Dynamic Barrier Risk Management: moving beyond PoC

eVision's Dynamic Barrier Management (DBM) solution is the connected kickoff point for predictive risk management. Developed throughout 2015, 2016, and 2017, it enables clients to view real-time cumulative risk across areas, assets, and decks, while providing deep-level SIMOPS, barrier management and more from a single interface. HESS Global has already kicked off this implementation with its use of Operational Risk Assessments, which feed into the DBM solution. The full DBM software is now out of Proof of Concept phase and is set to be implemented across the first sites in 2018. Besides being accessible directly from the eVision Permit Vision system, it seamlessly integrates into client infrastructure (see example of OSIsoft integration above), with the capability to enable open APIs for various third-party systems.

DBM allows its users to gain an unprecedented overview of risk on their assets. Cumulative risk, permit state, barrier visualization, Operational Risk Assessments and more are all visible on one single screen. From dynamic SIMOPS planning to risk review, the solution enables both staff and management to understand, address, and mitigate risk at a high level of effectiveness.

The Dynamic Barrier Management system allows for both enterprise/global views, as well as asset-specific views. The solutions allows its users to decide the granularity they require, at any time. These views give direct insight into the barrier health of client asset(s). The Barrier Management software will visualise all global assets and highlight for which asset attention is required. Drilling down further, users and management are able to view the full initial/residual barrier model of the asset in question, showing exactly where the problems of the assets lie.

DBM offers interactive, real time SIMOPS (Simultaneous Operations) management. This highly useful feature ensures that dangerous conflicting work can't be performed, or requires certain processes to ensure the safety of all involved. The specifics of SIMOPS are configurable to client needs. Furthermore, dynamic maintenance planning allows the user to simply drag the work to the date or time desired. The system will automatically predict, calculate or re-calculate the risk rating based on desired factors.

**Real world case: OSIsoft Integration**

A major step towards true predictive risk is connecting live data to the Permit Vision system. Predictive risk requires big data: the system needs to be able to make assumptions based on vast amounts of variables, including materials and equipment information, corrosion statistics, workforce lessons learned, plant state, and more. By integrating Live Plant Information into Permit Vision, the system not only increases the safety of the workers, but also provides these types of data which feed into eVision's Predictive Vision concept. This is why eVision and OSIsoft, the leading provider of open-source plant data, initiated a partnership in mid-2016. This partnership has led to the development of an integrated system, combining sensor data with eVision's dynamic Permit Vision solution, paving the way towards predictive risk.

For example, certain hazards which are flagged on a type of valve are linked to live plant information about flow rate, temperature and more: if a pattern is detected by eVision's predictive risk algorithm, it will be able to provide insight into possible risks as well as mitigations. Also, available data on corrosion for certain equipment can be fed into eVision's solution, which combines this information with various variables to provide a preventative maintenance plan for the equipment.

Please view the OSIsoft/eVision partnership video [here](#).

**Real-world case: Hexagon PPI 360-degree safety integration (June 2015)**

More and more companies are switching to digital systems to support their daily operations. This marks huge progress and also sees impressive results: accidents and injuries decrease, risk becomes more understandable, and processes streamline and simplify. But if the information used in their digital systems is not connected or up to date, the concept simply doesn't work effectively.

This is why eVision built its case around integration; a 360-degree safety and efficiency model that ensures the quality of daily maintenance. eVision has partnered with Intergraph (now Hexagon) to connect various, previously disparate systems into one framework, for example using Hexagon SmartPlant P&IDs to feed into eVision's interactive P&ID solution, solving the "as-is vs as-built" dilemma and offering a level of workforce safety and asset oversight previously unheard of. The connected nature of this data allows eVision's Dynamic Barrier Risk system to pull information that is vetted and up-to-date, increasing the quality of its risk management system and Dynamic Barrier visualisations.

For insight into this technical integration, please view eVision's keynote at Hexagon in June 2015 [here](#).