

TASMANIAN MINERALS AND ENERGY CONFERENCE 2017

ADVANCED MANUFACTURING FORUM INNOVATION IN INDUSTRY

Wednesday 2nd August 2017

Hobart Function & Conference Centre, Elizabeth Street Pier, Hobart

Conference Registration

8.00 - 8.25 am

INTRODUCTION

Welcome and Introduction

8.25 – 8.30 am

Kelly Elphinstone, TMEC Advanced Manufacturing Committee Chair

Introduction to the TMEC Advanced Manufacturing Committee

8.30 - 9.00 am

David Kenworthy of the Kyda Group of Companies, Peter McLinden of Castings Tasmania, Aaron Brimfield of Bridgepro Engineering, Tim Lyons of One Atmosphere, Richard Bennett of Ashgrove Cheese, Tom Haselgrove of Huon Aquaculture and Paul Sturzaker, TMEC Advanced Manufacturing Coordinator.

Each committee member will introduce themselves and provide a brief introduction to their respective organisations.

SESSION ONE – INDUSTRY 4.0, DIGITAL MARKETING AND NEW TECHNOLOGY

Introduction to Industry 4.0

9.00 – 9.30 am

Will Kestin, CEO TasICT

The Australian Government's Department of Industry, Innovation and Science defines Industry 4.0 (the 'fourth industrial revolution') as the current trend of improved automation, machine-to-machine and human-to-machine communication, artificial intelligence, continued technological improvements and digitalisation in manufacturing.

This trend is enabled by four key drivers:

- 1. Rising data volumes, digital transformation and connectivity*
- 2. The emergence of analytics and business-intelligence capabilities*
- 3. New forms of human-machine interaction, such as sensor and touch interfaces and augmented-reality systems and*
- 4. Improvements in transferring digital instructions to the physical world, such as robotics and 3D printing.*

Industry 4.0 is now a globally accepted reality that is affecting almost every industry across the world and is rapidly transforming how businesses operate.

Will Kestin is currently the CEO of TasICT, Tasmania's peak industry body for the ICT sectors. He is a strategy and leadership specialist who has been managing, lecturing and public speaking for over 25 years. His career includes 14 years in telecommunications, 15 years in industry peak body association management, 4 years as a Director of two major promotional marketing agencies and 3 years managing a global training and development company.

Six Key Steps for Process Automation

9.30 - 10.00 am

Rob Vernon, 41st Degree

Organisations that are seeking sustainable growth should consider automation as a key investment area. The Six Key Steps outlined in this presentation will review key challenges faced by businesses when considering automation and provides recommendations on how and where to begin, when looking to invest to exploit its potential.

Rob Vernon is the Business Development Manager at 41st Degree, a Tasmanian ICT business which delivers client-focused solutions to businesses throughout Australia. The company has a passion for developing tech products and solutions to suit business needs and delivers its services through exceptional people with a focus on developing customer understanding and relationships for all projects.

CSIRO – Additive Manufacturing - 3D Printing

10.00 - 10.30 am

Daniel East PhD, Director, Lab22 Innovation Hub

What are the current developments in metallic 3D printing and how can 3D printing be utilised in everyday business?

Daniel is a metallurgist with over 15 years' experience in light metals research he has worked on projects in the aerospace, space, automotive and consumer electronics industries. He attended Alanvale College in Launceston, completed a Bachelor's degree in Metallurgy from RMIT, followed by a PhD in Materials Engineering from Monash University.

Morning Tea

10.30 - 11.00 am

SESSION TWO – DISRUPTIVE TECHNOLOGY

An introduction to Disruptive Technology

11.00 – 11.30 am

Prof Paulo de Souza, CSIRO

Professor de Souza is a Physicist with PhD in Natural Sciences from Uni-Mainz, Germany. He has 20+ years of international experience in industrial innovation and consultancy. He is recognised for his work in miniaturised sensor development in fields including space exploration, environmental sciences, animal behaviour monitoring, and industrial process control. Paulo has 200+ peer-reviewed publications, patents and books. He is co-author of a series of papers identified as the Breakthrough of the Year 2004 by the prestigious journal Science. He is an Officer of the Chief Executive Science Leader at CSIRO | Data61, and is leading CSIRO's research efforts in the field of micro-sensing technologies, including implantable devices for brain monitoring. Paulo is driven by long-term challenges and the endurance required to meet them. He has been working for over 13 years with NASA's Opportunity rover, which has covered over a Marathon on Mars. Like Opportunity, he became an ultra-marathoner himself.

What's it like to be a disruptor?

11.30 - 12.00 noon

Can you revolutionise a global industry from Tasmania – You sure can! Just ask Tim

Tim Lyons, Managing Director, One Atmosphere

Tim will share his story of the development of a helicopter post-crash buoyancy system offering superior safety and survivability for military and civilian helicopters operating over water. The system developed by One Atmosphere is set to revolutionise safety in the helicopter industry. Perseverance and an innovative approach to developing a product, and pursuing a market for that product, is positioning One Atmosphere for global success.

Tim was born and raised in Hobart, Tasmania and upon completing year 12 moved to the Australian Defence Force Academy in Canberra. As a Naval Officer, Tim specialised in Clearance Diving and was involved in numerous operations including Peace Keeping, Explosive Ordnance Disposal, Mine Counter Measures and Submarine Escape and Rescue. Soon after leaving the ADF, Tim founded One Atmosphere which has since relocated from Western Australia to Hobart.

What's it like to be confronted by market disruption?

A Journey from Disruption to Market Leader

12.00 -12.30 pm

Diane Edgerton, Directedge Manufacturing

What do you do when your market is shifted off shore and your competitors begin to adopt new technology? You revolutionise and recreate your business.

Diane Edgerton is the CEO and Managing Director of Directedge, with her strong business background and Advanced Diploma of Business [Accounting] her role is to manage and give general direction of the company to achieve company objectives as well as to plan and provide strategic direction and development for the future in relation to business and products development, markets and financial performance.

Panel Discussion: Prof Paulo de Souza, Diane Edgerton and Tim Lyons

12.30 – 1.00 pm

Facilitated and led by TMEC CEO Wayne Bould

Lunch

1.00 - 1.45 pm

SESSION THREE – SAFETY HEALTH & ENVIRONMENTAL TECHNOLOGY

Robotic Dairy Farming

1.45 - 2.10 pm

Simon Elphinstone

How do you take an industry that involves long hours, specialist knowledge, back breaking hard work and requires year-round hands on engagement and make it attractive to the next generation? You automate the process, introduce robotics and a data collection system that allows the farmer to increase milk quality, maximise cow health and reduce labour requirements. With this system, they can even enjoy the occasional sleep in!

The Use of Technology in Managing Fatigue – Caterpillar Smart Band

2.10 – 2.35 pm

Jenny Krasny, Caterpillar Safety Services

Combining robust wearable technology with predictive fatigue modelling. Consistent quality and quantity of sleep is critical to human health, safety and operational performance. The Cat Smartband can assess ongoing sleep patterns and, utilizing the world's leading bio-mathematical fatigue model, SAFTE™, analyze data to accurately predict how a worker's fatigue will change for up to 18 hours after the start of their day. Cat Smartband data is used by Caterpillar fatigue experts to generate fatigue reports which can be filtered by specific groups and date ranges for detailed analysis. Caterpillar will help you integrate this technology effectively and guide you in leveraging the data to build a robust fatigue management system.

With almost 20 consulting experience, Jenny has led some of Australia's most respected mining, construction, engineering and manufacturing organisations through strategy development, safety culture change / change management, executive coaching and leadership development. A dynamic and engaging Senior Safety Consultant at Caterpillar Safety Services, Jenny Krasny is passionate about creating environments where both technology and people can thrive. Jenny has a Master of Organisational Psychology degree from the University of Queensland, specialising in cynicism to organisational change and is currently in the process of writing a book that focuses on bringing the 'person' back. In her time in the field, Jenny has seen technology and automation change the face of how we do business, and while it has brought with it many advantages especially in creating safer working environments, along the way, the very 'thing' that is being protected has been forgotten, being treated as an object rather than a human being.

Huon Aquaculture (Topic to be confirmed)

2.35 – 3.00 pm

Tom Haselgrove, Chief Financial Officer

Afternoon Tea

3.00 – 3.30 pm

SESSION FOUR – HOW CAN WE HELP?

The Future of Work and Workforce Readiness for Manufacturing: Responses for a Diverse and Rebalancing Sector

3.30 – 3.50 pm

Sandra Parker, Deputy Secretary Workplace Relations and Economic Strategy

Sandra Parker's role as the Deputy Secretary, Workplace Relations and Economic Strategy is to facilitate jobs growth and workforce participation through workplace relations and work health and safety policies that promote fair, productive and safe workplaces. Sandra works closely with the employment portfolio's seven statutory agencies – the Fair Work Commission, Fair Work Building and Construction, the Registered Organisations Commission, the Office of the Fair Work Ombudsman, Comcare, Safe Work Australia, the Asbestos Safety and Eradication Agency, and the Workplace Gender Equality Agency.

Department of State Growth – Where are we now with our Manufacturing Journey?

3.50 – 4.20 pm

Mark Bowles, Department of State Growth

What's happened since the Advanced Manufacturing summit in 2014. The Department of State Growth will provide an update on what DSG heard, what they did with that, and what, as a result, is on offer. The Department of State Growth will also check in with industry 'is it working' and how things are travelling in the sector.

TMEC Advanced Manufacturing Membership, The Manufacturing Portal

4.20 – 4.30 pm

Paul Sturzaker, TMEC Advanced Manufacturing Coordinator

Panel Discussion: TMEC Advanced Manufacturing Committee Members

4.30 – 5.00 p.m

Facilitated and led by TMEC CEO Wayne Bould

Wrap Up Thank you

5.00 – 5.10 pm

Kelly Elphinstone, TMEC Advanced Manufacturing Committee Chair

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Wednesday 2nd August 2017

Networking Dinner and Drinks

6.00 - 10.00 pm

Join us for an informal networking evening at The Cascade Brewery Function Centre Degraeves Room. This informal event will include all drinks (beer, wine and soft drink) with a variety of canapes and small dinner portions served throughout the evening. (We encourage you to sample a wide variety of the local fare on offer).

For those who don't want to drive, Red Decker Buses will collect dinner guests from two locations in the CBD and transport them to the Function Centre, returning to the CBD at the end of the evening. The first bus will leave the CBD at around 5.30 pm.

Dress Code: Smart Casual



TASMANIAN MINERALS AND ENERGY CONFERENCE 2017

DOING BUSINESS IN TASMANIA

Thursday 3rd August 2017

Conference Registration

8.30– 8.55 am

INTRODUCTION

Welcome and Introduction

8.55 – 9.05 am

Wayne Bould, TMEC CEO

SESSION ONE – BUSINESS AND THE ECONOMY

Economy: National Perspective

9.05 – 9.45 am

Melos Sulicich, Managing Director and CEO MyState Limited

Mr Sulicich has extensive experience in a diverse range of businesses and industry sectors covering petrol retailing, financial services, industrial services, healthcare, transport and logistics. In 2014 appointed as Managing Director and CEO of MyState Limited. From 2008-2013, he held the position of CEO of RAMS Financial Group, a subsidiary of Westpac. Prior to this he spent 8yrs in general management positions for companies including Mayne Group, Adsteam Marine and the Spotless Group. From 1995-2000, Mr Sulicich worked in various positions for Colonial Group Limited including General Manager Marketing, Director Sales and Marketing for Colonial UK Limited and General Manager, Network Financial Services.

Economy: Tasmania's Economy and the Current Political Environment (Topic TBC)

9.45 – 10.15 am

Julian Amos, Tasman Management Services Pty Ltd

Julian is a Business Consultant specialising in strategy and communication, and is also a well-known commentator on the Tasmanian political scene. He was at one time the Minister for Primary Industry, Energy and Forests. Since leaving parliament, he has been the Chair of FIAT, a director on the board of Hydro Tasmania, a director of UTas Innovation Ltd and CEO of SALTAS.

Morning Tea

10.15- 10.45 am

Energy – National Perspective: Current State of Play in Tasmania and the NEM

10.45 - 11.15 am

Marc White, Principal Consultant, Goanna Energy Consulting Pty Ltd

Marc White (GAICD, MBA) is Principal Consultant for Goanna Energy Consulting. Marc has enjoyed a career in the energy industry spanning over 34 years and he has negotiated competitive energy contracts of up to \$100M in value.

TasNetworks

11.15 - 11.30 am

Lance Balcombe, Chief Executive Officer

Lance Balcombe has been Chief Executive Officer of Tasmanian Networks Pty Ltd since October 2103. Lance is also a Director of the Energy Networks Australia, a Member of Australian Energy Market Commission (AEMC) Reliability Panel, and a Director of Liferaft Systems Australia Pty Ltd.

His Tertiary/Professional qualifications include a Bachelor of Commerce from University of Tasmania, he is a Fellow of the Institute of Chartered Accountants and CPA Australia, a graduate of the Stanford Executive Program and a Member of Australian Institute of Company Directors (AICD).

Hydro Tasmania

11.30 - 11.45 am

Stephen Davy, Chief Executive Officer

Steve is Chief Executive Officer at Hydro Tasmania and has been with the business since 2005. Hydro Tasmania is Australia's largest hydro company with over 30 hydro power stations and a hydro consulting business, Entura, operating internationally. Steve is currently Chairman of Hydro Tasmania's mainland retail business, Momentum Energy, selling electricity and gas on mainland Australia and on the Bass Strait Islands. Steve is also a Director on the Board of the Australian Energy Council.

Simon Himson, CEO, Tas Gas Networks

Simon has a B. Comm. from Tas Uni, a Masters of Business majoring in Marketing and was a CPA for over 25 years. Simon has been directly involved in the gas sector in Tasmania since its introduction by Duke Energy in 2001. For five years, he was the Commercial Manager for the Tasmanian Gas Pipeline whilst it was developed and owned by Duke Energy and then Alinta. He is now the CEO of Tasmania's only distribution network and the state's largest natural gas retailer, which sits at the end of a monopoly pipeline.

Panel Discussion: Julian Amos and Marc White**12 noon – 12.30 pm**

Facilitated and led by TMEC CEO Wayne Bould

Lunch**12.30 - 1.30 pm****SESSION TWO – SOME THOUGHT STIMULATORS****Freight: What is happening with Freight in and out of Tasmania****1.30 – 2.00 pm****Brian Gillespie, DP World Australia****The Hope Bay Project: Gekko's Modular Gold Plant****2.00 – 2.30 pm****Sandy Gray, Technical Director, Gekko Systems**

Gekko Systems' low height, modular, Python plant processing solution is ideal for remote or underground use. This solution was selected by TMAC Resources at its Doris mine and mill complex for a number of reasons including speed of design, construct, through to commissioning, energy efficiency, as well as the low footprint and height design. These characteristics allowed for the full modular plant to be prebuilt and tested prior to shipment in containers to site. In addition, the small footprint and head height of the process plant allowed for significant savings in the size and cost of the process facility. The complete modular plant was designed, fabricated, assembled and tested at Gekko's Ballarat plant, prior to being packed and shipped. Hope Bay is located 160 kilometres above the Arctic Circle in the Nunavut Region of Canada. Sandy Gray is co-founder and Technical Director of Gekko Systems with over 15 years' experience in mineral processing operations. Sandy has rejuvenated the art of gravity separation of alluvial gold using the basis of panning and is a world leader in gravity gold and leaching flowsheets design, materials handling and effective plant design. Sandy is a recipient of the prestigious Clunies Ross Award, Australia's pre-eminent award for scientists, technologists and innovators and most recently, Sandy received the AusIMM Professional Excellence Award 2017.

METS Ignited**2.30 – 3.00 pm**

Mets Ignited initiatives – tripartite initiative program. Mine/University/Manufacturer working together to solve a problem and build the solution

(Speaker from Mets Ignited to be confirmed)

Afternoon Tea**3.00 – 3.30 pm****SESSION THREE – INNOVATION ON THE GROUND****Isn't it time we challenged the safety norm?****3.30 – 3.45 pm****Jenny Krasny, Caterpillar Safety Services**

Organisational Psychologist Jenny Krasny will share key insights into the 'progress of safety' across recent times. Jenny will highlight some of the issues hampering safety initiatives and provide you with suggestions on what to consider when you next contemplate how to improve 'safety' in your business.

With almost 20 consulting experience, Jenny has led some of Australia's most respected mining, construction, engineering and manufacturing organisations through strategy development, safety culture change / change management, executive coaching and leadership development. A dynamic and engaging Senior Safety Consultant at Caterpillar Safety Services, Jenny Krasny is passionate about creating environments where both technology and people can thrive. Jenny has a Master of Organisational Psychology degree from the University of Queensland, specialising in cynicism to organisational change and is currently in the process of writing a book that focuses on bringing the 'person' back. In her time in the field, Jenny has seen technology and automation change the face of how we do business, and while it has brought with it many advantages especially in creating safer working environments, along the way, the very 'thing' that is being protected has been forgotten, being treated as an object rather than a human being.

Innovation and Automation in Mining Equipment**3.45 – 4.00 pm****Wayne Symes, Atlas Copco Australia**

Wayne has spent 20 + years working for large global mining OEM's. He has spent the past 11 years with Atlas Copco, the last 6 years as the Business Line Manager for Atlas Copco's Underground business nationally. He says that he is lucky to have been able to undertake this position while still based in Tasmania, though notes that he is a very regular guest of Qantas.

TasRail's Network Control System - Use of GPS technology to provide real time data to monitor operational safety and efficiencies.

4.00 – 4.15 pm

Damien White, Chief Executive Officer, TasRail

Appointed in April 2010 as TasRail's inaugural CEO, Damien White is leading an aggressive rail revitalisation plan to ensure that rail is an integral freight transport solution for Tasmanian industry.

Damien has a Bachelor of Business in Transport Studies and Master's Degree in Business Administration on top of 35 years' experience in the rail industry.

Tasmanian Advanced Minerals – Adding to the bottom line through innovation

4.15 – 4.30 pm

Chris Stuart, Managing Director

Chris will share with us TAM's story of designing, developing and commissioning a magnetic impurity extraction system which allows them to process previously unusable raw material.

Chris Stuart graduated as a chemical engineer at UNSW in 1984. He worked for Sumitomo Corporation in Australia and Japan for almost 20 years, heading up chemical and industrial mineral investments in Australia. He arrived in Tasmania in late 2006 to establish and manage Tasmanian Advanced Minerals Pty Ltd. This role has included processing facility design and construction, overseeing extractive and processing operations, and market development.

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ADVANCED MANUFACTURING FORUM INNOVATION IN INDUSTRY

Thursday 3rd August 2017

Joint Networking Conference Dinner and Drinks

6.30 - 10.30 pm

(We encourage both Advanced Manufacturers and Minerals & Explorations groups to attend this event).

Join us for a more formal dinner hosted at the Hobart Function and Convention Centre. Be entertained by Tom Berger's one-man show "Magic of Your Mind", an entertaining blend of mystery, humour, psychology and intuition using total audience participation.



"Perceptionist Tom Berger is known to hundreds of companies and organizations for his entertaining and mind-boggling demonstrations of the untapped powers of the mind.

With nine performances for the National Australia Bank, twenty five for Glaxo SmithKline and over seventy five for Bristol-Myers Squibb, Tom Berger is booked and rebooked by corporations around Australia to experience his motivational entertainment.

Radio presenter Alan Jones said he was "just unbelievable". The Mercury wrote, "Definitely a crowd pleaser!" Television presenter John Mangos on Channel 7 (Sydney) exclaimed, "...he's as good as any of the American guys I've ever seen!"

Tom Berger's one-man show Magic Of Your Mind is an entertaining blend of mystery, humour, psychology and intuition using total audience participation. Tom dazzles the mind as he challenges his audiences to question what is real and what is unreal; what is possible and what is impossible.

As a presenter on the corporate circuit, Tom Berger is not just an entertainer and he is much more than a speaker. His extensive use of audience participation guarantees that you don't just watch his presentation, you experience it. He baffles, mystifies and thoroughly entertains his audience. Then, at the end of his presentation, Tom delivers a powerful motivational message about the potential of the human mind."

Dress Code: Business Casual (but feel free to leave your tie at home!)



TASMANIAN MINERALS AND ENERGY CONFERENCE 2017

REAL MINING STUFF

Friday 4th August 2017

INTRODUCTION

Welcome and Introduction **8.30 – 8.35 am**
Wayne Bould, TMEC CEO

SESSION ONE

Minister Guy Barnett MP **8.35– 9.00 am**
Minister for Resources

Born and raised on a farm in Hagley, Guy Barnett has been advocating for the needs of rural and regional Tasmanians for most of his life. Guy Barnett gained a law degree and Master of Laws at the University of Tasmania and following a successful career in law and business he represented Tasmania in the Federal Senate for nearly 10 years. Guy was elected to the Tasmanian State Parliament in 2014 and appointed to Cabinet in 2016 as Minister for Resources and Minister for Building & Construction and more recently Acting Minister for Corrections.

History of Mining in the Hobart Area **9.00 – 9.30 am**
Ben Waining

Down Hole EM: a ‘Geology Gadget’ **9.30 – 9.50 am**
John Bishop – Mitre Geophysics

John Bishop and Kate Hine are the principals of Mitre Geophysics Pty Ltd, a long-established consulting company serving the mining and exploration sectors. In- and near-mine resource expansion has been a focus for many years, especially employing electrical and electromagnetic methods, with increased resources resulting at several Australian and overseas operations. Kate has a first-class honours degree from UTAS and John a PhD from Macquarie University; both majoring in geophysics.

Legacy Mining Rehabilitation **9.50 – 10.10 am**
Jen Parnell, Mineral Resources Tasmania

TO BE CONFIRMED **10.10 – 10.30 am**

Mineral Resources Tasmania **10.30 – 10.50 am**
Brett Stewart – Initiatives from the State budget funding announcement

Morning Tea **10.50- 11.20 am**

SESSION TWO – WHAT’S HAPPENING IN OUR REGION?

Elementos: Progressing the Development of the Cleveland Project **11.20 - 11.40 am**
Christopher Dunks, Executive Director

Currently the Managing Director of Synergen Met Pty Ltd, Christopher was a Founder and Managing Director of Rockwell Minerals Pty Ltd, the company that merged with Elementos in 2013, and negotiated the original deal to purchase the Cleveland Project. Christopher’s experience over the last 22 years has been dominated by working on major minerals processing, refining and power projects both in Australia and the USA. He has worked extensively with Bechtel, Worley Parsons, SNC Lavalin and Jacobs (Aker Kvaerner).

Copper Mines of Tasmania Restart **11.40 – 12.00 noon**
Peter Walker

Peter is currently an Executive Director for Copper Mines of Tasmania Pty Ltd and General Manager Care and Maintenance of the Mt Lyell mine. Peter is also a director of Thalanga Copper Mines Pty Ltd. He has 25 years’ experience in the mining industry, both open pit and underground operations in employee/industrial relations including Rio Tinto, Barrick and Newmont. Peter holds a Bachelor of Commerce from Charles Darwin University, and is a Certified Professional of the Australian Human Resources Institute.

Stellar Resources**12.00- 12.20 pm****Peter Blight, Managing Director**

Mr Blight is the Managing Director of ASX listed tin exploration and development company Stellar Resources Limited, a position he has held since 2014. He is a geologist and minerals economist and has been involved in the exploration, mining and finance industries for well over 30 years. Prior to joining Stellar, he was based in Moscow as the Director of Commodity Research at Russian aluminium producer UC Rusal. He also had a 14-year career with investment bank UBS as Executive Director of Commodity Analysis in London and prior to that as Director of Mining Research in Melbourne.

AusTin Mining – Granville East Project**12.20 – 12.40 pm****Adam Randall, Project Manager**

Adam Randall is the Project Manager of the AusTin Mining's Granville East Project. He has 30 years' experience in the mining industry and has worked on mineral processing projects in Tasmania, the mainland in Africa. His current role with AusTin Mining has seen him successfully update and refurbish the plant which is currently operating and ramping up production of tin concentrate.

TO BE CONFIRMED**12.40 – 1.00 pm****Wrap Up Thank you****1.10 – 1.15 pm****Ray Mostogl, TMEC President****Lunch****1.15 - 2.00 pm**

