



NASA

Selected Active Risk Manager (ARM) to Support
the Risk Management Process and Improve Safety,
Control and Predictability

SWORD

GRC



The Challenge

Since its inception in 1958, NASA (National Aeronautics and Space Administration) has accomplished many great scientific and technological feats. NASA technology also contributed to the military-industrial complex, where adaptations have benefited us mere earthlings. For example in 2000 NASA started a program to develop the next generation of lithium advanced batteries. The new lithium-ion (Li-ion) batteries could mean that a 12 year old who plays his or her hand-held electronic game for 2 hours per day would not have to buy any more batteries until they were 64 years old!

NASA remains a leading force in scientific research and in stimulating public interest in aerospace exploration, as well as science and technology in general.

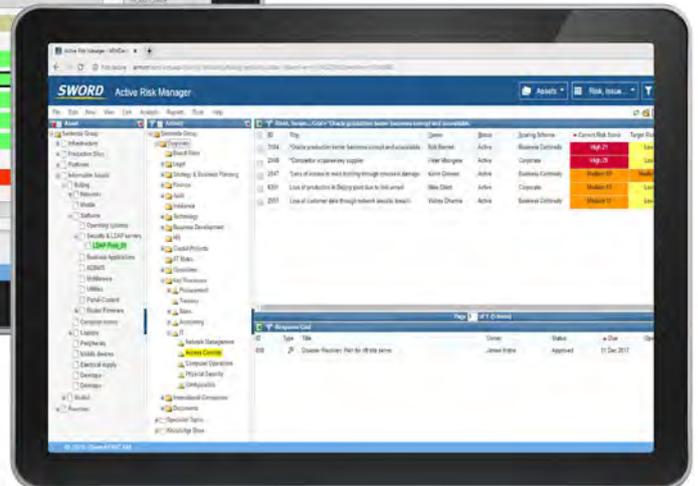
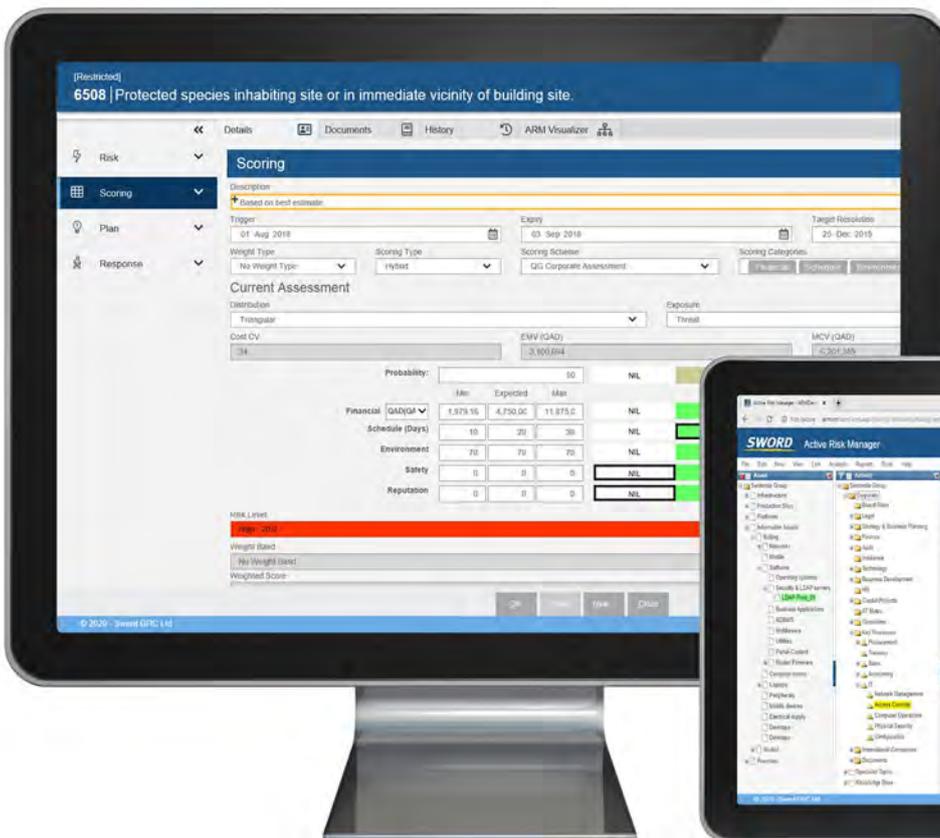
At the heart of NASA is exploration and with exploration comes risk. These risks take many forms and fundamental to every mission requirement is safety. If it cannot be done safely then it will not be

done at all. Therefore safety issues touch every aspect of risk management within every NASA mission, irrespective of importance, location or budget.

According to Phil Napala, Office of Safety and Mission Assurance at NASA Headquarters,

“Mission success stands on the foundation of our unwavering commitment to safety. Science is king at NASA and to make advances in science risk is inevitable. We work on the basis of there being many levels of risk and to manage these levels we have massive amounts of data much of it in islands around the organization, therefore we needed a software solution to improve communication, encourage collaboration and to increase the amount of time dedicated to engineering rather than viewing graphic manipulation.”

Following a review of the risk management solutions available NASA selected Active Risk Manager as the technical solution for the management processes associated with safety, performance, cost and schedule risks.





GSA Endorsement

The fact that Sword GRC had been approved by the General Services Administration (GSA) played an important part in the selection process. This meant that Active Risk Manager had been reviewed and Sword GRC had successfully negotiated the rigorous United States Government Service Agency vendors supplier's approval process.

Phil Napala says,

“ We spent time reviewing the market and Sword GRC stood out as the company to work with. They had a first class product, which was on the GSA schedule and secondly because the people are smart and very willing to work with NASA in terms of any specific technical requirements. They certainly have a “customer” first attitude and were prepared to help. Their business ethic was a refreshing change and we liked that approach. Active Risk Manager proved to be the most sophisticated and complete risk management solution we looked at. We decided to initially install the product in a small selection of Head Quarter's programs to standardize and improve communication and collaboration of risk information. The flexibility and configurability of this product makes it suitable to be used across the Agency on different sized projects and by various functional groups.”

The first installation of Active Risk Manager was at the Stennis Space Centre in Mississippi responsible for engine and rocket propulsion testing for space shuttles. Other projects to use Active Risk Manager include the Mission to Mars project (Exploration Systems Mission Office) and Global Precipitation Measurement based at the Goddard Space Flight Centre.

Several benefits have already been seen from the use of this standard risk management product including the amount of time saved when reporting across multiple projects. Prior to the use of Active Risk Manager the majority of reports were produced on Microsoft™ Power Point which often meant recreating the same slides month in and month out. NASA estimates that by this time saving measure alone millions of dollars will be taken off annual expenditures. This will allow the money to be spent directly on mitigation or the engineering component of projects.



Not Alone in Space

A further benefit has been that many of NASA's prime contractors for example Lockheed Martin, Northrop Grumman and Honeywell are also managing risks using Active Risk Manager. This means that communication and the sharing of information is accelerated with everyone speaking the same language.

David Emanuel, of Sword GRC adds at this point,

“ Space projects are the ultimate in risk management, there aren't screwdrivers long enough to fix problems. A robust risk management process must be supported and underpinned by a robust technical solution that enables communication and makes risk management inclusive both within and across NASA, their partners and supplier communities. From our work with several of NASA's prime contractors we were fully aware of the importance of making informed decisions leading to endeavour control and predictability across both organizations and projects.

“Sword GRC understands that risk management is a continuous process involving identifying, analysing, planning, tracking and controlling risk. Our product is aligned with NASA's Continuous Risk Management process (CRM). Our staff is aligned with NASA's drive for efficiency and transparent communication. Sword GRC are aligned with NASA's ruthless pursuit of excellence and successful execution of missions.”



NASA has established risk management requirements and guidelines, it has a standardised approach to risk reporting and evidence exists that risk management is working within the organization and continues to improve.

As Phil Napala concludes,

“ Our motto has always been, Fly By, Orbit, Land, Sample Return and Human. We have achieved this with the Moon and our sights are now set on Mars, Jupiter and Saturn. However, as the distances in space get longer it gets harder and the risks get bigger but with Active Risk Manager we foresee a future where risk management methodologies will inform policy and investment decisions to accomplish fundamental safety objectives and therefore successfully accomplished missions.”



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