

## CURRICULUM VITAE

**NAME:** RICHARD GILMOUR BILLET

**YEAR OF BIRTH:** 1981

### ACADEMIC QUALIFICATIONS:

Bachelor of Engineering (Mechanical) 2004, University of Queensland, St Lucia

Bachelor of Business (Management) (Business Economics) 2004, University of Queensland, St Lucia

### AWARDS:

2012 Winner, National Engineering Excellence Award, Engineers Australia, Canberra  
2012 GHD Overall Winner, Engineering Excellence Award, Newcastle Division, NSW  
2012 UGL Innovation in Sustainable Engineering Award, Newcastle Division, NSW  
2012 Winner, Engineering Excellence Award, Newcastle Division, NSW  
2004 Dean's Commendation, University of Queensland

### CAREER APPOINTMENTS:

2013 – Business Development Manager, Bright Devices Pty Ltd  
2011 – Business Development Manager, Gilmore Engineers|e3k Global  
2010 – Senior Consultant, Gilmore Engineers|e3k Global  
2009 – 2010 Research & Development Engineer, Gilmore Engineers|e3k Global  
2005 – 2008 Mechanical Engineer, New Product Development, The Riviera Group  
2004 – 2005 Undergraduate Mechanical Engineer, The Riviera Group

### BIOGRAPHICAL NOTES

Richard Billett is a Senior Consultant and Business Development Manager, e3k Global, the New Product Division of Gilmore Engineers Pty Ltd, Research, Development and Commercialisation Specialists.

He received his Bachelor of Mechanical Engineering degree in 2004, from The University of Queensland, Australia. He also completed a Bachelor of Business (Management) degree in 2004, majoring in Business Economics.

In 2005, Richard joined The Riviera Group, builder of luxury powerboats on the Gold Coast, Australia, as a Graduate Mechanical Engineer working in the New Product Development division. He worked on the design and implementation of the mechanical, structural and liveability (HVAC) systems on all new models and across the entire range of Riviera's existing powerboat range. During this time, he developed skills in advanced CAD (Computer-Aided Design) and mechanical design of various drive systems.

In 2009, Richard joined Gilmore Engineers Pty Ltd|e3k Global as a Research and Development Engineer. He has worked on numerous design projects and developed expertise in concept generation and engineering analysis, three dimensional computer modelling, prototype testing and Computational Fluid Dynamics (CFD). Subsequently Richard has become a Senior Consultant and Business Development Manager with Gilmore Engineers.

e3k specialises in Industrial Research and Development, particularly New Product Development and Commercialisation. This activity requires a broad knowledge of engineering, from which ideas and fresh approaches to problem-solving can be drawn. Complete products which satisfy an identified market and consumer demand are created from initial concepts, or partially developed devices. This requires a highly creative and experienced approach, together with cross-fertilisation of ideas from other disciplines to enable them to be world competitive and suitable for export. A complete idea-generation, design, prototype development and testing service is provided. Commercialisation and manufacture of the product is considered constantly with assistance being given in protecting Intellectual Property, conducting market research, liaison with regulatory authorities, and importantly interacting with sources of finance.

e3k has been the recipient of 6 Engineering Excellence Awards from Engineers Australia. e3k was a National Winner in 2012, as well as taking 3 Awards in the Newcastle Division, including the GHD Overall Winner, and the UGL Innovation in Sustainable Engineering Award for engineering design and testing of the SeaUrchin marine power generator. e3k received a High Commendation in 2001 and was a finalist in 2010 in the Queensland Division Awards with projects sponsored by the Queensland Academy of Sport and Leighton Contractors Pty Ltd respectively.

A noteworthy project led by Richard in 2009 was the successful dynamometer testing of a novel internal combustion engine that had been researched, designed, developed and prototyped by e3k. This provided valuable experience in the design of the fuel injection and ignition maps for a non-conventional combustion engine.

In 2013, the medical device named “Agilitas” which was wholly developed by e3k over 5 years, was launched for commercial sale by Bright Devices Pty Ltd, part of the Gilmore Engineers Group. It is a smart visual cueing device designed to assist persons suffering primarily from ‘Freeze of Gait’ associated with Parkinson’s Disease.

In February 2014, Atlantis Resources Limited, a company grown from the technology developed by e3k in the years 2000 to 2004, was admitted to trade on the London Stock Exchange. The world-patented technology now part-owned by Morgan Stanley, relates to underwater tidal renewable power generation turbines.

In 2014, Richard conducted CFD analysis on diverse projects such as the multiphase wash streams of a commercial dishwashing machine, the flow behaviour within a municipal water storage tank in the Middle East and the heat transfer through a performance vehicular heat exchanger. Further projects in 2014 included the analysis and evaluation of a new SAG mill design along with the formulation of a lifting strategy for a 300 tonne ore feeder in Papua New Guinea, involving Finite Element Analysis. Richard also provided a concept design for a novel, amphibious vehicle and investigated capital works upgrades in a copper concentrator plant.

In 2015, Richard spent time in Papua New Guinea developing capital equipment reports for a mine life extension program. Further development of the SAG mill project from 2014 saw Richard travel to the sites of manufacture of the replacement mill casing, in Ankara, Turkey and Tianjin, China, to conduct quality assurance inspections.

In 2016, e3k expanded its Project Engineering internationally and Richard was part of the team which conducted the lead contractor role for the repair of a stainless steel lined concrete tank in Laos, SE Asia, which was leaking acid, as part of a 5 day total plant shut. CFD projects during 2016 included a novel ship hull, an anaerobic sewage digester tank and clarifier arm.

Richard’s CFD experience includes extensive design and analysis of a novel underwater tidal power-generating turbine, city water storage facilities, livestock loafing shelters, surfboard fins, Olympic swimming pools and a study of wake flows from a power boat.

As part of the Gilmore Engineers Pty Ltd team, Richard investigates incidents and prepares expert engineering evidence for the legal profession of Australia. This evidence, provided by Gilmore Engineers Pty Ltd, has ranged from detailed failure analysis of major industrial accidents, to motor vehicle accident re-construction and personal injury.