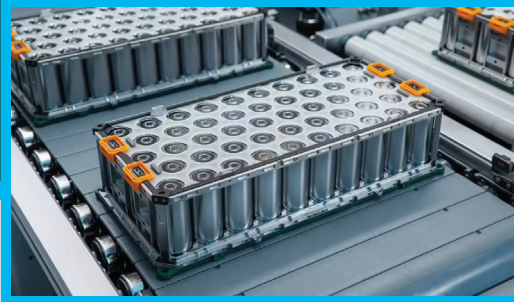




TRADEBONE



LITHIUM & SODIUM BATTERY, CELLS & TECHNOLOGY TRANSFER COMPANY

From Lead Acid to Future Energy Storage Solution

ENERGY SOLUTION

CELLS PROVIDER

TECHNOLOGY TRANSFER

ASSEMBLY LINES



350

PROJECTS COMPLETED

35

AWARDS RECEIVED

80

HAPPY CLIENTS

05

PATENTS

Executive Summary

Global energy systems are undergoing a fundamental transition driven by renewable energy integration, grid instability, electrification of transportation, and rising environmental compliance requirements. Traditional lead-acid battery technology — once dominant due to low initial cost — has reached its practical and economic limits. At the same time, emerging technologies such as graphene-based batteries remain largely experimental and lack large-scale commercial maturity.

Lithium-ion battery technology has emerged as the only proven, scalable, and future-ready energy storage solution capable of meeting modern residential, commercial, industrial, and electric mobility requirements. This report presents a comprehensive research-driven and execution-focused lithium battery transition project, specifically tailored for the Pakistan market while remaining scalable for the Middle East and African regions.

Tradebone proposes a turnkey project model, beginning with detailed customer requirement analysis and extending through technology selection, China-based sourcing of equipment and cells, local installation and commissioning, full technology transfer, and long-term after-sales support. The objective is to enable customers to adopt lithium battery solutions with minimum technical risk, optimized investment, and sustainable long-term returns.

Company Overview

TRADEBONE

Who We Are

Tradebone is a China-Dubai origin multinational group with over 15 years of operational experience in industrial technology transfer, energy systems, and global energy storage solutions. R&D Headoffice in Shenzhen, **China** and Sales Development Headoffice in **Dubai** along regional offices in Pakistan, UAE, UK, KSA, and Afghanistan. The company delivers advanced industrial technologies as fully deployed and commissioned systems, supported by technical training and long-term after-sales service.

Tradebone enters the lithium-ion and sodium-ion battery domain with a strong foundation in lead-acid battery ecosystems. The group owns a lead battery recycling and smelting facility in Pakistan's Nankana district, operational for more than a decade, providing direct exposure to battery chemistry, failure behavior, industrial processing, and dealer networks. This background, combined with nearly 15 years of industry experience in China alongside major battery manufacturers, positions Tradebone as a trusted partner for lithium and sodium battery assembly lines, localized cell manufacturing, and full technology transfer projects across high-growth emerging markets.



Mission Statement

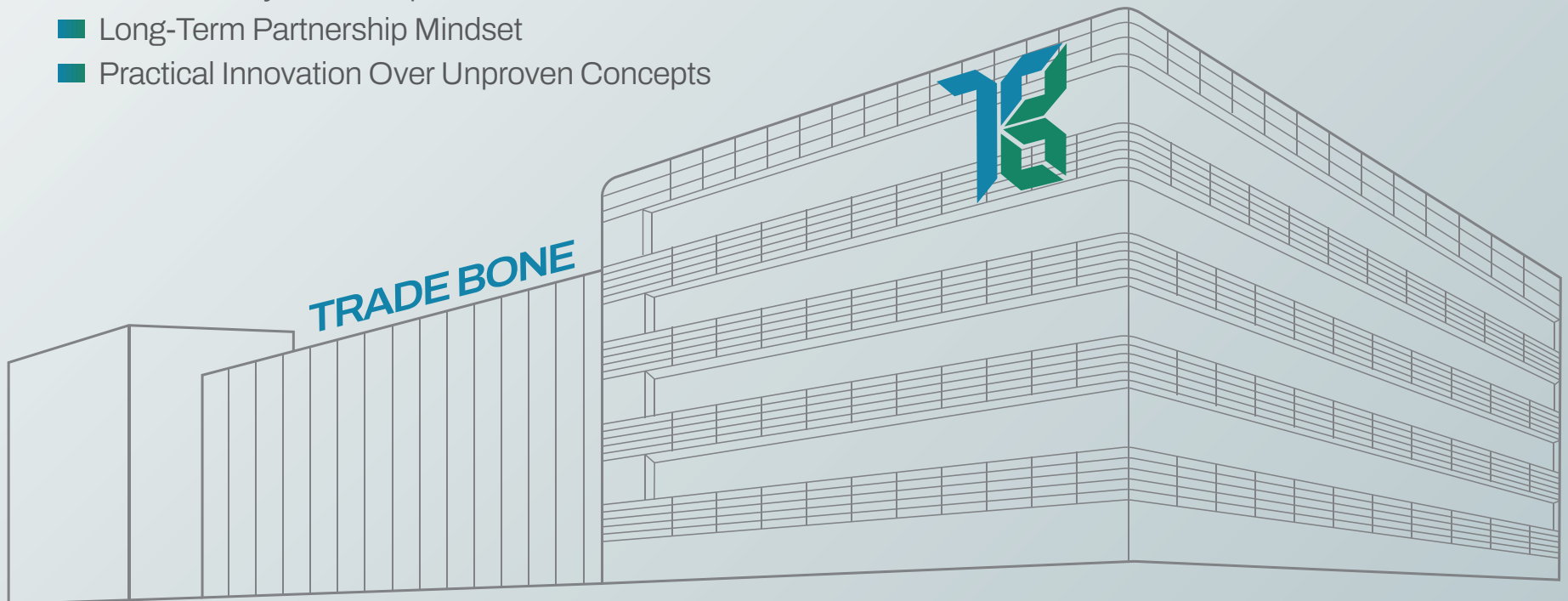
To enable global markets to adopt efficient, sustainable, and future-ready energy storage technologies through structured technology transfer and localized execution.

Vision Statement

To become a globally recognized energy and technology solutions group, driving clean energy adoption and industrial self-reliance.

Core Values

- Execution Excellence
- Trust and Transparency
- Sustainability and Compliance
- Long-Term Partnership Mindset
- Practical Innovation Over Unproven Concepts



COMPANY DEVELOPMENT

Global Presence: R&D Headoffice China, Sales & Development Headoffice in Dubai, Led Recycle Factory in Pakistan, Site Sales offices in UK, KSA & Afghanistan



15 Years of Industrial Experience

A Proven Track Record

Over the last decade, Tradebone has built deep operational expertise across:

Registered Operations
established in USA,
UK, UAE, and China

Delivered industrial
technology transfer and
localization projects

Entered and stabilized
international seasoning
& flavor supply chains

Strengthened global
supplier, logistics, and
partner networks

2011
2012

2013
2014

2015
2016

2017
2018

2019
2020

2021
2022

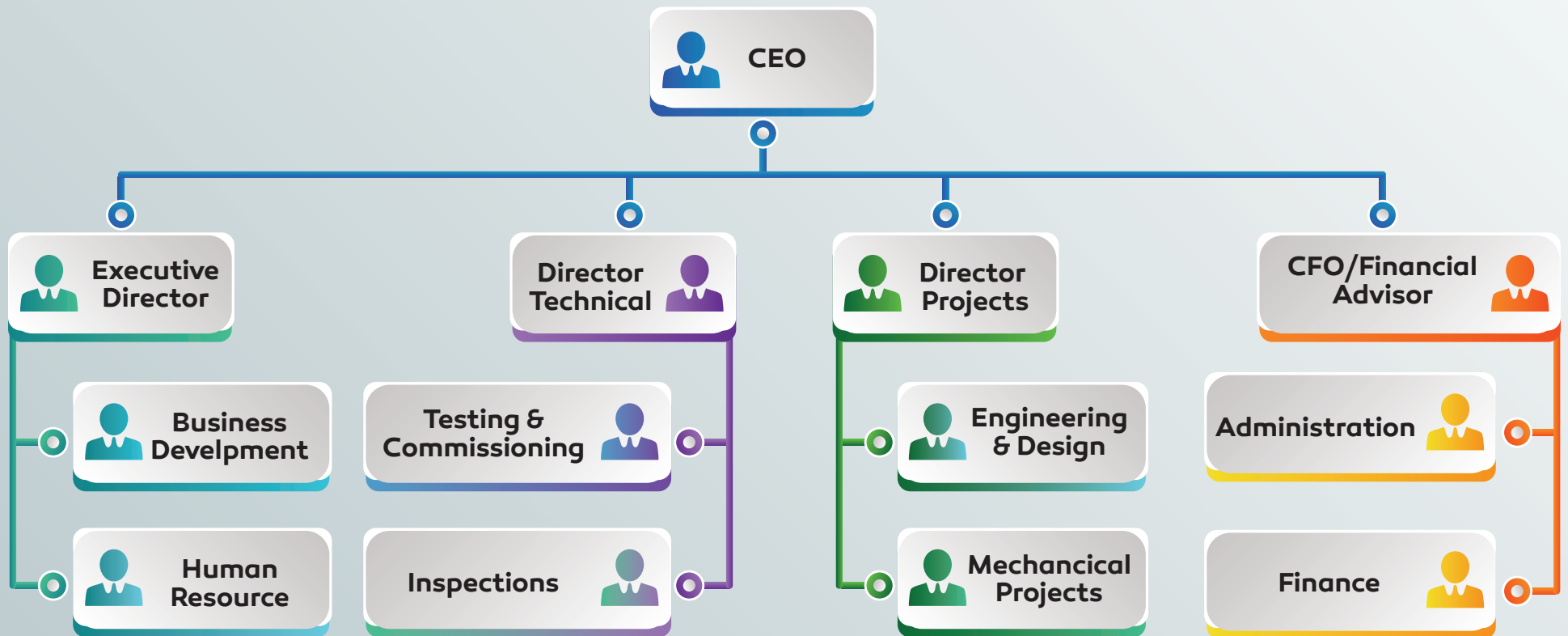
2023
2025

Expanded global trading
in energy solutions and
energy storage systems

Scaled export of
appliances and
industrial equipment

Supplied printers and
industrial printing solutions
across regions

Organizational Structure



This structure ensures consistency, accountability, and scalability across regions.

CEO'S MESSAGE & PROFILE

Mr. Abbad Farooq

At Tradebone we believe the world is a global village and every individual deserves access to cost-effective, reliable energy solutions at their doorstep. Persistent import hurdles and limited local availability of advanced battery technology have made procurement difficult for Pakistan's industries and consumers. Tradebone was founded to change that — to localize proven lithium energy storage solutions, simplify supply chains, and convert existing lead-acid capacity into future-ready lithium assembly and recycling operations.

Our Nankana lead-acid recycling and cell-processing facility gives us direct industrial insight into battery lifecycle behavior, environmental compliance, and practical manufacturing challenges. Combining that local presence with Shenzhen-based technology sourcing and engineering lets Tradebone deliver turnkey projects — from certified cell supply and automated assembly lines to on-site commissioning, staff training, and long-term technical support.

We are committed to quality, transparency, and sustainable growth. By bringing Chinese engineering capability, verified suppliers, and structured technology transfer to regional industry, Tradebone reduces technical risk and optimizes investment for our partners. I invite investors, industrial clients, and institutional stakeholders to join us in building a resilient, clean-energy future for Pakistan, the Middle East, and Africa.

Mr. Abbad Farooq

Chief Executive Officer (CEO),
Tradebone



CEO'S PROFILE

Position: Chief Executive Officer (CEO), Tradebone.

Experience: Over 15 years of cross-border experience in specialized machinery, technology transfer, and industrial project execution across Pakistan, China, and international markets.

Functional Expertise: Machinery sourcing and procurement, plant installation & commissioning, after-sales service, supplier verification, and full technology transfer for energy and manufacturing projects.

Energy & Battery Experience: Practical knowledge of Tradebone's Nankana facility; strong understanding of equipment, and environmental compliance.

Industrial Footprint: Leads operations spanning execution), Dubai (regional development), and the

Business Reach: Operates family and group relationships (100+ customers across service networks and export

Thought Leadership: industrial opportunities and strategic regional trade-corridor potential.

Strengths: Strategic leadership, operations and a long-term partnership sustainability and

battery reclamation and cell processing through lead-acid to lithium transition requirements, capital

Shenzhen (Head Office), Pakistan (industrial United Kingdom (international trade).

businesses with long-standing client multiple sectors), including after-sales experience.

Actively promotes regional has authored articles on development and

partnerships in China, project scaling, practical innovation, mindset focused on compliance.



Why Lithium-Ion and Sodium-Ion Batteries Represent the Future of Energy Storage

Lithium-ion and sodium-ion batteries are increasingly recognized as the cornerstone technologies for the next generation of energy storage because they directly address the technical, economic, and environmental limitations of earlier systems such as lead-acid batteries. As power systems evolve toward renewable integration, decentralized generation, and electric mobility, energy storage solutions must deliver higher efficiency, longer operational life, minimal maintenance, and strong safety performance. Lithium-ion batteries have already proven their capability across electric vehicles, grid storage, and industrial applications, while sodium-ion batteries are emerging as a strategic complement due to material abundance and cost stability. Together, these technologies align with global decarbonization goals and long-term energy security requirements.

HIGHER ENERGY DENSITY



LONGER LIFECYCLE AND DURABILITY



LOWER IN SIZE



MAINTENANCE-FREE OPERATION



ENHANCED SAFETY STABILITY



ENVIRONMENTALLY SUSTAINABLE



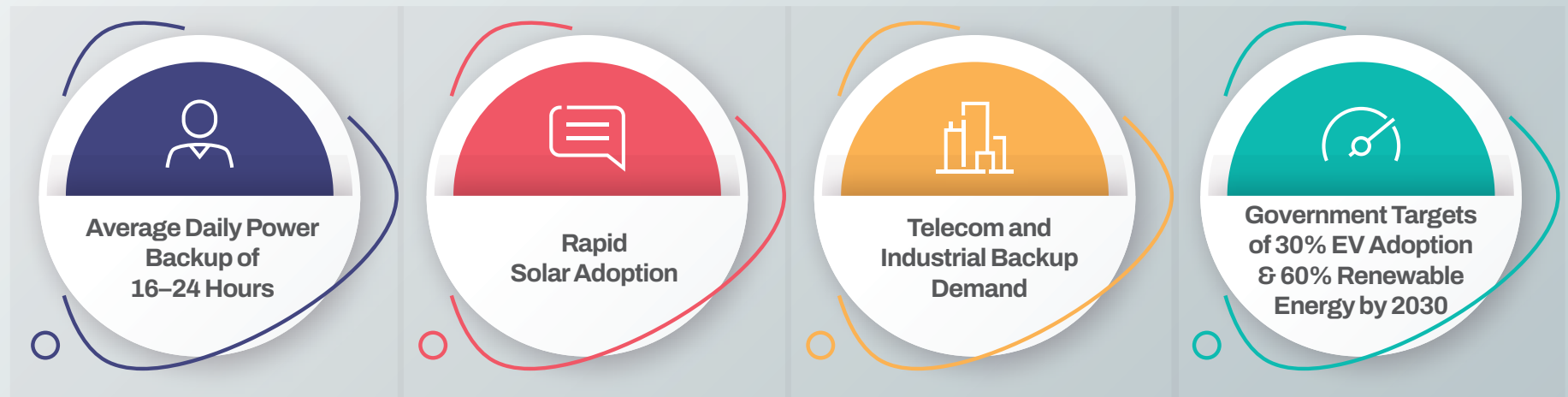
ALIGNMENT EV INDUSTRY



Global & Pakistan Market Transition to Lithium Batteries

The global lithium battery market reached approximately 1,545 GWh in 2024 and is projected to exceed 5,127 GWh by 2030, growing at a CAGR of over 22%. In contrast, the lead-acid battery market continues to decline in both production volume and market share.

Pakistan mirrors this global shift. Lithium battery imports are projected to rise from 1.25 GWh to nearly 8.75 GWh by 2030, driven by:



Despite this demand, local lithium battery production meets only ~15% of market requirements, creating a major opportunity for localized assembly and manufacturing.

Lithium & Sodium Battery Applications and Future Outlook



Technical & Economic Comparison

Lead-Acid, Lithium (LiFePO_4), & Sodium-Ion Batteries



Key Benefit	Lead-Acid Battery	Lithium-Ion Battery	Sodium-Ion Battery
 Usable Energy & Efficiency	Only ~50% usable capacity	80–100% usable energy	80–90% usable energy
 Battery Life & Durability	Short life; frequent replacement	6–10× longer operational life	4–6× longer operational life
 Total Cost Over Time	High lifetime cost due to maintenance	Lowest total cost of ownership	Cost-stable and competitive
 Safety & Reliability	Gas emission and overheating risk	High safety with BMS (very high for LFP)	Very high thermal stability
 Sustainability & Future Readiness	Environmentally hazardous; declining relevance	Core technology for EVs & renewables	Emerging future solution for grid storage

Can We Help You? Tradebone Solutions

Tradebone offers **Three Engagement** models:



BATTERY PRODUCTS

Customized lithium & Sodium battery packs designed according to voltage, capacity, application, and branding requirements

CELLS SUPPLY

Reliable sourcing of certified cells from verified Chinese manufacturers with long-term supply assurance.

TECHNOLOGY TRANSFER

Comprehensive technology transfer covering lithium battery assembly line setup as well as end-to-end lithium battery cell manufacturing, including process design, equipment integration, training, and quality control systems.

Finished Lithium Battery Products

-  From 12V to 300V & 23AH to 300AH
-  3.2V Single Cell
-  Life PO4
-  Grade A Cells
-  BMS Supported
-  IP65/67
-  Over temperature protection



Cells Supply for Battery Manufacturing

Ready to use cells supply from reputable and verified suppliers across the china



-  Any custom capacity as per your demand regarding application, temperature, chemistry
-  from 23ah to 320ah @ 3.2V single cell
-  Life span : 3000 cycles to 8000 cycles (6-12 years)

Technology Transfer of Lithium Battery Assembly Line



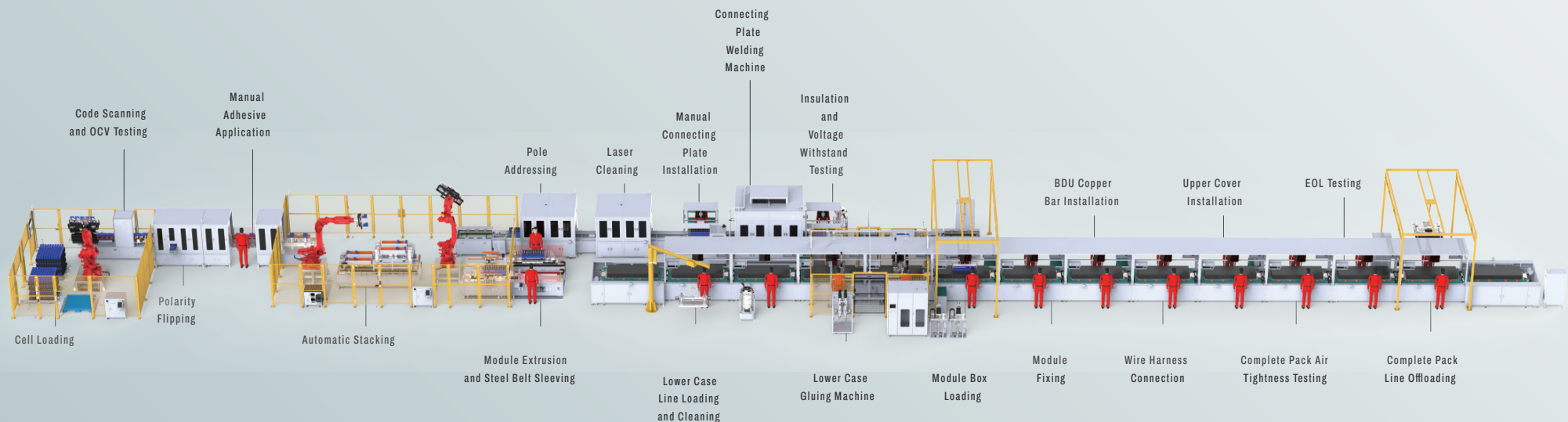
Automation level: Fully automatic system with 90–95% automation



Cell compatibility: 18650 / 21700 / Prismatic / Pouch cells

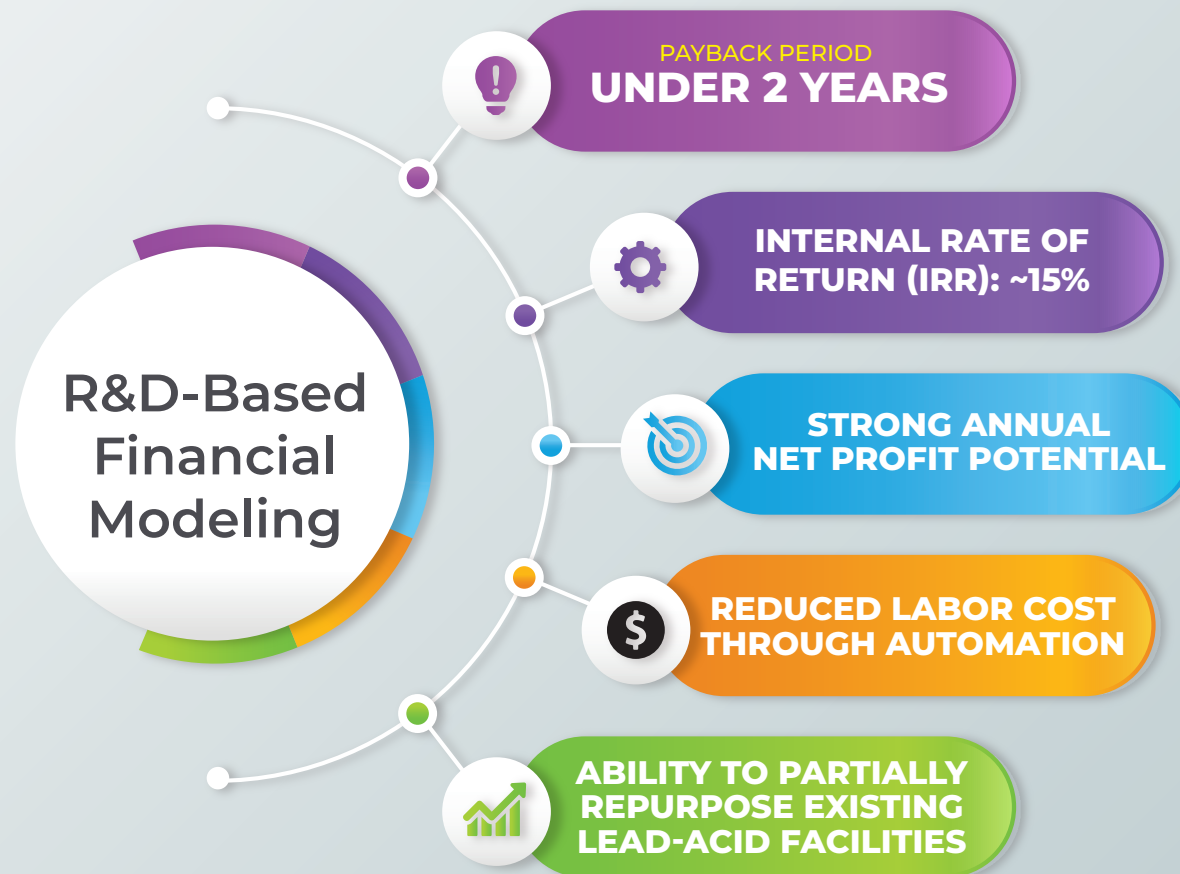


Production capacity: 300–1,000 battery packs per 8-hour shift



Assembly Line Technology Transfer ROI Feasibility (Pakistan Focus)

R&D-based financial modeling indicates that lithium battery assembly projects in Pakistan can achieve:



These returns outperform traditional lead-acid manufacturing investments, which face declining margins and rising compliance costs.

Technology Transfer Lithium Battery Cell Manufacturing Unit

Production Line
Automation Rate
99%

Class 7 Cleanliness In
Assembly Process
Class 6 Cleanliness In
Coating Process

"0" Pollution Workshop

6 Hi-Pot Tests In Proess

8 Times
Demagnetization



Assembly Line Technology Transfer ROI Feasibility (Pakistan Focus)

Benefits

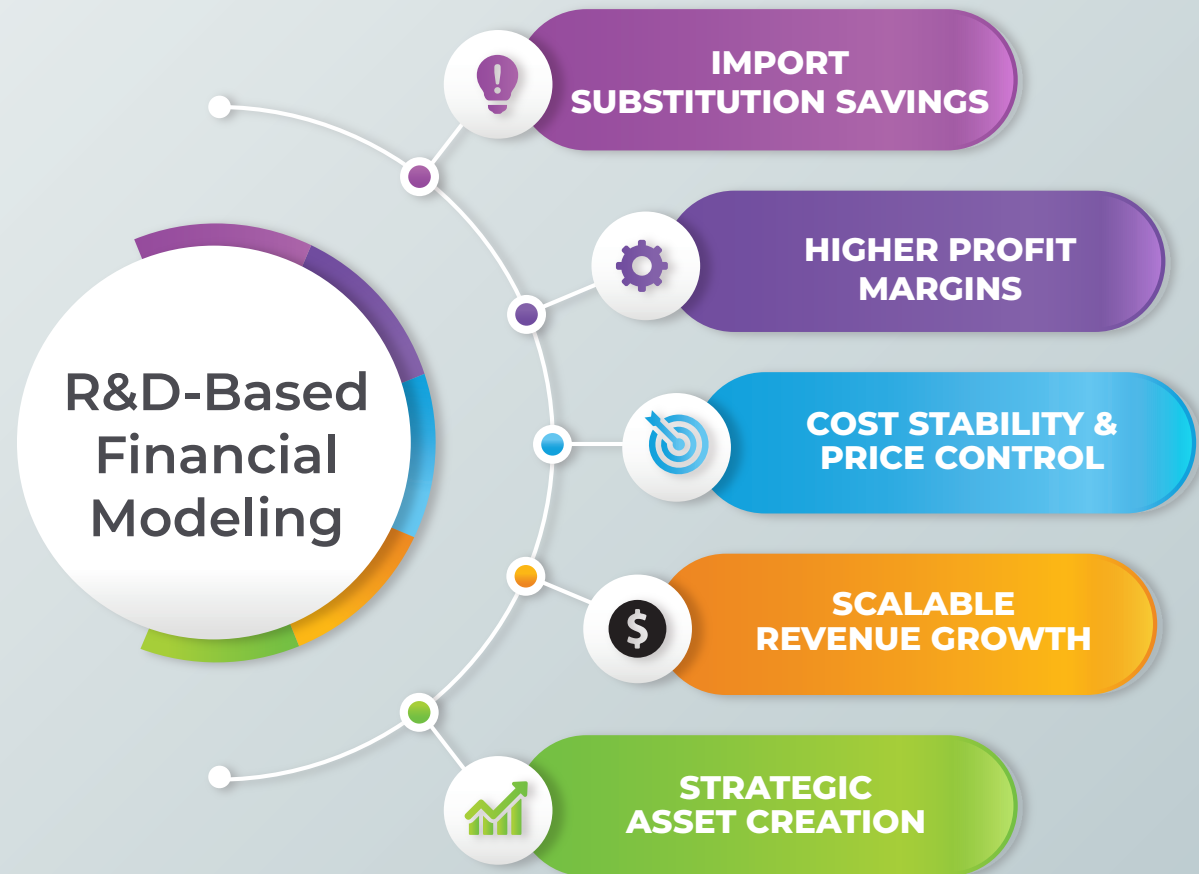
Enables local production of lithium battery cells, reducing dependency on imports and improving supply security

Transfers core manufacturing know-how, including cell chemistry, formation, and quality control processes

Lowers long-term production costs through localization and economies of scale

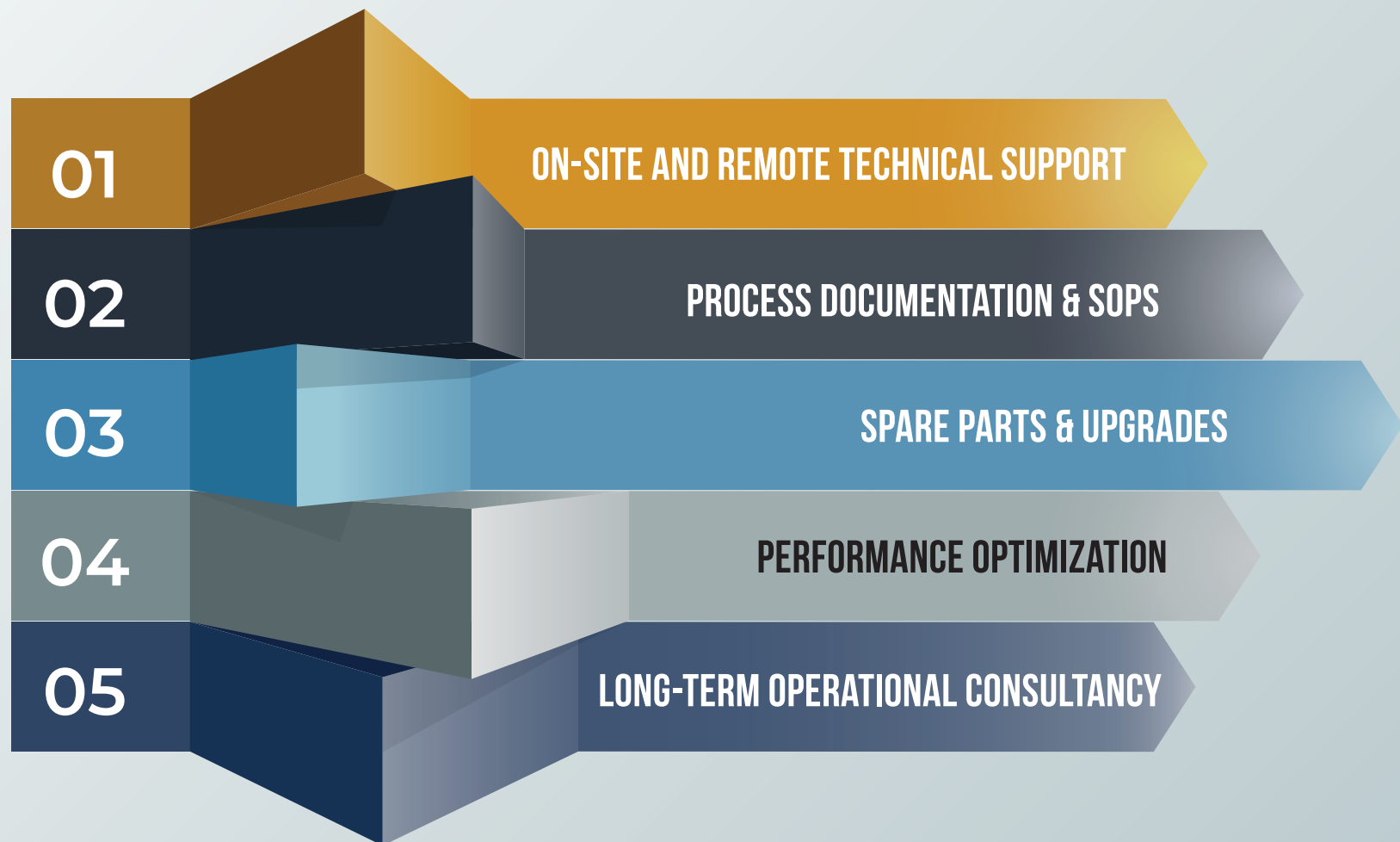
Builds in-country technical expertise and skilled workforce for advanced energy storage technologies

Enhances control over product performance, customization, and compliance with international standards



After-Sales Service & Technology Transfer

Tradebone assumes full responsibility for end-to-end engagement, including project execution, technology transfer, commissioning, and comprehensive after-sales service to ensure long-term operational success.



How Tradebone Works?

Tradebone operates through a centralized strategic management framework supported by specialized operational divisions:



01

Strategy
& Investment Management



Energy & Battery
Technology Division

02

03

China Sourcing &
Supplier Management

Engineering &
Quality Assurance

04

05

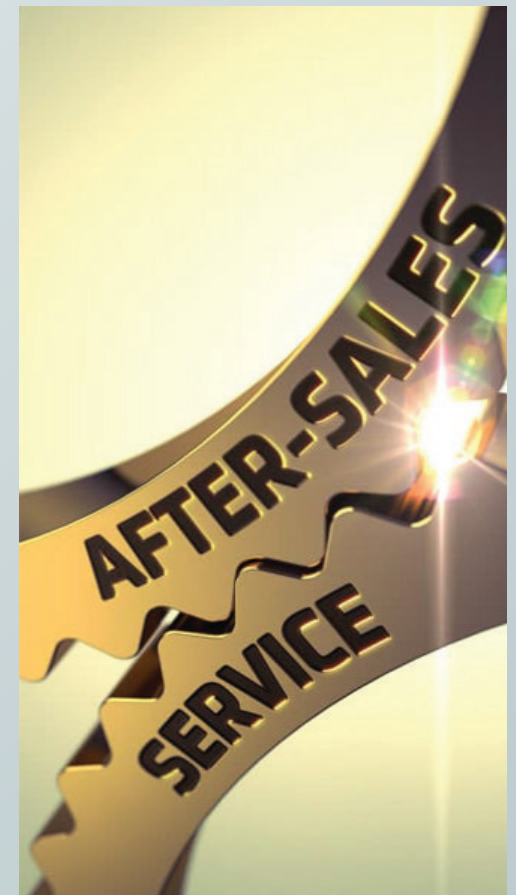
Logistics, Customs
& Compliance

Sales, Dealer &
Industrial Client Network

06

07

After-Sales Service
& Technical Support



This structure ensures consistency, accountability, and scalability across regions.

Why Choose Tradebone

CHINA-ORIGIN TECHNOLOGY ACCESS

15+ YEARS INDUSTRIAL EXPERIENCE

EXISTING BATTERY RECYCLING INFRASTRUCTURE

STRONG REGIONAL PRESENCE

END-TO-END PROJECT OWNERSHIP

COMPLETE TECHNOLOGY TRANSFER

LONG-TERM AFTER-SALES SUPPORT

Tradebone is a technology partner, not a transactional supplier.

Code of Conduct

Tradebone adheres to strict ethical standards



**REGULATORY
COMPLIANCE**



**ENVIRONMENTAL
RESPONSIBILITY**



**TRANSPARENCY
& ACCOUNTABILITY**



**RESPECT FOR
INTELLECTUAL PROPERTY**



**ZERO TOLERANCE FOR
UNETHICAL PRACTICES**

Official Technology Partner Visits China



Tradebone is a technology partner, not a transactional supplier.

Previous Industry Engagements



Let's Connect



Together, we build the future of energy storage.

Company Certification



370200 Trademark Electronic Search System (TESS)

United States Patent and Trademark Office
Home Site Index Search FAQ Glossary Guides Contacts eBusiness eBIZ Alerts News Help

Trademarks > Trademark Electronic Search System (TESS)

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Log out | Please logout when you are done to release system resources allocated for you.

Record 1 out of 1

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TRADEBONE

Word Mark TRADEBONE
Goods and Services: IC 006, US 021 023 028 036 038, G & S: Cell phone battery chargers for use in vehicles; wireless speakers; desk or car mounted units incorporating a loudspeaker to allow a telephone to be used hands-free; smartphone mounts; FIRST USE: 2019/01/1, FIRST USE IN COMMERCE: 2019/01/01

IC 021, US 002 013 029 030 033 040 050, G & S: Containers for household or kitchen use; cutting boards for the kitchen; strainers for household purposes; lunch boxes; tumblers for use as drinking glasses; FIRST USE: 2019/01/1, FIRST USE IN COMMERCE: 2019/01/01

Standard Characters Claimed
Mark Drawing Code (4) STANDARD CHARACTER MARK
Serial Number 88053739
Filing Date January 16, 2019
Current Basis 1A
Original Filing Basis 1A
Published for Opposition May 28, 2019
Registration Number 5832322
Registration Date August 13, 2019
Owner (REGISTRANT) Farooq, Abbaal INDIVIDUAL PAKISTAN C/O LegaFero RAPC Worldwide 448 E Southern Ave Tempe ARIZONA 85282
Attorney of Record Raj Abhyankar
Type of Mark TRADEMARK
Register PRINCIPAL
Live/Dead Indicator LIVE

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TRADEBONE 商标档案

商标名称:	TRADEBONE	法律状态:	已注册	商标类别:	05 医药	
申请号:	41491757	申请日期:	2019-10-09	初审日期:	2020-03-20	
注册日期:	2020-06-21	失效日期:	2030-06-20			
申请人:	深圳市阿巴德进出口贸易有限公司				代理机构:	深圳市智联信知识产权
申请人地址:	广东省深圳市宝安区松岗街道潭头社区松岗大道7号汉海达大厦1306A					
商品/服务项:	0502 医用营养品; 婴儿食品; 0506 内裤衬里(卫生用); 卫生内裤; 失禁用尿布; 婴儿尿布; 婴儿尿裤; 月经...					

TRADEBONE 商标档案

商标名称:	TRADEBONE	法律状态:	已注册	商标类别:	21 厨房洁具	
申请号:	41499247	申请日期:	2019-10-09	初审日期:	2020-03-27	
注册日期:	2020-06-28	失效日期:	2030-06-27			
申请人:	深圳市阿巴德进出口贸易有限公司				代理机构:	深圳市智联信知识产权
申请人地址:	广东省深圳市宝安区松岗街道潭头社区松岗大道7号汉海达大厦1306A					
商品/服务项:	2101 一次性盘子; 午餐盒; 厨房容器; 家用器皿; 水壶; 糖果盒; 纸或塑料杯; 饭盒; 2102 玻璃盒; 2105 ...					

TRADEBONE 商标档案

商标名称:	TRADEBONE	法律状态:	已注册	商标类别:	09 科学仪器	
申请号:	41485756	申请日期:	2019-10-09	初审日期:	2020-03-27	
注册日期:	2020-06-28	失效日期:	2030-06-27			
申请人:	深圳市阿巴德进出口贸易有限公司				代理机构:	深圳市智联信知识产权
申请人地址:	广东省深圳市宝安区松岗街道潭头社区松岗大道7号汉海达大厦1306A					
商品/服务项:	0901 可下载的手机应用软件; 计算机外围设备; 0902 人脸识别设备; 0907 手机用自拍杆; 智能手机用壳; ...					

TRADEBONE 商标档案

商标名称:	TRADEBONE	法律状态:	已注册	商标类别:	18 皮革皮具
申请号:	41503468	申请日期:	2019-10-09	初审日期:	2020-03-20
注册日期:	2020-06-21	失效日期:	2030-06-20		



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