



JANUARY 2017

Closing the Gaps without Breaking the Bank

A Case Study Featuring A Big Box Retailer



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.

Letter from the Executive Director

If NAEM's benchmarking research has taught us anything, it's that no two companies solve the same problem the same way. Even in a field where environment, health and safety, and sustainability programs often have similar elements, individual leaders need to understand how to adapt core concepts to the particularities of their own company's organizational structure, operations and culture. This is nowhere truer than in the area of EHS&S data management, where commercial software systems offer centralization and automation, as long as practitioners understand their organizations well enough to configure these systems to their needs.



And there is no one practice or approach for solving a complex problem like that.

To understand a challenge like data management, it's useful to hear from a variety of peers, to learn what worked and didn't work so well, and allow their experiences to inform your own. That is what this report is intended to do. As the latest installment in NAEM's research on EHS&S Software and Data Management, this report gives you a peek inside how a diverse group of companies use software tools to organize their EHS&S information and communicate their performance.

In reading through these case studies and interviews, I was struck by what a creative a problem-solver you need to be to find the best solution for your company. Insofar as no two companies are alike, one system does not always fit all. I was also reminded of a maxim that seems to emerge at every NAEM Software and Data Management conference we've hosted since 2001: Data Management is a long-term journey that requires vision, leadership commitment and continuous improvement.

We hope that this report helps you understand how your experiences compare to those of your peers and gives you some ideas you can use to help you refine your path forward.

Sincerely,

A handwritten signature in black ink that reads "Carol Singer Neuvelt". The signature is fluid and cursive, written in a professional style.

Carol Singer Neuvelt
Executive Director, NAEM

Contents

Introduction	4
Case Study	6
Lessons Learned	10
NAEM's Software and Data Management Offerings	12
Acknowledgments	14

Thank You to Our Publication Sponsors

This research report was independently developed by NAEM in accordance to our objective research standards, and is available free-of-charge, thanks to the financial support of the following sponsors:



About NAEM

The National Association for Environmental Management (NAEM) empowers corporate leaders to advance environmental stewardship, create safe and healthy workplaces and promote global sustainability. As the largest professional community for EHS and sustainability decision-makers, we provide peer-led educational conferences, benchmarking research and an active network for sharing solutions to today's corporate EHS and sustainability management challenges. Visit NAEM online at www.naem.org.



Case Study on Data Management



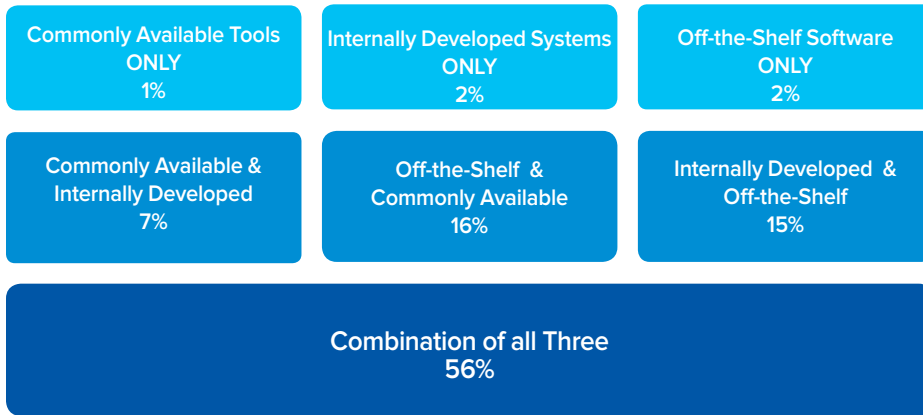
For any EHS and Sustainability leader who has had to manage vast amounts of data, it's tempting to think that there might be a software tool, or one strategy out there, somewhere, that could meet all of your needs. Unfortunately, the experience of those who have selected, implemented and managed these systems suggests this is not the case.

Indeed, a number of variables help shape a company's EHS&S data management strategy, including organizational design, internal culture, types of operational risks and the level of external scrutiny to internal operations.

It's perhaps not surprising then, that among the 165 software users NAEM surveyed about their company's data management approach, 56 percent are using a combination of commercial systems, internally developed software and commonly available tools, such as Microsoft Excel.

Current Data Management Approach

Figure 1



N=164

As the EHS&S software offerings become increasingly sophisticated, more companies are adopting commercial systems to centralize data collecting and reporting.

Common Reasons Why Companies Use More than One System

While software tools for the environmental, health and safety, and sustainability professional have rapidly matured over the past decade, more than half of those surveyed by NAEM still use a combination of commonly available tools, internally-developed software and commercial systems to manage their data. The reasons, according to research participants, may include:

- Decentralized structures may not lend themselves to a centralized reporting systems
- Diverse operations may produce a variety of data types
- Individual operations may have unique risks that require targeted solutions
- Internal culture may value decentralized decision-making
- Acquired businesses may have their own software tools
- Legacy tools may be better aligned with organizational needs



Even so, the scope of these implementations vary widely from company-to-company. A single company may use an enterprise-wide system to manage its corporate standards, for example, while its individual business units use different combination of software systems to meet their own unique needs.

This is often the case for companies that have gone through a merger or acquisition, where the new business entities bring new assets but also their own approaches to data management.

All this makes standardizing corporate processes, or adopting any single system, exceedingly difficult. But as Jason Schmitz, Director of Trinity Consultant's T3 Group points out, perfect integration and standardization may be an unattainable ideal.

“It’s very easy for the human brain to say, ‘We’d really like to have everything in one nice, neat, tiny bow. The fact of the matter is that these organizations are diverse; they grow; they contract; people come; people go; the organization restructures; people get new roles and responsibilities.”

“It’s okay to not have perfect data because you’re not going to have perfect data...you’ve got to figure out what you can tolerate,” he said.

Regardless of a company’s EHS&S program maturity, business objectives or budget, software tools remain just that—a conduit for collecting information. It’s how well an organization aligns around a vision and commits itself to continuous improvement that truly holds the key to success for any data management program.

“The hope is that you master one area and then you go onto the next top priority and master that,” Mr. Schmitz said. “Data management is an evolution.”

In the interviews and case studies that follow, we will examine how different companies evaluated unique data management challenges, and identified solutions to address their business needs. We’ll also explore how they solved problems today while positioning their programs on a long-term path for growth.



Closing the Gaps without Breaking the Bank

Faced with a variety of data management needs, it may seem that a single, enterprise-wide solution is the best option. In this interview, however, the corporate EHS&S leader of a big box retailer explains how identifying distinct needs led to a cost-effective set of solutions.



Q: Could you briefly describe your company and the nature of its EHS risks?



A: My company is a big box retailer with thousands of employees. Our EHS risk is lower than most manufacturing industries or utilities, but the risks are broad. Our highest risk areas are ammonia refrigeration, construction storm water management, hazardous waste management, and fuel systems.



Q: What was the specific data management challenge you faced? How did this issue come up?



A: Our company did not have any type of environmental information management system in place and we were initially looking for one system to manage compliance as well as sustainability data.

Our compliance data is managed by a handful of employees, relatively few. And we had some existing enterprise systems in place. My concern was by building a larger EMIS that we just wouldn't have the resources to manage. I also didn't want to have to train on a new EMIS that they would be using infrequently. I wanted them to focus on using the new enterprise system that we had and just fill in the gaps, where needed.



Summary of Top Desired Software Capabilities: Buyers

Figure 5

Top Desired Software Capabilities	Percentage
Incident tracking	88%
Corrective action tracking	85%
Audit finding documentation	82%
Incident reporting	82%
Incident investigation	82%
Internal reporting	82%
Performance metrics/dashboards/scorecards	82%
Environmental auditing/inspections	76%
Compliance calendar	76%
Energy and carbon management/metrics	73%
Safety auditing/inspections	73%
NOV tracking	73%
Non-Conformance statistics	67%
Risk management	67%
Regulatory change tracking and monitoring	64%
Hazard identification and assessment	61%
Annual sustainability reporting	61%
GHG reporting	61%
Job hazard/Risk assessment	58%
EMS/ISO 14001 management system	58%
Document management	58%

N=33

On the sustainability side, our data were siloed around the company, whether that was waste data that were provided by our waste hauler or we have water/energy utility data that are collected and recycling data that are collected by our recycling vendors, so we had all of these disparate locations for our data so there was never really one true source. And the data that we received from our vendors was in different formats: so it was a mess.

We knew that we wanted a single true source of data, something that had a user-friendly dashboard because it would be a system that would be used by a lot of different people across the company. My criteria were to identify a product that could generate trend graphs and reduce data fairly easily and automate the receipt of the data and have a user-friendly dashboard.



The other issue we faced was financial. Because we did have enterprise systems in place that we could patch together, it was a much for difficult justification for me to spend a significant amount of money to bring in an all-encompassing integrated systems that would duplicate other things that we had in our enterprise systems.



Q: What was the solution or approach you came up with? What steps did you go through to implement that solution?



A: We decided to separate the two issues, and seek two different solutions as the users and audiences were distinct.

When I would attend NAEM conferences or RILA conferences, I had an opportunity to meet with some of the vendors and see software solutions. Whenever we purchase any type of software, our IT staff goes through a project management process where they'll assess our needs, look at the IT and system issues and look into our existing IT systems, so they put together a business requirements document, which includes an overview of the process, the workflows, the systems requirements reporting, the interface requirements:

- The software had to support data collection from these existing enterprise systems (for compliance) in addition to things that would be manually uploaded.
- The application had to support data entry in a variety of units of measure.
- The application had to include details about existing store locations.
- The software had to be able to reconcile common units of measure, especially because we were looking at energy and greenhouse gas emissions, etc.
- It had to support a variety of reporting needs.
- The system had to evaluate that data and generate things like carbon footprints and energy metrics and things like that.

We had some online demonstrations from five vendors and we whittled it down to four for the RFP and one that we selected.

We decided to use in-house enterprise systems to manage compliance calendars, procedures, inspections, and audits, as users would be company-wide. We then purchased cloud-based software to provide regulatory requirements and updates, as well as audit checklists. We identified providers through conferences, conducted interviews and sole sourced our selection.

We purchased a new software system to manage our sustainability metrics. We identified providers through conferences, developed a project plan, released an RFP to pre-selected companies, conducted interviews and demonstrations with a short list and selected a provider based on meeting our project criteria.



Q: How has that performed for you? What are some of the benefits you've been able to realize from that approach and what are some of the shortcomings?

A: On the compliance side, the benefits were that this was the absolute lowest-cost way to do it. We have not had to spend internal resources on IT or on training. The data that we generate is easily accessible to others in the company. The downside is that it is a patchwork system so we do sometimes have to go to multiple systems to run through a process.

On the sustainability side, the benefits are that we finally have one true source of data that we don't have to go to multiple locations and multiple users to collect. We can now deliver metrics quarterly and produce an annual footprint report internally because the system is pretty easy to use. We've also been able to manage this all in-house, without any outside consultant support.

Q: How much did you spend?

A: For the compliance system, we spent less than \$10,000; for the sustainability system, we spent less than \$50,000.

Q: How many staff resources are required to maintain the system?

A: We've had internal IT support via the start up but minimal amount of time and maintenance afterwards. And again, because we're automating almost all of our data collection, our resources are spent evaluating data, not just collecting and managing it.

Q: How many users do you have?

A: For the compliance system, we have five users; for the sustainability system, we have eight users.

Q: Any lessons learned you'd like to share from your experiences?

A: Sure it would have been nice to pull in a slick, all-purpose system but we didn't really have to. And there's no way we could have done this any cheaper, and still received the same value.





Lessons Learned

No matter the maturity of your data management program, there are certain lessons that seem universal to all companies. These include:

1. **Data management begins with establishing a basic set of standardized work flows:** “If you don’t have the processes where we have a common definition and terminology for how we do things and what information we collect, and what exactly that information means, you can’t deploy any software much less an off-the-shelf version.”

2. **Every EHS&S data management system will need cooperation from other functions to be effective:** “The art of organizational change management is huge for putting in new data management systems, especially if you’re relying on a network of people or upstream business processes.”

3. **A data management system is only as accurate as its users:** “If executed properly, [most business processes] produce high-quality information. The problem is that without the knowledge, the skill and the capability, people sometimes just get it wrong.”

4. **Each solution has its quirks:** “There’s no system that users say: ‘It’s so great, I really love it,’ People always have their complaints.”

5. **Data Management is a journey of continuous improvement:** “Sometimes you’ve got to put a stake in the ground and move forward and use that mark as your starting point for [further improvement]”



6.

Don't rush into a decision: "Take your time to review what is out there because an EHS software platform is a long-term commitment. It's not a project that you do for one or two years: This becomes a corporate solution."

7.

Know your Audience: Work for the target audience or customer base. Know who will be using the system and what it will be used for. Organize data or information that makes sense to the user and helps them make decisions in a timely manner and take action.

8.

A complicated problem doesn't require a complicated solution: "It is best to match your organizational requirements and assess as to what solution works for you. The solution must be cost-effective relative to the compliance risk. Don't buy "Cadillac" if the need is not there."

9.

Progress is not always a straight line: "As you continually improve, you get the curveballs of change that may take you two steps forward, one step back. Whenever you're in the middle of that, it might not look so pretty but as long as you're vectoring in the right direction, I think that's the most important thing when it comes to data management."


10.


The more data, the more work: "Once you create more data for yourself, you create more problems for yourself. You never used to know about those incidents that occurred. Now that you've got that granularity, you've got a problem that you've got to deal with. The overwhelming amount of data that you're going to create might actually make your job harder, so you've got to be cognizant of that."



Read the Full Case Studies Series

Download NAEM's Approaches to EHS & Sustainability Data Management report or read a case study from the series by visiting www.naem.org

 **Approaches to EHS&S Data Management**
 DECEMBER 2016 *How Corporate Leaders are Setting Priorities and Leveraging Software to Advance Program Performance*



Thank you to our research sponsors:

ch2m **enablon** **INTELEX**
sphera™ **UL** **velocityEHS**


Copyright © NAEM. All Rights Reserved.


 **Finding Common Ground within a Decentralized Company**
 JANUARY 2017 | A Case Study Featuring Amphenol Group



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.


Copyright © 2017. All Rights Reserved.


 **Using Data Visualization to Meet Compliance and Drive Internal Engagement with EHS Data**
 JANUARY 2017 | A Case Study Featuring an Energy Generation Company



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.


Copyright © 2017. All Rights Reserved.


 **Transforming a Central Data Repository into a Dynamic Information Management System**
 JANUARY 2017 | A Case Study Featuring The United States Postal Service



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.


Copyright © 2017. All Rights Reserved.


 **Careful Management Helps a Legacy System Withstand the Test of Time**
 JANUARY 2017 | A Case Study Featuring Abbott Laboratories



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.


Copyright © 2017. All Rights Reserved.


 **Closing the Gaps without Breaking the Bank**
 JANUARY 2017 | A Case Study Featuring A Big Box Retailer



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.


Copyright © 2017. All Rights Reserved.


 **Enforcing Corporate Standards through Centralized Data Management**
 JANUARY 2017 | A Case Study Featuring Chevron Corp.



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.

Copyright © 2017. All Rights Reserved.

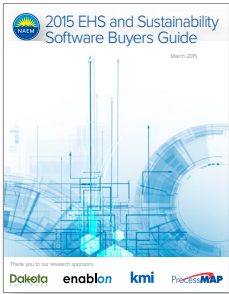
 **Executing a Multi-year Data Management Strategy Using Internal and External Systems**
 JANUARY 2017 | A Case Study Featuring Lam Research Corp.



This case study is part of NAEM's report on "Approaches to EHS & Sustainability Data Management." This series of case studies explores how organizations from different industries meet their unique data management challenges. To read the full series, visit www.naem.org.

Copyright © 2017. All Rights Reserved.

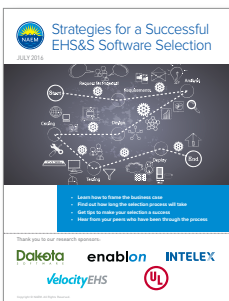
NAEM provides valuable resources for corporate EHS and sustainability leaders and IT professionals who are responsible for selecting, implementing and maintaining software systems, and who are looking to better manage and report their data.



2015 EHS&S Software Buyers Guide

This report, which includes data from 165 in-house EHS and sustainability leaders, addresses common questions from a peer perspective, including: business objectives for software purchase, the desired software capabilities, peer spending and expected maintenance costs. The detailed analysis also incorporates the perspective of past purchasers to provide shoppers with a comparison between their expectations and the experiences of those who have recently gone through the process. An update to this report will be published in March 2017.

Download Free Report: www.naem.org/?survey_2015_ehsmis



2016 Strategies for a Successful EHS&S Software Selection

A successful selection begins with a well-managed selection process. Download this free white paper to learn how to frame the business case for a new system, how to identify requirements and how to plan for long-term success.

Download Free Report: www.naem.org/page/survey_2016_ehsmisg



2017 EHS & Sustainability Software Ratings Report

NAEM's Software Ratings Report is the only third-party evaluation of satisfaction with specific software capabilities, user adoption, customer service from the perspective of in-house EHS and sustainability leaders. Download the free report to learn how users rated leading software providers, or take the survey today to rate your software system.

Download the free report: www.naem.org/page/survey_2017_ratings
Take the survey today: www.naem.org/page/survey_2016_swrating



2017 EHS&S Software and Data Management Conference March 6-8, 2017 | Houston, TX

Since 2001, NAEM's EHS and Sustainability Software and Data Management Conference has been the premier software event designed to meet the needs of corporate EHS and sustainability leaders. NAEM's conference is the best opportunity to meet with the leading solution providers at the same place and to hear from fellow users who utilize these systems on a daily basis.

For More Information: www.ehsmis.naem.org/



Acknowledgments

Publisher

The National Association for Environmental Management (NAEM)

1612 K St., NW Suite 1002
Washington, DC 20006
(202) 986-6616
www.naem.org

Series Contributors

Asif Ansari

Environmental Compliance and Risk Management
The United States Postal Service

Martha Coopersmith-Gray

Director of Environmental Health and Safety and Sustainability
Amphenol TCS

Lisa Marx

Principal EHS Specialist
Abbott Labs

Thochan Nguyentan

Corporate EHS&S Manager
Lam Research Corp.

Jay Roussel

Project Manager
Chevron Corp.

Jason Schmitz

Director of T3Group
Trinity Consultants

Eric Schwartz

Report Sponsors

CH2M

Enablon

Intelex

Sphera Solutions

UL

VelocityEHS



Acknowledgments

Analyst

Elizabeth Ryan

Director of Communications, NAEM

Report Design

Ellie Diaz

Chaos Studios

Media Inquiries

For more information about this report or to request an interview with an NAEM analyst, please contact NAEM at (202) 986-6616.



www.naem.org