SHOURNA INDUSTRIAL COMPANY LTD.

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Projects & Innovation

An illustrated portfolio of project concepts






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81 original plates across 12 sections

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Original artwork is reproduced in its source language. Each plate has an English title and summary. Project figures are illustrative estimates from the original proposals.

Offshore desalination and resource recovery



The floating platform combines reverse-osmosis drinking water production with separate pathways for industrial water and salt recovery. The wider concept includes oxygen and green hydrogen production.

Desalination and green hydrogen



The proposal pairs shipboard desalination with renewable electricity and green hydrogen. The project concept calls for hydrogen to power ship engines and generators.

Recovering sea salt by freezing



As water freezes, dissolved salts become concentrated in the remaining liquid. The concept explores using freeze concentration to prepare desalination brine for salt recovery.

Producing salt by industrial evaporation



The concept uses evaporation to concentrate residual brine until salts crystallize. The crystals can then be separated and prepared for handling.

Commercial oxygen production



The integrated project proposes producing oxygen by electrolysis using suitably treated water. The diagram illustrates the production and commercial handling stages.

Uses for water recovered from desalination



The plate explores irrigation, industrial cooling and injection. Each route depends on treating the recovered water to suit the intended application.

Jeddah Medical and Pharmaceutical City



The proposed city brings together pharmaceutical research, testing and manufacturing in the Jeddah area. The development concept locates the campus in Asfan.

Integrated campus master plan in Asfan



The illustration shows how research buildings, production facilities and supporting infrastructure could be arranged across a single campus.

A future pharmaceutical campus in Jeddah



An architectural visualization presents the proposed city as a coordinated campus for medical research and pharmaceutical industry.

Vision for a pharmaceutical manufacturing city



The proposal links local feedstocks and research capabilities with pilot production and commercial pharmaceutical manufacturing.

Pharmaceutical supply chain plan



The plan traces local raw materials from their sources through preparation, research and testing to potential industrial use.

From raw materials to manufacturing



The sequence follows selected inputs through preparation and laboratory evaluation toward pilot-scale processing and pharmaceutical production.

From local plants to pharmaceutical candidates



The proposed collaboration connects local botanical resources with research teams and potential manufacturing partners to investigate candidate products.

From herbal research to drug development



The workflow moves from plant selection and extraction to characterization and evaluation before candidates proceed to further development.

From research to pharmaceutical manufacturing



The plan outlines follow-up studies, laboratory testing and pilot development needed before a candidate can advance to manufacturing.

Proposed pharmaceutical partnership work plan



The plan connects joint project selection, laboratory work and evaluation with a decision on which results to advance toward pilot development.

Drug discovery from local plants



The proposed laboratory examines locally sourced plants, prepares extracts and screens them for compounds of potential pharmaceutical interest.

Extracts from desert plants



The visualization shows plant sample preparation and extraction in a research laboratory for subsequent analysis and evaluation.

Toxicology and biocompatibility laboratory



The proposed laboratory evaluates biological responses to candidate formulations and materials as part of the research program.

Precision medicine and genetic markers



This laboratory concept focuses on genetic markers that can help researchers characterize disease and study treatment response.

Genomics and health data center



The center concept brings genomic analysis and health data together to support biomedical research and precision medicine.

Laboratory for chronic disease research



The illustration depicts a laboratory for investigating chronic conditions and screening candidate treatments.

Molecular imaging of nanoscale drug carriers



This research concept uses molecular imaging to study nanoscale carriers designed to deliver therapeutic compounds.

Vaccine research and plant biotechnology



The laboratory concept explores plant biotechnology as a research route for vaccine development.

Antibody and therapeutic protein development



The proposed research laboratory studies how antibodies and other therapeutic proteins can be developed and characterized.

Aseptic pharmaceutical filling line



The illustration shows a controlled filling area for pharmaceutical products that require aseptic processing.

Automated slaughterhouse and medical by-products



The concept proposes recovering and processing animal by-products for potential uses including surgical sutures and heparin research.

Integrated slaughterhouse proposal



The proposal connects livestock inspection, halal slaughter, processing and the recovery of selected by-products for downstream use.

Stone paper factory and product range



The factory concept converts calcium carbonate and polymer into rolls and sheets for bags, cartons and other packaging formats.

Stone paper manufacturing complex



The site concept brings mineral preparation, sheet manufacture, converting and storage into one industrial complex.

From limestone to calcium carbonate powder



The process runs from quarrying and crushing through grinding and classification to produce calcium carbonate powder.

From the quarry to the processing plant



The illustration links limestone extraction with transport to the plant for size reduction, grinding and classification.

White limestone quarry



The quarry is the proposed upstream source of the mineral feedstock used in calcium carbonate production.

Limestone crushing station



Crushers reduce quarried limestone before it moves to downstream grinding and classification.

Calcium carbonate grinding plant



The grinding plant reduces crushed limestone to powder for use as an industrial feedstock.

Calcium carbonate quality control laboratory



Laboratory checks assess characteristics such as particle size and product consistency before material is released for shipment.

Automated powder packaging and palletizing



The line fills and closes bags of calcium carbonate powder and stacks the finished packs on pallets.

Industrial uses of calcium carbonate



The plate illustrates calcium carbonate as a mineral filler in products such as plastics, paper and coatings.

Calcium carbonate across industries



An overview links quarrying and powder preparation to multiple end uses, including building materials, polymers and paper products.

From feedstock to polyolefin powder



This plate follows petrochemical feedstocks through olefin production and polymerization to materials used in industrial converting.

Petrochemical complex and polymer pellets



The illustration shows the industrial setting for producing polymer feedstock supplied to downstream manufacturers.

Steam cracking and olefin separation



Steam cracking produces a mixture of compounds. Separation recovers olefin streams that can be used to make polymers.

Loop polymerization reactors



The illustration depicts reactor equipment used to convert olefin feedstock into polymer under controlled conditions.

Polymer pelletizing line



Pelletizing converts polymer into uniform granules suitable for handling, storage and downstream processing.

Multi-line plastics plant



The visualization shows multiple production lines for converting polymer feedstocks into industrial products.

Mineral preparation for stone paper



Calcium carbonate powder is prepared to the required specification before blending with the polymer component.

Stone paper manufacturing stages



The manufacturing sequence follows mineral preparation, polymer blending, sheet formation and winding.

Stone paper production line



This line visualizes continuous production from feedstock handling through sheet manufacture and roll collection.

Stone paper sheet extrusion



The mineral-polymer blend is formed into continuous sheet, cooled and collected for downstream processing.

Stone paper converting lines



The plate presents converting equipment that processes rolls into finished packaging and other products.

High-speed stone paper converting



The illustration depicts roll-fed equipment used to cut and form stone paper for downstream products.

From stone paper rolls to finished goods



The converting concept turns roll stock into bags, cartons and food-service packaging.

Packaging from stone paper rolls



Examples show how the same roll stock can be cut, formed and finished for different packaging formats.

Premium stone paper products



The range illustrates printed bags, boxes and other finished products made with stone paper substrates.

Automated stone paper bag plant



The proposed converting line feeds roll stock through cutting, folding and bag-forming equipment.

Automated stone paper container line



The illustration depicts forming and handling equipment for finished stone paper containers.

Stone paper plant financial estimates



The project estimate assumes 100,000 tonnes per year, US$35 million in capital costs, US$45 million in annual operating costs and US$120 million in annual revenue.

SHOURNA gold trading platform



The platform concept connects physical gold supply and custody with digital customer accounts and transaction records.

From gold ore to bullion



The plate follows ore from quarrying through processing, refining and casting into bullion.

Casting gold pieces to specified weights



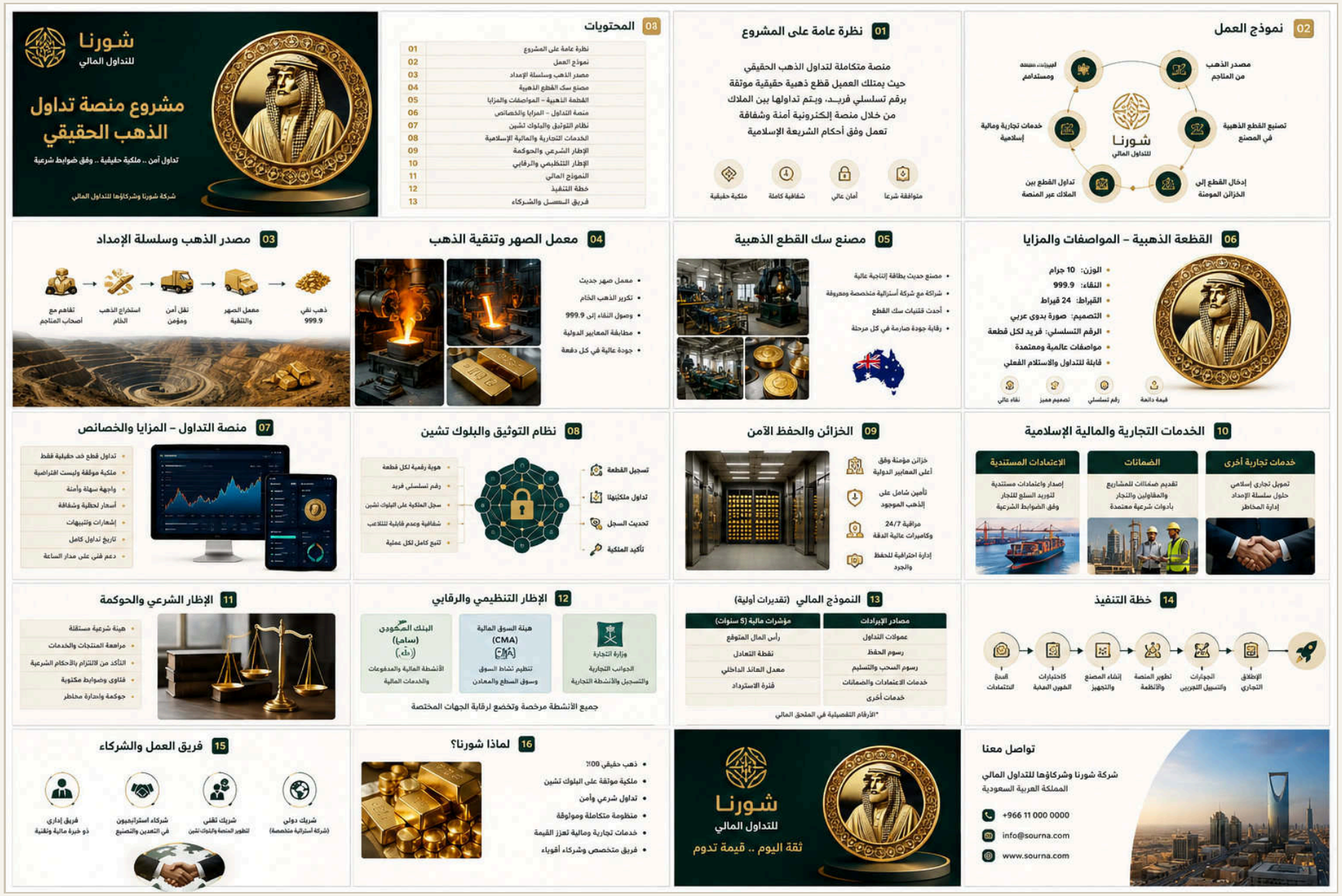
The proposed process uses molds for 10, 20, 30 and 50 gram pieces, followed by finishing and weight checks.

24-karat gold piece and bullion bar



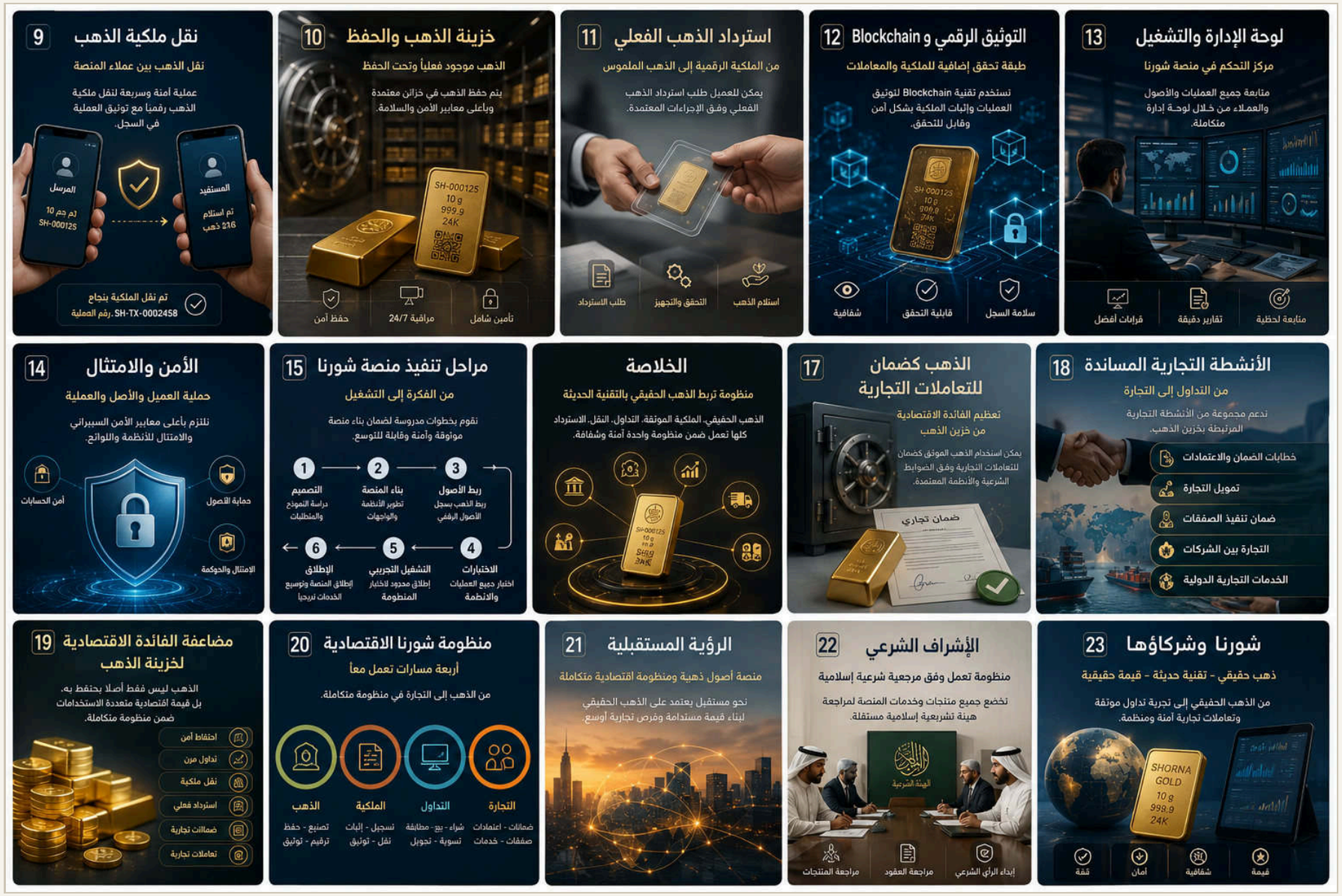
The product visualization pairs a round gold piece with a bullion bar to illustrate two physical formats.

Physical gold trading proposal



The proposal brings together gold sourcing, manufacture, bank custody and trading through a digital platform.

Gold trading ecosystem



The concept assigns roles across suppliers, fabricators, custodians and the digital operator, with transaction traceability built into the platform.

SHOURNA gold platform overview



The plate summarizes product design, physical custody, account management and the proposed digital trading workflow.

China-Oman-Africa multimodal corridor



The proposed route links Kashgar by rail to Gwadar, then uses maritime and onward connections through Oman to serve regional destinations.

Illustrative corridor distances and travel times



The scenario assumes 200 km/h on the Kashgar-Gwadar rail leg and 30 knots on the Gwadar-Muscat maritime leg.

Travel times from Kashgar to four destinations



The scenario compares indicative transit to Jebel Ali, Riyadh, Aden and Djibouti through the proposed corridor.

Transit time comparison across four ports



The plate compares modeled travel times across selected port routes using the assumptions in the original corridor study.

Indicative ocean shipping times from China



The original comparison lists indicative ocean freight times to Jebel Ali, Dammam, Jeddah, Aden and Djibouti.

Hadramout appliance and commercial industries



The Mukalla proposal covers sheet-metal-based manufacturing for appliances, cooling equipment and commercial products, with regional export potential.

Hadramout fisheries industrial complex



The proposal links fish reception, processing, packaging and cold-chain operations in a coordinated industrial site.

Hadramout minerals and stone paper complex



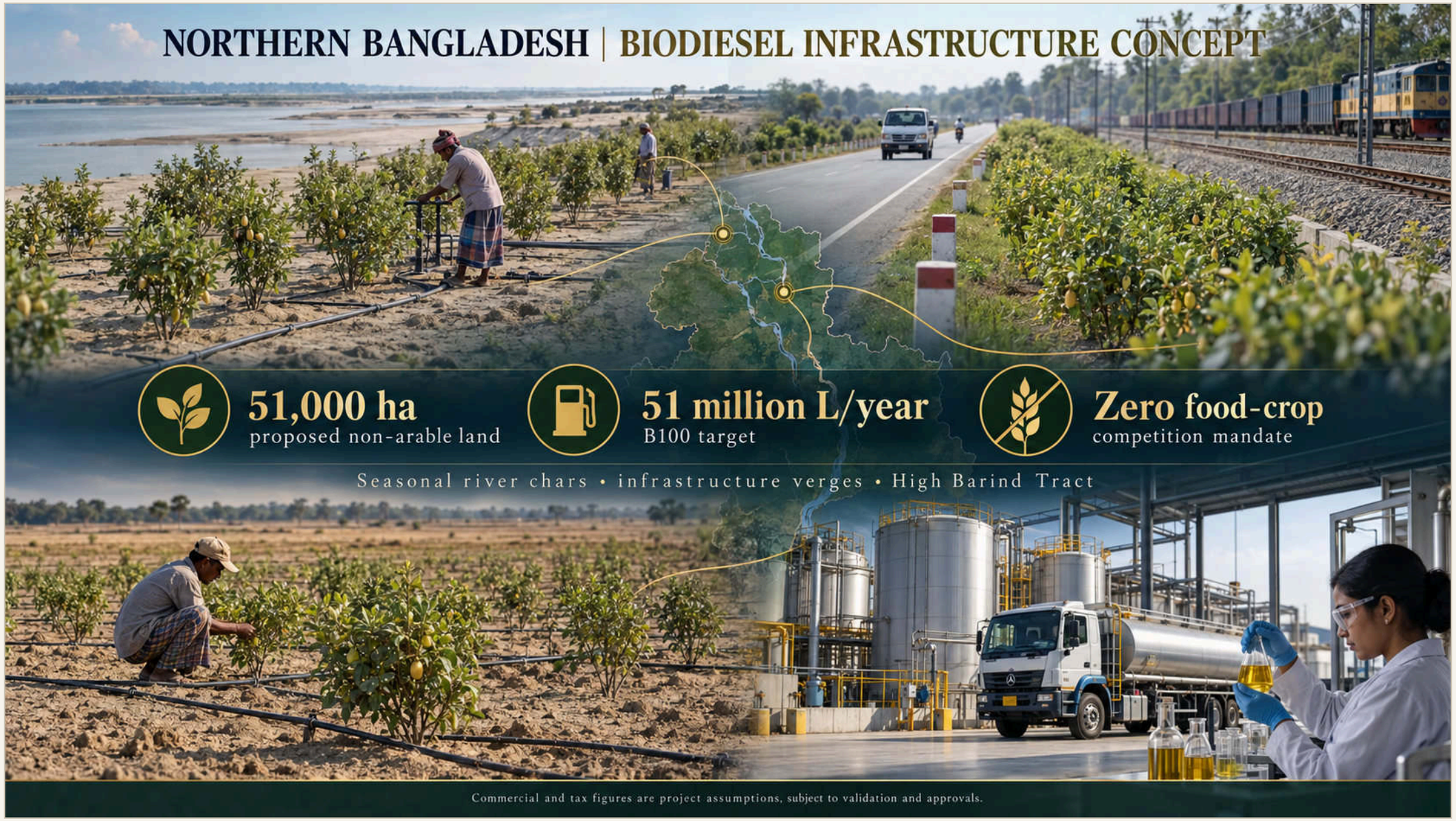
The concept links local mineral resources with calcium carbonate processing, stone paper manufacturing and cement production.

Integrated B100 biodiesel project in northern Bangladesh



The project concept targets 51 million litres of B100 annually from a supply chain drawing on 51,000 hectares of land identified in the proposal.

Biodiesel infrastructure in northern Bangladesh



The illustration connects feedstock collection and preparation with conversion, fuel storage and dispatch.

Modern ostrich farm in Saudi Arabia



The farm concept combines rearing, feeding and veterinary care with production for multiple downstream markets.

Ostrich product range



The illustration highlights meat, eggs and leather as distinct product streams from the proposed farm.

Ostrich steak in a Saudi restaurant



A restaurant presentation illustrates one proposed sales channel for ostrich meat.

Residential compound of 12 villas



The concept arranges twelve residences on a 100 by 40 metre site with space for a pool and shared landscaping.

Structural concept for a 200 m² residence



The proposed assembly uses galvanized steel framing, internal boards, exterior cement board and insulation.

Mobile food production trailer



The plan fits food preparation and service equipment into a trailer with designated work and storage areas.

Digital platform for industrial sales



The concept presents a digital catalog and sales channel for SHOURNA industrial products and services.

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