

**SYSTRA**



# **GRADUATE PROGRAM**

*2022/2023*



*"Australia is a burgeoning centre  
of engineering and technology."*

*Do **you** have what it takes?*

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# About Us



**SYSTRA is a world leading management consulting and engineering firm specialising in transportation, infrastructure and technology.**

## Our Values



**Excellence:** Excellence is a defining value; it sets us apart as experts in our specialist field.



**Connected Teams:** The best outcomes are achieved through teamwork, both locally and internationally.



**Bold Leadership:** As leaders in our field of expertise, we must be at the forefront of industry developments.

**S**YSTRA's Australian & New Zealand offices specialise in Systems Consulting & Technology services. Working on more than 3,500 projects in 80 countries we have helped build over half of the world's metro systems and high-speed lines and we are utilising that knowledge to deliver some of the largest and most complex projects in aviation and government, security & technology.

Our challenge is to design and implement the safest, most efficient and most secure solutions for our clients. We assist growing towns and regions that need reliable, fast, clean transport systems, to make a lasting improvement to their residents' living standards. Our services are unique, we work on all stages of projects: upstream studies and planning, design, construction, integration, test and commissioning, operations and maintenance.

# The History

## Over 10 years' experience in Australia working with established industry leaders

**A**t SYSTRA we work with a range of public and private sector clients across all stages of projects and asset lifecycles. Combining the broad knowledge of our locally based consultants with that of our overseas colleagues allows us to provide industry leading advice and solutions. We employ individuals with strong technical attributes who use pragmatic approaches based on hands-on experience and an understanding of wider stakeholder considerations.

1957



### **SYSTRA Creation**

SYSTRA's roots come from SOFRERAIL, which was a French company for railway design and construction. SYSTRA has since undergone several mergers and acquisitions to become the global force it is today.

2009



### **Scott Lister Creation**

Scott Lister, an Australian engineering consultancy was founded by associates Mark Scott and Howard Lister. Its main activities were, safety assurance, comprehensive engineering services, and project management.

2014



### **SYSTRA Australia Branch Formation**

SYSTRA Australia Branch was created to conduct two major projects in Sydney: the North-West Railway Line; and a signalling modernisation project done in conjunction with Scott Lister.

2016



### **SYSTRA Acquires Scott Lister**

This acquisition gave SYSTRA the wherewithal to build up its activity in Australia, a high potential market for transport infrastructure; as well as reinforce its skills in systems safety and integration.

Now



### **SYSTRA Operations in Australia, New Zealand and the UK**

SYSTRA Scott Lister is the Oceania Management Consultancy arm of SYSTRA. We lead many public transit projects to success with our superior planning; and also provide our engineering expertise to external projects.



# Program Overview



The Graduate Program will be delivered over a 24-month duration with work rotations in different sectors. It is designed to give our graduates a comprehensive introduction to multi-discipline engineering in Rail, Structures, Advisory and Defence.

A buddy/mentor will be allocated to each of our graduates to give them the opportunity to learn more about SYSTRA. Throughout the program, graduates will be able to engage in open discussion, gain objective feedback and obtain career guidance.

Our Talent Acquisition team will be finalising graduate hires in November 2021 for a February start in 2022. Engineers and non-Engineers are invited to apply for roles in Engineering, Digital Planning and Human Factors.



Learn about every facet and function that makes up a leading engineering consultancy.

From on-site project engineering, management and delivery, to the essential business support roles like safety, new business and strategy, and commercial management, graduates will work alongside our leaders.



Our partnership with Engineers Australia (EA) will ensure that graduates are industry ready.

Graduates will benefit from an international course which embraces evidence based learning and teaches work and life-skills through topics such as self-management, emotional judgement, communication and teamwork.



Leveraging our global network, graduates will learn about the latest engineering advances.

SYSTRA has over 8000 employees globally. Australia is one of the 15 key countries that our organisation is looking to further invest and grow exponentially. Currently, there are exciting projects in rail, defence, smart mobility and future cities.

# Join Our Team




## Which stream is right for you?

- A- Engineering.** For those completing a bachelors' degree in electrical, mechanical or aeronautical engineering.
- B- Digital Planning.** For those completing a bachelors' degree in data science or mechatronics engineering.
- C- Human Factors.** For those completing a bachelors' degree in psychology, ergonomics, or cognitive engineering.

## Are you eligible for entry in 2022?

- You will have completed or are working towards a relevant degree by end of 2021.
- You must be an Australian citizen or hold an unrestricted visa that enables you to work here.

## Who are we looking for?

-  An individual who can demonstrate the ability to absorb and apply specific skills and knowledge from a variety of formal and informal learning experiences.
-  Someone who possesses excellent verbal, written communication and interpersonal skills, coupled with the capability to work in a collaborative and inclusive team environment.
-  The right person with initiative, who is a self-starter capable of managing multiple projects and meeting project specific deadlines with a high degree of accuracy.

## Our Locations

### Sydney

Level 15, 2 Chifley Square  
Sydney NSW 2000

### Canberra

Level 1, 18 National Circuit  
Barton ACT 2600

### Brisbane

Level 2, 310 Edward Street  
Brisbane QLD 4000

### Adelaide

Level 21, 25 Grenfell Street  
Adelaide SA 5000

### Melbourne

Level 7, 600 Bourke Street  
Melbourne VIC 3000

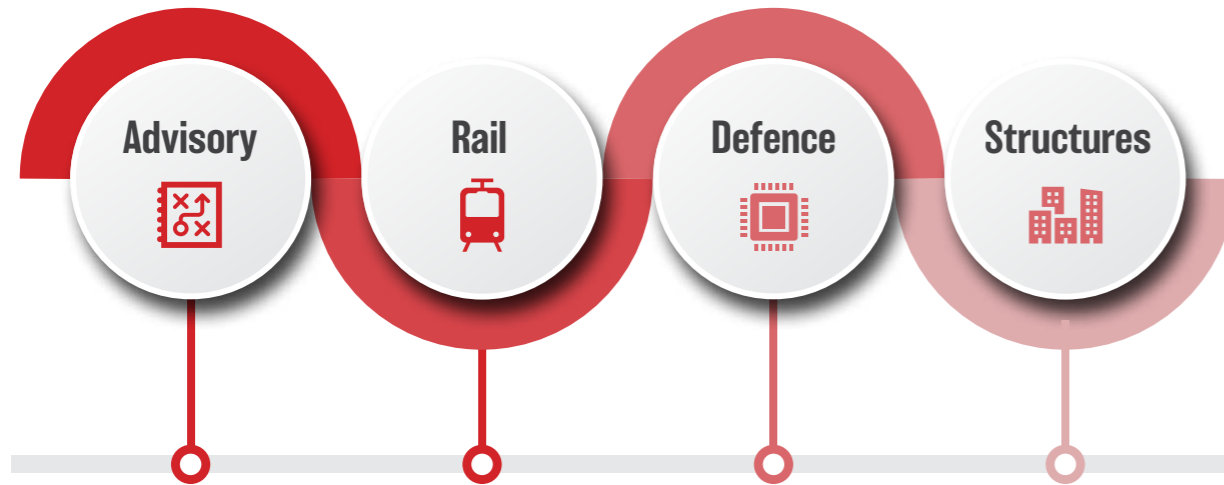
### Perth

Level 34, 152 St Georges Terrace  
Perth WA 6000

# Your Development

The graduate program aims to provide graduates with real job experience to improve their technical capabilities that align with our Competency Framework. Our competency framework is based on industry best practice and aligned to professional institutions to support graduate career development and to set them on the path to becoming a Chartered Engineer. There will be a particular focus on non-technical skills such as communication which will be complimentary to our consulting environment. At the end of the program, successful graduates can choose to stay employed with SYSTRA where their knowledge and talents will continue to be developed.

## The Rotations



- Business Cases & Feasibility Studies
- Operational Modelling & Simulations
- Intelligent Transport Systems
- Performance & Risk

- Urban Mobility (LRT/BRT)
- Metro Transit Systems
- Heavy Rail & High Speed
- Digital Systems

- Land;
- Air;
- Maritime;
- Joint Systems C4I.

- Bridges
- Tunnels & Underground Structures.

# Course Outline

The 18 month Engineers Australia course is embedded into our graduate program. EA's course was selected based on its recognition within the industry. Upon completion, graduates will receive accreditation through Deakin University. As our business has strong ties with EA, you will be supported by CPEng qualified mentors from Day One.

## MODULE 1 Personal Mastery and the Role of the Engineer

Module one explores the graduate's self-awareness and communication skills in the context of their work environment. Various theories and models relating to individual and team development are covered as a foundation. Practical skills and performance are developed to enable graduates to transfer skills to new experiences, continually evolving their capabilities.

- Self-management
- Emotional judgement
- Communication
- Teamwork
- Leadership
- Writing a winning bid
- Project methodology



## MODULE 2 Value in the Workplace and Delivering Solutions

Module two explores the skills and processes required to develop and implement successful projects that deliver desired business outcomes. The topics will enable practical upskilling to enhance and leverage stakeholder relationships.

- Problem solving
- Stakeholder engagement
- Prepare a Business Case
- Financing your project
- Writing a winning bid
- Project methodology



## MODULE 3 Growing Professional Skills and Sustaining Success

Module three explores the theories, models and methods to provide strategies that bring more innovative practices into workplaces, enabling graduates to succeed in a Volatile, Uncertain, Complex and Ambiguous (VUCA) world. It will challenge their ability to think critically and work collaboratively, setting them up to become Chartered ready.

- Career and industry
- Evaluation
- Innovation and risk
- Critical thinking
- Performance leadership



# Global Rank 2020



SYSTRA's specialist expertise recognised by ENR  
 2019 - 2020 International Design Firms Rankings



## Our Regions

The SYSTRA Group consists of eight regions, each with their own local offices and subsidiaries. We have extended our global network to 15 regional technical centres that work closely with the Group's technical department in Paris, so that we can deliver SYSTRA quality worldwide.

■ France - Headquarters

■ Middle-East

■ Latin America

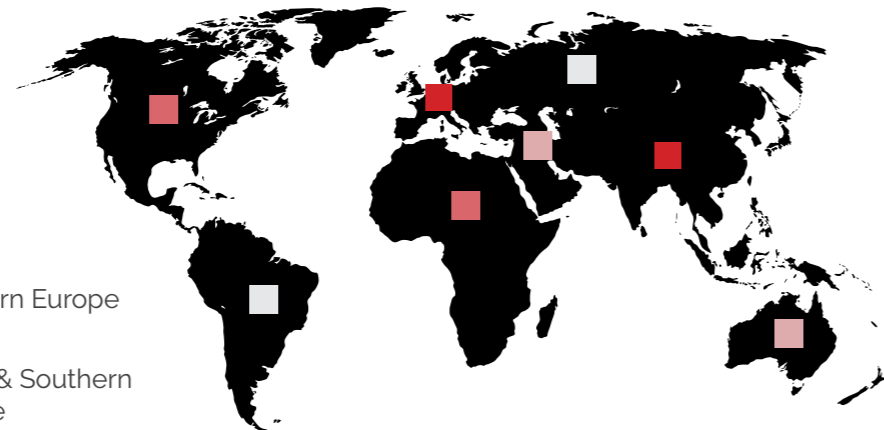
■ North America

■ Oceania

■ Asia

■ Northern Europe

■ Africa & Southern Europe



# Recent Projects

*"A growing world population, the build-out of emerging countries, exploding megacities, asphyxiating inner cities. Now is the time to improve urban and inter-city mass transit. At SYSTRA Scott Lister we develop innovative solutions that enable local governments and public contracting authorities to offer safe, suitable solutions."*



## Navy/Army Aviation Acquisition Program Office (NA3PO)

SSL is leading the establishment of an Integrated Work Package project through our partnership in the Team Downer MSP consortium. NA3PO will upgrade various Navy and Army rotary-wing and Unmanned Aerial System (UAS) capabilities that will provide the Australian war fighter with the tools to successfully complete their mission in the 2020's and beyond.

These capabilities include Light Utility Helicopters to support Special Forces, and to replace or upgrade the (Tiger) Armed Reconnaissance Helicopter along with providing future generations of UAS for the tactical reconnaissance role. Team Downer will provide expertise to NA3PO to drive these projects through Defence's capability lifecycle.





## Sydney Metro North-West

Sydney Metro is Australia’s biggest public transport program delivering Australia’s first automated metro service. The Metro North-West is the first of three Metro projects in the city over the next decade. It delivers eight stations along 36km of standalone track with 4000 commuter car parking spaces between Tallawong (Rouse Hill) and Chatswood.

The project was delivered, operated and maintained via a Public Private Partnership (Northwest Rapid Transit) for the state government client, Transport for New South Wales. Since 2014 SYSTRA Scott Lister provided Independent Certification services for over 1000 technical packages through the Design, Manufacturing, Construction, Testing & Commissioning and Final Completion phases.

SYSTRA have played a key role in the success of the Sydney Metro North West earning praise from the Sydney Metro Project Director and the CEO of Northwest Rapid Transit.



## Victoria Cross Station

SSL are providing an integrated Systems Engineering and Safety Assurance service to support Leadlease, who are constructing the new Victoria Cross station. Our deliverables include Requirements Verification Traceability Matrices (RVTMs) and administration of the central DOORS requirements database. We are also developing the Master Interface Matrix and Interface Registers.



## Hitachi Rail - ETCS

Cross River Rail is a new 10.2 km line that includes 5.9 km of tunnel under the Brisbane River and the CBD. SSL is supporting Hitachi Rail with the early works phase of CRR European Train Control Systems. ETCS L2 involves continuous supervision of train movement with continuous communication, which is provided by GSM-R, between the train and trackside.



## Evolution Rail - HCMT

The High Capacity Metro Trains project in Victoria is the production of 65 new trains that will run on the Sunbury and Pakenham corridors. Because of the complexity and integration challenges, comprehensive Systems Assurance was required to ensure that the Integrated Systems will be safe. Evolution Rail engaged SSL to supply a Safety Team and Systems Engineering Team.



## LAND 200 MSP

The LAND 200 project will deliver a new tactical communications network incorporating new Software Defined Radios, Software Defined Networks, development and implementation of a new Australian Standard Generic Vehicle Architecture (AS-GVA) onto more than 500 vehicles and enhance existing battle management system software.

# Notes

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**SYSTRA**





## Stay in Touch



Level 15, Chifley Tower,  
2 Chifley Square, Sydney, NSW 2000



T +61 (0) 2 9229 8100  
F +61 (0) 2 9232 5279



graduate\_au@systra.com  
www.systra.com.au

*“Our passionate engineers work to get the world moving freely every day.”*

**SYSTRA**