



*young*  
**IPWEA**  
INSTITUTE OF PUBLIC WORKS  
ENGINEERING AUSTRALASIA



# Young IPWEA

Career Framework

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## Introduction/Background

Public Works is an exciting and diverse industry that gives young professionals the opportunity to gain knowledge and a broad range of skills in many different facets of the industry. These can include engineering (including civil), stormwater, traffic asset management, project management as well as delivery. All of which offer opportunities for leadership as you progress through your career. No two days are the same in Public Works, you could be dealing with a flood today and a building issue tomorrow, making it a dynamic career choice.

Now that you're excited about a Public Works career, how do you know which path to take? Which part of Public Works excites you? What are employers looking for? And how do I make myself more employable?

The Public Works industry has changed significantly in recent times, and the concept of the T-Shaped engineer has become prevalent. A T-Shaped engineer is one that has a depth of knowledge in one or two specialist areas while having a breadth of knowledge across multiple facets.

Public Works provides an opportunity for young professionals to gain experience in multiple facets of technical, delivery and leadership streams. This then supports the development of widespread breadth of knowledge, while allowing a deeper set of skills to be developed in specific areas related to the individual's role or areas of interest.

Young IPWEA has identified that for young professionals it can often be hard to know what questions to ask, what opportunities to seek out and what to ask of your leaders/mentors. With these gaps in mind, Young IPWEA has developed this document to help you start the conversation with your employer. The document highlights areas of value that will enable you to seek opportunities that will build your knowledge and skills.

### Self Reflection

Before you dive into the document, we recommend you take a few minutes for some self reflection and evaluate your own strengths and weaknesses in the following areas:

Rank the following skills in order of strength:

- Reading Comprehension
- Speaking
- Active Listening
- Complex Problem Solving
- Critical Thinking
- Time Management
- Judgment and Decision Making
- Mathematics
- Coordination
- Active Learning

Rank the following areas of knowledge in order of strength

- Engineering & Technology
- Building & Construction
- Design
- English Language
- Administration & Management
- Mathematics
- Customer & Personal Service
- Mechanical
- Computers & Electronics
- Public Safety & Security

Once you've taken the time to reflect on your strengths and weaknesses, the next step is to learn about further your development in three key areas - Technical, Delivery and Leadership roles.

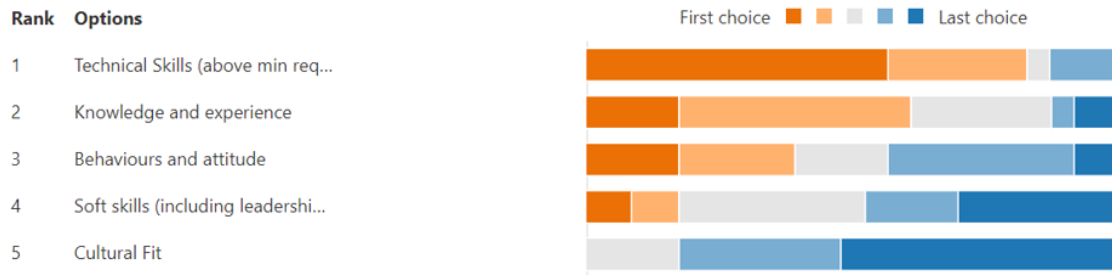
## TECHNICAL FOCUS

### Types of roles - Design Engineer, Asset Manager...

#### Technical

What are employers looking for?

For an **Engineering** focused Public Works role (e.g. Design or Approvals Engineer) please drag and rank from high to low the importance of the following in a candidate



Key area (in order of importance)	Commentary
Soft Skills	You will have developed, or be developing, soft skills in order to interact constructively with peers, managers and clients/customers. This is vital for forming positive and strong relationships that will serve you and the organisation well into the future.
Behaviours and Attitude	You will reflect positive behaviours and attitudes that fit with the culture and professionalism of the organisation. You will be capable of working within and leading a team.
Knowledge and Experience	You will have knowledge and experience that is applicable to the role. A leadership role will require both a depth of technical and breadth of industry experience across multiple disciplines as you will be working and collaborating with a variety of stakeholders.
Technical Skills	You will need technical expertise in the specific area/s required for the role. You may also have expertise in a different area that is transferable to the role.
Cultural Fit	You will need to be able to live and breathe your organisation's values and will be responsible for building a positive team culture.

## Foundational skills and knowledge for public works.

Many of the skills that you need to possess as a technical expert are applicable and transferrable to other roles within the public works industry.

Shared specialisation:

- Systems analysis
- Maths/physics
- Design
- Building and construction

## FOUNDATION SKILLS AND KNOWLEDGE

- |                         |                                 |
|-------------------------|---------------------------------|
| • Engineering and Tech  | • Building and Construction     |
| • English Language      | • Time Management               |
| • Reading Comprehension | • Judgement and Decision Making |
| • Speaking              | • Coordination                  |
| • Active Listening      | • Active Learning               |
| • Mathematics           | • Complex Problem Solving       |
| • Critical Thinking     | • Administration and Management |
| • Design                | • Customer Service              |

## What's next? (in no particular order...)

Here are some simple steps you can take to build your skills for a Technical Role:

Network with your peers. Explore what roles exist within the industry and learn more about the pathways that others have taken in their career journeys:

- What training programs have they taken part in, and what would they recommend?
- Who has inspired them and what made them inspirational? What skills and experience did they possess? It can help to understand what skills, experience and personal qualities are valued in a particular role, and identify what areas you may wish to work on as a result of your own career aspirations.
- Who else could you talk to if you're interested in a similar role in future?
- Find a mentor, or mentors, to discuss your journey with. Can they help connect you with others on the same journey as you? Take part in the Coffee Cup Challenge.

Look for opportunities to increase knowledge/skills:

- Attend conferences and other events that enable you to network and learn something new.
- Sign up to present at a conference or event. This helps to increase your level of confidence, and further connects you with industry professionals that are interested in similar topics. A lot of these people will come to speak to you after you've presented at a conference!

- Sign up to co-author and/or co-present a paper at a conference or event. If you're new to these types of events and presenting, then this can be a good step towards presenting by yourself in future.
- Take part in training relevant to the technical role that you'd like to perform.
- Stay aware of what skills and experience are required to perform the breadth of roles across the public works industry and stay on top of maintaining your personal development across multiple facets of the industry where applicable. This will help you if you would like to transition into a new role, and also raise your awareness of the other roles being performed within your team/industry and strengthen your ability to work with them.

Engage in your performance review process:

- Talk to your manager about how you could expand on your technical skills – training, mentoring, shadowing someone in a similar role.
- Look ahead at what training opportunities, conferences and other events are coming up. Are there any that are aligned with areas that you are interested in? Do you have a topic that you could present on?
- Undertake your own self-reflection prior to your performance review and think about what steps you might need to take to help achieve your career objectives. Where do you think you have gaps in your skills and experience? What steps might you need to take to fill these gaps or strengthen the skills and experience that you already have?
- Have conversations with other members of your team to seek their feedback on your performance across the different areas of skill and experience. Use this as part of your self-reflection process to understand where you might be performing well, and any areas for improvement.

Join a committee! Committees are great avenues for meeting people across the industry and more broadly improving your experience, confidence and soft skills. You could join the YIPWEA Committee and/or a committee to help organise an event.

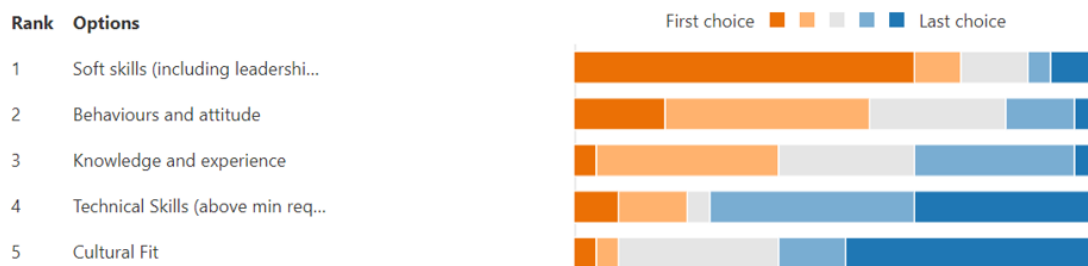
## Leader/Manager Focus

### What are employers looking for?

A leadership or management role will require a wide range of skills above the technical subject matter knowledge of your field. A survey of the industry's senior leadership identified a majority of employers looking for soft skills as the most desired attribute in a candidate. These soft skills include the ability to lead, work within a team, communicate and present ideas.

Key area (in order of importance)	Commentary
Soft Skills	You will have developed, or be developing, soft skills in order to interact constructively with peers, managers and clients/customers. This is vital for forming positive and strong relationships that will serve you and the organisation well into the future.
Behaviours and Attitude	You will reflect positive behaviours and attitudes that fit with the culture and professionalism of the organisation. You will be capable of working within and leading a team.
Knowledge and Experience	You will have knowledge and experience that is applicable to the role. A leadership role will require both a depth of technical and breadth of industry experience across multiple disciplines as you will be working and collaborating with a variety of stakeholders.
Technical Skills	You will need technical expertise in the specific area/s required for the role. You may also have expertise in a different area that is transferable to the role.
Cultural Fit	You will need to be able to live and breathe your organisation's values and will be responsible for building a positive team culture.

For a **Management** focused Public Works role (e.g. Team Leader, Coordinator) please drag and rank from high to low the importance of the following in a candidate



## Foundational Skills and Knowledge for Public Works

Many of the skills that you need to possess as a leader/manger are applicable and transferable to other roles within the public works industry:

- Writing
- Work with teams
- Innovation
- Analytical thinking

### WORK STYLE

### FOUNDATION SKILLS AND KNOWLEDGE



### What next?

Coordination / Admin and management. Committee work?

Building and construction. Seek opportunities

### What next?

Find a mentor, or mentors, to discuss your journey with. Can they help connect you with others on the same journey as you? Take part in the Coffee Cup Challenge.

If you are looking at a career in leadership, become a mentor to a junior within your organisation or a university student. This is a great opportunity to give back and grow your own coaching and training skills essential to becoming a leader. Take part in the Coffee Cup Challenge by becoming a mentor yourself

Join a committee! Soft skills is the number one desired area looked for in leaders. Joining a committee will provide experience in communication, managing meetings, leading teams, presenting as well as opportunities to meet and network with industry leaders. You could join the YIPWEA Committee and/or a committee to help organise an event.

Look for opportunities to increase knowledge/skills:

- Attend conferences and other events that enable you to network and learn something new.
- Present at your next IPWEA conference by submitting an abstract to the next conference call out on a project you have recently worked on. This helps increase your level of confidence and further connect you with industry professionals interested in similar topics. A lot of these people will come to speak to you after you've presented at a conference!
- Sign up to co-author and/or co-present a paper for a conference or event. If you're new to these types of events and presenting, then this can be a good step towards presenting by yourself in future.
- Take part in training relevant to the technical role that you'd like to perform.
- Stay aware of the skills and experience required to perform the breadth of roles across the industry and maintain your development across multiple facets. This will help you transition to a multi-disciplinary role, while raising your industry awareness and ability to work with diverse teams.

Network with your peers. Develop your breadth of knowledge by exploring roles within the industry:

- What training programs have they taken part in, and what would they recommend?
- Who has inspired them and what made them inspirational? What skills and experience did they possess? It can help to understand what skills, experience and personal qualities are valued in a particular role and identify what areas you may wish to work on as a result of your own career aspirations.
- Who else could you talk to if you're interested in a similar role in the future?

Engage in your performance review process and take action within your role to grow your desired areas of development:

- Undertake your own self-reflection prior to your performance review and consider what steps you might need to take to help achieve your career objectives. Where are your skill and experience gaps? What steps might you need to take to fill these gaps or strengthen the skills and experience that you already have?
- Undertake a 360 degree review. Speak with your manager, coworkers and your direct reports to seek their feedback on your performance across the different areas of skill and experience. Use this as part of your self-reflection process to understand where you might be performing well, and any areas for improvement.
- Talk to your manager about how you could expand on your technical skills – training, mentoring, shadowing someone in a similar role.
- Look ahead at what training opportunities, conferences and other events are coming up. Are there any that are aligned with areas that you are interested in? Do you have a topic that you could present on?

Now that you have a better understanding of what the industry wants and the skills and knowledge required to be successful, take a moment to reflect on the initial strengths you identified. What are the steps you're going to take to help you continue your development journey in the public works sector? Are you going to talk to your manager? Are you going to seek out a new project? Am I going to register for the Coffee Cup Challenge?

The future is in your hands, you just need to take the leap and get started.



[www.ipwea.org/young](http://www.ipwea.org/young)