

Essential Buyer's Guide to Asset Integrity Management Software

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 cenosco

How to use this guide

Find out how to make the most out of this guide.

This guide has been created for engineering professionals and CIOs who need to evaluate and select Asset Integrity Management software for their organization. This guide has been designed especially for asset-intensive industries, such as oil and gas and chemicals, as these industries are the most reliant on effective and reliable Asset Integrity Management software. For these buyers, Asset Integrity Management software is a long-term investment for a sustained journey towards empowering their organizations to safeguard and gain control of their assets, keep their people safe, and comply with regulations.

The Asset Integrity Management landscape is a broad and complex one, with various overlapping terms and functionalities. Because of this, it can be difficult to analyze what you really need in your software beyond the buzzwords. This guide aims to facilitate prospective buyers' journeys on multiple layers. Firstly, help them get a deeper understanding of what to look for in Asset Integrity Management software. Secondly, evaluating vendors and assessing which would best meet the prospect's requirements best. Finally, this guide provides a checklist space that can be used to easily differentiate between the various vendors' offerings.

Prospecting buyers can use this checklist as a way to evaluate or score different vendors and their offerings. We provide room to apply a different weight to each category, so you can tailor your research to your specific needs. Finally, we conclude with an overview of additional requirements you may want to consider when selecting a vendor and considering their capabilities. These characteristics should also play a role in making your final decision when choosing which Asset Integrity Management software to implement.

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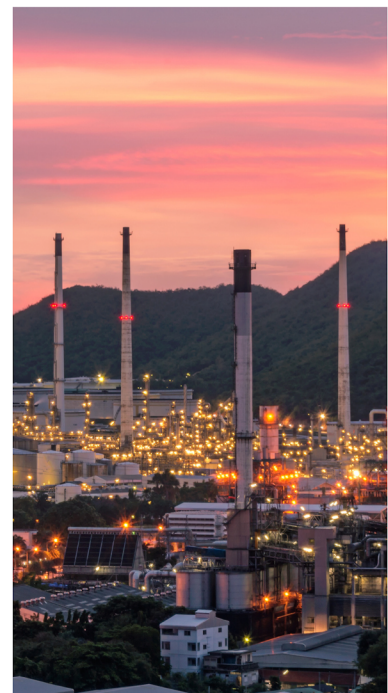
Our checklist curated to make sure you pick the right software for you.

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Learn more about the leading Asset Integrity Management company.



1. The Importance of Asset Integrity Management

Asset Integrity Management (AIM) is the practice of ensuring an asset is able to perform its function as effectively and efficiently as possible throughout its lifecycle. Equipment failure, unplanned shutdowns, and deferred production are all costly and dangerous side effects of inefficient asset integrity management. These issues may also lead to major health and safety hazards for both employees and the environment.

The Costs of Inefficient Asset Integrity Management

The costs associated with unplanned shutdowns in the oil and gas industry have been cited to be between \$38 to \$88 million USD a year on average. In 2016 the oil and gas industry saw 29 accidents where a total of 50 lives were lost, averaging almost two fatalities per plant incident. The types of equipment used in these industries may vary from pipelines, to pressure equipment to electrical equipment. These all have in common that fatigue cracks, corrosion, and other deterioration processes that can be spotted on the instruments do not necessarily symbolize damage or a need for maintenance, making it more difficult to assess when and where attention is required. This is where a well-integrated and effective AIM solution can help your business thrive in terms of safety and proper asset function.



Asset Integrity Management (AIM) or Asset Performance Management (APM)

Ever since the buzzword Asset Performance Management (APM) gained popularity, companies have begun confusing the terminology of their needs when looking for an Asset Integrity Management solution. The difference between AIM and APM comes down to their functionalities. An AIM solution will help you manage your assets' integrity by predicting or planning effective maintenance or inspection plans. An APM on the other hand looks at the overall performance of an asset within a system. Therefore, AIM solutions are most often what engineers are looking for to ensure their assets' functionality and their people's safety. According to Gartner, APM solutions are not a "mature technology". We, therefore, suggest not to worry about labels and focus on the discipline and benefits you are after when choosing software.

2. The Benefits

Below, we break down the benefits of a well-integrated asset integrity management software.

1. Setting realistic expectations

Having well-implemented AIM Software will help you keep your expectations in check. You will establish an optimal maintenance or inspection strategy that will keep you within budget, and running as often while keeping risks low.

2. Avoid Overspending

Having an optimal maintenance or inspection strategy helps you find the sweet spot between cost and time efficiency.

3. Prevent critical failures and reduce downtime

The ultimate goal of an Asset Integrity management system is to keep your plant and operations running smoothly. With proper software in place, you can prevent critical failures and unplanned downtime.

4. Manage environmental, health, and safety risks

With proper asset integrity management, you can guarantee reduced health hazards for your employees, reduce your carbon footprint and avoid harmful leaks or other damages to the environment.

5. Stay compliant while retaining critical knowledge

It is essential to remain compliant with the rules and regulations in place for the location in which you are operating. An Asset Integrity Management solution will help you ensure that you are always compliant through storing and documenting all relevant inspection data.

6. Accelerate your digital maturity journey

You can accelerate your digital maturity journey by using a user-friendly software to facilitate data capture in the field. Achieve easier visualization for data-driven decision-making.



3. Fundamental Features Checklist

When choosing an Asset integrity management software, there are certain features you should always consider. Use this checklist to guide your purchase.

	Weight	Cenosco	Vendor 2	Vendor 3
The Basics				
Is it a SaaS solution?		✓		
Can it be installed on-premise?		✓		
Is it able to collect and store wide range of metadata		✓		
Can it handle large data?		✓		
Can it create an unlimited number of tags?		✓		
Can the software define user roles and their rights for performing assigned tasks and levels of software access?		✓		
Can the solution accommodate multiple hierarchy structures?		✓		
Does the software allow for unlimited users?		✓		
Is the system capable of tracking all the changes for compliance?		✓		
Does the system has a user-friendly interface?		✓		
Functionalities				
Can it add new codes and standards to its library?		✓		
Does the solution offer a flexible risk-based approach (for all disciplines)?		✓		
Are there libraries for damage mechanisms, failure modes, failure rates, etc?		✓		
Does the solution offer engineering calculations (corrosion rate, failure rate, Maintenance Efficiency Index, SIL, etc)?		✓		

	Weight	Cenosco	Vendor 2	Vendor 3
Functionalities				
Does the solution offer engineering calculations (corrosion rate, failure rate, Maintenance Efficiency Index, SIL, etc)?		✓		
Does the solution offer a scheduling feature for tasks (inspection, test, maintenance, etc)?		✓		
Can the software keep a record of all the equipment specifications flexibly?		✓		
Can the system predict failure (remnant life, tasks intervals) ?		✓		
Can it record inspection, test, and maintenance findings with dynamic checklists?		✓		
Can the solution help you to plan activities during a planned event (turnaround, shutdown, pitstop, etc)?		✓		
Does the system offer a strategy optimization feature?		✓		
Does the system offer anomaly management?		✓		
Is there damage mechanisms library?		✓		
Can the software predict damage based on metallurgy and design and operation conditions?		✓		
Universal Features				
KPIs		✓		
Reporting		✓		
Extensive import capabilities for bulk data		✓		
Extensive export capabilities for bulk data		✓		
Use it on any device (laptop, tablet, phone, etc.)		✓		
Offline capabilities for field activities		✓		
Configurable dashboards (including out-of-the-box KPIs, process tracker, etc.)		✓		
Global (local) Strategy libraries (for all disciplines, maintained by SME)		✓		

	Weight	Cenosco	Vendor 2	Vendor 3
Universal Features				
Configurable Queries		✓		
Personalized Filters (can be saved, shared, etc.)		✓		
Reporting (excel, pdf, word, etc.)		✓		
3D Visualization (used as dashboard, field report, equipment strategy, etc.)		✓		
Smart P&ID Feature		✓		
Interfaces				
Can it be interfaced with CMMS/ERP System (SAP, Maximo, EAM (Infor), JDE, etc)		✓		
Can it be interfaced with Data Historian (OSI PI)		✓		
Can it be interfaced with Document Management System?		✓		
Can it be interfaced with a Digital Twin (Hexagon, Aveva, etc)?		✓		
Does it offer a data lake?		✓		
Does the system offer the capability to connect with field equipment fitted with Bluetooth connectivity (such as smart torquing tools)		✓		
Related Services				
Does the vendor provide methodology as well as tool training?		✓		
Does the vendor provide implementation and data migration services?		✓		
Does the vendor offer an extensive online knowledge base?		✓		
Does the vendor offer the support of subject matter experts?		✓		

	Weight	Cenosco	Vendor 2	Vendor 3
Other				

Notes

4. Additional Vendor Evaluation Criteria

Below we share some additional tips on what to consider when choosing a vendor.



Experience

Evaluate whether the vendor has considerable market experience and success.



Referenceable Customers

Evaluate whether the vendor has referenceable customers who have faced significant results from implementing their solution.



Methodology and Best Practices

Does the vendor provide a proven methodology and best practices for customer success?
Do they have valuable knowledge ready to be shared for your needs?



Integrations and Data Migration

Explore the vendor's capabilities to effectively integrate and migrate data from your existing systems to their solution.



5. Cenosco and the IMS Suite

INTEGRITY MANAGEMENT SYSTEMS

Cenosco is the leading provider of asset integrity management software.

For over 20 years, we have been leading the way in product innovation across asset-heavy industries, including Oil and Gas, and chemical manufacturing. Our IMS Suite of solutions was designed to support users in making smart inspection and maintenance decisions to increase safety, maximize asset availability, and optimize asset management costs. We created the IMS Suite in collaboration with world-renowned Oil & Gas leader, Shell.

Meet IMS

IMS is a unified asset integrity management solution suite for all your equipment types and processes. The range of IMS products can be deployed individually or together, and each component complements the others seamlessly.



IMS PEI

Pressure Equipment Integrity

Manage equipment integrity using Shell's RBI methodology or advanced corrosion calculations.



IMS RCM

Reliability Centered Maintenance

Optimize preventive maintenance plans based on risk and take advantage of our library of maintenance strategy templates.



IMS SIS

Safety Instrumented Systems

The perfect solution for your end-to-end Safety Life Cycle analysis.



IMS FCM

Flange Connection Management

Manage critical flanges with a strict guided maintenance protocol.



IMS PLSS

Pipeline and Subsea Systems

Manage pipeline and subsea system integrity, performing In-Line Inspections (ILI) and Fit-For Service (FFS) calculations.



IMS CIVIL

Manage Civil Structures

Manage equipment integrity with RCM and RBI methods adapted for civil degradation dynamics.

Why IMS?

The IMS Suite of solutions was designed to support users in making smart inspection and maintenance decisions to increase safety, maximize asset availability, and optimize asset management costs. Our domain expertise goes deep into the assets, and with our fully integrated software, you can centralize your maintenance and inspection efforts.

- ✓ Keep your people safe
- ✓ Gain control over your assets
- ✓ Manage your assets with ease
- ✓ Comply with regulations
- ✓ Avoid leaks and other disasters
- ✓ Exclusive Methodologies and Libraries

OUR SOLUTIONS ARE USED GLOBALLY

We're deployed in over 40 countries across the globe.

5,000+

ACTIVE
USERS

120+

DEPLOYED
ASSETS

20+

YEARS OF
EXPERIENCE

Proven Results

- ✓ 20% Inspection cost reduction
- ✓ 30% Turnaround time reduction
- ✓ €100K - €100M Savings per leak prevented

Trusted by world leaders



Looking for more Asset Integrity Management Resources?

Visit our website to explore our collection of blog posts, webinars, and other asset integrity management resources. Explore some samples below.

ON-DEMAND WEBINAR

Leveraging Corrosion Data Analysis and Visualization for Inspection Management

Estimating the remaining life of your equipment is important in the inspection management process. Depending on the corrosion data involved, this analysis step could be very complex. Using visualization tools can add many benefits in this regard. Watch our webinar now to learn more.

The Speakers

Ennery Leon: Integrity Lead at Taqa Global

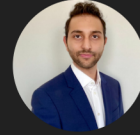
Sangeeth Sagar: Product Marketing Manager

Luiz Curado: Solution Engineer & Business Development Manager

[Watch Now](#)



Ennery Leon



Sangeeth Sagar



Luiz Curado



Should you use a digital twin for your asset integrity management?

A digital twin is a virtual image of your asset. It's a source in which all asset information can be combined, such as process data, conditions, physical properties, results of inspections, leaks, temporary repairs, risk levels, and remaining life estimates. It also incorporates (near) real-time data collected from your assets.

There is some overlap between what digital twins and 3D models can do for you. That's no surprise since a 3D model is actually the foundation of a digital twin. A digital twin can start as a 3D model that visualizes data and grow into a mature tool, that monitors risks, predicts failure, and eventually even initiates interventions.

[Read more...](#)

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