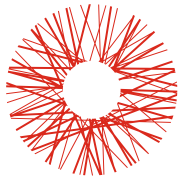




ROI CASE STUDY

PROGRAM: CUSTOMER RELATIONSHIP MANAGEMENT

DOCUMENT NUMBER: S112 JULY 2018



NUCLEUS
RESEARCH

ROI: 282%

Payback: 8.4 Months

MICROSOFT

MACDONALD-MILLER FACILITY SOLUTIONS

ANALYSTS

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THE BOTTOM LINE

MacDonald-Miller Facility Solutions (MMFS) deployed an integrated solution of Microsoft Dynamics 365 with Azure IoT Hub to improve operational efficiency, centralize company information and processes, and to modernize as an early adopter of Internet of Things (IoT) technology. MMFS was able to modernize its field service operation to one of proactive maintenance, reduce the time-to-completion for service calls by nearly two weeks, increase profits, and differentiate itself as an industry leader in smart building construction, optimization, and maintenance.

THE COMPANY

MMFS is a leading full-service, design-build contractor with three primary business arms specializing in new construction, facility service and maintenance, and building performance optimization. Headquartered in Seattle, WA with 10 locations across Washington and Oregon, MMFS is an industry leader in the design, construction, and modernization of “smart” buildings to minimize building energy usage with the goal of cost savings for owners and a “greener” planet for all.

THE CHALLENGE

Prior to the implementation of Microsoft Dynamics 365, MMFS faced difficulties synthesizing company data from many disparate sources and uncovering actionable insights from it. The company already had Dynamics deployed on premise; however, there were only five active users and there was no unified system to share service requests or leads across the entire business in an efficient manner. In-person collaboration between customers, sales, and service technicians, as well as accounting and executive Leadership, was difficult to record and track. This caused frustration, extraneous clicks in multiple systems, and lost earning potential. To ensure continued growth, MMFS needed to improve organizational visibility and operational efficiency by modernizing the marketing department’s use of analytics and by modernizing its field service to reduce the time needed to resolve service calls and incorporate preventative maintenance.

**Cost : Benefit
Ratio** | **1 : 4.4**

THE STRATEGY

MMFS already had experience with Microsoft Dynamics and other Microsoft tools and technologies when it began to evaluate its new CRM strategy. The new CIO had previous experience with Salesforce, but ultimately decided to adopt Dynamics 365 and Azure IoT Hub for three main reasons:

- Usability. Employee familiarity with the Microsoft user interface (UI) ensured smooth adoption and reduced the amount of training necessary.
- Scalability. The solution could be easily scaled up to accommodate new users and workflows. Mobile compatibility allowed service techs to access data and log work orders in real-time; site managers could monitor buildings remotely and company operations could be unified across all 10 corporate offices.

- IoT integration capabilities. Because the Azure IoT Hub was integrated with the Dynamics 365 Connected Field Service platform, MMFS could take advantage of emerging IoT capabilities to build out the use case for managing complex smart building data and field service.

Fine Solutions (since acquired by Encore) was selected as an implementation partner, assisting with data migration and creating specialized triggers and workflows for each of the three business arms: construction, maintenance, and building optimization, as well as training. At the initial rollout, there were 146 users; each received 10 hours of face-to-face training on the platform with an additional 2 hours of self-guided learning on the Web.

At present, the solution has been adopted by the entire company and is customized to support each of the three business arms' unique operations. MMFS has used the Microsoft technologies to shift towards a more proactive business model, using real-time data to deploy technicians as needed before a customer requests service. Technicians can utilize wearable technology in the field to provide photos and videos of company assets while on site. The sales team has visibility of this media and can use it for customer-facing processes such as portfolio review.

TYPES OF BENEFITS

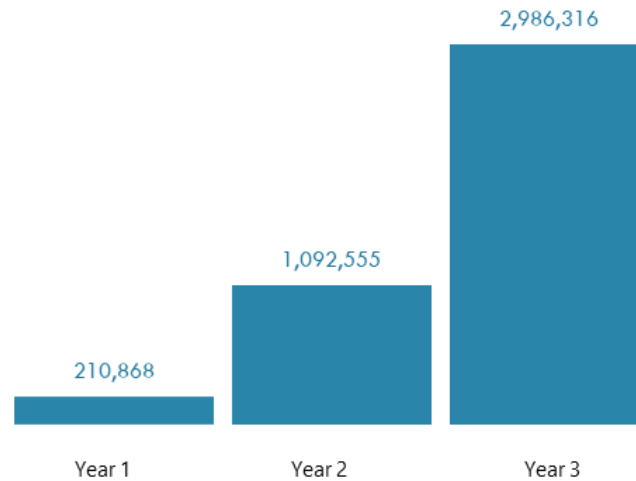


KEY BENEFIT AREAS

Deploying Dynamics 365 and Azure IoT Hub allowed MMFS to modernize and grow its business by facilitating collaboration across business units and departments and optimizing field service operations by leveraging IoT. Key benefits of the project included:

- Increased field service efficiency. Because of field service automation and the integration of IoT data, MMFS is able to manage more buildings and facilities without a correlated increase in field staff.
- Increased profits. The project enabled MMFS to increase profits through improved marketing, increased lead capture by technicians in the field, and cross-departmental transfer of leads. The company has also gained new opportunities through its differentiated IoT service capabilities.
- Increased visibility. MMFS was able to use analytics tools such as search engine optimization (SEO) and keyword analysis to track and improve marketing campaigns in real time. The adoption of Dynamics by the marketing team has recouped over 58 percent of the total deployment costs in additional profits from Web-generated leads over the past 6 months.

CUMULATIVE NET BENEFIT



KEY COST AREAS

The largest cost area of MacDonald-Miller's deployment was software subscriptions, making up more than 70 percent of the total cost. Other cost areas over the three-year period included initial and ongoing personnel costs to implement and support the solution, third-party consulting from Fine Solutions, and the cost of employee time for training on the new system.

LESSONS LEARNED

Integrating analytics with real-time sensor data from smart buildings differentiates MMFS as the industry leader in real-time, data-supported building optimization. As IoT is still a developing field, having Microsoft as a partner with a reputation for industrializing nascent technologies lent MacDonald-Miller both validity and expertise in the deployment and has allowed it to redefine its business model from one of reactive service to one of proactive engagement.

Realizing that adoption was critical to achieving value from the deployment, MMFS knew it needed an internal transition strategy that included both user training and management support. To incentivize the migration onto the new Dynamics platform, it set up an internal adoption leaderboard. Using the leaderboard to create individual and team usage benchmarks, managers were able to identify the different classes of users. Frequent and skilled users scored higher and were commended while the more reluctant adopters were supported, resulting in a faster and more well-accepted migration to Dynamics.

CALCULATING THE ROI

To calculate MacDonald Miller's total investment in Microsoft, Nucleus quantified the initial and ongoing costs over a three-year period for software, personnel, consulting, and training.

Direct benefits quantified included the cost savings from avoided hires, calculated based on the average annual fully loaded cost of the avoided staff members.

Indirect benefits included increased profits from both Web-generated and service-generated leads and were quantified based on the resulting increase in revenues, applying an average profit margin.

Benefits not quantified include the increased company visibility and the added prestige that comes from being a leading-edge technology provider, as MMFS has become, with smart building optimization and maintenance.

FINANCIAL ANALYSIS

Annual ROI: 282%

Payback period: 0.7 years

BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	290,000	560,000	1,370,000
Indirect	0	546,690	547,230	547,824
Total per period	0	836,690	1,107,230	1,917,824

COSTS - CAPITALIZED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	0	0	0	0

COSTS - DEPRECIATION	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	0	0	0	0

COSTS - EXPENSED	Pre-start	Year 1	Year 2	Year 3
Software	201,480	201,480	201,480	0
Hardware	0	0	0	0
Consulting	83,000	5,500	5,500	5,500
Personnel	30,516	18,563	18,563	18,563
Training	85,284	0	0	0
Other	0	0	0	0
Total per period	400,279	225,543	225,543	24,063

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
All government taxes	45%			
Cost of capital	7.0%			
Net cash flow before taxes	(400,279)	611,147	881,687	1,893,761
Net cash flow after taxes	(220,154)	336,131	484,928	1,041,569
Annual ROI - direct and indirect benefits				282%
Annual ROI - direct benefits only				145%
Net Present Value (NPV)				1,367,773
Payback period				0.7 years
Average Annual Cost of Ownership				291,809
3-Year IRR				187%

All calculations are based on Nucleus Research's independent analysis of the expected costs and benefits associated with the solution.