

# RECONNECTING & MOVING FORWARD

FROM THEN TO NOW: THE LATEST AND GREATEST AT PRL

# CHRONICLES

BoDs  
Spearhead  
Transformation

Journey to  
Achieving  
Record Profits

REUP to Enhance  
Capabilities and  
Sustainability

Seven  
Consecutive  
Wins

## 03 From the Desk of the MD / CEO

### 03 2020-2022 in a Glance

- 03 Embracing Change: PRL Board of Directors Spearhead Transformation
- 04 Accelerating Progress: PRL Appoints FEED Contract and Financial Advisor for REUP
- 04 Overcoming Challenges: PRL's Journey to Achieving Record Profits in FY 2021-2022
- 05 From heavy to light: PRL's Recipe for Success
- 05 Continuity in Crisis: How PRL Navigated the Challenges of COVID-19
- 06 Safety is a journey, not a destination: HSEQ Milestones
- 06 Maintaining Excellence in HSEQ: Regeneration Shutdown, Audits, and Training
- 06 Evolution in Progress: Decoding PRL's New Logo
- 07 Building a Better Future: Reflecting Commitment to Social Responsibility

### 07 2023 & Onwards

- 07 PRL's Refinery Expansion & Upgrade Project (REUP) to Enhance Capabilities and Sustainability
- 08 Shaping a Sustainable Energy Future: PRL's Leadership at the Pakistan Energy Conference 2023
- 08 Embracing Sustainability: PRL's Inspiring World Environment Day Celebration
- 09 Sharing Memories and Honoring Devotion: PRL's Retirees' Lunch Celebrates Company Heritage
- 09 Empowering the Next Generation: PRL's Inspiring Field Trip Fosters Future Leaders
- 09 Partnering for Education: PRL's 10-Year Commitment to Supporting TCF School
- 10 Seven Consecutive Wins: Committed to Sustainability and Beautification
- 10 Oil Movement: Managing Stocks and Operations with Efficiency and Flexibility
- 10 Catalyzing Pakistan's Energy Sector: Shaping a Strategic Alliance to Accelerate Refinery Growth and Foster Collaboration
- 11 From the Pitch to the Refinery: PRL Cricket Team's Quest for Sporting Glory
- 11 Growing Towards a Greener Future: PRL's Urban Forest Initiative
- 12 Ensuring Safety and Excellence: The Role of Technical & Inspection at PRL
- 12 Streamlining Trade: PRL Joins Digital Revolution with Pakistan Single Window Portal
- 12 Paving the Way towards optimization: Streamlining Processes for Greater Efficiency and Cost Savings
- 12 Unlocking Employee Potential: A Closer Look at PRL's HR Training Programs
- 13 Residue to Olefins: How the RFCC Technologies Can Help the Refinersto Face the Challenges of the New Downstream Industry
- 14 Motion Amplification: The Revolutionary Tool for Vibration Analysis in Machinery and Equipment
- 14 Celebrating Long-Term Commitment: PRL's Long Service Awards Recognize Employee Dedication
- 15 T&I Insights: Ethanol (E-10) As a Blending Fuel for Gasoline
- 15 Antea's Palladio Inspection Data Management Software (IDMS)
- 16 Thank You for Your Dedication: Retiring Employees at PRL
- 16 New Talents, New Horizons: PRL Welcomes Trainee Batch 2023
- 17 The Art of Being on Time

---



# In this Issue

# From the desk of the MD/CEO

Dear Team PRL,  
Glad to be connected with you through this forum again. I hope this message finds you all in good health and high spirits.

As we move forward in 2023, I would like to take a moment to express my gratitude to every one of you for your dedication, hard work, and commitment to excellence.

In recent years, we have made significant investments and progress in our operations and are committed to delivering our customers the highest quality products and services. We are proud of our safety and environmental responsibility record and will continue to prioritize these important issues in everything we do.

At Pakistan Refinery Limited, we believe that our success is built on a foundation of integrity, respect, and collaboration. We value your contributions and are committed to supporting your personal and professional growth.

As we continue to navigate through the challenges of the industry, I am confident that we will continue to innovate, adapt, and excel in all our endeavors. With your continued support and dedication, we will continue to grow and succeed together.

Thank you for your hard work and dedication to Pakistan Refinery Limited. I look forward to working with all of you as we build a bright future for our company and industry.

Wishing PRL and all of us a successful and rewarding year ahead.



*Zahid Mir*

Managing Director & Chief Executive Officer, Pakistan Refinery Limited

## 2020-2022 in a Glance

It has been a while since we last communicated through our newsletter. The last edition of the newsletter was published in March 2020, and since then, a lot has happened at PRL. The past two years have been full of challenges, but despite the global pandemic and other events, we have persevered and made significant progress.

As we are already halfway through the year, it is important to reflect on the accomplishments and milestones that we have achieved in 2020, 2021 and 2022. In this edition of our newsletter, we will glance at the past two years before diving into the exciting developments of 2023.

# Embracing Change:

## PRL Board of Directors Spearhead Transformation

In October 2020, a new board of directors was appointed at PRL, marking a significant turning point for the company. The board's vision and leadership were further demonstrated during the board meeting held on December 27, 2021, where the approval was granted for the Refinery Expansion and Upgrade Project (REUP). This strategic initiative will revolutionize our operations and pave the way for a prosperous future.

With a strong commitment to meeting market demands and surpassing industry standards, the REUP project encompasses the expansion of our crude processing capacity from 50,000 to an impressive 100,000 barrels per day (bpd). Additionally, we are elevating our sustainability efforts by upgrading our refinery to a state-of-the-art Deep Conversion Refinery, enabling the production of environmentally friendly fuels that comply with EURO V standards. These visionary changes reflect our unwavering dedication to excellence and our determination to shape a better tomorrow.



“We are embarking on a transformative journey with the Refinery Expansion and Upgrade Project, reinforcing our commitment to excellence and sustainability. These strategic changes will strengthen our position in the industry and enable us to deliver exceptional results while meeting the growing energy needs of our nation.”

- Tariq Kirmani,  
Chairman PRL

### BOARD HUMAN RESOURCES & COMPENSATION COMMITTEE

1.	Mr. Tariq Kirmani	Chairman
2.	Mr. Aftab Husain	Member
3.	Mr. Nadeem Safdar	Member
4.	Syed Jehangir Ali Shah	Member
5.	Syed Muhammad Taha	Member
6.	Mr. Zahid Mir	Member/MD & CEO

### BOARD AUDIT & RISK COMMITTEE

1.	Mr. Mohammad Abdul Aleem	Chairman
2.	Mr. Mohsin Ali Mangi	Member
3.	Ms. Tara Uzra Dawood	Member
4.	Mr. Abid Shahid Zuberi	Member

### BOARD PROJECT STEERING COMMITTEE

1.	Mr. Mohsin Ali Mangi	Chairman
2.	Syed Muhammad Taha	Member
3.	Mr. Aftab Husain	Member

# Accelerating Progress:

## PRL Appoints FEED Contract and Financial Advisor for REUP

PRL attained two significant milestones further accelerating the progress of PRL's Refinery Expansion and Upgrade Project (REUP). After an extensive and competitive bidding process involving some of the world's top engineering companies, M/s Wood Group UK Limited was selected as the Front-End Engineering Design (FEED) Contractor for REUP.

In parallel, PRL took a rigorous evaluation process and following a competitive bidding process among leading financial institutions in the country, PRL appointed a consortium of United Bank Limited and JS Global Capital Limited as the Financial Advisor and Arranger for local debt and equity components for REUP.

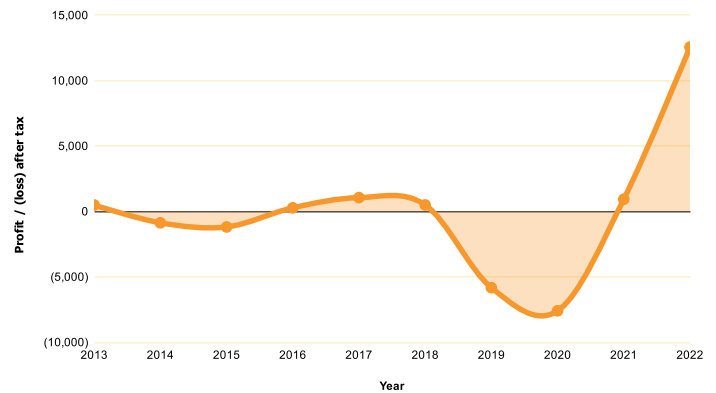


The FEED Contract and the appointment of the Financial Advisor and Arranger are crucial milestones in the REUP journey, transforming PRL into a state-of-the-art refinery. These partnerships reinforce PRL's commitment to delivering exceptional results, meeting international standards, and fostering sustainable growth in the energy sector.



# Overcoming Challenges:

## PRL's Journey to Achieving Record Profits in FY 2021-2022



PRL achieved its highest-ever profit of PKR 12.5 billion in the fiscal year 2021-2022, despite challenges such as the imposition of Super Tax. This outstanding achievement can be attributed to the company's efficient crude planning, better inventory management, optimal product mix, and high Gross Refining Margins (GRMs).

PRL's successful crude planning and the purchase of low-cost spot cargoes resulted increased throughput and record-breaking production of Motor Spirit (MS/Petrol) and High-Speed Diesel (HSD). Furthermore, better inventory management and optimal product mix led to improved yields and contributed to the company's overall performance. PRL's record-breaking performance in the fiscal year 2021-2022 showcases the company's ability to overcome challenges and achieving excellence.

“I am incredibly proud of the unprecedented success PRL has achieved. Despite facing numerous challenges, our team's unwavering dedication and visionary approach have propelled us to record-breaking profits.”

- Zahid Mir, CEO/MD

“People are at the core of all strategy and decision-making at PRL. We take immense pride in having a very talented and motivated team. Our diligent preparation and groundwork during the Covid-19 years enabled us to deliver stellar performance during this year.”

- Asad Hasan, Deputy Managing Director (Operations & Engineering)

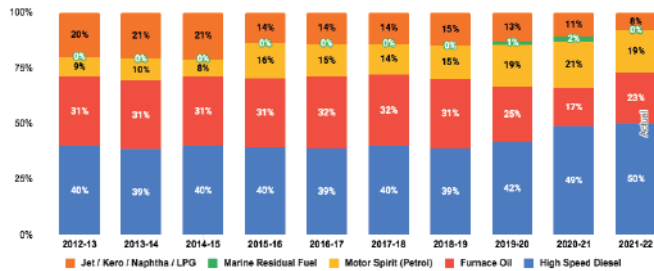
“PRL achieved its highest-ever profit of PKR 12.6 billion, overcoming challenges from domestic politics, economic issues, and global crises. This success can be attributed to management's innovative strategies, including the procurement of opportunity crudes, and the dedication of the refining staff in maximizing high-margin product production.”

- Imran Ahmad Mirza, CFO / Deputy Managing Director (Finance & IT)



# From heavy to light

## PRL's Recipe for Success



PRL's successful shift from heavier crudes to lighter, sweeter grades in our crude recipe has resulted in increased profitability and enhanced market competitiveness. This strategic decision has enabled the company to process a broader range of crudes, provide customized products, and capitalize on market fluctuations. The transition to lighter crude duly augmented by higher cash sales, reduced credit terms, and a shift in production towards more valuable products such as High-Speed Diesel (HSD) and Motor Spirit (MS), while decreasing the production of Fuel Oil (FO) are the positive contributors. PRL's adaptability and customer-focused approach have contributed to its continued growth and success in the industry.

After successfully capitalizing on the advantages of processing lighter, sweeter grades, PRL recognized an opportunity in the market and made the informed choice increasing the proportion of heavier crudes. This move allows PRL to optimize catering to specific customer demands. By transitioning back to heavier crudes, PRL gains the flexibility to process a wider variety of feedstocks, accommodating market fluctuations and ensuring a diversified product portfolio. PRL displays its commitment to flexibility, customer-centricity, and market-driven decision-making.

**“** PRL remains committed to innovation and adaptability, ensuring that we continue to thrive in a dynamic market landscape. **”**

- Zahid Mir, CEO/MD

**“** By offering a diverse range of customized products and services, we have strengthened our position in the market and forged stronger partnerships with our valued customers. **”**

- Om Perakash, General Manager Commercial



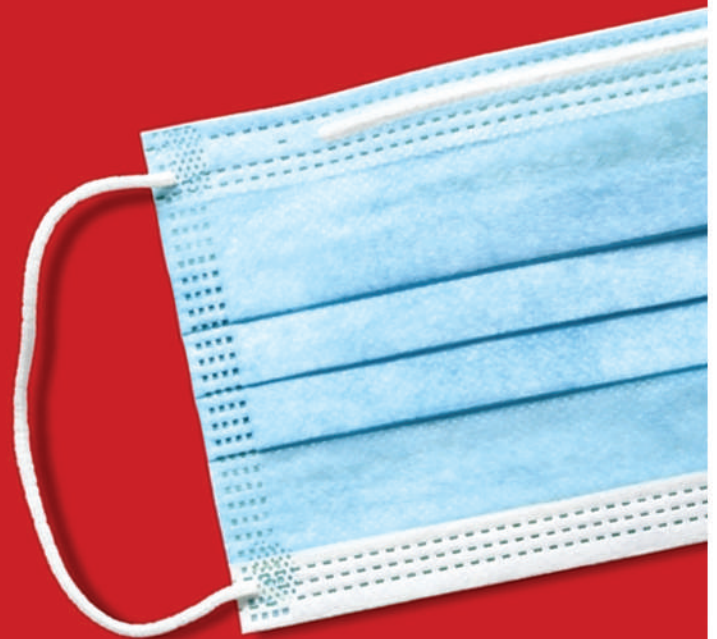
# Continuity in Crisis

## How PRL Navigated the Challenges of COVID-19

PRL demonstrated an unwavering commitment to safety and employee well-being during the COVID-19 pandemic. Through comprehensive preventive measures, including social distancing, sanitization, awareness programs, and on-site testing facilities, PRL successfully maintained uninterrupted operations and ensured the supply of essential petroleum products. Their dedication to employee safety serves as a model for other businesses in crisis management.

PRL's IT department also played a crucial role in enabling remote work for employees. By swiftly providing secure tools and technology, such as VPN access to the company's network, PRL prioritized the health and productivity of their staff. The company's resilience and initiative-taking approach not only protected employees and contractors but also underscored their commitment to maintaining operations and upholding their responsibilities.

PRL's unwavering commitment to safety and employee well-being during the pandemic allowed them to continue providing essential services to the nation. Their comprehensive prevention strategy and smooth transition to remote work highlighted their dedication to employee safety and efficient crisis management. PRL's actions serve as a shining example of prioritizing employee well-being while ensuring business continuity in challenging times.



# Safety is a Journey, not a Destination

## HSEQ Milestones

PRL has demonstrated a strong commitment to Health, Safety, Environment, and Quality (HSEQ). Their recent achievements in this area include the successful migration to ISO 45001:2018 and the completion of external audits for ISO 9001, 14001, and 45001 standards. Furthermore, PRL's adherence to regulatory requirements is evident through the renewal of the No-Objection Certificate (NOC) from the Sindh Environmental Protection Agency (SEPA). By meeting and maintaining reportable parameters within environmental standards, PRL showcases its responsible approach toward safe operations.

PRL's commitment to safety has not gone unnoticed. Their outstanding safety record has earned them the prestigious first position award in the Oil & Gas Energy sector at the 15th Employer Federation of Pakistan (EFP) Occupational Safety & Health Awards in 2019. It is an honor to be awarded the first position in the Oil and Gas Energy sector for four consecutive years, setting a benchmark for excellence and serving as a role model for other organizations in the industry. In July 2022, PRL also achieved the milestone of 12 million manhours without any Lost Time Injuries (LTI).



“ Safety is not just a priority; it is a value. Make it a part of your daily routine and help create a safer workplace for everyone.

- M. Farhan Hassan,  
Deputy General Manager - HSEQ ”

## Maintaining Excellence in HSEQ

### Regeneration Shutdown, Audits, and Training

PRL has achieved significant milestones in the Health, Safety, Environment, and Quality (HSEQ) domain, including the successful execution of the Regeneration Shutdown without incidents and the retention of ISO Standards certification. The Company's migration to an updated E-PTW logbook and conducting of training sessions have improved safety performance. PRL's commitment to HSEQ excellence sets a commendable example for the industry, emphasizing its dedication to maintaining high standards of safety and environmental stewardship.

“ Don't overlook safety, it takes only one mistake to cause an accident.

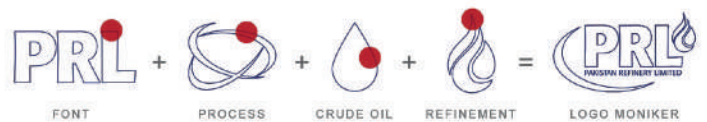
- M. Farhan Hassan,  
Deputy General Manager - HSEQ ”

# Evolution in Progress

## Decoding PRL's New Logo

After more than six decades, Pakistan Refinery Limited has unveiled a new logo as part of a significant rebranding effort. The previous logo featured a Crude Distillation Column, representing the company's refinery aspect, while the new logo takes a futuristic approach with abstract symbols signifying progress and innovation. The carefully selected colors, font, and symbols reflect the company's commitment to growth and development, aiming to strengthen its brand identity and market position. This rebranding initiative aligns with the company's modernization strategy and displays its focus on innovation, progress, and growth, positioning Pakistan Refinery Limited for a successful future.

The rebranding initiative by Pakistan Refinery Limited marks a momentous change in the company's history. By embracing a more progressive and innovative approach, the new logo symbolizes the company's ambitions and aspirations for the future. As the company modernizes its operations and embraces new technologies, the logo represents its commitment to staying ahead of the curve in the ever-changing global market. With a renewed focus on innovation and progress, Pakistan Refinery Limited is well-positioned to overcome future challenges and achieve its growth objectives in the years ahead.



# Building a Better Future


## Reflecting Commitment to Social Responsibility

- **Enhancing Education Infrastructure:** PRL has demonstrated a strong commitment to corporate social responsibility through their efforts to improve education infrastructure in their communities. PRL renovated the Government Girls Elementary School in Bhattai Colony, Korangi Crossing, by constructing new washrooms and renovating the main building. Additionally, PRL donated school furniture to the Government Girls School in Ibrahim Hyderi. These initiatives highlight PRL's dedication to supporting the local community and investing in the education sector to promote societal growth and provide resources for the younger generation.

- **Advancing Surgical Care for the Underprivileged:** In 2022, PRL demonstrated its commitment to social responsibility by donating PKR 7.5 million to The Indus Hospital's expansion project. The donation was specifically earmarked for the development of treatment rooms for general surgery, benefiting numerous patients in need of surgical interventions. The Indus Hospital is a non-profit healthcare institution known for its exceptional medical facilities and skilled staff. PRL underscores its commitment to fostering a healthier society through strategic partnerships with organizations like The Indus Hospital.


- **Extending a Helping Hand to Flood-Hit Areas of Pakistan:** PRL donated emergency relief medicines worth Rs10 million to the flood-affected regions of Interior Sindh in Pakistan in 2022. The donation was made in collaboration with the Army/Rangers and was directly given to a Medicine Company for efficient distribution. Dr Rauf Zaman, Chief Medical Officer of PRL inspected the donated medicines and effectively delivered them to Hyderabad, Pannu Aqil, and other affected regions with the coordination of the Rangers. This generous donation reflects PRL's dedication and solidarity with the people of Sindh during challenging times.

“ PRL is dedicated to supporting education, healthcare, and disaster relief, embodying our values of empathy, compassion, and solidarity. Our initiatives reflect our efforts to build a better future and make a positive impact on our communities.



- Najam Mahmud,  
General Manager Human Resources

“ Through our initiatives in education, healthcare, and disaster relief, we aim to make a meaningful difference in the lives of people. It is a privilege to be part of an organization that values social responsibility and actively works towards building a better future for all.



- Major Dr Usman Farooq (Retd),  
Senior Manager Security, Administration & IR

## 2023 & onwards

JAN - JUN 2023

In this section, we dive into the dynamic landscape of 2023 and beyond, unveiling the remarkable initiatives, achievements, and milestones that lie ahead. Witness the unfolding chapters of PRL's story as we forge ahead with innovation, sustainability, and unparalleled dedication. Limitless possibilities await us in this thrilling new era!

## PRL's Refinery Expansion & Upgrade Project (REUP) to Enhance Capabilities and Sustainability

Pakistan Refinery Limited (PRL) is making significant strides towards enhancing and modernizing its refining capabilities through the Refinery Expansion and Upgrade Project (REUP). This transformative endeavour aims to propel PRL into a sustainable future, producing cleaner and environmentally friendly fuels, while meeting growing market demands.

The REUP project involves doubling the capacity to 100,000 barrels per day (bpd). PRL is committed to adopting a state-of-the-art Deep Conversion Refinery configuration, equipped with advanced technology that adheres to stringent environmental protocols, including the production of EURO V standard fuels. Current capex requirements are estimated at approximately USD 1.5 Billion.

The Detailed Feasibility Study (DFS) for the project was developed by Wood Group. DFS entailed selecting the proven state-of-the-art technology and configuration, comparable to any world-class modern refinery. After an exhaustive evaluation of globally available technologies and licensors, the DFS specified a Residue Fluidized Catalytic Cracker (RFCC) based on a process configuration designed to process regional medium crudes. Proposed technologies will be licensed by leading global licensors. RFCC-based configuration was deemed to be the best fit as it almost eliminates Fuel Oil, significantly increases the MS and HSD production, reduces Capex requirements and at the same time yields a healthy GRM and returns.

The project is currently in the FEED phase, executed by Wood, UK, from their centre of excellence in Reading, UK and is expected to be completed by September 2024. Following the completion of FEED, EPC tenders will be floated.



The significance of the PRL REUP is multi-faceted. It will generate substantial employment opportunities and fosters skill development by training professionals on state-of-the-art licensed technology. Moreover, the project significantly contributes to the national GDP, reduces import dependency, and promotes import substitution, resulting in substantial savings of valuable foreign exchange.



“REUP will be a major milestone in PRL’s and Pakistan’s Refining industry’s history, as it will mark a bold new venture into deep conversion refining and open future petrochemical opportunities. Its completion will enable PRL to expand product options, boost refinery capacity and decrease the country’s dependence on imported fuels. Thereby contributing to Pakistan’s Energy Security”

- Asad Hasan, Deputy Managing Director (Operations & Engineering)

## Shaping a Sustainable Energy Future

### PRL's Leadership at the Pakistan Energy Conference 2023

PRL’s collaboration with the Petroleum Institute of Pakistan (PIP) for the Pakistan Energy Conference 2023 demonstrated the company’s strong commitment to driving sustainable progress in the energy sector. The conference, held under the theme ‘Securing our Energy Future,’ served as a platform for industry leaders and stakeholders to address critical energy challenges.

Furthermore, PRL contributed to the Energy Outlook 2023, launched at the Pakistan Energy Conference 2023 by PIP. PRL showcased expertise and underscored its role in driving positive change within the energy industry. PRL remains steadfast in its pursuit of innovation, sustainability, and collaborative partnerships, all aimed at shaping a brighter and more sustainable energy future for Pakistan.



# Embracing Sustainability

## PRL's Inspiring World Environment Day Celebration

PRL’s World Environment Day celebration was a resounding success as the company demonstrated its unwavering commitment to environmental conservation and sustainability. The event featured a tree plantation drive led by the PRL leadership team, highlighting their involvement and dedication to fostering a greener environment. The lush green gardens at PRL, adorned with vibrant flowers and exotic plants, served as a living testament to the company’s vision of creating a sustainable ecosystem. By raising awareness about environmental issues and emphasizing the importance of conservation, PRL inspired individuals to take an active role in preserving our precious natural resources. Through this initiative, PRL aimed to not only beautify its surroundings but also motivate others to make a positive impact and contribute to a more sustainable world.





# Sharing Memories and Honoring Devotion

## PRL's Retirees' Lunch Celebrates Company Heritage

PRL's Retirees' Lunch, held on Monday, February 20, 2023, exemplified the company's unwavering commitment to its employees and its deep-rooted heritage. This special event, dedicated to honoring retired employees, was a resounding success as both current and retired staff came together to enjoy a delightful meal and relive cherished memories. The atmosphere was filled with laughter, camaraderie, and the rekindling of old friendships, creating a heartwarming ambience that displayed the enduring bond between PRL and its employees.

The Retirees' Lunch (also known as 'Bara Khana') serves as a significant gesture of appreciation by PRL for the tireless dedication and hard work contributed by its employees throughout the years. It symbolizes the company's recognition of their valuable contributions and the role they have played in shaping the company's history. The Retirees' Lunch not only celebrates the company's rich legacy but also serves as a reminder of the enduring connection between PRL and its employees, reinforcing the company's commitment to honoring its past while embracing a promising future together.



# Empowering the Next Generation

## PRL's Inspiring Field Trip Fosters Future Leaders

PRL recently hosted a group of students from Ilmesters Academy for an educational field trip, providing them with valuable insights into refinery operations and safety measures. The visit included informative presentations, demonstrations, and visits to various workshops, allowing the students to learn about various aspects of the refinery. The PRL team's efforts were commended by the school administration, and the students expressed their gratitude for the enriching experience. This initiative reflects PRL's dedication to promoting education and community engagement, showcasing the company's commitment to community development.



# Partnering for Education

## PRL's 10-Year Commitment to Supporting TCF School

PRL has made a long-term commitment to support the operational expenses of Professor Amanat Ali Campus, a TCF school, for the next ten years. Through a donation of PKR 9.2 million for the academic year 2023-24, PRL will contribute towards the school's teacher salaries, training, textbooks, uniforms, utilities, and management expenses. The Citizens Foundation (TCF) will manage the school according to its policies and standards, with regular progress reports provided to PRL. This initiative reflects PRL's dedication to promoting quality education and social welfare in Pakistan.



“ Education is the key to unlocking the potential of Pakistan's future generations, and we are committed to playing our part in this critical endeavor. By partnering with TCF to support quality education, we can help make a meaningful impact in the lives of children in our nearby communities.”

- Zahid Mir,  
MD & CEO, PRL



“ We are grateful for Pakistan Refinery Limited's contribution to our cause of promoting quality education in Pakistan. Through this partnership, we will be able to provide a better learning environment and opportunities for our students, which is critical for their future success.”

- Syed Asaad Ayub Ahmad,  
President & CEO, The Citizens Foundation

## Seven Consecutive Wins

### Committed to Sustainability and Beautification

PRL's remarkable win in the factories/industrial Garden category at the 72nd Pakistan Flower Show, marking their seventh consecutive victory, highlights their unwavering commitment to creating beautiful and sustainable landscapes. Recognized by the Horticulture Society of Pakistan, this achievement highlights PRL's expertise and dedication to horticulture, as their gardeners' meticulous work and diligence have once again impressed the judges. This outstanding performance not only reflects PRL's pursuit of excellence but also underscores the importance of horticulture in promoting a healthier environment and enhancing the quality of life. Their success serves as a testament to PRL's commitment to sustainability, community involvement, and creating a positive impact through the beauty of nature.



“ ہمیں اپنی ٹیم اور PRL میں بنائے گئے باغات پر فخر ہے۔ ہم لوگوں کی زندگیوں میں رنگ لانے کے لیے بہت محنت کرتے ہیں۔ ہم پر اعتماد کرنے کے لیے PRL ٹیم کا شکریہ

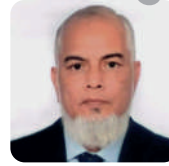
- PRL Gardeners' Team

## Oil Movement

### Managing Stocks and Operations with Efficiency and Flexibility

PRL's Oil Movement team has played a crucial role in overcoming challenges related to crude oil and finished product movement. They successfully managed the decrease in demand for High Sulfur Furnace Oil (HSFO) during the winter season by storing stocks at rental terminals and coordinating the first-ever HSFO export in recent times. Additionally, the team effectively managed High-Speed Diesel (HSD) stocks and made improvements to supply facilities, including the installation of flow meters and additional safety gadgets.

Despite operational challenges, the team ensured timely deliveries, contributing to PRL's growth and success. The Oil Movement team's dedication and effective management have been vital to PRL's operations and its ability to meet customer demands.



“ The Oil Movement team at PRL has demonstrated exceptional resilience and expertise in managing complex challenges related to crude oil and finished product movement. Their initiative-taking approach, from optimizing stock levels to implementing facility improvements, has contributed to our operational efficiency and success. We are proud of their dedication and continuous efforts to ensure the smooth flow of operations and meet customer requirements.”

- Akbar Musharraf, Deputy General Manager  
Oil Movement & Terminals

## Catalyzing Pakistan's Energy Sector

### Shaping a Strategic Alliance to Accelerate Refinery Growth and Foster Collaboration

PRL and OGDCL took a significant step forward in Pakistan's energy sector by signing a Memorandum of Understanding (MoU) on May 24, 2023. The purpose of this MoU is to establish a strategic collaboration between the two entities, leveraging their expertise and resources to drive growth and innovation. The primary objective of this collaboration is to create a mutually beneficial framework for future cooperation and collaboration, capitalizing on their shared interests in the energy industry in Pakistan. One of the key aspects highlighted in the MoU is the exploration of potential equity investment opportunities in PRL by OGDCL as a strategic investor. This investment would enable PRL to acquire the necessary resources for refinery upgradation and expansion, ensuring its continued growth. Both parties are committed to engaging in sincere negotiations to identify and finalize such investment opportunities. This strategic collaboration between PRL and OGDCL, prominent entities in Pakistan's energy industry, is expected to have a positive and transformative impact on the sector's overall growth and development.





# Growing Towards a Greener Future

## PRL's Urban Forest Initiative

PRL is partnering with the Sindh Government to establish an Urban Forest around the Refinery, aiming to plant 150,000 trees of various species. This ambitious project reflects PRL's commitment to combat deforestation, promoting sustainability, and creating a greener environment. The selected tree species will contribute to mitigating global warming, improving air quality, and enhancing the overall environmental quality. Beyond the environmental benefits, the Urban Forest will also positively impact mental health and well-being, providing a space for outdoor activities and reducing stress levels. PRL's adherence to the Forest Act 1927 and collaboration with the government demonstrate its responsible land use practices and community engagement. The establishment of the Urban Forest underscores PRL's dedication to shaping a more sustainable future.

## From the Pitch to the Refinery

### PRL Cricket Team's Quest for Sporting Glory

When it comes to sports, cricket holds a special place in the hearts of the people of Pakistan. It is a sport that brings people together and inspires a sense of national pride. Pakistan Refinery Limited's cricket team is a testament to this spirit, having participated in two tournaments over the past year.

PRL's cricket team participated in the CA Pakistan Cricket League 2022 and the 7th PARCO T20 Cricket Tournament 2023, displaying their talent and determination. They began the CA Pakistan Cricket League with a convincing win but were knocked out in the semi-final. In the PARCO T20 Tournament, they had notable victories, including a thrilling match against Shell. Despite falling short in the qualifiers and facing tough opponents, PRL's team displayed sportsmanship and dedication, making the Company proud.





# Ensuring Safety and Excellence

## The Role of Technical & Inspection at PRL

The Technical and Inspection function at Pakistan Refinery Limited (PRL) is responsible for upholding safety standards, maintaining operational excellence, and ensuring regulatory compliance. This includes conducting regular inspections and audits to identify hazards, monitoring equipment performance through preventive and predictive maintenance programs, and actively managing risks. The team is dedicated to maintaining the highest standards of safety, reliability, and compliance. Through diligent inspections, initiative-taking maintenance, and risk management initiatives, this function plays a fundamental role in ensuring the smooth and efficient functioning of PRL's operations.



“Through rigorous inspections, proactive maintenance, and effective risk management, we strive to maintain operational excellence and deliver on our promise of reliability and compliance.”

- Abdul Majid,  
General Manager Technical & Inspection



# Streamlining Trade

## PRL Joins Digital Revolution with Pakistan Single Window Portal

Pakistan Refinery Limited successfully registered at on the Pakistan Single Window Portal, an electronic portal that allows parties involved in International Trade and Transport, to lodge standardized information and documents using Single-Entry Point to fulfil all Import, Export, and Transit-related Regulatory requirements. The Pakistan Single Window (PSW) is one of the most significant initiatives the Government of Pakistan took to reduce the time and cost of doing business by digitalizing Pakistan's cross-border trade and eliminating paper-based manual processes. This has resulted in smooth, hassle-free, cheaper, robust, and swift day-to-day operations and integration into Global Value Chains.

# Paving the Way towards optimization

## Streamlining Processes for Greater Efficiency and Cost Savings

Stepping into the 21st Century brings out commendable developments, especially in the field of Information Technology; SAP Ariba is one of the significant examples to mention. A cloud-based Procurement solution which allows users to perform business transactions on a single platform globally. SAP Ariba is a B2B solution that allows users to connect to the world's largest network of Vendors and Suppliers and offers numerous advantages to maximize benefits from Procurement Management.

The Contracts and Procurement Department of PRL intends to embark on its journey into the global digital supply chain and has taken onboard the goal to fully implement SAP Ariba, which will facilitate the users with time and cost-effective Procurement process enabling millions of suppliers and buyers to get directly connected on the SAP Ariba network.



“This should be a game changer and transform procurement

- Shehrzad Aminullah,  
General Manager Contracts & Procurement /  
Company Secretary



# Unlocking Employee Potential

## A Closer Look at PRL's HR Training Programs

PRL prioritizes employee growth and development through a wide range of training programs offered throughout the year. These programs cover analytical, soft, and technical skills, empowering employees to excel in their roles. The Training Center serves as a modern hub for learning, equipped with top-notch facilities to ensure access to high-quality training. The successful "Colors of Collaboration" Bootcamp, facilitated by Carnelian, stands out as a two-day program focused on enhancing collaboration and teamwork among selected employees in leadership roles. Additionally, Meaningful Lives has organized various training programs, including wellness, problem-solving, decision-making, time management, and stress management, benefiting employees both professionally and personally. PRL's commitment to comprehensive training programs reflects its dedication to fostering employee growth and creating an environment where individuals can thrive.



“At PRL, we recognize that our employees are our greatest asset. By offering a wide range of training and development programs, we are empowering them with the skills and knowledge necessary to excel in their roles. Our commitment to their growth and development reflects our dedication to fostering a culture of continuous learning and innovation.”

- Najam Mahmud,  
General Manager Human Resources

Traditionally, petrochemical intermediates such as propylene and ethylene were produced by steam cracking. In steam cracking, Naphtha (which is also the feedstock to produce Motor Gasoline) is first separated from Crude Oil before going through an energy-intensive process of Steam Cracking to produce Propylene and Ethylene.

However, in recent years, improved, energy-efficient catalytic cracking technologies such as Residue Fluid Catalytic Cracking (RFCC) are being widely applied. The RFCC technology is designed to process heavy feedstock such as atmospheric residue (which is the bottom stream from the atmospheric distillation column). As a result, this technology allows the conversion of low-value products that are atmospheric residue into highly valued products such as Propylene, Gasoline and Diesel which can significantly improve the refiner's margin. Furthermore, with the addition of catalyst additives such as 'ZSM-5', the yields of petroleum intermediates can further be improved by up to 8-9%.

In conclusion, with the great challenges being faced by the refining industry and with the growing demand for petrochemical intermediates, refiners are applying energy-efficient technologies such as RFCC that are focused on adding value to the bottom of the barrel streams i.e., processing crude residues to produce valuable products such as petrochemical intermediates along with transportation fuels. Considering the many advantages of the RFCC, the Refinery Expansion & Upgrade Project of PRL has also selected the RFCC technology for its upcoming project.

## Residue to Olefins

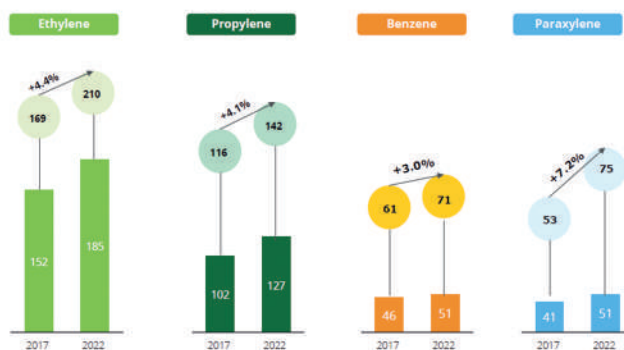
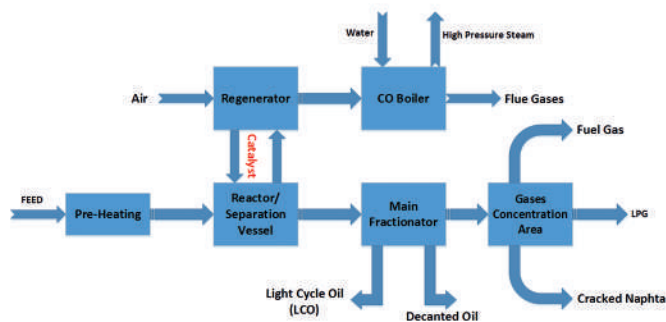
### How the RFCC Technologies Can Help the Refiners to Face the Challenges of the New Downstream Industry

By: Saad Bin Kasim, Lead Process Engineer

In the oil and gas industry, the downstream sector refers to the stages of processing and distributing petroleum products after they are extracted from the ground. The crude oil refining process is a key component of the downstream industry, as it involves converting crude oil into more valuable and useful products such as Motor Gasoline, High-Speed Diesel, Jet Fuel, and various chemicals.

The current global scenario presents great challenges to the crude oil refining industry, including price volatility of raw material, global pressure to reduce environmental impacts and decreasing refining margins for simple (hydro-skimming) refineries. The latest threat to refiners is the reduction of the consumer market, with the growing demand for Electric Vehicles (EVs). Despite the recent forecasts, the transportation fuels (Jet Fuel, Motor Gasoline & High-Speed Diesel) demand is still the main revenue driver for the downstream industry.

With the demand for petrochemical products such as Polypropylene & Polyethylene on the rise, it is forecasted that the demand for their valuable intermediates that is Propylene and Ethylene will also rise in the next years and can be an attractive path for refiners to keep their relevance.



# Motion Amplification

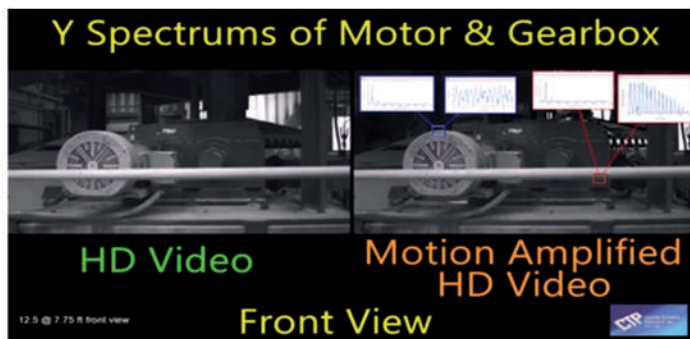
## The Revolutionary Tool for Vibration Analysis in Machinery and Equipment

**By: Imran Ahmed Shaikh, Senior Manager Maintenance & Planning**

Machine components such as pumps, compressors and motors are designed to rotate, and move back and forth; this motion invariably produces vibration. Not all motion is intentional and undesirable motion such as vibration can instigate serious issues in the machine. Vibration can be caused by imbalances, misalignment, loose attachments, and general wear. Performing analysis to discover the root cause sometimes becomes a complicated, tedious task and may take years to be pinpointed.

Development of new tools & techniques has made this task a bit easier i.e., Motion amplification is the latest, interesting non-contact new in-the-town vibration analysis method that uses digital video data to amplify the motion of objects and systems. This technology allows users to see motion that is otherwise invisible to the naked eye. However, that is not all it does; each pixel in the image acts as an accelerometer, providing extensive data about the movement of thousands of points and turning it into an exhaustive set of vibration data. Motion Amplification software produces easy-to-understand videos of the actual movement across equipment or machinery which enables far more effective communication between technical and nontechnical personnel, enhancing decision-making.

Faults that can be diagnosed easily include but are not limited to piping vibration, rotating equipment imbalance, misalignment, engine and compressor motion, soft foot, the issue with structural stiffness, ineffective damping, torsion, flex, bending, structural cracking, and excessive transient loading.



# Celebrating Long-Term Commitment

## PRL's Long Service Awards Recognize Employee Dedication

PRL's long service awards program recognizes and appreciates employees who have dedicated years of service to the company. It is a celebration of their commitment and loyalty, serving as motivation for others and fostering a culture of recognition within PRL.

Name	No. of Years served
Mohammad Tajuddin	35
Aftab Ali	35
Akbar Musharraf	30
Muhammad Hafeez Khan	30
M. Anees Akhtar	30
Muhammad Nasir	25
Muhammad Saleem	25
Imran Ahmed Khan	25
Munir Ahmad	20
Zafar Iqbal	20
Riaz Ahmed	20
Ayaz Ahmed	20
Nisar Ahmed	20
Naveed Kamran	20
Muhammad Noman	15
Asad Hasan	15
Muhammad Naeem Bhatti	15
Kamran Jaffer	15
Asim Siddique	15
Rida Ahmed	10
Jamil Ahmed	10
M. Akhlaq Hussain Qureshi	10
Muhammad Waqas Razzaq	10
Syed Murtaza Adeel Noor	10
Mohammad Naveed Khan	10
Syed Asif Ali	10



# T&I Insights

## Ethanol (E-10) As a Blending Fuel for Gasoline

By: **Abid Abbas Safdar, Senior Manager Technical Services**

Oxygenates are oxygen-containing ashless, organic compounds. Oxygenates are mono-oxygenated hydrocarbons including C1 through C5 alcohols, (Methanol, Ethanol, Propanol) and C2 through C6 carbonyls and ethers (MTBE, ETBE, TAME) Di-oxygenated hydrocarbons, include C2 through C4 methyl esters and 1,4-dioxane & propylene glycol.

Ethanol As E10: Ethanol is a simple alcohol & primary oxygenates with the chemical formula  $\text{CH}_3\text{-CH}_2\text{-OH}$ . Ethanol is a volatile, flammable, colorless liquid with a slight characteristic odor and a boiling point of 78.37 °C. There are various common ethanol fuel mixtures in use around the world. Anhydrous ethanol can be blended with gasoline (petrol) for use in gasoline engines as its Research Octane Number (RON) is 108, but with high ethanol content only after minor engine modifications. Ethanol fuel mixtures have "E" numbers which describe the percentage of ethanol fuel in the mixture by volume, for example, E85 is 85% anhydrous ethanol and 15% gasoline. Low-ethanol blends, from E5 to E25, although internationally the most common use of the term refers to the E10 blend. Blends of E10 or less are used in more than 20 countries around the world, led by the United States, European Union, Brazil, China, Canada, Thailand, Argentina, and India.

E10, a fuel mixture of 10% anhydrous ethanol and 90% gasoline, sometimes called gasohol, can be used in the internal combustion engines of most modern automobiles and light-duty vehicles without the need for any modification on the engine or fuel system. E10 blends are typically rated as being 2 to 3 octane numbers higher than regular gasoline and are approved for use in all new U.S. automobiles and mandated in some areas for emissions and other reasons. The E10 blend and lower ethanol content mixtures have been used in several countries.

### Merits of Ethanol

- It creates byproducts that are also useable, like dry carbon dioxide in cryogenic applications.
- Lesser CO emissions.
- Blending Ethanol up to 7.9% does not affect the Euro V specifications of Gasoline and maintains the oxygen content as per specification i.e., 2.7%.

### Demerits of Ethanol

- Ethanol is hygroscopic, meaning it absorbs water vapor directly from the atmosphere. Because absorbed water dilutes the fuel value of the ethanol and may cause phase separation of ethanol-gasoline blends.
- Lesser fuel economy as compared to pure Gasoline.
- It is a corrosive fuel.
- It requires a lot of cropland space for the cultivation of sugarcane.

## Antea's Palladio inspection Data Management Software (Idms)

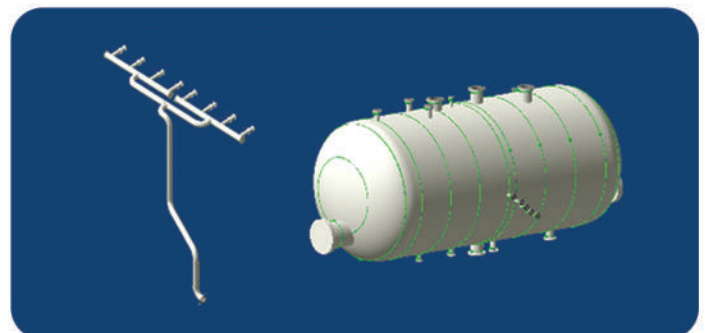
By: **Shayan Hasan Khan, Engineer Inspection**

The inspection section manages large amounts of asset data for different asset types installed within the refinery premises. This includes legacy data, history, inspection, scheduling, corrosion, maintenance, and repair information for each piece of equipment. Over the years, this data was stored in the form of documents, files, books, and history cards. Since this data was unstructured and located in disparate sources, it usually took a long time to retrieve. To prevent these issues and to avoid the future accumulation of such forms of data, the Inspection section has adopted Antea's Palladio Inspection Data Management Software (IDMS) to centralize all static equipment and plant piping data into one digital database.

All data generated from the inspection and testing of equipment and assets are collected, stored, managed, and analyzed in the IDMS. Some of the key features of the software are:

- Directly locate the equipment/piping tag on available P&IDs.
- Manages a technical datasheet for each item which contains basic information like identification tag, manufacturing date, material and mechanical data, design and operating pressures and temperatures etc.
- Generates alarms for items which are due for inspection so that users can plan efficiently.
- Enables the creation of a 3D model of the item to identify the position of inspection areas easily and precisely.
- Uploads all inspections against the item tag to create a digital inspection history of the equipment.
- Evaluates thickness monitoring data of items and provide expiry data so that the next inspections can be planned accordingly.

The inspection started working on this software in 2018 and after extensive data uploading (which includes technical data population, sketches preparation, inspection data etc.), about 90% of the data has been integrated into the software. Inspection is now looking forward to including Risk Based Inspection (RBI) module in this software which will further optimize the inspections of equipment and piping being performed, and eventually increase the reliability of the plant.



# Thank You for Your Dedication

## Retiring Employees at PRL

PRL acknowledges and appreciates the contributions of retiring employees, recognizing their dedication and impact on the company's success. The company wishes them a happy retirement and expresses gratitude for their commitment and legacy.

S.No.	Name	Designation	Department	Date of Retirement
1	Syed Asif	Refinery Technician I	Engineering	31.07.2022
2	Abdul Majeed Dar	Executive Operations	Operations	19.11.2022
3	Sultan Mir	Selection Grade Technician	Engineering	01.01.2023
4	Qari Abdul Sattar	Officer Administration	Human Resources	15.02.2023
5	Abdul Rehman	Executive Instrumentation & Control	Engineering	28.02.2023
6	Taimoor Akram	Executive Oil Movement	Operations	28.02.2023
7	Asif Zahid	Manager Contracts	Contracts & Procurement	15.06.2023

# New Talents, New Horizons

## PRL Welcomes Trainee Batch 2023

PRL is investing in young talent by hiring a new batch of Trainees from top universities. These high-achieving graduates will undergo a two-year traineeship and work across different departments at PRL. The company invests in the learning & development of these individuals, ensuring a bright future for both PRL and the industry.

Congratulations to the Trainee Batch of 2023!

S.No.	Name	Department
1	Faisal Mahmood	Operations (Process & Utilities)
2	Hamza Sohail	Operations (Process & Utilities)
3	Sameet Salman	Operations (Process & Utilities)
4	Hassaan Ahmad Khan	Operations (Process & Utilities)
5	Ammar Ali Azmi	Oil Movement
6	Muhammad Zain	Oil Movement
7	Zeeshan Ul Islam	HSEQ
8	Ayyan Abid	Engineering (Electrical & Instruments)
9	Muhammad Muneeb Ahmad	Engineering (Civil)
10	Areesha	Engineering (Electrical & Instruments)
11	Fahad Alvi	Engineering (Mechanical)
12	Muhammad Areeb	Technical & Inspection (Inspection)
13	Muhammad Burhan	Engineering (Rotary)
14	Imran	Technical & Inspection (Laboratory)
15	Bilal Abdul Karim	Technical & Inspection (Laboratory)
16	Muhammad Umer	Technical & Inspection (Laboratory)

# The Art of Being on Time

**By: Muhammad Rashid Zafer, Chief internal Auditor**

This story is about two friends Ahmed and Zain.

One of Ahmed's distinguishing characteristics is that he is always on time. No matter if it is an official meeting or an informal gathering of friends, Ahmed is never late. Everybody in the office knows that when Ahmed says that he will join the meeting at 8:30 am, it is 8:30 am, not a minute. When Ahmed says that he will leave the office on time even his wife and kids know that he will be home by 6:00 pm as it takes an hour from his office to his home. This is how Ahmed operates, always on time. Nevertheless, Ahmed lives in a real world full of uncertainties, traffic jams and emergencies. That is why Ahmed always informs the people around him about extraordinary situations and reschedules his appointments in advance.

Zain, his friend, is exactly the opposite of Ahmed. He does not like the punctuality trait of Ahmed. Zain believes in the notion that 'man is born free' and no one has the right to take this freedom from him. So, for Ahmed time is just a number and being an accountant, he understands that one of the inherent characteristics of numbers is that 'they can always change.' For him to join a meeting at 8:30 am means any time between 8:30 am to 10:30 am. He believes that people should be intelligent enough to realize that life is not perfect and there is always a possibility of some unforeseen event or incident happening. Even his wife and kids do not know when Zain will reach home because, on many occasions, he gives them a surprise by reaching home at 4:30 pm.

Now if you were given the choice to hire Ahmed or Zain, what would be your response?

Let us assume that Ahmed and Zain both are equal in all respects i.e., money, looks, competence etc. So, keeping all other things constant, I hope that every one of us will be in favour of Ahmed over Zain because of his punctuality trait. This trait makes Ahmed predictable, dependable, and expected to be always there when needed.

Now pause here for a second and reflect that we always expect others to be Ahmed but never try to become Ahmed. We always expect others to be on time but never consider this as something important when it comes to ourselves.

Now let us see what Ahmed does to always be on time and never late.

1. Estimation of Time: Ahmed always calculates the time required for each assignment. So, for example, if Ahmed needs to catch a flight at 5:30 am, Ahmed works back the time required for each step required in the process. So, Ahmed knows that to catch the flight at 5:30 am he must reach the airport at 4:30 am. To reach the airport he must leave the house at 4:00 am. To leave the house at 4:00 am he must complete the packing by 3:50 am. To complete the packing and to do other work he must start the process of reaching the airport at 2:50 am.

2. Buffer: Since Ahmed lives in the real world, he always adds some time for events that can be anticipated. Ahmed has estimated that to cater to unusual traffic or a flat tyre on his way to the airport requires 15 minutes. So, Ahmed starts his process of reaching the airport at 2:35 am rather than 2:50 am.

Karen Joy Fowler, a famous American author has beautifully said: "Arriving late is a way of saying that your own time is more valuable than the time of the person who waited for you."



**RECONNECTING & MOVING FORWARD**

# CHRONICLES



P.O. Box 4612, Korangi Creek Road, Karachi - 75190, Pakistan.  
Tel: (92-21) 35122131-40, Fax: (92-21) 35060145, 35091780  
Email: [info@prl.com.pk](mailto:info@prl.com.pk) Website: [www.prl.com.pk](http://www.prl.com.pk)