



ENVISIONING
THE FUTURE
WITH A GROWTH
MINDSET

10X DHI Group Roadmap JOURNEY

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“The primary purpose of Druk Holding and Investments Limited (DHI) shall be to ensure that its companies are able to meet the challenges and requirements of the corporate sector in a highly competitive global economy, such that DHI creates and maximizes returns to its shareholders, the people of Bhutan.”

~ From the Royal Charter granted on 11 November 2007 to establish DHI.



Dasho Karma Yezer Raydi
Chairman, DHI

Foreword

In every nation's journey, there are moments that call for vision—vision rooted in values, yet bold enough to shape a new future. For Bhutan, this moment is now.

As we look ahead to 2035 and beyond, Bhutan must redefine the way it builds prosperity, safeguards sovereignty, and serves its people. In this spirit, Druk Holding and Investments Limited (DHI) has crafted the 10X Roadmap, not simply as a corporate strategy, but as a national undertaking. A commitment to deliver transformation with discipline, growth with purpose, and wealth with wisdom.

Our mandate, as enshrined in the Royal Charter, is clear: to be custodians of the people's assets and stewards of their future. In the past, this meant securing national revenue largely from the energy and resource segment. In the decade ahead, it means something more. It means investing in innovation, empowering human capital, diversifying our economy, and becoming an institution that leads by example.

This Roadmap is the result of deep reflection, strategic clarity, and shared aspiration. It charts the course for how DHI and its companies will unlock value, enhance performance, and remain aligned with Bhutan's unique development philosophy. It also speaks to the world, to those who seek to partner with a nation that values integrity, sustainability, and long-term thinking.

But more than anything, this document is a call to service. It invites every colleague within the DHI Group, every partner in government, and every citizen of Bhutan to walk together - to build institutions that last, industries that uplift, and legacies that endure.

On behalf of the Board of Directors, I commend this 10X Roadmap to all its readers. May it serve not only as a plan, but as a promise. A promise to do justice to our responsibilities, and to our future.

Let us rise to the challenge. And let us do so, together.

Dasho Karma Yezer Raydi
Chairman, DHI

List of Abbreviations

GMC	Gelephu Mindfulness City	PV	Photovoltaic
GDP	Gross Domestic Product	CBDC	Central Bank Digital Currency
R&D	Research & Development	PTDP	Phuentsholing Township Development Project
CoE	Center of Excellence	LVHV	Low Volume High Value
ESG	Environmental, Social & Governance	STI	Science, Technology & Innovation
PM	Project Management	RGOB	Royal Government of Bhutan
M&E	Monitoring & Evaluation	TTPL	Thimphu TechPark Limited
CSP	Corporate Strategic Plan	PoC	Proof of Concept
JNWSFL	Jigme Namgyel Wangchuck Super Fab Lab	MVP	Minimum Viable Product
FDI	Foreign Direct Investment	IP	Intellectual Property
AI	Artificial Intelligence	MCIF	Multichannel Innovation Fund
BFF	Bhutan Future Fund	SAFE	Simple Agreement for Future Equity
SAR	Special Administrative Region	IPO	Initial Public Offering
GNH	Gross National Happiness	ANPR	Automatic Number Plate Recognition
ERM	Enterprise Risk Management	SCADA	Supervisory Control and Data Acquisition
CSR	Corporate Social Responsibility	GLOF	Glacial Lake Outburst Flood
KPI	Key Performance Indicator	ROI	Return on Investments
ML	Machine Learning	NPV	Net Present Value
LCOE	Levelized Cost of Energy	IRR	Internal Rate of Return
SMR	Small Modular Reactors	MDI	Multilateral Development Institutions
PPA	Power Purchase Agreement	CVC	Corporate Venture Capital
NCA	Nature Capital Accounting	TMS	Treasury Management System
IOT	Internet of Things	ERP	Enterprise Resource Planning
MoENR	Ministry of Energy & Natural Resources	CTO	Chief Technology Officer
SMCL	State Mining Corporation Limited	DRIVE	DHI Research & Innovation Venture Excellence
HPC	High-Performance Computing	PMBOK	Project Management Body of Knowledge
MRO	Maintenance, Repair & Overhaul	CVC	Corporate Venture Capital
FTTH	Fiber To The Home	MDI	Multilateral Development Institutions
OPGW	Optical Ground Wire	FID	Financial Institution & Development
ADSS	All-Dielectric Self-Supporting		
NDI	National Digital Identity		
DPI	Digital Project Infrastructure		
EV	Electric Vehicle		

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Message from the CEO



DHI and its Group are embarking on a bold decade of transformative change. At DHI, we stand at the threshold of a historic opportunity, one that demands not incremental change, but bold, exponential transformation. The 10X Roadmap is DHI and its Group's ambitious commitment to grow tenfold over the next decade, inspired by the Gelephu Mindfulness City (GMC) initiative and aligned with the Government's 21st Century Economic Roadmap. This journey is not about doing more of the same. It's about reimagining everything — from how we raise and allocate capital, and invest in Bhutan and abroad, to how we foster innovation, build infrastructure, develop talent, and create lasting value for generations to come.

From stewardship to strategic acceleration. As Bhutan's sovereign investment arm, DHI has historically contributed around 30% to GDP and 40% of the government's internal revenue. But our ambition must go further. The 10X Roadmap redefines our role, from steward of national assets to strategic architect of Bhutan's future economy. Through a bold investment roadmap, we are catalyzing next-generation industries in green energy, manufacturing, services, mines and

minerals, infrastructure, exploring deep tech, R&D, innovation economy, and exploring global capital markets. At DHI, we are charting a bold investment horizon of over USD 40 billion in the coming decade—led by hydropower, solar, and frontier sectors. We welcome global and local partners to co-create industries rooted in purpose, progress, and values.

Executing with intent, scaling with discipline.

This strategy is underpinned by three core pillars of growth: Portfolio Management Strategy, Investment Strategy, and Innovation Strategy and supported by three strategic enablers: Financing, Technology, and Human Capital. We are institutionalizing excellence through Centers of Excellence in Environmental, Social and Governance (ESG), R&D, Project Management (PM), and Monitoring & Evaluation (M&E). Each pillar is action-oriented, timeline-bound, and designed for impact. DHI's portfolio companies will now reimagine their Corporate Strategic Plans (CSPs) based on their core business strengths, while embracing diversification to remain resilient and relevant in a rapidly evolving future — all in alignment with the 10X Journey.

Why now? Because the future won't wait.

The world is shifting rapidly: geopolitically, technologically, and climatically. We look forward to partnering with global strategic stakeholders, learning and supporting, and investing not just to keep pace with the future, but to shape it. This is our moment to build the Bhutan of 2035: high-income, digitally integrated, economically sovereign, and globally relevant.

Join the 10X movement. The 10X Roadmap is a call for all of us to build a movement where we collaborate among Governments, Academia, Industry and Communities locally and globally. We seek innovative minds and long-term partnerships to co-create a creative economy that is meaningful for the future and empowers the next generation. Let us move forward with urgency, guided by national values and ambition for impact in pursuit of DHI's 10X Roadmap.

Ujjwal Deep Dahal
CEO, DHI

Executive Summary

As Bhutan stands on the cusp of a profound economic transformation, we at DHI are called to lead with clarity, courage, and conviction. The 10X Roadmap is our response to this national movement. It is not merely a corporate plan, it is a strategic blueprint to reimagine what DHI and the Group, and indeed Bhutan, can become over the next decade.

The challenges ahead are undeniable but it is within them that we uncover our greatest opportunities. The world is entering an era defined by exponential technological advancements, intensifying competition for resources, volatile global markets and shifting geopolitical and economic power dynamics. While our economy has long been anchored by agriculture, tourism, and hydropower and it is vital to continue nurturing these sectors, we must urgently diversify beyond hydropower. To remain competitive and resilient, Bhutan must deepen its human capital, embrace innovation, and build new capabilities to create and lead in emerging industries. This transformation requires our institutions to evolve, preserve the integrity of our national values while acquiring the agility, foresight, and executional excellence demanded by a rapidly changing global landscape.

In addition to its pivotal role in supporting the GMC initiative and Bhutan's 21st century economic roadmap, the 10X Roadmap has been crafted in response to the following three strategic imperatives:

> Positioning DHI and the Group as a catalyst for economic growth

DHI is committed to playing a transformative role in Bhutan's economic landscape. As the steward of national assets, DHI will support key national projects including the GMC, while unlocking new engines of growth across the private sector and entrepreneurial ecosystem.

> Driving strategic investments in future industries

To remain relevant and competitive in a rapidly changing global economy, DHI will actively invest in and co-create with National and International strategic partners the next-generation industries in sync with the 21st Century Economic Roadmap.

> Building infrastructure and innovation for sustainable growth

Foundational investments in physical, digital and financial infrastructures will serve as the bedrock for industrial growth and innovation. DHI aims to create an enabling environment for knowledge-based sectors, entrepreneurship, R&D, and inclusive development.

The 10X Roadmap is a strategic blueprint and taken together, these imperatives position DHI as a critical instrument in operationalizing Bhutan's 21st century economic roadmap by aligning strategic investments with national priorities and translating national ambitions into actionable outcomes. It centers on building a robust and diversified economy through a dynamic portfolio strategy targeting five key sectors: Energy and Resources,

Manufacturing and Services, Infrastructure, Mines and Minerals, and Global Securities. A key pillar of this vision is establishing a research-driven manufacturing ecosystem through the DHI InnoTech and the Jigme Namgyel Wangchuck Super Fab Lab (JNWSFL), emphasizing low-volume, high-value production.

To unlock private sector growth, DHI will invest in emerging industries and innovation, backed by a Multichannel Innovation Fund (MCIF) and strategic Foreign Direct Investment (FDI) partnerships. In the energy domain, DHI with support of the Government leads Bhutan's goal of a 20 GW renewable portfolio while investing in future energy technologies. It also seeks to leverage Bhutan's green energy and hydropower potential to drive an AI and Energy Economy, in partnership with GMC and GovTech.

DHI will scale its impact globally through its international subsidiaries, potentially forming strategic market linkages for Bhutanese products. At the national level, DHI is committed to fostering an innovation ecosystem by improving access to capital, shaping enabling policies, and supporting entrepreneurial growth across all stages of the innovation cycle.

The 10X Roadmap is our commitment to navigate this complexity with discipline and ambition. It sets out a clear path to multiply the value of DHI's contributions tenfold in revenue, in institutional capacity, in national impact, and in global relevance.

Our Strategic Architecture

At the heart of the Roadmap are **three Core Pillars**, each designed to institutionalize performance and unlock growth:

1. Portfolio management strategy

We will enhance value creation from our current group companies with business diversification, elevating governance, restructuring capital allocation, and enforcing performance management systems. Key reforms include the introduction of strategic portfolio management quadrants, viz- Potential, Strategic, Growth and Future Zones and strategically managing the 4 quadrants considering the expectations of the Group companies in the journey of DHI 10X.

2. Investment strategy

Our investment platform will pursue new growth across Energy and Resources, Mines and Minerals, Infrastructure (physical, digital, and financial), Manufacturing and Services, and Global Securities. This strategy involves establishing investment vehicles and forging strategic partnerships with global players in high-impact and future-focused industries.

3. Innovation strategy

We are building a foundational infrastructure for a national innovation ecosystem — an ecosystem that positions innovation as a foundational pillar of Bhutan's economic future. This startup-driven approach is guided by our Innovation Strategy, which charts pathways for national progress through deep-tech capabilities and a robust R&D ecosystem, with the JNWSFL at its core. The strategy includes investment in centers of excellence to establish applied and fundamental R&D infrastructure for Bhutan, enable commercialization pathways, and foster an ethical, frontier science-and-technology-driven economy aligned with Bhutanese values and global opportunities.

These pillars are supported by three strategic enablers: Financing, Technology, and Human Capital, which together ensure the operational resilience and readiness needed to implement the 10X Journey.

Building Institutions for the Long Term

The Roadmap is accompanied by major institutional reforms that re-architect DHI for high performance. We have introduced a professional C-suite structure, including a Chief Investment Officer, Chief Operating Officer, and Chief Financial Officer, and Chief Technology Officer supported by a matrix governance system that decentralizes delivery while maintaining strategic alignment. We have also introduced the Y-Career Model, allowing high-potential talent to grow as either managers or specialists, without being forced into one-size career ladders. These reforms are designed to retain and inspire the next generation of Bhutanese professionals who will shape our economy.

To institutionalize excellence, we are establishing CoEs in Project Management, ESG, R&D, and M&E. These will build national capability, embed global best practices, and serve as learning platforms across DHI & Group and beyond.

Risk, Reality, and Readiness

We are clear about the risks and challenges ahead and the opportunities it provides for DHI and Bhutan at large. Overdependence on hydropower, fragility in the mining sector, weak innovation ecosystems, and talent shortages are real constraints. Global turbulence from climate

volatility to digital disruption further compounds these risks.

The 10X Roadmap embeds a Strategic Risk Management Framework, a transparent Monitoring & Evaluation system, and adaptive governance protocols to help us navigate uncertainty but more importantly leverage the exponential growth of technology globally and the economic transformation potential for Bhutan. We are building institutions that are not only high-performing, but also resilient, ethical, and future-proof.

Destination 2035: A Transformed Bhutan

By 2035, DHI's 10X Roadmap envisions a transformed economic landscape, anchored in a Nu. 700 billion revenue base and the Nu. 30 Billion in the Bhutan Future Fund (BFF). Through strategic investments, DHI will have built globally competitive sectors, created meaningful investments and jobs, and nurtured a vibrant startup ecosystem. Agile governance and efficient portfolio management will align the DHI Group with global standards. The strategy will deepen capital markets and financial access while guiding investment with a national science and technology research centers and roadmap. More than growth, the 10X Roadmap represents a legacy of economic resilience, institutional confidence, and Bhutan's emergence as a forward-looking, innovation-driven nation.

Context of the 10X Roadmap

Gelephu Mindfulness City: A Vision for the Future

At the forefront of Bhutan's national transformation is the bold and visionary initiative of the GMC- a Special Administrative Region (SAR) in the south of Bhutan. Conceived under the leadership of His Majesty The King, GMC embodies a fusion of Bhutan's spiritual and environmental values with next-generation infrastructure, global connectivity, and a knowledge-based economy. Strategically positioned as a gateway to South and Southeast Asia, GMC is envisioned as a sanctuary for mindful living, innovation, and value based high-impact enterprise.

The core economic clusters of GMC are designed to integrate mindfulness, sustainability, and renewable energy with the dynamism and flexibility of a highly autonomous Special Administrative Region. This curation of the economic cluster reflects that GMC is not a typical economic zone driven solely by growth or profit, but a space shaped by values and long-term vision. The economic clusters being - Green energy and Tech Industries, AgriTech and Forestry, Aviation and Logistics, Finance & Digital Assets, Tourism, Spirituality, and Health and Wellness. As a city GMC reflects Bhutan's deepest values while embracing the aspirations of the 21st century, GMC marks a pivotal shift in how Bhutan will engage with the world on its own terms, with purpose and foresight.

“The purpose of establishing this SAR is to create a vibrant economic hub by providing a conducive business environment and compelling incentives. It will be a Mindfulness City, encompassing conscious and sustainable businesses, inspired by Buddhist spiritual heritage, and distinguished by the uniqueness of the Bhutanese identity.”

- His Majesty's National Day Address
17th December 2023.

Salang Tendrel for Gelephu Airport,
23rd December 2023

Bhutan's 21st Century Economic Roadmap

On 21st February 2025, the Royal Government launched the 21st Century Economic Roadmap, a strategic blueprint designed to accelerate national development and transform Bhutan into a high-income, innovation-led economy by 2050. It is an ambitious, long-term national vision for inclusive prosperity rooted in Bhutan's enduring commitment to Gross National Happiness (GNH), environmental sustainability, and equitable development.

Bhutan aspires to build a resilient, inclusive, and sustainable economy that enhances the well-being of all citizens. This vision is guided by the principles of ethical growth, environmental stewardship, and national unity, anchoring economic progress in Bhutan's unique values.

Five Core National Ambitions

- > Transform Bhutan into a Developed Economy;
- > Build a Robust and Diversified Economy;
- > Position Bhutan as a Global Leader in Priority Sectors;
- > Develop a Knowledge and Innovation-Driven Economy; and
- > Ensure Sustainability and Environmental Stewardship.

Towards a New Economic Era

The realization of the DHI 10X Roadmap requires a **unified, multi-sectoral approach**, engaging the public sector, private enterprises, civil society, academia, and international partners. It calls for reimagining Bhutan's economic structures, leveraging innovation, digitalization, and human capital to fuel next-generation industries and sustainable livelihoods.

As Bhutan embarks on this transformative journey, the GMC and the 21st Century Economic Roadmap stands as a guiding compass, inspiring bold action, nurturing future-oriented thinking, and fostering a shared responsibility to shape a prosperous and purposeful Bhutan for the decades ahead.

DHI's 10X Roadmap serves as both the strategic framework and execution pathway for Bhutan's sustainable economic growth. Aligned with the 21st Century Economic Roadmap and grounded in the five national ambitions, it articulates DHI's vision and priorities — translating national goals into actionable outcomes through the following strategic lenses:

1. **Build a robust and diversified economy:** DHI will strategize a dynamic Portfolio Strategy that includes targeted mergers, acquisitions, and divestments, both within Bhutan and internationally for economic diversification. The portfolio strategy will be guided by DHI's Investment Strategy around five focus areas i.e. Energy & Resources, Manufacturing & Services, Infrastructure, Mining & Minerals, and Global Securities & Digital Assets. In parallel, DHI will

implement its Innovation Strategy to position innovation as a core pillar of Bhutanese economy.

2. **R&D-driven manufacturing economy:** As part of its Innovation Strategy, DHI aims to establish R&D-led manufacturing as a key pillar of Bhutan's economy. Anchored by the CoER&D and guided by a strategic focus on low-volume, high-value manufacturing, DHI will catalyze the development of advanced industries that blend innovation, technology, and investment to drive long-term economic growth.
3. **Enabling the private sector and internal market creation:** DHI's role will be critical in developing new industry verticals. Investments in emerging sectors and the innovation economy (supported by the multichannel innovation fund) will present a transformative opportunity for private sector growth. DHI aims to collaborate with global strategic partners and attract FDIs focused on risk capital and creative financing. By spearheading the creation of high-risk, high-potential industries, DHI will pave the way for downstream opportunities, enabling lower-risk investments and broader participation by the domestic private sector.
4. **Hydropower, energy diversification, and energy research:** DHI will take the lead in advancing Bhutan's national goal of developing a 20 GW renewable energy portfolio, comprising 15 GW of hydropower and 5 GW of solar energy. Beyond project implementation, DHI is committed to diversifying the green energy mix to enhance energy security, resilience, and efficiency. In parallel, it will invest

in research and innovation to shape the energy systems of the future, aligning with global sustainability transitions and technological advancements.

5. **Energy and data center economy:** DHI, through its "triangulation strategy" will work closely with GMC and GovTech to build an economy around "AI Compute and Energy" leveraging the abundant green energy and Hydro energy potential of Bhutan.
6. **Regional and global expansion:** DHI, through its international subsidiaries (in close collaboration with the Government and Ministries), will actively pursue strategic partnerships and market access initiatives to promote Bhutanese products and services in regional and global markets.
7. **National innovation ecosystem and the Multichannel Innovation Fund for an innovation economy:** DHI will actively pursue diverse financing instruments to enable access to capital across all stages of innovation, from pre-seed and seed funding to the scaling of transformative ideas. Through the establishment of the MCIF, DHI aims to catalyze the growth of an innovation-driven economy. In parallel, it will advocate for the necessary infrastructure, policy frameworks, and regulatory reforms to foster a vibrant and resilient entrepreneurial ecosystem.

Our Promise to the Shareholders

The People of Bhutan

As the Stewards of the Public Trust and Custodian of Bhutan’s Sovereign Future, DHI is unwavering in its commitment to serve the highest interests of its ultimate shareholders, the people of Bhutan.

Established under the Royal Charter, DHI has been entrusted with the mandate to hold, manage, and grow the nation’s strategic investments for the long-term benefit of Bhutan and its citizens - today and for generations to come.

In honouring this responsibility, we make the following enduring promises to the people of Bhutan:


- > We will protect and grow Bhutan’s national wealth with prudence, transparency, and a long-term perspective;
- > We will align our strategies and investments with the national vision for fiscal resilience, economic diversification, and inclusive prosperity;

- > We will invest in the capacity of Bhutanese talent, nurturing a generation of skilled, ethical, and future-ready professionals;
- > We will embrace innovation and frontier technologies, positioning Bhutan to lead in the global knowledge economy; and
- > We will strengthen the Bhutan Future Fund and its underlying assets, ensuring financial sovereignty and intergenerational equity.

We recognize that every citizen is a trustee of the nation’s collective wealth, and we are fully accountable to that trust.


Through the 10X Roadmap, DHI will strive not only to generate returns, but to leave behind a lasting foundation for prosperity, grounded in values and inspired by the aspirations of generations yet to come.

Envisioning DHI



Vision

To be the leading wealth management and creation organization that helps transform Bhutan into a globally competitive economy guided by the principles of GNH.



Mission

To safeguard and enhance national wealth for all generations of Bhutanese through prudent investments.

DHI Values, Behaviours & Culture

Domain	Defined Elements
Values	Integrity, Honesty, Excellence, Prudence, Teamwork, Accountability
Behavioral Principles	Innovation, Boldness, Coaching, Agility, Ownership & Transparency
Culture Drivers	Y-Career Model, C-Suite Reforms, Centres of Excellence, Leadership Development, GNH

Behavioral Principles: The Spirit of DHI

Teamship & Co-Elevation:

Commitment to each other’s growth and shared leadership that unlock trust, speed, and bold action across silos.

Innovation:

Creativity and experimentation are encouraged across investment, operations, and public value creation.

Boldness & Growth Mindset:

Ambition, courage, and adaptability are seen as drivers of leadership and responsiveness.

Coaching & Collaboration:

Shared learning, mentorship, and cross-functional cooperation are promoted.

Agility & Focus:

Fast, flexible action aligned to long-term goals is emphasized, especially in a volatile world.

Ownership & Transparency:

Reinforced at all levels, from project outcomes to national impact metrics.

Values at DHI

1. Integrity

Definition: We act with unwavering honesty and moral clarity, ensuring our decisions reflect the highest ethical standards in service of the public trust and national interest.

Key Behaviours:

- > **Speak truth to power**
Example: Flag ethical misalignment in Board-level investment discussions.
- > **Put collective interest first**
Example: Decline high-return proposals that may undermine sustainability or social equity.
- > **Own your decisions, especially the hard ones**
Example: Accept responsibility for failed innovations and lead recovery transparently.

High-Return Practices:

- > **Serve First, Then Lead** - Lead through Service, put Nation and People Before Self.
- > **Own the Whole** - Stand accountable for team and institutional results.
- > **Integrity Check-ins** - Embed ethical audits in all project reviews.

2. Honesty

Definition: We communicate with openness, speak truthfully, and operate transparently, with respect for our stakeholders and accountability to the people of Bhutan.

Key Behaviours:

- > **Communicate with clarity and context**
Example: Simplify technical performance data for public consumption.

- > **Enable upward feedback**
Example: Invite cross-level feedback from junior staff to improve executive decisions.
- > **Expose dysfunction early**
Example: Report value misalignment or operational gaps without delay.

High-Return Practices:

- > **Candor Breaks** – Formal spaces for truth-telling across hierarchy.
- > **360° Transparency** – Share performance dashboards internally and externally.
- > **Check-In Rituals** – Begin meetings with trust-building moments.

3. Excellence

Definition: We hold ourselves to the highest standards of performance and professionalism—striving for quality, continuous improvement, and lasting results.

Key Behaviours:

- > **Aim for 10X, not 10%**
Example: Push subsidiaries to innovate business models, not just efficiency gains.
- > **Stress test ideas**
Example: Pilot products with internal critics before market entry.
- > **Break silos**
Example: Encourage cross-sectoral initiatives.

High-Return Practices:

- > **10X Challenge Practice** – Design initiatives that force leapfrogging.
- > **XChange Sessions** – Host high-intensity dialogues between sectors.
- > **Relationship Action Plans** – Build strategic alliances for impact delivery.

4. Prudence

Definition: We manage resources wisely and responsibly, balancing ambition with discipline to ensure long-term, intergenerational value creation.

Key Behaviours:

- > **Let long-term impact guide you**
Example: Prioritize green infrastructure with decades-long ROI over quick-fix projects.
- > **Make bold yet calculated bets**
Example: Invest in unproven but strategically aligned startups with risk buffers.
- > **Design for resilience and scale**
Example: Build financial tools that serve SMEs and can scale to bigger markets.

High-Return Practices:

- > **Foresight Labs** – Scenario planning for emerging disruptions.
- > **Red-Blue Teaming** – Simulate decision-making under stress.
- > **Capital Discipline Reviews** – Quarterly assessments of all major investments.

5. Teamwork

Definition: We believe in the power of collaboration to unlock shared success across teams, sectors, and borders.

Key Behaviours:

- > **Break hierarchy barriers**
Example: Facilitate peer-based decision-making forums.
- > **Value collective wisdom**
Example: Use public consultation as an input into strategic investments.
- > **Co-create solutions**
Example: Partner with youth and academia to shape R&D agendas.

High-Return Practices:

- > **Co-Elevation Sprints** – Intense cross-functional workshops.
- > **Learning Loops** – Group-wide reflection sessions on failed initiatives.
- > **Network Impact Mapping** – Visualize how collaboration amplifies outcomes.

6. Accountability

Definition: We take ownership of outcomes, measure our impact beyond financial metrics, and remain answerable to the people of Bhutan.

Key Behaviours:

- > **Align with national priorities**
Example: Embed GNH principles in all subsidiary scorecards.
- > **Be evidence-based**
Example: Use real-time M&E dashboards for project course correction.
- > **Close the loop**
Example: Report back to citizens and government on long-term impact of flagship investments.

High-Return Practices:

- > **Impact Compacts** – Signed outcome agreements for all key roles.
- > **Strategy-to-Execution Traceability** – Show how each action links to national goals.
- > **Performance Forums** – Transparent public briefings on quarterly results.



The DHI Strategy

Building the Architecture for Bhutan’s 10X Future

Introduction

To realize Bhutan’s bold national ambition of a tenfold increase in GDP by 2050, DHI has undertaken a comprehensive strategic realignment. This transformation is anchored in the DHI 10X Roadmap, a journey designed to deliver exponential growth, national resilience, and sustained public value.

At the center of this strategy are three core pillars that define how DHI will create, manage, and scale impact:

1. Portfolio Management

We will boost value creation across group companies through diversification, stronger governance, optimized capital allocation, and performance systems. This includes managing four strategic portfolio zones – Potential, Strategic, Growth, and Future – aligned with the DHI 10X journey.

2. Investments

Our investment platform will target growth in key sectors including energy, infrastructure, and global securities, by creating investment vehicles and

partnering with global leaders in future-focused industries.

3. Innovation

Positioning research, entrepreneurship, and deep tech as the pillar of Bhutan’s economy by cultivating a national innovation ecosystem.

These core pillars are deeply aligned with Bhutan’s overarching national priorities, including:

- > The transformative vision of the Gelephu Mindfulness City (GMC);
- > The vision of becoming a High-Income Nation by 2035; and
- > The national 21st Century Economic Roadmap.

The Enablers of the DHI 10X Journey

Supporting these core strategies are a set of powerful institutional enablers:

1. Financing

Mobilizing long-term, sustainable capital through diverse global financing instruments, sovereign partnerships, and global capital markets.



2. Technology

Harnessing cutting-edge technologies to transform operations, power data-led decision-making, and architect bold, future-ready strategies shaped by emerging science and innovation.

3. Human Capital

Investing in leadership development, technical upskilling, and a values-based workplace to build a resilient and purpose-driven workforce.

Centres of Excellence (CoEs)

In addition, we are institutionalizing excellence through Centers of Excellence in ESG, R&D, Project Management (PM), and Monitoring & Evaluation (M&E).

A Strategic Platform for National Transformation

Together, these core pillars and enablers form the architectural blueprint for DHI’s role in Bhutan’s economic future. They define not only what DHI will do, but how it will lead, as a steward of public trust, an incubator of future industries, and a key contributor to the national vision.

With clarity of purpose and commitment to execution, the 10X Roadmap will help usher in a new era of prosperity, resilience, and global relevance for the people of Bhutan.

Core Pillar I: Portfolio Management Strategy

Optimizing national assets for sustainable growth and long-term resilience

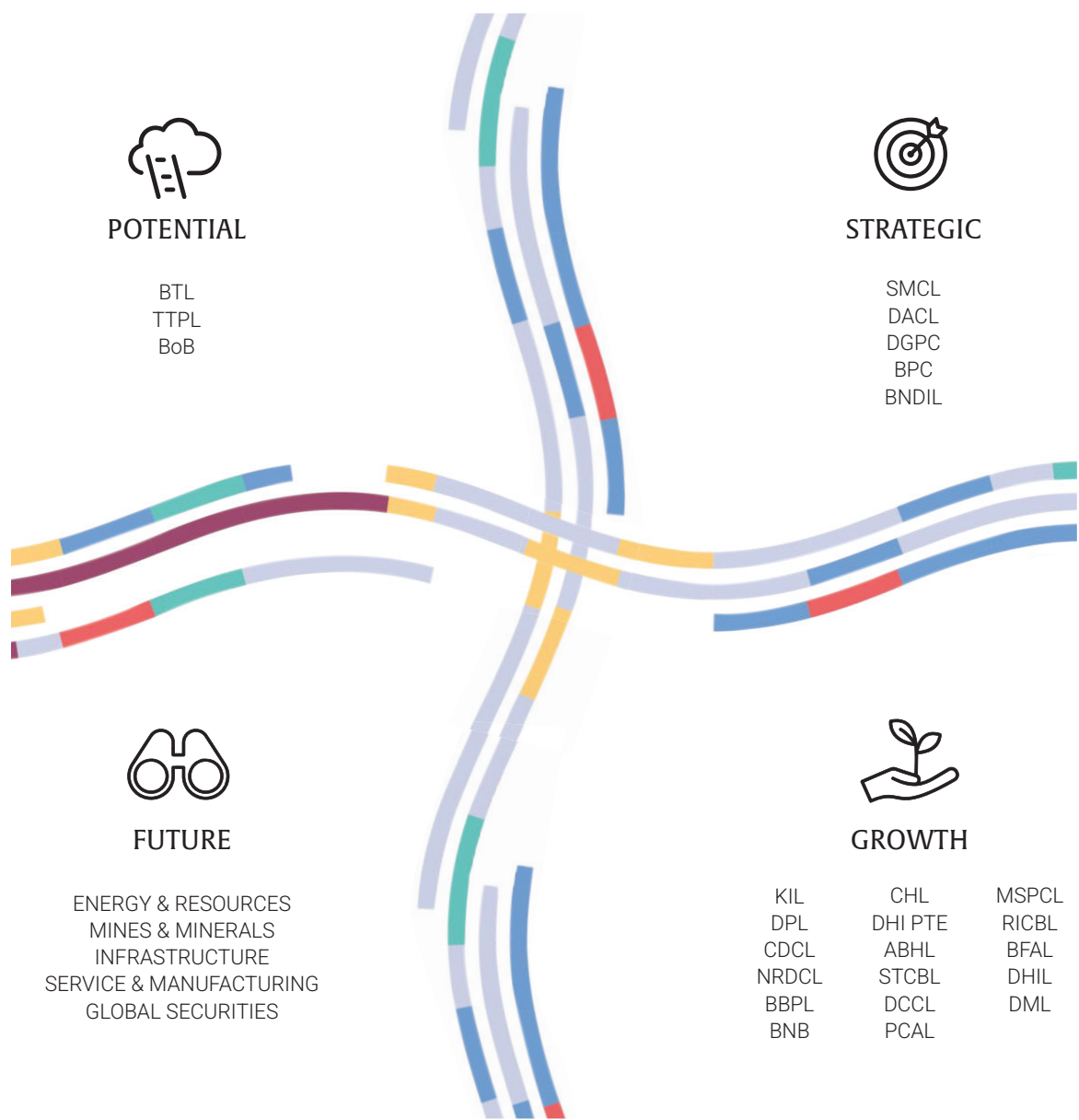
At the heart of DHI's transformation lies the strategic stewardship of its 25 portfolio companies, entities that collectively contribute close to 40% of the government's domestic revenue and nearly 30% of the GDP. As the landscape of Bhutan's economy evolves, so must the architecture through which DHI creates value, drives performance, and ensures relevance.

The Portfolio Management Strategy is designed to optimize capital efficiency, enhance corporate governance, improve operational excellence, and realign subsidiaries with Bhutan's 10X national growth vision. It provides a structured framework to categorize, support, and scale each company according to its maturity, opportunity, and contribution to national priorities.

Strategic Objectives

- > **Redirect capital** toward high-growth, future-ready sectors;
- > **Enhance performance** through rigorous governance, strategic restructuring, and global benchmarking;
- > **Align operations** with Bhutan's long-term transformation goals;
- > **Diversify risks** across sectors; and
- > **Embed sustainability and digital transformation** as core mandates.

FOUR QUADRANTS UNDER THE
PORTFOLIO MANAGEMENT STRATEGY



Portfolio Segmentation:
Four Strategic Quadrants

Based on their maturity, opportunity, and contribution to national priorities, companies have been placed into four strategic quadrants to guide investment, oversight, and transformation:

1. Potential Zone

High-growth, innovation-sensitive companies require investment and agility to stay ahead of disruptive trends.

2. Strategic Zone

Mature, nationally essential companies that require restructuring to remain competitive and adaptive.

3. Growth Zone

Scalable businesses in need of study for investments/divestments, operational overhaul, cost optimization, and financial performance improvements.

4. Future Zone

Represents the sectors that would be explored with global strategic partners with the investment and the innovation strategies of the 10X Roadmap.

Strategic Focus Areas

To operationalize its Portfolio Management Strategy, DHI has identified seven strategic focus areas that together serve as levers for reform, optimization, and long-term value creation. These areas define how DHI will manage its

portfolio dynamically, balancing stability with transformation, and performance with purpose.

1. Strengthening corporate governance and accountability

Robust governance is the cornerstone of long-term value creation. DHI is committed to upholding the highest standards of corporate governance across its portfolio. This includes enhancing the capacity and effectiveness of subsidiary boards, instituting clear governance frameworks, and promoting strategic autonomy balanced by transparent oversight.

Equally essential is the promotion of a culture of accountability. Through structured performance compacts and regular strategic reviews, DHI ensures that each company is evaluated not only on financial outcomes, but also on strategic alignment, innovation capacity, and national contribution. These measures reinforce clarity of purpose, foster discipline in execution, and enable performance that is both measurable and meaningful to Bhutan's development trajectory.

2. Driving operational efficiency across the portfolio

In an increasingly competitive and resource-constrained environment, operational efficiency is not just a management imperative, it is a strategic necessity. DHI is committed to enabling its portfolio companies to operate with agility, precision, and productivity while maintaining a clear line of sight to long-term value creation.

To that end, DHI will promote group-wide operational improvements through systems integration, lean process redesign, and shared services in core functions such as finance, human

resources, procurement, and digital infrastructure. These efforts are designed to eliminate redundancies, reduce costs, and improve service delivery across the board.

Operational efficiency is not about doing more with less, it is about doing what matters most, faster and better. As DHI subsidiaries evolve into high-performance institutions, efficiency gains will be reinvested into innovation, talent development, and customer excellence, strengthening the Group's ability to serve the people of Bhutan more effectively and sustainably.

3. Enhancing capital allocation and financial efficiency

To support Bhutan's transition to a resilient, innovation-driven economy, DHI is adopting a sharper, more disciplined approach to capital allocation. Resources will be channeled towards companies and sectors that demonstrate long-term growth potential, strategic relevance, and alignment with national priorities.

This refined investment logic will prioritize entities in the Potential, Growth, and Future Zones, where capital injection can catalyze structural transformation and yield exponential returns. Performance-driven criteria such as return on investment, capital productivity, and national economic contribution will guide funding decisions, ensuring that every Ngultrum invested is strategically justified and impact-oriented.

As a part of this shift, DHI will also pursue strategic divestments from non-core, underperforming, or legacy assets that no longer align with its future vision. These divestments are not simply cost-cutting measures; they are deliberate reallocations of national capital, from

static holdings to dynamic opportunities. Proceeds will be reinvested in high-impact areas such as digital infrastructure, frontier industries, and knowledge-based enterprises, furthering Bhutan's economic transformation while maintaining fiscal discipline.

Through this two-pronged strategy of targeted investment and thoughtful divestment, DHI will enhance the financial agility of the Group, unlock capital for innovation, and ensure that Bhutan's sovereign assets are constantly working to generate maximum value for its people

4. Institutionalizing enterprise risk management and resilience planning

To build a resilient portfolio in an increasingly complex global environment, DHI will reinforce and institutionalize its Enterprise Risk Management (ERM) framework across the Group. This will include regular stress testing, scenario planning, and dynamic risk assessments to address sector-specific vulnerabilities particularly in areas like hydropower, which are exposed to climate volatility and geopolitical uncertainties. In parallel, DHI will pursue greater sectoral diversification, especially in green technologies such as solar and smart energy solutions, to reduce dependency on energy assets and unlock future-ready growth avenues.

5. Driving innovation and enabling digital transformation

In a world shaped by rapid technological evolution, DHI recognizes that sustained competitiveness will depend on its ability to innovate. The Group will embed a culture of innovation across its companies by encouraging investment in R&D, incentivizing experimentation, and nurturing intrapreneurship. Digital transformation will be a

core focus, particularly in finance, telecom, and energy, where emerging technologies such as blockchain, 5G, AI-driven optimization, and smart grids offer game-changing potential. Across the portfolio, companies will be encouraged to reengineer their business models using digital identity systems, automation, and next-generation analytics to deliver more efficient, transparent, and user-focused services.

6. Mainstreaming environmental, social and governance (ESG) commitments

In alignment with Bhutan's unique development philosophy of Gross National Happiness (GNH) and its sustainability commitments, DHI will adopt a Group-wide ESG framework. This will involve updating its Corporate Social Responsibility (CSR) guidelines and embedding ESG metrics into corporate evaluations. The ESG framework will guide subsidiaries in adopting environmentally sustainable practices, promoting social inclusion, and enhancing governance standards. In doing so, DHI aims not only to minimize environmental risks and reputational exposure, but to amplify long-term brand value, investor confidence, and national impact.

7. Deepening stakeholder engagement and transparency

Transparency and trust are foundational to DHI's legitimacy as a public institution. To this end, the Group will institutionalize robust financial and operational reporting systems across all subsidiaries. Disclosures to the Government, regulators, and the public will be timely, accurate, and consistent. Additionally, DHI will prioritize two-way engagement with a broad range of stakeholders, including employees, citizens,

policymakers, and private partners, to ensure its policies and performance are guided by Bhutan's shared values and collective aspirations.

Reimagining Bhutan's economic core through the portfolio management strategy

DHI's Portfolio Management Strategy is not simply about improving performance, it is about reimagining Bhutan's economic core to meet the demands of the 21st century. It is about ensuring that each subsidiary not only contributes to national income, but also aligns with Bhutan's identity, its aspirations, and its global role. Through this strategy, DHI will ensure its portfolio remains agile, accountable, and aligned, setting the foundation for economic resilience and a tenfold national transformation.

Milestones for Portfolio Management Strategy

Core Pillar I. Portfolio Management Strategy		Timeframe
1	Corporate Strategic Plan (CSP): Develop CSP reflecting the National aspirations and to meet the DHI 10X Strategy for all portfolio companies.	Short-term
2	Standardizing Performance: Adopt industry specific global Key Performance Indicators (KPIs) for all portfolio companies.	Immediate
3	National Business Growth and Efficiency: 3.1 Business process reengineering, operational efficiency, business diversification strategies and adaptation/optimization of businesses with digital and technological advancements in line with the company's CSP. 3.2 Conduct Business Reviews and develop efficiency and optimization roadmaps, M&A, investments and divestments related to the portfolio companies.	Immediate to Short-term
4	Regional and Global Growth of DHI: enhance cross-border trade and forge regional and global alliances and businesses for portfolio companies.	Short-term
5	Strengthen Corporate Governance	On-going
6	Transforming Performance to Impact Measurement: Reimagine Performance Management and COMPACT for enhanced impact across DHI Group.	Immediate to Short-term
7	Risk Management: Strengthen unified ERM framework and Resilience Planning.	On-going
8	Establish and implement Center of Excellence (CoE): 8.1 Environmental, Social, and Governance (ESG) CoE. 8.2 Monitoring & Evaluation (M&E) CoE.	Short-term
9	Institutionalize stakeholder grievance mechanisms.	Short-term
10	Optimizing Systems across DHI and Group: 10.1. Strategize and implement a green and efficient transportation system. 10.2. Centralized green procurement system for the Group.	Short to Medium-term

Timeframe
On-going : Currently in progress or a continuous process
Immediate : < 1 Year
Short term : 1 - 3 years
Medium term : 3 - 6 years
Long term : > 6 years



CORE PILLAR II: Investment Strategy

Channeling capital into engines of transformation for national growth and global relevance

To realise Bhutan's 10X economic aspiration, DHI is implementing a focused, and future-facing Investment Strategy. Anchored in Bhutan's comparative advantages, its natural capital, sovereign prerogatives, and geo-economic/political potential, this strategy targets high-growth, high-impact sectors of the future that can reshape the national economy, create jobs, and attract global partnerships. In parallel, DHI has established the BFF to safeguard resources for future generations and respond to national contingencies. DHI aims to grow the BFF to Nu. 30 billion over the next decade as part of its long-term capital strategy.

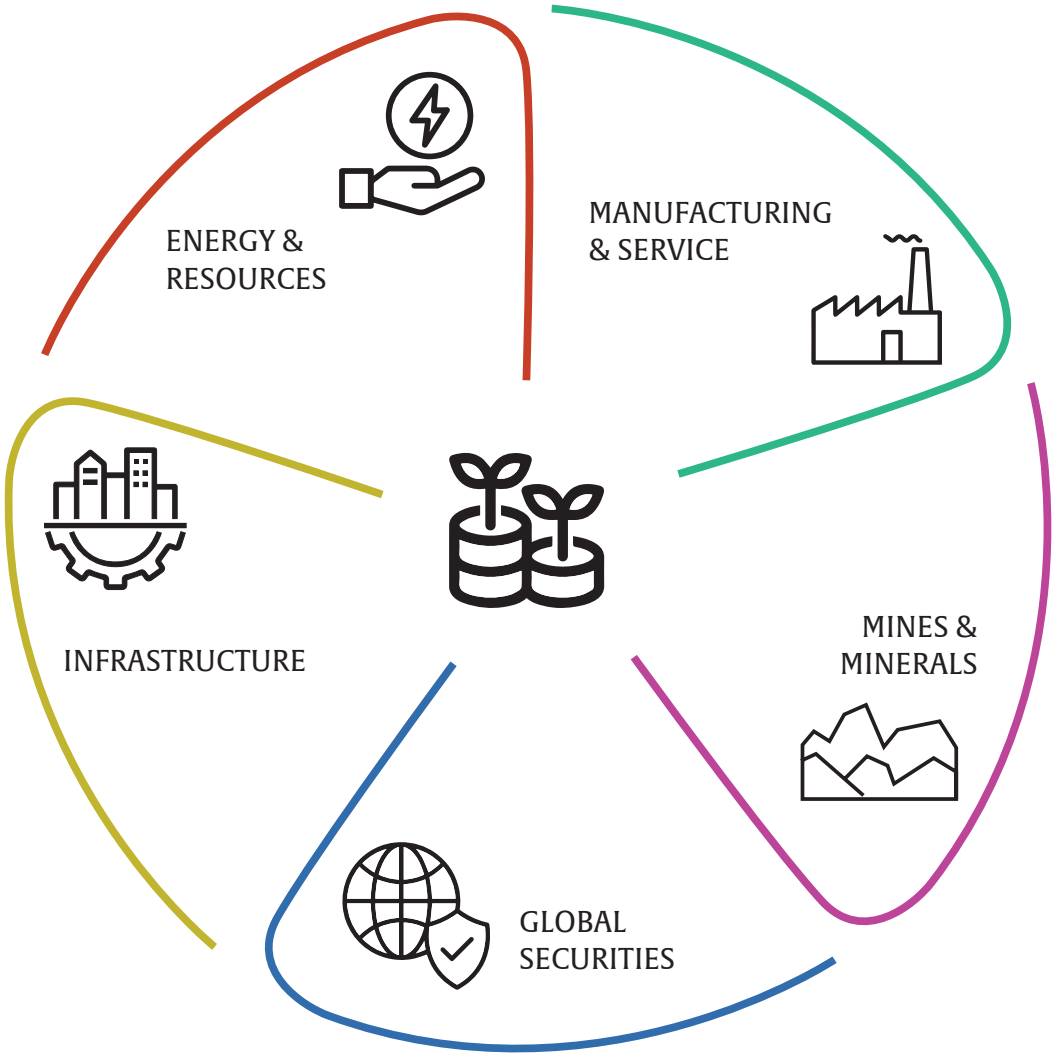
In close collaboration with the Royal Government, the GMC initiative, private partners, and international allies, DHI will steer investments into five key sectors: Energy and Resources, Mines and Minerals, Infrastructure, Manufacturing and Services, and Global Securities. These are not just economic categories—they are Bhutan's strategic platforms for structural transformation, economic diversification, and long-term resilience.

Strategic Objectives

DHI's Investment Strategy is built on a bold ambition: to transform Bhutan's economic architecture by investing in high-impact sectors that are resilient, future-ready, and globally relevant. These strategic objectives will guide DHI's investment strategy and the capital planning and deployment over the next decade:

- > Implement the DHI Triangulation Strategy: Develop a green energy portfolio in partnership with strategic global allies to power Bhutan's next-generation clean energy-intensive industries, such as AI data centers. This effort is guided by the Triangulation Strategy, which aligns three key pillars: energy investment partners, industrial investment partners, and the combined role of DHI and the Royal Government in providing enabling policies, regulatory support, and catalytic capital for both energy and industrial development. Together, DHI and the Government will build the foundational ecosystem necessary to attract high-quality national and global investors and drive sustainable, clean industrial growth in Bhutan.

FIVE INVESTMENT AREAS



- > Establish Bhutan's long-term economic engines by prioritizing investments in sectors that offer exponential potential, such as energy systems, critical mineral exploration, digital infrastructure, advanced low volume high value manufacturing, and wellness services.
- > Mobilize global capital and expertise by developing commercially bankable projects, forging strategic partnerships, and ensuring DHI serves as a credible gateway for global and local private and institutional investors.
- > De-risk the national economy through geographical and sectoral diversification, reducing overreliance on legacy sectors and embedding flexibility to respond to future shocks.
- > Strengthen Bhutan's sovereign investment capability by professionalizing asset management, developing structured financial products, and building internal capacity for global market engagement.

These objectives will ensure that every Ngultrum invested delivers not only financial return, but also national strategic value, helping Bhutan move confidently toward its 10X economic transformation.

Strategic Focus Areas

1. Energy and Resources

- > **Energy Resources**
Bhutan has a hydroelectric potential of estimated 36 GW and an installed capacity of 3.6 GW as of 2025. However, the firm power available is only around 700 MW, while the peak load is already beyond 1,000 MW and

is expected to exceed 1,500 MW by 2025 end. Of the approximately 12,000 MU of energy generated in 2024, 50% is consumed domestically, with the remainder exported to India. However, Bhutan imports over 1,000 plus MU annually during the lean winter months. The energy system must address both the peak power demands at specific times and the base load energy requirements (for industrial and domestic use) during the 6-month deficit period each year. Currently, this deficit is met through the day-ahead market and some long-term reimport strategies from India. To ensure energy security and support economic development, an integrated hybrid energy generation portfolio plan is required.

Bhutan's 2040 energy plan includes an additional 15 GW of hydroelectric power and 5 GW of solar power, necessitating an estimated investment of over 26 billion USD. While these developments are crucial, it is imperative to establish a hybrid energy generation strategy for investment and financing to ensure long-term energy security. As renewable energy integration increases in the South Asian grid, with falling costs of solar and battery technologies, global advances in nuclear power (especially small modular reactors), and the accelerating role of AI/ML and material science innovation in R&D, energy supply and grid technologies will undergo significant changes. Additionally, considering the impacts of climate change, the risks associated with hydro power, rising construction costs, and the levelized cost of energy (LCOE) for hydroelectric generation, it is essential to implement a national energy security investment plan with a diversified energy generation portfolio. Hence, beyond conventional hydro, the green portfolio approach to energy investment plan integrates emerging technologies viz. solar, geothermal

(shallow, traditional and advanced geothermal technologies), hydrogen and combined cycle, pumped storage, grid scale batteries and energy storage systems, exploration of natural hydrogen and considering small modular reactors (SMR) for base load generation as technology matures — to diversify generation mitigating the climate change risks and future-proofing energy security, efficiency and energy grid stability. Investments will also target infrastructure upgrades, such as smart grid and electricity market mechanisms in generation, transmission and distribution to build a nationally resilient energy market and grid.

Energy as an enabler through a triangulation strategy: With rapid advancements in material science, energy & storage technologies and quantum computing—accelerated by the AI revolution—strategizing our hydro and solar investments to be competitive today and in the long term, is important. A window to be competitive and an enabler to the economy could be to nationally strategize for the demand of the clean power-intensive industries (viz. AI data centres) which is a time bound opportunity but strategic. To journey this strategy, a “triangulation framework”—bringing together (a) global energy investors, (b) global industrial partners (specifically targeting AI Data centre and hyper-scaler, and (c) Government, Private Sector and DHI—will be essential for a narrative to the investors. This triangulation strategy—linking energy investors, industrial demand, and government/Private Sector/DHI—would be instrumental in building a robust domestic market ecosystem for energy. It would also create the conditions for Power Purchase Agreements (PPAs), while simultaneously enabling the growth of new industry verticals and strengthening

the national economy. This could provide the critical impetus needed to position energy as a catalytic enabler of Bhutan's future economy, unlocking innovation, industrial diversification, and sustainable economic growth.

> **Forests Resources**

With over 70% of Bhutan's land under forest cover, the country is uniquely positioned to lead a timber innovation economy. DHI will build an integrated ecosystem for engineered timber production (e.g., Glulam, CLT), supporting the GMC's sustainable construction goals and creating high-value export potential. This includes investment in design and production facilities, circular forestry systems, carbon markets (e.g., HFLD credits), and frontier R&D in materials science and wood engineering. The integration of forest resources and investments in the timber industry with the innovation strategy and flagship project of Nature Capital Accounting (NCA) would create a significant cross-pollination platform, fostering collaboration between global partners and aligning the Investment Strategy with the Innovation Strategy.

> **Water Resources**

Water is both a lifeline and an economic opportunity. The objective would be to study water as a strategic resource and as an industry with global partners and position Bhutan's water resources as a key economic driver beyond hydropower, leveraging for sustainable development and regional cooperation, while ensuring long-term water security for Bhutan. DHI will study to position for investment in research and development of water technologies, including water purification and water-efficient systems. Studies to explore “*water storage potential developing the natural catchment areas*” around

the country providing back up for water as a lifeline resource but also towards efficient water utilization for agriculture, industries and sustainable city and tourism development. It will explore investing in water-based industries focused on safe drinking water, purification technologies, Internet of Things (IoT)-enabled water monitoring, fresh water monitoring and tokenization and tourism and community engagement initiatives like water parks. A strong R&D thrust will support innovations in eco-friendly distribution, smart metering, and health-driven water applications, transforming Bhutan's water abundance into a national advantage.

2. Mines and Minerals

DHI will work closely with MoENR to unlock Bhutan's untapped mineral potential in a way that is sustainable, and will also actively pursue commercialization.

Using modern geological mapping, AI, drone technology, and international best practices, the strategy will focus on exploring and adding value to important minerals such as magnesium, graphite, tungsten, lithium, copper, molybdenum, and other rare earth elements that are important to Bhutan. At present, SMCL mines coal, gypsum, and dolomite, and DHI is exploring ways to increase their value through processing and innovation. Going forward, DHI plans to expand its focus to both metallic and non-metallic minerals, especially rare earth elements and minerals that are critical for new and emerging industries of the 21st century.

This sector will become a major driver of 10X growth of DHI and importantly for the 21st Century Economic Roadmap and the 10X GDP plan for Government contributing to:

- > Economic diversification;
- > Foreign exchange stability;
- > Export competitiveness; and
- > Downstream industrial development.

Strategic partnerships and sustainable responsible mining practices will be essential to ensure sustainability, transparency, and long-term national benefit. Through the responsible development of minerals required for the 21st century economy and understanding the geo-political realities and a commitment to sustainability, DHI aims to foster long-term growth, technological innovation, and contribution to the economy. Through the responsible development of minerals required for the 21st century economy and understanding the geo-political realities and a commitment to sustainability, DHI aims to foster long-term growth, technological innovation, and contribution to the economy.

3. Infrastructure: Physical, Digital, and Financial

> **Physical Infrastructure**

For a developing country, efficient infrastructure is a critical foundation for economic growth. The challenge lies in balancing investments for immediate and short-term needs while failing to strategically invest in long-term infrastructure, which can hinder future opportunities. Therefore, as the government's investment arm, DHI must strategically prioritize investments in infrastructure that foster technological advancements, business opportunities, and enhance Bhutan's connectivity both globally and domestically. With GMC positioned as a pioneering economic hub—offering a conducive business environment and serving as a strategic gateway between South and Southeast Asia via railways,

airways, and other multimodal transportation networks—it becomes imperative to establish seamless, advanced, and efficient multimodal connectivity between GMC and Bhutan’s major cities and towns. Such integration will not only enhance domestic mobility and economic cohesion but also unlock the full potential of GMC and the nation as a regional transit and trade nucleus.

National future transportation infrastructure is a key driver of economic growth, and for Bhutan, next-generation systems are a strategic priority to reduce reliance on fossil fuels while leveraging its green energy potential. With the construction of the international airport at GMC and advanced discussions on connecting GMC and Samtse to Indian Railway systems, the development of efficient and futuristic multi-modal transportation systems between key cities of Bhutan and GMC is vital for balanced growth, technology transfer, and progress. Bhutan for its 21st century economic roadmap should become a transportation hub by partnering with global leaders in advanced technologies, including high-speed railways, underground transport, flying cars, electric and hydrogen vehicles, and drones. These initiatives will enhance connectivity, drive industrial growth, and create opportunities in logistics, engineering, and manufacturing.

In addition to transportation, DHI is also focused on leveraging green energy and pursuing the “triangulation strategy” to attract global partners in creating High Performance Computing (HPC) Centers for AI in Bhutan. This will be pursued in collaboration with GMC to establish Bhutan as a hub for AI computing innovation.

Accordingly, DHI with its 10X Roadmap will work towards and strategize for next-generation urban and inter-city infrastructure, prioritizing integrated multimodal systems linked to the Gelephu International Airport and India’s railway corridors. Strategies to discuss and connect with global partners will include technology, research, transfer of knowledge and financing windows for such future infrastructure development:

- > Advanced transportation (electric/hydrogen vehicles, underground transport, drone logistics, flying car testing for local transportation, cable and ropeways etc);
- > Future smart cities (Phuentsholing township, special economic zones); and
- > HPC clusters powered by Bhutan’s clean energy.

These will anchor Bhutan’s regional integration and industrial competitiveness.

As part of the broader aviation infrastructure strategy DHI through Drukair will work on, and explore the development of key aviation support services, with global partners at the upcoming Gelephu International Airport. These include the establishment of a state-of-the-art catering unit, ground handling services, and engineering and maintenance facilities. In parallel, DHI will assess the feasibility of a certified Aircraft Maintenance, Repair and Overhaul (MRO) facility at Gelephu. This would not only support regional aviation demands but also create high-skilled jobs, promote technology transfer, and establish Bhutan as a trusted technical hub in South Asia. These aviation-linked investments will transform Gelephu into a fully integrated aerotropolis, amplifying the economic footprint of the airport and anchoring the city’s role as a gateway to global markets.

> **Digital Infrastructure**

To support a digital economy, DHI will expand Bhutan’s connectivity backbone through fiber expansion, last-mile Fiber To The Home (FTTH) rollout, and satellite-ground link integration in close coordination with GovTech Agency. Under the GMC strategy, subsea cable connectivity will provide low-latency international bandwidth, enabling data-intensive industries like AI, cloud computing, and precision tech.

Currently, Bhutan’s national backbone is connected via Optical Ground Wire (OPGW), with All-Dielectric Self-Supporting (ADSS) cable linking each of the 205 gewogs to the internet through fiber optics routed via India. GMC plans to expand dark fiber connectivity to subsea cables over the coming years, and Starlink services have been introduced in 2024. To support a digital innovation economy, a robust last-mile and international low-latency bandwidth infrastructure is essential. As part of DHI’s 10X Roadmap, the strategy includes supporting GMC for connectivity, FTTH deployment, study evolving radio and wireless communication systems, and the adoption of 5G and beyond to foster an IoT economy.

> **Financial Infrastructure**

The National Digital Identity (NDI) of Bhutan could be the backbone of the Financial Infrastructure and revolutionize innovation in the financial and digital sector in Bhutan. DHI will expand the foundation of a Digital Public Infrastructure (DPI), through the expansion of the decentralized NDI Systems built on Self Sovereign Identity principles in collaboration with GovTech Agency. Strategy would be to expand the use cases of the NDI for Government Services, Utilities, Corporate Sector and all public service systems through

single sign on, Digital/Cryptographic signatures platforms, e-KYC and many more.

4. Manufacturing and Services

> **Manufacturing**

The manufacturing sector in Bhutan has significant potential to transform the economy by driving growth across industries, creating jobs, and fostering skill development. However, it has remained stagnant, contributing only about 7% to GDP since 2011, well below the 18% needed for high-income status. Bhutan’s 2023 graduation from Least Developed Country status highlights the need for industrial transformation to avoid the middle-income trap. Research shows that moving to a high-income economy requires industrial expansion, increased exports, and technological advancement.

DHI will focus on a ‘low volume, high value’ manufacturing strategy, which includes building capacity in design, engineering, and manufacturing in sectors such as efficient motors for electric vehicles (EVs), components for humanoid robots, and space industry technologies aligned with GovTech’s mission. The Group is also actively investing in strategic projects with global potential, including a geothermal spa, mass-engineered timber for eco-friendly construction, and energy-efficient charcoal production. Plans for a magnesium production plant are underway to meet growing demand for lightweight materials. Bhutan’s affordable green energy has been key to the development of its manufacturing sector. As significant investments are made in energy sources, DHI sees growing opportunities to add value to green energy. Beyond cement and steel, DHI will explore logistics challenges, EV assembly and

manufacturing, battery and solar panel assembly, and potential in the semiconductor industry. Considering the global and regional manufacturing landscape, DHI will develop:

- > a comprehensive manufacturing and service strategy to cater to the growing market in the region, which includes over 2 billion people; and
- > explore EV motors and battery systems, Semiconductor and solar PV components, Advanced robotic systems and aerospace elements.

> **Services**
Tourism, health, education, logistics and aviation services hold significant potential for national branding and GDP contribution. DHI will explore investment partnerships in:

- > Premium medical and wellness services;
- > Education-tech and transnational education campuses; and
- > Logistics and aviation services including, catering, security, and airport management services.

These investments will leverage Bhutan’s soft power, institutional trust, and natural environment to develop world-class service experiences.

5.Global Securities and Digital Assets

> **Global Financial Securities**

DHI will gradually expand its exposure to global capital markets to diversify income streams and enhance investment capabilities. This includes managed portfolios of equities, fixed

income, and thematic funds, built through strategic partnerships.

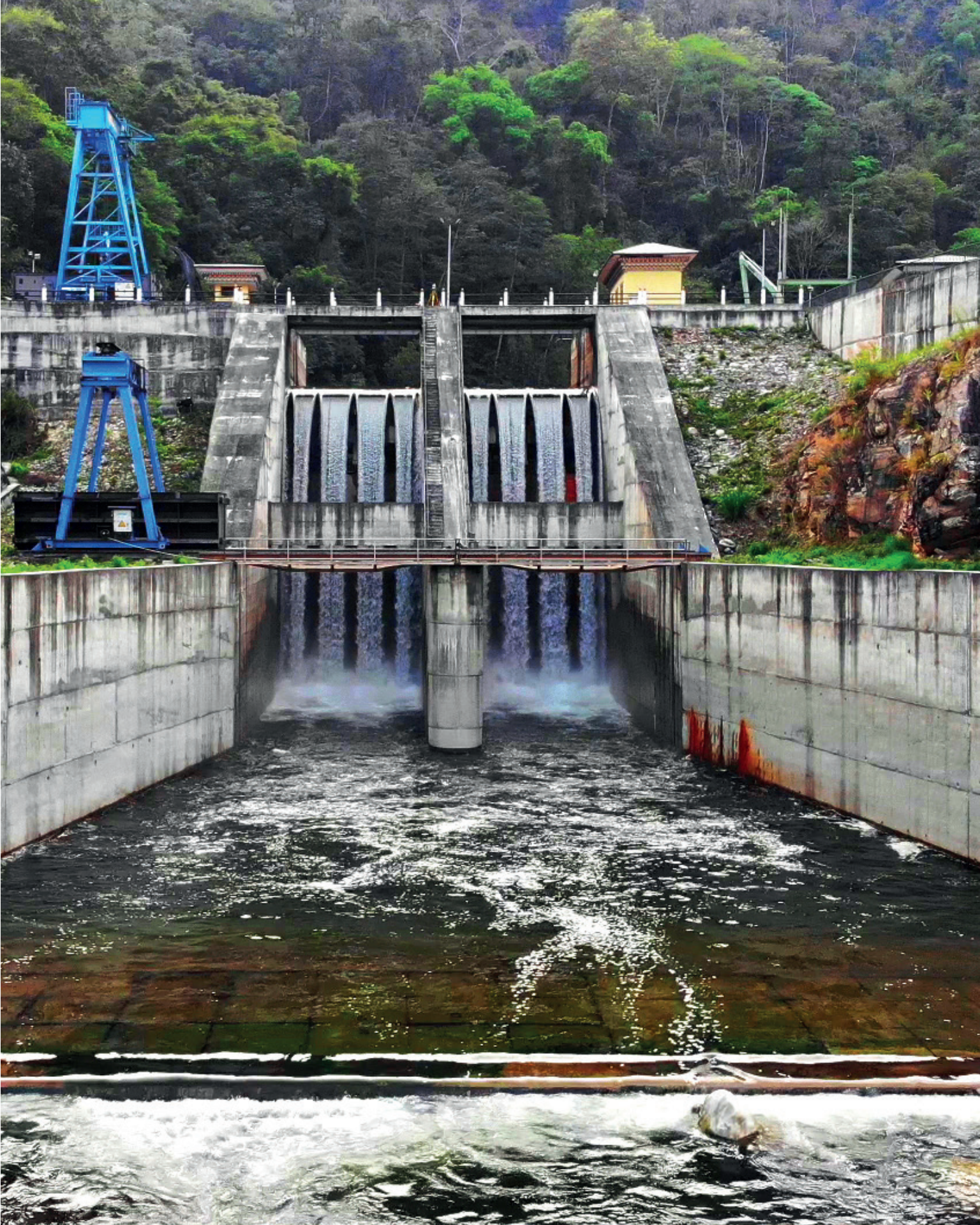
Over the next decade, the future of asset management lies in the successful integration of human expertise and technological innovation. Therefore, it is essential for DHI to strategically expand its assets under management to capitalize on these opportunities, and to actively contribute to this growth.

> **Digital Assets**
DHI will maintain a balanced portfolio of digital assets considering it as a store of value as well as opportunities in tokenomics, crypto currencies, central bank digital currency (CBDC) and the evolving landscape of Blockchain and Web3 technologies and will form a frontier in DHI’s portfolio. Digital assets such as tokenized infrastructure, programmable money, and decentralised applications will be monitored and selectively engaged through a sandbox model, in collaboration with regulators and global innovation partners.

Milestones for Investment Strategy

Core Pillar II. Investment Strategy		Time frame
Energy and Resources		
1 Green Energy Portfolio Investment and Exploration:		
1.1	15 GW Hydro Power and Transmission Network implementation. > 695 MW Short-term > 2,358 MW Medium-term > 13,524 MW Long-term	Ongoing to Long-term
1.2	5 GW of Solar Power implementation. > 675 MW Short-term > 423 MW Medium-term > 3,900 MW Long-term	Ongoing to Long-term
1.3	Explore harnessing Geothermal Energy in Bhutan (Traditional, Advanced, Shallow).	Short to Medium-term
1.4	Energy Storage Technology exploration – Grid Scale Batteries and other emerging storage technologies (sand, salt ++).	Short to Medium-term
1.5	Explore Hydrogen Economy in Bhutan - (energy, transportation, ammonia, Hydrogen/combined cycle energy).	Medium-term
1.6	Explore large scale Wind Energy/SMR/Natural Hydrogen/Natural Gas.	Long-term
2 Create Mass Engineered Timber industry and wood value addition technologies (e.g. TMTM and Superwood).		Short-term
3 Explore industry and services on Water and value addition.		Medium-term
Mines and Minerals		
1	Build global partnerships and knowhow: Conduct techno commercial feasibility for sustainable mining, value addition and creating industry verticals with rare earth and critical metallic and non-metallic minerals.	Long-term
2	Explore establishment of a Magnesium production plant.	Short-term
3	Explore feasibility of Graphite mining and value addition.	Short-term
Infrastructure (Physical, Digital and Financial)		
1	Phuentsholing Township Development Project (PTDP): Implement PTDP’s township development, management and investment promotion.	Immediate
2	Digital Infrastructure Business: Study techno commercial feasibility of National digital infrastructure viz. FTTH, international dark fiber connectivity, and evolving communication infrastructure.	Short-term
3	Airport development, expansion and airport business development.	Medium-term

Core Pillar II. Investment Strategy		Time frame
4	Transportation System: Plan and build feasibility studies for Intra and inter-city transportation infrastructure including advanced tunnelling, flying cars, high speed railways, hydrogen fueled transport etc.	Long-term
5	AI Data Centers: Build multiple pathways with hyperscales and developers and conduct detailed feasibility studies to establish green Data Centers for AI applications.	Long-term
6	Financial Infrastructure Business: Study the development of Innovative NextGen Financial infrastructure and instruments.	Short-term
Manufacturing and Services		
1	Low Volume High Value (LVHV) Manufacturing Framework development: A multi decade plan to build talent pipeline and global partnership to build low volume high value manufacturing as a pillar of business.	Short to Medium-term
2	Explore with partners globally for LVHV manufacturing/assembly of electric vehicles, electric motors, IoT and other relevant products.	Medium-term
3	Assess potential investment channels in the rapidly evolving semiconductor and electronics industry.	Medium-term
4	Services: Explore services in:	Medium to Long-term
4.1	Health	
4.2	Education	
4.3	Hospitality	
4.4	Logistics.	
Global Securities		
1	Scale-up the value of Bhutan Future Fund to Nu. 30 Billion.	Long-term
2	Expand and diversify global investment portfolio including to emerging markets.	Immediate
3	Expand to provide fund management services to external clients.	Medium to Long-term
4	Build strategies and deploy new capital to grow the DHI portfolio.	Ongoing



CORE PILLAR III: Innovation Strategy

Building Bhutan's next economic engine through science, technology and innovation

Bhutan is poised at the threshold of a historic economic transformation, one driven not solely by capital or consumption, but by creativity, knowledge and breakthrough ideas. While Hydropower, Agriculture and Tourism has largely been Bhutan's economic cornerstones, and should continue to be, DHI's Innovation Strategy is designed to position science, technology and innovation (STI) as a central pillar of Bhutan's future economy, aligned with its Royal Charter mandate to stimulate private sector growth and national development.

The ecosystem design framework is driven by three key elements: Drivers, Facilitators, and Enablers. The Drivers, such as RGoB, GovTech, DHI InnoTech, and Thimphu TechPark Limited (TTPL), provide national policy and technical support. The Facilitators, including the JNWSFL and the Fab Lab Networks in Bhutan, offer creative spaces and infrastructure to turn ideas into prototypes. The Enablers, like the Multichannel Innovation Fund, provide financing platforms for pre-seeding, seeding, and scaling ideas and projects. This framework also brings together three critical stakeholders: global and local Innovators, Startups, and Academia. The collaboration and

interaction among these stakeholders and the key elements are expected to generate innovative, value-driven products and services. These innovations can then be validated, invested in, and scaled globally by investors and partners. The ecosystem is designed to enable start-ups and next-generation entrepreneurs to ideate, experiment, conduct both fundamental and applied research, and commercialize transformative innovations. It is deliberately designed to support circular innovation, where discovery fuels enterprise, and enterprise feeds back into scientific capacity establishing a self-sustaining model for long-term national growth.

Strategic Objectives

DHI's Innovation Strategy will pursue the following objectives to drive systemic change and national competitiveness towards building Innovation as a pillar of economy:

- > **Establish a robust pipeline of high-impact start-ups** in emerging fields such as digital identity, Web3, healthtech, deep tech, internet of things and AI;

- > **Foster cutting-edge research and intellectual property creation** through CoEs and partnerships with world-class institutions;
- > **Ensure accessible and sustainable innovation financing** at all stages, from pre-seed to scale via a structured, MCIF structure;
- > **Build institutional capacity and talent pipelines** by integrating Bhutanese innovators, academics and investors into global R&D and start-up ecosystems; and
- > **Create innovation policy instruments and sandbox environments** that reduce regulatory friction and accelerate commercialization.

A Framework for the Innovation Ecosystem: Drivers, Facilitators, Enablers

At the heart of DHI's Innovation Strategy is a three-part framework:

1. Drivers

Drivers are institutions and actors that provide policy support, technical assistance, and proof-of-concept (PoC) development capabilities. These include agencies like GovTech, DHI InnoTech, TTPL, and relevant government ministries. Their role is to work with regulators and innovation leaders to create adaptive, incentivizing policy environments, and to build PoC and Minimum Viable Product (MVP) prototypes that accelerate product-market fit. DHI will continue to expand the Driver ecosystem to include local and international collaborations that can bring speed, scale, and relevance to Bhutan's innovation efforts. It is

expected that many more drivers from private sectors would be incubated as we work on the innovation ecosystem with some risk capital being injected by RGoB and DHI.

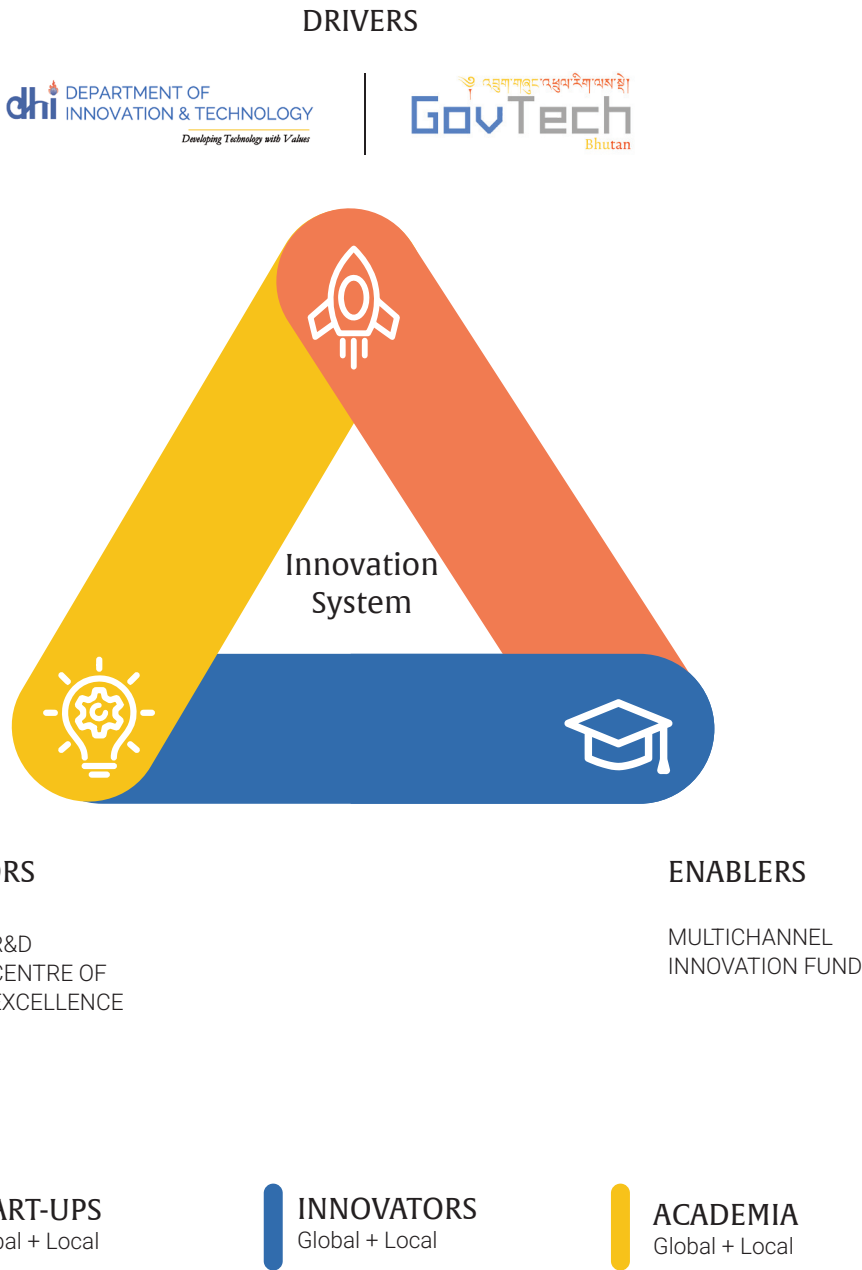
2. Facilitators

Facilitators provide creative infrastructure and research capacity, with the flagship institution being the Jigme Namgyel Wangchuck Super Fab Lab (JNWSFL), established in partnership with Massachusetts Institute of Technology (MIT). This facility is set to evolve into a world-class Applied and Fundamental Research CoE. Currently, it enables applied research and prototyping opportunities, with the ambition to support innovators, academics, and startups in Bhutan and the global community. The focus will be on exploring cutting-edge domains such as robotics, quantum computing, digital biology, advanced life and material sciences, and other emerging fields. The goal is to transform these research areas into national laboratories and translate findings into practical technologies and Intellectual Property (IP). Over time, the facilitator aims to become a hub for both local and international collaboration, hosting global experts and fostering partnerships between Bhutanese researchers and international talent to develop products with global potential.

3. Enablers

Enablers provide financial platforms and instruments to pre-seed, seed, fund and scale innovation. The cornerstone is the MCIF, which will deliver catalytic capital across all stages of the innovation lifecycle. This includes support for R&D, prototyping, start-up seeding, growth acceleration, and strategic scaling. The fund will also be designed to absorb early-stage financial risk, unlocking co-investment from commercial and impact-aligned investors locally and globally.

INNOVATION STRATEGY



The Multichannel Innovation Fund

To build a resilient and circular innovation economy, Bhutan needs not just ideas, but also the capital, mentorship, global talent and patience to nurture and grow. The DHI-designed MCIF is designed to meet these needs. It will operate independently, transparently, and with a clear mandate to drive innovation across sectors and disciplines. It is expected to grow as a fund of fund structure with clearly defined financing channels to support various stages; such as talent development, pre-seeding, seeding as well as scaling requirements of a start-up journey through the matching of instruments and governance for the development of the innovation ecosystem. The MCIF aspiration is to raise towards 100 Million USD globally in the next 3 to 5 years and evolve progressively towards a billion dollar fund supporting the innovation ecosystem of Bhutan. The fund will be sourced from the following areas:

- > **Venture capital:** Venture Capital will be a source of funding for start-ups and solutions with novel value proposition and scalability;
- > **Impact investments:** Patient Capital and Long-Horizon Investments aimed at Socio-Economic Impact with less priority on returns;
- > **Self-funding:** “Skin-in-the-game” is a critical factor in investment, and to drive co-investment and external investor confidence, Bhutan will also act as a source for the fund; and
- > **Philanthropy:** Philanthropic sources aimed at “contribution for good” that will want measurable, structured deployment but no expectation of financial returns.

These sources of funding will then flow into the MCIF. The operationalization of the fund, with its diverse channels, will be implemented in phases, based on the ecosystem’s readiness and the critical impact of each channel. These channels include but are not limited to the following:

1. Catalytic philanthropy channel

Non-dilutive support for early ideas, public good research, and talent pipeline development using instruments such as:

- > Pre-seed idea grants & sandboxing;
- > Scholarships & fellowships;
- > Research and Development;
- > IP protection & accelerator support; and
- > Support to researchers/individuals in high-potential institutions

This Channel will serve individuals, researchers, students, universities, and public good initiatives.

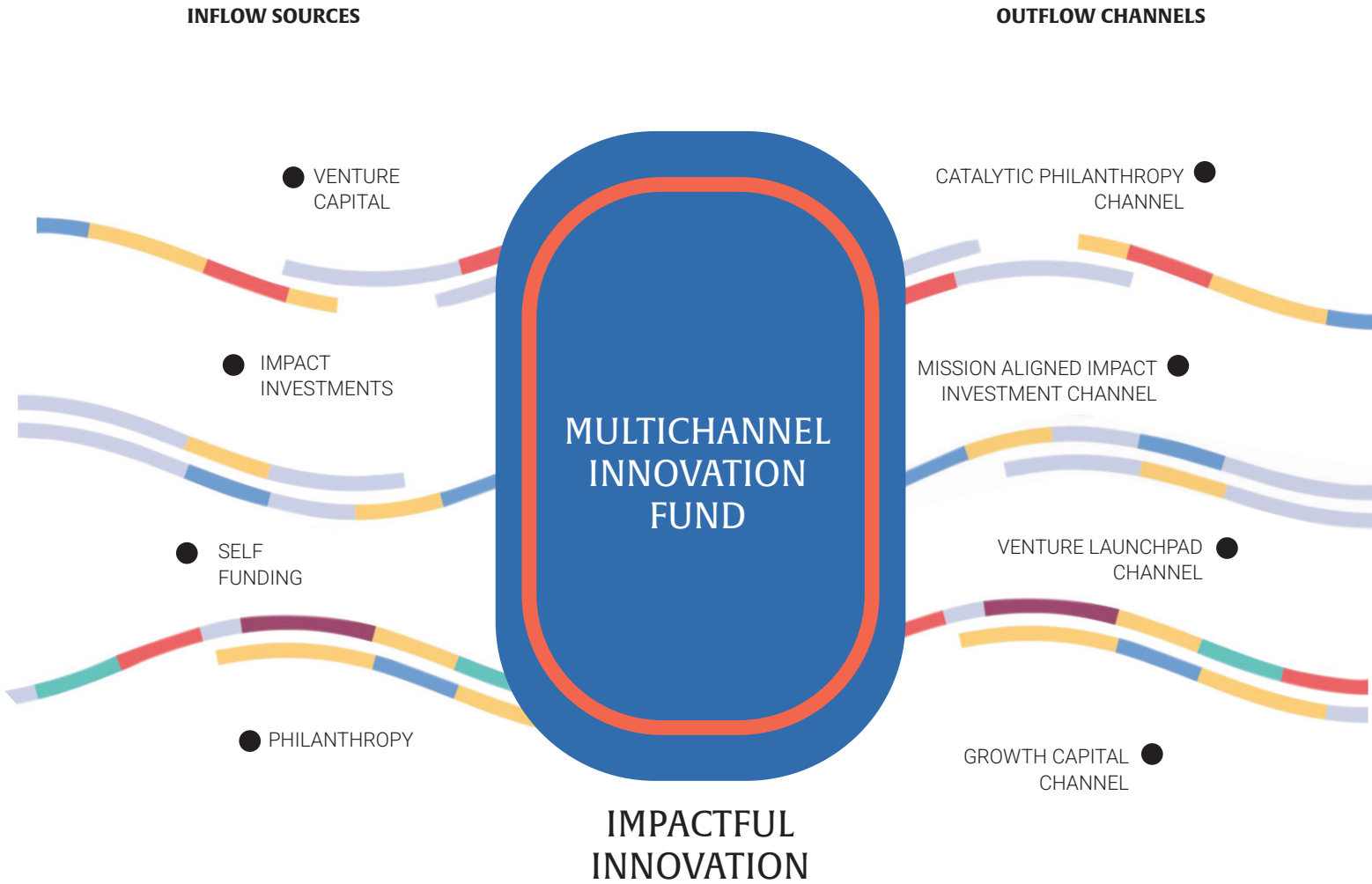
2. Mission-aligned impact investment channel

This will be patient capital for solutions to critical national challenges or international challenges, by using blended financing for public-private solutions and de-risking social and climate innovations with potential market fit. Planned methods of deployment can be:

- > Concessional equity or debt;
- > Convertible notes or recoverable grants; and
- > Outcome-based finance (e.g., development impact bonds)

This Channel will serve social enterprises, hybrid ventures, new value propositions in systems approach.

MULTICHANNEL INNOVATION FUND



3. Venture launchpad channel

will support early-stage, high-risk commercial start-ups with potential for scale, taking inspiration from Estonian and Singaporean models, backed by venture philanthropy and/or angel networks. It looks towards enabling market-validated ventures moving toward Series A. This Channel will utilize:

- > Angel-style “Pay Back if You Can” or Simple Agreement for Future Equity (SAFE);
- > Seed & pre-seed funding; and
- > Incubation & technical support.

This channel will serve High-potential early-stage founders/startups.

4. Growth capital channel:

Scaling high-performing startups and businesses instruments. This is the channel aimed with traditional venture capital and institutional investors, and this channel results in stronger pipelines for VC aligned ventures. The Channel will support:

- > Series A/B/C equity investment;
- > Strategic corporate partnerships; and
- > Initial Public Offering (IPO) facilitation with the securities exchange.

This channel will serve scale-stage startups, mature private companies targeting IPO or acquisition. This will be the most mature channel of funds.

Each window will be governed by well-defined investment mandates, risk-return expectations, and alignment frameworks to ensure that capital flows to innovations that are technologically sound, commercially viable, and socially transformative.

This funding architecture will also enable DHI to attract and syndicate capital from global development partners, sovereign investors, philanthropic funds, and private investors making Bhutan’s innovation economy globally relevant and investable.

A Living Ecosystem: National Digital Identity as a Case Study

One of the earliest demonstrations of this ecosystem’s potential is the NDI platform. Enabled through the MCIF, NDI became a launchpad for a new category of Bhutanese start-ups, ancillary services, and identity-linked fintech applications. It exemplifies how the interplay of drivers (policy and tech), facilitators (infrastructure), and enablers (capital) can generate an entirely new economic cluster, rooted in national priorities but globally competitive in scope.

A Sovereign Innovation Economy

Bhutan’s innovation ambition is not to replicate Silicon Valley but to build something sovereign, regenerative, and rooted in its values. Through the DHI innovation strategy, Bhutan will create an ecosystem that empowers local talent, attracts global collaborators, and redefines the role of innovation in national development. By 2035, Bhutan will not only be a consumer of global technologies, it will be a source of pioneering ideas, a hub for responsible innovation, and a builder of industries yet to be imagined.

Milestones for Innovation Strategy

Core Pillar III. Innovation Strategy		Timeframe
1 ENABLERS of National Innovation Ecosystem:		
1.1	Establish a “Multichannel Innovation Fund”: As per the DHI innovation ecosystem Enabler’s design and in collaboration with RGoB as per the 21 st Century Economic Roadmap.	Short to Long-term
1.2	Collaboration with RGoB and GMC: Create pathways to build policy and regulatory collaboration for new venture/ start-ups to support next generation entrepreneurs as per the 21 st Century Economic Roadmap.	Ongoing
1.3	Laying the Foundation for National Innovation Ecosystem: Design and implement programs and collaborative networks to foster Bhutan’s National Innovation Ecosystem. The initiative will nurture idea generation and startup creation by engaging global and local stakeholders—including innovators, startup founders, academicians, and government entities.	Ongoing
2 FACILITATORS of National Innovation Ecosystem		
2.1	Feasibility to create Fundamental National R&D Labs Center of Excellence (R&D CoE) Explore to build fundamental R&D Labs with global academicians for - Material Science, Robotics, AI and Next Gen Energy systems.	Immediate to Medium-term
2.2	JNWSFL Expansion: Expand the Super Lab and Fab Lab network in Bhutan, Launch Skill Building Programs (viz. FabAcademy) and build global networks to increase the footprints in JNWSFL for industries, students and innovators.	Long-term
2.3	JNWSFL Industry linkages and product development:	Immediate
	2.3.1 With global and national industries and institutions to build products and services of value and commercialization pathways.	
	2.3.2 Develop Assistive Technology to support people with disabilities.	
3 DRIVERS of National Innovation Ecosystem		
3.1	Create Start-Ups from DHI InnoTech.	Immediate
3.2	Applied Research for PoC and MVP.	Ongoing

Core Pillar III. Innovation Strategy	Timeframe
<div>3.2.1 Artificial Intelligence and Blockchain:</div> <div><ul style="list-style-type: none">- Establish GPU computing center for R&D and training of algorithms.- Automatic Number Plate Recognition (ANPR) upgradation and smart city solutions.- AI powered Business intelligence solutions.- Application development on Agentic AI for Humanoid Robots.- Prototype land tokenization and transaction.</div>	<div>Immediate to</div> <div>Medium-term</div>
<div>3.2.2 Drones:</div> <div><ul style="list-style-type: none">- Build a DRONE Roadmap for Bhutan– “Design, Manufacturing and Use cases” to build a Drone Industry.- Design and Manufacturing: Build roadmap for DroneDesign and manufacturing with academic institutes and JNWSFL.- Use Cases: Drone delivery services, Disaster Management and Electrical Power Line Maintenance for commercialization.- Explore a Drone testing lab in Bhutan.</div>	<div>Immediate to</div> <div>Medium-term</div>
<div>3.2.3 IoT, Energy and Application:</div> <div><ul style="list-style-type: none">- Smart Agri-Tech Solutions.- Water Management, Supervisory Control and Data Acquisition (SCADA) and Glacial Lake Outburst Floods (GLOF) early warning system and analytics.- Shallow GeoThermal, Hydrokinetic Energy Solutions PoC.</div>	<div>Short-term</div>
<div>3.2.4 Nature Capital Accounting:</div> <div><ul style="list-style-type: none">- Maintaining the National Carbon Registry that meets global benchmarks for transparency, interoperability, credibility, and digital performance.- Develop collaboration as technology partners for Bhutan’s Global-Standard Infrastructure for Carbon markets and NaturalCapital Accounting.- Facilitate Carbon Financing instruments.</div>	<div>Ongoing</div>
<div>3.3 Innovation for Business development and efficiency gains program for DHI portfolio companies in Potential, Strategic and Growth Zone.</div>	<div>Immediate and</div> <div>Ongoing</div>



Enabling Strategies

The foundational capacities that power DHI's 10X Transformation

DHI's 10X Roadmap is underpinned by a trio of strategic enablers, Financing, Technology, and Human Capital. These enablers are not ancillary to the strategy; they are its operational backbone. They empower DHI to pursue ambitious investments, build a high-performance portfolio, foster innovation, and scale impact across sectors. Each enabler strengthens DHI's capacity to remain agile, future-ready, and globally competitive.



Financing Strategy

Powering transformation through smart capital and financial innovation

To realize its long-term vision, DHI will adopt a forward-looking and resilient financing strategy that balances internal capital deployment with access to diversified external funding sources domestic and international. The strategy will align financial structures with emerging global standards, ESG principles, and Bhutan's economic priorities.

1. Capital Sourcing & Diversification

DHI will combine retained earnings and internal reserves with external financing instruments such as green and social bonds, project financing, syndicated loans, and blended finance. Domestically, it will issue commercial papers, engage in asset-backed financing, and attract institutional and private investors through public-private partnerships. Internationally, DHI will explore Eurobonds, Export Credit Agency-backed financing, and joint ventures with sovereign and private equity investors.

2. Sustainable and Strategic Instruments

Financing will increasingly be linked to ESG-compliant instruments, allowing DHI to unlock funding from global impact investors. It will explore securitizing future cash flows and divesting non-core assets to reinvest in strategic sectors. Over time, select subsidiaries may be

considered for IPOs to enhance market visibility and raise growth capital.

3. Risk and Performance Management

DHI will implement advanced risk analytics, dynamic modelling, and early warning systems to manage financial exposures. Key financial indicators such as ROI, NPV, and IRR will guide data-driven decision-making. Real-time dashboards and audit trails will support transparency, capital efficiency, and institutional resilience.

This financing framework directly supports all three core pillars:

- > **Portfolio Management** through M&A activity, divestments, and sector restructuring;
- > **Investment Strategy** by funding high-growth and R&D-intensive projects; and
- > **Innovation Strategy** via bespoke financial tools for early-stage ventures.

In sum, DHI's financing approach will not only fund the 10X journey but will also shape the conditions necessary for its financial and institutional sustainability.

Milestones for Financing Strategy

Strategic Enabler I: Financing Strategy		Timeframe
1	Financing Strategies for DHI Portfolio, Investment and Innovation Strategies: Some of the potential institutions and instruments to explore:	Short to Long-term
1.1	Multilateral Development Institutions (MDIs) & DFIs.	
1.2	Sovereign Wealth Funds & Government-Backed Funds.	
1.3	Venture Capital & Private Equity Firms.	
1.4	Philanthropic Capital & Impact Investors.	
1.5	Commercial Banks & Financial Institutions.	
1.6	Thematic & Sector-Specific Funds: Niche investment vehicles aligned with climate, digital, health, and food systems viz. Carbon bonds, Green Bonds.	
1.8	Corporate Strategic Investors & CVCs (Corporate Venture Capital) and Endowment Funds.	
2	Pilot first blended finance initiative to support High Impact Ventures/Investments/Projects.	Short-term
3	Develop centralized treasury management system (TMS), sustainable dividend policy and assets valuation systems.	Short-term
4	Develop portfolio financing strategies with subsidiaries and capital allocation Framework.	Medium-term
5	Adopt digital solutions and predictive analytics to improve oversight and decision-Making.	Medium-term
6	Establish co-investment models and secure global financial partnerships to enable strategic investments (Thematic bonds/Social bonds, Innovation fund, etc.).	Long-term
7	Obtain globally recognized credit ratings for DHI.	Ongoing

Technology Strategy
Embedding frontier technologies across the DHI ecosystem

At DHI, technology is a strategic multiplier—enhancing operational efficiency, broadening impact, and strengthening performance. Our approach integrates innovation across core operations while equipping DHI to lead in emerging, future-focused sectors. To drive this vision, DHI’s technology strategy is structured around three pillars: (i) digital transformation of Portfolio companies (ii) Platformization and shared technology infrastructure, and (iii) DHI’s Science and Technology Foresight Framework.

We aim to modernize each portfolio company through tailored digital roadmaps as a part of the Subsidiary CSP that optimize their operations and unlock new value. At the group level, we will build interoperable digital platforms—such as data lakes, AI models, cybersecurity frameworks, and shared services—that improve agility and reduce duplication across the enterprise. Additionally, DHI will build the Science and Technology Strategy for business growth—like blockchain, Industry 4.0, and sustainable tech—that can future-proof our economy and create competitive advantage across sectors. Through this layered and unified approach, we position DHI not only as a tech-enabled organization, but as a technology-driven ecosystem leader.

1. Digital Transformation Across the Portfolio:

DHI will standardize digital systems and adopt new technologies across subsidiaries to improve operational efficiency. Group-wide platforms will support enterprise resource planning, smart analytics, and interoperable systems across finance, HR, procurement, and compliance.

- > **Customized Digital/Technology Roadmaps:** Each portfolio company develops a tailored technology adoption plan aligned with its sector and growth stage as a part of the CSP.
- > **Operational Modernization:** Automating workflows, adopting enterprise resource planning (ERP) systems, and digitizing customer experiences.
- > **Capability Building:** Upskilling talent and nurturing tech leadership within subsidiaries to enable sustainable digital adoption.

2. Platformization and shared technology infrastructure

In collaboration with the InnoTech Department and specific Subsidiaries, the Technology Strategy led by the Chief Technology Officer (CTO) Office would build the roadmap and strategies around the following

- > **Shared Digital Infrastructure:** Creating interoperable platforms (e.g., cloud systems, data lakes, cybersecurity frameworks) to unify and streamline tech operations across subsidiaries.
- > **AI & Analytics as a Service:** Centralizing advanced analytics and AI capabilities to drive smarter decision-making and efficiency at scale.
- > **Cybersecurity Governance:** Establishing group-wide security standards and incident response protocols to safeguard digital assets and data integrity.

3. DHI’s Science and Technology Foresight Framework

DHI’s Science and Technology Foresight Framework serves as a strategic compass for aligning our technology strategy with

the accelerating pace of global technology advancements. By systematically scanning emerging scientific and technological trends—from AI, quantum computing, and synthetic biology to green hydrogen and advanced materials—we identify transformative opportunities early and shape proactive investment and capability-building strategies. This foresight-driven approach enables DHI to incubate and scale future-facing businesses across critical sectors such as clean energy, biotechnology, digital infrastructure, and advanced manufacturing. Through scenario planning, expert networks, and technology horizon scanning, we embed adaptability into our strategy—ensuring our subsidiaries are not just reactive but positioned to lead in markets shaped by scientific breakthroughs. Ultimately, this framework empowers DHI to catalyze an innovation-led economy, where Bhutan transitions from being a technology consumer to a developer and exporter of high-value, knowledge-driven solutions.

Milestones for Technology Strategy

Strategic Enabler II: Technology Strategy		Timeframe
1 Digital Transformation Across the Portfolio		
1.1	Customized Digital/Technology Roadmaps in the CSP	Short-Term
1.2	Operational Modernization: Strengthen the adoption of <i>RISE with SAP</i> system across DHI and Group	On-going
1.3	Digital infrastructure optimization and modernization framework for portfolio companies (viz. Cloud, latency, data lakes, Architecture of Apps for DHI and Group).	Long-term
2 Platformization and shared technology infrastructure		
2.1	Develop and implement <i>Cyber Security Governance for</i> DHI and Group	Short/medium
2.2	AI & Analytics as a Service to DHI and Group	Short-Term
2.3	Develop and implement DHI <i>Data Economy Strategy</i> for business development	Short Term
3 DHI’s Science and Technology Foresight Framework		
3.1	<i>“Science and Technology Foresight Framework”</i> for DHI – Anticipating disruptions and opportunity for DHI and Group and the Nation.	Long-term
3.2	Conduct feasibility studies to adopt advanced technologies such as humanoid robots, biotech, quantum computing, nuclear and NextGen energy technology to support the agile Applied Research at InnoTech DRIVE and the Fundamental R&D CoE of DHI.	Long-term
3.3	Develop and implement DHI and <i>Group AI and Blockchain strategy.</i>	Short-Term

Human Capital Strategy

Activating people power for Bhutan’s sovereign transformation

The heart of the 10X Journey lies in its people. DHI’s Human Capital Strategy will unlock the full potential of its workforce by cultivating a culture of innovation, excellence, and collective purpose across all levels of the Group.

1. Talent management

To deliver its ambitious goals, DHI will attract and retain top-tier talent, offer dynamic learning opportunities, and align individual growth with organizational objectives. A robust talent pipeline will be built through leadership development programs, skill mapping, and structured mobility across subsidiaries.

2. Leadership development

Future-ready leadership is central to DHI’s transformation. The Group will proactively identify high-potential individuals, equip them with strategic leadership skills, and expose them to regional and global best practices. Leaders will be trained to think systemically, act ethically, and lead with purpose.

3. Human-centric workplaces

DHI will foster work environments anchored in trust, wellbeing, and inclusion. It will champion flexible work models, voice-based decision-making, and employee recognition systems. A culture of collaboration will be strengthened through group-wide knowledge platforms that enable the free flow of expertise and innovation.

4. Organizational learning and cultural alignment

To institutionalize transformation, DHI will invest in change management, digital literacy, and systems thinking. Shared cultural values will be reinforced across subsidiaries to ensure alignment with the 10X vision and Bhutan’s national ethos.

Together, these three enablers, Finance, Technology, and People, will empower DHI not only to deliver the ambitions of its 10X Roadmap, but to build a sovereign economic institution that is resilient, innovative, and globally respected. They represent DHI’s deep commitment to capacity-building not just within the organisation, but across Bhutan’s entire economy.

Milestones for Human Capital Strategy.

Strategic Enablers III: Human Capital Strategy		Timeframe
1	Culture Hack Program Develop and implement change management strategy across the Group for Innovative, Growth Mindset, Agility and focus, collaborative and accountable workforce who are visionary, digitally literate, and geopolitically aware.	Short-Term
2	Strategic Workforce Planning and Development:	Immediate
	2.1 Develop competency-based framework across all DHI positions.	
	2.2 Capability heatmaps and develops bench strength of talent.	
3	Implement talent performance and recognition framework.	Short-Term
4	Talent Acquisition, Management, Development and Retention Strategies.	Short-Term
5	Leadership Development for a New Era Review and implement a holistic corporate leadership (CEOs & company executives) development programme aligned with national interests and global acumen.	Short-Term
6	Learning and Capability Building Create a 21 st Century Learning Hub and establish and implement a continuous coaching and mentoring framework across the Group.	Short Term
7	Facilitate creation of a human-centric workplace within the Group.	Ongoing
8	Optimize DHI and Group Human Talent Develop and implement human talent and succession planning strategy across the Group.	Ongoing

Centres of Excellence (CoEs)

Championing domain leadership to drive systemic transformation

To complement the Core Pillars and strategic Enablers of the 10X Roadmap, DHI will establish a series of CoEs. These will serve as national hubs for deep expertise, capability-building, and global best practice integration in key strategic domains. Each CoE is designed to institutionalize excellence, accelerate learning, and catalyze systemic transformation within DHI and across Bhutan’s broader development landscape.

These centers are not merely technical units, they are strategic anchors that signal DHI’s intent to lead in areas that shape the future of governance, sustainability, innovation, and execution.

1. Centre of Excellence for Project Management (CoE PM)

Elevating execution through systems, standards and capacity

The CoE for PM will serve as the national benchmark for structured project delivery across DHI and its subsidiaries. It will embed global standards such as Project Management Body of Knowledge (PMBOK), Projects IN Controlled Environments, Version 2 (PRINCE2), Agile, and SAFe, while tailoring practices to Bhutan’s institutional realities and transformation pace.

Key functions will include:

- > Developing and institutionalizing a standardized DHI Project Management Framework;
- > Delivering structured training, certification, and leadership capacity programs;
- > Supporting full project lifecycles: Initiation, Planning, Execution, Monitoring, and Closure; and
- > Promoting cost, time, and scope optimization across flagship and subsidiary projects.

The CoEPM will help DHI move from project dependency to a project excellence culture, where strategic initiatives are delivered with speed, quality, and purpose.

2. Centre of Excellence for ESG (CoE ESG)

Operationalizing sustainability and stakeholder trust

The CoE for ESG will mainstream Environmental, Social, and Governance principles into DHI’s investment and operational strategies, rooted in Bhutan’s core value of GNH and its global sustainability commitments.

Key priorities:

- > Establishing ESG metrics and disclosure standards across subsidiaries;
- > Developing sector-specific frameworks for green innovation, risk mitigation, and equity;
- > Driving sustainability integration into corporate strategy and decision-making; and
- > Building capacity through training, stakeholder engagement, and impact benchmarking.

The CoE ESG will not only enable compliance but foster a culture of ethical stewardship, positioning DHI as a leader in values-based development.

3. Centre of Excellence for Monitoring and Evaluation (CoE M&E)

Making performance visible, measurable, and meaningful

The CoE for M&E will build institutional capacity for impact measurement, transparency, and adaptive learning. It will serve as DHI’s internal audit for strategy implementation, ensuring that ambition is matched with data, evidence, and public accountability.

Its functions include:

- > Designing and institutionalizing a group-wide M&E Framework;
- > Developing key indicators for financial, operational, social, and environmental performance;
- > Generating strategic insights from data to enable course correction and resource optimization; and
- > Supporting transparent and credible internal and external reporting.

The CoE M&E will ensure that the 10X Roadmap remains grounded in evidence and that DHI delivers measurable results that matter.

4. Centre of Excellence for Research and Development (CoE R&D)

Turning knowledge into next-generation industries

The CoE for R&D will drive DHI’s R&D-led growth strategy by linking fundamental and applied research with national industrialization priorities. It will serve as the intellectual engine powering Bhutan’s innovation economy.

Core functions:

- > Identifying strategic areas of R&D that align with DHI’s sectoral roadmaps (e.g. energy storage, quantum computing, life sciences);
- > Supporting the creation and protection of intellectual property and high-impact publications;
- > Facilitating global academic partnerships, research grants, and scholar exchange programs; and
- > Incubating future-ready industries through deep tech spinouts and translational R&D platforms.

The CoE R&D will nurture a new cadre of Bhutanese researchers and inventors, positioning the country as a respected contributor to global scientific and technological advancement.



Institutional Reforms

Strengthening DHI's architecture for scale, agility, and future relevance

As DHI moves to deliver the ambitions of its 10X Roadmap, a fundamental shift in its organizational structure and talent model is underway. The institutional reforms are designed to align

leadership responsibilities with global best practices, enhance internal agility, and prepare the organisation to manage larger, more complex portfolios and partnerships.

Introducing a New C-Suite Structure

To elevate institutional capacity and leadership effectiveness, DHI has created a professionalized C-suite architecture. This ensures that strategic oversight, day-to-day operations, and specialized functions are clearly distributed, freeing the CEO to focus on corporate strategy, innovation, and external engagement.

The following executive roles have been introduced:

- > **Chief Operating Officer (COO)**
Leads Portfolio Management Services and operational governance. Responsible for driving performance across DHI's group companies and ensuring strategic alignment, accountability, and execution excellence.
- > **Chief Investment Officer (CIO)**
Leads Investment Management Services. Oversees capital allocation, risk-adjusted return strategies, and development of future investment pipelines in alignment with the Investment Strategy.
- > **Chief Financial Officer (CFO)**
Leads Financial Management Services. Ensures integrated financial planning across DHI and its subsidiaries, while safeguarding the group's fiscal health and funding capacity.

This Executive Management Committee, chaired by the CEO, will work as a matrixed and collegial leadership team, enhancing responsiveness, dismantling silos, and ensuring the unified delivery of DHI's 10X roadmap.

Establishing the Y-Career Model for Leadership Development

To complement the C-suite reform and encourage a high-performing, empowered workforce, DHI is institutionalizing the **"Y-Career Model"** across its professional services track.

Under this model, high-potential professionals at the Senior level can pursue one of two career pathways:

- > **Managerial Track**
For those who aspire to lead units, divisions or departments, shaping policy, guiding staff, and overseeing cross-functional outcomes.
- > **Specialist (Technical) Track**
For subject-matter experts who wish to deepen their craft, contribute to strategic projects, and influence decision-making without direct line-management responsibilities.

This dual-track model provides:

- > Greater flexibility in professional development;
- > Recognition for technical excellence; and
- > Retention of high-value talent who may not seek traditional management roles.

By reinforcing merit-based growth, the Y-Career Model supports a resilient, inclusive, and forward-leaning organizational culture, ready to engage peers and partners at national and global levels.

Strategic Risk Management

Anticipating uncertainty, embedding resilience

As Bhutan embarks on an ambitious 10X transformation, DHI recognizes that bold strategies must be matched with disciplined foresight and institutional resilience. The 10X Roadmap is designed not only to pursue opportunity, but to withstand disruption. Strategic risk management is therefore embedded into the DNA of DHI's operations, ensuring agility, accountability, and national safeguard. DHI approaches risk not merely as a threat to be contained, but as a dynamic landscape to be navigated, where uncertainty is anticipated, trade-offs are assessed, and course correction is institutionalized.

Risk Categories and Exposure Zones

DHI's strategic risk landscape spans multiple domains, including:

- > **Financial and market risk:** Exchange rate volatility, interest rate fluctuations, inflation, and capital market exposure, particularly relevant as DHI diversifies funding sources and international investments.
- > **Geopolitical and regulatory risk:** External shocks arising from global conflicts, trade dynamics, or regional instability, as well as shifting policy regimes at home and abroad.

- > **Technological risk:** Disruption from emerging technologies (AI, quantum, cybersecurity), obsolescence of legacy systems, or failure to scale digital infrastructure across subsidiaries.
- > **Environmental and climate risk:** Climate-induced risks to hydropower, physical vulnerability of critical assets to floods, landslides, and heat stress.
- > **Reputational and social risk:** Misalignment between commercial objectives and societal expectations; loss of public trust due to governance failure, ESG non-compliance, or project backlash.
- > **Organizational and talent risk:** Inability to attract or retain high-performing talent; institutional resistance to change; cultural misalignment with strategic goals.

Risk Management Architecture

To manage these risks, DHI will strengthen its ERM framework, anchored in best practices and adapted to Bhutan's sovereign context. This includes:

- > Group-wide risk register tracking key exposures across portfolios and strategic projects;

- > Scenario modelling and stress testing for high-impact investment decisions;
- > Early warning systems and leading indicators integrated into performance dashboards;
- > Regular risk review cycles and dynamic policy adjustments; and
- > Strengthening Board and Audit Committee oversight on risk governance.

The framework will be decentralized yet harmonized, empowering subsidiaries to manage operational risk while ensuring strategic risks are addressed at the Group level.

Embedding resilience and adaptive capacity

Beyond risk compliance, DHI's strategy integrates resilience by design:

- > Building redundancy and flexibility into infrastructure and capital structures;
- > Prioritizing climate-resilient investments and green transitions;
- > Institutionalizing knowledge-sharing and learning loops to adapt in real time; and
- > Strengthening sovereign reserves, digital infrastructure, and human capital buffers.

Strategic assurance: leading with integrity

As a steward of public trust and a custodian of Bhutan's sovereign future, DHI recognizes that its legitimacy depends on foresight, transparency, and integrity. Risk management is not a technical exercise but also a leadership responsibility. Through strategic assurance, DHI will ensure that transformation does not outpace stability, and ambition is pursued with prudence.

Key Challenges

Facing constraints with clarity and courage, and creating opportunities

As we chart an ambitious course for our 10X transformation, we must also acknowledge the structural, operational, and capacity challenges that could constrain our trajectory. These are not just obstacles to overcome but also signals to adapt, reform, and lead with foresight. By confronting these head-on, DHI reaffirms its commitment to disciplined execution and strategic agility.

Sectoral Overdependence on Hydropower

Bhutan's GDP and DHI's revenues remain disproportionately dependent on large-scale hydropower. However, this cornerstone sector is increasingly constrained by:

- > Financing barriers due to the high capital intensity of new hydropower projects;
- > Delays in approvals and fragmented stakeholder coordination;
- > Departure of experienced professionals, exacerbated by the COVID-19 pandemic;
- > Climate variability, affecting water availability and power generation; and
- > Rising domestic consumption, which reduces export surplus, undermining high-value external revenue.

Unless new capacity is unlocked or the energy portfolio is diversified, achieving the target of Nu. 700 billion in revenue over the next 10 years will be significantly challenged.

Fragility in the Mines and Minerals Sector

Bhutan's mineral extraction industry, a key non-hydro contributor to DHI's income, faces its own limitations:

- > Frequent operational disruptions due to compliance issues or permit suspensions;
- > Poor connectivity, with inadequate rail access and logistical bottlenecks;
- > Challenging terrain that raises extraction and transport costs; and
- > Shrinking domestic demand, adding volatility to an already cyclical sector.

Without investment in infrastructure and policy reform, this sector risks long-term decline.

Innovation Ecosystem still in infancy

As the world pivots toward high-tech, data-driven economies, Bhutan's innovation ecosystem remains nascent. Key gaps include:

- > Limited R&D infrastructure and funding;
- > Absence of an enabling policy environment for emerging tech; and
- > Lack of institutional pathways to convert research into commercial products.

This delay risks marginalizing Bhutan from global innovation value chains, unless decisive steps are taken to scale our capabilities and platforms.

Human Capital Deficits and Skills Mismatch

Bhutan's workforce is at a critical inflection point. Between 2021 and 2023, high attrition including the emigration of experienced professionals has created institutional voids across sectors. At the same time, fast-evolving industries like AI, fintech, and blockchain demand skills that remain scarce locally.

Addressing this requires:

- > Leadership and technical capacity development;
- > Targeted upskilling and reskilling programs;
- > Education system reform, aligned with future industries; and
- > Selective international talent recruitment, balanced with localization goals.

Global Uncertainty and Technological Disruption

The broader context of DHI's strategy includes geopolitical volatility, climate disruption, and exponential technologies that reshape industries overnight. Bhutan cannot insulate itself from these forces but it can build adaptability, foresight, and systemic learning into every layer of its economy.



DHI Foundation Day 2024

The DHI Group in 2035: A Vision Realized

*What the destination of the
10X Roadmap looks like*

DHI will stand as a model of what a sovereign investment institution can become: agile, innovative, globally connected, and deeply rooted in national values. This decade-long journey will culminate in the creation of a new economic identity for the country: resilient, inclusive, future-ready.

DHI and the GMC: A National Vision Enabled

GMC will be the most iconic expression of Bhutan's sovereign development model, an international city built on the principles of sustainability, spirituality, and innovation. It will anchor Bhutan's emergence as a hub for wellness, knowledge economies, ethical finance, and green technologies.

DHI will have played a strategic enabling role, facilitating catalytic investments, fostering cross-sector partnerships, and aligning national capabilities to GMC's long-term aspirations. As a sovereign economic institution, DHI will have helped seed anchor enterprises in clean energy, digital infrastructure, fintech, logistics, and research-based industries that underpin the GMC economy.

Not as a master developer, but as a trusted orchestrator, DHI will have contributed to making

GMC a symbol of Bhutan's sovereign confidence and global relevance.

Bhutan: A High-Income, Innovation-Driven Nation

Bhutan will have achieved high-income status, its economy transformed from dependence on a few legacy sectors to a diversified portfolio of knowledge, digital, and value-added industries. At the heart of this success will be the DHI Group's robust and **diversified revenue base exceeding Nu. 700 billion**, underpinned by next-generation industries and enhanced performance across the portfolio and the **30 Billion in Bhutan Future Fund**. This scale of growth will not only sustain the national exchequer but also empower Bhutan to confidently pursue its long-term development vision.

DHI: A Sovereign Institution with Global Relevance

DHI will have evolved into a world-class sovereign economic institution, stewarding over Nu. 3.5 trillion in assets and delivering multi-dimensional returns, financial, strategic, social, and environmental. Its subsidiaries will operate with autonomy and excellence, competing in global markets while remaining aligned to Bhutan's national vision.

DHI will be recognized for:

- > **Portfolio excellence:** High-performing, ESG integrated group companies across energy and resources, infrastructure, finance,

communication, digital services, and advanced manufacturing.

- > **Innovation leadership:** A thriving national innovation ecosystem anchored by Centers of Excellence, FabLabs, and internationally recognized Bhutanese startups.
- > **Investment capability:** A strategic capital platform investing confidently in global markets, digital assets, and future industries.
- > **Institutional integrity:** Transparent governance, strong C-suite leadership, and a professional, purpose-driven civil economy.

The Group Companies: Competitive, Resilient, Future-Ready

By 2035, DHI's subsidiaries will be transformed into efficient, competitive, and socially accountable enterprises, each contributing meaningfully to GDP, employment, and national resilience. Many will have regional or international footprints. Several will be publicly listed. All will be digitally empowered and innovation-enabled.

People and Talent: Bhutanese Leading with Confidence

The 10X growth will translate into relevant and purposeful employment, especially for the youth. DHI will have enabled the emergence of industries of the future from green energy and advanced materials to AI-driven manufacturing and bio-innovation, creating dignified jobs that matter in the global context and resonate with national

values.. The Y-Career Model and strategic HR reforms will have created inclusive, values-driven workplaces where ambition and service go hand in hand.

A Thriving Innovation and Start-up Ecosystem

The 10X journey will have unlocked the creative potential of the Bhutanese youth. Through the Innovation Strategy, DHI will have catalyzed a national innovation ecosystem, one where students, researchers, start-ups, and entrepreneurs co-create solutions with global relevance. From lab to market, ideas will have been nurtured, funded, and scaled in Bhutan. **The MCIF should be towards the journey of a Billion dollar fund and importantly supported by global passionate innovation leaders.**

Agile, Efficient Governance Across the DHI Group

The Portfolio Management Strategy will have transformed the governance model of DHI's subsidiaries. By 2035, DHI will operate with agile, data-driven, and performance-focused governance structures, aligning each entity with global standards of transparency, competitiveness, and sustainability while retaining Bhutan's unique institutional ethos.

A Deep and Diversified Capital Ecosystem

Through the financing strategy, DHI will have played a foundational role in strengthening Bhutan's capital markets, broadening financial instruments, and unlocking new access routes

to global capital. Partnerships with multilateral institutions, sovereign investors, and private capital will have anchored a robust Financial Institution & Development (FID) ecosystem.

A Future-Focused Science and Technology Strategy

By 2035, DHI will be guided by a national science and technology strategy designed for relevance in the 21st century. From AI and quantum computing to biotech and climate tech, DHI will have established foresight-led investment frameworks that continuously position Bhutan at the frontier of emerging industries.

Legacy for the Nation

Finally by 2035, the success of the 10X Roadmap will not be measured by numbers alone, but by the transformation of Bhutan's institutional confidence, economic depth, and global relevance. It will be a decade that redefined possibilities not just for DHI, but also for the people of Bhutan.

Call to Action

Building the Future, Together

The 10X Roadmap is a shared national ambition. It calls upon each of us, within DHI, across our Group companies, across government and society to rise to the occasion and help build a stronger, smarter, and more sovereign Bhutan.

We are entering a decisive decade. One that will define not only the future of our economy, but the legacy of our generation. The choices we make, the risks we embrace, the institutions we reform, and the ideas we scale, these will determine whether Bhutan can thrive in a fast-moving, complex world.

This journey is bold by design. It will challenge our assumptions, stretch our capabilities, and demand unprecedented collaboration. But we do not walk alone. We walk together as stewards of public trust, custodians of a sovereign future, and champions of intergenerational wellbeing. So let us act with clarity, courage, and commitment.

Let us make the next decade the moment Bhutan redefined what is possible.

The future is not something we inherit. It is something we build. Together.



The Road Ahead

By 2035, the vision for DHI is clear and ambitious: achieving a revenue milestone of Nu. 700 billion, establishing a Nu. 30 billion Bhutan Future Fund, and realizing a tenfold increase in assets under management. DHI will be at the forefront of driving national infrastructure development, advancing transportation systems, and pioneering next-generation industries. Through sustained investment in research and development, innovation will become the cornerstone of Bhutan's economy. This bold vision embodies a commitment to economic resilience, sustainable growth, and lasting value creation for the nation and its people.





DIVERSIFICATION
LEADERSHIP **APPLIED**
DATA ECONOMY **RESEARCH**
EMERGING TECH CENTERS OF EXCELLENCE
CRITICAL MINERALS PORTFOLIO TRANSPARENCY
DIGITAL INVESTMENTS **FUTURE**
CAPITAL SOURCING **ADAPTABILITY**
START-UPS **STRATEGIC ENABLERS** HUMAN CENTRIC
SOLAR POWER CULTURE OF EXCELLENCE OPERATIONAL WORKPLACE
GREEN ENERGY EFFICIENCY HYDROPOWER
ECONOMIC TRANSFORMATION
10X JOURNEY
INFRASTRUCTURE **RESILIENCE** RISK DIVERSIFICATION
GLOBAL SECURITY INNOVATION
IMPACT BASED TARGETS **ACCESS TO**
ECOSYSTEM HUMAN CAPITAL **FINANCE**
QUANTUM STRATEGIC ETHICS ENERGY & RESOURCES
NEXT CORPORATE GOVERNANCE
GENTECH MINES & MINERALS GMC