

## Summary

# Executive summary

The wearable form factor enables hands-free operation and allows the user to multitask and get immediate access to information. It also enables continuous recording of useful data such as body metrics, location and environmental data. Berg Insight's definition of a connected wearable is a device meant to be worn by the user and which incorporates data logging and some sort of wireless connectivity. Various forms of connected wearables have for long been used in professional markets to improve work processes and increase efficiency. The high smartphone adoption, cloud services, miniaturised hardware, sensor technology and low power wireless connectivity enabled wearables to emerge as a new promising consumer segment some years ago. Today, activity trackers and connected fitness devices as well as smartwatches are leading the wearable technology industry in terms of shipment volume and market maturity. However, the number of applications for wearable technology is vast and a plethora of device categories such as smart glasses, head-mounted displays, medical devices, wrist-worn computers and scanners, connected clothes and garments, gesture control devices and many more exist. These wearable devices target various market segments including infotainment & lifestyle, fitness & wellness, people monitoring & safety, medical & healthcare, enterprise & industrial and government & military.

The market for connected wearables has entered a strong growth phase that will last for many years to come. Berg Insight estimates that shipments of connected wearables reached 116.8 million units in 2018. The market is expected to grow at a CAGR of 15.4 percent to reach annual shipments of 238.5 million in 2023. Wearable activity trackers and connected fitness devices is the leading category, currently representing a majority of the shipments. Decreasing prices and extended capabilities will enable shipments in the segment to reach 88.9 million units in 2023. Smartwatches have also started to reach significant volumes. The market is led by Apple which accounted for close to half of the 45.5 million devices shipped in 2018. Smartwatches are increasingly incorporating activity tracking features as well as more advanced sensors for medical applications. Growing at a CAGR of 20.9 percent, the market

segment is predicted to become the largest wearables category with shipments of 117.7 million devices in 2023. Sales of smart glasses and head-mounted displays have grown rapidly in recent years. During 2018, an estimated 1.5 million devices were shipped. Around 75 percent of these devices were VR/AR headsets to be used for gaming and entertainment purposes, while the remaining devices were mainly used by enterprises and the military. The category is projected to reach annual shipments of 11.9 million devices in 2023. Annual shipments of medical and mobile telecare/mPERS devices are forecasted to grow from 1.8 million devices in 2018 to 6.9 million devices in 2023. Finally, annual shipments of wearables not covered by the above product categories are predicted to grow at a CAGR of 34.1 percent from 3.0 million units in 2018 to reach 13.0 million units in 2023. The segment includes wearables such as authentication and gestures devices, smart rings, wrist-worn computers and scanners, smart jewellery and connected prosthetics.

North America is the largest market for connected wearables and accounted for about 44.4 million of the total shipments in 2018. The second largest market is Europe which reached shipments of 38.5 million devices followed by Asia-Pacific with 26.9 million devices. Berg Insight projects that North America will remain the largest regional market in 2023, but its market share will decrease from 38 percent in 2018 to around 33 percent at the end of the forecast period. Asia-Pacific is estimated to account for an increasing share and in 2023 account for 30 percent of the shipments, up from 23 percent in 2018. Emerging markets currently represent a relatively small share of the market. Demand in the Middle East and Africa mainly comes from a few developed countries and wider adoption in the region will be highly dependent on the overall economic development.

Bluetooth will remain the primary connectivity option in consumer centric wearables throughout the forecast period and smartphones will act as the principal hub for remote connectivity. The number of active cellular network connections from wearables is projected to grow from 23.8 million in 2018 to reach 176.8 million connections in 2023. The growth is mainly driven by increasing adoption of cellular connectivity in the smartwatch category. The most common connectivity option for wearable medical devices will be low power NFC technologies and Bluetooth which enable remote connectivity via medical monitoring system hubs. BYOD will have an increasing impact on the connected medical device category, especially for patient-driven models of connected care.