#### **TECHNOLOGY AND INNOVATION**

## INVENTING THE FUTURE

**Adopting future-proof** technologies and optimizing network rollout is a key pillar of Mobily's corporate strategy, with the aim of improving customer experience and return on investment. In line with this vision, the Company maintains a robust digital technology strategy, encapsulated in the 4Ds framework: Digital Infrastructure, **Digital Operations, Digital Customer Engagement and** 

The implementation of the 4Ds framework in 2024 allowed Mobily to significantly enhance its technological agility, elevate customer experiences, generate new revenue streams and boost network efficiency. State-of-the-art technological and digital infrastructure provided robust support to customer-facing segments, including the Consumer Unit, Business Unit and Wholesale Unit. Investments in cutting-edge technology and innovation across all aspects of the business and partnerships with global technology leaders ensured the delivery of superior customer experiences and drove sustainable growth.

Mobily continued to set the industry standard throughout the year by advancing its customer experience and digital transformation initiatives. These efforts garnered significant recognition, earning Mobily the Best Consumer Experience

Award from the Communications, Space and Technology Commission (CST) for the third consecutive year and the Best Infrastructure and Service Innovation in FTTH Award from the SAMENA Telecommunications Council.

#### **Expanding Network Coverage**

Mobily significantly expanded its 5G coverage across the Kingdom in 2024 by adding 807 new 5G sites, with a focus on major cities. This expansion increased 5G population coverage in Saudi Arabia's 7 main cities to over 87%. Overall, Mobily extended its network coverage to serve 61 cities through more than 6,600 5G sites, ensuring enhanced connectivity for a broader audience.

Expanded 5G coverage across the Kingdom in 2024 by adding

new 5G sites

Achieved 100% virtualization for the Ericsson PS

core network

The Company's expansion of its 5G network was a significant contributor to the success of the Hajj season this year, as it worked proactively with the CST to respond to a dramatic increase in demand from pilgrims. Across the Kingdom, call success rates surpassed an impressive 99% with over 44.8 million voice calls made in Makkah and the Holy Sites on Eid Al-Adha alone. Data consumption also reached record highs, with a staggering 5.8 petabytes used – double the global average per capita usage. Mobily played an important role in meeting this demand by increasing its 5G towers across Makkah, Madinah and the Holy Sites. It also led the market during this period with its Excellent Consistent Quality score reaching a 4-day moving average 57% and download speeds remaining consistent at 41.1 Mbps.

Enhanced Mobile Broadband (eMBB) stood out as the dominant use case for 5G in 2024, supporting impressively high speeds for users across a range of services such as internet browsing and downloads, which improved the overall customer experience. Fixed wireless access, complementing

Fiber-to-the-Home (FTTH) offerings, continued to be a major eMBB service, and is projected to grow in the coming years.

Other key accomplishments in network expansion included 816 4G expansions, as well as the addition of 264 new sites. Mobily also fiberized 174 sites and expanded the IP Multimedia Subsystem (IMS) network with a new site in the east to support resilience and enhance customer experience.

Furthermore, the Company made progress in the deployment of 451 FTTH zip codes across 25 cities. Notably, Mobily was awarded 2 major Wireless Broadband (WBB) projects to enhance wireless network coverage in rural areas. The Company also achieved a 99% communication coverage rate and 97% broadband internet coverage rate on Saudi Arabia's primary and secondary roads, as reported by CST and the Ministry of Transport. These accomplishments underscore Mobily's commitment to enhancing connectivity across the Kingdom, ensuring reliable communication services for travelers and residents alike.



### **Improving Network Speed and Latency**

Solidifying its position as a leader in the telecommunications sector, Mobily made significant strides in improving the speed and latency of its network. According to Ookla, Mobily's median speed increased by 27.5%, demonstrating the Company's commitment to delivering faster and more reliable services. Mobily ranked #1 in median download, upload speed, and latency in both Q3 and Q4 of 2024, boasting a minimum latency of approximately 24mms.

The Q3 2024 OpenSignal report highlighted Mobily's leadership position in videos, games and download speed experience. Mobily was also recognized as a 5G Global Rising Star for its impressive improvement in users' experience. Additionally, Mobily ranked 1st in download speed for popular gaming platforms (PlayStation, Xbox, and Steam), and in latency for 11 out of 18 games in the Q3 2024 Game Mode report from the CST. These achievements underscore Mobily's dedication to enhancing network performance and providing superior user experiences.

### TECHNOLOGY AND INNOVATION (CONTINUED)

To support its ambitious expansion plans, Mobily acquired new International Mobile Telecommunications (IMT) spectrum in the 700 MHz and 3800 MHz bands in 2024, in a strategic decision to support the future of 5G. The acquired spectrum in the 3800 MHz band will support Mobily's future network traffic growth and emerging use cases, driving higher per-subscriber consumption over the years. Once implemented, the 700 MHz band will enhance indoor 5G coverage and improve coverage for a larger number of subscribers, making it one of the ecosystem's best low-band frequencies.

## Pioneering Technological Excellence

Mobily deployed and upgraded a range of technologies across its operations, ensuring a competitive edge and setting the Company up for continued growth. The Company built an on-premises embedded SIM (eSIM) platform to support consumer, machine-to-machine and wholesale services. It also obtained the Security Accreditation Scheme for Subscription Management (GSMA) certificate.

A centralized portal integrated with the Network Control Center was established to detect congested links, providing a user-friendly interface for monitoring and rerouting traffic data between border gateway protocol links. Mobily also launched voice over long-term evolution (VoLTE) inbound roaming and enhanced the roaming messaging solution via the LTE/VoLTE wireless resource management system.

Additionally, the Company unified the signaling platform, deployed the first phase of Wideband Broadband (WBB1).

Mobily also conducted a 5G roaming capability check, introduced Segment Routing v6 to enhance network routing intelligence and explored the capabilities of Open Radio Access Network (O-RAN). Furthermore, the Company has included virtual reality and augmented reality as part of its technology strategy, completing proofs of concept with various use cases.

Mobily conducted testing for the local packet gateway concept with Ericsson, introduced a dedicated mobile core for high-reliability IoT customers, and developed new solutions for business customers with IoT requirements. The Company supported connected car solutions with eSIM and VoLTE readiness. It also continued to enhance the traffic exchange matrix path and traffic manipulation to offload high latency links and support carrier exchange.

# Accelerating Artificial Intelligence

Mobily is committed to pioneering advancements in artificial intelligence (AI) to deliver unparalleled network performance and customer satisfaction. The Company has been leveraging AI for several years, and in 2024, it continued to enhance AI utilization across its network using advanced tools such as cognitive software and digital twin. By incorporating customer experience management software and cognitive

self-organizing networks, Mobily used Al to optimize its network and deliver superior customer experiences.

During the year, Mobily further implemented its digital twin technology, initially introduced in 2023, to create a virtual model of its network infrastructure, optimizing network coverage and enhancing customer experiences. The phased activation of this technology this year aimed to expand its geographic scope and enhance its functionality using Al platforms. These efforts focused on improving the performance of existing applications and introducing new, impactful solutions to elevate the quality of Mobily's services.

# Advancements in Cloud Computing

Mobily made significant strides in cloud computing during 2024, achieving a series of milestones that demonstrate the Company's commitment to innovation and efficiency. It achieved 100% virtualization for the Ericsson PS core network and increased internet gateway (IGW) internet functions cloudification from 60% to 80%. Additionally, Mobily onboarded Ericsson PS on Cisco Cloud, with an ongoing proof of concept to enhance its cloud capabilities.

Increased IGW internet functions cloudification from 60% to 80%

In addition, efforts to upgrade Mobily's cloud architecture from virtual machine-based to containerized-based architecture in 2 new Ericsson sites have resulted in notable improvements. Mobily also reduced the hardware footprint of the bulk messaging system by 66%, showcasing its focus on optimizing resources and enhancing performance.

### **Leveraging the Power of Partnerships**

At LEAP 2024, Mobily demonstrated its commitment to driving digital transformation and innovation through a series of significant MoUs with global and local leaders in technology and digital solutions.

Notably, Mobily partnered with Tencent Cloud to launch a groundbreaking enterprise cloud platform, supporting the Kingdom's goal of becoming a global business and entertainment hub. Under the announced "Go Saudi" program, the platform combines Mobily's network infrastructure with Tencent Cloud's cutting-edge technologies like Al, big data and immersive convergence. It delivers integrated IT services, including computing, storage, database, network and security solutions, while prioritizing user privacy and regulatory compliance to ensure a trusted cloud environment.

Mobily also announced that it has extended its managed services partnership with Ericsson for an additional 3 years, reinforcing its commitment to leveraging next-generation technologies to drive digital transformation. The partnership will focus on integrating Al, machine learning and automation across Mobily's network to enable intelligent, data-driven operations. These advancements aim to optimize processes, enhance service and operational metrics and reduce time-to-market, ensuring that Mobily continues to deliver high-quality services efficiently.

Furthermore, Mobily strengthened its strategic collaboration with AWS to advance cloud computing services within Saudi Arabia. By leveraging AWS's robust cloud infrastructure and Mobily's extensive telecommunications network, the Company aims to deliver secure, scalable and efficient cloud solutions to meet the growing demands of various sectors, thereby contributing to the Kingdom's Vision 2030 objectives.

Mobily also announced its collaboration with Ejada Systems Ltd. to implement the region's first Oracle Fusion solution, advancing its digital transformation journey. The project introduced a comprehensive Oracle ERP system for human capital, supply chain and finance management, centralizing operations and enhancing real-time data access. By migrating to a cloud-based platform, Mobily improved efficiency, scalability and adaptability to evolving market demands, reinforcing its leadership in telecommunications and its commitment to innovation, aligned with the Kingdom's broader technological development goals.

### **→** Technological Developments in 2025

Mobily has outlined a series of ambitious technological innovation objectives and initiatives for the year ahead, with the aim of driving continued growth and enhancing service quality. Key initiatives include building new fiber optics for border crossing and deploying WBB1 and WBB2. The Company will also continue the deployment of 451 FTTH zip codes across 25 cities, introduce new user plane functions at remote sites to support edge computing and monetize domain name system functionality.

Mobily aims to ensure network readiness for a new mobile virtual network enabler by introducing 2 new regional IGW sites and implementing 2 automation capabilities in the IGW domain. The Company will advance broadcast messaging for business customers and expand its 5G network. In 2025, Mobily is expected to explore 5G private networks and network slicing with business customers from various industries, addressing the diverse requirements of these use cases compared to eMBB services.

Further extending network coverage, Mobily plans to re-farm spectrum, expand 4G and increase VoLTE traffic share.

These strategic initiatives highlight Mobily's commitment to pioneering technological advancements and delivering superior customer experiences, solidifying its leadership position in the telecommunications sector.

88