

Fellow upgrade exemplar:

Your career history and organisation chart

Part A: Description of current role and organisation

Please provide a description of your current role, the organisation and its objectives.

Company X, Bristol

September 2003 to present - Lead Mechanical Expert

Recent achievements:

- Established a 'new product think tank' which takes staff from all areas of the company to pro actively brainstorm new opportunities
- Increased overall profitability of engineering division by 15%, by adopting innovative working practices
- I am leading our company's efforts to achieve institution accreditation for our graduate training schemes

Areas of responsibility:

- Engineering Policy
- All aspects of Mechanical Engineering on all company projects, including the management of service and repair depots
- Staff training plan
- Liaison with industry and academia stakeholders
- Ensuring compliance with national and industry standards relevant to the water industry

Company X supplies drinking water to more than X million households and treats wastewater (sewage) from nearly X million households across County A, County B, County C and County D.

The business is responsible for circa 200,000 items of plant distributed across thousands of sites. The plant ranges from simple equipment such as: small pumps, valves, compressors, etc to large complex process equipment such as: pumps in excess of 750kW, screens, combined heat power units, odour control systems, centrifuges, chemical installations and sludge dryers. The plant is often installed in hazardous and challenging environments.

The business has a turnover in excess of £XXX million a year, to which a significant proportion of expenditure is the installation and refurbishment of mechanical plant. The business has circa 1,500 direct employees and is broadly divided into the following functions: Operations that operate the infrastructure, Assets that provide the engineering support to the business, Capital Delivery that manage the installation of equipment and Support Services that provide services such as customer services, HR, finance, etc.

Our business is supported by a sub-contractor base, largely under my direction, typically totalling a further 1000 heads.

Part B: Your career history

Include a brief summary of your career history; give a brief description of each role held since election as MIMechE and the dates the positions were held.

Qualifications:

Chartered Mechanical Engineer

BEng 2.1 Honours Degree in Mechanical Engineering

Certificate in Management

2006–present: Lead Mechanical Expert

Head of mechanical engineering for Company X, with responsibility for providing the lead on all strategic mechanical engineering issues, policies and strategies.

2005–2006: Special Projects Manager

Reporting immediately to the Asset Director with the responsibility for delivering key projects, examples of which were: project managing the engineering function within a

£X billion business plan (PR09), management of £5million CDM contract and a feasibility study for a £63 million sewerage scheme.

2003–2005: Strategy Manager

Management of an engineering team responsible for delivering maintenance strategies and solutions for the company's 210,000 mechanical, electrical, ICA and civil assets.

2002–2003: Principal Engineer

Formulation of engineering policies, procedures, best practices and preparation of multimillion pound framework supplier agreements for key water industry equipment.

The following roles were held prior to my election as MIMechE:

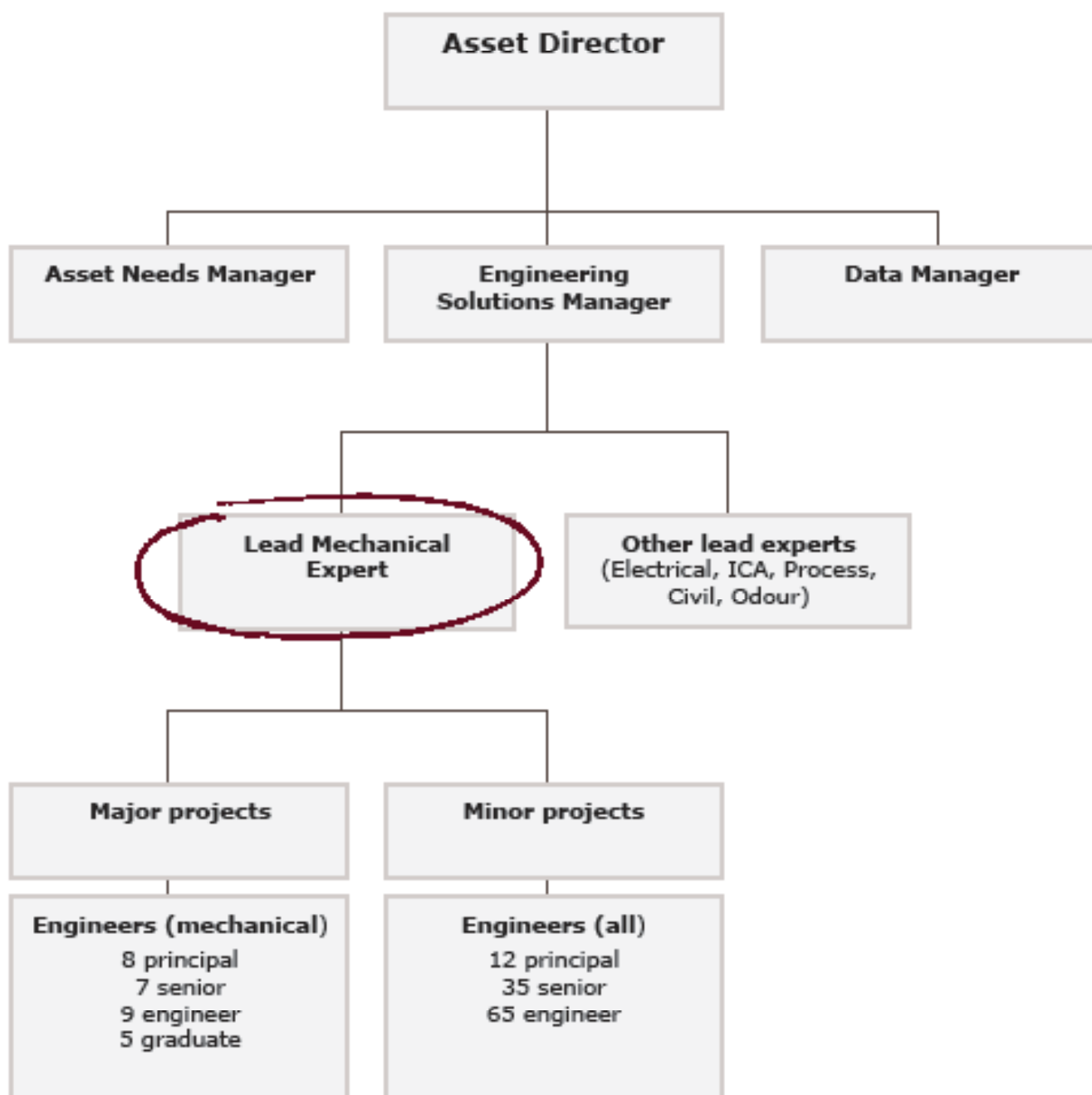
2000–2002: Mechanical Engineer

1999–2000: Liaison Engineer

1993–1999: Mechanical & Electrical Technician

1989–1993 Multi-skilled Apprentice

Company X
Organisation chart



Fellow upgrade exemplar:

Evidence of Fellowship requirements

Provide strong examples and objective evidence to demonstrate how you have met the qualities for Fellowship.

Please provide clear, objective evidence of:

- ALL Essential qualities
- ONE Desirable quality, plus
- ONE OTHER, which could be in the Desirable or Optional categories.

Essential qualities

E1: A position of senior responsibility and/or significant autonomy in your particular field

I hold the post of Company X's Lead Mechanical Expert (Chief Mechanical Engineer); this position is the highest mechanical engineering post within our large company and as such carries full accountability and autonomy for all mechanical engineering activity within our company. I am responsible for the oversight of the authoring of all company mechanical specifications (circa 70 documents).

The selecting of suppliers and manufacturers is also my responsibility. The role requires the approving of design briefs for our £XXXM capital programme and providing strategic technical advice & authority to the whole business on engineering issues.

E2: Demonstrable leadership qualities

As the Chief Mechanical Engineer I take the responsibility on all key mechanical issues for the business. Previously this would have involved managing a significant team of principal and senior engineers; these have largely now been outsourced to our engineering consultants so I no longer have line management responsibilities for these staff, but continue to have technical leadership of them and drive their behaviour through my specification, business procedures, contractor governance and approval processes. Whilst employed as Strategy Manager, I led a team of 5 engineers responsible for the company's mechanical, electrical, civil and ICA maintenance strategy. I have project managed numerous multi-million pound engineering projects, refer to career history for further details.

I am currently leading a project to bring the engineering design function back in-house to Company X. This involved the development of 'cradle to grave' business processes to take projects from the concept stage, through feasibility, optioneering, outline design, to approved detailed design. This will also involve recruiting a team of principal and senior engineers.

My role involves considerable liaison with our contractors to ensure they are carrying out our projects in a cost effective, safe and compliant manner, and considerable liaison with our regulatory body.

Essential qualities (continued)

E3: Influencing policy and strategy making decisions in either a technical or business environment

I have personal responsibility for the authoring and approval of all mechanical policies, strategies, and specifications in the business.

As part of the senior leadership of Company X I frequently participate in company policy, setting discussions where business-critical technical and commercial strategies are decided. An example of this would be the recent decision to bring back in-house high level engineering work and to recruit high calibre engineering staff to support this.

I drive and influence national water industry standards by sitting on the steering group for the water industry specifications scheme (WIMES). I also actively contribute to the writing and approving of these national specifications for mechanical equipment utilised within the industry.

I sit on the DEFRA working group for the writing of new national legislation and guidance for sewage pumping stations.

The leading of working groups within Company X, to devise new engineering policies and strategies is a key element of my role; I am also a major contributor to our engineering consultant's design business processes.

This recently involved a complete review of processes used to deliver a £XXX million design and construction contract.

E4: A structured approach to Continuing Professional Development (CPD)

Due to the large range of plant types and technologies utilised by our business, it is essential to take a serious approach to CPD in order to gain a thorough understanding of the plant we use and to keep abreast of technological advancements. To this effect I undertake one of the following every month: attending a seminar/conference/training course, meeting with an industry expert, visiting of a manufacturer, benchmarking with other industries or reading a technical paper.

Company X has a comprehensive and structured development programme, which I actively participate in. I frequently deliver presentations to Company X and our engineering consultants and contractors to impart the knowledge gained from my CPD; I regularly publish water industry technical specifications.

I am an active supporter of the charity Wateraid and regularly organise and lead events, such as the climbing of Munros.

Essential qualities (Continued)

E5: The promotion of the engineering profession to young engineers and potential engineers

I promote engineering within local schools by supporting engineering and challenges. The most recent event involved the mentoring and judging of a robot building challenge for 18 local schools. I additionally work with the local university providing engineering projects and mentoring to final year MSc students. I am currently mentoring three mechanical students.

I am registered as an IMechE Professional Review Interviewer and am currently in the process of being approved as an Industrial Advisor.

I am leading Company X's efforts to gain IMechE (and other) accreditation for our engineering graduate development scheme, and am encouraging our main contractors to do the same.

I regularly support and coach engineers within our contractors' teams and in my previous role supported my engineering team through their route to Chartered status.

Desirable qualities

D1: Highly specialist knowledge in a specific area of engineering

Although Company X's range of assets is large, one of the more common engineering areas is the pumping and screening of wastewater. In order to support the business in this specialised area, I have developed an in-depth knowledge in this field. This knowledge has been built up through many years of operating, designing and managing the construction and commissioning of these installations. This has included the involvement of some of the highest head wastewater pumping stations in Europe.

This knowledge has been complimented with the management of R&D projects, carrying out in-depth studies and the writing of specifications for not only Company X, but for the water industry nationally.

Outputs of my studies have influenced manufacturers' designs. I now contribute to water industry standards covering this field.

Desirable qualities (continued)

D2: Technical or engineering resource management and/or personnel management and development

As Chief Engineer I am line manager for four principal engineers. I have been involved in getting our graduate scheme accredited and as such have persuaded several graduates and other engineers to seek professional registration.

We have an active training plan which I update yearly to ensure a wide range of general and specialist engineering and non technical skills are covered.

Since our recent change of strategy, bringing senior engineering responsibility in-house,

I am currently engaged in the resource planning for and recruitment of a new high-calibre engineering capability within our company.

Optional qualities

O1: Responsibility for a budget and the associated risk

As Chief Engineer I set and monitor budgets worth approximately £10 million per annum across four technical areas. With three divisions' major projects coming in under budget year on year since 2004.

In order to achieve budget compliance, I hold each of my principal engineers accountable for the achievement of their own budgets, and require them to review their budget and spend during their monthly project reviews with me and my staff managers.

Optional qualities (continued)

O2: Application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts

O3: Active development and application of new technologies in engineering and related areas at senior level

With the business having such a wide range of plant across its circa 200,000 strong asset base, the range of fundamental principles required for me to write specifications for all these assets is significant; these specifications are often for very complex chemical and thermal processes.

The assets I write specifications for have to withstand the unpredictable weather conditions the UK is now experiencing, for example, our storm water pumping stations have to deal with freak floods, and our water supply sites have to continue to produce large quantities of water throughout drought periods. I have to approve designs for wastewater treatment works that must have the capability of dealing with the unpredictable nature of sewage, which can contain chemicals, fuels, fats, etc.

I am one of the most progressive Lead Mechanical Experts that Company X has had in recent years and am always searching for new and improved technologies to assist with our treatment processes; this has become even more important to me in recent years with the need to drive down whole life costs and manage our business in a more efficient and environmentally aware manner. I always manage a significant suite of R&D projects and ensure Company X is at the forefront of trialling new products, of which recent examples are new pump design and process blower types.

Please note that these are sample answers only and may not represent a complete application as the answers are not all from the same application form.