





# Project Controls Manager

What are we selling and what are you buying?



# Agenda

#### **Introduction – From Gamekeeper to Poacher**

#### **Defining the Problem**

- Linkedin Statistics
- Client Expectations
- · People's Front of Judea

#### **Progress to Date**

- APM Competence Framework
- Projects Controls Institute
- · Open University of Australia
- PMI Certifications

#### **Recommendations for Next Steps**

- Be Consistent in our Communication
- PMP for PCM?
- Apply Maturity Assessments to PCM's

#### **Closing Remarks & Questions**





# Gamekeeper









## External Challenge – Internal Opportunity

# FOI Request – how much money has Scottish Water spent on external consultants?

- Request was difficult as not easily answered in statutory time limits – made upper management very nervous;
- Small task force put together to investigate number of consultants in use across the business over 3 financial years;
- Opportunity to better understand departmental resource requirements and to renegotiate long-standing consultancy agreements.





## 3 Key Questions on Value & Purpose

- 1. What happens if you do not come in tomorrow? Next week? Next month?
- 2. Is your role administration or analysis are you adding value or just moving data along?
- 3. If we took away your systems and tools, how would you do your job?

Review process did not focus primarily on cost-cutting measures but on understanding activity and 'contribution' – how does your role add value to the goals and deliverables of your team.





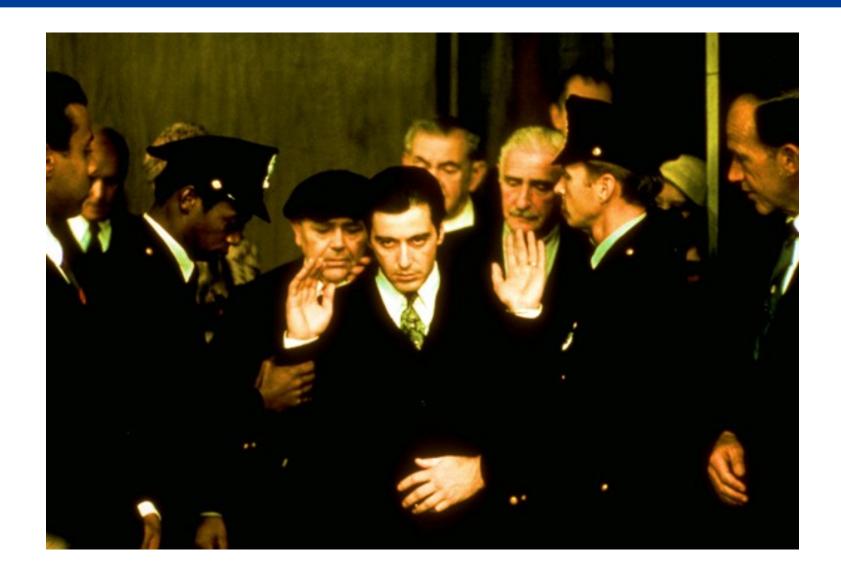
# Switching Sides....







# Now fully in the Olive Oil Business









# Extremity of Views?

"The right personality and four weeks of P6 training is all it takes to be a highly effective project controls manager on a large construction project."

Senior Project Director, Tier 1 Construction Firm

"The PCM should have a minimum of 15 years professional experience undertaking project controls roles for the development and delivery of construction projects.

Demonstrated experience leading teams in planning/scheduling, cost management, risk management, change control and reporting within complex projects."

Sydney Metro, PMO Tender





# Linkedin – PCM Diversity

# 1,220 people identify as a 'Project Controls Manager' on Linkedin here in Australia.

Seniority	
Partner+	7%
Director	14%
Senior Advisory	56%
Manager	9%
Consultant	0%
Entry Level	14%

Experience	
More than 10 years	88%
6-10 years	10%
3-5 years	1.5%
1-2 years	0.5%
Less than 1 year	0





# Linkedin – PCM Diversity

# 1,220 people identify as a 'Project Controls Manager' on Linkedin here in Australia.

Top 5 Industries	
Construction	341
Oil & Energy	221
Mining & Metals	198
Consulting	102
Civil Engineering	67

Top 5 Employers	
ВНР	39
Downer	27
Transport for NSW	24
WorleyParsons	24
Laing O'Rourke	22





Your candidate for Project Controls Manager must demonstrate or hold the following:

- Deep understanding of project controls methodology;
- 15 years experience in engineering or project management environment;
- 10 years experience in rail infrastructure projects;
- 5 years experience in PMO environment;
- Technical expertise working with Primavera P6;
- Experience using Primavera Web, Acumen Fuse, BI Publisher and Primavera Risk.





Your candidate for Project Controls Manager will ideally have the following:

- Relevant engineering or Project Management degree;
- Extensive experience in project controls or cost systems;
- Advanced level knowledge of engineering, procurement, construction and project start-up processes;
- Experience in validating or producing monthly cost, schedule and risk reports;
- Good interpersonal and communication skills (verbal and written);
- Good levels of personal hygiene (??)





As Project Controls Manager you will provide Governance and Project Controls Support (including Earned Value Management and other analysis techniques) to the Programme Management Team:

#### **Essential Skills and Qualifications:**

- Experience of working in a Project Control role within a complex, matrix organisation with the ability to interact and brief senior stakeholders in a concise and accurate way
- Proven understanding of Earned Value Management techniques
- Experience of coaching and influencing others to improve performance, embed best practice and deliver continuous improvement

#### **Desirable Skills and Qualifications:**

- Degree / Certificate in Project Management or professional qualification such as APM, IPMA, Prince2 or similar.
- Practitioner knowledge of Primavera 6, Primavera Risk Analyser, ARM tools
- Life Cycle Management Assessor
- Project Control Systems Reviewer (IBR)





"All members of the PMO are required to have demonstrable project controls competence in accordance with the APM Competence Framework (or equivalent)."

	Schedule Management	Resource Management	Budgeting & Cost Control	Risk & Issue Management	Consolidated Planning	Resource Capacity Planning	Change Control
<b>Projects Controls Manager</b>	Proficient	Proficient	Proficient Proficient		Proficient	Proficient	Proficient
Projects Controls Engineer	Competent	Competent	Competent Competent		Competent	Competent	Competent
Lead Planner	Expert	Expert	Competent	Competent	Expert	Expert	Competent
Planner	Expert	Expert	Practised	Competent	Expert	Expert	Practised
Lead Cost Manager	Competent	Competent	Expert	Competent	Competent	Competent	Proficient
Senior Estimator	Competent	Competent	Competent Expert		Competent	Competent	Proficient
Estimator	Practised	Practised	Practised	Practised	Practised	Practised	Practised
Lead Risk Manager	Proficient	Competent	Proficient	Expert	Competent	Competent	Competent
Change Control Manager	Competent	Competent	Competent	Competent	Competent	Competent	Expert
Reporting Lead	Competent	Competent	Competent	Competent	Competent	Competent	Competent

AWARE >> PRACTISED >> COMPETENT >> PROFICIENT >> EXPERT





# Client Expectations - Summary

So taking all of the seek adverts, client role descriptions, tender documents and so on – is there any consistency in what a PCM should bring to the table?

Qualifying Criteria	Rating	Comment		
Degree Requirements		Consistent, most client roles require Engineering or PM degree		
Years Experience		Semi-consistent, most adverts suggest 10 years+ experience		
Domain Knowledge		Not consistent, mostly mentioned as 'planning & controls'		
Tools & Systems Expertise		Semi-consistent, most common request is Primavera P6 but cost/risk not usually covered		
Stakeholder & Communications		Not consistent, very rarely mentioned or requested		



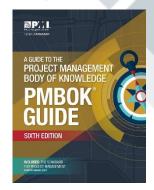


### Professional Bodies - People's front of Judea













**Project Management Institute** 























# APM Competence Framework

"The APM Competence Framework sets out the competences required for effective project, programme, portfolio management and project management office (PMO)."



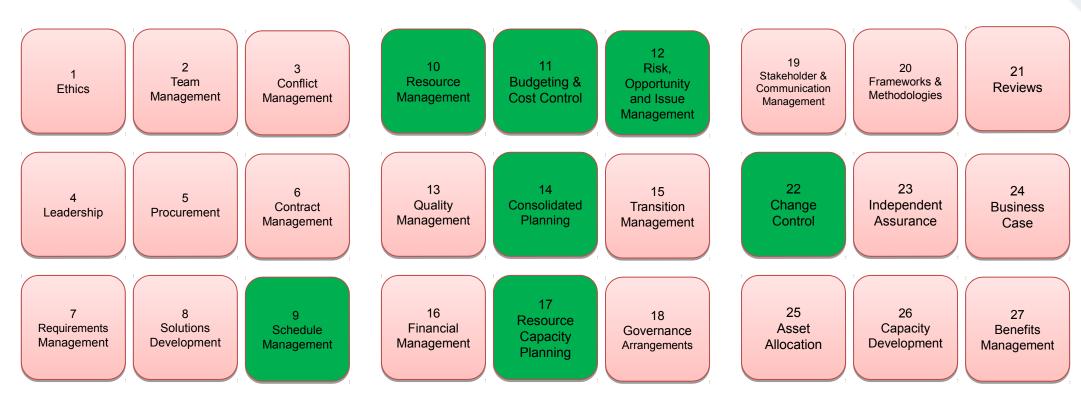
AWARE >> PRACTISED >> COMPETENT >> PROFICIENT >> EXPERT





# APM Competence Framework

Sydney Metro proposed subset of APM Competence Framework for all project controls professionals working on the program.



AWARE >> PRACTISED >> COMPETENT >> PROFICIENT >> EXPERT





#### APM - Planning, Monitoring & Control Special Interest Group

# Formed in 2012 from the previous Planning and Earned Value SIG's. Focus on:

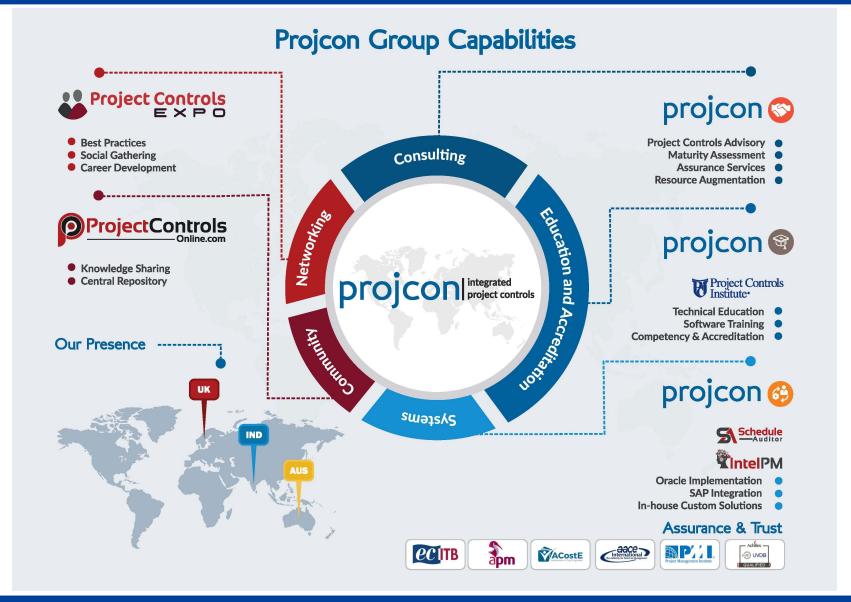
- Custodian of the APM guide "Planning, Scheduling, Monitoring and Control - The Practical Project Management of Time, Cost and Risk";
- Created the Foundation and Practitioner APMG training course – 'Project Planning & Control Certification';
- Now has 3,383 followers within APM;
- Publishes papers and guides on planning, controls, earned value management and scheduling maturity.







### Projcon Group







#### Project Controls Institute – Accreditation Framework

















Foundation

Certified Scheduling Technician (CST)

Certified Associate in Project Management (CAPM)® Project Fundamentals Qualification (PFQ)

(ECostE) -Project Controls/ Planning/Cost/ Estimation/ Commercial Support

**Enrolled Cost Engineer** 

Project Planning & Control™ (PPC) -Foundation

Earned Value Foundation

Integrated Project Controls

Fundamentals of Earned Value

Primavera P6 -Foundation Level Microsoft Project -Foundation Level

Microsoft Project-

Advanced Level

Certified Cost Technician (CCT)

Planning &

Schedulina

Project Risk Management Level 1 Management (EVM) -

Project Planning

& Control™ (PPC) -

Practitioner

Management

Planning and Scheduling in Primavera P6

Professional (PSP)

Certified Cost

Project Management

Professional (PMP)

Schedulina

Professional

(PMI-SP)

Project Management Oualification (PMO)

Project Risk

Management Level 2

Engineer (RCostE) -Project Controls/ Planning/Cost/ Estimation/ Commercial Support

Incorporated Cost Engineer (ICostE)-Project Controls/ Planning/Cost/

Estimation/

Commercial Support

Registered Cost

Earned Value Management (EVM)

Practitioner

Managing Successful Programmes (MSP®) - Foundation

Information Management

Contract Management (NEC and FIDIC)

**Building Information** Modeling (BIM)

Primavera P6 -Advanced Level

Primavera P6 for **Project Managers** 

Primavera Risk Management

Professional

Earned Value

Professional (CCP)

Professional (EVP)

Risk Management

Program

Management

Professional (PgMP)®

Professional (RPM)

Certified Professional (CPCostE) -Project Controls/ Planning/Cost/ Estimation/

Commercial Support

Managing Successful Programmes (MSP®) - Practitioner

Advanced Project Performance & Reporting

Total Cost Management (TCM)

Expert

Decision & Risk Management Professional (DRMP)

Certified Forensic Claims Consultant (CFCC)

Management Professional (PfMP)®





### Open University Australia – Project Control Methods

#### **Topics covered:**

- The Monitoring and Controlling Process Group (PMBOK® Guide)
- Project schedules and management
- Project costing and tracking
- Project quality plans and compliance
- Scope control
- Stakeholder relationship management
- Risk control
- Project communications
- Performance management
- Project monitoring, auditing and reporting
- Process improvement







#### PMI - Certifications

#### PMI Scheduling Professional (PMI-SP):

- Secondary degree;
- 5,000 hours project scheduling experience;
- 40 hours project scheduling education;
- Exam 170 multiple choice questions in 3.5 hours

#### PMI Risk Management Professional (PMI-RMP):

- Secondary degree;
- 4,500 hours project scheduling experience;
- 40 hours project scheduling education;
- Exam 170 multiple choice questions in 3.5 hours



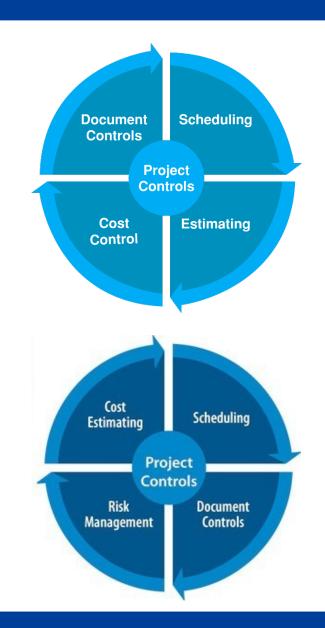




### Be Consistent in how we Communicate













### Keep things Simple

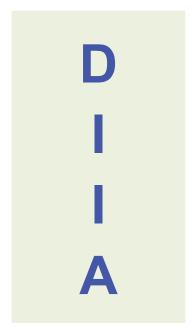
"There are many definitions of Project Controls used across industries and indeed across companies within industries. Project Controls is a professional function not widely recognised as a set of specialised skills in its own right."

#### **PCM**

Generates project performance information

#### **PM**

Makes effective use of that information







#### **Understand Our Role**



DIRECTION APPRENDRE	Km Partiel	Km Total	POSITION GPS	OBSERVATIONS
Par 13 Muraton	0,12	2	N 43 55 058 E 007 39 247	Croix en bois à l'embranchement
	0,88	1,88	N 43 57 181 E 007 36 695	SCARASSAN 1225 m Direction : Colla Pegairole Attention, pis te effondrée à Tembranchement!
1	1	1	Les Pisses de Française	Cyprès sur la gauche Fontaine
Pa i i a	9,41	0 km 35,51	Les Posses de Loutroure	Restaurant - Bar - Refuge Attitude : 1212 m Borne k ilométrique : 24 Départ de la pi
	4,63	26,1	Les Posits de Fontage	Direction : Gouta A gauche : pylône télécom
Cou to S	2,04	21,47	Les Postes de Françaire	On quitte la route principale à la sortie de Pigna. Camping dans le virage Direction : Gouta
	1,26	19,43	Les Pooss de Loureage	PIGNA Carburant , Commerçants , Hôtel
Can to I Vittori	0,53	18,17	N 43 29 016 E 007 37 264	Fin de la piste Point de vue au carrefour
Vin tim Ig Ila	10,89	17,64	Les Pisses de Française	Pontsur la Roya
Re 220 Pigns	6,75	6,75	N 43 38 365 E 007 35 751	Forêt de sapins



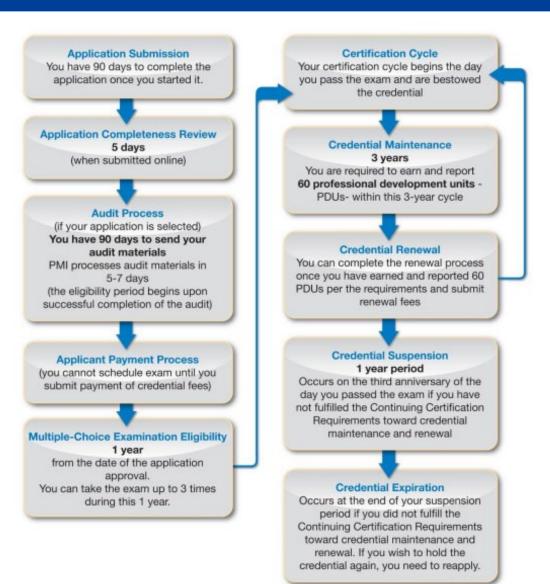
# Lessons from Rally Driving







#### What would PMP® for Controls Look Like?



Who would be the accrediting body?

What would the pre-requisites be for application?

How many controls disciplines would need to be covered?

Appetite for more exams and CPD amongst PCM's?





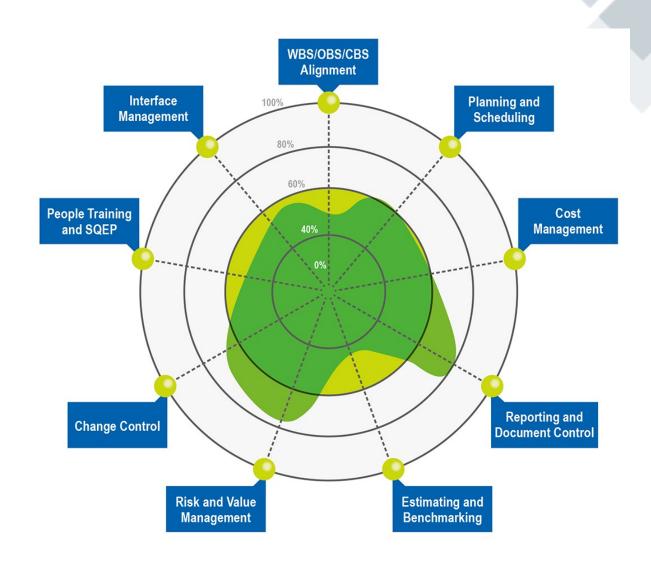
## Apply Maturity Assessments to Ourselves

Schedule Management (13 questions) Cost Management (13 questions)

Risk Management (15 questions) Change Management (6 questions)

Information Management (7 questions) Performance Reporting (5 questions)

Project Controls
Personnel
(6 questions)







### Standardise PCM Competency Assessment Framework

Schedule Management

**Cost Management** 

Risk Management

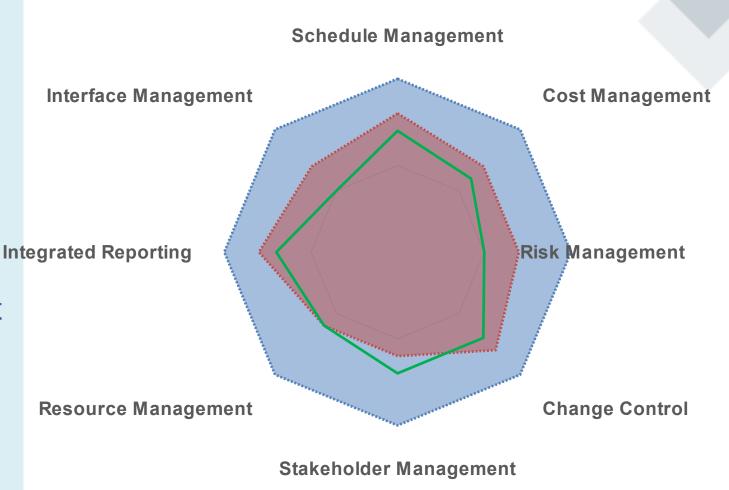
**Change Control** 

Stakeholder Management

Resource Management

**Integrated Reporting** 

Interface Management







### **Summary Thoughts**

#### **Problem Summary**

Project Controls means so many different things to different people so naturally the role of PCM is inconsistent across the industry.

### **Signs of Progress**

Good work to date by APM, PCI and PMI but the Romans aren't taking us seriously just yet!

### **Next Steps**

Common language, common definition, common framework. Recommendation that we target a PMP equivalent for PCM.





