

lift Industry News

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STEFAN KACZMARCZYK

OVERVIEW



It is a pleasure to contribute to this edition of *Lift Industry News*, particularly following the successful 17th Lift and Escalator Symposium (LES) last month.

LES has become an important fixture in the international Vertical Transportation calendar, providing a unique platform for researchers, academics, engineers, manufacturers and industry professionals to exchange knowledge, challenge conventional thinking and explore the technologies shaping our future.

This year's event welcomed over 130 delegates from across the international lift and escalator community, demonstrating once again the value of bringing together individuals with different perspectives but a shared commitment to excellence.

The breadth and quality of the programme reflected the increasingly complex challenges facing our industry. Presentations explored subjects ranging from lift system dynamics, traffic analysis and passenger safety to artificial intelligence, digital monitoring and the application of emerging technologies.

As someone whose career has been closely associated with engineering research and education, I particularly value the Symposium's commitment to presenting peer-reviewed technical papers.

This academic rigour, combined with practical industry experience, provides an essential foundation for meaningful technological progress.

An important highlight was the keynote address by Ruth Carter, Chief Executive of CIBSE, who explored the importance of fostering a culture of collaboration. This message resonated strongly with the LES audience underlying philosophy: that progress is best achieved through openness, cooperation and the sharing of expertise.

The panel discussion examining whether international lift and escalator standards are keeping pace with technological developments also highlighted the importance of continued dialogue across national boundaries.

Equally encouraging was the recognition of emerging talent through the Dr Gina Barney Award awarded to Terry Fung, whose paper on vertical transportation design in modern airports received this year's award. Encouraging young professionals to undertake research, present their findings and contribute to industry debate is fundamental to securing our future.

Beyond the formal presentations, LES provided invaluable opportunities for informal discussions, professional networking, and the development of

new collaborations. These conversations are often where ideas take shape and future research partnerships begin.

Looking ahead, our industry must continue to strengthen the relationship between academic research and practical engineering. Challenges associated with sustainability, increasingly sophisticated building systems, digitalisation and the modernisation of existing installations will demand both scientific understanding and innovative thinking.

We must also invest in education and professional development, ensuring that the next generation of engineers possesses the knowledge, skills and confidence to address these challenges.

The success of this year's LES reinforces my belief that our greatest resource is not technology alone, but the collective expertise, enthusiasm and commitment of the people working within our industry.

I would like to thank everyone who contributed to making LES 2026 such a valuable and stimulating event. Your valuable insights, ideas, and contributions have made this event a truly enriching experience.

I hope you enjoy this edition of *Lift Industry News* and that it encourages further discussion, collaboration and innovation across our industry.

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lift Industry News

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SYMPOSIUM | 2026
LES in numbers



130

DELEGATES



19

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PANEL MEMBERS



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KEYNOTE ADDRESS



17TH YEAR OF THE LIFT & ESCALATOR SYMPOSIUM

A sell-out event saw 130 people from across the vertical transportation industry come together at Kettering Park Hotel for two days of excellent presentations, stimulating debate and lively conversation. We have all the details of the speakers, exhibitors, keynote address and panel discussion... and plenty of photos!



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CALENDAR

2024

October
20 - 22

Lift Expo Poland

October 20-22

WARSAW, POLAND



LiftExpo
Poland



October
28 - 30

Lift Expo Italia

October 28-30

MILAN, ITALY



November
10

Nordic Lift Expo

November 10

STOCKHOLM,
SWEDEN



November
24

Elevator Forum (Eltnille am Rhein)

November 24

ELTVILLE AM RHEIN,
GERMANY



November
25 - 26

elemental LONDON

November 25-26

LONDON, UK



December
03 - 05

ISEE India

December 3-5

NEW DELHI, INDIA



December
10 - 11

International Elevator & Escalator Symposium

December 10-11

NETHERLANDS



LIFT 2026

January	26	Elevator Forum (Vienna) 26 January VIENNA, AUSTRIA			June	08 - 09	Elevcon June 8-9 BUCHAREST, ROMANIA		
March	23 - 25	The Elevator Show Dubai March 23-25 DUBAI, UAE			September	15 - 16	19th Lift & Escalator Technologies Symposium September 15-16 KETTERING, UK		
May	06 - 09	Asansör May 6-9 ISTANBUL, TURKEY			October	12 - 15	Interlift October 12-15 NUREMBERG, GERMANY		
May	18 - 19	18th Lift & Escalator Technologies Symposium May 18-19 HONG KONG			November	17 - 20	GEE Global Elevator November 17-20 MILAN, ITALY		

Where competence,
experience
and academic
qualifications meet.

POINT OF VIEW

by Len Halsey

Should apprenticeships be given greater recognition in the discussion on accreditation?

Back in 2019, I wrote an article for Elevator World UK entitled, 'Accreditation: is now the time?' The article discussed the merits of introducing an accreditation scheme for field operatives and those responsible for the management of field activities and how this might be administered and the opportunities it could bring.

At the time, there were two events that drove the thinking. The first occurred in New York where, following a series of accidents and fatalities, the local government stepped in and imposed a licensing scheme covering everyone responsible for the design, installation, inspection, maintenance or repairs of lifts, escalators and moving walks.

The second was the introduction by the UK government of the Trailblazer scheme, which provided a template for apprenticeships across a wide range of industries. For the lift and escalator industry, the process was developed and administered by the Lift and Escalator Industry Association (LEIA).

Under the Trailblazer scheme, apprentices are subject to a review and verification of skills and competence at the end of the apprenticeship in an 'end-point assessment' (EPA), where the candidate is assessed by an independent panel and must have satisfied both the employer's training requirements and the criteria of the Trailblazer scheme.

At the time it seemed to me that the introduction of the EPA could provide the catalyst for an accreditation scheme and I suggested that perhaps following a post-apprenticeship supervised period of 6-12 months, during which experience and confidence are gained, the candidate would be finally assessed and accredited. Accreditation would be awarded within the field of training and learning: lifts, escalators/moving walks, platform and stair lifts, etc.

The suggestion was that LEIA, as the industry association, would be best placed to administer the accreditation process and provide a consistent and independent approach in maintaining high skill level, competences and experience. There were many questions to be addressed related to the accreditation of the existing workforce, subcontractors and those taking the NVQ route, but the aim of the scheme would be to improve safety, standards, competences and professionalism of

those working within our industry. As the article sets out, it could also provide a gateway to further education and training.

We all recognise that working on VT equipment brings many hazards in potentially dangerous environments and requires specialist skills. For many years, those working on gas systems have been accredited to the Gas Safe (formerly CORGI) scheme, the introduction of which came about following the Ronan Point disaster, where poor quality gas works were responsible for an accident that killed 17 people in 1968.

However, the same does not apply to those working in the UK lift and escalator industries; the question has to be, why?

The answer, in my view, is that the industry, as a collective body, doesn't see the need for it and, as a consequence, there is no appetite on the part of anyone to take on the task of administering such a scheme. Cost is a major factor, but as has been said, if you think H&S is expensive, wait until you have an accident! Do we really have to wait for a serious accident to bring about the imposition of an accreditation scheme?

In addition to the lack of a perceived need there is currently little or no requirement for proof of competence of those delivering the services. Clients, consultants or main contractors have no point of reference in calling for minimum competency levels as no such scheme exists. This, I would suggest, mirrors the situation in New York, and here there are possible parallels to be drawn.

The imposition of licensing in New York came about because the industry failed to recognise the need to regulate itself. No doubt the involvement of local government in determining criteria for competence brought many headaches and was an administratively burdensome process which could have been avoided

had the local industry taken the steps necessary to regulate itself. Surely self-regulation has to be better than imposed regulation!

The key factor in the discussion of both events is having proof of competence and the right skills to undertake tasks safely. Here the emphasis is on competence, and as we know, this is acquired through training, education and practical experience. This leads us to the question of how competence is defined. Different dictionaries define competence as 'the ability to do something well', 'the ability to perform to a specified standard'. The HSE describes it as 'the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely'. We now see behaviour forming part of the competence definition, and I think few would disagree with those definitions in the context of the services the industry provides. By extension, those managing field activities also need to have the right competences, not only in the delivery of those services, but also wider management skills including H&S, planning and awareness of the task to be undertaken and how it can be accomplished safely.

Without question, my view is accreditation is a necessary step to meet the evolving world of regulation, the Building Safety Act 2022 being a prime example. Here, competence in all areas of construction and management forms the basis of improving standards and safety. In this respect it has been the government who have set the agenda and driven change, which I am sure will continue to be the case.

The major question then is: does the industry have the appetite for accreditation and who would be responsible for its management? From my discussions back in 2019 with the management of both small and large companies, almost all agreed it would be a good thing and had many benefits. On the question of administration,

my view was that LEIA would be best placed to award accreditation given it represents the industry as a whole and is independent. I sensed at the time the appetite wasn't there, and I'm not sure how it would be viewed now, given the ever-increasing need to demonstrate competence at all levels across the skills spectrum.

This perhaps raises the question as to whether the Society of Vertical Transportation (SoVT) might have a role to play on the wider issue of professional recognition of competences across the wider base of the industry workforce?

This September the SoVT celebrated its first anniversary. Launched last year at the Lift and Escalator Symposium, it represented a major change to the former Chartered Institute of Building Services Engineers (CIBSE) Lift Group, in that it became a specialist society within the institution with recognition in its own right. The CIBSE Lift Group had been in existence for many years and the move to a society within CIBSE is seen as a milestone in terms of recognising the lift and escalator industry as a major element within building services and provides a framework in which the industry can develop professional credentials.

Currently, the route to SoVT membership is to first join CIBSE at an appropriate level and then transfer to SoVT at the same level. Progression to higher levels of membership mirrors the CIBSE route but is now perhaps more tailored to the lift and escalator industry itself and reflects the specialist nature of VT within the wider building services environment.

A major factor for SoVT is that the original CIBSE membership criteria applies and for many the perceived requirement for academic qualifications represents a barrier to higher entry levels. This is where the question of academic qualifications, competence and experience meet.

As with the original CIBSE Lift Group, routes do exist for those seeking to progress through the various membership levels, but it does appear that academic qualifications take precedence over vocational qualifications and experience, especially at entry levels, presenting a barrier to many potential members. While academic qualifications are a measure of completing an academic course or passing exams, they are not of themselves a measure of competence. However, as we know, academic qualifications are valued more than apprenticeships, and this is a major obstacle to those taking an alternative route, making it seem a daunting task to the less academically inclined, albeit competent practitioners within the industry.

As we have discussed, competences are seen as a measure of skill, practical knowledge, experience and safe application, and it is here that legislation, codes and standards place great emphasis. In this respect, it is interesting to note that in terms of definitions, qualifications, as a distinct element of competence, are not mentioned.

Within our industry, a significant number of field operatives have come through an apprenticeship or the old improvership schemes to reach senior positions in both the field and management, be it technical or operational. Here, there is a major source of potential SoVT members who are not academically minded but very competent and would benefit from recognition of an apprenticeship in terms of equivalence to a degree. For me, this is a key factor and one where equivalence would do much to raise the profile and recognition of competences, bringing with it the opportunity to contribute and provide a path to higher levels of SoVT membership.

On the face of it, we appear to have two bodies, LEIA and SoVT, whereby one is seeking to deliver competent

operatives who have been trained in their field of expertise and the other seeking to increase membership within the bounds of its membership criteria. It strikes me that if this gap can be bridged, it would be mutually beneficial to both organisations and an enormous benefit to the industry as a whole. This could widen the base of membership and provide a continuous route to higher levels of education and training, with resultant improved levels of competence, accompanied by professional body recognition.

Accreditation designed by the industry and administered independently must be the way forward. The alternative raises the possibility of having a scheme imposed and administered by an outside organisation such as the Construction Skills Certification Scheme (CSCS) which may well not meet industry needs.

The objective of any accreditation scheme must be to set standards, improve safety and skills, and promote professionalism, giving formal recognition to those who work in the industry and strive to improve.

To achieve this, it needs all stakeholders to agree on the principle, applicable criteria and collectively drive the process before it is imposed.

Recent comments that may help inform the debate:

- One from the UK Prime Minister, who said the hard hat should carry the same recognition as the graduation cap.
- It is now suggested that universities should look to promote 'sandwich' courses whereby graduates gain work experience as part of their degree studies.
- There is now belated recognition that the UK needs a better skilled workforce and apprenticeships are a key part of moving in that direction.

Collectively they signal a recognition that vocational education and work experience should be acknowledged as valued alternatives to pure academic studies and qualifications.

ACKNOWLEDGEMENTS

My grateful thanks to Nick Mellor, Adam Scott, Micky Grover-White and Rory Smith in the preparation of this article.

BIOGRAPHY

Len spent a major part of his career with Otis, holding senior technical and managerial positions in construction, modernisation and major projects before joining Canary Wharf Contractors in 1998.

Working with signature architects and major international VT consultancies, Len worked providing design solutions in complex high rise buildings and across the developments portfolio, including infrastructure, retail, residential and public transport projects. He was appointed Project Executive for Vertical Transportation Systems in 2015 and fully retired from Canary Wharf in 2023. He is now an independent consultant.





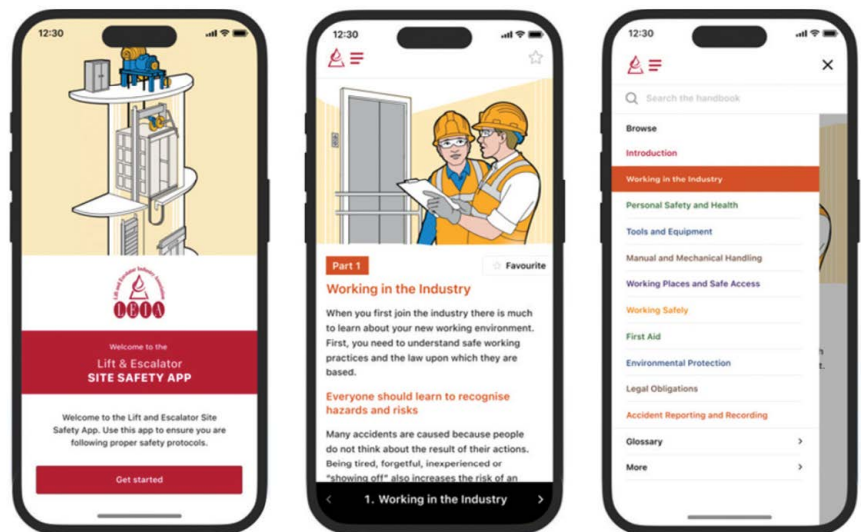
BEHIND THE SCENES AT LEIA

New Site Safety App to put handbook guidance on every engineer's phone

We're excited to announce that the LEIA Site Safety Handbook is now available as a mobile app, making practical health and safety guidance easier to access, search and navigate wherever you are.

The app follows a year of work behind the scenes by LEIA's Safety and Environment Committee, which has taken the project from initial concept through to development and delivery. The app brings the content of LEIA's Site Safety Handbook into an accessible digital format for smartphones and tablets, allowing users to quickly find the guidance they need while on site including offline in low-signal environments.

It covers key areas including personal safety and health, tools and equipment, safe working, first aid, environmental protection, legal obligations and accident reporting and recording. Employers can also use the app to support inductions, toolbox talks and refresher training, keeping the same guidance in front of every team member.



- The app is available for £7.99 for LEIA members and £14.99 per user for non-members.
- Users can search the handbook, move between sections and chapters, and bookmark the guidance they use most.

On behalf of members and the industry, we would like to thank the committee for all their hard work to bring this to fruition.



Safety & standards

New standard BS 8486-10:2026

At the time of going to press, BS 8486-10:2026 is expected to be published shortly. It is intended for organisations and professionals involved in installing, examining, testing or maintaining evacuation lifts.

It is particularly relevant to:

- Lift installation companies and test engineers.
- Approved bodies and inspection bodies.
- People carrying out inspections and thorough examinations.
- People who work on lifts or related building equipment.
- Organisations providing lift-sector training and technical support.

BS 8486-10:2026 covers the examination, testing and recording needed to determine conformity with the evacuation-lift provisions in BS EN 81-76:2025.

It provides:

- A structured set of examination and test questions.
- A consistent method for assessing new evacuation lifts before they enter service.
- A recognised approach for recording inspection and testing results.
- Evidence that can support the lift's technical file.
- A repeatable basis for later checks following modifications, upgrades, or retesting.

BS EN 81-76:2025 addresses evacuation lifts within the wider series for passenger and goods passenger lifts. Its safe application depends on coordination between lift specialists and those responsible for the surrounding building conditions and systems. We will be producing full guidance in the next few months.

Learning & development

New Learning Management System on its way

Behind the scenes, we are putting the finishing touches to a new Learning Management System (LMS) for our distance learning programmes. The LMS will bring learning materials and assessments together in one place, allowing learners to progress at their own pace and download certificates shortly after successful course completion. Learners will have the flexibility to enrol at any point throughout the year and a further phase will provide LEIA members the ability to track employee progress and access completion records.

Events

Bringing the industry together

Last month, we welcomed members and non-members to our Safety Seminar in London, with a packed agenda addressing some of the key safety and technical issues facing the industry.

The session covered topics including BS EN ISO 8100-1, thorough examination and the launch of the new Site Safety App. It also provided an opportunity to share knowledge, discuss developments and bring people from across the industry together.



LEIA Assessment

Celebrating apprentice success at Jackson Lift Group and Otis

Congratulations to Max Emmett of Jackson Lift Group and Rian Cullen of Otis, who both achieved Distinctions in their end-point assessments for the ST0252 v1.2 Lift and Escalator Engineering – Lift Service and Repair pathway.

For Rian, achieving the highest possible grade marks the culmination of the hard work, learning and preparation that went into his apprenticeship.

"Achieving a Distinction in my EPA is something I'm incredibly proud of," says Rian. "My apprenticeship journey has been challenging but extremely rewarding, and it has given me the opportunity to develop both my technical knowledge and practical skills whilst learning from some very experienced engineers within the lift industry."

For Max, starting an apprenticeship represented a significant change as he moved from a small seaside town to a busy city and began developing his knowledge and practical skills across a wide variety of lift equipment.

"From day one, I knew it was going to be a challenge due to the huge variety of equipment and skills involved within the lift industry," says Max. "Now that I have completed my apprenticeship, I have come to realise that this variety and the challenges that come with it are a big part of what makes the job so interesting."



Max Emmett

DATES FOR THE DIARY

Contracts & Legal Seminar:

27 October, Leeds – LEIA Members only.

Quality & Technical Seminar:

11 November, Northampton – LEIA members only.



Rian Cullen

Join the PLG

The Personal Lifting Group is anticipating changes to BS 5900 and BS 6440 and is waiting for the European Standards EN 81-45 and EN 81-46 to be made available for public comment. Any LEIA member who wishes to join this committee should get in touch at enquiries@leia.co.uk.

TAKE IT TO THE BANK

Two of the escalators at Bank Underground Station are currently being replaced as part of a wider London Underground (LU) escalator replacement programme.

Escalators "E4" and "E5" at Bank link the Northern Line platforms to the District & Circle Line platforms.

First installed in 1933 as MH types, they were replaced in 1995 with O&K RTHD-LUL2 types and subsequently heavily modified by Tubelines (part of the previous Private Public Partnership at LU) to become bespoke TLES-3 types in 2009 / 10.

16 years later, and with the degraded performance of these escalators becoming more apparent, they are now being replaced with Otis Heavy Duty-Metro 520 types as used extensively across the Elizabeth Line.

This requires complete removal of all the existing escalators and associated services, along with modifying the envelope to accommodate the new escalators and surrounds. Over 100 tonnes of steel and c.60 tonnes of concrete have been removed as part of this project, 99% of which will be recycled.

Waste being removed via engineering trains, on its way to be recycled.



The escalator shaft with both old Escalators completely removed.



Due to delivery constraints, the new escalator sections were also delivered by engineering train, and the escalators were installed from the top down, with sections having to be hoisted up. Typically, the escalators are delivered at street level and hoisted down. The upper truss section, weighing approximately six tonnes, was the largest.

The top 3 sections of E5 being installed.



These escalators have a vertical height of 17.2m and are installed at 30 degrees, making them almost 35m in length. As part of the wider programme, LU have installed c.120 of these Otis HD-Metro 520 escalators on the network.

The escalator replacement may be the focus, but this is just one part of the overall project. Often unseen is the amount of temporary works required, the associated civil and premises works to support and finish around the escalators, the installation of new fire detection and suppression systems and the installation of new lighting and power, which all add to the time on-site.

From hoardings going up to bringing into service of the new escalator, this type of project in a deep tube station that remains operational will take about 18 months, with the aim that the escalators will have a life of c. 40 years before needing to be replaced again.

Photos by Adam Thompson.



THE INTERVIEW

Mitsubishi Electric is an industry leader in vertical transport. With sleek, high-class designs and state-of-the-art technologies, the lifts are at home in high-tech cityscapes. Racking up nearly 20 years of experience at Mitsubishi, we chatted with Gordon Wong, Design Engineering Manager, to find out more about the company and his vision of the future.

Tell us a little bit about yourself.

My main role is to be the bridge between architectural ambition and the mechanical reality, connecting the architects with the engineers. I coordinate the client side, working with them to get the best design brief, and then work with procurement alongside the factory, ensuring compliance with codes and making sure the operations teams are fully aware of what needs to be installed. Then it extends to final sign off and commissioning.

I also lead the Compliance Committee, which provides technical governance on compliance matters, product design changes, factory-driven engineering issues and regulatory interpretation to ensure consistent and compliant project delivery.

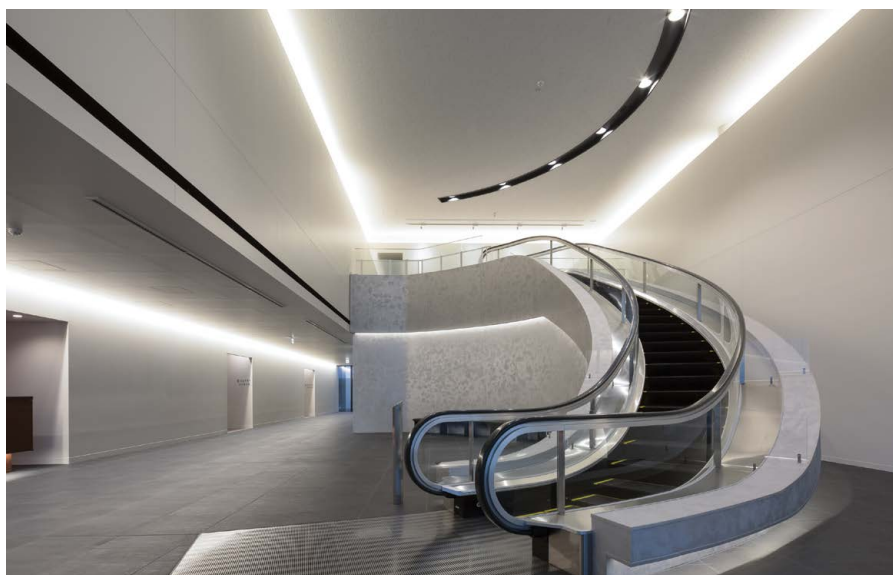
How long have you been with Mitsubishi Electric?

I've been here since 2008, I started as a junior – a document controller – and developed my abilities through design roles. I took a brief break to extend my skills in consultancy before rejoining Mitsubishi, and nearly 20 years after first joining, I'm Design Engineering Manager.

What does the lifts and escalators division do?

We are the only supplier for Mitsubishi Electric branded lifts in the UK, and we supply lifts predominantly to new builds, although we are starting to branch out into modernisations as the lifts get older. We specialise in the highest quality high speed lifts, mainly installing in super prime residential. Our clients are just as selective of their lift supplier as we are of them!

We ran a coin test in our lifts – where a coin is placed upright on its edge on the lift floor as it runs – which showed just how smoothly our lifts run, with very little vibration, ideal for prime real estate. Although it's not a formal measure of lift compliance, of course, it's nice to know that a lift runs so smoothly that a coin remains standing on its edge!



The OBU allows a robot to communicate with and call the lift, so, for example, a robotic wheelchair could collect someone, take them to the lift, travel to the required floor and then continue to their destination without the passenger having to operate the lift themselves. The technology is already being used for robotic wheelchairs at Haneda Airport in Japan, and it's exciting to see how that concept could be applied in a building environment.

The second project is still at the tender stage. However, if it goes ahead, we could see the first spiral escalator installed in Europe. We have around 100 spiral escalator installations around the world, but none currently in Europe.

The design has actually been around for about 30 years and remains unchanged. The existing installations continue to operate smoothly, so there hasn't been a reason to redesign the concept. It would be fantastic to finally see one installed in Europe.

How is digital technology changing the way lifts are designed and engineered?

From a design perspective, digital technology is streamlining how we work, making things more efficient, introducing automation and making our work more accurate.

All this means that engineers are released to concentrate on more complicated tasks, and designers are free to focus on innovation, spending more time thinking creatively and looking for new solutions.

Tell us about a successful project that really showcased your skills and innovation.

A project called The Heron – it was one of my very first high-speed, high-rise projects. It had a hybrid destination control system and our clients had high expectations, so there was a lot of interaction and good communication required to make sure everything went smoothly and the lift was well integrated. It had the highest cost per square metre at that time.

The final design met their criteria perfectly and we celebrated with a spectacular launch day. We had to ensure there were no hiccups, so we made sure we had an engineer onsite throughout – appropriately dressed in a tuxedo, of course!

What is the biggest challenge you are facing at the moment?

There have been a lot of changes in regulations, with a new set due to be released at the start of 2027. Historically we've had varying regulations across the UK, Europe, Asia and America, however we're looking at a standard set of ISO global regulations being introduced which we need to comply with.



It's been an interesting journey, with plenty of research and development, ensuring that we will comply with every regulation.

What is the most interesting project you've worked on recently?

There are two projects that stand out for me. The first is a large scale project at St John's Wood Square, a stunning residential development in London where we used our One Beat Unit (OBU) technology. The interface unit allows multiple building services to communicate with the building management system, including lifts, air conditioning and access control. It also allows integration with robots, which is really exciting.

We've recently developed an automated drawing tool which allows you to input the lift parameters, and it then produces a 2D drawing and a 3D BIM model almost instantaneously. BIM is becoming increasingly important because the major contractors and developers want detailed 3D models as part of their projects.

I think there's another side to it though, and that's making sure people have the right training. Technology is great, but you need engineers to understand how to use it properly.

Are you seeing a new generation of lift engineers coming through that's passionate about new innovation and technology?

Definitely. In the past three years we've shifted more of a focus to apprentices. I think historically that hasn't been so much of a priority, however we've installed training facilities inside our warehouse and have now welcomed around eight apprentices. They gain experience and learn how to diagnose issues and find faults as well as building lifts, all in-house, readily available within our own training lifts, as part of a structured programme.

Are there any exciting emerging technologies you think will have an impact on the lift industry over the next few years?

I think the obvious answer is the impact of AI and the effect it will have on buildings. Although lift technology hasn't changed drastically over the years, the demand on the lift has. No longer is it simply a passenger lift at the front of the house or a goods lift or firefighting lift at the back, we have multiple uses combined within one lift – all singing and dancing!

I think an AI system will have a huge influence on use and efficiency, creating smart lifts. For example, AI will know a wheelchair user has entered the building and that they will need to use the lift, so the right one will be automatically called without having to take any action – linking up building technology, access systems and accessibility – I think there is great potential for increasing efficiency. Alongside this, we also have to think about the cybersecurity vulnerabilities and ensuring our new smart lifts are protected. I'm both excited and hesitant at the same time!

Away from work, what do you enjoy?

I have a young family, with daughters aged seven and five, so they keep me entertained and busy!

Since COVID I've developed a passion for cooking, especially delicious Asian dishes, and I love to experiment with flavours as well. It's a good way to wind down and enjoy meals as a family together.

We also love to travel as a family and get lost exploring a city. We never usually have a plan, but that's how you find the hidden gems!

Thank you to Gordon for giving us an insight into Mitsubishi Electric.

You can find out more about their services at europe.mitsubishielectric.com/en/products-solutions/building/

europe.mitsubishielectric.com/en/products-solutions/building/

A LITTLE BIT OF LIFT HISTORY



**Prof. David Cooper MBE
BSc (Hons), MSc, MPhil, CEng,
FCIBSE, FSoVT, FSOE, FBES, FCGI,**

**Dave Cooper confesses
to his love of lift
industry memorabilia**



Two things that I love are the lift industry and antiques associated with the lift industry. In the last edition of Lift Industry News I was described as the hardest working person in the lift industry. This coincided with a heatwave where the UK reached 38.1°C. I am not sure that the modernisation fitter carrying a control panel upstairs on their shoulders in a block with a simplex lift during the heatwave would describe me as the hardest working but I am going to give them the chance to call me the saddest person in the lift industry!

There is a very good book called *"Reminiscences of a Great Industry"* written by Henry Claude Walker, Chairman of Waygood-Otis, detailing the rich history and evolution of the lift and elevator manufacturing company Waygood & Co. (later Waygood-Otis). It talks about the manufacturing base in Dartmouth Road in Forest Hill, SE23 and looks at the corporate history of the lift company before and after its merger with Otis. Sadly I lent my copy to someone and it never came back.

In 1914 R. Waygood & Co. acquired the British branch of Otis, creating the combined firm Waygood-Otis Ltd. Then in 1952 the Otis Elevator Company secured a controlling financial interest in the company and the name lived on until 1957 when Otis dropped the Waygood name.

My Waygood Lifts paperweight featured in photograph 1 is likely to have been made pre 1914 as there is no mention of the Otis name and given that it is inscribed with "Waygood Lifts have been supplied to His Majesty the King – Falmouth Road SE" it is likely to postdate 1901 as Queen Victoria reigned from 1837 to 1901 and was followed by two Kings in Edward VII (1901 to 1910) and George V (1910 to 1936). Given that Waygood moved into Falmouth Road in 1840 and left as Waygood Otis in 1952 it is likely that the paperweight dates from 1901 to 1914. It is in daily use on my desk.

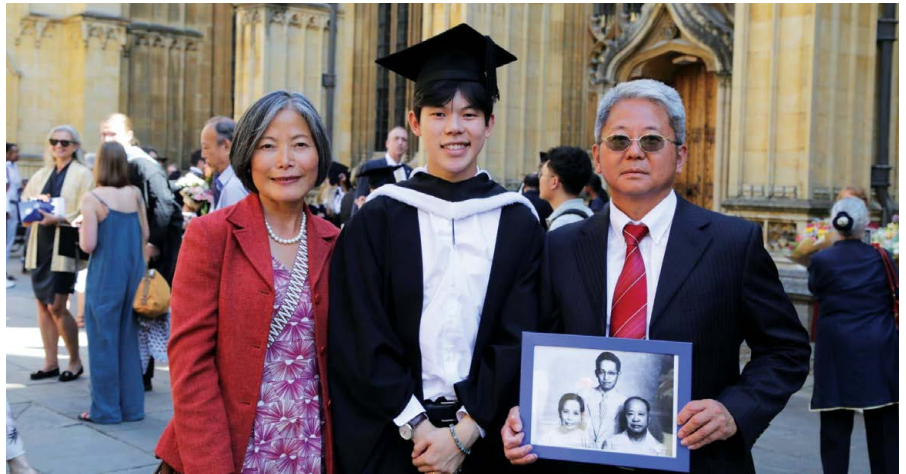
The ink blotter in photograph 1 is again inscribed "Waygood Lifts" which is likely to predate 1914 because of the lack of the mention of Otis. Sadly it gives away nothing else but like the paperweight sees daily use on my desk.

My most recent acquisition is the pocket watch in all of the photographs. It keeps perfect time unlike most lift industry programmes these days and is engraved on the back "Presented to Mr F K Lyon as a mark of esteem by Waygood Otis staff, Leeds 1924". The "by" is a mystery as it could mean it was a gift to an external person and presented by Waygood Otis staff or it could be that he was a member of Waygood Otis staff. Anyone help me with the missing piece of the jigsaw?

THREE GENERATIONS. ONE JOURNEY. ONE DREAM.

**Hongliang Liang CEng
FCIBSE FSoVT**

On 31 July 2026, my son graduated from Merton College, University of Oxford, with First-Class Honours in Philosophy, Politics and Economics (PPE). PPE is widely regarded as one of Oxford's most prestigious and academically demanding degree programmes, and a First-Class Honours degree represents the highest undergraduate classification awarded by the University.



At my son's graduation from the University of Oxford, I held a photograph of my late father and grandparents, symbolising the journey of three generations.

As a father, I could not be prouder. Yet this is not only his achievement. It is the culmination of a journey that began long before he was born.

My late father, **Dr Ding-zhong Liang** (梁定中), graduated from **St. John's University School of Medicine** in Shanghai in 1952. (St. John's University was widely regarded as one of China's leading universities and was often referred to as "the Harvard of the East".)

During some of the most difficult periods in modern Chinese history, he treated every patient equally, regardless of status or background. He refused to compromise his professional integrity,

quietly helped people whose lives were in danger despite considerable personal risk, and never allowed politics to come before medical ethics.

My own journey was very different.

I was born into a family that had already suffered years of political persecution. Shortly after I was born, my father was imprisoned for ten months as a political outcast. Left to care for two young children alone, my mother was forced to work night shifts under immense pressure and later suffered a serious mental breakdown.

Material conditions at the time were extremely harsh. When I was a child, every urban resident received a monthly ration of only 28–32 jin (approximately 14–16 kg) of grain, together with 250 grams of pork and

250 grams of cooking oil—not per day, not per week, but per month.

Yet despite the poverty, my father ensured that our home was always filled with books and I spent much of my childhood reading anything I could find about the outside world.

I was also severely affected by ADHD. In recent life, I came to wonder whether my constant search for attention and stimulation as a child reflected an early need for the responsiveness and security that I had missed during infancy. Whether or not that explanation is correct, it became part of the way I experienced the world.

My primary school results were extremely poor. It took me almost a year simply to memorise the twenty-six English letters, and even Chinese phonetics remained difficult for



My first job in Britain—working as a butcher at Oriental City, London, from April 2001 to May 2002.

Everything I have achieved since then has been built from scratch.

Over the past twenty-five years, I have had the privilege of becoming a Chartered Engineer, a Fellow of CIBSE and the Society of Vertical Transportation, establishing my own consultancy, publishing internationally, and contributing to projects throughout the United Kingdom and around the world.

But none of these achievements means as much to me as watching my son walk across the stage at Oxford.

Looking back across three generations, I realise that every generation faces different challenges.

- My father's generation struggled to survive with integrity.
- My generation struggled to create opportunities.
- My son's generation has the freedom to pursue excellence.

For me personally, becoming a British citizen in 2009 remains the most important milestone of my life. It meant becoming part of a country where hard work is recognised, where the rule of law provides security, where professional ability is valued, and where my children are free to pursue their dreams without limits.

For the first time in my life, I no longer felt that I was facing the world alone. I knew I belonged to a country whose values I admired and whose institutions I could trust.

Today, I know that my father succeeded.

I know how fortunate I have been.

many years until the last year of my senior middle school. Most people believed my future would be limited to becoming a factory worker or a soldier.

Everything changed when my family moved to Qingdao in 1982.

Unable to learn efficiently by listening, I gradually developed my own method of learning through reading, observation and independent analysis. Instead of memorising facts, I tried to understand the underlying principles behind everything I studied. Although this made language learning particularly difficult, it gradually became the foundation of the way I think and solve engineering problems today. I later described this process as Disadvantage transformation - the idea that apparent disadvantages can become unique strengths through new ways of thinking and learning. Throughout my life, I have believed that, except for death or irreversible disability, almost any disadvantage can be transformed into an advantage by choosing the right environment, doing the right things, at the right time. I later described this principle as Time Space Deployment.

In 1990, after graduating from university, my first monthly salary, including bonuses, was only RMB 150, equivalent to approximately £15 at the time. Over the following six years, I almost doubled my income every year, increasing it by more than sixty-four

times overall. At the age of twenty-eight, just two and a half years after entering the Chinese lift industry, I founded my own lift service company in Zhuhai Special Economic Zone.

In 1997, my wife and I purchased our first newly built apartment. Mortgage lending had only recently been introduced in China and required a 50% down payment. Through hard work, we repaid the entire five-year mortgage in just two and a half years and received the property title in September 2000. One month later, I discovered that the United Kingdom had opened new opportunities for overseas study. I applied immediately.

By the time I received my student visa, paid for my tuition for language school, flight and prepared to leave China, I had very little cash remaining. So, when I arrived in Britain in April 2001, I carried just **£800 and US\$100**. After paying the deposit and rent for a small room in London, I had around **£100** left.

Yet I never felt afraid. I simply believed that if I worked hard, treated people with honesty and decency, and created value for others, opportunities would always follow.

One week later, I found my first job in Britain, working twenty-five hours a week as a butcher at Oriental City in Colindale for **£4.20 per hour**, while preparing to build an entirely new life.

And I know that the opportunities I found in Britain changed not only my own life, but the destiny of my family.

ACKNOWLEDGEMENTS

Looking back over the past twenty-five years, I realise that none of what I have achieved in Britain would have been possible without the generosity, encouragement and trust of several remarkable people.

First and foremost, I would like to thank **Professor John Fieldhouse**.

When I was preparing to enter the British engineering profession, Professor Fieldhouse wrote me an extraordinary two-page reference letter. During my early job search, almost every potential employer was impressed by his recommendation. I submitted my first application in April 2002, attended just one interview, received an offer from Quality Lift Product (QLP) Ltd in May, and started my first engineering position as Product Development Engineer in the UK on **26 August 2002**. That letter opened the first important door of my professional career in Britain.

My sincere thanks also go to **Professor Dave Cooper MBE**.

Without his support, I would never have become a Fellow of CIBSE or later a Fellow of the Society of Vertical Transportation. At the time, I believed he was probably the last person who would agree to sponsor my applications, which was why I only approached him after exhausting every other possibility. To my surprise, he accepted immediately and without hesitation. His confidence in me meant far more than the Fellowships themselves.

I would also like to thank **Mr Adrian Godwin**.

Before meeting Adrian, I had never wanted to become a consultant. I believed consultancy merely made projects more complicated and more expensive. Adrian completely changed that perception. Working alongside him opened my eyes to what true engineering consultancy should be - creating value through knowledge, judgement and innovation. It was under his guidance that I successfully transformed from a lift and escalator engineer into a vertical transportation consultant.

I would also like to thank **Mr Paul Baker**, my first employer in the UK lift industry.

Paul treated me not simply as an employee but as a colleague and a friend. His trust and kindness gave my family the stability we desperately needed during our first years in Salisbury. Without his support, it would have taken us much longer to establish ourselves and begin building our new life.

Finally, I would like to thank the entire British lift industry, especially the colleagues at QLP Ltd such as Alan Richardson, Tony Critella and his wife Sue.

You welcomed an engineer from the other side of the world and judged me not by where I came from, but by what I could contribute.

For that, I shall always be grateful.

My father gave me integrity.

Britain gave me opportunity.

My son has been given the freedom to pursue excellence.

Thank you, Britain - my adopted country.

BIOGRAPHY

Hongliang Liang, MSc CEng FCIBSE, is a graduate of Nanjing Architectural and Civil Engineering institute in China, majoring in hoisting transportation and construction machinery (1986-1990). He came to the UK in 2001, and obtained an MSc in Engineering Design and Its Management at Huddersfield University in 2003. He has more than 31 years' experience in the field of VT, during which time he has worked in a variety of positions. He joined MovvéO (formerly Lerch Bates Europe) in 2014 as senior design manager/consultant.

Hongliang launched his own business, Aliang Lift Design Studio Ltd, in April 2020, providing survey/design services for modernisation and full-replacement projects for lift suppliers and contractors. The studio also provides VT consultancy, traffic analysis, system design, detailed design, tender negotiations for redevelopment and new-development projects to engineers, VT consultants, architects and developers.



Meet TVC's new business development team members.

Two new faces are helping Thames Valley Controls strengthen its relationships across the lift industry. Ricky Cohen and Samuel Iyanu have recently joined TVC as Business Development Managers, and we spoke with them to find out more.

Ricky and Samuel may have taken very different routes into the lift industry, but they have quickly found some common ground in their new roles at TVC.



Ricky spent more than 15 years in sales before moving into the lift industry around five years ago, initially joining his brother as a trainee lift engineer. After two years, he returned to sales, working for a lift company across contracts, installations and modernisation before joining TVC.

Samuel's background is equally varied. He began in the safety-critical railway sector, working as a Controller of Site Safety and track team leader, helping to establish safe systems of work for railway maintenance teams.



BUILDING RELATIONSHIPS, ONE LIFT AT A TIME



He later joined Otis as a Sales Associate, developing his knowledge of the lift industry before progressing into a Sales Consultant role, managing and developing his own territory. His move to TVC now gives him a new perspective on the industry from the independent supplier side.

More than simply winning new customers...

"It's about bringing in new business, but also reconnecting with companies we've worked with previously, understanding why those relationships may have changed and exploring how we can earn their business again. Ultimately, we want an opportunity to show people what TVC can do today. Just give us one lift – one opportunity to prove ourselves – and then it's up to us to earn the next one." – Samuel

Backed by the strong TVC brand...

"What surprised me most was how receptive people have been. When I was working for an independent lift company, it could be difficult to get hold of people. With TVC, they recognise the brand and want to know what we're doing. It feels like the reputation is already there – it just needs a fresh face to say, 'Hi, how are you? We're back, and we'll look after you.'" – Ricky

Both Ricky and Samuel see their roles as a bridge between customers and TVC's technical team. They aim to make things easier for the customer while bringing valuable feedback into the business.

"There's a real appetite across the company to improve and make the business better. We're not standing still. There's also a huge amount of technical knowledge within the business, which gives us confidence that when customers bring us more complex questions, we've got the expertise behind us to support them." – Samuel

We wish Ricky and Samuel all the best in their new roles!

Find out more about TVC's services at tvcl.co.uk.

Away from the office...

Ricky Cohen

Ricky's part of a darts team and is a coach for an under-13s football team. He also spends a lot of time with his brothers and nine nieces and nephews, and especially enjoys a Sunday dinner with the whole family.

Samuel Iyanu

Samuel is a passionate Manchester United supporter who also enjoys keeping active through fitness and weight training. A devoted family man, his weekends are usually a lively mix of football, family adventures and spending quality time with his young family.

A LIFE IN THE DAY

WeMaintain is focused on empowering their engineers with the tools and recognition they rightly deserve. A powerhouse of innovation, we spoke with Global Head of Sales, Cheryl Dilley to find out what drives them, and her, every day.



FIRSTLY, COULD YOU SHARE A BRIEF ROUND UP OF YOUR ROLE?

I'm the Global Head of Sales for WeMaintain. I've been in the role for five years and I lead the sales across five markets – the UK, France, Portugal, Hong Kong and Singapore. That covers maintenance, modernisation, new installations and our IoT offering as well.

I lead a large international sales team, working through a leadership group of senior managers and senior sellers who report directly to me. Within that team, we're responsible for driving growth across our five markets, so it's a wide remit, but for me, it's very much all about building and developing relationships with a common end goal.

IN A COUPLE OF SENTENCES, CAN YOU SUMMARISE WHAT WEMAINTAIN DOES?

WeMaintain is a global independent technology lift and escalator company, combining proprietary innovative technology with a skilled workforce of engineers.

WALK ME THROUGH A TYPICAL DAY FOR YOU – FROM YOUR FIRST CUP OF COFFEE!

I'm an early riser, and always start with a coffee! I like structure, so the way I work is pretty organised. I start with the emails, making sure our clients are happy, then move on to internal communication and focus on Asia for the first half of the day, because of the time difference.



With responsibility for teams across different time zones, I structure my mornings around working closely with our colleagues in Hong Kong and Singapore, whether that's supporting live tenders, reviewing the pipeline or catching up with the team.

After that, who knows where the day will go?! That's the best thing about my role, no two days are the same. I can go from supporting a tender in Europe to sales pitches and final-stage strategic interviews, and then on to analysing our pipeline and forecasts. It's a mixed bag each day. I also love going out to meet clients, that's where you build that rapport and relationship.

I'm very bad at taking a lunch break, so usually the end of the day is signalled by a rumbling stomach!

HOW LONG HAVE YOU WORKED IN THE LIFT INDUSTRY AND WHAT ATTRACTED YOU TO IT?

I joined the lift industry in 2013, having previously worked in a very challenging project management role. I wanted something completely different and new, and took a role at a company called Alimak Hek, which supplied lifts to oil rigs, so very niche! After a couple of roles at other companies, I landed here.

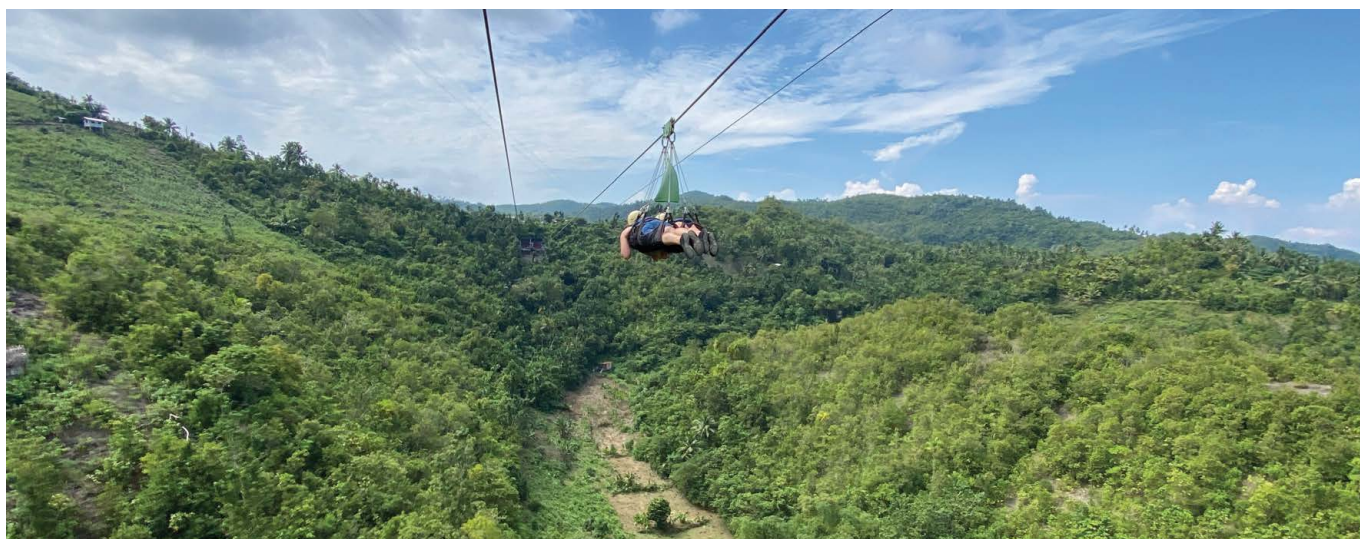
There's no single reason I came to the lift industry, it was simply a new challenge with so much to learn. I can get bored quite easily, so I had toyed with the idea of going on the tools, but my heart is in sales, I'm a people person, and I still learn something new every day.

WHAT DO YOU ENJOY MOST ABOUT YOUR JOB?

If anyone in sales doesn't say, "The buzz of the sale," then they're probably in the wrong job! That's the end goal and what gets me up in the morning.

I like a tough situation, and the challenge of cracking a relationship and turning around someone's opinion.

Some of the best relationships start over a pint, and I'm a big Guinness fan. I'm pretty good at splitting the G too, so if anyone fancies a challenge, you know where I am.



WHAT ARE YOU FOCUSING ON RIGHT NOW?

Multiple projects! The biggest one for me at the moment is global leverage. We operate in five different countries and I've got five sales machines all working towards that end goal. I'm the person who pulls all of that together so that if, for example, we have a really strong relationship with an asset manager in Singapore, we can use that relationship in the UK, and similarly for other countries. So I spend a bit of time travelling around to different countries and building relationships, understanding different needs. Clients in Asia have very different needs to those in Europe, so it's my job to create efficiencies as well as opening up new territories and identifying new opportunities.

ARE THERE ANY INNOVATIONS, PROJECTS OR PLANS YOU'RE EXCITED ABOUT SEEING MOVE FORWARD WITHIN THE INDUSTRY?

We are a super innovative company, so innovation is part of our DNA. Data and AI usage have to be at the top of the list, but there's also our IoT offering, which is brand agnostic. We build and maintain the hardware and software ourselves, so it can work across different lift brands, giving a much broader view of what's happening across a customer's portfolio.

The goal is to move to truly proactive maintenance. We can already monitor lift movements and vibration and identify anomalies, but the next step is to highlight predicted issues and fix them before they even arise. We're not looking to replace engineers, it's about giving them better information ahead of problems.

Modernisation is another huge opportunity. With the UK's lift stock getting older, we need to improve the way we modernise, prioritising lifts that need investment, rather than just looking at the oldest first. It's all about efficiently and effectively using the data we have and building a modernisation package that suits each individual customer.

WHAT DO YOU LOVE TO DO OUTSIDE OF WORK?

My biggest passion is travel, and my partner and I like to take things to the extreme with over 10 holidays each year. I'm very lucky to travel the world for work as well. We've just visited Georgia and Azerbaijan, and we have plans to visit Kyrgyzstan, with three of our 10 day trip on horseback. I don't ride, so that'll be an interesting one!

WHERE DO YOU FIND YOUR INSPIRATION?

I strongly believe that you are only as good as the things you've been exposed to. I've had some poor managers in my career, before joining WeMaintain, but I've tried to use that experience to work out what kind of manager I want to be, mostly by doing the opposite!

It may be that you felt underappreciated, so you start to understand how important it is to make people feel appreciated or treated with respect. So I think in a funny way, those experiences mentored me without me even realising it!

**LOOKING AHEAD 12 MONTHS,
CAN YOU TELL ME WHERE YOU'D
LIKE TO BE, OR WHERE YOU'D LIKE
TO SEE THE COMPANY?**

A personal goal of mine for the company is to scale into another country, and then from a broader perspective, it's increasing people's awareness that we're doing something different and that we're changing the industry for the better. We're not 'just' another lift company.

The business was built around the belief that engineers should be at the heart of everything we do. By combining their expertise with innovative technology, we're creating an environment where engineers are better supported, have the tools to do their jobs effectively and can deliver a better service to customers. This gives them more time to focus on customers, while ensuring they are recognised, supported and competitively rewarded for the important work they do.

You know who you think of when someone says, "Taxi revolution". In 12 months, I want even more people thinking WeMaintain when they hear, "Lift revolution".

**Thank you to Cheryl for sharing
some brilliant advice and vision for
the company.**



**Find out more about
WeMaintain at
wemaintain.com.**



CP Automation
Keeping industry
in motion

Coming soon:

THE CPA700 ELEVATOR DRIVE

CP Automation will soon launch the CPA700, its latest-generation elevator-specific inverter drive engineered to simplify installation, enhance ride quality and deliver long-term reliability across a wide range of lift applications.

Designed for new installations, modernisation projects and machine-room-less (MRL) lifts, the CPA700 will provide controller manufacturers, lift engineers and building owners with a single, flexible drive platform.

Features and benefits will include:

- One drive for multiple applications
- Built-in RFI filter and braking transistor for simplified installation
- Intuitive start-up wizard and lift-specific parameter structure
- Optional Bluetooth keypad for remote diagnostics
- SIL 3-certified with integrated UCM brake monitoring and rope wear monitor



CP Automation will also be exhibiting again at this year's **Lift & Escalator Symposium from 16-17 September at Kettering Park Hotel**. The team will be available to answer any questions about the CPA700 or any of CP Automation's services and solutions.

To learn more about the CPA700 and CP Automation's lift engineering solutions, visit www.cpaltd.net

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elevatorsales@cpaltd.net

16 - 17 September



LIFT & ESCALATOR
SYMPOSIUM

RENEW, NOT REPLACE

Why modernisation could be key to improving lift performance.

As building owners try to improve energy efficiency and maximise ratings under schemes such as NABERS or BREEAM, many are turning their attention to ageing building services and infrastructure. Lifts are no exception, but when performance, reliability or compliance become concerns, there are options besides a complete replacement. Here, Brian Preston, global business manager – elevator at CP Automation, explores how a 'renew not replace' approach to lift modernisation can deliver significant performance and efficiency improvements while reducing costs, disruptions and environmental impact.

When faced with an ageing lift, the default response for many building owners is to consider a complete replacement – everything, including the cabin, guide rails, motors, ropes and control panels. As lifts age, increasing maintenance costs, obsolete controls and evolving safety standards can make older systems appear uneconomical to retain.

While installations will inevitably reach the end of their service life, many lifts contain core mechanical components, such as geared or gearless machines, that are still perfectly capable of delivering reliable operation. In these cases, replacing the entire system can mean discarding valuable assets unnecessarily. Instead, upgrading the controller, drive system, doors and other elements can often deliver the same benefits as a new lift while avoiding the cost and disruption of a full replacement.

Why modernisation is gaining momentum

The growing interest in lift modernisation boils down to a mix of practical, financial and regulatory pressures. Building owners require good, reliable lift performance to satisfy the building's occupants, but they are often working to tight budgets and must extend the lifespan of existing assets where possible. Consequently, many are looking for ways to enhance reliability, efficiency and passenger experience without committing to complete overhauls.

Modernisation offers a practical middle ground, allowing building owners to upgrade key systems and components while retaining serviceable equipment.

Time is also a factor. A full lift replacement can take several months to complete, disrupting tenants, residents and visitors. Meanwhile, a modernisation project can often be completed in a fraction of the time while delivering comparable improvements in ride quality, reliability and efficiency.

And then there are the regulatory pressures. For example, updates to BS9991:2024 and the release of EN81-76:2025 have prioritised inclusivity, ensuring lifts can evacuate less able-bodied people from multi-storey buildings in emergencies, such as fires and power loss. Regardless of intent, these regulations are prompting many organisations and building owners to review ageing equipment and explore how it can be brought in line with modern expectations.

More than energy-saving

Energy efficiency is often one of the main drivers behind lift modernisation. Improvements in lift controller technology, such as variable speed drives (VSDs), intelligent lift controllers and regenerative braking, mean modern systems can operate far more efficiently than their predecessors. The result? Reduced energy consumption and therefore operating costs.

Older lifts often relied on travel profiles that involve decelerating into a floor before creeping into position. However, modern control systems can travel directly to floor level, reducing unnecessary floor-to-floor travel time and improving overall efficiency. Combined with LED lighting and energy-saving standby modes, these improvements can make a meaningful contribution to a building's wider sustainability objectives and the relevant sustainability accreditation scheme scoring.

Regenerative braking technology can enhance these benefits further. Rather than dissipating excess energy through braking resistors as heat, regenerative systems return energy to the building's electrical network so it can be used elsewhere.

The overlooked benefits of regeneration

While energy savings dominate discussions around regenerative braking, some of this technology's most valuable benefits are often overlooked. For example, traditional braking resistors generate significant heat – and this was historically seen as part of normal operation. However, as more buildings install secondary power supplies and automatic rescue devices (ARDs), temperature management is becoming increasingly important for long term reliability.

Battery systems operate most effectively within a relatively narrow temperature range of approximately 20-25 degrees Celsius. Excessive heat will shorten battery life, increasing maintenance requirements and replacement costs in the process. By removing the need for braking resistors during normal operation, regenerative systems can help create a cooler operating environment and extend the lifespan of critical back-

up systems whilst also reducing the costs associated with maintaining the optimum ambient temperature.

Modernisation in action

We recently supported a modernisation project involving three panoramic lifts serving seven floors – and it was a great example of the benefits of renewal over replacement. Rather than replacing the existing Otis 18ATF geared machines, the customer retained the core mechanical equipment while introducing a modern control system, including an updated AC drive and additional regen technology. The modernised system also utilised a more efficient direct-to-floor travel profile.

The results exceeded expectations. Energy monitoring carried out before and after the upgrade revealed that energy consumption had fallen by almost 55 per cent. What's more, this didn't include the additional savings from modern controller features such as the ECO standby mode when the lift was idle.

Importantly, this project also shows the benefits of including regen as part of the modernisation beyond energy efficiency. By removing the need for traditional braking resistors, regenerative braking helped reduce heat generation inside the machine room. As mentioned, this is becoming more important as more buildings adopt secondary power supplies and ARDs, products where the effects of excessive heat quickly become apparent.

In addition, the use of braking resistors to 'dump' regenerated energy requires the drive's DC Bus to climb to the braking transistor voltage threshold, and so the Bus capacitors are constantly cycling between approximately 600V and 800V on a conventional 400V system.

The use of regen technology regulates the drive's DC Bus to maintain a constant voltage at all times, which will further extend the lifetime of the drive's Bus Capacitors.

Yes, there is no doubt that a full replacement may have delivered some additional efficiency gains, but these would have come at a far greater cost with considerably more disruption to building operations. For the client, the project delivered substantial performance improvements while retaining their existing assets and avoiding the impact associated with replacing serviceable equipment.

While every lift installation is different, complete replacement may not always be the best solution. By targeting the components that have the greatest impact on performance, efficiency and compliance, modernisation or 'renewal' can often deliver many of the benefits of a new lift installation while reducing costs, minimising disruption and extending the life of existing assets.

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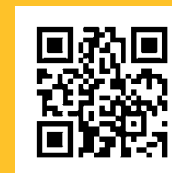


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SOVT: ONE YEAR ON, BUILDING A GLOBAL PROFESSIONAL COMMUNITY



One year ago, the CIBSE Society of Vertical Transportation (SoVT) was launched, building on the proud legacy of the CIBSE Lifts Group and creating a professional home for everyone shaping the future of vertical transportation, from students and emerging talent to engineers, consultants, manufacturers, contractors, academics and industry leaders.

The transition to a Society was about building on that legacy with greater ambition: strengthening professional recognition, developing the next generation and creating a platform through which our industry can connect, learn and lead.

An important step has been the introduction of structured SoVT membership grades. Through CIBSE, these provide pathways towards Engineering Council professional registration at EngTech, IEng and CEng levels, alongside SoVT post-nominals recognising professional experience and achievement in vertical transportation.

Our ambition reaches far beyond the UK. Supported by representatives across the UK, MENA, North America and Canada, Hong Kong and Australia, SoVT is developing an international network for sharing knowledge, regional experience and good practice, supporting emerging talent and giving VT professionals a stronger collective voice.

Our first year has established strong momentum:

- **Official Launch, September 2025:** Hosted by the Lift and Escalator Symposium alongside the publication of *CIBSE Guide D: 2025*.
- **Membership Briefing, November 2025:** Introducing the Society's membership structure and professional pathways.
- **Annual Seminar, November 2025:** SoVT's first technical seminar, continuing the successful tradition established by the CIBSE Lifts Group.
- **AGM, April 2026:** Hosted at the new CIBSE HQ, with Adam Scott and Graham Barker becoming Chair and Vice Chair, followed by three technical presentations.
- **Summer Seminar, August 2026:** LEIA Technical Director Micky Grover-White introduced BS EN ISO 8100-1 / 2 to a full house at CIBSE HQ.
- **First Anniversary:** Marked by CIBSE CEO Ruth Carter returning to the 17th Lift and Escalator Symposium to deliver the keynote, *Fostering a Culture of Collaboration*.

Looking towards 2027 and beyond, we aspire to expand international and regional seminars alongside our AGM and wider technical programme, connecting people and ideas across geographical and professional boundaries.

Why join SoVT?

Membership offers professional recognition, specialist knowledge and CPD, access to a growing global network, career-development opportunities, CIBSE knowledge resources and the opportunity to contribute to technical guidance, consultations and the future direction of our profession.

Our first year established the foundations. Our next chapter is about connecting the global VT community, raising professional standards and inspiring the next generation to take our industry forward.

Whatever your role, wherever you are in the world, there is a place for you in SoVT.

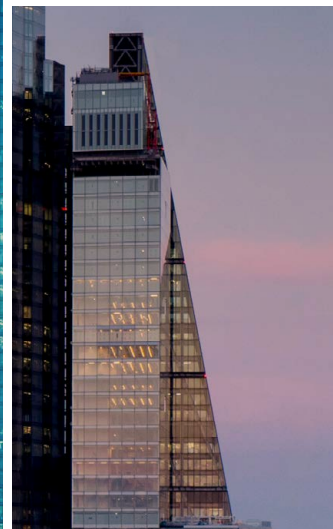
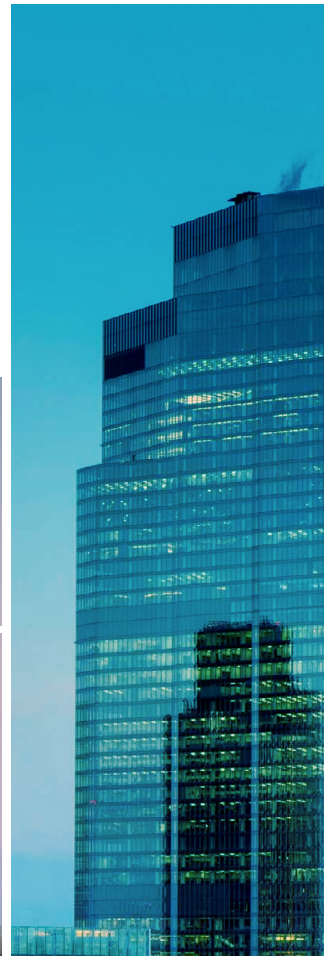
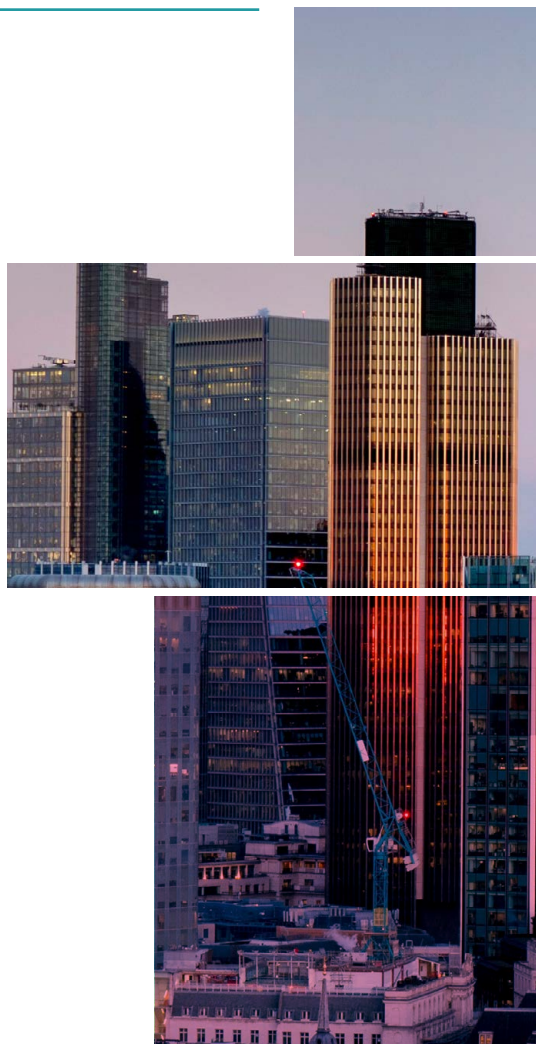
SAVE THE DATE:

17 November 2026, CIBSE HQ, for the second SoVT Annual Seminar. Further details will follow on LinkedIn.

Discover SoVT, membership and resources: CIBSE Society of Vertical Transportation



17TH SYMPOSIUM ON LIFT & ESCALATOR TECHNOLOGIES



16 - 17
September
2026

Kettering Park Hotel
www.liftsymposium.org



17TH LIFT & ESCALATOR SYMPOSIUM



Two days of learning, networking and discussion

A sell-out event saw 130 people from across vertical transportation come together at the Kettering Park Hotel for two days of great presentations, stimulating debate and a lot of conversation.

Dave Cooper welcomed everyone, and colleagues from the Society of Vertical Transportation (SoVT), Adam Scott and Rory Smith, gave a brief presentation on what membership of the SoVT can offer. Ceri Saunders, Senior Networks and Engagement Manager – Societies at CIBSE, was available to talk to anyone interested - she has written about SoVT membership on Page 35.

Ruth Carter, Chief Executive of CIBSE, gave the keynote address, stressing that events such as LES are incredibly important because they bring together people with different experiences, different perspectives and different areas of expertise, but with one shared purpose: advancing engineering excellence. That spirit has defined CIBSE for almost 130 years, and it will continue to define our future.

You can read Ruth's full speech on page 47.

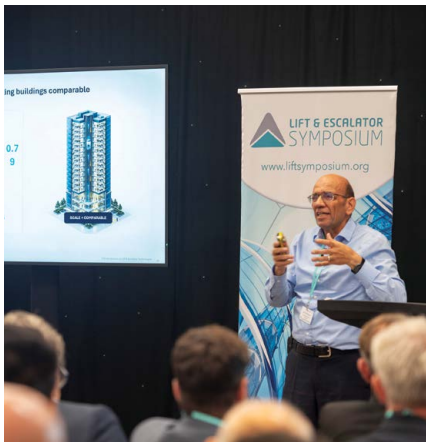
The first paper was presented by Gemma Moore with the title **Shifting Gears and Lifting Careers: Encouraging Women into the Lift Industry**. Drawing on her personal experience and conversations with her colleagues in the industry, Gemma gave an insightful presentation on a topic that's becoming increasingly important for the future of our sector: encouraging more women into the lift and escalator industry. We are facing well-documented skills shortages across engineering. At the same time, demand for vertical transport is rising as cities grow and buildings become more complex. We need more people entering the industry, and we need teams that reflect the diversity of the customers we serve. Research shows that diverse teams innovate better, solve problems more effectively, and even improve safety outcomes.

Inclusion isn't just a social goal - it's a business advantage. Gemma made clear recommendations that led to a buzz of conversation in the break that followed.

- Employers can expand mentorship programmes, review recruitment and promotion processes, and invest in inclusive culture training
- Educators can provide early exposure to engineering and promote apprenticeships to girls
- Industry bodies can share best practice, support women's networks, and run visibility campaigns.

Everyone has a role to play in shaping the future of the industry.

Session 2 covered Design and Traffic Analysis and was chaired by Adam Scott from The Vertical Transportation Studio Ltd.



A well-known face at LES, Lutfi Al Sharif continued on from his presentation in 2025 on establishing a universal relationship between the traffic mix in a building and the stops data. Working with Eng. Thani Ghobon of the Electrical Engineering Department at Al Hussein Technical University (HTU), Dr Richard Peters & Mathew Appleby of Peters Research Ltd, this is a research line that has been building for decades, where stop

data is normalized, then the same relationship is tested at different building scales. Nearly identical was the important phrase as Professor Al Sharif concluded, perhaps "one size fits all" is not always a bad engineering idea - provided you normalise first.



A first-time presenter at LES, Terry Fung is a vertical transportation specialist at Foster + Partners, London. His work focuses on the integration of lift and escalator systems within complex infrastructure, with particular emphasis on airport design for CPK Airport Warsaw and King Salman International Airport Riyadh.

He presented a comprehensive framework for VT design in modern airports, where lifts, escalators, and moving walks form mission-critical infrastructure that directly influences passenger satisfaction, accessibility, and operational resilience. Airports are among the most demanding VT environments, required to absorb intense, scheduled surges – where a single wide-body aircraft may deliver more than 800 passengers within minutes – creating circulation pressures far exceeding those in commercial buildings.



A very impressive and thought-provoking paper resulted in Terry being awarded the Dr Gina Barney Emerging Excellence Award for Vertical Transportation 2026. The award aims to acknowledge exceptional promise and dedication to advancing knowledge in the VT sector. Congratulations to Terry and the team at Foster + Partners.

You can read his paper in the Knowledge Bank on page 58.



A regular attendee at LES but a first-time speaker, Tiina Laine, a senior expert in the People Flow Planning team, has been working for KONE Major Projects since 2008. In her role, she analyses people flow in high-rise buildings and other complex buildings.

When conducting lift traffic analysis, one of the key modelling choices is passenger capacity: the limit on the number of passengers in a lift car. A widely used convention in the lift industry is the 80% rule, according to which lifts are assumed to be loaded to no more than 80% of their rated capacity. Together with Mirko Ruokokoski, Tiina explored a question that has been discussed in the lift industry for decades: does real-world passenger loading data support the 80% rule for lift car loading? With 93 measurements from 19 different countries, the team concluded that 80% of rated capacity can be exceeded.



With over 33 years in the VT industry, leading one of India's foremost vertical-transportation consultancies with 16,000+ units in its consulting base, LES was delighted to welcome back Jagadish Kumar to present on Human-Centric Vertical Mobility in Super-Tall Luxury Residential Towers in India.

The evolution of luxury high-rise residential towers in India has fundamentally reshaped expectations from VT design. As developers pursue increasingly premium living experiences, lifts are no longer mere utility components but core lifestyle enablers that define comfort, privacy, security, and service efficiency. Contemporary VT planning integrates intricate user profiling – residents, visitors, house helps, service personnel, and even pets – to ensure seamless movement patterns within dense vertical communities.

India's skyline has moved from low- and mid-rise housing to vertical ecosystems of luxury, exclusivity, and technology, with towers now rising 200-300m and beyond. Jagadish broke down the VT expectations and requirements in this exciting, fast-moving country.



Vignesh Dhanapal is currently working as a Senior Vertical Transportation Engineer at Foster + Partners, London, beginning his career as an installation engineer in India, and has over 10 years of experience in the Gulf region as a Vertical Transportation Consultant.

Modern lift cabin interiors have evolved into architecturally expressive spaces incorporating premium materials and integrated systems. While these finishes enhance perceived quality, they introduce significant engineering implications that are often overlooked during design. As lift-rated capacity and traffic analyses are typically based on bare cabin dimensions, the addition of interior finishes reduces the net usable area available to passengers, affecting passenger capacity, traffic performance and accessibility compliance.

Giving practical examples showing the impact of finish thickness and the impact of BS EN 81-20, the presentation made it clear that cabin finishes are no longer just an architectural decision. They are also an engineering decision.



Session Three was on Safety and Evacuation, chaired by Nick Mellor of LEIA.

C. Erdem İMRAK is a full-time Professor at Istanbul Technical University (ITU) and together with his colleagues Dr Adem Candas, Dr Eren Kalay and Emre Pinarbasi & Tolga Balci from Emlak Konut Asansör (EKA) they have done a great deal of work on the condition of hospital lifts after an earthquake.

Among public buildings ordinarily used by the public, health facilities hold a critical priority and importance. During field visits following two major destructive earthquakes in Turkey in the last 15 years, damage to hospital lifts in particular has drawn attention. Hospital lifts, which are of great importance in the treatment of earthquake victims, are desired to be earthquake-resistant after an earthquake. In this study, the damage detected in hospital lifts following the 2011 Van earthquake and the 2023 Kahramanmaraş twin earthquakes in Turkey are evaluated, and the techniques developed and implemented for earthquake-resistant lifts were explained with examples.



Another very familiar face at LES, Dave Cooper has been in the lift and escalator industry since 1980. He is a member of the SoVT Committee and also serves on the CIBSE Board and is currently President.

He has been engaged in a major research project to reduce the number of entrapments on escalators. Whilst the research covered all types of entrapments, his paper and presentation focused on the types of entrapments that cause life-changing injuries, particularly to young children, including step-to-step entrapment, step-to-skirt entrapment and comb plate entrapments. Injuries include severe crushing and, in some cases, amputation. Examples of real-life accidents were cited with a focus on methods of prevention. The research has revealed that these types of accidents can be reduced significantly, which has been confirmed by laboratory testing by a major escalator manufacturer.

The takeaways from Dave's enlightening presentation were:

- We haven't acted quickly enough as an industry on a matter that we have known has existed for years.
- We need to educate passengers
- We need to reduce friction
- We need to maintain better
- We need more research



Two years ago, Kristian Farr won the Dr Gina Barney Award for an excellent paper on Theoretical Evacuation Lift Capacity Assessments. This year he returned in his new role as Senior VT Engineer for AECOM to build on the previous capacity assessment paper but with the same opener: this paper raises more questions than answers.

This year Kris had teamed up with Dr Alastair Bartlett, Associate Director in AECOM's fire engineering team to understand what a whole building evacuation might look like, asking hard-hitting questions such as "is one evacuation lift per core enough?" "what is an acceptable evacuation time?" and "do the Americans have it right?"

The presentation covered the need for capacity assessment, human factor, the change in core/control arrangements, and lift evacuation time.

Their paper presents a methodology for assessing the number of evacuation lifts needed to bring evacuation time in line with stair evacuation time. However, additional work is needed to determine:

- The proportion of users likely to use evacuation lifts in the event of a fire
- Guidance on determining target evacuation times

- Practical measures of providing additional evacuation lifts without unduly compromising usable floor area
- Evidence-based loading and unloading times
- Effect of method of evacuation (driver assisted or automatic)

Day One proceedings ended with the first of two sessions on Technology and AI chaired by Graham Barker, a partner in the VT team at Cundall.



Jonathan Beebe has more than 40 years' experience in bringing software design and information modelling technologies into the domain of lift system control and monitoring. Throughout his career, Jonathan has maintained an active interest in research, and he is currently developing an ontology to enable semantic interoperability between lift systems and smart buildings and cities, in which vertical transportation systems play a fundamental role.

Jonathan began with defining the terms he used in his paper: **Development of an ontology for interoperability between lift systems and other systems**

Ontology being the vocabulary and grammar of lifts - concepts, properties & relationships.

And in more detail, he looked at some of the more interesting outcomes of applying that methodology. This approach emphasised the user perspective, the essential quality for interoperability, providing a stepwise analysis of the users' requirements for information. It also highlighted elements of the required information model that may not be readily available from standard lift equipment, with the aim of prompting a discussion of how such requirements might be supported.



Another regular presenter at LES, Matt Appleby is a software engineer at Peters Research Ltd. He is involved in project managing the new Elevate Online and leads front-end development.

Artificial intelligence is increasingly being integrated into lift systems, with applications in dispatching, traffic analysis, preventive maintenance and passenger-facing services. These technologies may improve efficiency, reliability, safety, accessibility and sustainability, but they also introduce ethical risks that have not yet been widely explored within lift research.

Opening with a quote from Jurassic Park: "Your scientists were so preoccupied with whether or not they could, they didn't stop to think if they should", Matthew argued that lift systems represent a distinct ethical context. They are shared, physical, safety-critical infrastructure embedded within buildings, and many users can't meaningfully opt out of using them. The ethical burden is therefore different from many consumer digital systems, where individual choice and consent are often treated as central safeguards.

As AI permeates the lift industry, a choice must be made. The technology can be allowed to develop without sufficient ethical scaffolding, risking surveillance, inequality, deskilling,

responsibility avoidance, and eventual enshittification. Alternatively, the industry can build that scaffolding early and deliberately. If it does, AI may help produce lift systems that are safer, more accessible, more sustainable and more accountable than those we have today.



Dr. Adem CANDAŞ is an Assistant Professor at Istanbul Technical University (ITU). His research interests include fracture mechanics, computer-aided engineering, numerical analysis, materials handling systems, and lift systems.

Together with his colleagues Professor C. Erdem İmrak, Dr Eren Kalay and Tefvik Keles & Mehmet Selcok from the R&D Electrical Systems team at Emlak Konut Asansör (EKA) they have researched Security-Oriented Artificial Intelligence-Embedded Image Processing for Lift Car Interiors.

In lift systems, in-car cameras have become widely used for both passenger counting purposes within the cabin and for security reasons. It is known that security systems in lifts generally remain limited to basic security measures. Current applications include emergency buttons, audible warnings, and intercom use; these solutions offer a reactive approach that allows users to intervene after an event causing

danger in the lift has occurred. The developed web-based interface enables the monitoring and tracking of passengers in the car, small children, pets, belongings, and potentially hazardous situations.

Day Two opened with a session on Engineering, chaired by Phil Hofer Head of Group Field Engineering at Jardine Schindler based in Hong Kong.



Stefan Kaczmarczyk was the first presenter, covering Dynamic Response of Lift Systems Under Overtravel and Buffer Impact Conditions. Professor Kaczmarczyk needed no introduction. He has over 45 years' research and consulting experience in applied mechanics/dynamics and mathematical modelling, with applications to vertical transportation systems.

His presentation covered simplified models for predicting the dynamic behaviour of a lift system during overtravel under buffer-strike conditions. The models incorporated both linear and nonlinear buffer characteristics, implemented in a computer simulation environment conducted over a range of buffer impact speeds and lift system parameters to evaluate buffering forces and impact-induced dynamic phenomena.



Michael Eibel and Erich Spirgi from Lift Engineering Asia Pacific Limited, in collaboration with Dennis Aeschbacher & Daniel Roth, from PI Electronics AG, Baden, Switzerland, have been working on a high-speed hoistway scanning system that captures precise data on essential shaft elements, including guide rails, guide rail fixations, and landing doors. By enabling rapid, detailed analysis even in the tallest buildings, the system accelerates engineering workflows. This is particularly valuable when used as an integral part of rectification work on the shaft system.

Their presentation on Precise High-Speed Hoist Way Scanning System in Super-Tall Buildings gave examples of measurements in super-tall buildings, the limitations of state-of-the-art methods and the results of a new approach.

The symposium papers are published as Open Access in the conference proceedings, which are indexed in [Elsevier's Scopus](#), the largest abstract and citation database of peer-reviewed technical literature. The papers are available on-line on the [resources pages](#) of the symposium website.



As a prequel to the Panel Discussion, Rory Smith, consultant at Peter's Research Ltd and with over 57 years of lift industry experience, admitted that in the first 33 years of his long career he had assumed codes were just a set of arbitrary rules that had to be followed to successfully get through an inspection. Then he took a course at the University of Northampton titled Codes and Standards and learned that there was science behind most of the standards.

Sharing his knowledge, Rory demonstrated that codes and standards are based on risks to be mitigated and a group of time-tested assumptions.

You can read his paper in the Knowledge Bank on page 58.



Our industry operates internationally, but it does not operate under one rulebook. Equipment may be designed around ISO principles, manufactured to European requirements, adapted for North American or national codes and then subjected to different local rules covering fire safety, accessibility, inspection and maintenance.

Under the banner: One Industry, Many Rulebooks: Are Lift and Escalator Standards Keeping Pace? Adam Scott brought together an expert panel to ask whether the current system continues to provide the right balance between safety, innovation, accessibility and commercial practicality.

The panel: Phil Hofer, covering Asia Pacific; Rory Smith, covering the Americas; Micky Grover White, Technical Manager at LEIA covering UK and Europe and TAK Matthews, prominent vertical transportation consultant and the Principal Consultant at TAK Consulting Pvt. Ltd., India's first full-service elevator and escalator consultancy, bringing his knowledge of the fast-growing Indian market.

You can read the views from the Panel Discussion on page 54.

The final session was our second session on technology and AI, an area so topical it needed two sessions! Chaired by Richard Peters of Peters Research Ltd, our first speaker was Polina Rukin from CEDES.



Polina is a product owner with long-term experience in design and user experience at CEDES. She started her tenure in the lift industry at Relayr when working for the Skyler Elevate product. Working with colleague Christoph Rüdiger, who currently occupies the chief engineer role of Elevate at CEDES, they presented the scenario where a technician drives across the city, climbs into the machine room and finds the lift running perfectly. Nothing wrong. Nobody knows when it went down or why it recovered. That trip cost real money and told us nothing.

The only two questions that matter in lift service are WHERE is the problem, and WHEN did it start. And without continuous monitoring, both answers arrive late. The presentation looked at how continuous lift monitoring helps improve operational efficiency and which algorithms help to do it most accurately.



Tim Ebeling is head of development with Henning GmbH & Co. KG. One of his particular focal points is measurement technology. Especially in this area, he looks back on many years of experience in the development of acceleration and rope load measuring systems.

In a presentation looking at Edge AI for the Next Generation of Lift Monitoring, Tim presented the next development stage of a predictive maintenance system for lifts in which artificial intelligence models are executed directly on-site at the edge device installed within the lift system.

Predictive maintenance has become a key enabler for improving the reliability, availability, and lifecycle management of modern lift systems. Current solutions typically rely on connected sensor devices that transmit operational data to cloud-based platforms where advanced analytics and artificial intelligence (AI) models are executed. While this architecture enables powerful

diagnostics and fleet-level insights, it introduces dependencies on connectivity, latency constraints, and additional data transfer requirements.

The combination of expert systems, Edge AI, and cloud-based fleet learning opens new opportunities for lift monitoring.

The cloud trains. The edge decides. The ecosystem learns.

Predictive Maintenance becomes not more abstract, but closer to the installation: faster, more robust and more adaptive.



Our final presentation was from Dr Stefan Gerstenmeyer, Chief Technical Officer at Peters Research Ltd. With almost 3 decades of experience in the elevator industry, Stefan's expertise spans the research and development of group and dispatcher algorithms, elevator traffic simulation, traffic analysis, and advanced traffic control systems for multi-car elevator configurations.

Modern lift control systems rely on communication networks to connect many components. These include controllers, sensors, inverters, door drives, user interfaces, and monitoring systems. Each of these components has different requirements for data transmission.

Drawing on practical experience in the design and implementation of lift control systems, working with his colleagues Dr Richard Peters & Dr Mike Pentney, the presentation compared two technologies in terms of their architectural characteristics, network topologies, scalability, communication protocols, and suitability for different parts of the system architecture.

That concluded an excellent two days of challenging, educational, stimulating, and thought-provoking presentations and discussions. A huge amount of work goes into every presentation, and the LES Trustees and Management Team extend their grateful thanks to everyone involved; it is truly appreciated.

We are very grateful to all the exhibitors for their continued support: Avire, CEDES, CPA, DAC, Lester Controls, Peters Research Ltd, Schaefer and Sassi Lift Systems.

A big thank you to all who attended for being part of another excellent Lift & Escalator Symposium – see you next year!

DATES FOR 2027:

Wednesday 15th, Thursday
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RUTH CARTER KEYNOTE ADDRESS



Ruth Carter, Chief Executive of CIBSE gave the Keynote address to start LES off. With the title Great Things Happen When We Work Together: Fostering a Culture of Collaboration she looked at the growing importance of vertical transportation within the wider built environment.



It is a real pleasure to be here with so many colleagues, experts and innovators who are shaping one of the most fascinating and important areas of building engineering. I would like to begin by thanking the organisers for inviting me to speak today and, more importantly, for creating a forum that has become one of the leading international gatherings for the vertical transportation profession.

Events such as this are invaluable because they bring together people with different experiences, perspectives and areas of expertise around one shared purpose: advancing engineering excellence. That spirit of collaboration sits at the heart of CIBSE. It has defined our Institution for almost 130 years, and it will continue to define our future.

VERTICAL TRANSPORTATION AND CIBSE LEADERSHIP

Vertical transportation is especially significant to CIBSE this year because our President is Dave Cooper. Dave is recognised internationally as one of the world's leading Chartered Engineers in lifts, escalators, cableways, funiculars, cranes, materials-handling technology and the wider field of vertical transportation.

At CIBSE, we are proud to be led by someone whose knowledge and experience in vertical transportation are recognised globally. This year's presidency reflects the importance CIBSE places on specialist disciplines and on the vital role they play in creating buildings that are safe, accessible, efficient and high-performing. Without advances in vertical transportation, the tall cities growing around the world would simply not be possible. Imagine having to climb the 163 floors of the Burj Khalifa, for example.

I know Dave shares my belief that the strength of our profession lies not only in technical excellence, but also in our willingness to collaborate, share knowledge and support one another. Those values are deeply embedded within CIBSE and are strongly reflected in today's symposium.

WHY THIS IS AN EXCITING TIME FOR ENGINEERING

Today, I want to focus on three themes: why this is such an exciting time for CIBSE and for our profession; the global trends reshaping engineering and why they matter to everyone working in vertical transportation; and why collaboration, professional excellence and knowledge sharing have never been more important.

Across the world, engineering is changing at an extraordinary pace. Buildings are becoming taller, cities denser and technology faster-moving. At the same time, expectations of the built environment continue to rise. Buildings are no longer expected simply to provide shelter; they must be safe, efficient, resilient, adaptable, intelligent and capable of supporting the wellbeing of the people who use them.

This means the role of building services engineering has never been more important. Every aspect of building performance depends on the expertise, knowledge and judgement of engineers, and vertical transportation is an increasingly important part of that picture.

THE CHANGING ROLE OF VERTICAL TRANSPORTATION

For many years, lifts and escalators were sometimes viewed simply as components within a building. Today, we understand that they are much more than that. They are fundamental systems that influence accessibility, safety, energy performance, occupant experience and the way people interact with the spaces around them.

As cities continue to grow upwards and become more connected, vertical transportation is becoming one of the defining elements of modern building design. Moving people safely, efficiently and inclusively through increasingly complex buildings is not just an operational requirement; it is central to creating better places for people to live, work and interact.

That is why gatherings such as this symposium are so valuable. They provide a platform for experts to exchange knowledge, challenge established thinking and explore the innovations that will shape the next generation of buildings.

CIBSE'S GROWTH AND GLOBAL REACH

CIBSE is fortunate to be part of an engineering profession that continues to evolve and demonstrate its value. Today, CIBSE is one of the fastest-growing professional engineering institutions in our sector, and over the past five years our global membership has grown by around 20%.

Our growth is not simply about numbers. It reflects the confidence that engineers around the world place in the knowledge, professional standards and technical leadership that CIBSE provides. Our focus has always been on quality, competence and meaningful value for our members rather than simply increasing the size of our community.

- More than 14% of our members have been continuous members for over 40 years.
- Our longest-serving member is 105.
- Around 17% of our membership is under the age of 30.

This gives us both a remarkable foundation of experience and real confidence for the future. Young engineers are joining our profession because they want to solve meaningful problems, improve how people experience buildings, contribute to decarbonisation and digital transformation, and help create a built environment that works better for society.

Although CIBSE is proudly headquartered in London, our outlook has never been limited by geography. We are a truly global institution, supporting members in around 100 countries, and our knowledge and guidance are accessed internationally by professionals in 194 of the 195 countries around the world.

This international perspective is increasingly important because engineering has always been a global profession. Ideas, technologies and expertise move across borders. What has changed in recent years is the speed and scale of that exchange.

SHARED GLOBAL CHALLENGES

The challenges we face are increasingly shared. Whether I am speaking with members in Australia, Europe, Hong Kong, the Middle East or elsewhere, I hear many of the same questions:

- How do we accelerate decarbonisation?
- How do we improve building performance?
- How do we integrate rapidly advancing technologies?
- How do we make buildings more resilient?
- How do we address the shortage of skilled engineers?
- How do we ensure buildings perform as intended throughout their lifecycle?

These are not challenges faced by one country or one region. They are global challenges that require global thinking and collective action. Professional institutions have an important role to play because we connect people, share knowledge, support collaboration and help ensure that engineering solutions are informed by the best available expertise and evidence.

LEARNING FROM DIFFERENT REGIONS

Australia: Engineers are focusing on resilience and adapting the built environment to changing conditions, including electrification, renewable energy integration and improved lifecycle performance.

The Middle East: Rapid urban development is creating ambitious building projects and opportunities to rethink city design, digital integration, intelligent systems and sustainability.

Hong Kong: The challenges of density and vertical living have created generations of world-leading expertise in moving people safely and efficiently through high-rise environments.

Each region has valuable lessons to share, and each benefits from learning from others. That exchange of knowledge is one of the great strengths of our profession and reinforces why collaboration remains so central to everything we do.

TECHNOLOGY, AI AND THE FUTURE OF ENGINEERING

The pace of technological change affecting our profession is extraordinary, and one of the most significant developments is the rise of artificial intelligence. AI is already beginning to transform engineering practice, supporting design optimisation, predictive modelling, building performance analysis and operational efficiency.

In conversations with CIBSE members around the world, I increasingly hear some experienced professionals say they may leave the profession early because they do not want to compete with AI. But engineering is not being replaced by AI. While AI can accelerate design and modelling at previously unimaginable speed, the complexity, nuance, client-facing judgement and ethical responsibility

of our profession cannot be replicated by technology alone.

Will the engineering profession survive the rise of AI? Of course it will. Engineers survived and thrived through CAD/CAM and BIM, and we will do the same with AI. As Jensen Huang, Chief Executive of Nvidia, has said: "You will not lose your job to AI, but you may lose it to someone using AI." Perhaps AI may even help us address the skills shortages facing our sector.

Within vertical transportation, the opportunities are particularly exciting. Predictive maintenance can improve reliability and reduce downtime. Digital twins can deepen our understanding of system performance across the lifecycle. Passenger-flow modelling can help optimise movement through buildings and improve user experience. Real-time data will increasingly enable engineers and building operators to make better decisions.

However, technology alone is never the answer. The future of engineering will not be defined by technology replacing expertise; it will be defined by technology enhancing expertise. Professional judgement, technical competence and ethical decision-making will remain fundamental.

The role of engineers is not becoming less important; it is becoming more important. As buildings become increasingly complex and interconnected, we need skilled professionals who understand not only how individual systems work, but how those systems interact with each other, with the building as a whole and, most importantly, with the people who use those buildings.

DIGITAL INFRASTRUCTURE AND WHOLE-BUILDING THINKING

Another major trend shaping engineering globally is the rapid expansion of digital infrastructure. The growth of data centres is one of the defining engineering challenges of our time. As demand for artificial intelligence, cloud computing and digital services continues to increase, so too does the need for facilities that are reliable, resilient and sustainable.

These buildings require enormous amounts of energy and depend on highly sophisticated building services systems. They demonstrate the importance of taking a whole-building approach to engineering, because no system operates in isolation.

Mechanical systems, electrical infrastructure, controls, energy management, fire safety and vertical transportation all contribute to the performance of the building as a whole. The most successful projects are those where these disciplines work together from the earliest stages of design.

This principle applies across the entire built environment. The challenges we face today cannot be solved within individual disciplines alone. They require collaboration, shared knowledge and a willingness to look beyond traditional boundaries.

ELECTRIFICATION, ENERGY SECURITY AND LOW-CARBON BUILDINGS

Electrification is another global trend reshaping our profession. Countries around the world are transitioning away from fossil fuels, and buildings are becoming increasingly dependent on electrical systems and infrastructure.

This transition presents both challenges and opportunities. It requires careful engineering to ensure buildings remain resilient,

reliable and capable of meeting changing demands. It calls for smarter energy management, better system integration and a stronger focus on whole-life performance. Governments may be slow or reluctant to drive this change, but change often needs a catalyst.

The current focus on energy security may become one such catalyst. After the global economic crisis almost 20 years ago, the need for stringent cost management helped normalise everyday environmental behaviours, such as switching off lights and reducing printing. In a similar way, today's geopolitical pressures may encourage governments to prioritise energy security and accelerate localised renewable and sustainable energy production.

Engineers must be ready to provide practical solutions. For vertical transportation, this creates significant opportunities for innovation. Energy-efficient lift technologies, regenerative drives, intelligent controls and improved operational strategies all have an important role to play in reducing the environmental impact of buildings.

Every improvement matters. The transition to a low-carbon future will not be achieved through one single breakthrough technology. It will be achieved through thousands of engineering decisions, made every day, that collectively improve how buildings are designed, constructed, operated and maintained. That is why the expertise represented in this room is so important.

SKILLS, KNOWLEDGE TRANSFER AND THE NEXT GENERATION

Alongside technology and sustainability, every country and region is facing another major challenge: skills. I make a point of reading CIBSE Council reports from years past, and a report from 1926 identified skills shortages as one of the sector's biggest challenges. Nearly 100 years later, that concern remains familiar. As an aside, the same report also noted — with some surprise at the time — the first woman becoming a CIBSE member.

The future of our profession depends on attracting, developing and retaining talented engineers. Across the world, employers continue to highlight shortages of experienced professionals. This is not simply a recruitment challenge; it is also a challenge of knowledge transfer.

- How do we ensure that decades of expertise are passed on to the next generation?
- How do we create opportunities for young engineers to learn from those with specialist knowledge?
- How do we ensure our profession remains strong, capable and ready for future challenges?

The next generation of engineers will work differently. A widely cited projection by economic forecasters suggests that roughly 65% of children entering primary school today will work in jobs that do not yet exist. Engineers of the future will use technologies many of us could not have imagined earlier in our careers. But the foundations of great engineering remain unchanged: professionalism, competence, integrity, curiosity and a commitment to continual learning.

Those values will continue to define our profession.

THE SOCIETY OF VERTICAL TRANSPORTATION

That commitment to learning, recognition and collaboration is one of the reasons why the launch of the Society of Vertical Transportation last year represented such an important milestone for CIBSE.

The Society builds on the outstanding legacy of the CIBSE Lifts Group, which for many years has supported technical excellence and knowledge sharing within the vertical transportation community. Its creation recognises that vertical transportation is a vital and increasingly important discipline within the wider built environment, and it provides a dedicated international professional community for those working across the field.

The Society brings together individuals and organisations involved in the design, engineering, installation, operation and innovation of lifts, escalators and emerging vertical mobility systems. It provides opportunities for professional recognition, continuing professional development, collaboration and international engagement.

Most importantly, it creates a stronger platform for sharing expertise and shaping the future of the profession. It reflects CIBSE's belief that every specialist area of building services engineering deserves a strong professional voice and a community where knowledge can be developed, challenged and shared.

CIBSE GUIDE D AND THE VALUE OF SHARED EXPERTISE

The Society's launch also coincided with the publication of the latest edition of CIBSE Guide D: Transportation Systems in Buildings, which remains one of the most internationally recognised technical references for vertical transportation professionals.

The latest edition reflects how rapidly this sector is evolving. It covers passenger and goods lifts, escalators, moving walks, lifting platforms and emerging technologies, providing practical guidance across design, installation, commissioning, operation and maintenance.

Guide D represents more than a technical publication. It demonstrates the value of collective expertise. Guidance of this quality cannot be produced by one person or one organisation alone; it is the result of specialists from across the profession contributing their knowledge, experience and insight for the benefit of the wider engineering community.

That is collaboration in practice. It is also a reminder of the important role professional institutions play: bringing people together, capturing knowledge and ensuring that expertise is available to support better decisions.

COLLABORATION AS THE DEFINING MESSAGE

Collaboration is perhaps the most important message I want to leave with you today. At CIBSE, we describe ourselves as the honest broker of collaboration. That principle is central to who we are and how we operate.

The challenges facing engineering today are too complex for any one organisation, discipline or country to solve alone. Climate change, energy transition, digital transformation, building safety and skills shortages are interconnected challenges. They require us to work together, share knowledge and learn from one another.

Professional institutions have a unique responsibility to support that collaboration. We connect people, bring together expertise, develop standards, support competence and help ensure that engineering decisions are informed by evidence, experience and professional judgement.

That is how professions become stronger. That is how innovation accelerates. And ultimately, that is how engineering delivers greater benefits for society.

LOOKING AHEAD

Looking ahead, I believe the future for our profession is incredibly exciting. Buildings will become smarter. Cities will become more connected. Technology will continue to evolve at remarkable speed. The expectations placed upon engineers will continue to increase.

So too will the opportunities: to create buildings that use less energy, support health, improve safety, increase accessibility, strengthen resilience and genuinely improve the lives of the people who use them.

Vertical transportation will play a central role in that future. It will not simply be about moving people between floors; it will be about enabling buildings and cities to function efficiently, intelligently and sustainably. That makes the work represented in this room more important than ever.

CIBSE exists for one simple reason: to advance building engineering for the benefit of society.

Everything we do — our knowledge, guidance, professional standards, communities and partnerships — is focused on that purpose.

The Society of Vertical Transportation is a powerful expression of that ambition. It brings together expertise from across the world, strengthens professional excellence, supports innovation and creates opportunities for collaboration that none of us could achieve alone.



The buildings of tomorrow will not succeed because of one technology, one organisation or one profession. They will succeed because engineers work together, knowledge is shared, standards continue to evolve and we invest in the next generation.

They will succeed because communities like this one continue to challenge, inspire and support one another.

The future of vertical transportation is incredibly exciting, and with the expertise, passion and commitment represented here today, I am confident this profession will continue to lead the way.

Thank you for everything you do to advance this remarkable field of engineering. I look forward to seeing where the next chapter of vertical transportation takes us.



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ONE GLOBAL INDUSTRY, MANY RULEBOOKS:

LES PANEL EXPLORES STANDARDS, SAFETY AND THE FUTURE

Codes and standards may not sound like the most lively topic for a panel discussion, but at this year's Lift & Escalator Symposium they prompted plenty of debate.

With the title, "One Global Industry, Many Rulebooks: Are Lift and Escalator Standards Keeping Pace?" and chaired by Adam Scott, the panel brought together Rory Smith representing North America, TAK Mathews offering an Indian perspective, Micky Grover-White from Europe and Phil Hofer from Asia Pacific.

The discussion widened from the science behind individual requirements to a much bigger question: could we ever have one genuinely global lift standard?

In principle, there was plenty of support for greater harmonisation. Manufacturers working internationally would have fewer variations to design around, while consultants, regulators and building owners would all be speaking more of the same technical language. Indeed, ISO describes harmonisation as one of the aims behind the ISO 8100 series.

Putting that into practice is another matter.



Rory described the complexity of the US, where ASME A17.1/CSA B44 provides an important common basis, but individual jurisdictions adopt different editions and amendments. He pointed to California using an older edition with modifications, while New York has different requirements across the city, state, Port Authority and subway system.

TAK described a similar state-by-state picture in India. National standards exist through the Bureau of Indian Standards, but legislation and enforcement are not consistent. Some states have no statutory lift legislation, while others apply local requirements rather than the national standard.

Looking at Asia Pacific, Phil said ISO 8100 is gaining acceptance, although local deviations remain common. He gave the example of pit ladders still being required in some jurisdictions despite improved pit-access provisions. Countries can also retain their own

requirements alongside a harmonised core standard, with China's GB standards cited as an example, including defined ride-quality values.

Micky gave delegates an idea of just how much work goes into trying to close these gaps. He reported that more than 3,500 comments were received during the ISO 8100 public inquiry. The working group had to split into smaller task forces to deal with them within the required timescales, with substantive comments considered, documented and answered.

Adam encouraged delegates to take part when draft standards are opened for comment. A workable alternative, rather than simply an objection, can influence the final document. The discussion also recognised that attending standards meetings requires time and resources, making public comment an important route for wider industry participation.

Another interesting debate was the balance between prescriptive and performance-based standards. Rory argued that overly prescriptive requirements can restrict innovation and pointed to Europe's notified-body route for alternative designs that can demonstrate equivalent safety. TAK noted that performance-based requirements can be harder to apply where there is less engineering capability or field experience. India, he said, still relies heavily on prescriptive rules while allowing innovation where it can be properly justified.

The conversation then moved to a familiar industry problem – **what about the lifts already out there?**

A new lift may meet the latest requirements, but an older installation could continue operating for many decades. Micky highlighted EN 81-80, the European standard specifically intended to improve the safety of existing passenger and goods passenger lifts, and questioned whether its potential is being fully used. Philip summed up the growing importance of the modernisation market rather neatly: **"Mod is the new NI."**

Accessibility brought another perspective. Rory said US requirements generally lead to larger lift cars than are typical in Europe, taking account of wheelchair manoeuvrability and stretcher access. TAK said India has barrier-free guidelines, although developers can resist the larger shafts and cars they require.



The discussion also stressed that accessibility is wider than wheelchair use. Micky referred to temporary injuries, pregnancy, age, pushchairs and sensory impairments. Destination control, touchless interfaces, facial recognition and QR-based systems may help, but the right solution depends on the building and its users. What works for regular office occupants may be confusing in a public hospital.

The same theme carried into escalator safety. Engineering can reduce risk, but it cannot remove human behaviour from the equation. The panel discussed improved detection, monitoring and stopping systems, alongside the continuing importance of maintenance and passenger education.

Finally, attention turned to software, remote monitoring and cyber security. As lifts become increasingly connected, the benefits are obvious – but so are the new risks. Software updates, remote access and safety-related functions all need careful control and testing.

The session ended with a call for greater participation in standards development. One worldwide rulebook may still be some way off, but greater international collaboration – and more people from across the industry taking part in the standards process – can help bring those rulebooks closer together.

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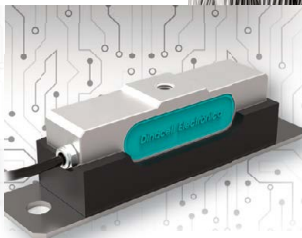
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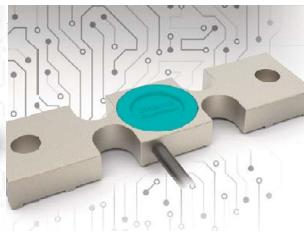
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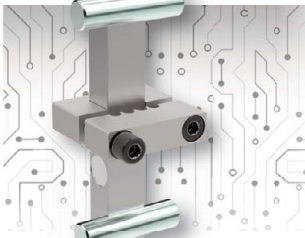
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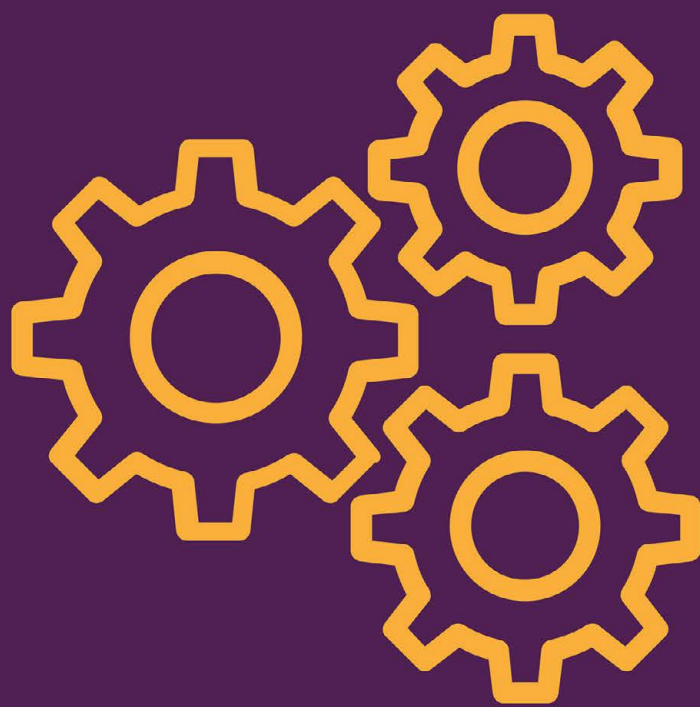
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DESIGNING VERTICAL TRANSPORTATION FOR MODERN AIRPORTS: PERFORMANCE, CAPACITY, AND PASSENGER-CENTRIC PLANNING

TERRY LAI KIN FUNG

Foster + Partners

Keywords: Airport vertical transportation; Passenger flow modelling; Terminal planning; Lift and escalator design.

Abstract: This paper presents a comprehensive framework for vertical transportation (VT) design in modern airports, where lifts, escalators, and moving walks form mission-critical infrastructure that directly influences passenger satisfaction, accessibility, and operational resilience. Airports are among the most demanding VT environments, required to absorb intense, scheduled surges – where a single wide-body aircraft may deliver more than 800 passengers within minutes – creating circulation pressures far exceeding those in commercial buildings.

Unlike predictable up-peak and down-peak conditions in offices, airports operate with continuously variable demand shaped by flight schedules, aircraft mix, immigration and security processing, and the growing complexity of multi-modal transfers. VT must therefore accommodate a highly diverse user group: business travellers, families with prams and heavy luggage, elderly and reduced-mobility passengers, airline crew, and staff operating across secure and landside zones.

A defining challenge is designing VT systems not just for people but for people-plus-luggage. Suitcases and trolleys consume significant car area, reduce effective capacity, slow passenger exchange, and alter flow patterns. Consequently, airport VT requires conservative loading assumptions and simulation calibrated to real passenger behaviour rather than commercial norms.

This paper emphasises the importance of early, integrated design between architects and engineers to ensure that circulation pathways, system sizing, and operational strategies are validated through reliable data and performance-based modelling. The framework incorporates airport-grade service KPIs, including waiting times, handling capacity, availability, and response targets. It also addresses accessibility and inclusivity, prioritising wide-door lift configurations, large car sizes, and alternatives such as inclined moving walks. Key resilience strategies – such as N+1 redundancy, dual power feeds, and generator backup for life-safety systems – are examined alongside sustainability measures including regenerative drives, auto-start/stop controls, and LED lighting. Finally, the paper explores digital integration, highlighting future trends such as Digital Twins and AI-optimized traffic flow.

1. INTRODUCTION

The design of vertical transportation systems for airport terminals presents a distinct set of engineering challenges that differ fundamentally from those encountered in commercial or residential buildings. Airports impose highly variable, schedule-driven demand profiles, complex circulation hierarchies, and stringent requirements for availability, safety, and resilience. In this context, VT systems function as capacity-critical infrastructure whose performance directly affects overall terminal efficiency.

However, current practice frequently treats airport VT as a downstream engineering exercise, developed after key architectural and systems-level decisions have been made. This sequential approach limits the ability of designers to optimise system capacity, redundancy, and passenger service levels, and it constrains the use of performance-based analysis during early design stages. The result is a persistent gap between theoretical handling capacity and observed operational performance.

This paper contends that early, integrated design involving VT specialists, architects, and MEP engineers is essential to closing that gap. Vertical circulation performance is strongly influenced by upstream design parameters – including level

geometry, structural constraints, fire zoning, power and control strategies – that fall outside the remit of VT engineering alone. Without early interdisciplinary coordination, system performance targets such as waiting time, throughput, and recovery from disruption cannot be reliably achieved.

Importantly, early integration also enables analytical tools – such as passenger-flow simulation and demand modelling – to be used as design drivers rather than post-hoc verification tools. By applying these methods at concept and schematic stages, VT systems can be sized against explicit, airport-specific service criteria, with assumptions that reflect real passenger behaviour and operational conditions.

The research presented in this paper proposes a performance-based framework for airport VT design that embeds interdisciplinary coordination, behavioural modelling, and measurable service metrics into early project delivery. By reframing VT as a system-level engineering problem rather than an isolated equipment solution, the paper contributes to a more robust and reproducible approach to designing lifts, escalators, and moving walks for modern airport environments.

2. PLANNING PRINCIPLES & PASSENGER FLOW

Airport passenger flows are characterised by highly variable, schedule-driven demand, with arrival and departure peaks generating significant short-duration surges. Vertical transportation design shall be based on schedule-linked population modelling and discrete-event simulation of lift cores, escalators, and moving walk systems.

System performance shall target average peak waiting times of 30–40 seconds and a five-minute handling capacity of 12–15% of peak population, ensuring smooth operation during peak flight banks.

Passenger behaviour assumptions shall be incorporated into modelling:

- Airside: ~80% escalator use / ~20% lift use
- Landside: ~80% lift use / ~20% escalator use

Lift car loading factors shall be adjusted to reflect luggage-related occupancy reductions, based on average benchmarking values compiled from a range of comparable international airport projects (see Table 1).

- Airside: 40–50%
- Landside: 15–25%

Table 1 Typical Car Loading Factors – Airport Benchmarking

	CPK Airport Poland	Tocumen Airport Panama	New Phnom Penh Intl. Airport	Kuwait Intl. Airport	Average
Airside lift	~50%	~40%	~60%	~50%	~40-50%
Landside lift	~20%	~15%	~15%	~25%	~15-25%

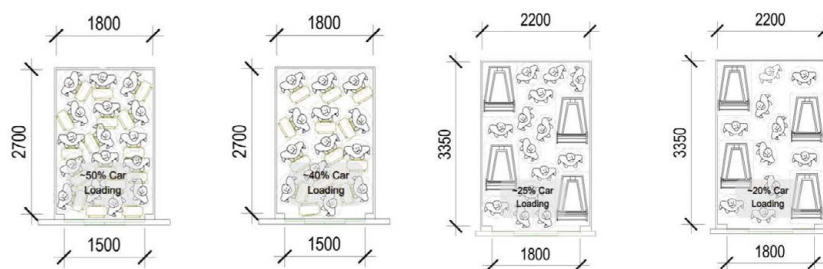


Figure 1 Typical layout of Airside lift 2500kg with 40-50% car loading factor (left) and Landside lift 4000kg with 20-25% car loading factor (right)

VT core locations shall be coordinated with architectural layouts and positioned at key decision points, with minimum ~6 m clear circulation space provided in front of lift and escalator banks to accommodate peak passenger flows.

Horizontal circulation shall be supported by moving walks (≈ 1400 mm pallet width, 0.65 m/s) arranged in series up to approximately 300–450 m. Longer distances shall consider automated people mover systems. Escalator provision shall be configured to suit demand, with double or triple banks in high-traffic areas.

System capacity shall be verified against five-minute demand intervals aligned with flight schedules. Design shall include segregation of landside and airside flows, accessible lift provision, and resilient power supply (e.g. dual feed with backup systems).

3. ACCESSIBILITY & INCLUSIVITY

Accessibility is a central requirement in airport design, driven by regulatory standards and shifting passenger demographics. The ageing population and increasing prevalence of passengers with reduced mobility necessitate inclusive VT systems that ensure equitable access throughout terminals.

Lifts serve as the primary vertical transport mode for passengers requiring assistance, including wheelchair users, families with strollers, and passengers with heavy baggage. Adequate cabin size (2,500–4,000 kg depending on landside/airside), door width (1,200–1,400 mm), and boarding areas (min $1.5 \times$ car depth) are critical to accommodate these needs effectively. Where feasible, dual-entrance (through-car) arrangements eliminate reversing and simplify flows for stroller and wheelchair users.

Passenger behaviour and demographic characteristics further influence the effectiveness of accessibility strategies. Escalators in infrastructure are used with some passengers standing on one side of the steps to allow others to walk and, in other cases, others standing or walking on both sides of the steps [1] [2].

Older passengers, for example, may avoid escalators due to balance concerns, while families and groups often prefer lifts to remain together during travel. In addition to fixed conveyance systems, supplementary mobility services such as wheelchairs and assist carts are frequently deployed to support passengers over long distances (see Figure 2). While these systems offer flexibility, they must be carefully managed to avoid conflicts with pedestrian flows and to minimise congestion within busy terminal areas. Ultimately, a multimodal approach that integrates various conveyance solutions is required to achieve a fully inclusive environment.

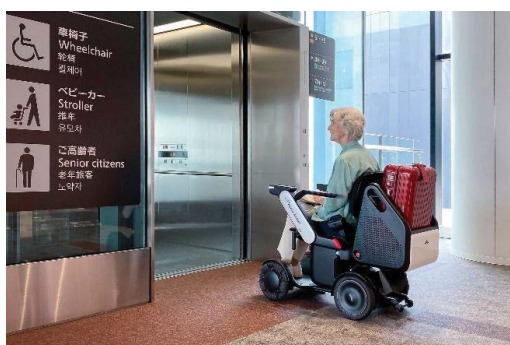


Figure 2 Autonomous Mobility Service transports passengers to their destinations and work in conjunction with a lift at Narita International Airport

4. SAFETY, RELIABILITY & REDUNDANCY

Airports demand a reliability posture closer to mission-critical infrastructure than commercial real estate. Specifications should set system availability and mean time to repair (MTTR) for priority assets, supported by remote monitoring and predictive analytics. Redundancy strategies include N+1 unit counts in critical transfer cores; Figure 3 shows an example of redundant escalator design. Dual electrical feeds with UPS and generator backup sized to run the life safety VT load – Firefighter / Evacuation lifts for ≥ 2 hours – and emergency features such as rescue drives that enable controlled descent to the nearest floor during power loss.

N+1 Escalator	
(90% population using Escalators)	
Escalator Location	Concourse - Platform
Concourse	5940
Platform	5940
No. of escalator	8
Type of Escalator	Heavy Duty
Angle of incline (°)	30
Vertical rise (m)	14
Step speed (m/s)	0.5
Step width (mm) - clear	1000
Intermediate Support	Yes
Number of flat steps	3



Figure 3 – N+1 Redundancy design and 3 flat steps escalator at CPK airport hub

Key safety risks include boarding and alighting incidents on escalators, falls caused by congestion or loss of balance, and misuse of equipment such as attempting to transport strollers or baggage carts on escalators. These risks are often exacerbated by unfamiliarity with the environment, highlighting the importance of both design and operational strategies to mitigate hazards. Safety bollards and 3-4 flat steps at both landings improve comfort and reduce incidents.

Reliability is equally important, as airport conveyance systems must function continuously to support uninterrupted passenger movement. Escalators, which operate constantly, are subject to higher wear and maintenance demands, whereas lifts typically operate intermittently but are more sensitive to service disruptions due to their role in accessibility. Maintenance planning must therefore account for lifecycle costs, operational uptime, and system resilience. As a result, the system must be designed with redundancy to maintain service during equipment outages and accommodate sudden surges in demand. Incorporating multiple units and designing for peak-period capacity ensures robustness and continuity of service. [3]

5. EQUIPMENT SELECTION: LIFTS, ESCALATORS & MOVING WALKS

The selection of appropriate conveyance equipment is a key determinant of system performance and must be aligned with passenger flow characteristics, spatial constraints, and operational requirements.

Lifts are indispensable for ensuring accessibility and accommodating passengers with heavy baggage, and their performance is influenced by factors such as cab size, door opening times, travel speed, and the number of stops served. Service quality is typically measured in terms of waiting time and journey efficiency, with well-designed systems achieving acceptable wait times even during peak periods.

Public passenger lifts in low-rise terminals are predominantly machine-room-less (MRL), which compacts machinery into the shaft overhead and simplifies coordination. Standardised cabin sizes and finishes (durable, vandal-resistant materials) ease procurement and lifecycle maintenance, while wide centre-opening doors (1200-1,400 mm), through-car configurations and large capacities (2,500 kg - 4,000 kg) support baggage trolley use cases.

Escalators, on the other hand, serve as the primary mode of vertical transport for most passengers due to their convenience and continuous operation. Escalators should have a 1,000 mm step width to accommodate passengers, balustrade heights around 1,100 mm for protection in open areas, 0.5 m/s speed and inclinations of 30° for comfortable boarding/alighting. The capacity is largely dependent on passenger boarding behaviour rather than theoretical throughput, with observed capacities in airport environments typically ranging between 50 and 60 passengers per minute. [4]

Moving walkways provide an effective solution for horizontal movement, particularly over long distances where walking alone would lead to fatigue and reduced passenger satisfaction. Although their impact on actual travel speed may be limited by user behaviour, they significantly improve perceived comfort and reduce the physical effort required for transit. Moving walkways reduce travel time for those who are walking/running, which helps to reduce anxiety for those in a hurry.

An effective VT strategy integrates these systems in a complementary manner, leveraging the strengths of each technology to address specific movement needs. Escalators are best suited for high-volume vertical flows, lifts for accessibility and specialised users, and moving walkways for extended horizontal connections. Table 2 summarises the typical selection criteria and key technical characteristics for lifts, escalators, and moving walkways commonly adopted in airport terminal developments.

Table 2 Summary Equipment Selection for Airport Terminals

Equipment Type	Typical Angle	Standard Width	Speed	Primary Selection Drivers
Lift	-	>1800mm	1.0-1.6 m/s	PRM compliance, heavy trolley handling, multi-level hub links
Escalator	30°	1000mm	0.5m/s	High-density inter-floor mass transit, security checkpoint feeding
Moving Walk	0° - 6°	1400mm	0.65m/s	Long concourses (>100m), passenger fatigue mitigation, speed-to-gate optimization

6. BACK-OF-HOUSE & STAFF VT STRATEGY

Unlike Front-of-House (FOH) systems, where the primary objective is to move large volumes of passengers efficiently and comfortably, Back-of-House (BOH) vertical transportation is driven by operational resilience, security segregation, and logistics efficiency. BOH lifts support a diverse range of users and cargo, including airport staff, airline crews, catering supplies, retail goods, baggage handling equipment, and oversized cargo. Consequently, lift selection is governed not only by traffic requirements but also by the physical characteristics of the transported loads, security zoning constraints, and the demanding operating environment of modern airport terminals. Typical BOH lift categories and their design characteristics are summarised in Table 3.

Table 3 – BOH Lift Type in Airport Terminals

Equipment Type	Capacity	Door Type & Width	Dimension Priority
Staff / Crew Shuttles	1600 - 2000kg	2-Panel Center Open (1100mm)	Standard wide or deep configuration
Catering & Retail Goods	2500 - 4000kg	4-Panel Center Open (1400 - 1600mm)	Deep configuration specifically dimensioned to accept standard pallet
Heavy Cargo / OOG Bags	5000 - 8000 kg	Heavy-duty vertical bi-parting or 4-Panel (>1800 mm)	Structural floor reinforcement to withstand highly concentrated wheel-point loads from motorized forklifts or heavy electric pallet jacks

In airport terminal architecture, BOH systems act as the invisible circulatory system keeping operations alive. A breakdown in BOH vertical transportation directly manifests as delayed flights, security breaches, or food service delivery failures.

The primary architectural constraint for BOH vertical transportation is the maintenance of strict regulatory borders. According to international aviation security standards, an airport terminal is divided into distinct zones that cannot cross-contaminate the public and secured areas. Staff and goods lifts must **never** inadvertently bridge a public level to a secured level without a controlled checkpoint interface.

If a BOH lift is required to physically serve both landside and airside levels, it should be configured as a dual-aspect lift with an access control system that activates landing calls and selectively enables landing door operation.

In addition, BOH lifts should be integrated with the physical interlock system. When the lift doors are open, the outer security corridor doors should remain electromagnetically locked.

7. WAYFINDING & ARCHITECTURAL INTEGRATION

Wayfinding and architectural integration can significantly influence the effectiveness of vertical transportation (VT) systems. Passengers naturally follow the most visible and intuitive routes; therefore, lifts, escalators and moving walkways should be located along straightforward circulation paths with clear sightlines from key decision points. Consistent architectural treatment, including signage, lighting and finishes, further reinforces route legibility throughout the terminal.

Strategically placing moving walkways within terminal corridors can help reduce minimum connecting times and support their consistent achievement during daily operations [5]. Generous decision plazas prevent crush conditions, support trolley manoeuvres and reduce cross-flows. Avoid routing general circulation corridors directly through lift lobbies or escalator landing zones; instead, position VT slightly off the primary traffic axis with ample forecourt space, with landside/airside segregation kept legible through barriers and glazing.

Digital wayfinding should complement physical wayfinding measures. Screens located near VT facilities can display real-time flight information, walking-time estimates and gate directions, with consistent terminology repeated in the terminal app and on overhead signage visible from 25–50 m away. Visibility and signage strongly influence passenger behaviour. Clear wayfinding encourages greater use of escalators and moving walkways, while prominent lift lobbies help direct passengers with trolleys and bulky luggage towards lifts, improving both safety and passenger flow.

Figure 4 illustrates key wayfinding principles for airport terminals. Straightforward paths with unobstructed sightlines enable passengers to identify their route and destination quickly, while prominent signage helps direct passengers with bulky luggage towards lift facilities.



Figure 4 Straightforward paths with clear sightlines to aid airport navigation (left); Prominent signage directing passengers with bulky luggage to lifts (right).

8. DIGITAL SYSTEMS, ENERGY & SUSTAINABILITY

Modern airport VT systems are data-rich and energy-aware. Group supervisory controls integrate with Building Management Systems (BMS) and lift monitoring platforms to provide centralised alarms, telemetry and analytics, as illustrated in Figure 5 (left). Predictive maintenance uses vibration, current, door-cycle and temperature data to forecast failures and schedule interventions during off-peaks, improving availability, while remote audio/video intercoms shorten rescue times and reassure passengers during incidents.

Energy efficiency is vital for lift systems. Regenerative drives capture descent/braking energy and feed it back to the building; smart standby modes dim lighting and slow speeds when idle, potentially saving 20–30% on energy consumption [6]. Sleep-mode functionality in escalators/moving walks preserves capacity without wasting power. Combined, these features contribute to green-building objectives and measurable operational savings, especially when paired with demand-responsive strategies such as remote check-in at parking/metro that shift loads upstream and reduce terminal congestion.

Looking ahead, digital technologies will further enhance VT operations. As shown in Figure 5 (right), digital twins can model and simulate terminal operations, enabling operators to evaluate the impact of disruptions and optimise dispatch logic across lifts, escalators, moving walks and baggage systems. AI-assisted capacity planning could dynamically adjust resources in response to flight schedules, security queue lengths and gate changes, helping airports maintain efficient passenger flows under varying operating conditions [7].



Figure 5 Examples of advanced airport VT management technologies: integrated BMS and lift monitoring platform for real-time system supervision (left); Digital twin model supporting simulation, capacity planning and operational optimisation (right).

9. CONCLUSION

This paper establishes a performance-based framework for vertical and horizontal transportation (VT/HT) design, reframing terminal conveyance from isolated equipment solutions into a system-level, mission-critical infrastructure. The intense, schedule-driven surges and the volumetric footprint of "people-plus-luggage" require a definitive departure from standard commercial design paradigms.

Peak passenger demand is typically derived from flight schedules, aircraft capacities, passenger load factors, and peak flight-bank overlaps. These profiles are assessed over five-minute intervals for VT analysis. Airport benchmarking and lift traffic planning practice indicate that a handling capacity of approximately 12–15% of the peak population within five minutes generally delivers acceptable waiting times and service levels.

To close the gap between theoretical handling capacity and real-world operational performance, VT planning must move upstream. Early architectural and engineering integration allows discrete-event simulation and demand modelling to act as design drivers rather than post-hoc verification tools. This ensures that terminal-level geometry, structural point-loading and security boundaries are optimised concurrently with equipment selection.

Looking forward, the next generation of airport terminal design will be defined by the convergence of sustainability and intelligence. Beyond the immediate energy savings provided by regenerative drives and automated standby controls, data-rich digital networks offer unprecedented operational control. By integrating smart telemetry into centralised Building Management Systems, operators can transition to predictive maintenance models that protect asset uptime. Ultimately, the deployment of predictive Digital Twins and AI-assisted capacity planning will allow terminals to dynamically recalibrate dispatch logic in real time, synchronising the terminal's physical circulation with the volatile demands of flight schedules.

REFERENCES

- [1] López, A., Tapia, A., & Seriani, S. Analyzing Escalator Infrastructures: A Pilot Study in Santiago Metro. Applied Sciences, 2023
- [2] Paul Davis, Goutam Dutta, Estimation of Capacity of Escalators in London Underground, 2002
- [3] IATA Airport Development Reference Manual 12th edition, 2022
- [4] National Academies of Sciences, Engineering, and Medicine, Airport Passenger Conveyance Systems Planning Guidebook (ACRP Report 67), Washington, DC, 2012.
- [5] Stefan Schwerdfeger, Nils Boysen, Dirk Briskorn, Konrad Stephan, Keep on moving: Optimized placement of moving walkways in airport terminals, Transportation Research Part B: Methodological, 2024
- [6] Ross Darcy, Elevator Energy Performance & Green Buildings, 2025 <https://www.futureliftservices.co.uk/blog/elevator-energy-performance-green-buildings>
- [7] Per Engelbrechtsen, The case for digital twins, Airport World, 2025 <https://airport-world.com/the-case-for-digital-twins>

BIOGRAPHICAL DETAILS

Terry L. K. Fung is a vertical transportation specialist at Foster + Partners, London. His work focuses on the integration of lift and escalator systems within complex infrastructure, with particular emphasis on airport design for CPK Airport Warsaw and King Salman International Airport Riyadh.

He has extensive professional experience in Hong Kong, including involvement in Third Runway System of Hong Kong International Airport, contributing to the development of large-scale aviation infrastructure and passenger-focused design solutions.

Terry holds a Masters degree from Hong Kong University of Science and Technology and is professionally accredited as a Chartered Engineer (CEng) with Institution of Mechanical Engineers (IMechE).



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THE SCIENCE BEHIND LIFT CODES & STANDARDS

RORY SMITH

Peters Research Ltd, UK

Keywords: Codes, Standards.

Abstract: Codes and Standards at first glance appear to be an arbitrary collection of rules, regulations, and dimensions. However, most codes and standards are based on basic safety principles, known risks, and science.

The safety fundamentals behind codes and standards in ISO/TR 1107-1 for traction lifts are presented.

The risks to be addressed, as well as the persons and objects to be safeguarded, as defined in EN 81-1, are reviewed. Although EN 81-1 has been superseded by EN 81-20 and EN 81-50, the abbreviated list of risks in EN 81-1 is still valid and easier to understand.

The science, mostly physics, and how it is applied are explained in simple terms.

How the risks, safety fundamentals, physics, and standards are applied to safety gears, brakes, and buffers are explored.

1. INTRODUCTION

During my first week in the lift industry, I was introduced to both the State of California Elevator Safety Orders and the City of Los Angeles Elevator Code.

California had no minimum pit depth. For flexibility, I was instructed to ask for a 3'- 11" (1,194 mm) deep pit. However, the City of Los Angeles required a minimum pit depth of 4'- 0" (1,219 mm). I asked why Los Angeles wanted an extra 1" (25.4 mm) and was told that both codes require a pit ladder if the pit is 4' or deeper, and Los Angeles wanted a pit ladder for their older inspectors.

For the next thirty-three years, I assumed codes were just a set of arbitrary rules that had to be followed to successfully get through an inspection. Then I took a course at the University of Northampton titled *Codes and Standards* and learned that there was science behind most of the standards [1].

2. RISKS TO BE SAFEGUARDED

EN 81-1 identifies the following risks that need to be addressed and mitigated [2]:

- a. shearing
- b. crushing
- c. falling
- d. impact
- e. trapping
- f. fire
- g. electric shock
- h. failure of material due to:
 1. mechanical damage
 2. wear
 3. corrosion

Additionally, EN 81-1 requires loads in the car and the following persons to be safeguarded:

- a. users
- b. maintenance and inspection personnel
- c. persons outside the lift well, the machine room and pulley room (if any)

3. ASSUMPTIONS

ISO TR 11071:2004 Comparison of worldwide lift safety standards Part 1: Electric lifts (elevators) states that the world's safety standards for lifts are based on a common set of assumptions about the following [3]:

1. Safe operation assured to 125% of rated load
2. Failure of electrical safety devices
3. Failure of mechanical devices
4. Imprudent acts by users
5. Neutralisation of safety devices during service
6. Car speed linked to frequency of mains (the frequency of the three-phase electrical supply)
7. Horizontal forces exerted by a person
8. Retardation

Each of these assumptions will be reviewed.

3.1. SAFE OPERATION ASSURED TO 125 % OF RATED LOAD

It seems very logical to assume that passenger lifts can be overloaded. The amount to which they can be overloaded with people is limited by platform area.

For example:

1. The maximum platform area permitted by EN 81-20 for a 630 kg passenger lift is 1.66 m² [4].
2. A 630 kg lift is rated for 8 passengers.
3. It is assumed that a typical passenger will have a mass of 75 kg and occupy 0.21 m² of cabin floor area.
4. Eight passengers would then require a platform area of 1.68 m² (8 * 0.21).
5. A 630 kg lift must be able to safely transport a 25% overload or 786 kg.
6. The additional 158 kg represents 2 additional passengers (2 * 75). In the example above, the lift can be seen to be fully occupied with 8 passengers. Therefore, it would be difficult for 10 passengers to enter this lift.

3.2. FAILURE OF ELECTRICAL SAFETY DEVICES

Electrical safety devices are typically homologated by a Notified Body or an equivalent organisation. Therefore, it is assumed that if properly manufactured, installed, maintained, and most importantly, inspected, they will function properly when needed.

3.3. FAILURE OF MECHANICAL DEVICES

Except in accidents involving suspension means or partial brake failure, mechanical components are assumed not to deteriorate to a hazardous condition before the need for replacement is detected. This applies when they are built and maintained in accordance with good practice and safety standards.

3.4. IMPRUDENT ACTS BY USERS

It must be assumed that users of lifts will misuse lifts and therefore, lift engineers should consider this in their designs.

3.5. NEUTRALISATION OF SAFETY DEVICES DURING SERVICING.

It is understood that service technicians must at times use jumpers to bypass door locks, etc. Jumpers can inadvertently be left in place when a lift is returned to service. To prevent this condition, BS EN 81-1: 1998 +A3:2009 requires a Landing and Car Door Bypass Device. The device is easier to use than a jumper, and the car will not run on automatic with the device enabled.

3.6. CAR SPEED LINKED TO FREQUENCY OF MAINS

Prior to the 1980s, many slow speed lifts used single or two speed AC motors. These motors were known as asynchronous motors or as squirrel cage motors, and operated at a speed that approximated a multiple of the supply frequency. The following equation can be used to define the motor speed in revolutions per minute (rpm) [5]:

$$N_s = \frac{60 \times f}{p \div 2} \quad (1)$$

Where: N_s represents synchronous speed in rpm

f represents frequency of the AC supply mains

p represents the number of poles of the motor

See Figure 1.

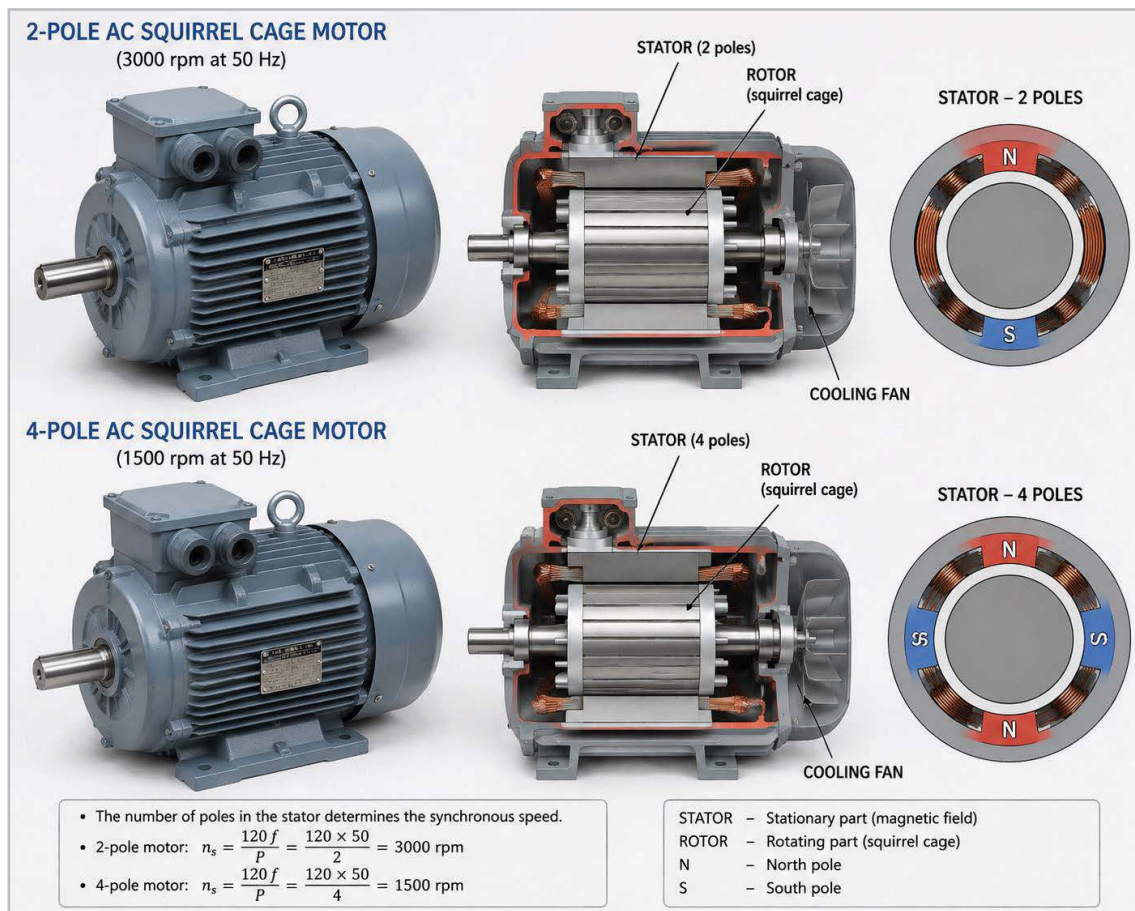


Figure 1 [6]

The actual speed of an asynchronous motor depends on the load [7]. If a fully loaded lift is going up, the motor rpm will be approximately 5% less than the synchronous speed. The same fully loaded lift travelling down will travel approximately 5% faster than synchronous speed.

If an AC machine is designed to operate at 1 m/s fully loaded in the up direction with 5% slip, then it will run in the down direction fully loaded at 1.1 m/s or 110% of rated speed.

The minimum tripping speed for governors is 115 % of the rated speed of a lift [4]. This speed prevents governors from tripping when the overspeed is due to the characteristics of a squirrel cage motor, whilst correctly sensing a true overspeed or loss of suspension.

3.7. HORIZONTAL FORCES EXERTED BY A PERSON

One person can exert either of the following horizontal forces at a surface perpendicular to the plane at which the person stands [3]:

- a. static force: 300 N.
- b. force resulting from impact: 1,000 N.

When one imagines a 75 kg person either leaning against a cabin wall or hoistway door, the 300 N force seems reasonable, as does an impact force of 1,000 N.

Static forces of short duration may be exerted by the simultaneous deliberate acts of several people located immediately adjacent to each other at an interval of every 300 mm along the width of surfaces such as doors and cabin walls.

For this reason, codes and standards have rigorous static and dynamic tests of entrance doors, cabin doors, and cabin walls [3, 8].

3.8. RETARDATION

People have been found to be capable of withstanding an average vertical retardation of 1g (9.81 m/s²), such as during an emergency stop of a lift. Additionally, higher transient retardations have also been tolerated successfully.

ISO TR 11071 states that historically, this 1g value is not been shown to be unsafe for a vast majority of people [3].

This retardation assumption applies to every device that retards the velocity of a lift in all the world's codes.

4. STANDARDS APPLICATIONS

The following are examples of how Codes and Standards address risks and persons to be safeguarded based on the assumptions previously detailed.

4.1. SAFETY GEAR, PROGRESSIVE

Risk: Impact, Falling

Persons to be safeguarded: Users

Assumptions: Retardation, Car speed linked to frequency of mains

Discussion: Progressive safety gears are required to bring a fully loaded car to a stop with an average retardation rate of between $0.2 g_n$ and $1 g_n$. The minimum safety application velocity is $1.15 v_n$.

The reason EN 81 specifies a retardation rate of between $0.2 g_n$ and $1 g_n$ is to accommodate an empty car and a fully loaded car. If a fully loaded car decelerates at $1 g_n$, then an empty car would decelerate at a significantly higher rate.

Example: Calculate the force required to decelerate a fully loaded lift with a capacity of 1,000 kg (Q) and an empty car weight of 1,700 kg (P) at a rate of $1 g_n$. Newton's Second Law of Motion states the following [9]:

$$F = ma \quad (2)$$

Where: f represents force in Newtons

m represents mass in kilograms

a represents acceleration in meters per second squared

g_n represents the gravitational acceleration or 9.81 m/s^2 .

In the case of a free-falling lift:

$$a = (g_n + k) \quad (3)$$

Where k represents the deceleration rate of the free-falling lift.

The retarding force in this case will equal $2,700 \times 19.62$, or 52,972 Newtons.

If the mass in the car is changed to 0 kg, then the total mass equals 1,700 kg, and if the retarding force of the safety gear remains 52,972 N, then the deceleration rate equals $2.18 g_n$.

Solving for the maximum retarding force that can decelerate the empty car at $1 g_n$ yields a value of 33,354N.

A retarding force of 33,354N would decelerate the fully loaded car at $2.54 g_n$.

The example shown here has been simplified for clarity. A real example would include rope and compensation masses, kinetic and potential energy dissipation, and other variables.

The EN 81 code gives a reasonable range of deceleration rates so both the fully loaded and empty car can operate safely considering a more complete and complex set of variables.

4.2. ENERGY DISSIPATION BUFFERS

Risk: Impact

Persons to be safeguarded: Users

Assumptions: Retardation, Car speed linked to frequency of mains

Discussion: Energy dissipation buffers are required to bring a fully loaded lift car or counterweight travelling $1.15 v_n$ to a stop at a deceleration rate of no more than $1 g_n$. The retardation requirement is based on the retardation assumption, whilst the velocity requirement is based on the car speed being linked to the frequency of mains assumption.

4.3. OVERSPEED GOVERNOR

Risk: Impact, falling

Persons to be safeguarded: Users

Assumptions: Retardation, Car speed linked to frequency of mains

Discussion: Overspeed governors have a minimum tripping speed of $1.15 v_n$. This is based on the car speed being linked to the frequency mains. A fully loaded car travelling down can exceed v_n .

The minimum tripping speed requirement is to avoid setting the safety gear whilst the suspension means are intact.

Overspeed governors have a maximum tripping speed of approximately $1.25 v_n$. This speed limit reduces the quantity of energy that must be dissipated by the safety gear and reduces the forces to which the lift equipment will be subjected.

The overspeed governor must be fitted with an electrical switch that will disconnect the hoist machine from the electrical mains and cause the mechanical brake to be applied. Whilst not a requirement of EN 81, this switch is commonly set at $1.15 g_n$.

4.4. MECHANICAL BRAKE

Risk: Impact, falling

Persons to be safeguarded: Users

Assumptions: Retardation, Safe operation assured to 125 % of rated load, Failure of material (partial brake failure)

Discussion: Brakes are required to stop and hold 125% of rated load with a maximum deceleration rate of $1 g_n$.

Two braking devices are required because it is envisioned that a partial brake failure can occur. A single mechanical brake must decelerate the car.

5. DISCUSSION

The components reviewed in the previous section safeguard passengers from a series of events, including loss of suspension, overspeed conditions, and failure to stop at terminal landings as follows:

- a. Loss of suspension: The governor detects a loss of suspension and activates the safety gear at $1.25 v_n$. The safety gear brings the car to a stop at a deceleration rate no more than $1 g_n$.
- b. Overspeed in the down direction, suspension intact: The governor detects the car speed is above 115% of v_n , and disconnects power to the motor and brake. The brake brings the car to a stop at a deceleration rate no more than $1 g_n$.
- c. Overspeed in the down direction with partial brake failure: The buffer brings the car to a stop at a deceleration rate no more than $1 g_n$.
- d. The car fails to stop at the lowest landing at a speed below 115% v_n : The buffer brings the car to a stop at a deceleration rate no more than $1 g_n$.

These components safeguard the passengers or goods inside the cabin from zero to 100% of capacity.

6. CONCLUSIONS

This paper has shown that codes and standards for lifts are not just a set of arbitrary rules that must be followed to successfully get through an inspection, but rather a set of standards that are based on risks to be mitigated and a group of time-tested assumptions.

REFERENCES

- [1] *Codes and Standards*, University College Northampton, Northampton (1999)
- [2] British Standards Institute. (2009). *BS EN 81-1:2009 Safety rules for the construction and installation of lifts - Part 1: Electric lifts*. BSI Standards Limited
- [3] International Standards Organization. (2004). *ISO TR 11071:2004 Comparison of worldwide lift safety standards —Part 1: Electric lifts (elevators)*
- [4] British Standards Institute. (2020). *BS EN 81-20:2020 Safety rules for the construction and installation of lifts – Lifts for the transportation of persons and goods - Part 20: Passenger and goods passenger lifts*. BSI Standards Limited
- [5] *Speed control of Induction Motor*. Available from: <https://www.eeeguide.com/speed-control-of-induction-motor/> last accessed: 23 May 2026
- [6] Figure 1. Comparison of 2-pole and 4-pole squirrel cage AC induction motors. Source: Author-generated using ChatGPT (OpenAI), 2026.
- [7] *Braking of Induction Motor*. Available from: <https://www.eeeguide.com/braking-of-induction-motor>. Last accessed: 24 May 2026.
- [8] ASME A17.1 (2022) Safety Code for Elevators and Escalators. ASME, U.S.A
- [9] Giancoli, D *Physics: Principles with Applications*. Prentice Hall, New Jersey, 2005

BIOGRAPHICAL DETAILS

Rory Smith is a Consultant at Peters Research Ltd. He has over 57 years of lift industry experience, during which he held positions in research and development, manufacturing, installation, service, modernization, and sales. His areas of special interest are Machine Learning, Operations Management, Traffic Analysis, dispatching algorithms, and ride quality. Numerous patents have been awarded for his work.



SILC 2026 brings global elevator experts to Spain to address new safety standards.

On 6 and 7 October, SILC (Santander International Lift City) once again brought together leading international experts to Cantabria, Spain to discuss the present and future safety challenges facing the lift industry. Organized by IMEM Lifts, the international congress focused on EU regulations, predictive safety, and cross-industry innovation.

As in previous years, the congress took place in two of the region's most emblematic venues, the Centro Botín in Santander, and the Pontifical University of Comillas.

Centered around the theme "Engineering Safety in Motion," this year's congress focused on the rapid evolution of European safety standards, predictive risk management, and cross-industry technological transfer.

Safety spans every stage of a lift's life cycle - from design and manufacturing to installation, maintenance, modernisation and daily use.

The first day opened with Wim Koster, President of the European Lift Association talking about "Data-Driven Safety: Building a Global, Transparent Framework for Protecting Elevator and Escalator Workers".

Nick Mellor, Principal Industry Adviser at LEIA, followed on the subject of "Safety of workers and users: the use of codes and standards".



Andrés Taboas, Director of Legislation & Standards at Otis Spain and Chair of UNE covered Key Aspects of the New Machinery Regulation (EU) 2023/1230, a detailed examination of the operational impacts stemming from the new EU Machinery Regulation 2023/1230, alongside broader international standardization updates.

Graham Baker Head of Vertical Transportation at Cundall, shared insights into how safety is integrated from the earliest stages of project development with a presentation titled: "Elevating Safety: Evacuation Lifts and EN 81-76 Revolution".

Paul Burns, Director of Vertical Transportation Design at D2E, addressed current and future challenges from a design and innovation perspective - "Blackout: An Update – Exposing the Hidden Risks of Battery Failure in Lift Passenger Emergency Systems".

The day concluded with an expert panel discussing "The Evolution of Safety in the Lift Industry and the Challenges Ahead".

The technical proceedings on Day Two concluded with a keynote address on risk management, team dynamics, and leadership under extreme conditions by Sebastián Álvaro, acclaimed journalist, author, and creator and director for 30 years of Spanish public television's landmark documentary series *Al filo de lo imposible* (At the Edge of the Impossible).

Thank you to Dave Cooper for supplying a picture of the familiar faces on the Expert Panel.

The **Lift Industry** Mental Health Charter

The Lift Industry Mental Health Charter

is an initiative which is focused on bringing together the lift industry to support mental health.

This includes all lift companies, lift consultants and lift suppliers across the lift industry and their employees. Working together to

support the people within the industry with their mental health will make the industry a safer and more supportive place to work.

1 in 5 have suicidal thoughts over the course of a lifetime

1 in 6 experience common mental health problems every week

1 in 4 experience mental health problems every year



Clear your mind,
You're not alone
Find help here!



www.liftmentalhealthcharter.com



TED BARKS

WITH THE LIFT INDUSTRY MENTAL HEALTH CHARTER

First Aid for Mental Health: Looking Beyond What We See

Petra Montalbano, Owner & Training Consultant at Petrain services is a committee member for the Lift Industry Mental Health Charter and she is giving Ted some time off as she writes for us for this edition.



I am proud to sponsor the Lift Industry Mental Health Charter. This industry and subject matter are very close to my heart, so I am honoured to serve as both the trainer for the Charter and a committee member.

Being brought up in the industry means I have a personal bias towards those who work in it and the craft of the industry. Even though I have never worked in it myself, my dad was a lift engineer for over 54 years before retiring, and he ran his own lift businesses.

Many of my paternal family are also in the trade. Due to my own struggles with my mental health over the years, and then losing my cousin, a lift engineer, to suicide, I feel extremely passionate about delivering training to those in this community.

Identifying mental health conditions

Where I think we find this so hard is that no two people are the same. When we remember that our mental health is simply the way we think, feel and behave, we can appreciate why signs and symptoms can be so hard to identify at times.

I have personally battled with anxiety since being diagnosed back in 2008 and, at times, have thought I had hidden my symptoms well from those close to me. Because of my own experiences, I thought I had a good sense of picking up when someone close to me wasn't quite themselves. However, losing my cousin was a stark reminder that the face of someone struggling is not always what we expect it to be.

Recognising signs is about noticing change. Someone struggling might be visibly upset. But they might also be the person making everyone laugh, turning up to work every day and seemingly carrying on as normal. They might become quieter, more irritable, withdrawn or unusually tired. They might stop engaging with colleagues or lose interest in things

they normally enjoy. Or perhaps their behaviour simply changes enough for somebody who knows them well to think, "That's not like them."

Providing advice and starting a conversation

"How are you?"

Three words we say several times a day because they are almost our autopilot response when we see someone and want to start a conversation. However, we often ask it knowing the autopilot response back will be, "I'm fine," and we all shuffle on with our day. There was no genuine desire to know how the other person was feeling.

Authentically asking is what it's all about, and it is something we discuss during my training courses. Being prepared and invested with not only your time but your emotions means that when you ask someone, "Are you okay?" or "How are you?", the person has an opportunity to respond honestly and know that you really do care.

We can be brilliant at having conversations about work, jobs, deadlines, customers and what we're doing at the weekend. But asking someone about their mental health can suddenly feel like we've stepped into unfamiliar territory. It doesn't need to be clinical or prescribed.

During our training courses, we discuss Mental Health First Aiders being there to listen, apply non-judgemental listening and signpost to appropriate options for help. We are not there to diagnose.

Stress

Stress is understood as excessive pressure put on ourselves by us or others. We all experience stress. A busy day, a difficult client or callout, a tight deadline or a particularly demanding project can all create pressure. Many people feel that a certain amount of pressure isn't necessarily a bad thing. However, the problem comes when the pressure doesn't switch off.

If you imagine a glass being held mid-air on the palm of your hand, with no support to your arm, eventually the burden of the weight will start to affect you. It's important that we don't compare people's experiences. What one person finds manageable might feel completely overwhelming to somebody else. I know from my own experiences that what might look like a perfectly manageable situation from the outside doesn't necessarily feel that way on the inside.

Drugs and alcohol

This is a subject that can be uncomfortable to talk about, but it is important that we do. Alcohol and drugs can have a complicated relationship with mental health - sometimes referred to as the chicken-and-egg analogy.

People may use substances socially, to relax, to cope with stress or because they feel they help them manage difficult emotions. But they can also have an impact on mood, sleep, behaviour and relationships.

It's very easy to make assumptions about somebody based on what we see. That's not what mental health first aid is about. It's about understanding that there may be more going on beneath

the surface and being able to approach a situation without immediately judging or labelling somebody. Sometimes the person who appears to be struggling with alcohol, for example, may actually be struggling with something else entirely. Understanding that connection is important.

First Aid for Mental Health action plan

As part of our training courses, we cover an action plan. The Lift Industry Mental Health Charter has also created its own, called LIFT. We ensured that our cards were wallet-sized, so you can carry one with you if you wish, knowing that in your back pocket you have a framework to work from and that can be incredibly helpful. It gives you somewhere to start rather than standing there thinking, "I haven't got a clue what I'm supposed to do here." It helps you consider what the person needs, what support might be appropriate and when it is important to involve somebody else. And that last part is really important.

It is also about calling things out and asking direct questions when you suspect someone is at significant risk of harm to themselves or others. We challenge this fear during our training courses, explaining that the myth of planting a suicidal thought into someone's head simply by asking the question is just that — a myth. For someone experiencing suicidal thoughts, being asked directly can actually provide an opportunity to talk openly, rather than making them feel that they have to carry those thoughts alone

First Aid for Mental Health in the workplace

For me, this is where the subject becomes particularly relevant to the lift industry. People spend a huge amount of their lives at work. We work with colleagues who might have been in the industry for decades, people who have just joined, people working on sites, people travelling between jobs,

people managing teams and people working independently. We might know each other's work inside out without necessarily knowing much about what is happening in someone's life outside of work.

And that's why workplace culture matters. Having a Mental Health First Aider is a great starting point, but it isn't the whole answer. Businesses also need to think about how they talk about mental health, how managers respond when someone says they're struggling, what support is available and whether people genuinely feel able to speak up.

But we always discuss the part employees play in building and supporting a positive workplace culture around mental health. It isn't just the responsibility of the business. Because sometimes supporting someone's mental health doesn't start with having the right answer. It starts with noticing, asking and being prepared to genuinely listen.



Find out more about the Lift Industry Mental Health Charter:

<https://liftmentalhealthcharter.com/>

<https://liftmentalhealthcharter.com/contact-us>

<https://www.petraintservices.co.uk/>



Today we're in the northwest of England, enjoying a stroll along the River Weaver in Cheshire, on our way to meet Micky Grover-White, Head of Technical at LEIA. We're looking forward to going behind the scenes of a Victorian boat lift, so, with no doors to close, let's find out more about our guest.

ELEVATOR PITCH

DOORS CLOSING, GOING UP...

I FIRST, TELL US A LITTLE BIT ABOUT YOUR JOB – WHAT'S YOUR MAIN AREA OF WORK?

I am Head of Technical at LEIA, which gives me a range of responsibilities, including assisting members with queries, ensuring that guidance is issued and up to date as well as working with Approved Bodies, HSE and the UK Government on key issues that may affect the industry.

I also manage the Quality and Technical, Safety and Environment and Personal Lifting Group committees and manage the Quality and Technical and Safety and Environment seminars.

A key part of my role is representing LEIA at various external organisations, including BSI, CEN, European Lift Association, Fire Service, CIBSE SoVT and SAFed.

WHAT WAS YOUR FIRST JOB AND HOW DID YOU GET TO WHERE YOU ARE TODAY?

I pretty much fell into the industry; I took on a one-week job in the late 90s with a small lift company, which turned into eight years! We worked all over the country and I learned so much, which set me up really well for becoming self-employed in 2006. A stint at a larger organisation allowed me to progress to Technical Manager and take on a Codes and Standards role, which led me to LEIA.

WHAT DO YOU ENJOY MOST ABOUT YOUR DAY-TO-DAY ROLE?

Standards development is my favourite part of the job. With a wealth of field experience, I have the knowledge and insight to guide the way standards are written, making sure they work in the real world. It's such a rewarding part of the job, knowing that I'm contributing to better ways of doing things.

WHAT DO YOU THINK THE MOST SURPRISING THING ABOUT THE LIFT INDUSTRY IS TO AN OUTSIDER?

What goes on behind closed doors – literally! Once the lift doors close, most people have no idea of the extent of engineering, design, equipment, technology, safety and innovation that gets them where they want to go – they press a button, the doors simply close and then open somewhere different.

WHAT THREE WORDS WOULD YOU USE TO DESCRIBE YOUR JOB?
Exciting, technical, never-ending.

WHAT'S THE BEST PLACE YOU'VE EVER VISITED AND WHY?

It would have to be a toss-up between the Great Barrier Reef and Mexico. Both are brilliant for diving and seeing wildlife. I visited the Great Barrier Reef by myself, but I took my partner and kids to Mexico and it was an incredible experience seeing the most beautiful sea creatures – stingrays, turtles – just stunning.



WHAT FICTIONAL TV SHOW WOULD YOU LIKE TO SPEND SOME TIME LIVING IN AND WHY?

I think it would have to be The Big Bang Theory, I'd love to sit on the couch chatting with Sheldon Cooper, it would be fascinating!

IF YOU COULD ONLY DRINK ONE DRINK FOR THE REST OF YOUR LIFE, WHAT WOULD IT BE?

Squash. Orange or blackcurrant, nothing fancy!



WHO WOULD YOU SWITCH PLACES WITH FOR ONE DAY?

My dad died when I was two, so I'd love to trade places with anyone who knew him. It would be incredible to know what his voice sounded like and amazing to just hear some stories about him.

AND FINALLY, IF YOU HAD TO CHOOSE YOUR FAVOURITE LIFT, ANYWHERE IN THE WORLD, WHICH ONE WOULD IT BE?

There are too many to choose from! But I am biased towards larger lifts for unique loads, so I think the Anderton Boat Lift in Cheshire would be my choice, it's one of only two working boat lifts in the UK and has a fascinating history.

It was designed by Edwin Clark in 1875 to transfer boats and barges between the River Weaver and the Trent and Mersey Canal across a height of 50 feet and was in operation for over 100 years until it closed in 1983 due to corrosion. However, it opened to the public again in 2002 after a huge renovation project. More recently, the lift is now undergoing some work to repair and modify the

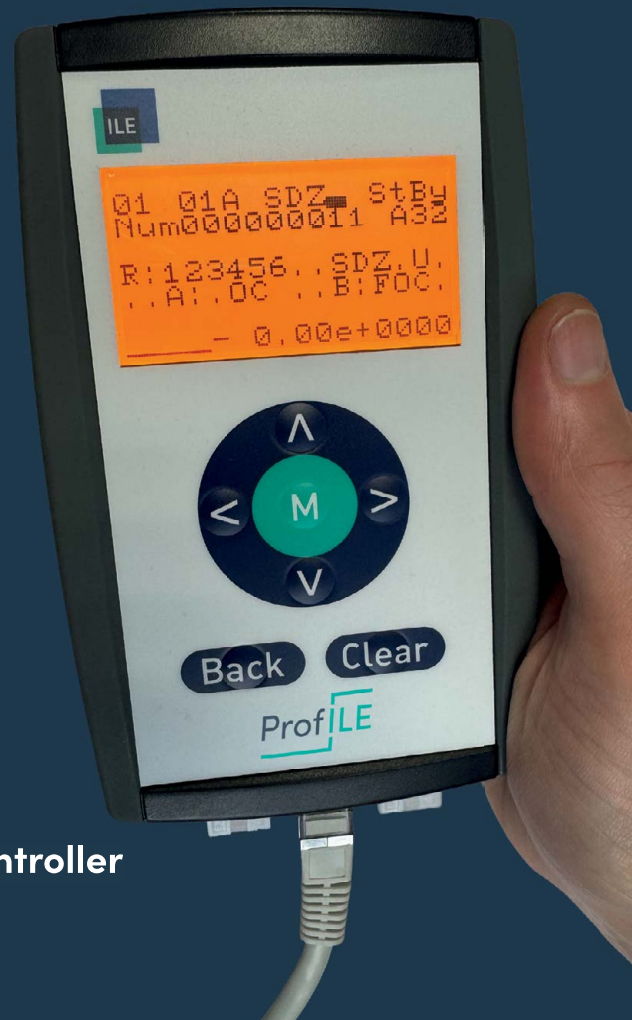
caisson gate lifting mechanisms, and will hopefully reopen again in 2027.

What a great piece of history, on its way to being revived once again! A huge thank you to Micky for sharing his thoughts with us. You can find out more about LEIA and their work here.

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