

RBI for ROI

Drive Your Return on Investment
with Risk Based Inspection



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Drive Your Return on
Investment with Risk Based
Inspection

With Risk Based Inspection,
You Can Drive ROI 8 Ways

Get Started Today





According to the experts at the American Chemistry Council (ACC), chemical producers spent \$1.26 billion on planned maintenance activities in 2018. That is a 38% increase over 2017. And according to the Marshall Institute, unplanned work can be even more expensive, generally costing 2 to 5 times more than scheduled activities.

Those figures are a major driver of chemical producers moving to advanced hardware and software to gain efficiencies. According to the World Economic Forum, digital technology within the worldwide chemical space will have generated a cumulative economic value of more than \$310 billion by 2025.

Is it any wonder then that analysts at Insight Partners Analysis estimate that the market for one of the major technological advances in inspection, Risk-Based Inspection (RBI), will grow to \$4.04 billion by 2027, representing a staggering 10.9% growth rate? Chemical plants can take advantage of significant returns on investment (ROI) through RBI.



“...digital technology within the worldwide chemical space will have generated a cumulative economic value of more than \$310 billion by 2025.”

A construction worker wearing a yellow hard hat and a blue and white plaid shirt is looking at a tablet. The background is a blurred industrial setting.

Drive Your Return on Investment with Risk Based Inspection

If you are still using Time-Based Inspection, you are leaving money on the table. Time-Based Inspection has historically come with ease and convenience, but unfortunately it lacks profitability.

In a best case scenario, you will waste money trying to maintain the volumes of records required by inspectors. In a more likely scenario, simply relying on time-based inspection could result in a major safety incident, which will cost you time, money—and your reputation.

Why spend money on a technique that doesn't work? Instead, drive your ROI through RBI.





With Risk Based Inspection, You Can Drive ROI 8 Ways

1. Drive ROI with more profitable record keeping

Some companies who opt not to use RBI waste profits and time by relying on paper files or Excel spreadsheets to maintain their records.

While this method may have worked in the past, it does not work today's advanced society. In the past, you may have had company inspectors that worked there for 25 years, and many of the basic records were in their heads. But this "corporate memory" is rapidly diminishing or no longer available as many senior personnel are retiring. Without this human-based "corporate memory," you need a records management method in place. With the trend toward third-party inspectors, the problem becomes even more acute. With the diminishing of the "corporate memory," companies must figure out a way to capture this critical knowledge as part of their knowledge management strategy, and be able to access the inspection data quickly.





Records and data management can now take longer than the maintenance and repair activities itself. Jurisdictional regulations for records management are also on the rise. Auditors are demanding more detailed records, often requesting the inclusion of:

- The technical approach used for analysis
- The data and procedures used
- Technical models used
- Pressure test data
- Details of all measurement tools
- Results of finite element analysis
- Fatigue analysis
- Sign-off records by officials
- And many other details

Few companies have the time to properly maintain paper records given the large amount of data. And the required data to be stored will only increase and become more complex with the different data capture mechanisms applied in the ever-increasing digital world.

With Metegrity Visions Enterprise's RBI, you can keep all records in a logically organized way, so that you have everything you need at your fingertips. And just as important, save valuable time and efforts.

A worker in an orange safety suit and white hard hat looking up at industrial equipment.

“Records and data management can now take longer than the maintenance and repair activities itself.”



2. Drive ROI with more profitable spares management

Companies that fail to use RBI waste profits by holding hundreds of thousands of dollars in spare equipment just in case something breaks.

That is a lot of money sitting idle. But companies make the attempt to be prepared because they cannot predict when something will fail. What's more, some equipment, such as heat exchanger bundles, are expensive to keep as spares, and when it leaks, you are stuck with unplanned downtime. Not only are we talking about the dollars tied up in the spares, but also the dollars spent to store and preserve the spares parts so they are fit for service when they are needed. For example, one plant pulled a refrigeration unit out of spares and put it into service, which failed almost instantly after start-up because the unit had been flooded due to Hurricane Katrina, initiating internal corrosion that had not been spotted earlier.

The result is significant loss in performance time, production, and money when something unexpected happens.

Metegrity offers advanced data analysis to predict not only when equipment will need service, but also when it is at the end of its useful life and needs replacement. With the early warning, you can order spares that arrive at the time you need them, and avoid tying up thousands of dollars in idle inventory.

“With the early warning, you can . . . avoid tying up thousands of dollars in idle inventory.”





3. Drive ROI with more profitable inspection intervals

Companies that don't use RBI waste profits due to over-inspecting.

A common example of this is inspecting equipment on a fixed interval. Equipment is inspected to monitor the thickness to ensure it never reaches a critical limit. But rather than calculating corrosion rates to predict when the critical limits will be reached, they inspect the equipment unnecessarily.

Over-inspection wastes profits. It also wastes valuable time from a heavily labored staff, who could be inspecting more critical equipment with their time.

With Visions Enterprise, advanced predictive models are used to inspect equipment only when it needs inspecting. In some cases, companies can drastically reduce their inspection requirements.

One customer reported that the number of thickness monitoring locations (TMLs) for a particular equipment was reduced from 100 to only 10 by using predictive models. In addition, the 10 that were remaining were placed in strategic locations to provide the highest quality data about to confirm equipment condition.



“One customer reported that the number of [TMLs] for a particular equipment was reduced from 100 to only 10 by using predictive models.”



“Time-based inspection represents a highly risky and unprofitable process.”

4. Drive ROI with more profitable inspection scopes

Companies inspecting equipment on a fixed interval simply do it as a matter of habit, not based on calculated intervals from predictive models. One of the issues with fixed interval methodology is that the 3 year inspection may be cursory at best, and often does not encompass a complete assessment of the equipment. The time-based inspections thus offer a false sense of security.

The inspection scope with RBI is geared toward the potential issues identified by the predictive analysis of the RBI study. In addition to the general inspection scope, more critical tasks are included instead of being inspected only when they pose an immediate problem.

Time-based inspection represents a highly risky and unprofitable process. Not only do you risk the equipment failing in service, you also waste time and effort to prepare equipment for inspection, not to mention the cost of the plant shutdown.

With Metegrity's Visions Enterprise, you are provided with special data-driven analysis to identify critical aspects to inspect for the equipment in your plant. This allows you to drive your profits by conducting rigorous inspections of critical equipment at appropriate intervals to ensure their continuing operation. And also make the most of your skilled labor force.





5. Drive ROI with more profitable mobile operations

Companies that don't use RBI impose limitations by forcing field personnel to return to the office to enter inspection data.

Worse yet, some companies use third party inspection resources which often results in wasted time and money by not offering any type of mobile operations platform. Consider the timeliness, convenience, and improved data accuracy by having the ability to enter the inspection data when you are out at the equipment instead of waiting until later.

Onboarding third party inspectors can also be a costly endeavor. It can take a considerable amount of time, effort, and money to allow third party inspectors access to on-site IT systems. Companies also need to consider cyber security risks associated with allowing third party inspectors accessing your systems and the other firewall issues. Each new third party inspector can be a potential security breach if not managed properly.

With Metegrity Visions Enterprise you can use Metegrity's VISIONSGO app to gain full mobility of operations with the increased capability to enter the data onsite. You get the data faster and more reliably by sending the data (real time) directly from VISIONSGO to the VISIONS database without the need to re-enter or format the results. You can also gain profitability by reducing your third party inspection costs and associated risks.



“Each new third party inspector can be a potential security breach if not managed properly.”



6. Drive ROI with more profitable maintenance and repair operations

Companies that don't use RBI waste profit by failing to implement the most effective maintenance and repair operations.

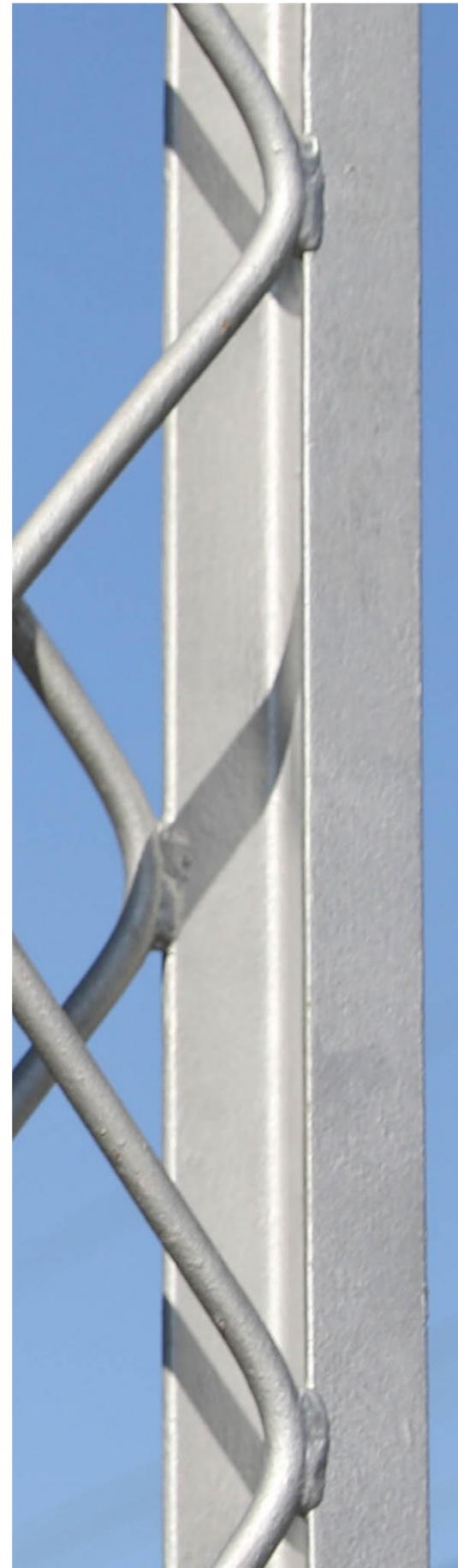
Such companies waste profits due to performing emergency repairs, paying increased cost due to limited time for competitive bidding, paying extra for expedited delivery, or paying a premium when the equipment is not currently available and needs to be custom-fabricated. Emergency repairs can eat your profits.

Meanwhile your plant is down which means no revenue is being produced.

The most significant risk is the risk to human life when equipment unexpectedly fails.

Metegrity Visions Enterprise uses RBI to identify vulnerable areas in equipment and focus inspection strategies to monitor those areas, thus allowing them into the turnaround cycle. Maximize your assets and eliminate emergency repairs.

“The most significant risk is the risk to human life when equipment unexpectedly fails.”





7. Drive ROI with more profitable use of your limited skilled labor resources

Companies that don't use RBI waste profits by forcing their senior staff to perform mundane tasks, such as searching for files in filing cabinets, responding to inspector demands for records by reviewing endless Excel files, or completing paper-based inspection reports.

Once that time is lost, you cannot get it back. With this also comes a shift in the attitudes in your senior staff as they may feel reduced to lower leveled positions based on the mundane tasks. Many senior staff members have "been there and done that" and do not care for that type of work. They do it because they need to and not because they want to.

Metegrity Visions Enterprise RBI maximizes your staff's time, knowledge and experience. The system will perform the data management automatically, so your staff doesn't need to waste time on mundane tasks. Visions Enterprise allows you to use your staff to its fullest potential and focused on complex tasks such as analyzing critical situations. Visions Enterprise is especially relevant for those companies who outsource some of the work—every hour of labor saved amounts to significant savings.



“Metegrity Visions Enterprise® RBI maximizes your staff's time, knowledge and experience.”



8. Drive ROI with data-based operations

Companies that don't use RBI waste profits because they lack the ability to identify where money is being spent.

The plant may be up and operational, but there are no insights to improve predictability and identify small risks before they become big risks. Companies using time-based inspection can sometimes be in a position where they do not actually learn from equipment failures due to lack of data.

With Metegrity Visions Enterprise you get the insight that you need. By examining the likelihood of inherent risks and subsequent consequences, you can get a true image of where your risks lie. Other approaches, such as time-based approaches, fail to deliver that level of insight—you are forced to run the plant on partial information. With Visions Enterprise RBI, you can make more informed decisions and run your plant more reliably.

“With Metegrity Visions Enterprise you get the insight that you need.”



A worker in a white hard hat and safety vest is shown in profile, using a laptop. The background is a blurred industrial setting with tall chimneys.

Get
Started
Today

Contact Metegrity to find how Visions Enterprise can transform the asset integrity management in your chemical plant.

Toll-free: 866.485.8500

sales@metegrity.com

Learn more at [Metegrity.com](https://www.metegrity.com)

A tall, vertical industrial chimney or stack is shown against a clear blue sky. The structure is metallic and has several horizontal bands or supports.

Manage asset health using our asset integrity management software for single to multi-site plants and facilities.

Visions Enterprise is a comprehensive, risk-based asset integrity software solution that supports all equipment types in a single platform. The solution is configurable, with seamless integration to CMMS systems, such as EAM, SAP, Maximo, InforEAM, J.D. Edwards, as well as AutoCAD, data logger instruments, data historians, and others.

Williams Tower
2800 Post Oak Blvd.
Suite 4100
Houston, TX 77056
United States

5715 - 76 Avenue
Edmonton, AB T6B 0A7
Canada

1-866-485-8500

[Metegridy.com](https://www.Metegridy.com)
sales@metegridy.com

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