

# CONTINUING PROFESSIONAL DEVELOPMENT



## CPD Guide with Examples

How to make the most of your Continuing Professional Development

# What is CPD?

Continuing Professional Development (CPD) describes the learning activities professionals engage in to develop and enhance their knowledge, skills, and competence.

## Benefits of CPD

**CPD can help you to:**

- Achieve your goals efficiently
- Maintain and enhance your knowledge and skills
- Keep up with changing technology and trends
- Get recognition
- Give you a competitive edge against others
- Stay in the job market
- Develop leadership skills and help influence others
- Provide evidence of competence when it's needed
- Gain access to experts in the field
- Demonstrate commitment to your profession

**CPD culture can help employers to:**

- Demonstrate a supportive and proactive culture for staff development
- Motivate staff in self-development against global frameworks
- Maintain value of previous training and reduce risk exposure
- Demonstrate professional team standing
- Enhance own organisation core competences
- Recognise those who go the extra mile
- Demonstrate a commitment to the profession

# CPD Activity Examples

CPD can take a variety of different forms and it is expected that the CPD focus for everyone will change as their career progresses. While the examples below are not exhaustive, CPD may include a combination of the following:

## Formal Learning

- Undertaking academic study
- Attending a technical specialist course
- Attending networking events, conferences, technical visits, lectures, seminars etc.
- Leading technical meetings and events
- Undertaking a technical qualification
- Attending a leadership/management course

## Informal Learning

- On-the-job training
- Taking on responsibility for a new budget
- Reading technical journals and books to keep up to date
- Researching a technical subject to increase your knowledge
- Undertaking a placement at work in a different technical area to increase the breadth of technical skills
- Any activities increasing your technical knowledge

## Peer and Professional Interaction

- Supporting the learning and development of others by mentoring
- Coaching your staff at work by sharing expertise and knowledge
- Demonstrating technical application
- Discussing ethical issues with colleagues
- Any community activities contributing to society

## Contributions to the Profession

- Writing/publishing technical articles and papers
- Reviewing papers for technical papers
- Supporting course developments for educational establishments

## Developing wider business skills

- Having regulatory understanding such as business regulations, charity law
- Exercising business processes in risk, audit, financial planning, value management, problem solving etc.
- Any activities where you can develop or demonstrate your interpersonal skills such as public speaking

## Volunteering

- Professional body volunteering roles such as professional registration, assessor, interviewer, committee roles, local network roles, etc.
- Providing consultancy or advisory roles to charities and other organisations.
- Other volunteering that supports the development of soft skills, financial, leadership skills.

# CPD Learning Process

There is no prescriptive format for your CPD record, but it must clearly include:

01

**Plan** your objectives and identify the CPD activities that will help your learning and development

02

**Do** the CPD activities and list the planned activities undertaken and include any other activities that you've completed in response to opportunities that might have arisen evaluation of your CPD activities

03

**Record** your CPD using "MyCareerPath" or via your format of choice

04

**Reflect** on what you've learnt and achieved through your CPD activities

05

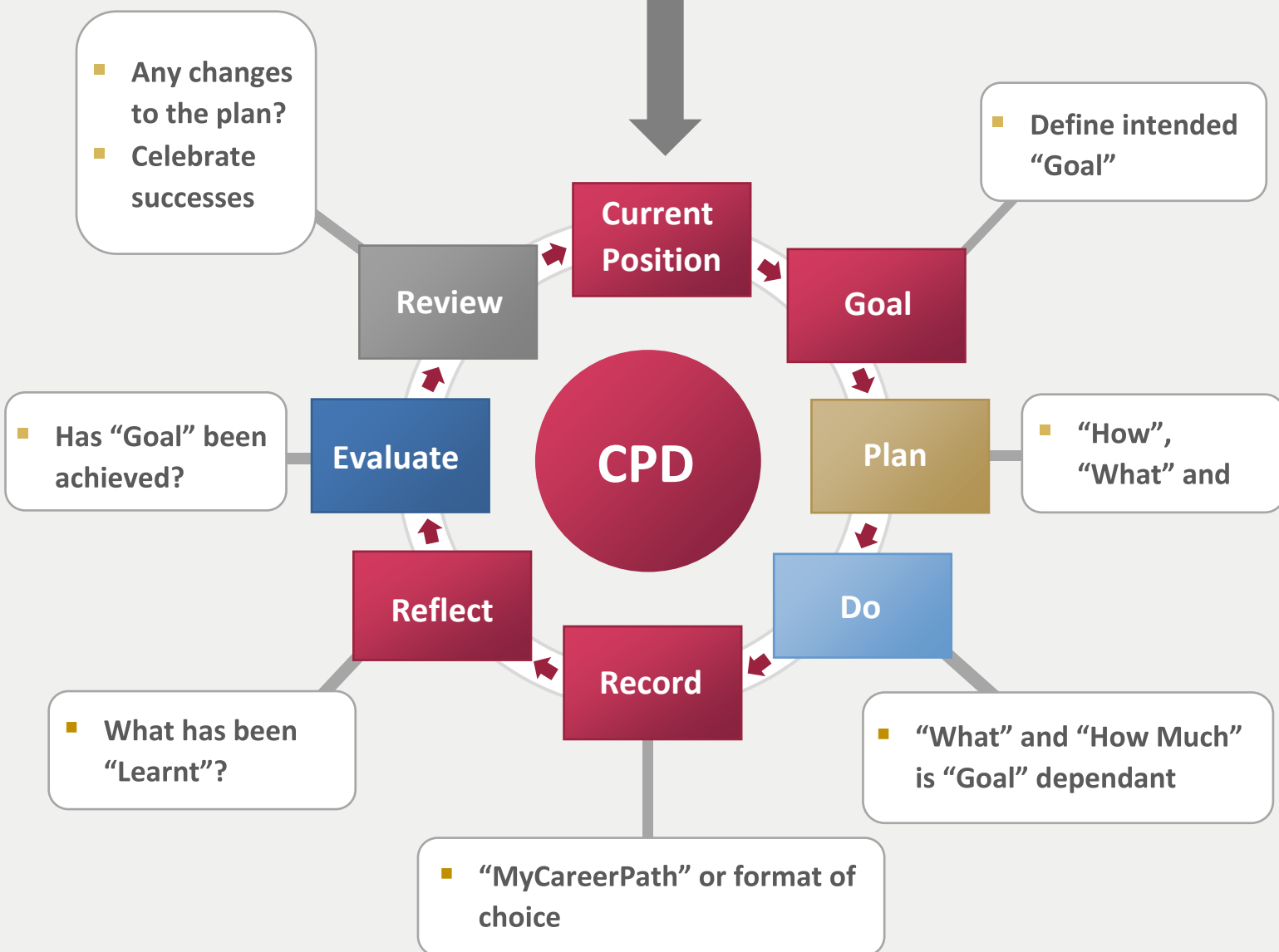
**Evaluate** your CPD activities against your objectives

06

**Review** your learning and development plan regularly and how your CPD activities fit with your future needs

## THE CPD CYCLE

# START



# Example CPD Records

To help to create your own unique CPD record, below are three CPD records which Institute members have kindly agreed that we can share with you.

## Example 1

Years Plan and Objectives				
E&I Engineer				
Activity	Type	Start Date	Completion Date	Target Date
Covid Risk Assessment	Objective	01-Apr-21	NA	31-Mar-22
<b>Description:</b> To ensure that the Risk Assessment document is kept updated and ensure that mitigation measures for the legal restrictions (at that given time) are in place for Covid-19				
<b>Objective:</b> Update Risk Assessments to reflect the legal restrictions of Covid-19 and raise awareness and application of measures designed to increase the well-being of site-based working and health.				
<b>Record and Reflect:</b> Our risk assessment document was always being changed to reflect the legal restrictions for Covid-19. There was a further emphasis on the importance of social distancing and good hygiene and how to plan work and restrict interactions where possible and how to mitigate these. These were reactive measures for working during Covid-19.				
<b>Review:</b> Updating risk assessment documents for Covid-19 was good practice. We also recognised that some working practices born from Covid-19 have worked well from the pandemic and that we may continue these practices thereafter.				
Activity	Type	Start Date	Completion Date	Target Date
New Clients	Objective	01-Apr-21	NA	31-Mar-22
<b>Description:</b> All Lead Engineers were given an objective to find at least one new client to bring additional work into the business.				
<b>Objective:</b> The objective was to bring different revenue streams into the business, with the intention of developing a working relationship with new clients.				
<b>Record and Reflect:</b> This proved extremely difficult but I was able to arrange a secondment with one of my previous employers for myself and also two of my team to provide Engineer Level resources and technical assurance for a new project. This has proved extremely beneficial for me and my team, as the two engineers I took with me previously had no LNG handling experience. As a result, additional training was offered and the team members were supported in their growth and development and broadened their knowledge base.				
<b>Review:</b> This work has brought a new client into the business, going forward we are looking to develop the relationship with the intention of bringing multi-discipline work back into our office instead of just providing the resource. These discussions have been ongoing and have been agreed with the client that on new projects if any work is to be outsourced that we will get the first refusal.				
Activity	Type	Start Date	Completion Date	Target Date
Diversification	Objective	01-Apr-21	NA	31-Mar-22
<b>Description:</b> All Lead Engineers were given an objective to diversify our client base into different sectors.				
<b>Objective:</b> The objective was to diversify our client base away from the standard Oil & Gas /Renewable and Nuclear Industries.				
<b>Record and Reflect:</b> We have had some success with partnering with another design house which specialises in water treatment. Predominately chlorine dosing systems, this has been a move away from our normal client base and has allowed us to tender for more work within the water industry. As expected the Renewable and Nuclear industry has been much harder to get into, even with our company having some small project success in both areas in the past.				



<b>Review:</b> With the move into the water industry and reviewing the tender documentation we have received. I feel that there is additional learning I need to carry out for different Analyser types which I have not used in the past. This will form part of my 2022/2023 development plan.				
Activity	Type	Start Date	Completion Date	Target Date
Develop Junior Team Members	Objective	01-Apr-21	NA	31-Mar-22
<b>Description:</b> One-to-one mentoring to develop the junior personnel within my team				
<b>Objective:</b> The objective was to provide one-to-one support and develop and access the needs of junior personnel within my team. I will also identify any additional training and experience needed to assist their development.				
<b>Record and Reflect:</b> Through one-to-one mentoring and peer checking their work output, I was able to help the engineers to work more efficiently and not to make the same mistakes that I made early in my career.				
<b>Review:</b> I have been mentoring a member of my team and we have devised a developmental plan together. He is currently working at Engineer Level however meets all the criteria to move to Senior Engineer Level. I also encouraged his application for CEng and has future aspirations of applying this year. Another mentee is a junior member of the team and is looking to move from a graduate position into an Engineer position. I have been able to give increasing responsibility to run his own small projects with less input from myself and the section Senior Electrical Engineer. Whilst we review the training requirements to attain his CEng in the future and what route is best in terms of work experience or to continue his learning with a Master's degree.				
Activity	Type	Start Date	Completion Date	Target Date
Company Standard Documents	Planned	06-Jan-22	18-Feb-22	31-Mar-22
<b>Description:</b> Yearly update of the Electrical & Instrument sections company standard documents.				
<b>Objective:</b> To ensure that Electrical & Instrument sections are updated as well as other regulations such as GDPR				
<b>Record and Reflect:</b> Yearly update of the sections company standard documents, to bring them in line with current codes and standards. Then carry out a review with the rest of the team to ensure they understand any changes to the standards. I also attended our annual learning course on GDPR so that my knowledge is refreshed and ensures that I fully understand the regulation and any changes that are made to the regulation. Having been on this course, I am able to amend company standard documents easily as well as impart my knowledge to members of my team about data protection and ensure that our processes and procedures are compliant.				
<b>Review:</b> The intention is to also review and update these standards for the new sectors we are looking to move the company into, as additional codes and standards need to be added. This will form part of my 2022/2023 development plan to update the company's standard documents and to carry out the necessary reading and training needed for this update. I was also able to apply my knowledge having been on the annual GDPR course. I was able to conduct a full audit of our standard documents and have identified where would improve in the future such as taking a course on cyber essentials.				

## Example 2

Record of CPD activities for Calendar Year 2020 (1 January – 31 December 2020)	
PROJECT DESIGN ENGINEER	
<b>(A) - Planned objectives/overall target</b>	1. Find a way to obtain a formal recognition of project management skills and gain a better understanding of project management theory.
	2. Develop my presentation skills. I have been invited and agreed to perform the lecture "The Blunt End of Instrumentation" in both the Cumbria section of the InstMC and the West of Scotland Section.
	3. Increase P&ID knowledge, familiarity and understanding (Try ISO 1219 maybe)
	4. Increase understanding of pumps and fluid systems regard static pressure and pressure drops with an ultimate objective of producing a method of specifying pumps for diesel cleaning and polishing applications
	5. Produce a Fuel Polisher Selector program to aid sales and non-technical staff in specifying fuel Polishers
	6. Figure out the need for expansion vessels on sealed piping systems
	7. After leaving my employment, I began actively looking for remote lectures and presentations relating to future technologies.
<b>(B) - CPD activities that are to be undertaken to achieve the objectives/target</b>	1. Complete XXX course to get QCF Level 5 in Project Management.
	2. I gave the first half of the lecture at XXX University in January. I gave the second half of the lecture via Teams later in October.
	3. This standard exists in 3 parts which I have not obtained via my employer due to funding constraints. Instead, I found ways of getting skilled up on the cheap using whatever resources are available to me.
	4. This was achieved mainly by learning on the job and grilling pump and filter suppliers, XXX from XXX was incredibly helpful, as well as YouTube videos were also surprisingly helpful for example Practical Engineering.



	<p>5. Worked closely with the Engineering Manager, Business Development manager and an external consultant to design an Excel spreadsheet and associated macro that would guide anyone in sales with basic training through the process of specifying a fixed or mobile fuel polisher within certain limits.</p>
	6. Perform calculations and increase understanding of the problem and solution.
	7. Find and attend courses, see list in (C)
<b>(C) - CPD activities that have been completed</b>	1. Completed all modules and lectures of the course
	2. Completed the presentation successfully on both dates
	3. By speaking with several experienced engineers and my peers in XXX, in some detail across several projects I believe I have developed my knowledge of P&IDs to an extent that I am happy with for now. If my future career path means further knowledge would be beneficial then I will resurrect this thread.
	4. Wrote an advantage/disadvantage table comparing Gear, Vane & Centrifugal Pumps. Including diaphragm pumps was suggested however their use is so limited it was decided to leave them off to avoid unnecessary complication. The table got overly complicated and so it was decided to whittle it down to the main 15 or so points rather than giving too much info and potentially confusing people who may not have the proper background needed to understand the more complex aspects of pumping systems.
	5. Made it most of the way through the process which was unfortunately stopped in its tracks by Covid. We do have a working prototype that was never issued to sales but is a significant achievement.
	6. Investigation and discussion with several knowledgeable individuals. On the specific application in question, we included pressure relief valves to account for the risk of thermal expansion and ensure the system would remain safe. Calculations were performed and the risk was addressed suitably.
	<p>7. Lectures and Webinars attended:</p> <ul style="list-style-type: none"> <li>• InstMC NW Lecture "Connecting Your Instruments to Your Plant - 10 Steps to a Leak Free System"</li> </ul>

	<ul style="list-style-type: none"> <li>• InstMC NW Lecture "UK Water Industry - Digital Transformation 2020"</li> <li>• "Attended Engineering Time Management" Session 1 - 10/8, Session 2</li> <li>• webinar "Temperature solutions in cryogenic applications"</li> <li>• InstMC Lecture "Understanding ATEX"</li> <li>• InstMC Lecture "Understanding Sensor Accuracy"</li> <li>• InstMC Lecture "Benefits of Professional Registration" 2.0 hours of CPD</li> <li>• Attended Apprenticeships - Funding and Key Apprenticeships Overview</li> <li>• InstMC Lecture - "Building Digitalisation Architecture " 2.0 hours of CPD</li> <li>• National Energy Research and Policy Conference: Connecting Research and Policy</li> <li>• Artificial Intelligence: Truth, Lies and Consequences</li> <li>• Moderated networking session - Cyber security OT vs IT</li> <li>• Cyber Security with a 20:20 Vision</li> <li>• Impact of uncertainty on flow measurement</li> <li>• Ammonia in future propulsion and the alternatives</li> <li>• Understanding Air Velocity Measurement</li> <li>• Systematic Capability Considerations in Functional Safety</li> <li>• Decarbonisation of Ireland's Heat Sector</li> <li>• DP Flow Measurement - Innovative Emerson Solutions</li> <li>• Green Hydrogen Displacing Diesel in Commercial Vehicles</li> <li>• Airships, Steamships and Spitfires, Women in Engineering</li> <li>• Scotland's Energy Transition</li> <li>• Sourcing's Human + Machine Contest: The Prequel</li> <li>• Clean heat and its implications for electricity and gas system operation</li> <li>• Ethernet to the Field of Process</li> <li>• Digital Transformation Activities at InstMC</li> <li>• Temperature X-well and twisted square</li> <li>• 5 Temperature Measurement Errors with RTDs</li> <li>• SEAI Energy in Ireland Launch</li> <li>• Additive Manufacturing</li> </ul>
<p><b>(D) – What has been learned or achieved as a result</b></p>	<p>1. I would say that the course has massively reinforced my existing knowledge and helped me to formalise the language I use around project management as well as tighten up on scheduling, progress reporting and KPI monitoring. I feel it was at the right level for the types of small and medium scale projects I manage. Looking into going to the next level I feel it would require a</p>

	<p>lot of time and financial investment that I do not believe would lead to significant benefit.</p>
	<p>2. In the first lecture one of the attendees sent me an article afterwards which could be used to justify national Grids t-well design which was highly informative and a fascinating read. The lecture was very well attended and went very well, I only managed to get through the temperature section as there was so much interest in what was discussed and so many questions and tangents throughout. I felt at the end of the lecture as though I had learned as much as the attendees. I gave the second half of the lecture via Teams in October. Again, it was very well attended. This was the first time I gave a lecture remotely and it was not easy. I was not as prepared for it as I thought, and I did spend significant time preparing. The inability to see people's expressions meant I could not gauge whether the content was at the right level or whether they were interested at all. Also, people find it very difficult to engage when remotely attending. I am not sure that there is much that can be done about this and would try to avoid remote lectures as this format doesn't suit my presenting style.</p> <p>3. I can now pick up just about any P&amp;ID and interpret it with minimal queries but also know the right questions to ask when I need to. I am still frustrated by the lack of standardisation of symbols across different industries, but this will become less of an issue with further experience and familiarisation.</p> <p>4. Massively increased understanding of the fundamental principles of pumping fluids and pressure systems.</p> <p>5. The capability of an excel macro to display an advanced GUI and perform intricate programmatic functions using VB code and reference tables is something I was not aware of beforehand. I was continuously surprised when my requests for more and more intricate functions were completed by the consultant although this would often need detailed discussion and mapping out of what needed to be achieved and was exceedingly difficult at times. In addition to the vast amount learned about MS Excel we learned an incredible amount about the process of specifying a fuel polisher. Trying to document the process and produce a procedure of sorts led down many rabbit holes from which we emerged each time better informed than before.</p>

	6. Increased understanding of thermal expansion and how to access and address risk.
	7. Impact of uncertainty on flow measurement: Great Presentation, really advanced my understanding of relevant terminology and why certain things are done as well as how to go about reducing uncertainty, had been through all this in university but always good to refresh my knowledge. Ammonia in future propulsion and the alternatives was also fascinating albeit the presenters bias was clear throughout. In general, the continuing lock down made it easy to find an abundance of lectures that interested me and helped me continue learning at no cost while between jobs.
<b>I – How this relates to the planned objectives</b>	1. The level 5 course was ideal and overall achieved the objective by formalising PM experience and helping me advance my understanding of theory terminology, good practice, and PM methods.
	2. Having to present to a large group of people gives a great imperative to get organised. Presenting for the InstMC at least at live lectures is a great way to improve presentation skills, learn a lot and network.
	3. The combination of on-the-job training and questioning knowledgeable people at every opportunity has allowed me to successfully complete the objective.
	4. The planned objective was achieved through completion of the planned activities.
	5. Everything learned about Excel and fuel polisher specification related to the planned objective. It really is a pity we did not get to see this one through to the end however the process itself was a great experience and something I will take with me to great benefit in my future career.
	6. I am still not happy with my understanding of liquid thermal expansion in sealed piping systems and will carry this thread into 2021. Although this is a common problem which for example is accounted for in many simple hydraulic systems using expansion vessels, I have not yet been able to find someone who can explain the theory and calculation methods to my satisfaction.
	7. The lectures and presentations attended were very insightful and helped bring me up to date with modern technologies especially in relation instrumentation and measurement as well as future energy sources and probably above all the ways in which the world is going to reduce its carbon output in the coming years and decades.

### Example 3

Lead ICSS Engineer				
Objectives	Development Activities	Learnings / Achievements	Evaluation	Review / Reflection
<b>Improve ICSS skills</b>	Build on my previous experiences in ICSS by pursuing a suitable job opportunity within the company.	Joined the XXX project as 'ICSS Lead Engineer'. Developed the plan for the delivery of 'Build Packs' to the Automation Contractor to support overall project schedule. Successfully tested and delivered ICSS hardware to site. This job has allowed me to learn more about ICSS planning, scheduling and ICSS hardware.	Since joining the project, all targeted milestones have been achieved. This role has allowed me to apply my learnings from when I did a similar role on the XXX project and improve my ICSS skills from there.	The project is ongoing. Software design, configuration, testing, and shipment to be completed in 2021. Completing this next year will allow for further learning and development of my ICSS skills, specifically in the process control and automation side.
<b>Increase knowledge of Functional Safety (IEC 61511)</b>	Apply what was learned last year from the Functional Safety course and exam (CFSP) and utilise it in a real project application. Pursue a role within the company to apply functional safety skills.	Developed the project for an offshore platform project (XXX Project) which deepened my understanding of IEC 61511, clause 10 'SIS safety requirements specification'.	Objective achieved. SRS was developed, accepted by the client, and issued for construction on the project. Gained confidence in my abilities as a functional safety professional.	This objective built on the training done in 2019. To continue developing in this area, further opportunities to be pursued in 2021+ to continue to apply my skills and knowledge and gain more experience in functional safety.
<b>Develop knowledge of cyber security (IEC 62443)</b>	Gain a basic understanding of cyber security in industrial automated control systems (IACS) by attending training, presentation or other.	Attended an internal L&L session on IACS security. Learned about the IEC 62443 suite of standards, what they include and where they fit into the project lifecycle.	Objective achieved. I feel I now have a basic understanding of the IEC 62443 structure and contents.	This objective is just the beginning of a journey learning about an increasingly more important area of our discipline. Aim to build on this in 2021+ by doing courses or work roles that include cyber security scope.

<b>Improve leadership skills</b>	Build on the previous year's job roles and continue to work in leadership positions within the company.	Completed my role as Instrument, Controls & Telecoms Lead Engineer on the Tyvek Line 8 Project. In completing this role, I learned skills in co-ordinating a remote team across the world (COVID prevented face-to-face engagements) and facilitating workshops with the Client which included attendees from 4 geographical locations (UK, Chennai, Luxembourg, USA).	Successfully led the closeout of the I, C&T engineering phase of the project and handing over ~900 engineering/design documents to construction and closing out 26 I, C&T purchase orders. Doing this job improved my leadership and team co-ordination skills. Also, the added benefit in gaining skills in modern communication tools such as MS Teams, WebEx, SharePoint etc.	Proud of completing this achievement given the COVID situation which prevented face-to-face engagement. Plan to continue C&I leadership roles into 2021+.
<b>Improve management skills</b>	Following on from the 'Operational Project Management Course' completed in 2018, enrol in a more advanced project management course.	Enrolled in the XXX University 'Improving Project Performance' programme.	Due to COVID, the course has been postponed to 2021.	Objective to be carried over to 2021.
<b>Improve mentoring skills</b>	Continue mentoring.	Mentored one of the graduates in 2020. This gave me the opportunity to learn how best to communicate both technical and general career experience to a young engineer.	I was able to share my experience/advice with my mentee which in turn helped me learn how best to share experiences, provide guidance, and inspire a young engineer. In the feedback provided, my mentee gave me a high score.	Being a mentor was a fulfilling and rewarding opportunity. The relationship was beneficial to my mentee but also to me. I would like to continue to do this.



## Further Information

- For further information or additional help with CPD, view our [Continuing Professional Development FAQs](#).
- You can learn more about CPD in our [Continuing Professional Development Guidelines](#) and [Policy Statement](#).
- Engineering Council's guide to [CPD](#).