



2025 LOTE TECHNICAL CONFERENCE

29 September – 1 October

Innovating For a Safer Future

FROM ASHES TO ALGORITHMS: AN EVOLUTION IN FIRE DETECTION

By Srinath Iyengar



Srinath Iyengar's presentation traced the evolution of fire and smoke detection technologies from ancient manned patrols to cutting-edge AI-driven systems. Beginning with historical methods such as telegraph alerts and early thermostatic detectors, the presentation explored the development of ionisation and photoelectric systems that remain foundational today. Iyengar highlighted the emergence of multi-criteria detectors using sensor fusion and intelligent algorithms to reduce false alarms and improve reliability.

The session also examined modern innovations including aspirated smoke detection, IoT-enabled smart alarms, and 5G-integrated devices. Looking ahead, the integration of artificial intelligence, machine learning, and advanced signal processing promises a transformative future for fire safety. Technical challenges such as cybersecurity, device interoperability, and connectivity in remote areas were also addressed, alongside real-world case studies.

This presentation offered a comprehensive view of how fire detection has evolved and where it is heading, emphasising the role of intelligent systems in enhancing safety and responsiveness.



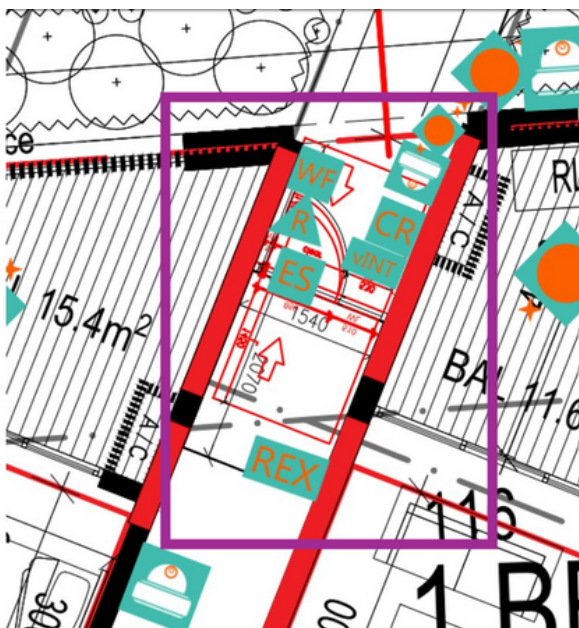
BUILT FOR SECURITY: LOTE'S STRATEGIC USE OF CPTED

By Ameeraa Hussain

Ameeraa Hussain's presentation explored the evolution and strategic application of Crime Prevention Through Environmental Design (CPTED) in urban planning and development. Tracing its origins from the 1960s to its formal adoption in NSW under Section 4.15 of the EP&A Act, the talk highlighted the progression through three generations of CPTED, each expanding from physical design to social, economic, and public health sustainability.

Hussain emphasised Lote Consulting's unique risk-based approach, integrating crime statistics, demographic data, and architectural plan markups to tailor security strategies. The presentation showcased how CPTED principles, such as surveillance, access control, and territorial reinforcement, are practically implemented using tools like smart lighting, AI-powered surveillance, and community engagement.

Case studies within Lote's project portfolio, including the Base Farm Precinct and Ambrose Early Learning Centre, illustrated real-world applications of CPTED strategies. The session concluded with a look at emerging technologies and standards, including ISO 22341 and the role of generative AI in designing safer, more resilient environments.



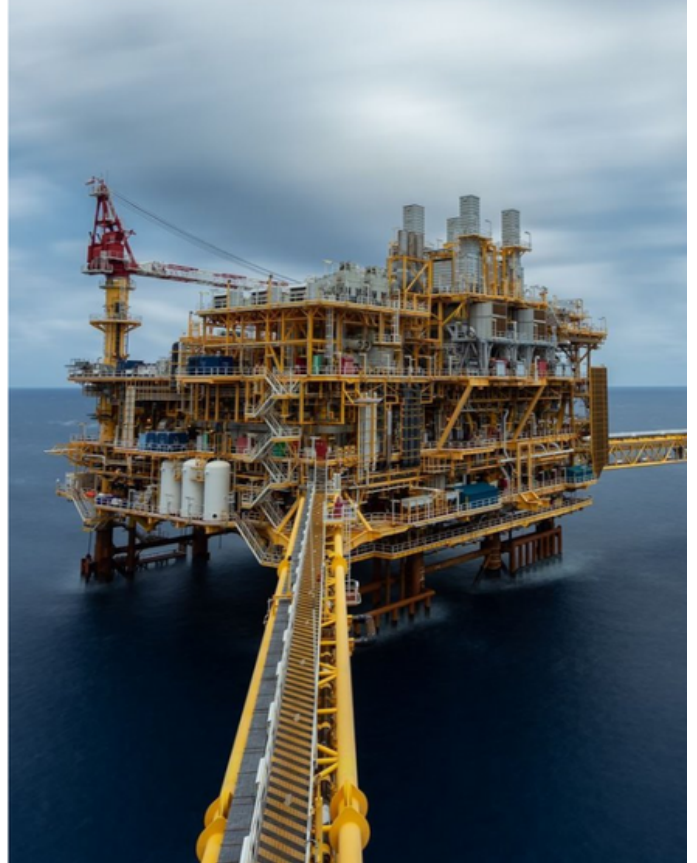
GUARDING THE RIG

By Ali Mohammed

Ali Mohammed's presentation addressed the unique fire safety challenges faced by offshore oil rigs, highlighting the extreme risks posed by hydrocarbons, complex equipment, and remote locations. He outlined the severe consequences of fire events, including threats to life, environmental harm, and asset loss, and emphasised the importance of robust regulatory frameworks such as OPGGS(S), ISO 13702, NFPA, IECEx, and ATEX.

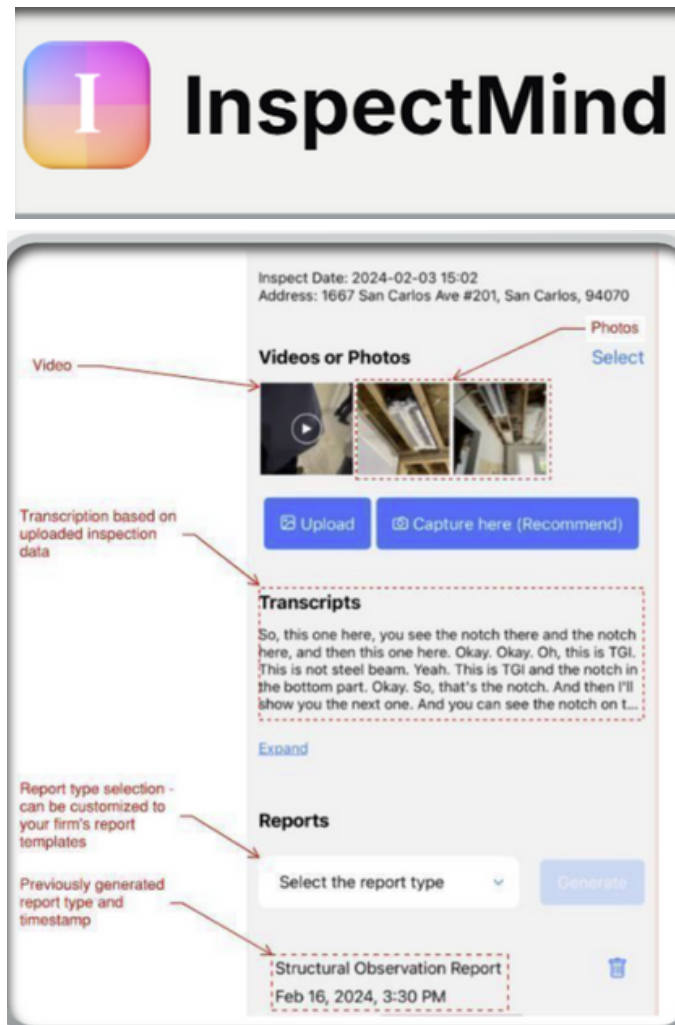
The session detailed the integration of hazard identification, risk assessment, and the ALARP (As Low As Reasonably Practicable) principle in developing safety cases. Mohammed discussed advanced fire detection and suppression technologies, such as multi-sensor systems, deluge and foam suppression, and passive fire protection and stressed the need for regular inspection and maintenance.

The presentation concluded by advocating for a holistic approach that combines regulatory compliance, engineering best practices, and operational experience. Emerging technologies like AI-based detection and digital twin technology, along with a strong safety culture and continuous training, were identified as key aspects to achieving world-class fire safety performance on offshore platforms.



AI IN ACTION

By Omar Khursheed



Omar Khursheed's presentation examined the transformative potential of generative AI (GenAI) in engineering report writing and consulting. He outlined the current challenges faced by engineers, including time-consuming documentation, repetitive tasks, and the risk of inconsistency.

Khursheed highlighted how GenAI can automate routine aspects of report writing, facilitate knowledge retrieval from past projects, and enhance the quality and speed of report generation.

The session showcased industry examples such as InspectMind AI and Archistar eCheck, demonstrating real-world applications of AI in automating inspections, permit assessments, and compliance reporting. Khursheed also presented Lote's vision for leveraging GenAI: accelerating workflows, improving quality through automated QA checks, and integrating AI with engineering documents and models.

Emphasising the importance of human oversight, data privacy, and domain-specific AI models, the presentation concluded that GenAI offers immediate value and a foundation for future innovation in engineering consulting, positioning Lote for a durable competitive advantage.



STORY-TELLING WHERE INGENUITY MEETS SAFETY

By Zahina Shah

Zahina Shah’s presentation explored the power of storytelling, branding, and creative communication in technical and safety-focused projects. Drawing on the origins of rhetoric and the universal frameworks of narrative, Shah demonstrated how effective storytelling, rooted in Aristotle’s principles of ethos, pathos, and logos, can enhance memory, engagement, and understanding in both marketing and project delivery.

The session highlighted the importance of brand identity using the Kapferer Model, with case studies illustrating how values, culture, and personality shape public perception. Shah emphasised that storytelling is not just about emotion but about choosing the best mode of communication for diverse audiences, making technical information accessible and memorable.

A unique case study involving a crocodile enclosure showcased how creative thinking and narrative can help balance safety, compliance, and real-world risks. The presentation concluded by encouraging the use of journey documentation and visual storytelling to foster empathy, inclusivity, and effective knowledge transfer in engineering and consulting practice.

Kapferer’s Brand-Identity Prism model

Type of model: Brand model (structure model)
Author(s): J.N. Kapferer
Domain: Identity and image

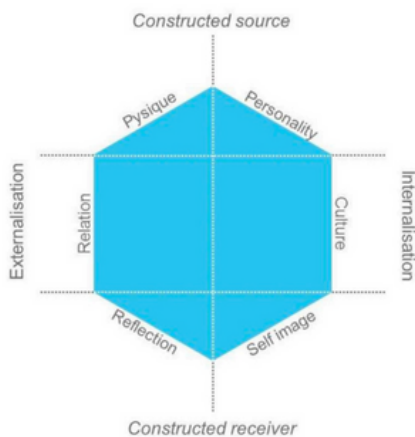


Figure 1: Six dimensions of brand identity



POWER PROTECTION AND PREVENTION IN EV BUS DEPOTS

By Syed Yamin Ahmed



This presentation addressed the emerging fire safety challenges in electric vehicle (EV) bus depots, driven by the rapid adoption of fully electric buses and the installation of high-capacity charging infrastructure. Key risks highlighted include thermal runaway in batteries, accumulation of toxic and flammable gases, and the lack of data on managing EV bus fires compared to diesel buses.

The presentation compared fire risks between diesel and electric buses, noting that EV fires are often harder to detect, can start internally, and may release hazardous gases. Special attention was given to the dangers posed by charging infrastructure, such as overloaded circuits and physical damage to charging stations.

The presentation explained thermal runaway, its triggers, and why it is particularly dangerous in EV batteries. It also compared battery chemistries, LFP (Lithium Iron Phosphate) and NMC (Nickel Manganese Cobalt), with LFP being safer and preferred for urban buses, while NMC offers higher energy density but greater fire risk.

Mitigation measures discussed included depot design for ventilation, physical barriers, and clear emergency egress paths. The session concluded with an overview of upcoming technologies, such as advanced battery management systems, integrated fire suppression, solid-state batteries, and remote diagnostics, all aimed at enhancing fire safety in EV bus depots.



FIRE SAFETY BUILDING INSPECTIONS IN NSW: ENSURING COMPLIANCE AND PUBLIC SAFETY

Yahya Elhallak



This presentation provided a practical guide to fire safety building inspections in New South Wales, aimed at both newcomers and experienced professionals. Yahya Elhallak, a senior fire engineer at Lote Consulting, shared insights from over 400 site inspections, highlighting the essential procedures, tools, and safety considerations involved.

Key topics included the types of buildings commonly inspected, the importance of understanding building classifications, and the preparation required for different inspection scenarios. The presentation emphasised the need for proper personal protective equipment (PPE), awareness of site-specific hazards, and adherence to NSW fire safety regulations and standards.

The inspection process was outlined step-by-step, covering preparation (such as reviewing building plans and previous reports), on-site procedures (including checks of fire services, exits, and fire-resistant materials), and the importance of thorough documentation. Special attention was given to the inspection of essential fire safety measures and the role of fire engineers, certifiers, and accredited practitioners in ensuring compliance.

The session concluded by reinforcing the critical role of regular fire safety inspections in reducing fire risks, ensuring legal compliance for building owners, and enhancing public safety and emergency response capabilities. The adoption of best practices and prompt resolution of identified issues were highlighted as key to maintaining safe and compliant buildings.

FIRE SAFETY IN E-FUEL PRODUCTION: ENSURING RISK MANAGEMENT IN SUSTAINABLE FUEL MANUFACTURING

By Samir Hussien

This presentation explored the fire safety challenges and risk management strategies in the production of electrofuels (e-fuels), which are synthetic fuels created from carbon dioxide and hydrogen using renewable electricity. E-fuels are positioned as a key solution for decarbonizing hard-to-electrify sectors like aviation and shipping, offering compatibility with existing infrastructure and supporting climate change mitigation efforts.

The session detailed the main chemical production pathways, such as methanation, Fischer-Tropsch synthesis, and e-methanol/ammonia synthesis, highlighting the operational hazards associated with high pressures, elevated temperatures, and the use of flammable and toxic gases. Specific fire and explosion risks were discussed for hydrogen, methane, methanol, and ammonia, emphasising the need for robust safety protocols.

Relevant NFPA standards (including NFPA 2, 30, 55, 68, and 69) were reviewed, outlining their application to hydrogen, compressed gases, flammable liquids, and explosion protection in e-fuel facilities. The presentation emphasised engineering controls such as hazard identification (HAZOP, LOPA, QRA), gas leak detection, ventilation, explosion venting, and tailored fire suppression systems.

Case studies, including incidents involving hydrogen explosions, methanol tank fires, and ammonia BLEVEs, were used to illustrate the consequences of inadequate safety measures and the importance of compliance with established standards. The presentation concluded by identifying research gaps in fire behaviour, material interactions, and the need for integrated safety modelling, calling for interdisciplinary collaboration to develop comprehensive fire safety frameworks for emerging e-fuel technologies.



HOSTILE VEHICLE MITIGATION (HVM): BARRIERS THAT THINK

By Jed Hugill

This presentation explored the concept and importance of Hostile Vehicle Mitigation (HVM)—the strategies and physical measures designed to prevent, deter, or reduce the impact of vehicles used as weapons or involved in accidental crashes. HVM is especially critical in crowded urban environments, public events, and around critical infrastructure.

The session covered the typology of threats (intentional, such as terrorist attacks, and unintentional, such as driver error), and highlighted the increasing risk posed by hostile electric vehicles due to their weight and acceleration. Key international standards, including ISO 22343-1:2023 and IWA 14-1, were discussed, outlining requirements for barrier performance, impact testing, and integration with urban infrastructure.

Real-world examples and case studies, such as the 2025 New Orleans truck attack and the 2024 Magdeburg Christmas Market incident, illustrated the consequences of inadequate or reactive HVM planning. The presentation showcased a range of HVM solutions from retractable bollards and wedge barriers to multi-functional urban design elements like planters and benches that provide security without compromising aesthetics.

Emerging technologies, including AI-powered surveillance and smart automation, were highlighted as future directions for proactive threat detection. The presentation concluded by emphasising the need for strategic, context-aware HVM that balances safety, accessibility, and urban design, and by outlining Lote's approach to integrating HVM into security planning and CPTED (Crime Prevention Through Environmental Design) reports.



GENERATIVE AI IN CRITICAL DOMAINS: LAW, CYBERSECURITY, AND FIRE SAFETY

By Esha Hatiskar

This presentation examined the opportunities and challenges of using generative AI in high-stakes fields such as law, cybersecurity, and fire safety engineering. In the legal domain, the session highlighted both the benefits, such as improved research efficiency and document drafting, and the risks, including AI “hallucinations,” confidentiality breaches, and the need for strict adherence to ethical and professional standards. Real-world case studies, like *Mata v. Avianca* and Michael Cohen’s use of AI-generated citations, illustrated the consequences of failing to verify AI outputs.

In cybersecurity, generative AI was shown to enhance threat detection, automate incident response, and support real-time analysis, but also introduces new risks such as AI-generated malware and deepfakes. The importance of human oversight, regulatory compliance, and ethical boundaries was emphasised.

For fire safety engineering, the presentation made clear that AI can assist with compliance checks and inspections but cannot replace certified engineers or legal accountability. All AI-generated outputs must be reviewed and endorsed by qualified professionals, and generative AI tools are prohibited from drafting technical documents for certification purposes.

The session concluded by stressing that while AI can support critical decision-making, human expertise, oversight, and regulatory compliance remain essential to ensure safety, reliability, and accountability in these domains.



FIRE SAFETY CONSIDERATIONS IN DRY AND TEMPERATE ENVIRONMENTS

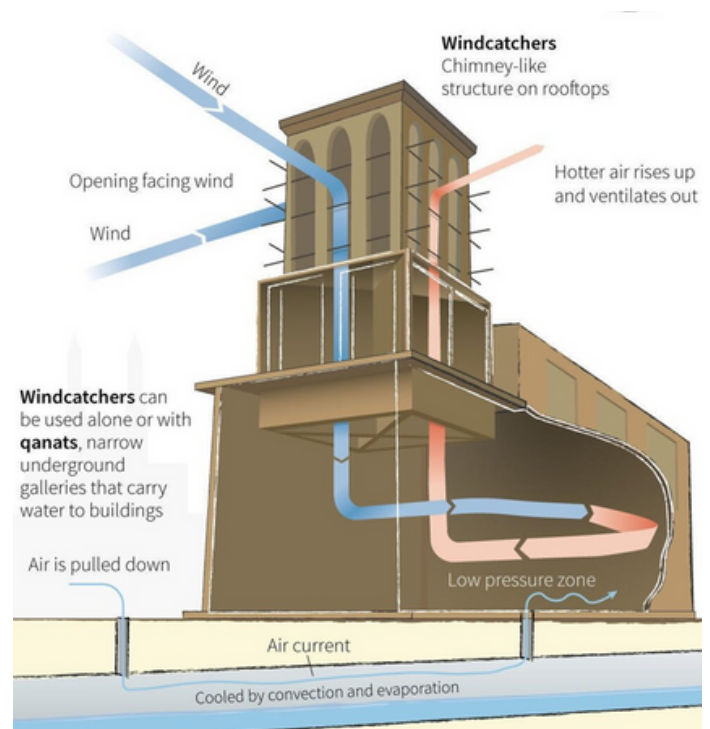
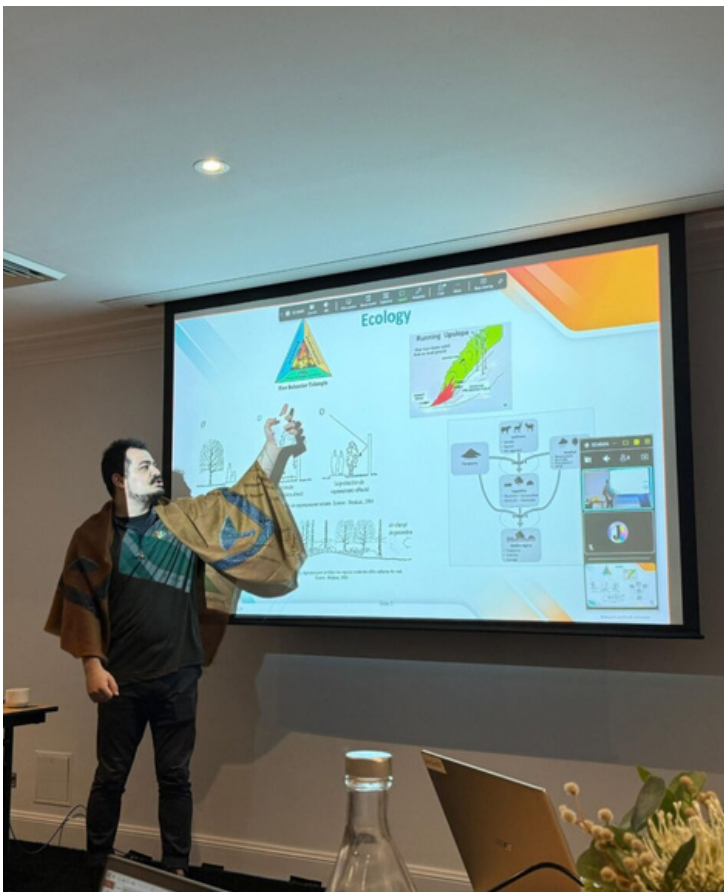
By John Khoury

This presentation explored how climate, ecology, and traditional building practices influence fire safety in dry and temperate regions. John Khoury highlighted the ways natural features, such as vegetation, topography, and weather, affect fire risk and how historical and modern communities have adapted their architecture to mitigate these dangers.

The session examined passive cooling techniques, the use of vegetation for shading and wind protection, and the importance of building materials and site planning. Examples ranged from ancient windcatchers in Iran, yurts in Mongolia, to Mediterranean and Australian rural homes, each demonstrating unique fire safety adaptations suited to their environments.

Modern fire safety standards, including those from ISO, NFPA, and local codes, were discussed in the context of global harmonisation and local adaptation. Case studies from Phoenix (USA), Hyderabad (India), and the UAE illustrated how different regions implement fire detection, suppression, and community education to address their specific risks.

The presentation concluded by emphasising the need for integrating traditional knowledge with modern fire safety systems to create resilient, climate-appropriate buildings and communities.



INTERSECTING IDEOLOGIES: ASSESSING FAR RIGHT AND RELIGIOUS RIGHT DYNAMICS IN AUSTRALIA

By Lana Vidakovic

This presentation examined the growth of the “Religious Right” as a political and social force, tracing its origins in the United States and exploring its influence and risks in Australia. The session outlined key ideologies, including Christian Identity and Christian Nationalism, and highlighted how these movements can foster discrimination, extremism, and violence, particularly gaining traction through online platforms and social media for propaganda, recruitment, and radicalisation.

Case studies and recent incidents, such as the Camp Sovereignty attack in Melbourne and the activities of groups like the National Socialist Network, illustrated the real-world consequences of unchecked far right and ideologically motivated extremism. The presentation also discussed the role of influential figures and online personalities in spreading these ideologies, and the challenges posed by echo chambers and limited content moderation.

Key risks identified included threats to social cohesion, increased violence, and the mobilisation of hate groups. The session emphasised the importance of proactive measures, such as Crime Prevention Through Environmental Design (CPTED), robust event safety planning, and targeted deradicalisation strategies, to mitigate these risks and protect public safety. The relevance to Lote’s work was underscored by the need for effective risk management, security planning, and community-focused safety solutions in the face of evolving ideological threats.



A HOLISTIC APPROACH FOR PERFORMANCE-BASED DESIGN OF DATA CENTRE LITHIUM-ION ENERGY STORAGE SYSTEMS

By Christopher Koch



This presentation addressed the complex fire and safety challenges associated with integrating lithium-ion battery energy storage systems (BESS) in Australian data centres. Christopher Koch outlined the need for a holistic, performance-based design approach that goes beyond minimum compliance with building codes and standards.

Key topics included the structure and function of data centres, the importance of comprehensive fire safety studies (FSS) as per NSW and Victorian guidelines, and the management of dangerous goods such as lithium-ion batteries, diesel, and transformer oils. The session highlighted the interplay between security measures, occupant life safety, and fire brigade intervention, emphasising the risks posed by toxic gases, explosion potential, and emergency access.

The presentation also discussed the limitations of current Australian codes and standards (such as the NCC, AS 2419.1, and AS 2118.1) in addressing the scale and unique hazards of modern data centres, and the necessity of referencing international standards like NFPA 855 and FM Global Data Sheets. Real-world examples and case studies illustrated the application of advanced fire safety strategies, including compartmentation, dynamic exit signage, smoke modelling, and specialised suppression systems.

The session concluded by stressing the importance of early engagement with stakeholders, certifiers, insurers, fire brigades, and regulators, and the need for integrated risk management to ensure both compliance and operational resilience in these critical facilities.

EFFECTS OF PRE-EXPOSURE WETTING ON A BUILDING DURING A BUSHFIRE

By Joyce Van

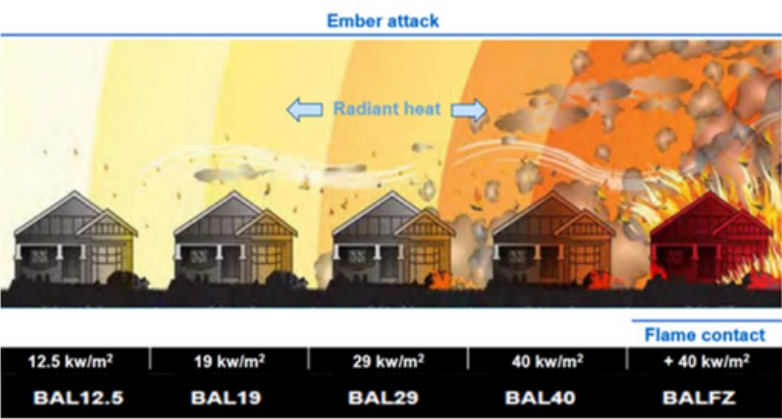
This presentation investigated the effectiveness of pre-exposure wetting, using water-based sprinkler systems, on reducing the risk of building ignition during bushfires. Joyce Van outlined the increasing importance of bushfire research in the context of climate change, which is driving more frequent and severe fire events in Australia.

The session explained the three main bushfire attack mechanisms on buildings: ember attack, radiant heat, and direct flame contact. It reviewed both passive (structural hardening) and active (sprinkler and suppression) protection strategies, highlighting the lack of rigorous standards and scientific data for outdoor sprinkler systems.

A literature review revealed mixed results regarding the effectiveness of water-based pre-wetting, with some studies suggesting limited protection against prolonged radiant heat. The presentation described a computational fluid dynamics (CFD) modelling study that simulated various sprinkler configurations, weather conditions, and pre-wetting strategies to assess their impact on building surface temperatures and ignition risk.

Key findings indicated that pre-wetting can reduce peak surface temperatures and delay ignition, but its effectiveness depends on factors such as sprinkler placement, weather severity, and water availability. The study identified areas for further research, including optimal wetting duration, water usage, and retrofitting older buildings.

The presentation concluded by emphasising the need for more quantitative research and standardisation to improve bushfire resilience for buildings in fire-prone communities.



SCALING SMART: HOW OPERATIONAL SYSTEMS SUPPORT A GROWING CONSULTANCY

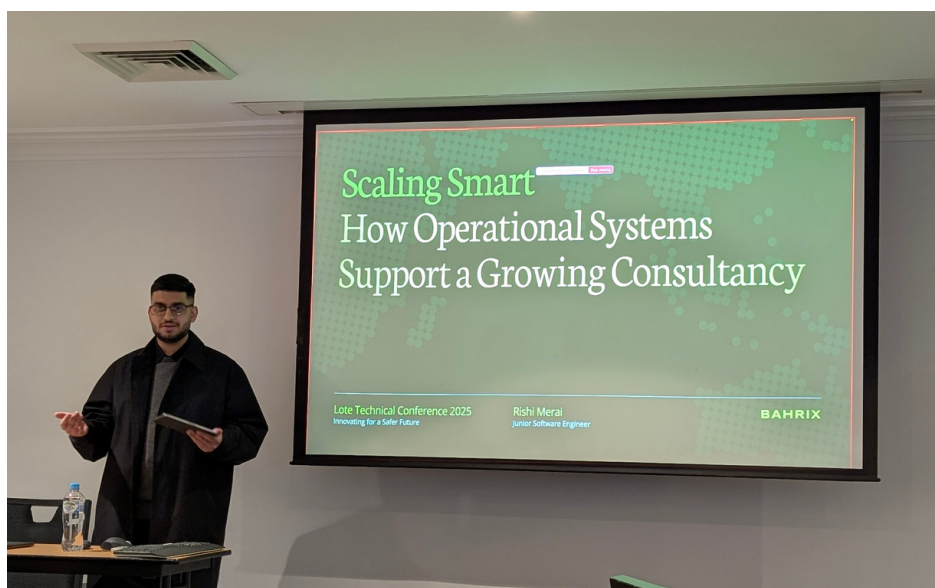
By Rishi Merai

This presentation examined how consultancies can achieve scalable growth by applying engineering principles and rigor to their internal operational systems. Rishi Merai discussed the challenges consultancies face as they expand, particularly the limitations of ad hoc tools and spreadsheets, which can lead to inconsistency, bottlenecks, and declining work quality.

The session introduced a case study of an integrated portal for project management, client relationships, and time tracking, used to illustrate the principles of scalable system design. Merai emphasised that successful digital transformation depends not just on technology, but on user adoption driven by usability and user experience (UI/UX). Poorly designed systems often result in low adoption, stale data, and financial loss.

Key design decisions highlighted included structuring information architecture to match consultant workflows, providing role-based views, using visual encoding to make data actionable, and implementing controlled vocabularies for consistency and compliance. The presentation also described the “network effect” of good design: as more users adopt a well-designed system, data quality and system value increase, enabling further growth without added bureaucracy.

The presentation concluded by stressing that every scalable system starts simple, but long-term success relies on treating operational systems as strategic infrastructure and prioritising user experience engineering to drive adoption, resilience, and reliability.



SPEAK FREELY, THINK BOLDLY: PSYCHOLOGICAL SAFETY AND HIGH-PERFORMING TEAMS

By Sumaiya Mazid

This presentation explored the concept of psychological safety as a critical factor in building high-performing teams. Sumaiya Mazid defined psychological safety as an environment where people feel safe to speak up, ask questions, share ideas, and admit mistakes without fear of embarrassment or punishment. The session emphasised that withholding thoughts and ideas limits both individual and collective learning.

The presentation outlined the four developmental stages of psychological safety: inclusion safety, learner safety, contributor safety, and challenger safety. It highlighted the risks of a workplace lacking psychological safety, including reduced collaboration, lower morale, poor team performance, and resistance to change.

Drawing on Google's Project Aristotle, Mazid discussed research findings that identified psychological safety as the number one predictor of team success, more important than reliability, clarity, meaning, or impact alone. Teams thrived when members felt safe to speak up, share ideas, and admit mistakes.

The session also described how Lote Consulting integrates psychological safety into its change projects through initiatives such as induction, recruitment, performance reviews, and mentorship programs. The presentation concluded by positioning psychological safety as a strategic enabler for Lote Consulting's growth, innovation, and positive workplace culture.



THE SUGAR BOMB – LESSONS FROM THE 2008 IMPERIAL SUGAR EXPLOSION

By Muhammad Naufal

This presentation examined the catastrophic 2008 Imperial Sugar refinery explosion in Georgia, USA, as a case study in industrial safety and risk management. Muhammad Naufal explained how ordinary materials like sugar can become explosive hazards under certain conditions, highlighting the broader risks posed by combustible dust in many industries.

The session detailed the sequence of events leading to the disaster, including the accumulation of sugar dust, a critical design change that created a confined, unventilated space, and the ignition of a dust cloud by an overheated bearing. The resulting explosions caused 14 fatalities, dozens of injuries, and the destruction of the facility, with severe economic and community impacts.

Key systemic failures identified included poor housekeeping and dust control, inadequate hazard awareness and safety culture, and insufficient emergency preparedness. The presentation emphasised the importance of following established safety standards, managing change rigorously, maintaining proactive housekeeping, investing in training, and challenging complacency.

Naufal concluded that the Imperial Sugar disaster was not a freak accident but the predictable result of systemic failures. The key lesson for engineers and safety professionals is to recognise and address “invisible” everyday risks before they escalate into major incidents.



FIRE SAFETY IN SUSTAINABLE BUILDING DESIGN

By Jack Tetley

This presentation explored the intersection of fire safety engineering and sustainable building design. Jack Tetley highlighted the significant environmental impact of the building industry, which accounts for around 40% of global CO₂ emissions, 36% of energy use, and up to 40% of solid waste.

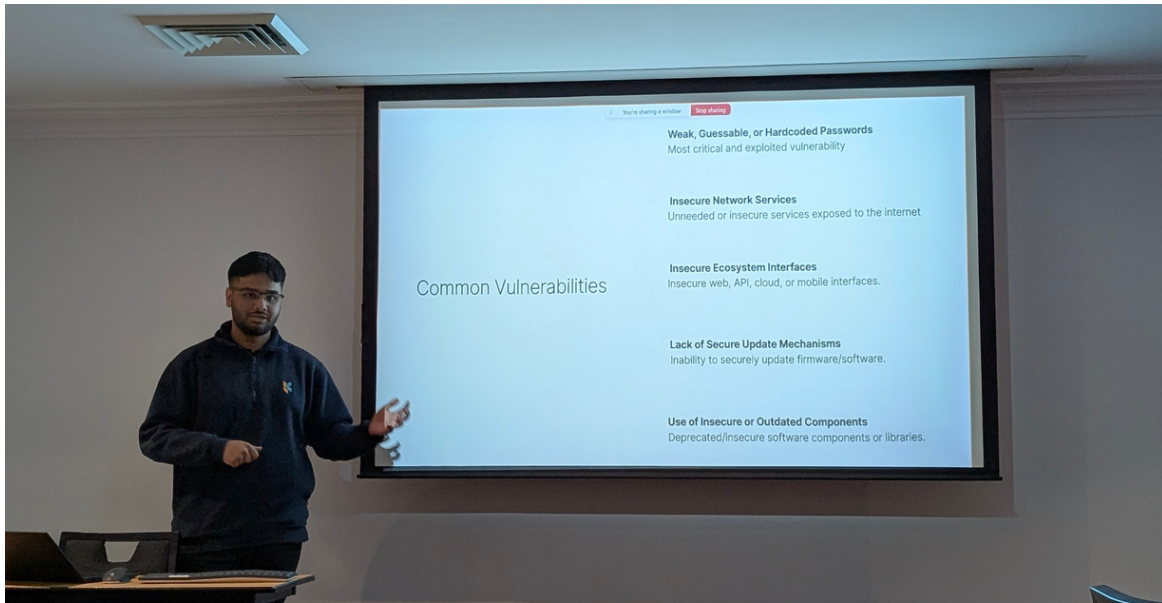
The session discussed how fire engineers influence sustainability through product recommendations, waste reduction, water management, and the integration of renewable energy. Tetley addressed the new fire safety risks introduced by sustainable innovations such as electric vehicles (with battery fire hazards), solar panels (risk of electrical faults and rooftop fires), and green roofs (combustible vegetation).

The presentation reviewed evolving regulatory frameworks and showcased innovations in fire protection, including recycled fire-rated materials, water-efficient sprinkler systems, eco-friendly fire retardants, and IoT-enabled detection and alarm systems. Tetley concluded by encouraging fire engineers to actively promote sustainability, supporting innovation while ensuring safety is not compromised.



INTERNET OF THINGS (IOT) SECURITY: UNDERSTANDING THE LANDSCAPE OF CONNECTED DEVICE VULNERABILITIES AND PROTECTIVE MEASURES

By Farjad Mahmud



This presentation explored the rapidly evolving field of Internet of Things (IoT) security, focusing on the vulnerabilities of connected devices and the measures needed to protect them. Farjad Mahmud explained how IoT integrates everyday objects into computer-based systems, enabling intelligent services, but also introducing significant security challenges.

The session outlined key characteristics of IoT, such as sensor data acquisition, connectivity, device heterogeneity, scalability, and the critical importance of security at both network and device levels. Mahmud discussed why IoT security is essential, citing rapid adoption, diverse device landscapes, and inherent risks like weak authentication, poor patching, and exposure to sensitive data.

Common vulnerabilities were highlighted, including weak passwords, insecure network services, lack of secure update mechanisms, and insufficient privacy protections. Real-world case studies, such as the Mirai botnet and high-profile device hacks, illustrated the potential consequences of poor IoT security.

The presentation reviewed current security controls, including technical measures such as authentication, encryption, network segmentation, device configuration, as well as international frameworks (ISO/IEC 27005, NIST, OWASP). Looking ahead, Mahmud discussed future directions such as blockchain integration, quantum-resistant algorithms, advanced risk management, and the evolution of “secure-by-design” devices.

The session concluded by emphasising the need for proactive, multi-layered security strategies and unified standards to address the growing risks in the IoT landscape.

THE FUTURE LOTICIAN: AI ADOPTION AND INNOVATION IN ENGINEERING

By Imran Hussain

This presentation explored the evolving role of artificial intelligence (AI) in engineering and consulting, focusing on how AI is reshaping workflows, decision-making, and collaboration. Imran Hussain traced the journey of Lote Consulting's digital transformation, from early adoption of basic digital tools to the integration of advanced platforms and AI-driven solutions.

The session highlighted industry research showing rapid growth in AI usage, with most engineering firms recognising the need to upskill and adapt to remain competitive. Hussain discussed the transformative potential of generative and agentic AI, not just as automation tools but as structural shifts in enterprise technology. Practical applications at Lote include AI-powered knowledge hubs, workflow automation, and enhanced client engagement through chatbots and dashboards.

Case studies demonstrated how AI can accelerate tasks such as fire safety design and proposal management, delivering faster turnaround and improved accuracy. The presentation also addressed the slower adoption of AI in fields like fire engineering and security consulting, noting cultural and regulatory challenges.

Hussain concluded by emphasising that embedding AI deeply into workflows will give Lote Consulting a competitive edge, enabling greater efficiency, scalability, and superior client service. The future "Lotician" is envisioned as an expert who confidently leverages AI and emerging technologies to drive innovation and strategic growth.



SECURING THE PHYSICAL: COMPREHENSIVE PHYSICAL SECURITY MEASURES

By Hashim Nahya

Hashim Nahya's presentation provided an overview of comprehensive physical security strategies, with a focus on practical implementation in corporate environments. Hashim outlined the range of Lote Consulting's security and fire safety services, including site inspections, risk assessments, report writing, and workshops.

A detailed case study analysis of the Parramatta Lote Office project illustrated the process of identifying and addressing physical security challenges. The session covered the importance of site inspections for safety and compliance, the use of blueprints and planning for optimal security coverage, and the installation of foundational infrastructure such as cabling, access control systems, and CCTV cameras.

The presentation highlighted real-world challenges encountered during the project, such as equipment faults, egress pathways, and the integration of security technology. Key takeaways emphasised the need for thorough planning, attention to detail, and adaptability when implementing physical security measures in dynamic office environments.

