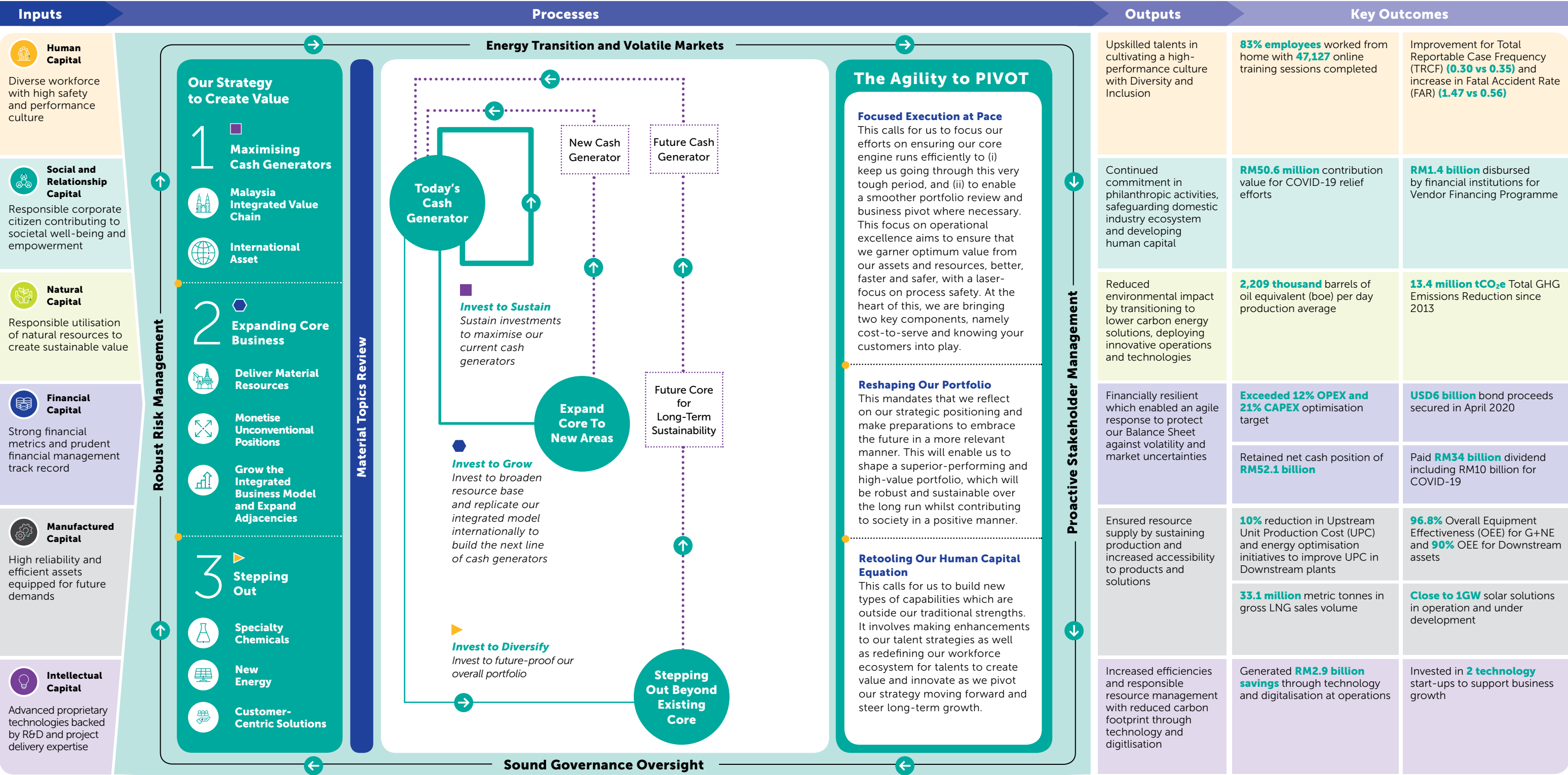


Value Creation Model







Lens 1

Continued Value Creation

Statement of Purpose : A progressive energy and solutions partner enriching lives for a sustainable future



Value Creation Model

Key Inputs	Key Outcomes and Outputs
<div>Human Capital<ul style="list-style-type: none">48,679 employees47% below 35 years old14% women in technical positionsEstablished the Corporate Command Centre (C3) and PETRONAS Pandemic Preparedness and Response Team (PPRT)Established Diversity and Inclusion (D&I) CouncilMore than RM170 million invested in learning</div>	<ul style="list-style-type: none">Improvement for TRCF (0.30 vs 0.35) and increase in FAR (1.47 vs 0.56)Process Safety: Reduction in Loss of Primary Containment (LOPC) incidents: 5 major and 24 minor / Reduction in fire-related incidents: 2 major incidents and 58 minor / Tier 1 incident: 7 casesTotal Recordable Occupational Illness Frequency (TROIF) increased to 0.16Remobilisation of staff and dependents to 13 host countries and evacuation from 33 countriesAchieved 1 million safe man-hours on the Kasawari Integrated Offshore High Contaminant projectStrengthened the leadership pipeline by accelerating talent development to become more transformative, agile and inventiveRaised awareness on unconscious bias through Theatre Exchange sessions which was initiated by PETRONAS Leading Women Network in collaboration with LeadWomen83% of employees working from home said Work-from-Home (WFH) arrangements are “satisfactory”, based on an internal survey30,268 digital learning users with 47, 127 online learning sessions completedGood progress made in shaping the way our people think and act toward becoming an agile workforce to face oncoming challenges and seize new opportunities for future progress
<div>Social and Relationship Capital<ul style="list-style-type: none">Annual RM100 million allocation for Yayasan PETRONAS for philanthropic activitiesDigitalisation of procurement systemSupport of Malaysia's Oil and Gas Service Equipment (OGSE) sector through Vendor Financing Programme (VFP) and Road to Bursa initiativesPETRONAS Education Sponsorship Programme (PESP) and Graduate Employment Enhancement Scheme (GEES) programme</div>	<ul style="list-style-type: none">Total contribution of RM50.6 million for COVID-19 relief efforts in Malaysia and countries where we operateSet-up of government quarantine centres at facilitiesDeveloped standard operating procedures (SOPs) and Contact Tracing Guide Book for Malaysia's oil and gas industry200,000 users benefited from the online tendering platform's ease of useRM1.14 billion in loans approved and disbursed to 214 applications by financial institutions through the VFPFacilitated high potential vendors to meet IPO requirements for listing on Bursa MalaysiaAwarded 370 scholarships, recruited 133 (61%) PETRONAS scholars and 140 GEES trainees
<div>Natural Capital<ul style="list-style-type: none">Fossil fuelsAirWaterBiodiversity and ecosystem</div>	<ul style="list-style-type: none">Oil and gas daily production average: 2,209 thousand barrels of oil equivalent (boe) per dayTotal Petroleum Reserves (2P): 8.6 bboe (as at 1 Jan 2021) / Total Contingent Resources (2C): 15.27 bboe (as at 1 Jan 2021)Total Reduction of 13.4 million tCO₂e of GHG emissions since 2013Reduced freshwater withdrawal: 60.0 million cubic metres (m³) from 60.3 million cubic metresReduced oil in water content: 532 metric tonnes (MT) from 648 metric tonnesReduced sulphur oxides emissions: 84,225 metric tonnes (MT) compared with 110,214 metric tonnes in 2019Hazardous waste reduction of 20,183 MTRecycled and recovered waste 65,173 MT (71% of generated waste)Completed feasibility study for Plastic Waste to Crude Naptha projectSignatory member of the Methane Guiding Principles partnershipCollaboration with Malaysian government agencies for: forest-based carbon offset potential, Rigs-to-Reefs decommissioning approach and Malaysian Oil Spill Contingency PlanConducted and mitigated risks based on Environmental Impact Assessment and Biodiversity and Ecosystem Services Assessment for all 28 onshore and 74 offshore facilities in Malaysia
<div>Financial Capital<ul style="list-style-type: none">Efficient capital management in pursuit of business objectives with appropriate balance between risk and rewardReputable credit ratingRobust liquidity management, cash preservation efforts and optimum source of fundingStrong governance mechanism</div>	<ul style="list-style-type: none">Exceeded OPEX and CAPEX optimisation target of 12 per cent and 21 per cent respectivelySolid corporate credit ratings at A2, A- and BBB+ as affirmed by Moody's, Standard & Poor (S&P) and Fitch respectively, underpinned by strong stand alone credit rating at four notches above our credit ratings as assessed by S&P and FitchSecured proceeds of USD6 billion in April 2020 through issuance of multi-tranche senior bond offeringRetained unique net cash position of RM52.1 billion and low leverage level amongst peers in 2020Paid RM34 billion dividend including RM10 billion for COVID-19
<div>Manufactured Capital<p>Sustained optimum level operations and innovative solutions offerings through</p><ul style="list-style-type: none">247 producing fields432 offshore platforms30 floating facilities3 LNG plants2 Floating LNG facilities2 Regasification terminals4 Refineries11 Petrochemical production sites4 Virtual Pipeline System trucks14 ROVR trucks<p>Product availability in more than 90 countries</p></div>	<div>Operations<ul style="list-style-type: none">Upstream achieved first hydrocarbon and Final Investment Decision (FID) for 17 and 13 projects respectively, plus 10 exploration discoveries10% reduction in Upstream Unit Production Cost (UPC) and energy optimisation initiatives to improve UPC in Downstream plantsSustained Overall Equipment Effectiveness (OEE): G+NE (97.2%) and Downstream (90%)PFLNG DUA achieved Ready for Start-Up milestoneSigned a Memorandum of Understanding (MoU) with Sarawak Energy Berhad (SEB) for the commercial production of Green HydrogenPengerang Integrated Complex (PIC) on track for operations by second half of 2021Diversifying into derivatives and specialty chemicals to cater to prioritised markets</div> <div>Distribution<ul style="list-style-type: none">Achieved 33.1 mtpa LNG sales including 6.5 mtpa new deals through innovative solution offerings (Virtual Pipeline System, LNG bunkering capabilities and LNG export via ISO tank)Secured 600 MMscfd minimum daily gas offtake during Movement Control Order (MCO) in Malaysia and achieved 274.4 MMscfd new and extended gas salesFacilitated 7 MMscfd capacity of third-party shipper supply under the Third Party Access (TPA)Delivered 16 MW of power and 105 MT of steam to customersIncreased solar capacity in Malaysia (90MW); India and Dubai (over 900MW)Expanded chemical distribution channel in IndonesiaLaunched PETRONAS Primax 97 with Pro-Race fuel for advanced technology engines and widened access to Sprinta lubricant through e-commerceSupplied 10 million litres of fuel through ROVR mobile refueling systemIncreased growth in non-fuel retail segments (Makan@Mesra food-to-go solutions, Deliver2Me service under Setel e-payment solution and PRYSM motorsport and lifestyle merchandise)</div>
<div>Intellectual Capital<ul style="list-style-type: none">Top quartile project management expertisePatented technologies and digital tools for operational efficiencies and low carbon solutionsVenture capital investments in technology start-ups to grow adjacent to and beyond oil and gas sphereFacilities of the Future programme</div>	<ul style="list-style-type: none">Generated RM2.9 billion cost savings through expertise, technology and digital tool deployments in project delivery and operationsInvested in Braintree Technologies for smart farming solutions and SOLS Energy as a one-stop solutions start-up for high quality solar energy systemsFirst in Southeast Asia to receive ISO 19650:2-2018 certification for PETRONAS New Leadership Campus constructionAchieved on-track deployment of the Kasawari Integrated Offshore High Contaminant project with CO₂ separation technology currently under development to convert CO₂ into fuel for land transportationBuilt green hydrogen testing facility for efficient and cost-effective productionProgressed the Bio-Agenda with projects to turn biomass to chemicals, bio-based specialty surfactants and plant-based aviation fuelPiloted Remote Autonomous Operation in Resak field, offshore Terengganu to reduce carbon footprint, increase safety on offshore platforms and reduce operational expenditure by 50%



Value Creation Model

Key Actions	Trade-offs
<ul style="list-style-type: none">Drive sustainable HSSE performance through solid frameworks benchmarked against industry best practices, robust risk mitigation measures, generative HSSE culture and digitalisationClose collaboration with the Malaysian government, host governments and authorities for COVID-19 HSSE measuresCascaded PETRONAS D&I statement and D&I awareness through virtual immersive sessions and workshop and escalated D&I discussions at ELT and Board levelsImplemented special working arrangements with split teams, equipped with digital collaboration tools and support desks with cyber security measuresConverted 23 training programmes to fully digital and blended learning; and leveraged on extensive e-learning facilitiesUndertook constant engagement with staff focusing on mental and physical well-being through various programmes and provided accessibility to coaches and dedicated mental health helplineRefreshed the PETRONAS Cultural Beliefs as part of internal rally towards meeting desired results	<ul style="list-style-type: none">All capitals are affected by the fatalities and the incidents that lead to the fatalitiesTransformation exercise may cause fatigue which could negatively affect human capital and benefit intellectual and manufactured capitalLower remuneration due to cost-cutting measures would affect human capital and benefit financial capitalInvestment in upskilling broadens career prospects and benefit human capital and manufactured capitals while causing a requirement for additional financial capital
<ul style="list-style-type: none">Ensured continued commitment to CSR activities via focusing on the areas of Education, Community Well-Being and Development, as well as the EnvironmentContinued the close collaboration with the Malaysian government, host governments and authorities for COVID-19 relief effortsTimely acquisition and delivery of medical equipment and supplies for COVID-19 relief effortsAccelerated transformation to fully digitalised procurement ecosystemForged innovative collaborations with 9 financial institutions, 5 investment banks and financial institutions to support the Vendor Financing Programme and Road to Bursa listing initiatives	<ul style="list-style-type: none">Contributions, donations and support programmes would require financial capital and serve social, manufactured, human and intellectual capitals by securing our licence to operate and bolster local industry's ability to thrive in crises
<ul style="list-style-type: none">Established short-term targets and identified 4 levers towards achieving PETRONAS' net zero carbon emissions by 2050 (NZCE 2050) aspirationMade operational excellence improvements: hydrocarbon flaring and venting reduction as well as renewable energy generation in operationsLow-carbon energy and solutions delivery: gas supply as low carbon fuels; increased installed renewable capacity in portfolio mix; and improved fuel efficiency in energy productsTechnology and innovation: Accelerated technology development for Carbon Capture, Utilisation and Storage (CCUS), biofuels, hydrogen and renewable feedstock and New Plastics Economy (NPE) initiativesResponsible reporting: Improved climate actions performance disclosure through digitalisation and continuous engagements, internal and external verification exercises	<ul style="list-style-type: none">Operations powered by non-renewable sources, with emissions and waste production would negatively impact natural capitalMore efficient operations with sound environmental and biodiversity management would benefit social and manufactured capitals over the mid and long term and may adversely impact financial capital in the short term
<ul style="list-style-type: none">Continued to strengthen liquidity management through robust strategies to protect and grow cashEstablished guardrails for financial risks management by establishing liquidity buffers and identifying pre-defined borrowings level within acceptable affordability thresholdMaintained prudent financial approach in making capital investments decisions for capital efficiency to strike optimum balance between risks and rewardsImplemented disciplined cost management and successful cost compression initiatives across the GroupUpheld strong corporate governance at all times	<ul style="list-style-type: none">Cost compression efforts would positively impact financial capital and lower allocation for investment would potentially impact manufactured and intellectual capital
<ul style="list-style-type: none">Leveraged on an integrated value chain to adapt to price and market volatilityForged enduring relationships with host governments, authorities and industry peersBuilt resilience in operational excellence with stringent SOPs, minimum manning and adjusted production levelsReset commercial strategies to generate long-term marginsImplemented customer-centric and demand-led solutions to capture broader markets in Reshaping PortfolioCreated new value through pervasive digitalisation across the operations and business value chain	<ul style="list-style-type: none">Lower overall production and supply cause an adverse impact on financial capital and benefit natural capitalAbility to sustain and optimise production in an agile manner cushions the impact on financial capital and benefits all capitalsGo-to-market innovation benefits the natural, social, financial and intellectual capitalsClean energy business would benefit natural capital and adversely impact financial capital in the short term and positively impact all capitals in the mid and long term with improved valuation, brand equity and value
<ul style="list-style-type: none">Prioritised delivering top quartile projects at a fraction of cost and time to support NZCE 2050 aspiration and delivered value on the cost reduction and operational efficiency frontsLeveraged on 3,934 IPs ranging from patents, trade secrets, copyrights and trademarks across technology segments to improve facility and equipment reliability as well as deliver products and solutions of superior qualityCollaboration with companies with proven technologies and commercially viable products to accelerate scalabilityBuilt on in-house R&D capabilities and technologies to accelerate low carbon technologies to support NZCE 2050 aspiration and Reshaping Portfolio	<ul style="list-style-type: none">Scalability limitations of new technologies in uncertain markets and operating environments would adversely impact financial and manufactured capitalsNew technologies for operating in high risk environments would benefit human, social and natural capitals by minimising HSSE risks and our environmental footprintInvestment towards NZCE 2050 would benefit social and natural capitals with a cost to financial capital