Use best practices from the airline and hotel industries to balance occupancy rates and pricing strategy.

Impact of marketing strategies

- Narrow down and identify customer segments based on demographic and behavioural data for better-converting marketing campaigns.
- Use customer insights to improve customer retention and engagement. Understand what your customers really care about and make it your product offering.

Customer experience

- With a more personalised marketing message comes a more personalised customer experience. Self-storage is a rather generic product; often, companies can only differentiate by offering better CX than the competition.
- Improved customer support – data analysis can help identify problems in customer service, allowing management to address them proactively rather than after the fact.
- Identify new trends and behaviour changes.

Operational Efficiency and Revenue

- By analysing usage patterns and sensor data, it is possible to improve maintenance efficiency and energy consumption of the facility and reduce costs associated with breakdowns.
- By modelling occupation levels, it is possible to assign limited resources like staff or marketing budget to facilities where it will have the most impact.
- Identify opportunities for ancillary revenue streams and upsell your existing or prospective customers.

Inventory and Space

- Analyse the space and layout of the facility to find room for optimization.
- Forecast future demand based on historical data and offer the right mix of unit sizes for maximised occupancy.

Risk Management

- Data analytics can help identify and flag attempts at fraudulent activities.

- Data analysis can also help ensure that the business stays compliant with industry and government regulations.

These are just a few examples of questions in self-storage that big data can provide an answer to.

Data Collection

Getting started with big data does not require a lot of equipment or effort. However, the success stands and falls with the quality of data collection. It is very easy to gather terabytes of information, but if there is no structure, then the analysis will not provide meaningful results.

Even if there is no centralised management for the facilities – as long as there is a computer, internet access, and a worksheet with customer information, high-quality data can be collected. The goal is to know as much as possible about prospective, current, and past customers at each point of interaction with the business. The data collected should be relevant to questions the business has. Creativity is only limited by practicality. For example, knowing how many of your customers have children about to move out for college to give them an attractive offer to store and remodel the old children's bedroom could be interesting, but practically, it is unlikely to get access to this information on a large scale. Like most other day-to-day operations, data collection can be partially or fully automated. A lot of the information will be available in the CRM if it is integrated with the self-storage software. Everything else can be obtained from forms and questionnaires that customers have to fill out. At the very minimum, a self-storage business should collect the following data:

Prospective Clients

- Contact details and basic demographic data
- Which marketing campaign is responsible for the conversion
- How did they first contact the business (app, website, phone call, etc.)?
- Their requirements regarding the unit and additional services
- The quote they received
- Why do they need self-storage (4-Ds of self-storage demand)
- Have they used self-storage in the past, and if yes, why are they changing facilities
- Which staff members did they speak to

Existing customers

On top of the above, for existing customers, every business should know:

- Why did they choose this property over another one
- Did they receive a special offer to move in?
- What is their rent rate compared to the average in the area?
- Are they subscribed to any extra services?
- How long is their lease?
- When was the last time they received an up-sell offer?
- How do they pay?

Past customers

For past customers, it is crucial to understand why they left and what could be done to prevent it in the future.

- When did they leave
- How long was their total lease
- Why did they leave
- Did they receive an offer to stay with different terms

Facility

Finally, gathering information about each facility to analyze and compare performance is essential.

- Occupancy rate over time and by unit type
- Average visit time
- Usage across time (i.e., when most people come, when most move in, etc.)
- Facility layout
- Sensor data from cameras, thermostats, doors, etc.

Data Analysis

Analyzing the gathered data has two components – comparing your targets to your results and understanding where deviations come from. The deeper you dig, the more insights you gain, but it is also easier to get lost in every-minute KPIs. Some of the collected data will be quantitative and easily visualized in a spreadsheet or chart. This can help model demand patterns in an area, make pricing adjustments, and identify the most converting marketing campaigns.

Let's look at this example. Facility A has received 80 new inquiries in the last month; out of those, only 10% signed the lease. At Facility B, there were only 38 inquiries, but 25 out of them signed the lease. Based only on these numbers, we cannot say why there is such a disparity in performance. In fact, it seems that A's marketing campaign was more successful. Seemingly, everything is right with the advertising. Diving deeper, comparing the two responsible sales managers and their closing rates over the past months is possible. If there is a significant disparity, one of the managers might require additional training. The cause could be completely different.

Let's assume that the problem is not with the managers, so we look further into the marketing campaigns. We find that the inquiries for Facility B mostly came from one Google Ads campaign that advertised small units and lockers. Out of the 25 people who signed up, 24 rented a smaller unit. Meanwhile, for facility A, most of the inquiries came from a general social media campaign targeting various customers. Most of the inquiries were for smaller and medium-sized units, but facility A had only very few available. We can conclude that the marketing campaign for facility A is not performing as well as that for B. It attracts more prospective customers, but because it is not targeted properly, the conversion rate is low, and the company is wasting its budget on bad leads.

Other data sources yield qualitative information. It is harder to analyze, but more often than not, it yields in-depth insights. A classic example is the feedback your customers leave when terminating their lease, especially if they voice dissatisfaction. Let's look at another example. A previously well-run, fully automated facility is suddenly experiencing churn. The prices have not increased, and there is no new competition in the area. Something must have upset the status quo, but the management can only find out if they directly ask the customers why they are terminating their lease. In this example, after sending out a simple email to 10 customers, 3 replied that there was a vermin infestation. As the facility is fully automated, there is no staff presence at most times, and maintenance has not been noticed.

A successful data-analysis implementation will always balance qualitative and quantitative data. By combining both and avoiding the pitfall of getting bogged down in excessive metrics, self-storage facilities can gain a comprehensive picture of their operations and make data-driven decisions that optimize performance and customer experience.

The impact of AI on data analysis

Using artificial intelligence to crunch large numbers is not a novel trend. But it seems that since ChatGPT was launched in November of 2022 [4], AI has been the center of any conversation. Big data is no exception. According to a Salesforce survey, 64% of marketers state that AI has substantially increased the efficiency of their marketing campaigns. 57% call it an essential tool to create 1-on-1 experiences across the entire customer journey [5] in 2017. By 2022, this figure had risen to 62% [6]. Thanks to the increasing adoption of the Internet of Things (IoT) at self-storage facilities worldwide, it is possible to easily and automatically collect all kinds of data about customer behavior at and around the self-storage business. From preventing theft and identifying where equipment maintenance is mostly needed to crafting personalized communication strategies with customers, AI data analysis tools can provide never-before-seen levels of depth and insights without significant additional effort to the self-storage operators.

Introducing AI tools to data analysis in self-storage can significantly improve the ability to make data-driven decisions and gain a competitive edge. The biggest selling argument for AI-powered data analysis is the ability to crunch large amounts of data in real time, providing managers with up-to-date insights. One of the main applications for this is dynamic pricing. AI algorithms can take into consideration demand, occupancy rate, competitor prices and other influencing factors to make live adjustments to prices. Other advantages are models and predictions. The AI can simulate different scenarios based on likely changes in market conditions to help the business assess the impacts and develop suitable strategies and countermeasures. Analyzing these patterns, an AI can also predict customer churn, giving the operators time to proactively react and retain the customers.



AI's rise since ChatGPT is undeniable – transforming big data and marketing efficiency!

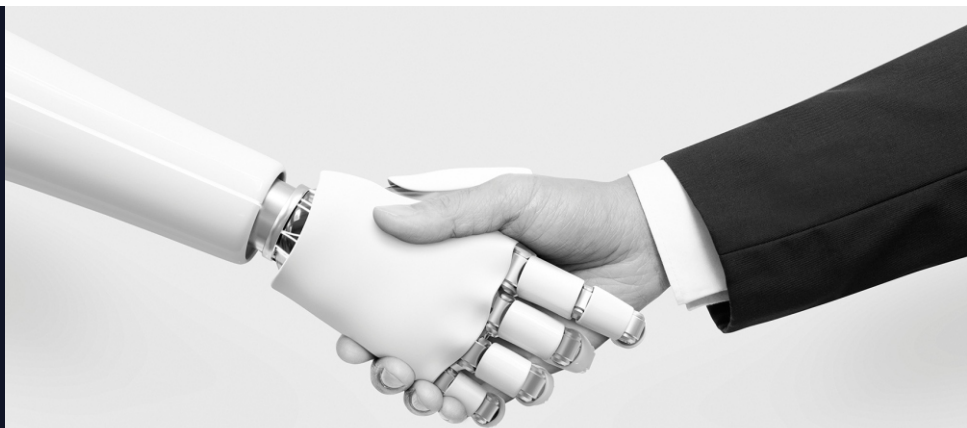
Implementation

No one can argue about the impact of analytics on a business. However, the success of the adoption depends on good implementation. As with any change and any project, there are risks associated with implementing data analytics into the operations. In a very sobering statistic, over 80% of big-data projects fail [7], and according to a prediction by Gartner, only 15% of AI-powered big-data projects would deliver correct insights [8]. These failures have the same reasons at the core.

- Too much data from too many sources – clean data is a building block of good data analysis. As mentioned before, it has become so easy to collect vast amounts of data at every customer touch point, but most of it goes unused. Like a marketing campaign, data collection has to be targeted based on the goal the business wants to achieve. Bad data leads to bad insights.
- Data Silos – Too often, relevant data is sitting on a hard drive or server and never sees the light of day, proverbially speaking. Internal inefficiencies and a lack of an overarching big-data strategy across the entire company usually cause this. Every employee and every touchpoint with the customer can be a relevant data collection point. Therefore, all teams and divisions must be on the same page regarding the analytics strategy. Too much data isn't good, but not enough data also leads to bad insights.
- Having the data but not acting on it – in another sobering statistic, three-quarters of C-level executives don't trust the data they receive [9].

For a successful data analysis implementation in self-storage or any business, developing and nurturing a data-driven culture is important. The loudest voice should be backed up in a meeting by good data insights. In a strategy meeting, the chosen course should be dictated by scenario analysis. Big data implementation is an ambitious project, and working with a good partner who will help create a common strategy that everyone can and will stick to is important. Building on past experience of the project partner will reduce the risk of failure. Most importantly, the partner can advise on the scale and scope of the project to make sure it stays focused, targeted, and relevant to the size of the business. Operators will also have to invest in a single data repository to avoid silos and to give everyone a holistic view. Every company sits on a gold mine of data and information. What differentiates the successful ones is how well they can utilise their potential.

"Over 80% of big-data projects fail—embrace the risks for AI-powered success!"



Conclusion

In today's data-driven world, where customer behavior is meticulously tracked and analyzed, big data offers self-storage facilities a powerful tool to gain a competitive edge. The industry is seeing enormous growth potential and change. Companies leverage data to navigate this new reality with personalized products and services: From adjusting prices to predicting consumer behavior to improving operational efficiency, the applications and uses of data analysis in self-storage are innumerable. A successful big data analytics implementation doesn't require extensive resources but hinges on the quality of data collection and having a good implementation partner. As self-storage businesses continue to evolve, leveraging big data will be essential for making informed decisions, improving performance, and staying competitive in a rapidly changing market.

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