

DAY ONE - Thursday 27th May 2021

7:00 - 8:00	REGISTRATION OPEN					
8:00-8:05	Welcome to Country					
8:05-8:15	Congress Opening address					
Technical Concurrent Streams						
Concurrent Sessions 1	Systems & Test	Systems & Test	Project Controls	RISK	RISK	Integrated Project Engineering
SESSIONS INCLUDE 5 MIN Q&A AT THE	Human Systems and Culture	Governance and Assurance	Capital Projects and Lifecycle	Sustainability and Resilience	Capital Projects and Lifecycle	Technology and Data/Capital Projects and Lifecycle
	Chair:	Chair:	Chair:	Chair:	Chair:	Chair:
8:15-8:40	# 108 An Overview of Systems Engineering in the Australian Transport Sector Ruben Welschen	52: Putting Unicorns in the Right Paddock: Effective Assurance as an Enabler of Change Jonathan Armstrong	56: Improving the discipline of planning and scheduling infrastructure projects Dave Crosby	4: "Energy Infrastructure Modelling for Sustainability & Resilience": Using the FRAM to Model a Complex System Geoff Hurst	50: PROJECTS - WHY LEADERSHIP & MANAGEMENT ARE CRITICAL IN AVOIDING A REPEAT OF POST-GFC MISTAKES IN MAJOR INFRASTRUCTURE PROJECTS Veno Panicker	6: Knowledge Management challenges in an Alliance-based major project delivery organisation Stephen Howe
8:40-9:05	81: Reconciling Enterprise Architecture and Systems Engineering Thomas Manley	22: Sytems Engineering Professional Certification Standard Ray Hentzschel	#61 Combining Project Alliancing (PA) and Critical Chain Project Management (CCPM) to increase project certainty. And reduce project delivery variation. Robert Bolton	5: PROTECTION OF CRITICAL PUBLIC INFRASTRUCTURE ASSETS IN THE EVENT OF A TERRORIST ATTACK WITH HIGH EXPLOSIVES Ruwan Weerakoon	32: Risk Management and Systems Leadership for Water Portfolios Laurie Bowman	94: Successes in Project Management and SE Integration William Parkins (Panel)
9:05-9:30	75: Systems Engineering Education in Australia – The State of Play Grace Kennedy	67: Analysis of telecommunications system model for service delivery network sizing Daniel Spencer	79: Innovative approach to project controls and reporting for high volume of small scale design portfolio Praema Ranga	55: Maximising investment post COVID-19: Integrating resilience into all aspects of infrastructure. Chris Quin	48: Emergent Behaviour in the Battle Management System (BMS) Aleksander Seizovic	
9:30-9:55	80: A Criticality Framework for Communications Networks Thomas Manley	20: A modelling approach for integration of systems engineering and program management Mahmoud Efatmaneshnik	39: How To Accelerate Your Leadership Skills & Build A Resilient & High Performing Team Joshua Stone	59: Combining Operational Data with Accounting Data: A Risk & Opportunity Perspective Alastair Paton	17: The Capability Management Process: a Systematic Way into Business Improvement Katharina Gerstmann	14: Multidiscipline Coordination – a Process Towards an Integrated Project Richard Lau
9:55-10:20	Congress Break - Virtual Networking					
10:20-10:45	101: Architecting for 'litties' Peter Bernus	43: Effectively communicating developmental system reliability growth plans and risk to decision-makers Paul Nation	9: Multi-project lifecycle management system Calin Borbell	10: How we built awesome risk software to kill spreadsheets Doug Vincent	111: The swiss cheese model with "Risk Leadership" as the fifth domain in a complex project environment" Santosh Therakam	
10:45-11:10	46: Using Model Based Systems Engineering (MBSE) techniques to develop an approach for designing a resilient SATCOM system Georgia Castignani	28: RAIDOC - The project management tool used by systems engineers Anthony Afonso	73: Earned Value Management for [Name]	107: International Humanification Law for the Australian Defence Industry Derek Rogers	110: High Capacity Electric Public Transport Vehicles: A Brisbane Metro Case Study David Cox	

11:10-11:35	89: Mapping the Human Systems Integration Perspectives to Systems Resilience in Critical Infrastructure Grace Kennedy	117: Exploring the Role of Hierarchy Structures in Achievement of Sustainable Development Goals Maya Narayan & Anshul Agarwal	Integrated Project Performance Measurement Laurie Bowman (Tutorial)	115: Post-disaster facility resilience: design gaps, traps and failures to deliver building code compliant in line with business continuity requirements Jordan Bartlett	# Fire Truck Diesel Exhaust Emissions – Risk Identification to Solution implementation – the Fire Brigade experience Kevin Smith	
11:35-12:00	19: Application of Subjective Complexity for Utilizing Competency Framework for System Engineer Role Assignment Mahmoud Efatmaneshnik	106: The challenges of artificial intelligence and systems engineering Jake Vanderlinde	Tim Rigby Resilience Engineering	Sean Brady Risk Engineering	109: Addressing the need for improved wellness in the construction infrastructure industry Janet McCulloch	
12:00-13:00	Congress Break - Virtual Networking					
16:00-16:45	Plenary 1 - Digital Megatrends - A perspective on the next decade of digital disruption - Stefan Hajkowicz, Senior Principal Scientist - Strategy, Foresight and Decision					
16:45-17:30	Plenary 2 - The Interaction of AI and Humanity - transforming human factors and ergonomics - Professor Paul Salmon, Professor of Human Factors and Gemma Reed, Associate Professor, University of Sunshine Coast					
17:30 - 18:15	Plenary 3 - Case studies and lessons learned – Governance to deliver successful business re-engineering projects: Sandra Diethelm, Executive Consultant, IXL Pty					
18:15 - 19:15	Networking Reception - Virtual Meeting Hub					
19:15	Day 1 Close					
DAY TWO - Friday 28th May 2021						
7:00 - 8:00	REGISTRATION OPEN					
8:00 - 8:15	Day 2 Opening Address					
Technical Concurrent Streams						
Concurrent Sessions 3	Systems & Test	Systems & Test	Project Controls	RISK	RISK	Integrated Project Engineering
SESSIONS INCLUDE 5 MIN Q&A AT THE	Technology and Data	Human Systems and Culture	Technology and Data	Capital Projects and Lifecycle	Sustainability and Resilience	Governance and Assurance
	Chair:	Chair:	Chair:	Chair:	Chair:	Chair:
8:15-8:40	88: Optimization and integration the Hard and soft systems nightmare for chaos avoidance in complexity management. Edward Tooher		Digital Transformation within the Major Transport Infrastructure Authority Cameron Mills	7: Digital Project Twin for Quantitative Cost, Risk and Schedule Assessment of Capital Projects Taylor Burns	78: Assessment of the viability and benefits of using vegetable oil fuels and of more fundamental ways to offset the impeding fossil fuel dilemma Ian Thomas	47: Technical success factors for major projects in the oil and industry is a mandatory requirement and how to achieve it Vijay Vijayaraghavan
8:40-9:05	65: Practical approaches to data integration spanning technical modelling for projects Daniel Spencer		The role of Engineering Technologist in Systems Engineering Rowyn Goyns	Eric Peterson Process Safety Engineer, LanzaTech	96: Inter-storey 'Drift into (FRL) Failure': Holistic construction compliance failures and future causal scenarios Jordan Bartlett	38: Technical Translators – Engineering Management; a defined and unique skillset for project success Georgina Mahony

9:05-9:30	41: A Bayesian approach to complex discrete-use system reliability growth planning under delayed or arbitrary corrective actions Paul Nation		24: Improving the accuracy and speed of project cost and time forecasts with Artificial Intelligence: Theory and Case studies Cuong Quang	112: Risk Engineering in the Defence Domains Jennifer Del Mastro	34: WWMED – What Would Earth Do? A Regenerative Approach towards a Resilient & Sustainable Future Megan Jones & Mary Casey	12: A System for Tailoring the Requirements Approach for New Zealand Defence Force Capability Projects Ben Morton
	Technology and Data	Sustainability and Resilience	Capital Projects and Lifecycle	Human Systems and Culture	Governance and Assurance	
9:30-9:55	57: MBSE for Navy In-Service Support Programs Vincent Capizzi	23: SESA Resilience Initiative towards a Resilience Framework for Australia as a System Jawahar Bhalla (Panel/Workshop)	8: Setup of Program Controls on Australian Mega Project Organisations Abhijnan Datta	104: Developing a Culture of Readiness: How Systems Thinking can support people prepare for Operational Change Adam Tull	18: Application of Possibility Theory to Systems Engineering Risk Management Mahmoud Efatmaneshnik	
9:55-10:20	45: An MBSE reference architecture to support distributed systems discovery for component-based Fault Modes Effect and Criticality (FMECA) analyses: an industry case study Jade Chantrell		66: A Markov Model for Project Planning Evaluation Mahmoud Efatmaneshnik	93: Why do we still argue about Definitions of Risk and of Opportunity? Jim Whiting	97: 50 YEARS ON HAS THE 1970 WEST GATE BRIDGE COLLAPSE BEEN PROPERLY EXPLAINED Ian Thomas	
10:20-10:40	Congress Break - Virtual Networking					
10:40-11:05	53: CFD analysis of main rotor downwash effect on helicopter landing sites on multi-storey hospitals Mario Wilsch	114: Building Resilience into Healthcare through Systems Engineering Andrew Madry (Panel)	Project Controls - A Project Directors Mandate Lou Vidotto	26: Balancing cost, risk and performance in asset management Monique Beeles (Panel)	31: Risk Management and Systems Thinking - The Past, Present and the Future Laurie Bowman (Panel)	
11:05-11:30	42: A comparison of empirical Bayes hyperparameter approaches for discrete-use system initial reliability estimation Paul Nation		113: A journey to Project Controls Maturity - A Case Study Jonathan Jacobs			
	Human Systems and Culture	Sustainability and Resilience	Capital Projects and Lifecycle	Human Systems and Culture		
11:30-11:55	87: Human Systems Integration and Autonomy Grace Kennedy (Panel)	92: Resiliency and Critical Communications Networks Thomas Manley (Panel)	33: Integrated Project Cost Management Laurie Bowman (Tutorial)	25: Ensuring safe design and operations in a flexible and remote working world: Practical Tips Jennifer Del Mastro (Panel)	60: Managing support during the inevitable transition from deterministic systems to non-deterministic complex systems Alex Parkin (Panel)	
11:55-12:20						
16:00-16:45	Plenary 4 - Managing Capital Projects for Profit, Performance and the Planet - Mark Betts, Director Project Management & Continuous Improvement, Level Crossing Removal Authority					
16:45-17:30	Plenary 5 - Creating a Resilient and Sustainable Future - John Blackburn AO					
17:30-18:15	Plenary 6 - Keynote presentation on Complex Systems Solutions Kerry Lunney FIEAust CPEng NER, Chief Engineer, Thales Australia					
18:15-19:15	Networking Reception - Virtual Meeting Hub					
19:15	Congress close					