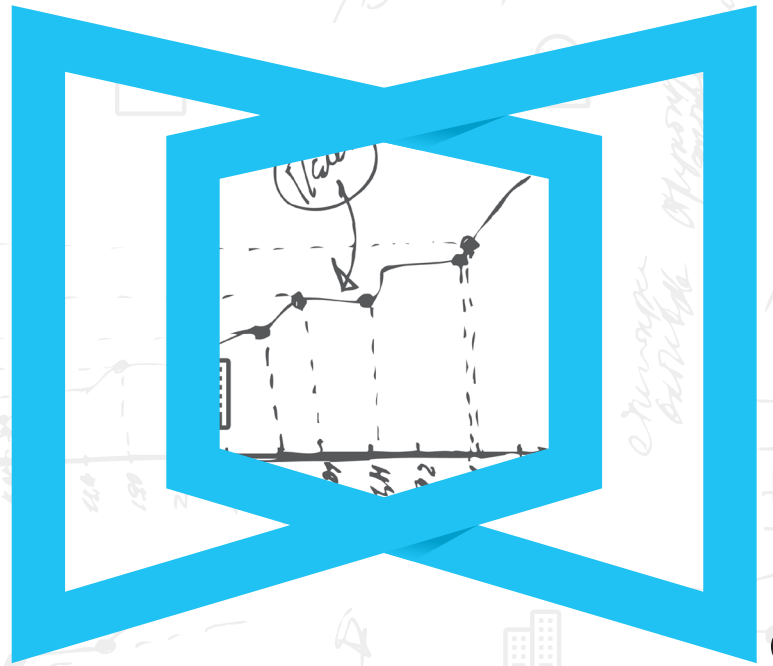


# White Paper Machine Learning and What it Means for Facilities Management



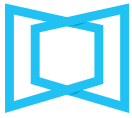
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# Machine Learning and What it Means for Facilities Management

## CHALLENGE

While Facilities Management can be a role highlighted by responding to emergencies (such as burst pipes, broken equipment, etc.), and one-off issues, often it's also focused on regular and routine facilities-related decisions. When looking at long term, bottom-line results, it's these latter, seemingly more mundane actions taken by the Facilities Team that can have the most significant impact.

For example, most Retail Facilities Managers must review hundreds of proposals from contractors and service providers. Plus, they must evaluate, verify and approve dozens of invoices daily. These tasks take time which delays needed work getting done and lowers quality of service. In addition, payments can also be delayed, which negatively impacts contractors and has the potential to lower service quality even more.

Historically, responding to service providers' proposals has been a manual-based, 'gut feel' process. On average, it takes more than four days to approve proposals. Approvals often involve multiple individuals in different departments and more than 80 percent of contracts are routinely approved.

This leads to excess costs, a lack of consistency, as well as lost opportunities to reduce costs. And even when contractors' proposals are rejected, providing useful feedback and resubmitting proposals is often a difficult, time-consuming process.

The challenge is how to make these never-ending decisions quicker while leveraging past-decision data to maintain consistency and improve improving the overall decision process and accuracy.

## BEST PRACTICE IMPLEMENTED

New technologies emerging from the field of artificial intelligence (AI) are bringing real and substantial benefits to Facilities Management. Specifically, machine learning (an application of AI) is enabling data-driven decision making to improve accuracy and timeliness while reducing costs.

Machine learning is about teaching computers to learn by interpreting data, classifying it, and over time, 'getting smarter' from its success and failures. Common examples include Amazon's providing product recommendations based on past browsing and purchasing behavior, and travel site airfare purchase recommendations (e.g., buy/wait).

How does machine learning impact the world of Facilities Management? New systems leverage companies' historical data and past decisions and using machine learning techniques with prescriptive analytics integrated into Facilities Management systems, improve routine daily tasks such as proposal evaluation and invoice approval processing.



Current Facilities Management-focused 'decision engines' work as follows (contractor proposal evaluation use case):

1. Machine learning-enabled facilities and service automation systems capture historical data of previously accepted/rejected proposals and work orders (e.g., the specific trade, category, equipment, price, contractor performance, etc.)
2. The decision technology analyzes and evaluates the specific data, previous influencing factors and past decisions using machine learning techniques.
3. The system produces an actionable approve/reject recommendation for a specific proposal based on a confidence level (ideally with supporting intelligence provided to add more underlying information to the decision)

Using this process, a Facilities Manager can easily view a data-informed recommendation immediately, based upon his/her past decisions. Over time, as more data is captured and more decisions made, the decision engine will improve its recommendations.

With machine learning integrated into Facilities Management systems, more and more historically routine decisions can be made based upon data rather than gut feelings. Other specific use cases that can benefit from this Best Practice include invoice approval, equipment repair/replace, request for proposal (RFP) analysis, not to exceed (NTE) limit optimization and more. Any decision a Facilities Manager routinely makes can be made quicker and more accurately with machine learning-based systems.

## RESULTS OF THE BEST PRACTICE

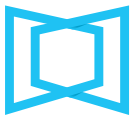
Making data-driven decisions using machine learning and prescriptive analytics have resulted in the following benefits:

<b>Improved decision speed</b>	Less time spent reviewing, verifying, contesting, discussing proposals
<b>Reduced costs</b>	Via better proposal accept/reject decisions
<b>Superior decision quality and consistency</b>	By relying on historical patterns as well as supporting intelligence to augment Facilities Management experience and expertise

Facilities Managers and teams make decisions every day but too often these decisions are made without data or in an inconsistent manner. These decisions are made often and non-optimized decisions can have a profound result on the overall results of the facilities program.

Until recently, even Facilities Management-based technologies could not easily access the relevant data for a specific decision or use past data and decisions in actionable recommendations. With machine learning and prescriptive analytics, a company's facilities data and past actions can be automatically analyzed and converted into recommended courses of action. This Best Practice results in bottom line savings in dollars and time, improving program results and quality of service delivered.





## VERIFICATION OF EFFICIENCY AND/OR SAVINGS CAPTURED

One larger Retailer, after moving to a machine learning-based proposal evaluation process, reported reducing the time to approve/reject a proposal by 50 percent. Using a systematic approach to make such decisions also enabled all facilities team members to make decisions (rather than waiting for the team leader), expediting the decision-making process and improving service quality.

Another Retailer reported significant savings on individual proposals by being able to readily access applicable data and data-based recommendations. Costs for proposal-driven service work have been reduced by knowing which proposals to accept and which ones to reject to get more cost competitive ones.

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*ServiceChannel provides a single platform with real-time, web-based views of service data across all trades, locations and contractors to source, procure, manage and pay for Facilities Maintenance services*

## About ServiceChannel

ServiceChannel provides facilities managers with a single platform to source, procure, manage and pay for repair and maintenance services from commercial contractors across their enterprise. By delivering unprecedented transparency and data-driven analytics of service quality, across all trades, locations and contractors, facilities managers drive significant brand equity and ROI for their organizations without outsourcing or investing in new infrastructure. The world's leading global brands use ServiceChannel solutions daily to help optimize millions of transactions and billions of dollars of spend annually.

