A guide from

From problem to thing of beauty: 7 ways to transform asset inspection

A Q&A guide on how Enterprise Inspection Management enables SME and Enterprise organisations to extract value from asset inspection

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Introduction

Many organisations retain a conventional paper-based approach to asset inspection. For the majority this means inspection is a bit like the business equivalent of the multi-headed hydra: It snaps away at different areas, taking bites out of the business.

It attacks business process efficiency and gobbles up operational budgets, while gnawing away at the ability to make optimal asset maintenance and investment decisions.

Paper-based inspection processes fail to expose risks to production, preventable maintenance costs, and fabrication Quality Assurance issues. Even more dangerous is the ability for this manual process to lay something of a governance trap for senior management, especially at touch points such as compliance and health and safety.

In this guide, through answering 7 key questions, we explore how Enterprise Inspection Management (EIM) enables inspection to be transformed into a strategic practice that revolutionises inspection process efficiency, delivering value to the business and making significant returns to the bottom line.

1. What is Enterprise Inspection Management (EIM)?

EIM is the application of modern, best practice software technologies to meet the needs of today's organisations to manage the typical maintenance and safety inspection process applied to capital asset machinery and equipment. This takes the entire process online and results in a fully integrated Inspection Life Cycle (ILC). In this context 'best practice' includes mobile technologies, browser based software, and the Software as a Service (SaaS) or online application deployment approach.

As with Enterprise Resource Planning (ERP) software, EIM establishes and maintains a unified system of processes and data sources, a highly important element in the effective management of today's businesses. EIM functionality includes collection, retention and availability of all relevant inspection data across the ILC.

EIM eliminates paper as the recording and storage media for inspection data, and also the resource required to copy-key data from paper into electronic media such as spread sheets or custom databases.

2. Why would I want an EIM solution when I can opt for the plug-in to my Enterprise Resource Planning (ERP) system?

Maintenance Management related inspection plug-ins for ERP systems are unable to support the complex logistics of inspection life cycles. Maintenance Management System (MMS) plug-ins are unable to address needs such as multiple sites, inspector assignment, asset classes, and inspection types. MMS is simply not designed to collect and retain the unique information types that are collected during inspections.

The EIM concept is designed to accommodate SME and large scale, multi-site operations, and supports all industries where on-going inspections and audits are critical to the business. EIM is a standalone software solution. However, similar to ERP sub-components such as HR and Finance, EIM is able to integrate seamlessly with ERP systems.

3. How does EIM define inspection as a business process?

EIM defines inspection in three phases, Pre-inspection, Inspection and Post-inspection. Pre-inspection steps are planning, authoring and scheduling. During the Inspection phase data is collected and uploaded, triggering the steps of the Post-inspection phase, i.e. validation and reporting.

Looping this process creates the ILC. Repeating the inspection process of an asset at appropriate intervals generates 'long view' data for each asset.

4. What are the cost benefits of Enterprise Inspection Management?

EIM achieves cost benefit across different dimensions of inspection. The primary and most tangible is the ability to reduce direct costs of large scale inspection programmes by up to 50%. However, regardless of the scale of inspection operations, the solution delivers significant returns to the bottom-line. ROI is realised in the short-term after deployment of EIM.

The secondary cost benefit is related to better maintenance management decision-making that results from the extensive historic asset condition data that EIM provides. These benefits are realised over the medium term.

Over the long term EIM influences strategic risk management decisions such as asset capitalization. It also has a significant role to play in ensuring organisations meet their compliance obligations.

5. How does EIM improve inspection activity over conventional paper-based inspection operations?

A core component of EIM is the integration of mobile technologies to improve the Inspection phase. This, along with the Pre-inspection phase workflow authoring enables standardised, consistent, and repeatable precision.

The mobile application provides precise instructions and guidance to the inspector, ensuring all tasks are completed. The App also provides predefined media resources such as video, audio and diagrams, which improves inspector productivity.

6. How is data quality assured?

By definition, EIM software ensures that data is validated at the point of input. This infers that validation is performed during the actual inspection, and all data is captured and retained within an electronic data base.

During the Post-inspection phase the validation step allows collected data records to be sense checked before assimilation into the database. In the event that data is rejected, the inspection job is automatically re-initiated for review by the inspector on the mobile device.

Online validation and sense checking means that decisions are not skewed by erroneous data or the incorrect application of business context. This eliminates the potential for poor data quality to have long-term negative effects on management decisions.

7. How does EIM deliver strategic benefits?

In addition to the tangible savings that result from the improved ILC, there are a number of strategic benefits. Over the long-term, datasets don't just form an 'asset database' - it's an asset in its own right, a 'database asset'.

This continually growing inspection database offers new and growing perspectives on the machinery or equipment estate, and enables the identification of trends and hidden insights.

And it's not just about inspection data related to assets. There's also extensive data on the ILC. For example, inspector performance, inspection duration and numbers of inspections are just some of the analytics that help identify trends and outliers.

Such insights, whether from the inspection outcome data or process indicators, can be applied to influence strategic, tactical, and operational decisions. For example, maintenance tactics may be adjusted on a given asset class, or training provided to inspectors to improve productivity.

Thank you for reading our guide

About Inspection Toolbox

Inspection Toolbox is an Enterprise Inspection Management (EIM) software Solution. It is unique in that it places an emphasis on managing the complete inspection life cycle in an integrated manner.

The solution is a highly flexible and cost effective tool, scalable to global enterprise level. It releases the intelligence locked within asset inspection datasets by bringing the power of cloud computing together with the flexibility and convenience of mobile apps.

Eliminating paper and streamlining inspections as a business process means that Inspection Toolbox quite simply transforms inspections from an administrative burden into a strategic practice.

The solution is developed by asset inspection experts with high level experience working with some of the world's largest multi-national enterprises. This experience has served as catalyst for the creation of Inspection Toolbox and driven the effort to address the dysfunctional nature of paper-based inspection programmes.

Beyond workflow management of asset inspection, the team at Inspection Toolbox is dedicated to improving business outcomes for customers. The governing ethos that drives the people behind the company is improving the collection, retention, and utilisation of data that is changing all the time.

Business data is continually collected and needs to be assimilated into an existing dataset. To release intelligence it needs to be compared with historical slices of the dataset. This means that the analytical outputs and the Business Intelligence delivered is in a state of constant flux.
The bigger picture is that Inspection Toolbox is committed to helping customers make sense of data and to put it to good use.

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