

FORWOOD
SAFETY

DIGITAL REPORT
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Eradicating workplace fatalities through technology

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Eradicating workplace fatalities through technology

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Thorsten Scholz, CTO, explains how tech innovation, solid partnerships and a focused approach can transform safety culture in industry



Whilst an element of risk may always be inherent to some specific workplaces or roles, there is no reason why this should remain cause for severe injury or loss of life. Tackling this issue with the steadfast attitude that all work-related deaths can be prevented, Forwood Safety has been on a mission to change the standard of safety within mining and oil and gas through applied technology since 1995. Growing from a small enterprise to a genuine leader, the company continues to focus on solving some of the most significant and enduring challenges facing the modern industrial sector: delivering best-in-class performance that doesn't compromise safety standards and relegating workplace fatalities to the archives of history.

Taking on the role of Chief Technology Officer (CTO) in late 2015, Thorsten Scholz came across Forwood Safety whilst working as a consultant within the mining industry. Whilst listening to a presentation on the verification method used by Forwood to improve performance of critical controls, he experienced an epiphany that he could help make an even greater impact on the safety of frontline workers



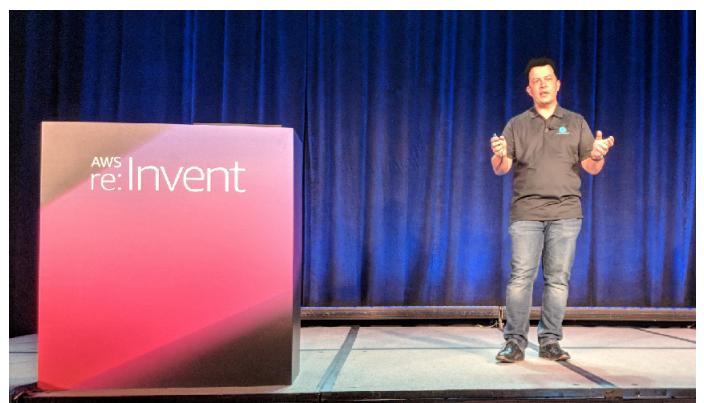
“I actually walked up to Steve Wood (CEO of Forwood) after the meeting and said, ‘I need to get involved in this’”

—
Thorsten Scholz,
 CTO, Forwood Safety

by joining the endeavour, which he did shortly afterwards. “I actually walked up to Steve Wood (CEO of Forwood) after the meeting and said, ‘I need to get involved in this’,” he says. With previous IT roles at large mining operations in Australia and project experience in high risk industries globally, Scholz understands the challenges of risk management and safety well – an understanding which has valuably contributed to his approach at being a CTO.

The drive and determination to excel at pace stems from Forwood Safety’s emphasis on a corporate culture

which empowers employees within non-hierarchical structures across the company, always centred on the idea of delivering success to clients. For Scholz, his approach to IT can be summed up in one word: Quality. “We’ve implemented Agile first in the product team and then across the rest of the business. Now, we can really scale and standardise our products, from content development to marketing while never losing focus on the business value of the outcome for our clients” he explains. From a technological standpoint, he credits the advent of cloud-computing as totally revolutionising the ERP computing which prevailed at the beginning of his career. “When I look at the IT sector, I can say with certainty that the cloud’s introduction was a catalyst for digital transformation. We could never deliver large scale enterprise safety and risk management solutions at such great value without the cloud and without a partner like Amazon Web Services (AWS).”





PARTNER

A truly critical partner for Forwood Safety, Amazon's importance to the company's daily operations cannot be overstated. Scholz has this to say on their relationship:

"We regularly collaborate with Amazon on strategic initiatives, most recently with one of our key clients to further progress the SaaS use cases of the Amazon QuickSight offering, a very powerful business intelligence (BI) tool. We've been involved with AWS for a number of years now, we continue to provide feedback on behalf of our large enterprise clients directly to

product management, which goes into their product roadmap. QuickSight allows you to run data analysis on any type of device, including browsers and phones at a data volume and scale which is unprecedented. As a safety and risk management firm, we don't want to invest in building reporting platforms, that makes no sense. Instead, we want to build data models and get insights into the data using an established, managed service like Amazon QuickSight. This approach helps us to focus on what we're good at: providing deep insights into fatality prevention."



Amazon QuickSight Embedded Analytics

Easily embed interactive visualizations and dashboards in your applications

Seamless, embedded analytics

QuickSight lets you to quickly embed interactive dashboards and visualizations into your applications without needing to build your own analytics capabilities. Blend analytics seamlessly into your application with QuickSight Embedded's themes, which let you personalize the look and feel (e.g. colors, fonts etc.) of your reports and dashboards. Integrate into your applications user experience by setting defaults and handling errors to match your app's user experience.

Enable deeper insights from data

QuickSight empowers your users to gain deeper insights through ad-hoc analysis and machine learning capabilities such as anomaly detection, forecasting, and natural language queries. In addition, users can author, publish, and share their own dashboards and reports to get specific answers to their customized questions. These capabilities provide you with new ways of monetizing and differentiating your applications.

Serverless and easy to manage

Seamlessly scale from tens to hundreds of thousands of users with QuickSight's server-less architecture with built-in high availability, eliminating the need to setup, configure, or manage servers. Additionally, with QuickSight's APIs, you can programmatically manage your analytics workflows such as setting up multi-tenant architecture for isolating data between multiple end-users, moving dashboards across accounts, automating deployments, and managing access for users with Single Sign-On (SSO).

Pay only for what you use

QuickSight's pay-per-session pricing model means you only pay when your embedded dashboards are being used. You don't have to worry about expensive user-based licensing especially when providing analytics capabilities to a large number of users (e.g., public websites, enterprise portals).

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Furthermore, the utility of working with AWS and using its products contributes another factor to Forwood Safety's agility, namely mitigating the need to 'reinvent the wheel' for every tech need that might arise. Using Amazon as a one-stop provider of vital compute solutions, Scholz says that the company can instead focus on their true mission: applying technology in creative ways to save lives. Able to adapt to new threats and working conditions as they

arise, Forwood Safety was able to integrate new protocols for COVID-19 risk management in record time. "Within weeks, we had specific COVID-19 content deployed globally. In that time, we developed comprehensive critical control checklists for COVID-19, and deployed these to over 250 sites and in seven languages, including Icelandic, Mongolian, Spanish and French," he explains. "Without the cloud that would have not been possible."

EXECUTIVE PROFILE:

Thorsten Scholz



Title: Chief Technology Officer **Company:** Forwood Safety
Industry: Fatality prevention **Location:** Australia

Thorsten Scholz is an agile leader with more than 25 years' experience designing innovative technology solutions in the Health, Safety and Environment (HSE) sector. Having worked with clients around the globe, he understands the complexities of real-world operations. Highly skilled in delivering game-changing technologies, Thorsten is well positioned for his current role as Chief Technology Officer at Forwood Safety. As a vital member of Forwood's Executive Team, Thorsten is pivotal in ensuring this dynamic company's success by leveraging technology innovations to find new ways of preventing fatalities around the world.





Currently offering three primary products – Critical Risk Management (CRM), SafetyApps and Enterprise Risk Assurance (ERA) – agility often combines with innovation at Forwood Safety, with collections of core proprietary technology (drones, satellites, etc) utilised for specialised tasks. “We have a geospatial platform integrated into our products which allows clients to upload custom maps in a self-service manner. If you give the people in control of operations a bird’s eye

view of critical risks in the workplace this helps to quickly identify areas where workers could get harmed and creates actionable insights to prevent this.” This is again indicative of Forwood Safety’s distinct approach to risk management and safety: collaboration between parties is essential and the company strives to combine its tech platform with methods and relevant content in order to produce a transformative solution for clients. “It’s about working together to achieve an outcome;

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Thorsten Scholz,
CTO, Forwood Safety

building a good safety culture must be a partnership,” Scholz emphasises.

Working closely with its channel partners and clients, Forwood Safety’s critical risk management platform analyses failures before they can turn into fatalities and provides capabilities to predict hotspots and blackspots. It follows the pattern that establishing a strong tech infrastructure is imperative for implementing sustainable technological change with great value for clients. Amazon, as already mentioned, has

been a crucial partner in achieving this, but one other company Scholz identifies for special praise is Base2Services. Founded in 2005, this company has developed a reputation in Australia as being one of the most respected cloud development/operations companies in the market. Having itself partnered with AWS for more than a decade, Base2Services is an expert in operating superlative cloud environments. “Base2Services focuses on DevOps, DevOps automation, cyber risk, cybersecurity and helps us to make sure that all the ‘nuts and bolts’ are in place and any warning signs are monitored, reviewed and addressed straight away. They provide us with 24/7 infrastructure support across the globe in a ‘follow the sun’ model. In terms of scalability, flexibility and value delivered, this has really helped us to focus on what is important to us: helping to save lives.”



Digital automation through artificial intelligence (AI) is one of the most exciting trends across several industries right now and Scholz declares that Forwood Safety is firmly at the forefront in its sector. Not satisfied with using a pre-existing solution in this regard, the company instead developed its own by hiring a team of data scientists to analyse the most effective way for AI to enhance safety. The breakthrough came via the revelation that using binary safety-related questions with choices of 'yes' or 'no' provided very fertile ground for algorithmic optimisation. "90% of the time the answers are very straightforward. If you have a good set of questions, which can be answered consistently and always with a 'yes' or 'no', it helps your machine learning (ML) model gather data and form predictions based on patterns." Considering the topic of AI-based automation more generally, Scholz states there are two aspects of importance to its development with regards to safety: 1) support via improved decision-making capabilities; and 2) working

1995

Year founded

1200+

Using our global benchmark critical control verification process

50

Number of employees

out practical applications which will benefit workers in the field. Both will require thought and attention, as well as close collaboration with partners and clients to pilot new approaches directly in the workplace. "From my perspective, ML and its applications for analysing both still photos and video are going to be critical in the future of safety technology" he adds.

With a five-year strategic road-map in place and solutions for



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“We believe all workplace fatalities can be eradicated”

—
Thorsten Scholz,
CTO, Forwood Safety

health-related crises like COVID-19 already natively established in the company’s products and services, Scholz is confident that Forwood Safety will continue to thrive and establish the next generation of safety principles which will endure and become industry standards.

“We want to leverage technology, as well as our expertise, to make a big difference in fatality prevention in



the years to come,” he concludes. “Forwood Safety has the partnerships and the cultural alignment to execute that vision. Ultimately, we believe all workplace fatalities can be eradicated.”



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