

Managing Director & Chief Executive Officer's New Year Message

■ Page 2



FEATURED PROJECTS

First Full EPC Project in Brunei ■ Page 4 | Innovation and Progress Keppel Sakra Cogen Project Nears Completion ■ Page 5 | Progression towards Combined Cycle Phase in BHCCPP-1 Project | Newly Awarded Contract for Amiral Cogeneration ISPP ■ Page 6 | A Successful Delivery of Project Aurora ■ Page 7 | Glow Energy Launches Fast-Track Admin Building and Workshop Project in Rayong ■ Page 8 | Petronas LNG-L600 Project in Pengerang ■ Page 9

INSIDER SPECIAL

New Year Message ■ Page 2 | Launch of Career Development Program 4/2025 ■ Page 11 | JML Turns 25: A Journey of Dedication and Innovation ■ Page 12 | Breathe Easy: Decoding Scents ■ Page 14 | How Your Diet & Lifestyle Influences the Risk of Cancer ■ Page 16 | Running Headfirst into a New Chapter ■ Page 18

JAN 2026



RISE TO THE CHALLENGE



Managing Director & Chief Executive Officer's New Year Message 2026

As we welcome 2026, I would like to extend my sincere appreciation to every member of the JEL Group. Each year brings its own set of challenges and opportunities, and 2025 was no exception. Yet what continues to define us is not the difficulty of the journey, but the strength, discipline, and agility with which we move forward together.

This past year, we advanced our digital transformation with the transition from SAP ECC6 to S/4 HANA. This initiative is more than a technological upgrade – it reflects our commitment to modernising the way we work, strengthening our network security, and building a more resilient and agile Group. As our business grows in scale and complexity, this transformation will play an increasingly important role in supporting our long term success.

Across the Group, we achieved meaningful progress and reached several important milestones. I would like to commend the teams behind the successful commercial operation of the PacificLight Power 100 MW Fast Start Ancillary Service Project and the Aurora 130 MW CCGT Power Plant for NUR Generation, which achieved 487,450 and 2.95 million safe manhours respectively. I am also pleased to share that the newly awarded BPS 120 MW CCGT Power Plant in Brunei Darussalam will be our first full turnkey EPC undertaking in the country, marking a significant expansion of our regional presence. In addition, we secured new projects in Thailand for the Administration Building and Workshop for Glow Energy, as well as the Amiral Cogeneration 475 MW ISPP in Saudi Arabia.

I would also like to congratulate our colleagues at JEL Maintenance Pte Ltd on reaching their 25th anniversary milestone. Your dedication has strengthened our maintenance capabilities and reinforced our position as Singapore's leading solar EPC service provider. In 2025 alone, the team secured 38.69 MWp of new solar projects and successfully delivered 23.49 MWp. These achievements reflect the growing confidence our clients place in us and our commitment to advancing sustainable energy solutions across the region.

As we look ahead, I want to emphasise the top priority that will shape our performance in the years to come: strengthening our engineering capabilities and management and elevating our project execution standards. These are not abstract aspirations – they directly influence our profitability and have a profound impact on cash flow. Strong and organized engineering produces robust solutions that uphold reliability and performance throughout a project's lifecycle. Equally, strong execution ensures that we deliver on time, within



budget, and with the quality and safety our clients expect. Safety must remain at the core of everything we do – from design and planning to construction and commissioning. It is not simply a requirement, but a responsibility we uphold to protect our people, our partners, and the communities we operate in. When these pillars are strong, financial performance follows.

In 2026, let us approach our work with renewed discipline and clarity. Every calculation, every drawing, every decision, and every site activity contributes to our overall performance. Excellence in engineering, execution and safety is not the responsibility of a select few – it is the responsibility of all of us.

As the Group continues to grow, I encourage each of you to make full use of the resources available to build the skills and capabilities that will shape the next chapter of your career. You are our greatest strength, and your development fuels our progress as one JEL Group. To the fourth batch of our Career Development Program participants who have just begun their learning journey, I look forward to seeing your growth and contributions. I hope you seize this invaluable opportunity to ask, learn, and challenge yourselves.

With these priorities in mind, I am confident that the JEL Group is well positioned to learn from past experiences, deliver strong results, and capture new opportunities. With our headquarters in Singapore, supported by a robust regional network and the collective strength of our people, we will continue to deliver value to our clients and uphold the reputation we have built over decades.

On behalf of the management team, I extend my heartfelt thanks to our clients, partners, subsidiaries, and every member of the JEL Group. Your trust, collaboration, and dedication have been essential to our success.

I wish you and your families a healthy, fulfilling, and prosperous New Year. May 2026 bring renewed purpose, continued growth, and shared success for all of us.

Koichi Watanabe
Managing Director & Chief Executive Officer
January 2026

First Full EPC Project in Brunei Building a 120 MW CCGT Power Plant



The BPS 120 MW Combined Cycle Gas Turbine (CCGT) Power Plant is a major infrastructure project underway at Berakas Power Station in Brunei Darussalam, developed and owned by Berakas Power Company Sdn Bhd, a state-owned enterprise.

Conceived with foresight to support Brunei's increasing energy needs, the project leverages Siemens Energy's highly efficient and proven SGT-800 gas turbines. The plant will operate in a 2-2-1 configuration, comprising two gas turbines, two heat recovery steam generators (HRSG), and one steam turbine.

The Engineering, Procurement, and Construction (EPC) contract was signed on 25 April 2025 between Berakas Power Company and Jurong Engineering Limited (JEL). Following the issuance of the Notice to Proceed (NTP) on 30 May 2025, a groundbreaking ceremony was held on 25 September 2025. This project marks JEL's first full EPC engagement in Brunei and is scheduled for completion within 27 months from the NTP date.

Procurement activities are progressing steadily, with purchase orders already placed for the gas turbines, HRSGs, steam turbine,

and other equipment. Soil investigation work has been completed, and the first phase of thermal conductivity and soil resistivity testing is ongoing. Site hoarding works have also been finalized.

JEL is actively engaging with governmental authorities and consultants to secure all necessary permits and licenses, ensuring regulatory compliance and uninterrupted progress. Engineering development currently stands at 20.2%, while procurement has reached 29.7%. Construction efforts are focused on foundational and site preparation activities such as the erection of the temporary site office.

To date, the project has recorded 66,320 safe man-hours without lost time injury, underscoring JEL's commitment to safety and operational excellence.

The collaboration between JEL's EPC expertise and Siemens' advanced turbine technology is expected to deliver a facility that sets new standards for energy efficiency in Brunei. Upon completion, the BPS CCGT Power Plant will stand as the most efficient power generation facility of its class in the country, reinforcing Brunei's energy infrastructure and future readiness.



120 MW
Power Capacity



Innovation and Progress Keppel Sakra Cogen Project Nears Completion

The Keppel Sakra Cogen (KSC) Project – a 600 MW Advanced Gas Turbine Cogeneration Combined Cycle Plant in Singapore – is entering its final stretch, marking a significant milestone in the nation's energy landscape. Since the contract signing on 30 August 2022, the consortium led by Jurong Engineering Limited (JEL) and Mitsubishi Power Asia Pacific Pte Ltd (MPW-AP) has advanced steadily, achieving 95% overall progress as of September 2025.

Procurement and shipping activities have wrapped up, and the GSUT Power Back Feed was successfully executed on 2 June 2025. A major milestone followed on 3 October 2025 when the gas turbine was successfully fired for the first time. This milestone is particularly significant, as it marks the ignition of Singapore's first hydrogen-ready, state-of-the-art J-class gas turbine, supplied by MPW-AP. The fusion of Mitsubishi Power's advanced turbine technology and JEL's construction expertise, alongside everyone involved in the Keppel project, made this historic achievement possible.

Now in its commissioning and testing phase, the commissioning team will be focused on completing the remaining critical systems in the coming months. These efforts are essential to ensure the plant's readiness for full operation and regulatory compliance. The journey through engineering, procurement, and construction has been challenging, with rigorous regulatory requirements and complex technical demands. Yet, the teams at MPW-AP and JEL have remained resolute, driven by a shared commitment to excellence. Their sights are now set on securing permits like Temporary Fire Permit and Temporary Occupation Permit.

Throughout, safety has been a cornerstone of the project's execution, with JEL's site workforce recording an impressive 1,089,257 safe man-hours as of September—a testament to the disciplined and safety-conscious culture maintained on-site.

Revolutionizing Steel Column Erection with Tatakata System

One of the standout innovations during construction was the adoption of the Tatakata-BASE system for turbine building column erection. Traditionally, this process relies heavily on wire ropes and large crews, but the Tatakata system introduced a smarter, safer, and more efficient approach. Positioned between the foundation and the column base plate, the system allows columns up to 25 meters high to be adjusted



600 MW
Power Capacity



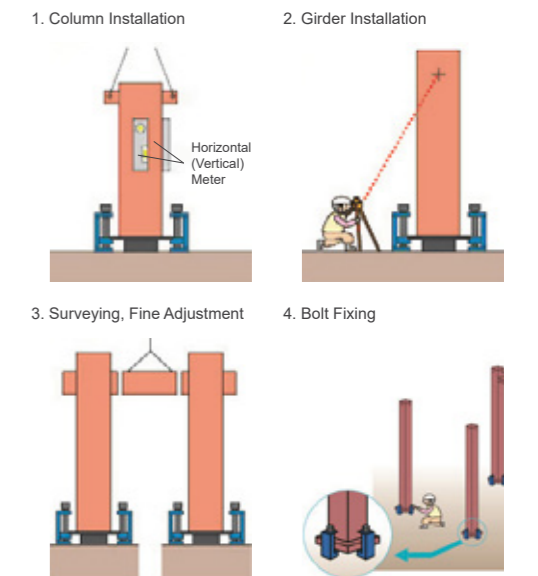
1.09 million
Safe Man-hours without LTI



and erected with remarkable accuracy. It enables columns to stand independently and provides a smooth adjustment mechanism to correct misalignments and ensure verticality. The benefits have been transformative: enhanced safety through the elimination of wire ropes, faster installation, precise alignment for long-term structural integrity, and reduced resource requirements leading to cost savings. This innovation exemplifies how the KSC team is setting new benchmarks for construction practices in Singapore.

The Keppel Sakra Cogen Project is more than a power plant – it is a symbol of innovation, resilience, and the future of sustainable energy. With completion in sight, we celebrate the achievements thus far and look forward to the successful commissioning and handover of this transformative facility.

Wireless Erection Method (Source: TECHNOS Co., Ltd.)



Progression towards Combined Cycle Phase in BHCCPP-1 Project

The Batu Hijau Combined Cycle Power Plant-1 (BHCCPP-1) project has advanced significantly since its commencement in 2022 when PT Amman Mineral Nusa Tenggara (AMNT) awarded contracts to Jurong Engineering Limited (JEL) and PT Jurong Engineering Lestari (PTJEL) for the landmark development of a 2 × 225 MW gas-based combined cycle power plant in West Nusa Tenggara, Indonesia.

In May and June 2024, units #11 and #12 successfully completed performance tests and reliability runs respectively, achieving commercial operation status under the open cycle phase. Both units were issued GTG Commissioning Certificates and are currently under warranty, enabling AMNT to export power to its smelter plant, depending on load demand.

A critical milestone was reached on 20 September 2025 when the plant received LNG gas to commence hot commissioning activities. The remaining three out of four gas turbine (GT) units were successfully commissioned for simple cycle operation,



with the last remaining undergoing performance testing and reliability run. Block 2, which houses 3 of the GTs, is now undergoing steam blow processes and will soon proceed to hot commissioning of the steam turbine unit under combined cycle operation.

Under Block 1, GT unit 11 (dual fire) has been successfully commissioned with gas, while GT unit 12 is currently in the process of gas conversion commissioning.

By the end of October 2025, the project team reached an outstanding safety milestone – 9.7 million man-hours without any lost time injury. This achievement reflects

the unwavering focus on rigorous safety standards and disciplined work practices across the site.



9.7 million
Safe Man-hours without LTI

The BHCCPP-1 project continues to move toward full combined cycle operation, reinforcing AMNT's vision for reliable and sustainable power generation in Indonesia.

A Successful Delivery of Project Aurora JEL Group's First EPC Project in Malaysia

Project Aurora marks a significant achievement for Malaysia's energy landscape and a proud milestone for JEL and EESB. The project was developed by NUR Generation Sdn Bhd—an independent power utility provider responsible for supplying electricity to the Kulim Hi-Tech Industry Park (KHTP) in Kedah, Malaysia.

Designed as a 130 MW Combined Cycle Gas Turbine (CCGT) plant, Project Aurora features two Siemens SGT-800 gas turbines, two heat recovery steam generators (HRSGs), a Siemens SST-300 steam turbine, and an air-cooled condenser (ACC), along with the associated balance of plant. The development was executed in two phases: Phase 1 involved the installation of gas turbines GT#1 and GT#2 operating in simple cycle mode with bypass stacks, while Phase 2 transitioned the facility into combined cycle operation with the integration of the steam turbine and HRSGs.

JEL was responsible for plant engineering and the supply of major equipment, while EESB managed the procurement of locally sourced items, civil works, mechanical and electrical installation—including the extension of the 132 kV switchyard—as well as startup, testing, and commissioning of the facility.



The first gas turbine was successfully commissioned in open cycle mode on 31 August 2024, followed by the second on 21 November 2024. After the combined cycle commissioning and completion of required performance tests, the plant entered commercial operation on 15 July 2025. During which, the new Water Treatment Plant (WTP) was considered to be commissioned successfully. As of 15 July 2025, the formal handover was achieved with the issuance of Taking Over Certificate (TOC) by the owner.

By the conclusion of Project Aurora, JEL and EESB had attained 2.95 million safe man-hours without a single lost time injury.

This accomplishment reflects the disciplined and consistent execution and adherence to safety practices upheld across the site.

As JEL's first full EPC undertaking in Malaysia, Project Aurora underscores the company's technical expertise, project management capabilities, and reputation for excellence in executing complex power plant solutions across the region. Beyond that, it stands as a powerful testament to the close collaboration between JEL and EESB, and the unwavering dedication, resilience, and hard work of every individual who contributed to this achievement.



Newly Awarded Contract for Amiral Cogeneration ISPP

On 30 April 2025, JEL was awarded a contract for the Amiral Cogeneration Independent Steam Power Plant (ISPP) project, signifying our entry into the Saudi Arabian market.

Located in Jubail, Saudi Arabia, the Amiral Cogeneration ISPP is a 475 MW and 452 tph cogeneration facility designed to supply reliable power and steam to the SATORP Amiral Petrochemical Complex. This strategic development supports Saudi Arabia's broader goals for industrial expansion and energy efficiency.

The plant is owned by NAJIM Cogeneration Company, a Saudi entity formed by Abu Dhabi National Energy Company TAQA and JERA, under a 25-year build-own-operate contract. The facility will feature

a Mitsubishi M501JAC hydrogen-ready combined-cycle gas turbine, engineered for future carbon capture and hydrogen co-firing – underscoring a strong commitment to sustainability and innovation.

JEL's scope encompasses mechanical and piping erection for one Heat Recovery Steam Generator (HRSG), installation of one Gas Turbine and Generator and one Steam Turbine and Generator, Balance of Plant equipment including Auxiliary Boiler, painting touch-ups, and insulation for Steam Turbine casing, HRSG drums, and tanks.

Establishing our presence in Saudi Arabia through our subsidiary, JELO, posed unique challenges – from navigating manpower visa requirements to sourcing construction equipment and tools. Yet, with only a few

key staff mobilized in July, our newly formed team rose to the challenge. They swiftly set up site operations, secured vendors, and coordinated manpower from both overseas and locally.

In mid-July, construction activities officially commenced, followed by the successful first HRSG casing lift in August. Another major milestone was achieved at the start of October with the lifting of the 410-ton Auxiliary Boiler HRA – the heaviest piece of this module.

As the Amiral Cogeneration ISPP project continues to progress steadily, our team remains fully committed to completing the mechanical works within schedule by September 2026, while upholding the highest standards of quality and execution.





Glow Energy

Launches Fast-Track Admin Building and Workshop Project in Rayong

Glow Energy Public Company Limited has embarked on the construction of a new Administration Building and Workshop within its Phase 2 Power Plant at the Map Ta Phut Industrial Estate in Rayong, Thailand. The project, awarded on 19 June 2025, is a strategic development aimed at enhancing administrative and operational capabilities for GPSC, a long-standing client of JEL and TJEL.

The new facility is being built on the former site of Gas Turbine 1A, which was fully demolished by the Owner prior to the project's commencement. The cleared site was officially handed over to TJEL at the start of the project, setting the stage for a 10-month fast-track timeline targeting substantial completion by 31 March 2026.

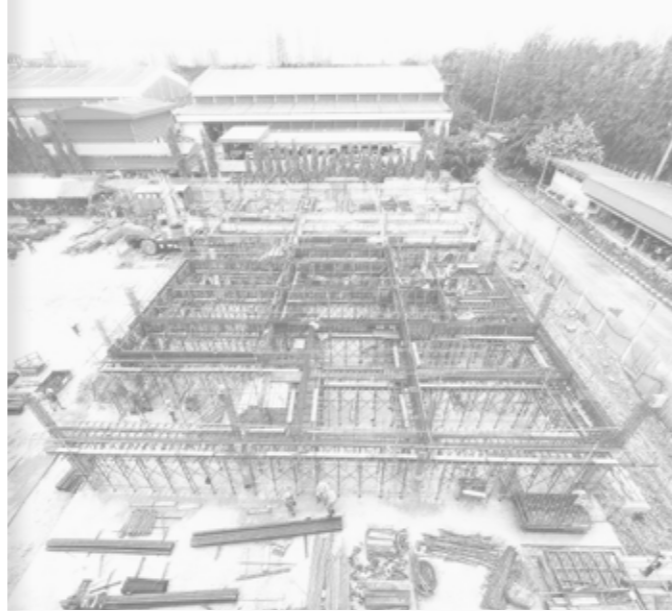
The two-story complex will span a total usable area of 1,663 sqm and will house a range of functional spaces, including co-working areas, offices, outage and safety rooms, a laboratory, a warehouse, and more.

The scope of work ranges from comprehensive engineering to procurement, construction to commissioning.

Despite early challenges posed by underground obstructions which initially hindered pile penetration, the team responded with a multi-pronged strategy. This included reviewing outdated as-built drawings, conducting detailed site surveys, adjusting foundation designs, and modifying piling techniques and equipment. These efforts enabled the successful installation of 174 Jack-In Piles ahead of the 48-day schedule.

Progress has been swift. The first pile was installed on 20 June 2025, and all civil, architectural, and sanitary design works have been completed. Structural components for both the ground and second floors have also been installed ahead of plan, marking a significant milestone in the construction phase.

As the project advances, TJEL remains committed to delivering a high-quality facility that meets GPSC's operational needs and upholds the longstanding trust between the companies.



Petronas LNG-L600 Project in Pengerang

At Pengerang, Johor, the LNG-L600 SOE Project managed by Air Products Malaysia Sdn. Bhd., spanning both greenfield and brownfield scopes, continues to advance with impressive momentum. Awarded in April 2025, the civil works package is scheduled for completion by February 2026.

The scope of work is extensive and technically demanding, encompassing civil and mechanical construction across the site. From foundational groundwork and building construction to the installation of sophisticated mechanical and electrical systems, the project integrates structural steel framing, sewerage and drainage networks, paving, earthing, street lighting, and fire water pipeline installations (U990EL & U990P). Together, these elements form the backbone of a modern, secure, and efficient LNG terminal.

Despite the scale and complexity, progress has advanced ahead of schedule, an assuring sign of the team's coordination and dedication. In the greenfield zones, several milestones have already been reached. Tanks were completed ahead of schedule in early August and handed over to the tank contractor by late September. The MCC Building, which houses the electrical room, has its main structure finalized, with finishing works completed in mid-November.

Foundation works at the Piperack and Cold Box Area are progressing well, with full completion targeted for mid-December.

Till date, greenfield civil works have reached a 61.75% completion rate—an impressive 8.8% ahead of schedule, translating to a lead time of approximately three to four weeks.

While the greenfield efforts have been smooth, the brownfield segment has encountered challenges, particularly with piling operations. Some piles failed to reach their intended depth, prompting a shift to a pre-boring method initiated in early September. This adjustment introduced delays, but the team responded swiftly by revising schedules and collaborating closely with engineers to regain lost time. Current priorities include finalizing architectural finishes, completing M&E installations, and wrapping up all underground fire water systems by year end.

Looking ahead, the project remains firmly on course. The greenfield section continues to set the pace, and recovery strategies for the brownfield works are actively underway. With strong collaboration between civil and M&E teams, the Petronas Project is steadily progressing toward completion, poised to fulfill its vital role in supporting Malaysia's energy future.



JEL Group

Digital Transformation Updates

S/4HANA Go-Live Milestone



We are thrilled to announce a major milestone in JEL Group's digital transformation journey: the successful go-live of SAP S/4HANA Phase 1 for our Singapore entities – JEL, JELO, and JMLS. This marks the completion of our first wave of migration from SAP ECC6 to S/4HANA.

This transition is far more than a technical upgrade—it's a strategic evolution in how we operate as a Group. SAP S/4HANA provides a future-ready ERP platform, built to support smarter decision-making, enhance collaboration, and drive operational excellence across the business.

What S/4HANA Brings to JEL Group

The adoption of S/4HANA unlocks a suite of powerful capabilities:

- Streamlined operations that reduce complexity and manual effort, empowering employees to focus on value-added activities.
- Integrated reporting and analytics that centralize financial and operational data into one platform, now enhanced with AI-driven insights for faster, smarter decision-making.
- AI-enabled automation and predictive capabilities that anticipate trends, optimize processes, and improve overall efficiency.
- Stronger compliance and governance features, ensuring alignment with regulatory and audit requirements.

Phase 2: Expanding to Malaysia

The journey does not stop here. With Phase 1's successful launch, we are now advancing into Phase 2, which focuses on our Malaysia entities – EESB, JMLM, PPSB, JELB. This phase is already underway and will deepen regional integration, harmonize processes, bringing forth stronger collaboration across the Group.

Expressing our Appreciation

We would like to express our heartfelt gratitude to our Management, project teams, business users, and our colleagues for their dedication and commitment in making Phase 1 a success. We recognize the long hours, dedication, and problem-solving spirit that went into ensuring a smooth transition. We further thank everyone who has contributed in one way or another to this achievement. Your continued support is crucial as we progress toward Phase 2 and beyond.

Shaping JEL Group's Future with S/4HANA and AI

The successful go-live of S/4HANA Phase 1 is a catalyst for innovation and will allow us to deliver even greater value to our clients, partners and stakeholders.

By modernizing our ERP backbone and integrating advanced AI capabilities, we're paving the way for intelligent process automation, predictive insights for data-driven decisions, and greater agility in a rapidly evolving digital and business landscape.

This is a bold and exciting step forward for JEL Group. Together, we are building a more connected, empowered, and resilient organization.

Launch of

Career Development Program 4/2025



JEL Career Development Program (CDP) has entered its fourth chapter on 25 August 2025, welcoming 27 participants from across our group of companies to embark on a transformative three-year learning journey comprising six core modules.

CDP is one of our key developmental initiatives aimed at strengthening human capital across JEL group. It equips participants with well-rounded business knowledge, broadens their exposure, and enhances networking opportunities within our organisation.

Similar to the previous three batches, CDP 4/2025 participants will undergo training in Project Management, Finance for Non-Finance Professionals, Leadership Development, Influence and Impact, and Contract Negotiation. New this year is the introduction of a timely topic, Design Thinking, to foster creativity and innovation through a human-centred problem-solving approach.

In addition to the traditional program structure where participants attend all six modules, this batch also marks the introduction of a modular participation option. Modular participants will attend selected modules aligned with their individual development needs – a flexible approach designed to balance professional growth with the demands of a busy work schedule.

A Dynamic Start to CDP 4/2025

The program launched with high energy and enthusiasm. Day one featured an engaging MBTI workshop, where participants explored different personality types, learned to appreciate and collaborate more effectively with different personalities. The session sparked lively discussions and insights, setting a momentum for the rest of the



program. A networking lunch with our Management Committee and CDP alumni followed, offering valuable insights and inspiration.

The day concluded with a lively teambuilding activity – an "Amazing Race" challenge around Marina Bay. Teams solved clues, tackled challenges, and ended the memorable day at Gardens by the Bay for a spectacular light and sound show.

Days two and three focused on "Communicating with Influence and Persuasion". Through interactive exercises and real-world scenarios, participants honed their ability to convey ideas clearly, effectively, and with impact.

An Enriching Journey Ahead

As the new batch of participants progresses through the program, we look forward to witnessing their growth, collaboration, and transformation. We are confident that this journey will not only elevate their professional capabilities but also foster lasting connections and friendships across JEL group.

Here's to a meaningful and enriching journey ahead for our fourth batch of CDP participants!



JML Turns **25** A Journey of Dedication and Innovation



JML commemorated its 25th anniversary on 29 August 2025 with a celebratory event at Swissotel, marking a significant milestone in its journey since its founding in 2000. From its beginnings as a local maintenance contractor, JML has grown into a trusted regional solutions provider serving clients across Southeast Asia and the Middle East.

in person, shared a recorded message expressing pride in JML's transformation and achievements across diverse industries. JEL Chairman, Mr Bob Tan, emphasized "passion" as a driving force behind JML's growth and is confident that this will continue guiding them to greater success.

The evening brought together staff, partners, and senior management from JEL, who attended in full support of the occasion. A series of speeches reflected on JML's evolution and its future direction. IHI President Mr Ide, though unable to attend

JEL Managing Director and CEO Mr Watanabe followed with a heartfelt address, recognizing JML's strategic role within the JEL and IHI Groups and commending the team's professionalism and adaptability. JML Managing Director Mr Nagappan concluded the segment with a warm message of appreciation to all employees—past and present—for their dedication and contributions to the company's success.

The celebration was both a tribute to JML's legacy and a reaffirmation of its commitment to quality, innovation, and continued growth. Sincere thanks were extended to all JML staff, whose hard work and passion have been the driving force behind the company's achievements over the past 25 years.

Breathe Easy: Decoding Scents

The greatest wealth is health
- Virgil

With around 400 olfactory receptors, humans can remarkably detect possibly a trillion different scents. From the enticing aroma wafting out of bakeries to the familiar scent that is uniquely our loved ones, scents permeate every aspect of our lives, often stirring emotions and memories. They feel harmless, even delightful. But in enclosed airspaces and over time, some scents containing chemical additives may quietly affect us, especially those more vulnerable.

Sometimes, these chemical exposures can even turn out to be life-threatening. Such was the case of the humidifier disinfectant, a common household item bought to purify the air but ended up causing misfortune to many families in South Korea.

A Grim Reminder: South Korea's Humidifier Disinfectant Tragedy

Between 1995 and 2011, South Korea experienced a major health crisis tied to disinfectants added to humidifiers. These humidifiers that have been sold by various companies like Reckitt Benckiser and Lotte Mart, contained chemicals like Polyhexamethylene Guanidine (PHMG). Hence, when water is added to the humidifier to dissolve the chemicals present – in this case – harmful PHMG, became aerosolised, and entered people's lungs.

The result: severe lung injuries, deaths, and elevated rates of respiratory disease and cancer in victims. Investigations confirmed causal links between those inhaled additives and long-term lung damage. To this day, 10,000 victims have been officially registered as suffering severe lung injury or death from the products (Equal Times, n.d.) This tragedy revealed how devices marketed to purify air can become dangerous.



10,000 Victims

When Pleasant Scents Turn Risky

Of course, not all devices that emit scents are dangerous. Though an unequivocal fact is that everyone's noses react differently to scents. What seems mild to one may trigger coughing, wheezing, or mental fog in another. That's because absorption of volatile organic compounds (VOCs) and respiratory sensitivity vary by individual. Even if you don't notice anything, it doesn't mean the air is harmless. As many hazardous compounds and fine particles are odourless yet can cause chronic or acute lung disease over time.

Vulnerable groups, including children, the elderly, and those with prior lung conditions, are at greater risk. This risk is compounded by the fact that indoor air quality is often neglected. For which, air in indoor spaces typically accumulate toxins and can be up to five times more polluted than outdoor air (U.S. EPA, 2014). Thus, when using such products indoors, it is wise to take note of the risks.



5x Indoor Risk

Hidden Risks: Household Chemicals, Essential Oils & VOCs

Many everyday items such as cleaning sprays, air fresheners, scented products, and cooking fumes from stoves emit VOCs. Over the years, exposure can contribute to respiratory irritation, oxidative stress, and even increase cancer risk in intense or poorly ventilated settings.

Even essential oils and diffusers are not risk-free. In closed, poorly ventilated rooms, they can release reactive compounds that irritate lung tissue, especially in people with asthma or Chronic Obstructive Pulmonary Disease (COPD). Some oils (tea tree, eucalyptus, citrus) are known irritants and may be toxic to pets. Also, fragrance chemicals reacting with indoor ozone can form harmful by-products like formaldehyde and ultrafine particles, which penetrate deep into the lungs.



3.1M Global HAP Toll

This chemical risk contributes to a global air crisis. In 2021, a staggering 3.1 million people globally have died from causes attributable to Household Air Pollution (HAP) (HEI, 2024).

Just because a scent is faint—or even undetectable—doesn't mean it's safe.

Eco-Friendly & Sustainable Cleaning DIY

As many common household cleaning items contain VOCs, soapberries (soapnuts, reetha, Sapindus, or 无患子 wú huàn zǐ), offer a natural, eco-friendly, and sustainable alternative to synthetic cleaners. These small, dried fruits contain saponins (natural surfactants) that make them effective for a variety of tasks, including laundry, dishwashing, surface cleaning, and personal care.



Hypoallergenic
Gentle on sensitive skin



Cost-Effective
Reusable & budget-friendly



Natural Softener
Softens fabrics naturally

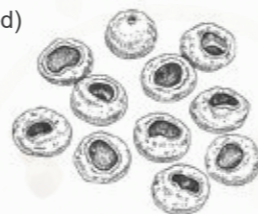


Chemical-Free
Non-toxic & plant-based

DIY Soapberry Cleaning Liquid

Ingredients & Tools

- 10-12 dried soapberry shells (deseeded)
- 6 cups of water (approx. 1,500 mL)
- Pot
- Fine-mesh strainer
- Airtight glass jar or bottle



Instructions

1. Bring the soapberries and water in a pot to a rolling boil.
2. Reduce the heat and simmer the mixture for 30 minutes. Gently mash the soapberries during this time to release the saponins.
3. Allow the liquid to cool completely.
4. Strain the liquid through a fine-mesh sieve into your airtight glass jar and label it clearly with a "Not Edible" warning.
5. Store the concentrate in a cool place; refrigeration is recommended to extend its shelf life (2 weeks to 1 month). If kept at room temperature, the liquid will only last for 3 days to 1 week.

Disclaimer

Soapberries are non-edible; keep them out of reach of children and pets. The liquid may irritate eyes; rinse immediately if splashed. Always perform a patch test if you have sensitive skin or allergies. Please do your own research to ensure this product suits your specific needs.

Natural Air Purifiers

Instead of using devices or sprays to mask or chemically treat the air, consider introducing certain indoor plants. Plants naturally filter common indoor air toxins, improving air (NASA, 1989). They also add humidity and visual appeal to a space.



Money Plant



Snake Plant



Peace Lily



Spider Plant

What Your Scent Might Reveal

We often associate scent with perfumes or environmental aromas, but our natural body odour tells a story too. Surprisingly, what we eat can influence how we smell—especially through sweat and skin secretions. Our bodies release by-products of digestion and metabolism through pores, so diet and health conditions can sometimes alter personal scent in noticeable ways (Northwestern Medicine, n.d.; Medical News Today, 2024).



Odour Type	Possible Health Causes	Possible Affected Body Parts
Sweet or Fruity	Body burns fat instead of sugar (diabetes)	Pancreas
Fishy	Rare condition (TMAU) causes chemical buildup in sweat	Liver
Musty or Sulfur (Rotten Eggs)	Liver can't clear toxins properly	Liver
Ammonia or Urine-like	Kidneys can't filter waste well	Kidneys
Sour or Vinegary	Stress, diet, or health issues	Metabolic
Pungent (Spicy/ Cumin)	Eating garlic, onions, curry, cumin affects sweat smell	Sweat Glands

A persistent or unusual body odour can sometimes indicate an underlying health issue. If the change continues despite good hygiene or is accompanied by other severe symptoms—such as fatigue, confusion, excessive thirst, vomiting, or jaundice—it's best to consult a doctor for a proper check-up.

While most odour changes are harmless or temporary, being attentive to them should be part of caring for your overall health.

Mindful Living

A healthy environment begins with mindful awareness and incremental changes. The choices we make daily about cleaning agents, fragrances, and even our diet all contribute to the air we breathe and the signals our bodies send. By paying closer attention to subtle cues—a lingering chemical scent, an unusual body odour, or the appeal of a cleaner alternative—you empower yourself to make smarter decisions. Stay informed, choose simple, and proactively protect your most fundamental asset: your health!

References

Equal Times. (n.d.). *The long fight for justice for South Korea's deadly steriliser victims*. Retrieved from <https://www.equaltimes.org/the-long-fight-for-justice-for#.X173eS2Q0qA>

Health Effects Institute (HEI). (2024). *Household Air Pollution: State of Global Air 2024 Report*. Retrieved from <https://www.stateofglobalair.org/pollution-sources/hap>

Medical News Today. (2024, January 4). *Sudden change in body odor: Causes and treatment*. Retrieved from <https://www.medicalnewstoday.com/articles/sudden-change-in-body-odor>

Missouri Botanical Garden. (n.d.). *Sapindus saponaria - Plant Finder*. Retrieved from <https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=286817>

NASA. (1989). *Interior landscape plants for indoor air pollution abatement*. Retrieved from <https://ntrs.nasa.gov/citations/19930073077>

Northwestern Medicine. (n.d.). *Body odor: A window to your health*. Retrieved from <https://www.nm.org/healthbeat/healthy-tips/body-odor-a-window-to-your-health>

U.S. Environmental Protection Agency (EPA). (2014). *Indoor air facts no. 8 use and care of home humidifiers*. Retrieved from https://www.epa.gov/sites/default/files/2014-08/documents/humidifier_factsheet.pdf

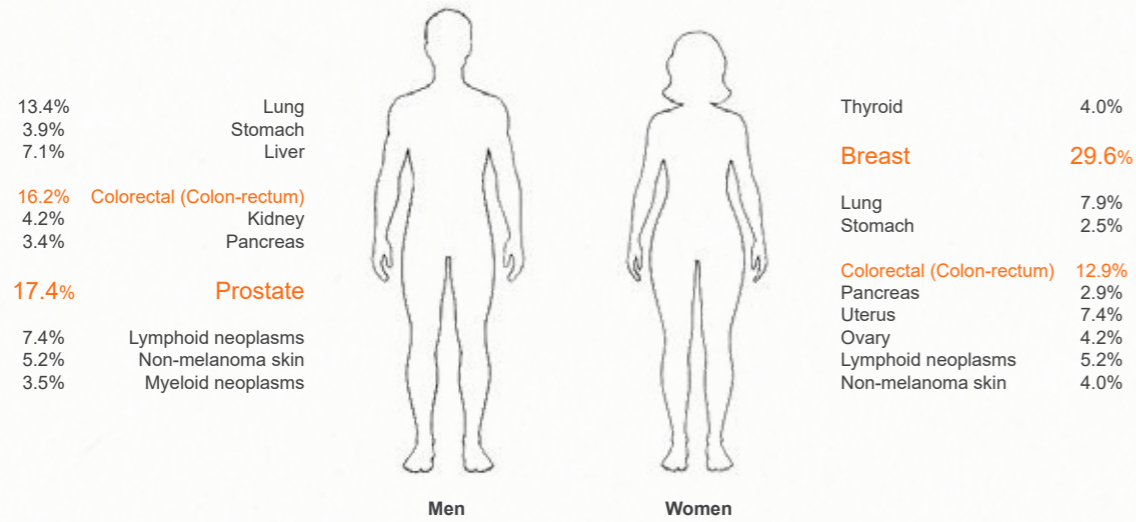
How Your Diet & Lifestyle Influences the Risk of **CANCER**

On 8 October, JEL hosted a lunch talk led by a senior nutritionist from Fitness and Health International to raise awareness about how dietary habits can influence cancer risk. The session highlighted the growing body of research linking food choices to cancer prevention and offered practical guidance for healthier living.

The Science Behind Diet and Cancer

Cancer arises from genetic mutations, but lifestyle factors—particularly diet—can significantly influence whether those mutations develop into disease. According to the World Health Organization, modifiable risk factors such as tobacco use, alcohol consumption, obesity, physical inactivity, and poor diet contribute to a substantial proportion of cancer cases. It is estimated that **30% to 40% of cancers are preventable** through lifestyle changes, according to large-scale epidemiological studies conducted by the World Cancer Research Fund.

In Singapore, *prostate cancer* predominates among men and *breast cancer* among women, whereas *colorectal cancer* is the second most common in both groups, with its occurrence strongly influenced by dietary and lifestyle factors.



Foods That Influence Cancer Risk

What to Cut Back On

Certain foods have been linked to increased cancer risk, especially for colorectal and breast cancers:

<p>Ultra-Processed Foods Linked to higher cancer risk due to additives and preservatives.</p>	<p>Processed Meats Classified as carcinogenic; contain compounds that may damage DNA.</p>	<p>Salt-Preserved Foods Can harm the stomach lining and raise gastric cancer risk.</p>
<p>Refined Carbs & Sugars Contribute to obesity, a known cancer risk factor.</p>	<p>Alcohol Associated with at least seven types of cancer; moderation is key.</p>	<p>Red Meat May form harmful compounds in the gut—opt for leaner proteins like fish or legumes.</p>

What to Eat More Of

On the flip side, some foods may help protect against cancer:

<p>Fruits & Vegetables Packed with antioxidants and fiber that fight inflammation.</p>	<p>Garlic & Onions Contain compounds that may reduce carcinogen formation.</p>	<p>Mushrooms & Sea Vegetables Support immune health with unique nutrients.</p>
<p>Calcium-Rich Foods Linked to lower colorectal cancer risk.</p>	<p>Sprouted & Cultured Foods Boost digestion and gut immunity.</p>	<p>Natural Oils Help maintain healthy cells—think nuts, seeds, and avocados.</p>

Beyond the Plate: How Sleep, Stress, and Exercise Influence Cancer Risk

While diet is a cornerstone of cancer prevention, it's not the whole story. How we sleep, move, and manage stress can also shape our cancer risk—especially for colorectal and breast cancers.



Sleep
The Body's Overnight Repair Crew

Sleep is when your body gets to work repairing DNA, regulating hormones, and clearing out cellular waste. Poor sleep disrupts these processes and may increase cancer risk.

- Studies show that night shift work and chronic sleep disruption are linked to higher risks of breast and colorectal cancer due to reduced melatonin levels and circadian rhythm disruption.
- Melatonin, a hormone produced during sleep, helps regulate cell growth and repair. Lower levels have been associated with increased tumor development.

Tip: Aim for 7–9 hours of consistent, quality sleep. Avoid screens before bed and keep a regular sleep schedule—even on weekends.



Stress
The Inflammation Accelerator

Chronic stress floods the body with cortisol and other stress hormones. Over time, this can suppress immune function, increase inflammation, and disrupt hormonal balance.

- Stress has been shown to alter the gut microbiome and increase intestinal permeability—factors that may accelerate colorectal cancer progression.
- For breast cancer, stress-related hormonal imbalances (especially elevated estrogen and insulin) can promote cancer cell growth.

Tip: Try mindfulness, journaling, or regular walks to manage stress. Even 10 minutes of deep breathing can make a difference.

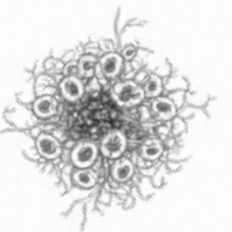


Exercise
Your Built-In Cancer Shield

Physical activity is one of the most effective lifestyle tools for cancer prevention.

- Regular exercise can lower the risk of colorectal cancer by up to 24%, according to a 2022 review in Cancer Cell International.
- For breast cancer, consistent physical activity is linked to a 10–20% lower risk, especially in postmenopausal women.
- Exercise helps regulate insulin, reduce inflammation, and balance estrogen—key factors in both colorectal and breast cancer.

Tip: Aim for at least 150 minutes of moderate activity per week. Walking, dancing, swimming, and cycling all count.



By making informed dietary choices—and pairing them with better sleep, stress management, and regular movement—we can take meaningful steps toward reducing our cancer risk and supporting long-term health. Prevention isn't about perfection; it's about progress. Every small change adds up.

Disclaimer: The information provided in this article is intended for general awareness and educational purposes only. It does not constitute medical advice, diagnosis, or treatment. Readers should consult qualified healthcare professionals for personalized medical guidance.

Running Headfirst into a *NEW CHAPTER*



My Running Origin Story

Hello, I am Richa, a fresh graduate from the National University of Singapore (NUS). I like to be active and enjoy mixing things up with new activities! Fun fact, if there's one food I can eat for the rest of my life, it would be acai! I love Acai Affair, but if I am feeling indulgent, I will go for Summer Acai! ><

As someone who enjoys being active, my years in school reflected that as I used to play competitive team sports, such as basketball and frisbee. However, as graduation approached early this year, I wanted to find an active pursuit I could do individually.

Around that time, I also wanted to achieve something "big" before entering the working world. So, with a few friends, I signed up for a half-marathon. Looking back, that decision was partly driven by a "quarter-life crisis" moment when everyone seems to pick up running! But I have no regrets as it was through this that my passion for running kindled.

The transition from student life to the working world often calls for a new approach to staying active. **Ms Richa Rachel John**, a Design Engineer, offers a candid look at her journey and shares her tips for building a fun, sustainable fitness routine that complements her adult life.

Gearing for My First Half-Marathon: The Consistency Game

Since it was my first time training seriously for a race, I didn't have a structured plan initially. Thankfully, the Nike Run Club app offered a half-marathon program that guided me through progressive weekly mileage, including one long run, two recovery runs, and two speed workouts, with two rest days.

It was tough to stay consistent over 14 weeks, especially during exam season and final-year project deadlines. I pulled through ultimately and completed my half-marathon! Through it, my biggest lesson was that showing up matters, even on days you don't feel like running. You almost always feel better afterwards. Equally importantly, I learned to listen to my body – sometimes rest is what you truly need, and only you can gauge that balance.

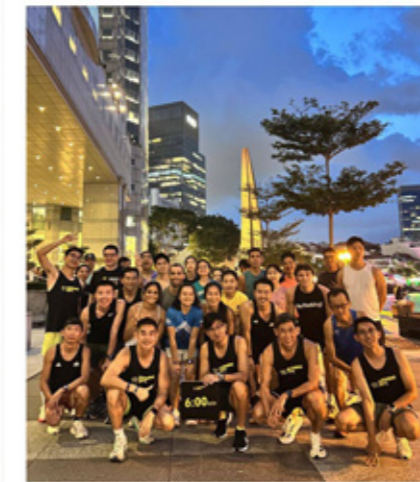
If you're thinking about taking on long-distance running, it's definitely worthwhile to invest in proper equipment! I learned that the hard way – my first pair of running shoes were too light and lacked stability, which didn't suit my running style. The right gear can make a world of difference in comfort, performance and injury prevention.

A Work-Life Shift

A new challenge came when I transitioned to work life. As a student, I had the luxury of time; I could hit the gym or attend classes anytime, often enjoying discounted student rates. Now, as a working adult, my schedule is more structured, and fitness has become an intentional choice rather than a spontaneous activity. Most workouts happen after work or on weekends, which requires commitment and discipline. But in a way, this routine has given me structure and balance in my day-to-day life, which I've come to really appreciate.

Keeping It Fresh and Fun

Running alone can get repetitive, so I try to make it more enjoyable by curating playlists or running with friends. To keep things interesting, my friends and I organise themed "fun runs" – for example, we did a 23 km run for our 23rd birthdays and a "Matcha Run" where we ran 8 km to try new matcha cafes around Singapore.



We also join local running clubs, which are free and usually held after work around the Marina Bay area. These sessions are led by experienced coaches and cater to different pace groups – from 5:30 to 7:30 minutes per kilometre – making it accessible for everyone. Attending these weekly runs has been key to keeping me consistent and staying connected with the running community.

Besides running, I enjoy attending HIIT classes (on days when I still have the energy!) and going to the gym. I've recently started trying out reformer Pilates classes – which serves as a nice balance to the high-impact nature of running.

All About the Balance

There's no denying that it takes effort to stay consistent with my workouts, especially after a long workday. What has helped me most is having a plan and sticking to a routine. I treat my workouts like an appointment with myself, something that's non-negotiable once it's on the calendar. I've also learned that it's okay to have off days; what matters is showing up again the next day. Consistency doesn't mean perfection – it's about finding balance that works for your lifestyle.

When it comes to food, I try to follow an 80/20 approach. This means that about 80% of the time, I eat relatively healthy meals with enough greens and nutrients, and 20% of the time, I enjoy my daily

sweet treat (I need it to survive!). It's about balance and not being overly restrictive, so staying healthy feels sustainable, not like a punishment.

What's Next?

I generally like exploring new fitness activities and keeping things fresh! For 2026, I'd love to try pickleball—it seems really fun, easy to pick up, and has become super popular lately! And maybe... train for a full marathon? I'm not sure if I'm ready yet, but who knows – maybe 2026 will be the year I take that leap!

Advice Time: Just Do It!

To someone just beginning to prioritise their health and fitness, especially during major life transitions, my best advice is: Just do it (not a Nike endorsement).

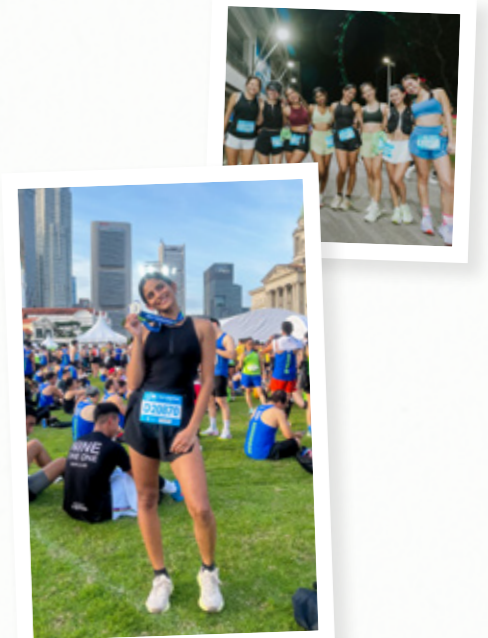
The hardest part is always taking that first step – the "activation energy" required to get out of bed or start something new. But once you do, it gets easier. It also helps to have someone to hold you accountable, whether it's a friend or a running buddy.

As the new year begins, here's to fresh starts, self-care and to the simple joy of moving your body!



All smiles for my first half-marathon!

Themed bibs with my friends on our 23rd birthday run!



Ending 2025 with a second half-marathon completed!



MacRitchie Walk

To wrap up September on a refreshing note, our colleagues and their families came together for a morning immersed in nature, laughter, and meaningful connection. The group embarked on a scenic walk from MacRitchie Reservoir to Windsor Park, soaking in lush greenery, tranquil trails, and – yes – plenty of cheeky monkey encounters along the way!

This was more than just a walk; it was a chance to unwind, recharge and bond outside the usual office setting. Here's to more energizing weekends and moments that bring us closer!



Running in Support for Cancer Research in Run For Hope

On 23 November 2025, several JEL staff members, together with their plus ones, proudly took part in the Run For Hope 2025 at Marina Barrage. This annual event, jointly organised by Four Seasons Hotel Singapore and the National Cancer Centre Singapore, raises awareness and support for cancer research.

Our staff embraced the challenge with enthusiasm, choosing between 5km and 10km. The morning was filled with energy and camaraderie as colleagues and their loved ones ran side by side, united by a meaningful cause. Beyond the physical achievement, the event was a reminder of the importance of community spirit and contributing to initiatives that make a difference.

To everyone who has faced or is facing cancer - and to the loved ones who walk beside them. We run with you.

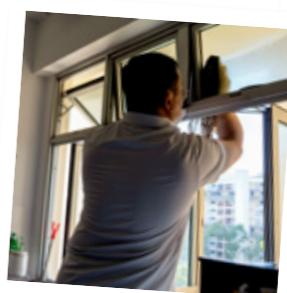
Post-Zumba cool down!

Giving Back Together: Volunteering with Helping Joy

On 5 December 2025, 13 of our staff came together for a meaningful volunteering session with Helping Joy, a non-profit organisation dedicated to supporting vulnerable individuals in our community. The team spent the day assisting with home decluttering, cleaning, and creating safer living environments for the elderly who may be facing physical or mental challenges.

This initiative was more than just a day of service — it was an opportunity to connect with the community and provide companionship. We sincerely thank the colleagues who gave their time and effort to make a real difference. Your compassion and dedication brought comfort and support to those in need.

Although this volunteering session has concluded, you can still support Helping Joy's mission via their website. Staff who wish to contribute further may consider making a donation to help sustain their ongoing efforts in creating safer, healthier environments for vulnerable individuals.



Deepavali Celebration

In October, we welcomed the Festival of Lights with vibrant spirit and joyful togetherness at our annual Deepavali celebration! The office came alive with colorful rangoli designs and festive decorations, creating a warm and welcoming atmosphere. Some colleagues added to the day's festivity by dressing in beautiful traditional Indian attire, showcasing the rich cultural heritage of the occasion.

The highlight of the day was the sumptuous lunch buffet, featuring crowd favorites like butter chicken, fluffy naan, and a variety of other delicious dishes that brought everyone together over great food and laughter.

It was a wonderful celebration of culture, community, and connection – lighting up our workplace in more ways than one!





Editorial Notes

A BIG thank you to all the article contributors and editorial team members. Every reasonable care has been taken to ensure the accuracy, adequacy, validity, or completeness of the information contained in this bulletin. All information is provided in good faith and we make no representation or warranty of any kind, express or implied, regarding the accuracy, adequacy, validity, or completeness of any information contained in this bulletin.

This bulletin, including, without limitation, all text, images, graphics, logos, photos and other content, are the exclusive property of and owned by Jurong Engineering Limited and protected by Singapore and international copyright and other applicable laws. Reproduction, modification and distribution of this bulletin or any of its content are prohibited without our prior written consent.

For enquires and feedback, please contact us at:

Jurong Engineering Limited

25 Tanjong Kling Road, Singapore 628050 | +65 6265 3222 | enquiries@jel.com.sg | www.jel.com.sg