

## OPPORTUNITY #25

WHAT IF DEVICES DISAPPEARED?

# INTERNET OF HUMANS

Connection to the virtual world  
for all, without the need for devices



### WHY IT MATTERS TODAY

By 2023 over 70% of the global population will have mobile connectivity<sup>246</sup> and by 2024 each person will have an average of 3.6 networked devices<sup>247</sup> and around 1.7 billion of devices globally will be active in AR use.<sup>248</sup>

Also by 2024 around one-quarter of the US population, some 110 million, is expected to be using AR.<sup>249</sup> Studies show that AR and VR could add as much as \$4 billion to the UAE economy by 2030<sup>250</sup> and that by 2025 60% of the Gen Z and Millennial population in Saudi Arabia will be frequent AR users.<sup>251</sup>

A convergence is anticipated of AR and VR, allowing us to see each other and the real world at the same time as virtual content.<sup>252</sup> This shift is referred to as 'from hands-on to heads-up'<sup>253</sup> connectivity.

### SECTORS

AGRICULTURE & FOOD · EDUCATION · FINANCIAL SERVICES & INVESTORS · HEALTH & HEALTHCARE  
· INFORMATION & COMMUNICATION TECHNOLOGY · MANUFACTURING · MEDIA & ENTERTAINMENT



## THE OPPORTUNITY TOMORROW

The virtual and augmented experiences created by AR/VR could become available without headsets or other hardware if linked to powerful, microscopic biocompatible implants in the brain.

Today's wired and wireless networks are expected to make way for connectivity technologies such as charged air particles that can interface directly with advanced organic brain implants to enable deviceless, always-on connectivity. An estimated 50,000 people worldwide already have implanted chips<sup>254</sup> for purposes including e-tickets and club memberships, and the value of the bioimplant market is reported to exceed \$100 billion, with anticipated growth of 8.6% per year to 2023.<sup>255</sup>

Freed from devices but with greater connectivity, people can benefit from easier access to essential and more advanced services that improve their productivity and well-being.

Anyone could access immersive content from any other person or company: private individuals uploading their personal imaginations to public spaces; companies offering tours of their latest products; governments broadcasting information about upcoming events for citizens to experience first-hand.

Widespread use of such technology for immersive experiences would require international protocols and standards for the use of implants and AR/VR content.

## BENEFITS

New markets and possibilities in both virtual and physical worlds can enable individuals, companies and governments to exchange information, immersive content and experiences.

## RISKS

Risks include fragmenting societies as online engagement replaces face-to-face contact. The risk of malicious harm is high as individual and systemic vulnerability to cyber threats rises as more of life becomes reliant on deviceless connectivity, creating the need for higher levels of cyber security for all.

## UNINTENDED CONSEQUENCES

These all-digital realms becoming always-on 'echo-realities'.