How to Build a Business Case
for Asset Integrity Management (AIM)

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Introduction

The decision to implement comprehensive technology for asset integrity management (AIM) is a straightforward one. By utilizing one comprehensive AIM software solution, owner operators can digitalize their processes resulting in time and cost savings. All asset data, work orders, inspection, scheduling, etc. is located on a single, robust database that is continuously populated and readily accessible. Instead of wasting time pouring through a wide array of disparate paper-based sources and software products acting as data silos, operators can instantly access the information they need at any time. By utilizing the intelligent analytics of risk-based inspection (RBI) instead of time-based intervals, companies can allocate capital resources to critical equipment while extending inspection intervals for less-critical assets. Reports tailored to regulatory bodies can be easily generated with the click of a button in the case of audit, making regulatory compliance seamless. The digitalization of all processes empowers operators with the ability to garner real-time actionable intelligence from their data, enabling them to make key business decisions in a proactive manner. The list goes on. At the end of the day, utilizing technology for AIM is a no-brainer when it comes to optimized maintenance, improved profitability, prolonged equipment life, reduced instances of failure for field

operations, reduced wait-times, and non-value added work tasks such as compiling data from multiple sources.

Why, then, is it so difficult to convince decision makers?

As with most new technologies, it can sometimes feel easier for organizations to "stick with what they know" – even in cases where "what they know" no longer translates to "what works best." Those dealing with day-to-day operations of the company feel at a loss when those with the buying power can't look past their resistance to initial investments long enough to realize the ultimate long-term profit potential. In some cases, maybe they are aware that their strategies need to change – but they're simply too daunted by the seeming complexity of the process.

Whatever the cause of resistance, the best way to help your company progress and adopt new AIM technologies is to develop an effective Business Case. This paper examines the typical components of a successful business case, the top five key factors to consider, how to anticipate and respond to resistance from management, and other strategies for success in developing an effective business case for AIM.

Building an AIM Business Case

Technology in the AIM sector has been evolving rapidly in recent years. These days, you can even manage and communicate work data directly from the field to the office via the convenience of a tablet. For asset-intensive organizations who have long been using dated, ineffective, or even no AIM software to manage their equipment, the time to invest in new technology is now.

You are an operator involved in the day-to-day trenches of the organization. You are aware of the benefits and profitability that the right AIM solution can bring to your company. But you need the tools to present your case to management successfully – to get them to realize that the long-term gains far outweigh the upfront cost.

This section will equip you with the tools you need to build an effective Business Case to achieve this – from the most typical components, to best practices in the process, to how to anticipate and overcome resistance.

1

Typical Components of an AIM Business Case

When building a Business Case to convince management to either a) adopt asset integrity management software for the first time, or b) change from the current system to one that better suits the company's needs, there are some common components useful to consider and examine.

Typically, an effective case for these purposes should include examination of the following:

◢ **Past AIM performance.** Examine the history of your plants, pipelines, facilities. Document any previous equipment failures and how they have impacted the company on the following levels: operational, safety, environmental, performance, and cost/lost profitability.

◢ **Inspection budget constraints.** Examine the existing inspection budget and where it's currently being allocated. Make the case that the company needs to be more prudent and efficient within its existing inspection budget.

◢ **Changes to AIM personnel.** Whether via retirement, turnover, etc. Maybe the company is dealing with fewer inspectors and can offset this challenge with efficient software, helping to reduce manpower requirements.

◢ **Outdated AIM software.** There have been cases where companies are saddled with an AIM software or company that is no longer supporting them sufficiently, whether that be via poor performance, excessive cost in comparison to other market solutions, or simply that there's no longer any ongoing support. Make the case for why the outdated software is no longer viable (read our previous Whitepaper on AIM Change Management for tips on how to do this).

◢ **Jurisdictional or insurance requirements.** If the company doesn't yet have an AIM system, demonstrate the ways in which implementing the right system can help with automatic regulatory compliance and reduced liability. If a current system exists but is insufficient, examine the ways in which it is too rudimentary for local requirements (and offset those with how your chosen solution helps adhere to them).

◢ **Let the data talk.** Identify the past or current availability and reliability percentages, and then compare those to where they could be if a new system was implemented. For example: In 2010, one operator identified that every 1% of asset availability equated to $20 million dollars.

◢ **Working smart, not hard.** Demonstrate the improved workflow that AIM could provide to inspectors, contractors, and operators in order to identify, solve, implement and manage assets for improved performance.

◢ **Incompatibility between current products.** A common challenge occurs when companies own other software and tools that don't work together with their AIM product. The right AIM tool would provide seamless integration with the company's other existing technology, providing greater efficiency and removing time wasted on dual data entry.

The above are some typical components that help to create a compelling argument for the real, tangible needs and benefits behind adopting a new AIM program. Some might be more relevant to your specific situation than others, so feel free to prioritize their order according to a hierarchy that most effectively communicates the unique needs of your organization.

2

Top 5 Elements to Building a Successful Case

We asked a group of independent individuals what they considered to be the top five key elements in building a successful case for AIM. The results were unanimous. While the previous section helps determine specific, tangible components to examine according to your unique company profile, there are five universal factors that should be at the heart of your business case:

1. Performance

This should include elements such as user-friendliness, close out, average time to close out anomalies, available modules to meet AIM requirements, etc. All of these translate into improved asset performance.

2. Time

Efficiency is key. Look at the time to install, train, implement software, and how easily (and therefore quickly/efficiently) the software can be used by the integrity group. Examine how efficiently users can add new data and keep the asset data evergreen; this is an ongoing task that must be accounted for if the long-term benefits are to be realized.

3. Cost

Specifically, reduced maintenance and support requirements. Fewer unplanned shutdowns. Smarter inspection intervals and reduced frequency. Using RBI to reduce risk and improve reliability, thereby stretching the existing AIM budget for more tangible output. Look at the long-term cost savings over the short-term initial investment.

4. Regulatory Reporting

The right AIM program would help the company facilitate automatic, up to date regulatory reporting by being configured to generate reports according to major regulatory bodies – including the latest API RP, for example.

5. Accountability

Being able to easily manage outstanding work and monitor the results of others guarantees that the required activities are being performed at the necessary intervals. Easy to use Dashboard keeps users up to date on current and emerging work. Audits are easily performed and corrective actions are assigned quickly.

3 Convincing the Management: Anticipating Challenges

If you've factored in all of the elements from the previous two sections, you should be on your way to a solid business case that will convince management to adopt the AIM program you're recommending. But, the best recipe for success is to be thorough. Change is hard for some companies. It comes with unknowns that can create uncertainty and hesitation. Try to anticipate some of the resistance or fears that you might encounter when presenting your business case. Then, be proactive by having already included the solutions.

Below are some common fears that might be encountered, along with counter-solutions to incorporate into your business case. For good measure, we've tossed in a few extra motivators that could be worth including.

Common Challenges

Challenge: If management believes that the plant processes used are not corrosive, and/or no failures have occurred in the past.

Solution: Although the internal processes may be benign, the external environment rarely is. External corrosion and corrosion under insulation (CUI) have caused many failures which resulted in surprisingly costly repairs. Check similar plant failure statistics. Not being proactive will have costly repercussions down the line. If possible, include known corrosion failures in the Business Case that highlight costs associated with downtime and repair costs.

Challenge: Management not being aware that their existing software is obsolete, or what alternatives are now available.

Solution: Do the research and present your findings. Show them the numbers and data that prove why their current system is insufficient. Be ready with a suitable alternative and an explanation as to why it's more suitable. Identify how different solutions will simplify the AIM workflow, reduce wait times, and remove non-value added steps to executing work orders and inspection activities. See our previous Whitepaper on AIM Change Management for more advice on this topic.

Challenge: Management doesn't comprehend the risks and consequences of equipment failure.

Solution: Data talks. Find cases in companies local to or similar to yours

where equipment failure occurred, and demonstrate the real consequences that company dealt with. Conduct a trial risk assessment for your most critical equipment and see if the PoF and CoF are tolerable. Also, conduct a trial risk assessment gap analysis to determine if all known risks have been identified – whether they are lower than expected, higher than expected, or are acceptable. Another way to view risk is to contemplate how to explain to a jury your actions prior to a preventable failure.

Challenge: Management is not convinced about the time and effort needed to complete and in-depth selection process.

Solution: Be ready to do some of the legwork yourself beforehand, so you can present 2 or 3 viable options and remove the more daunting elements of the task. This helps them realize that the selection process won't be as daunting as they anticipate and will help establish you as a valuable bastion for the company's success. See our previous whitepapers for **Tips on Selecting a Vendor.**

Challenge: Inspection group resistance to changing legacy software.

Solution: Educate the group by selling the fact that after the learning curve has been mastered, their life will be easier by being more efficient with a more effective use of their time. Often, explaining how the software will help them in their day-to-day work via elimination of repetitive tasks helps communicate the amount of new free time they will have for data analysis (rather than data entry).

Challenge: The cost of upgrading is deterring any support from decision makers.

Solution: Another instance where data talks. Examine the specific areas where upgrading is going to save the company money moving forward. Be prepared with percentages and tangible numbers to demonstrate the offset between long-term profitability and initial investment.

Challenge: Management is a champion of a specific software product already, and therefore are unwilling to consider alternatives.

Solution: Do your research. If you're convinced that an alternative program is better suited to the company, be ready to present comparison data that highlights all key areas where the new software offers functionality, support, or cost benefits that the existing one does not. In some cases, the company has invested so much on the legacy software that suggesting a change may be challenging. Try justifying the new AIM on a project or pilot basis. Read our previous Whitepaper on Change Management for more detailed tips with this one.

Challenge: Work culture. Simply put, the general attitude is: "We've done it this way for years, and it's worked well enough!"

Solution: Educate users with the reality of the increasing capability of AIM software and benefits of using these systems. This should help "sell" the changes to the status quo.

Challenge: General fear of change: fear of losing data, fear of new technology, fear of losing jobs to software, etc.

Solution: An understanding of the software and the data backup procedures, coupled with the necessary and reoccurring user training, will educate all users and management of the benefits. For any worry about job loss, encourage staff to recognize that becoming a master in using the software will increase their chances of continued employment.

Additionally, demonstrate how the software will improve the overall quality and efficiency of the organization. For example, if they are currently using spreadsheets to track assets, how do they manage updates across the organization so everyone has current information on the condition of assets? Spreadsheets and paper processes are inefficient, and they pose a quality risk as there is no centralized streamlining of communication across the organization.

Point out how software can alleviate this challenge.

Further, encourage them to consider liability. Who will be accountable if and when something happens? What data do they have readily available for regulators to demonstrate that they took every precaution? The right software tool removes this challenge by keeping all data and decisions stored with full history on a central database.

Additional Motivators

In almost all of the above instances, the success of your presentation will boil down to the same thing: **being able to convince management that utilizing the new software has the potential to save money while still maintaining asset integrity, or to improve integrity while maintaining the same budget.** The more tangible numbers and data you have in your arsenal to convince them of this concept, the more success you are likely to have. So do your research and load the business case with as much real, relevant data as you are able.

In addition, consider whether any of the following apply to your company. They can be great motivating factors when trying to convince key decision makers:

▲ **Location of asset can not be identified.** Translation? No year end bonuses for management.

◢ **Compliance.** Are all assets performing? Are they currently compliant with industry standards? Does the current AIM software provide an audit trail for jurisdictional reviews?

◢ **Safety.** Assets are managed in a consistent, reliable manner than ensures the plant meets operability, safety, and environmental targets.

◢ **Security.** The current AIM software may reside on remote 3rd party servers, which could potentially leave the user data at risk.

◢ **Cost of legacy software.** In most cases, the cost to maintain and support legacy software is high and steadily increasing.

◢ **Waste Reduction.** Non-value added tasks are required to gain the desired output from data collection, entry and analysis. This results in communication gaps and extended wait time for actions to be put in place.

◢ **Liability fines.** In the event of failure or shutdown, the company could face hefty fines if they cannot demonstrate that proper prevention measures were in place. They need a tool that provides a clear audit trail, capturing accurate data on asset history, health, location, inspections, repairs, etc.

◢ **Maintenance and repair costs.** If the company is wasting resources inspecting non-critical assets vs. critical assets, they are already losing money. By shifting inspection schedules to risk based methodology, companies can allocate resources to the most critical equipment. Further, the right AIM software empowers decision makers with constant awareness of their asset conditions, which gives them visibility into when they will need to replace it. This allows them to plan and prepare, and make more prudent decisions on maintenance and repairs, saving costs and thereby prolonging the life of the asset.

4

Identify Benefits to Each Stakeholder

Make sure that you know and are prepared to present on unique benefits that the AIM program can deliver to each stakeholder in the company. Consider the following benefits in preparing your business case:

1. Chief Inspector & Integrity Engineers

- ◢ All integrity related data is available in a single source that is up-to-date and readily accessible.

- ◢ Information that is needed to make both immediate and planned decisions is accessible at any time.

- ◢ Risk-based inspection (RBI) analyses focuses limited resources to critical equipment.

- ◢ Regulatory reporting can be designed to capture the necessary information and is easily generated for compliance reporting and audit support.

- ◢ AIM has proven to be an effective tool in extending equipment life, reducing loss of containment issues, and focusing work on more critical assets.

2. Management

- ◢ Digitalized information located in a single system results in time and cost savings.

- ◢ All integrity related data is up-to-date and readily accessible.

- ◢ Information that is needed to make both immediate and planned decisions is accessible at any time.

- ◢ AIM has proven to be an effective tool in optimizing maintenance activities, improving profitability, extending equipment life, reducing loss of containment issues, and focusing work on more critical assets.

- ◢ Regulatory reporting can be designed to capture the necessary information and is easily generated for compliance reporting and audit support.

3. Regulatory Group

- ◢ All integrity related data is available in a single source that is up-to-date and readily accessible.

- ◢ Regulatory reporting can be designed to capture the necessary

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information and is easily generated for compliance reporting and audit support.

4. Health, Safety & Environment (HS&E) Group

▲ Risk-based inspection (RBI) analyses take HS&E concerns into account both at the facility and corporate levels.

▲ HS&E emerging issues can be incorporated into integrity plans where appropriate.

5 Other Factors to Consider

Additional Tips & Tricks

AIM Audits
Consider utilizing AIM audits when conducting your presentation. These will help educate companies by causing them to examine their systems to confirm whether they are meeting jurisdictional requirements. Further, it could be useful in demonstrating the cost and reliability improvements that software could provide in this regard.

Case Studies / Word of Mouth
Utilize professional networks to learn about how other operators improved when their AIM system was installed. If possible or necessary, use case studies or references to demonstrate the benefits.

Identify the Positives
Be prepared to demonstrate what the proposed new system and work flow would operate as. Focus on the positive add-ons, and on every are where time lags or redundancy are potentially eliminated.

Software Demo
Include screen shots of current AIM software or brochures to help show the 'new world'.

Conclusion

The financial benefits of implementing a comprehensive AIM program for any asset-intensive corporation are, at this point, well known and self explanatory. Yet, it can still be difficult to convince decision makers of this reality when they are comfortable with an old system and resistant to change. The best business case is one that has *tailored the arguments to the specific history and operations of the company. By focusing on real data reflective of the* unique company profile, it becomes much easier to prove certain and tangible benefits. Do your research. Anticipate resistance. Then, use the strategies and recommendations discussed here to build a case powerful enough to assuage those concerns as they arise. Remember, the goal is to help the company's profitability in the long term. The best business case demonstrates tangibly how that can be achieved.