

Capability Statement



Chambers & Associates Pty Ltd

Summary

- Role** Chambers and Associates Pty Ltd is a systems engineering consulting, contracting and training organisation providing project services to a wide variety of industry sectors.
- Mission** CA's mission is to advance our client's ability to reliably deliver complex systems that are safe and fit for purpose.
- Industry Sectors** Founded by Les Chambers in 1988 CA works in Australia and internationally in railway and road transportation, telecommunications, defence industries, military aviation, armed forces integration, chemical processing, gaming, nuclear power, general systems development, government, construction and education.
- Clients** Regardless of industry all our clients have one thing in common: they are developing increasingly complex and sometimes life-critical systems in demanding environments where the constraints of cost, scope, time, quality and safety require high levels of professionalism in software and systems engineering. Our clients have included Honeywell, Siemens, Telstra, BHP, Invensys, Ansaldo, Rockwell, Boeing, Royal Australian Air Force, Jupiters and various Australian and international government departments.

Services

CA provides full lifecycle support for systems and software engineering projects. We provide both consulting and contracting services.

- Commercial**
- Bid preparation
 - Marketing support
 - Strategic planning

- Management**
- Project planning
 - Project management

- Lifecycle Support**
- Requirements engineering
 - Architectural design
 - Control system design
 - Unit, integration and system testing

- Systems Assurance**
- Verification and validation
 - System safety management
 - Software quality assurance
 - Configuration management

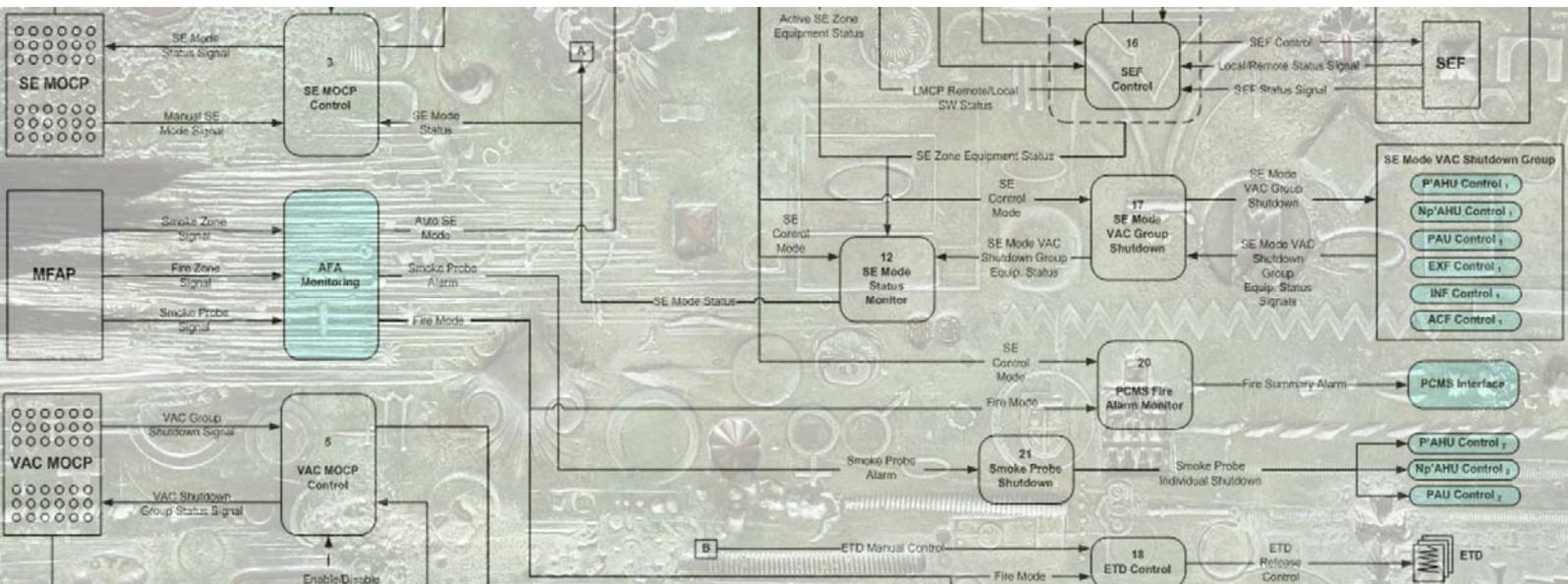
- Methods and Processes**
- Process assessment
 - Methodology development
 - Methodology deployment

- Training**
- CA provides the following public and in-house courses:
- Managing Software Development Projects
 - How to Implement a Software Quality Management System
 - Specifying Software Requirements
 - Modelling Software Requirements
 - Functional Safety Management



Case Studies

- Bid Preparation 4
- Requirements Engineering 5
- Control System Design 6
- Integration and System Testing 7
- System Safety Management 8
- Software Quality Assurance 9
- Methodology Development 10



Case Study: Bid Preparation

CA participated in an international multidisciplinary team developing a bid package for a battle management system.

Client: Government of the United Arab Emirates

Services

- Consult on strategic approach
- Develop conceptual designs
- Develop project approach
- Perform risk management planning
- Prepare bid documentation
- Prepare estimates



Case Study: Requirements Engineering

CA developed a requirement specification for automatic provisioning of telephone exchanges from network provisioning service orders.

Client: Telstra

Services

- Plan requirements capture project
- Elicit Requirements
- Analyse requirements
- Prepare software requirements specification



Capturing software requirements where completeness, correctness and absence of ambiguity are essential.

Case Study: Control System Design

CA designed the ventilation and air conditioning, building management and smoke extraction control systems for underground railway stations on the Taiwan high-speed rail network. We all also provided quality and functional safety management services.

Client: Honeywell

Services

- Develop control strategies
- Prepare system architecture specifications
- Prepare detailed design descriptions
- Manage design team

A photograph of a high-speed train at a station platform. The train is white with a red stripe and is moving towards the right. Several passengers are standing on the platform, some with luggage. The platform has a green wall on the left and a yellow safety line on the ground.

Designing safety critical systems
where software protects human life.

Case Study: Integration and System Testing

CA designed the integration and system test program for the fire suppression and smoke extraction systems in the Tugun Bypass road tunnel.

Client: Pacific Link Alliance

Services

- Develop test plans
- Develop test designs
- Developed test cases
- Conduct testing and record results
- Manage test program



Validating systems where smoke testing is more than a figure of speech.

Case Study: System Safety Management

CA was the safety authority on the Tugun Bypass road tunnel.

Client: Pacific Link Alliance (PLA)

Services

- Develop and maintain a program level System Safety Plan
- Ensure that an effective functional safety management program is implemented and maintained within the PLA and any subcontracting organizations performing work that impacts functional safety
- Endorse PLA and subcontractor safety documentation
- Manage hazards: their identification, assessment and resolution
- Train PLA and subcontracting organizations in functional safety concepts and practice
- Maintain safety-related documentation
- Plan and monitor safety-related verification and validation
- Participate in program design reviews
- Review design changes for safety implications
- Liaise with subcontractors' safety authorities and certification groups
- Review and approve subcontractors' safety submissions
- Prepare the program safety case
- Respond to The Client's submittal responses and other correspondence.



Assuring system safety where complex systems protect life and property.

Case Study: Software Quality Assurance

CA provided the quality manager for a multimillion dollar telecommunications network provisioning information system development.

Client: Telstra

Services

- Develop quality plans
- Conduct project audits
- Confirm corrective action on non-compliances
- Monitor quality metrics
- Consult on development process improvement

A photograph of a traditional Japanese garden. In the foreground, there is a large, moss-covered tree trunk. To the left, a building with a red interior is visible. A stone path leads through the garden, and a small stone lantern stands near the path. In the background, there is a pond with several koi fish, surrounded by rocks and lush greenery. A waterfall is visible on the right side of the pond.

Improving software quality where survival means knowing what your customers want.

Case Study: Methodology Development

CA created a railway signalling development methodology for a railway signalling systems integrator currently allied with Queensland Rail.

Client: Synergy Alliance (Alliance partners: Ansaldo and The United Group)

Services

- Review and assess process effectiveness
- Analyse the rail signalling development process
- Develop project methodologies
- Roll out methodologies
- Plan and execute or consult on process improvement initiatives



Designing system development practices where both the people and the system must be stars.

Contact

Enquiries: Les Chambers

Ph: +61 7 38704199

M: +61 412648992

les@chambers.com.au