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Ã¢â?¬Å?NEOM is fundamentally reshaping health by placing a strong emphasis on personalised careÃ¢â?¬Â•

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The core of a holistic health reform lies in the integration of emerging cutting-edge technologies into personalised care, emphasising interdisciplinary approaches. To fulfil the burgeoning healthcare requirement, Saudi Arabia is investing $500 billion to build an integrated megaproject region, NEOM, to create a human-centric care model through innovative systems, policies and infrastructure marvels. NEOM is forging to become a global benchmark for innovative technology, research, and education designing advanced treatments and comprehensive care. NEOM's holistic human-centred approach simplifies medical specialisations and gives individuals easy access to their medical profiles. Dr Mahmoud Alyamany, Head of NEOM Health, Wellbeing Sector elaborated on the futuristic health model during his recent visit to Singapore over Ã¢â?¬Ë?Discover NEOM' global tour.



What are Saudi Arabia’s strategic objectives to establish a NEOM megaproject? What are the infrastructural marvels and entrepreneurial opportunities the project will entail into the healthcare sphere?

NEOM is a region of Saudi Arabia being built from the ground up to redefine human life, by incorporating holistic, technologically advanced, and sustainable design to create a thriving, cohesive society. These touchpoints are what we are set to establish in health here at NEOM.

At NEOM, preventative and inclusive care is a matrix by which digital health technologies, individual-centric unique care systems, and collaboration with the individual themselves work in harmony to achieve ultimate health. In terms of infrastructure, Digital Twinning is a system we discussed at “Discover NEOM” – it is our personalised proactive preventative

health system that will assess risk recognition and prevention of health risks in an individual, unifying the health records for all NEOM residents which better enables continuity of care and predictive insights. Additionally, entrepreneurial opportunities in terms of moving the world of digital health delivery and preventative care forward, will be fully supported. Preventative and inclusive care delivery begins at the provider level, so we will be training health providers thoroughly on the unique strategies to provide value-based individualised care.

Could you share investment made for the health sector and the underlying rationale?

We are currently building and equipping state-of-the-art research parks adjacent to the quaternary hospital and NEOM-U to provide a space for clinical practitioners to practise cutting edge research and participate in biotech, biosimilar innovations, and clinical trials. Investment in research and future-thinking is a step towards establishing a better model of holistic care in NEOM. These facilities will serve as the infrastructure for which internationally acclaimed leaders in the health field can develop new, innovative care techniques, treatments, and more. NEOM's vision will come to life through our focus on:

- **Providing a comprehensive experience throughout the entire care process**: NEOM's health ecosystem will offer holistic care and high-tech technologies to integrate health into life, ensuring seamless integration across the care continuum
- **Supporting individual empowerment and proactive prevention:** NEOM puts prevention at the forefront, giving individuals control over their health and well-being while offering leading care for those where needed.
- **Designing a digital-first ecosystem that's available 24/7**: Powered by high-end technologies, Dr. NEOM system will connect residents to virtual health professionals for real-time guidance and assessments while offering "digital twins" (holographic images) for them to track their own health.
- **Spearheading genetics as the future of personalised care**: Driven by AI and data science, NEOM's high-end health system will use biotechnology like genetics assessments to create advanced prevention and care models.

As an international community of innovators, entrepreneurs and scientists, how is NEOM aiding in commercialising innovations?

Commercialising innovation is pivotal to our vision. NEOM isn't just a place where innovations are born; it's where they're nurtured, refined, and introduced to the world, creating value for all stakeholders involved. Excellent global connectivity and strategic location are our explicit and compelling value propositions. With convenient connectivity between Asia, Europe, and Africa, NEOM lies at the intersection of three continents. Further, we are pioneering new standards in regulation for both people and business. NEOM has 14 economic engines that focus on sectors and industries of the future - including health, wellness and biotech.

NEOM will also focus on the following areas when investing in Health, Wellbeing, and Biotech: Personalised Health System Development, Evidence-Based Practice and Data Management, Innovative Health Facilities and Services, Health System Design and individual Engagement, Health Provider Training, and Research and Innovation.

In NEOM's digital-first health ecosystem Dr. NEOM harnesses technology to address precision health. A virtual physician will individuals patients in real-time and residents will be able to track their own health through digital twins. The NEOM system will redefine precision health with advanced technology. At its core, the system ensures that individuals have constant, streamlined access to care. With real-time access to virtual health professionals, turnaround times can be significantly reduced.

How does NEOM revolutionise health delivery with a personalised treatment regimen? H**ow does NEOM redefine engagement and care models?**

The development of a futuristic health system and top-of-the-line data aggregation systems will be the catalyst for providing elite preventative care and identifying innovative therapies. Personal prevention and health management regimens will include omnipresent health sensors and then interventions integrated into residents' day-to-day lives based on unique individual needs and preferences. We will be set to practise cutting-edge research and participate in biotech, biosimilar innovations, and clinical trials.

NEOM is fundamentally reshaping health by placing a strong emphasis on personalised care. Some of the highlights would be-

Digital Twins & Advanced Data: Using Digital Twins for diagnosis we combine insights from Whole Genome Sequencing (WGS), omics data, live health metrics, and comprehensive medical records to create a Personalised Proactive Preventative Health System. Health interventions and treatments can be tailored with precision based on a dynamic, real-time health profile.

Intelligent Systems: Using supercomputing, artificial intelligence, and augmented intelligence, we're able to identify risks, predict potential health issues, and offer preventative measures tailored to each individual.

Continuous Enhancement: By implementing continuous simulation and Digital Twinning of health processes, we're optimising individuals' experiences and ensuring that assessments and interventions are always based on the most recent and relevant data.

As a hub for innovation how will NEOM be fostering a burgeoning bioscience entrepreneurial landscape?

Our strategy is to foster a diverse and global community at NEOM, with over 3,300 professionals from 95 countries already championing our vision. NEOM is laying the groundwork for a thriving bioscience entrepreneurial ecosystem through:

Research and Development Hubs: Our state-of-the-art research parks planned to be adjacent to centres of excellence and health facilities. These spaces will provide a conducive environment for clinical practitioners to engage in cutting-edge research, fostering biotech advancements and clinical trials.

Collaborative Education: Our collaboration with NEOM-U aims to produce a new breed of health professionals adept in fields ranging from data science to system engineering. This cross-disciplinary approach ensures that budding entrepreneurs are well-equipped to lead in the bioscience sector. We see collaboration across multiple areas, namely: Collaborative Research & Development, Educational Exchanges & Shared Learning, Business Opportunities and Medical Tourism.

Support for Innovation: Through platforms like "Holo-Medicine Training Centers" and "innovative health insurance models" that reward positive health behaviours, NEOM is constantly pushing the boundaries, inviting entrepreneurs to envision and create the future.

The curating of individualised digital health protocols for all residents of NEOM will allow us to compile a robust set of data that will lead to evidence-based practices and techniques. In addition, this model develops training centres to improve the technical capabilities of health professionals in terms of biotechnology specialisation and innovation. Global leaders from multidisciplinary fields can collaborate seamlessly through specialised clinical trials conducted at NEOM research facilities.

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