# Workshops

## Workshop 1: Effective Consensus Decision Making-Utilising Practical Game Theory Techniques

**2:00 – 3:30 pm, November 25, 2025**

**Facilitator:**

**David Karr (CPEng, Chris Heyde Awardee, FIIEA)**
Federal Immediate Past President
Industrial Engineers Australia (IEA)
Perth, WA, Australia

David Karr Graduated as an Industrial Engineer BSc (Eng Mech in the Industrial Option) in 1976 at University of Witwatersrand (Wits), Johannesburg, South Africa in 1976. He received a Graduate Diploma in Engineering at Wits 1979. David has worked in various Production and Industrial Engineering roles in manufacturing, service industries and consultancy for over 45 years in South Africa, Canada and Australia. He also has training experience as a lecturer(casual) at TAFE (technical college) for 13 years delivering training in various aviation business units.

He has worked for Siemens (Routing Eng) and Colgate Palmolive (IE) (South Africa), Pirelli Cables (IE) and Canada Post (IE) (Canada), BOC Gases (Australia) (Production & Project Manager) across production quality, project management, supply chain management, design and improvements of production line and layouts of work area and data optimization. Industry experience included batch and process type manufacturing as well as large and small sites mainly with large multinational or national companies. He has delivered Game Theory presentations to Curtin University, Perth, WA, University of Melbourne and Industrial Engineers Australia. Also, he has applied practical Game Theory industry circumstances.

He has its own Business Consultancy undertaking passenger surveys, time and motion studies, setting up preventative maintenance systems for various clients and introduction of digitized autonomous processes. David has been very active in professional organizations in Canada (Canadian Society of Industrial Engineers (CSIE) and in Australia (Industrial Engineers Australia (IEA) and Engineers Australia (EA). He is a fellow, Chris Heyde Awardee and Federal Immediate Past President of Industrial Engineers Australia and a Chartered Professional Engineer of Engineers Australia.

### About the Workshop

This workshop will demonstrate a practical example of utilizing Game Theory for effective Consensus Decision Making. In today's ever increasingly multifaceted world, there is an essential need for complex decisions to be resolved in a responsible optimal manner. The solution process needs to be suitably applied, that appropriately resolves the issue. In most cases, utilising Industrial Engineering (IE) Techniques will result in suitable outcomes. Consensus Decision Making-Utilising Game Theory, is a participative, creative and dynamic way of reaching an optimum collective agreement between all or most members of a group. Instead of simply voting for an item and having the majority of the group getting their way, a group using consensus decision making, is committed to finding the best solution that everyone actively supports, or at least can live with leading to beneficial outcomes minimizing risks

## Workshop 2: Industry 4.0: Digital Manufacturing Made Easy!

**2:30-4:00pm, Thursday, 27 November 2025**

**Facilitator:**

**Vikram Sachdeva**
Director – Manufacturing Excellence and Transformation
Swinburne University of Technology
Melbourne, Australia

Vikram Sachdeva is an accomplished manufacturing leader with 28 years experience spanning operations management, industrial engineering, operational excellence, and digital transformation. He defines and executes strategies that equip businesses for the future. A trained engineer and a natural problem solver, he uses Lean Six Sigma and Industry 4.0 to create process, people and technology solutions that address both ingrained and evolving manufacturing challenges. Underpinned by his passion for bringing new ideas to business, he engages and leads teams in delivering innovation and continuous improvement.

In his current role, Vikram is leading Manufacturing Excellence and Transformation initiatives at Swinburne, with a remit to support manufacturing businesses (primarily SMEs) with digital transformation. In the last 5 years, Swinburne's Factory of the Future has successfully delivered a unique, nation first, government funded Industry 4.0 Business Readiness program catalysing multi million dollar investment in Industry 4.0 technologies, contributing to onshoring, new jobs creation and establishing Industry 4.0 as a key enabler to any manufacturing transformation program.

Through this workshop, Vikram and his team aim to spread awareness and provide hands-on experience on how the new technologies can assist Industrial Engineers to be more productive while they develop innovative human-centred systems

### About the Workshop

Using engaging demonstrations, this workshop takes a holistic approach to lay the foundations for understanding Industry 4.0. Participants will learn about the benefits, applications, and approaches to adopting digital technologies. Developed and delivered by a mix of industry-experienced professionals and subject matter/technology experts, Demonstrations provide hands-on experiential learning with technology demonstrators across vision systems, Industrial Internet of Things (IIoT), Data Analytics, Artificial Intelligence, Augmented & Virtual Reality, real-time location systems, wearables, and predictive maintenance.