

Wearables in 2020: The Impact of COVID-19

Topic overview for 2020 including the impact of COVID-19

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James Hayward



James Hayward



Principal Analyst

Since joining IDTechEx, James has led IDTechEx's research around markets and enabling technologies for wearable electronics. This has included producing hundreds of interview-based company profiles for companies spanning the entire value chain, and authorship of several IDTechEx reports, including Wearable Technology, Wearable Sensors, E-Textiles and Haptics.

As part of IDTechEx's consulting services, James has worked on custom projects with billion-dollar companies based in the USA, Europe, the Middle East and Asia covering various areas surrounding wearable technology, e-textiles, and related topics. This has included detailed material and component benchmarking, competitive analyses and investment partnership advisory services.

As a speaker, James has given keynote presentations on topics including wearable technology, e-textiles, sensors, haptics and other emerging technology trends at international conferences across Europe and the USA.

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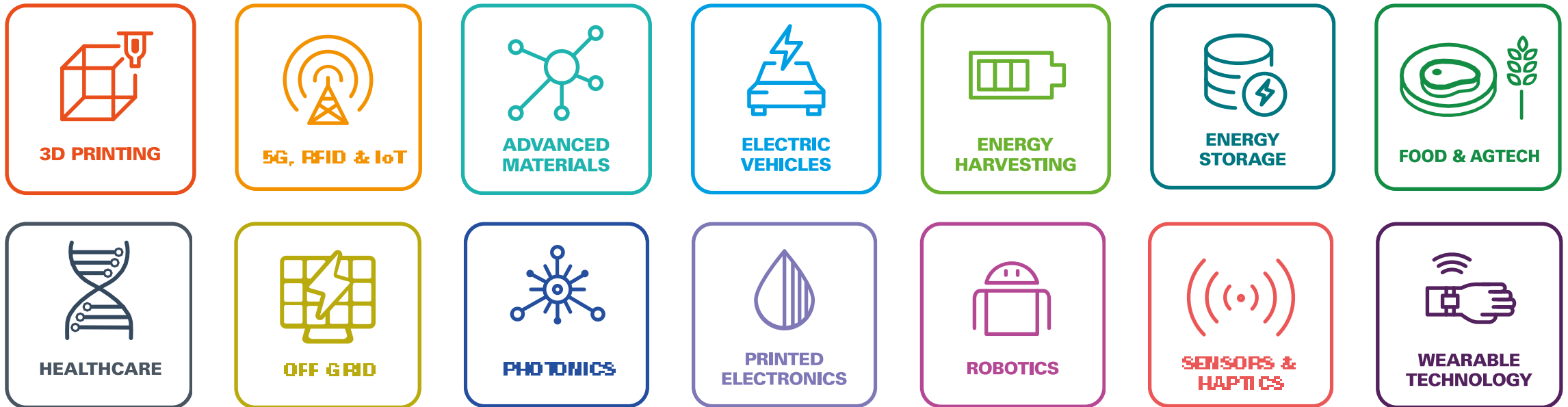
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[James Hayward](#)

IDTechEx provides clarity on technology innovation

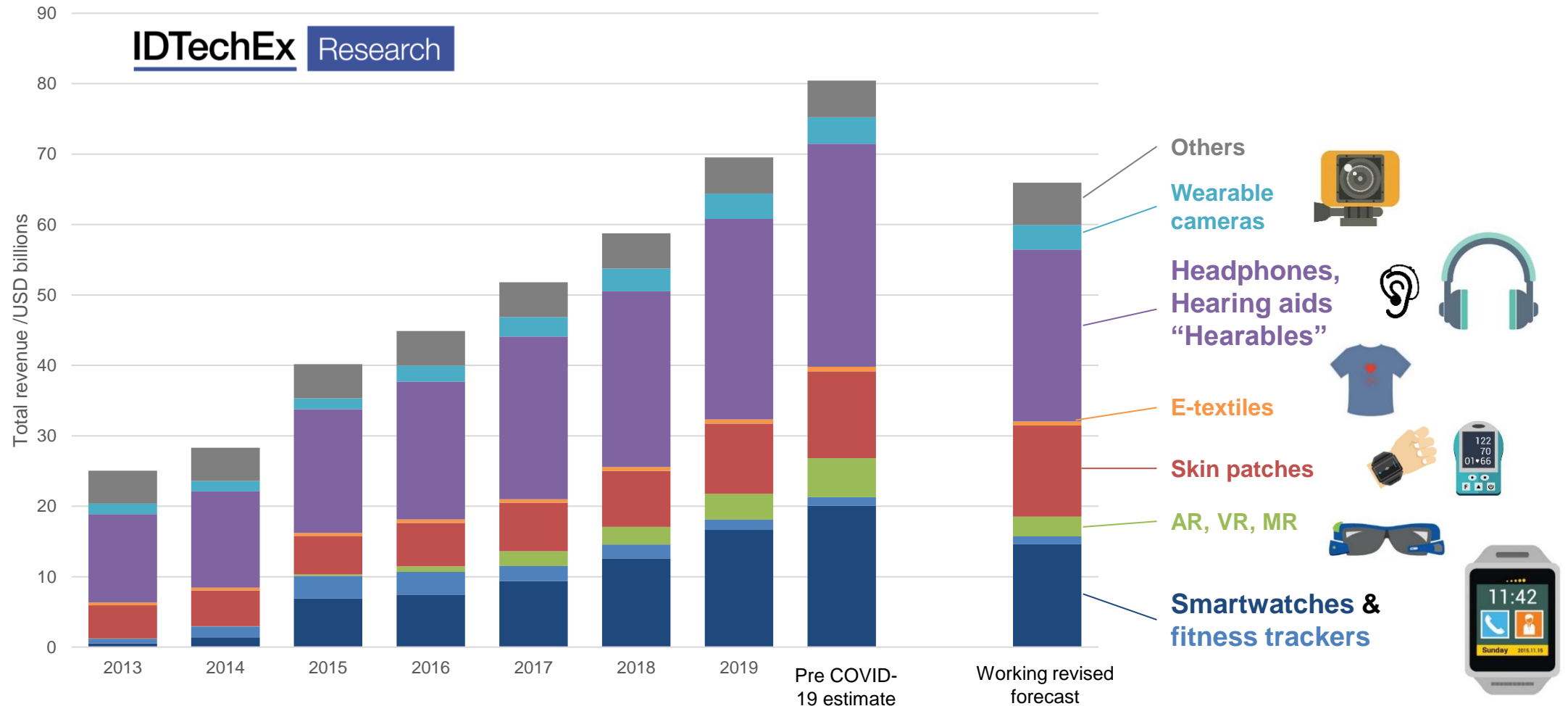
- Technology assessment
- Technology scouting
- Company profiling
- Market sizing
- Market forecasts
- Strategic advice



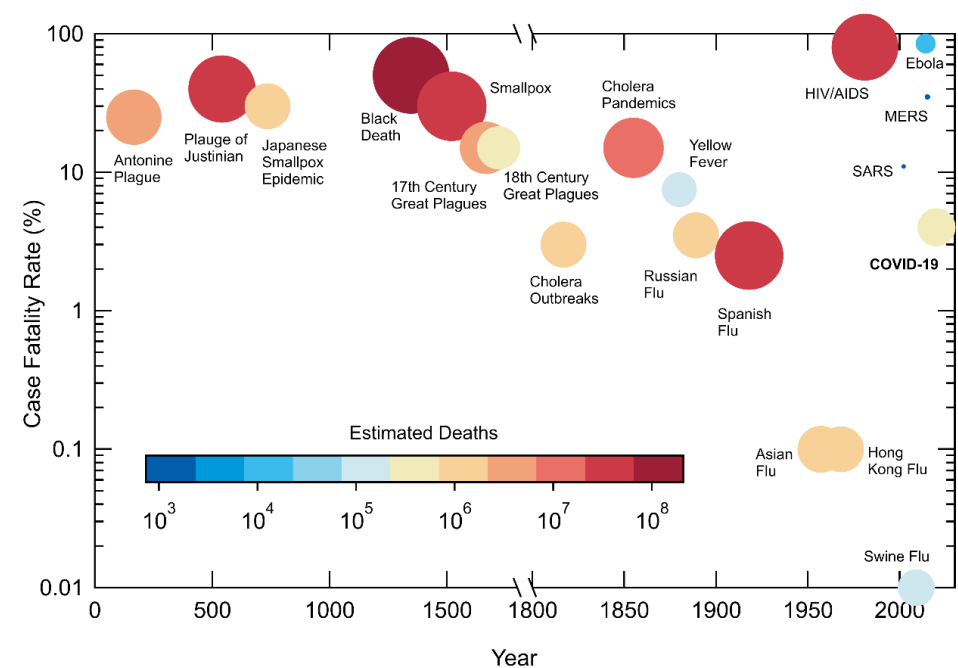
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Wearables: State of the Industry

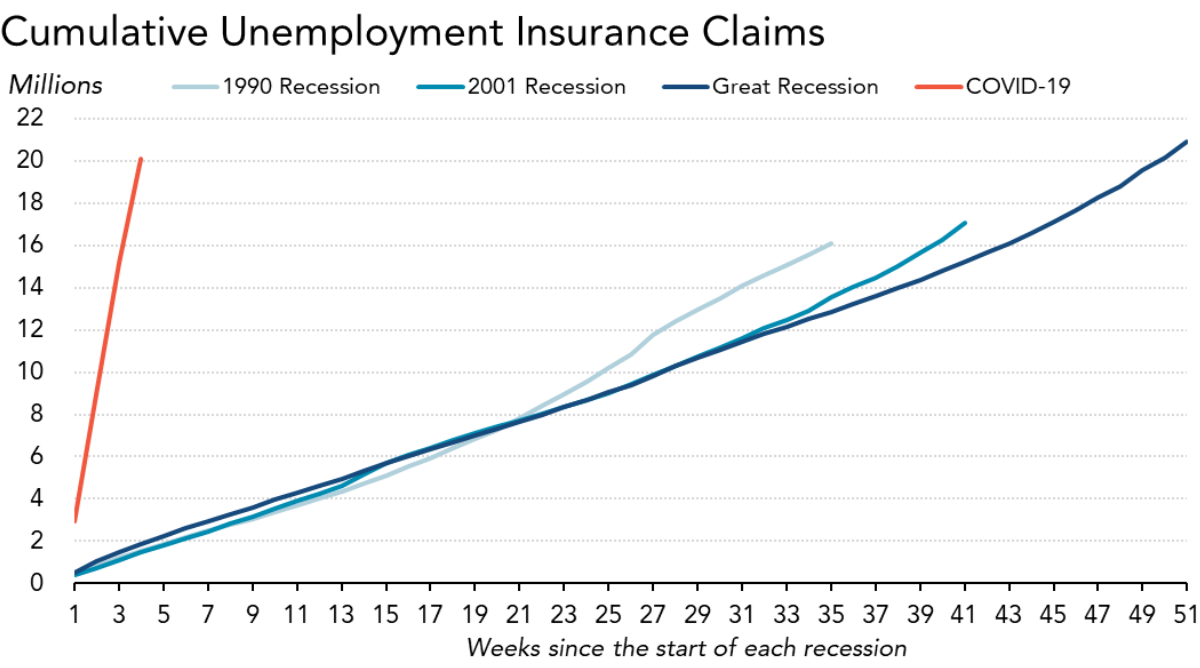
Annual revenue from wearable technology products



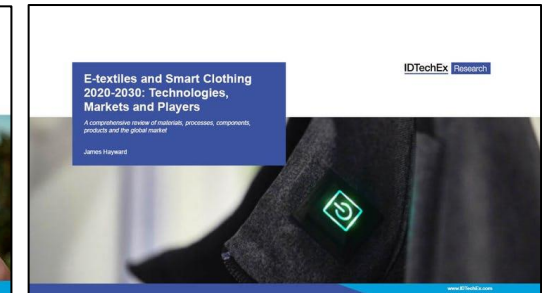
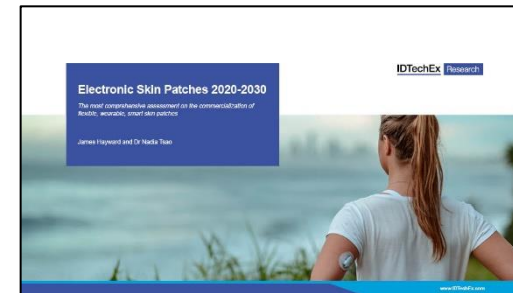
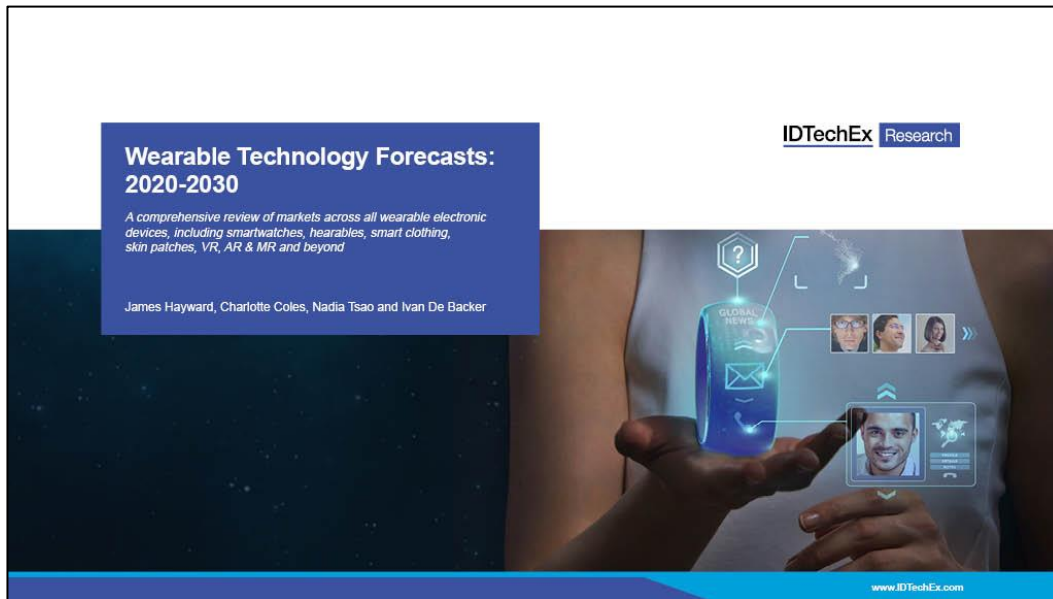
Economic Impact of COVID-19



Pandemics over time
Source: IDTechEx



Source: US Department of Labor, Employment and Training Administration



Wearable Technology Forecasts 2020-2030

Hearables

- Cochlear implants
- Hearing aids
- OTC hearing aids
- True wireless stereo headphones
- Wireless headphones
- High end wired headphones
- Low end wired headphones
- Other hearables

Skin patches

- Holter monitoring
- Event monitoring
- Extended wear Holter monitoring
- Mobile cardiac telemetry
- Other cardiac skin patches
- Insulin pumps
- Continuous glucose monitors
- Pregnancy monitoring
- Other wireless inpatient monitoring
- Other outpatient monitoring
- Smart bandages (wound care)
- Fever monitoring
- Fertility tracking
- Electrical stimulation
- Iontophoresis patches
- Other skin patches

E-textiles

- Smart clothing for biometric monitoring
- Heated clothing
- Illuminated clothing
- Other e-textile apparel

AR, VR, MR

- PC VR
- Standalone VR
- Mobile VR
- VR accessories
- PC AR & MR
- Standalone AR & MR
- AR Accessories

Other wearable product forecasts

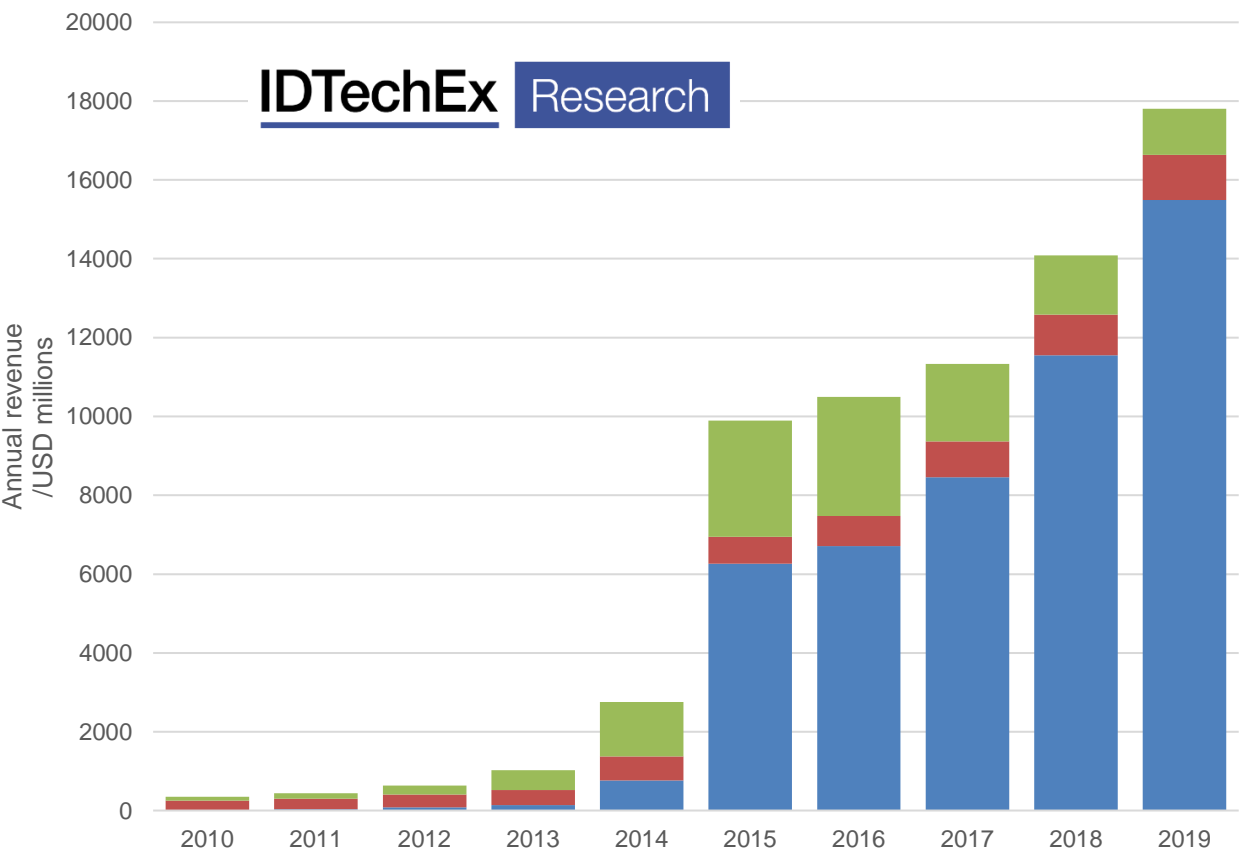
- Smartwatches
- Sports watches
- Activity trackers
- Chest strap
- Smart footwear (simple / sensing)
- Basic electronic watches
- Other infotainment
- Other fitness trackers
- Others
- Wearable cameras (consumer & sports)
- Wearable cameras (law enforcement, professional, etc.)
- Other enterprise devices
- Military wearables
- Smart contact lenses (infotainment / medical)
- Other medical devices

IDTechEx Research

Total = 52 forecast lines
Revenue, pricing & volumes for each

Smartwatches and Fitness Trackers

Wearable Technology products: Revenue



Activity trackers

Shown: Fitbit, Jawbone, Fitbug, Nike (3/4 are no longer sold)
Others: Xiaomi, Huawei, many more



Sports Watches

Shown: Nike+ & Garmin ForeRunner (older)
Others: Garmin, Suunto, Polar, etc.

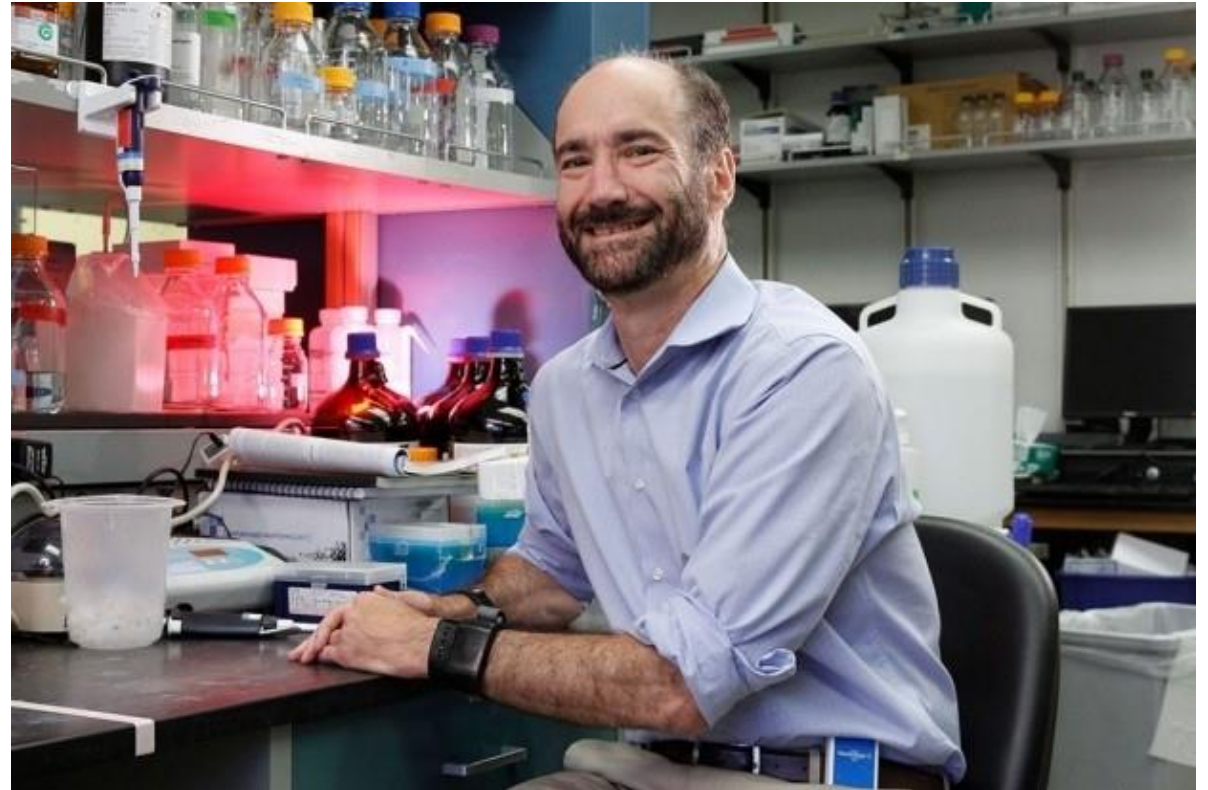


Smartwatches

Shown: Apple Watch, Fitbit Versa
Others: Samsung, Huawei, Xiaomi and others



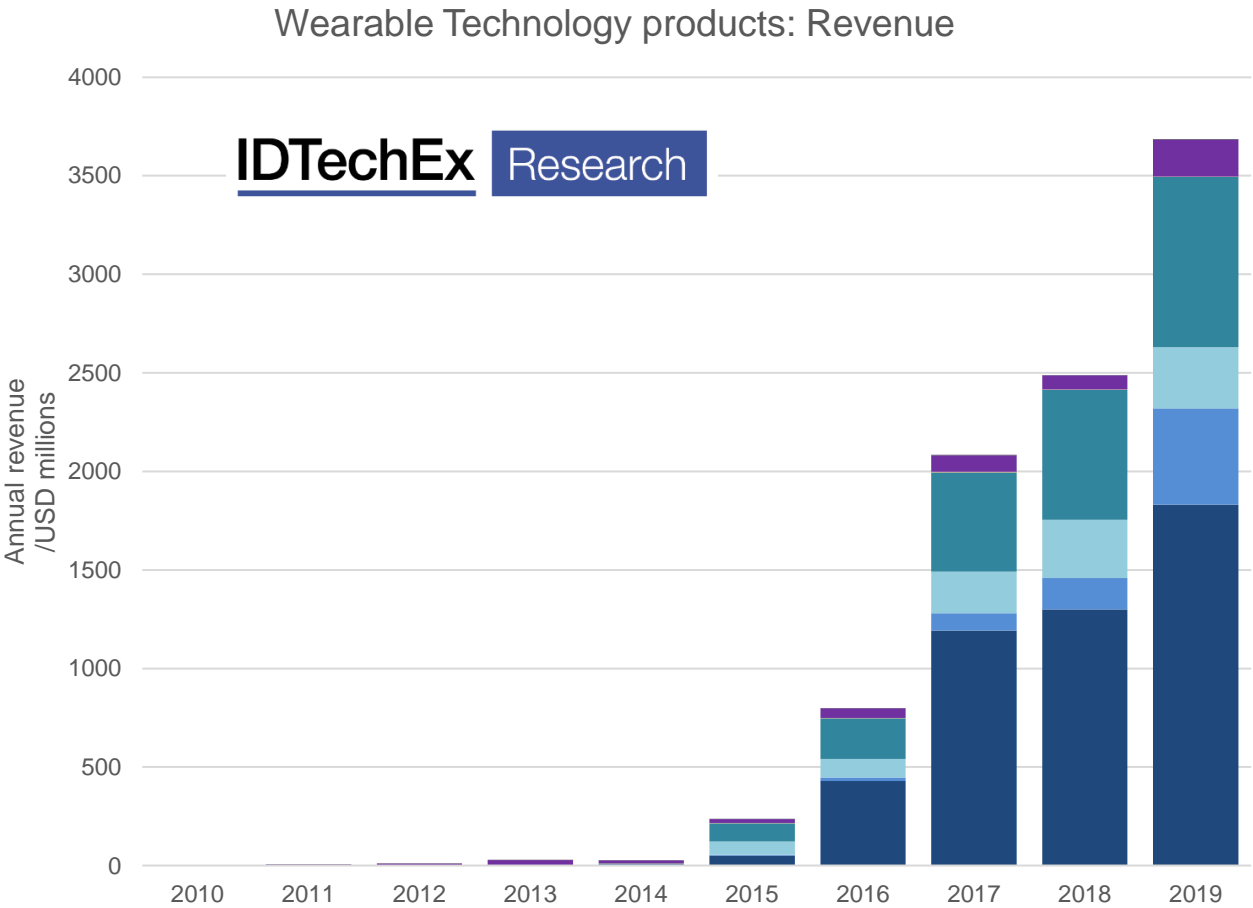
Smartwatches to Track COVID-19 Symptoms



Study looking at smartwatches as a tool to detect and monitor symptoms of COVID-19 is led Michael Snyder, PhD, professor and chair of genetics at the Stanford School of Medicine.

Source: Stanford University

Virtual, Augmented and Mixed Reality



AR/MR

VR



XR in a Time of Pandemic



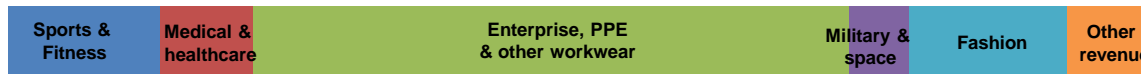
- Case studies showing uptake in use by doctors during active pandemic
- Applications including
 - Medical education & training
 - Telemedicine, including remote surgery
 - Digital therapeutics
- Significant longer term promotion for remote training and operation, assisted by XR devices (beyond just medical)

Electronic Textiles / Smart Clothing

Application validation

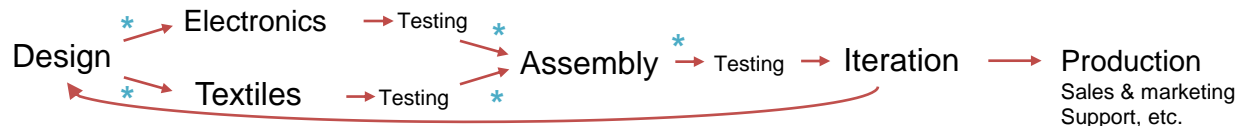
- Sports & fitness
- Healthcare & medical
- Space / military / bespoke
- Fashion / lifestyle
- Outdoor/performance wear
- Other apparel / wellness
- Non-apparel (industrial textiles, bedsheets / carpets / furniture, automotive interiors, etc.)

IDTechEx Research 2019 estimate, ~ \$0.5bn

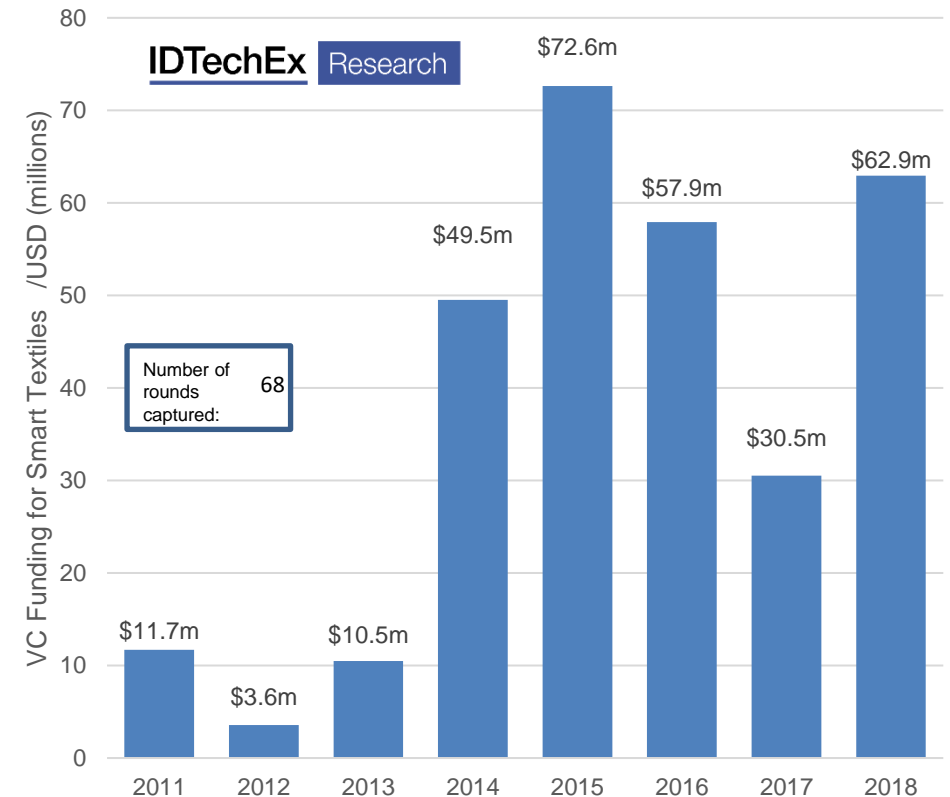


Supply chain maturity

- Inefficiency in early value chain makes profitability more challenging, driving up cost base and price points
- Efficiency is improving, with co-located manufacturing and designs being optimised for easier manufacture



VC funding for E-textiles companies, 2011 - 2018



Source: IDTechEx Research

E-Textile Companies Switching Output to PPE



Electronic Skin Patches

2019 total skin patches revenue:
\$9.9 bn

Cardiac monitoring

Holter & event monitoring, MCT



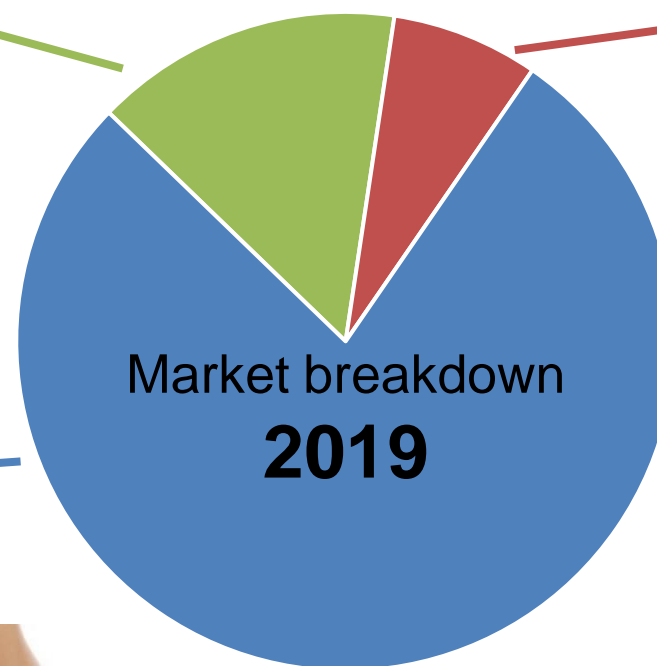
Left to right: iRhythm Zio, BioTel Heart products
Source: iRhythm, BioTelemetry

Diabetes management

CGM and insulin pumps



Left to right: Dexcom G4, Abbott FreeStyle Libre, Medtronic Minimed.
Source: Dexcom, Abbott, Medtronic



Others

- Inpatient monitoring
 - E.g. foetal heart rate during labour
 - Infectious disease ward monitoring
- Outpatient monitoring
 - Many potential categories
- Smart wound care
- Fever monitoring
- Fertility monitoring
- Electrical stimulation
- Iontophoresis
- Others

Remote Patient Monitoring – Skin Patch Options



Remote Patient Monitoring – Skin Patch Options



VIVALNK

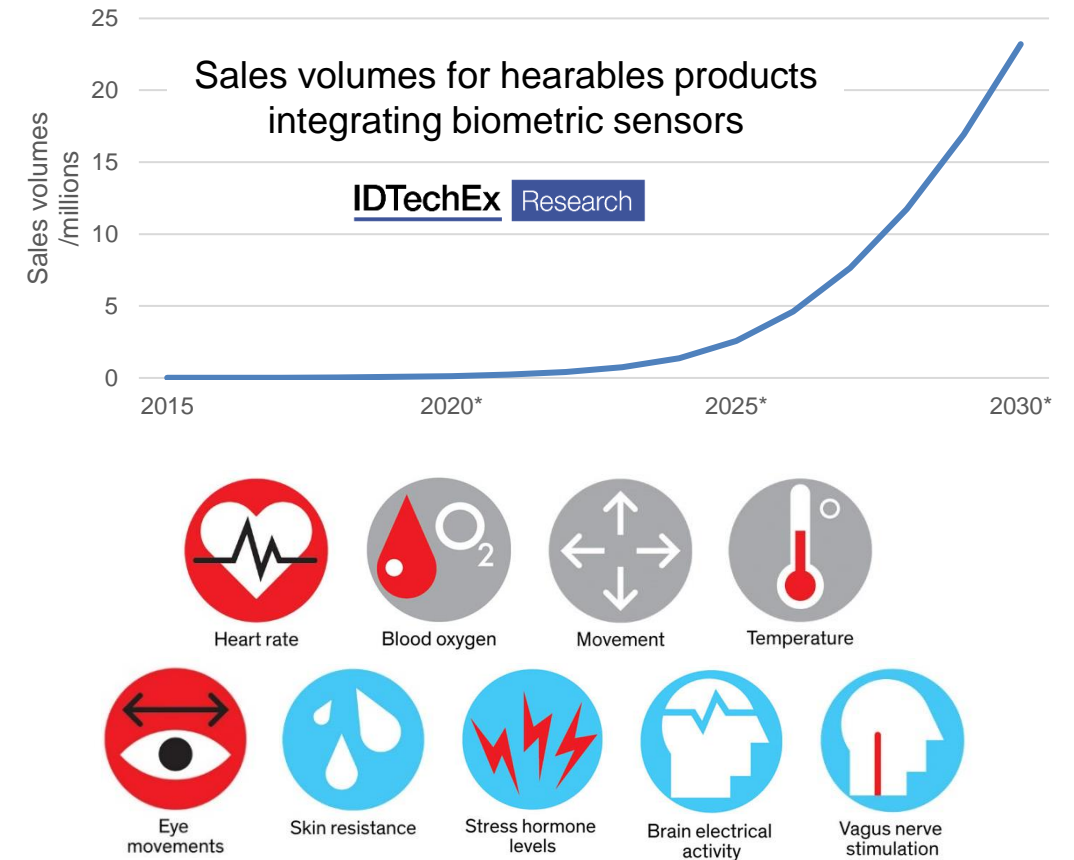
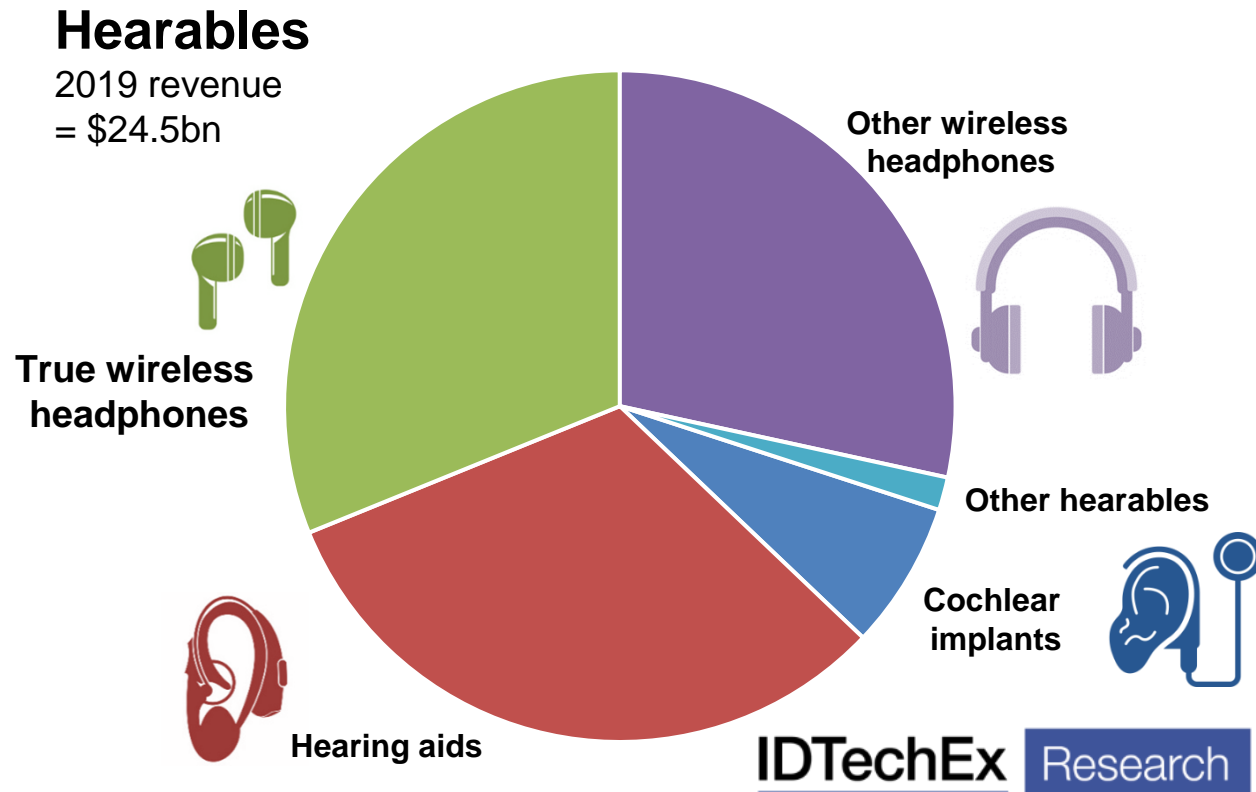
PHILIPS



BioTelemetry[™]
inc

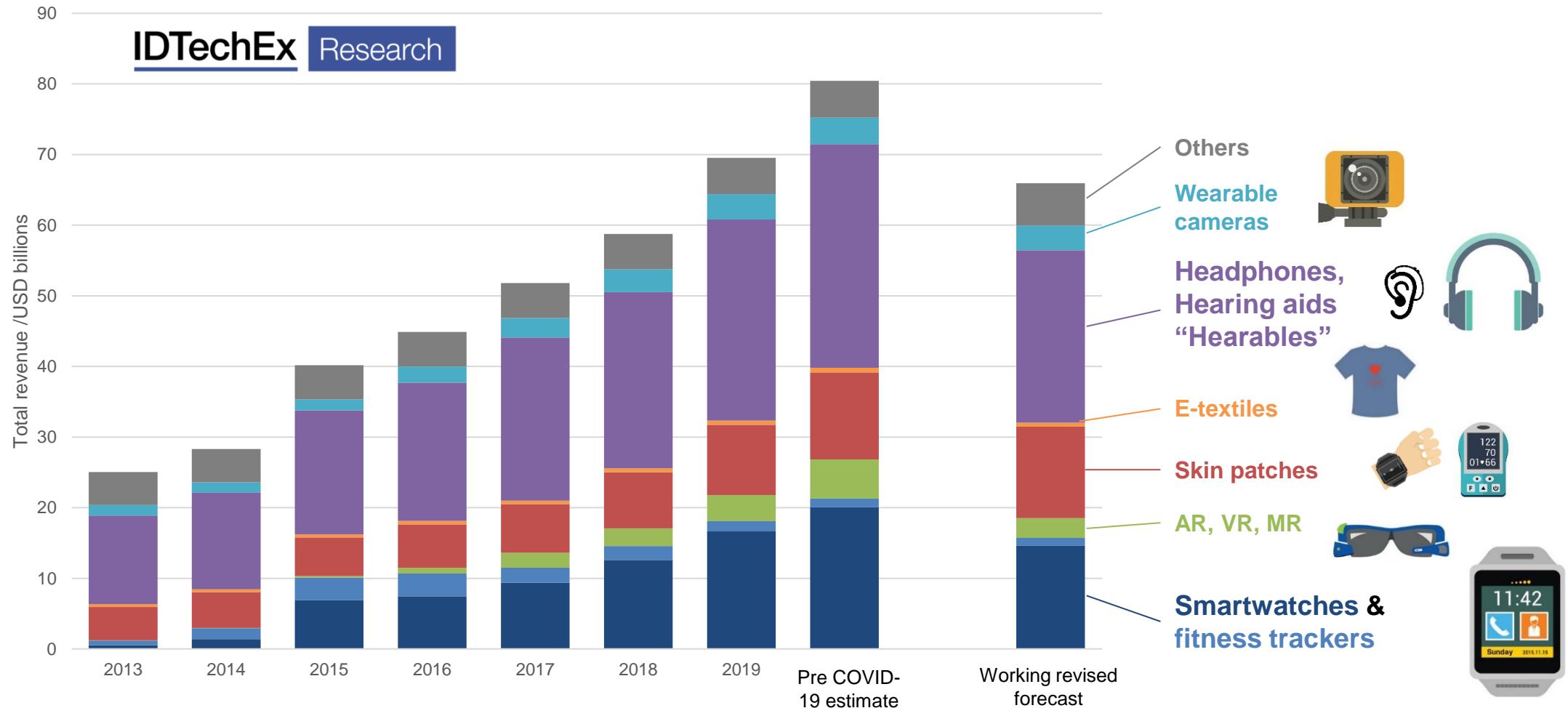
LifeSignals

Hearables



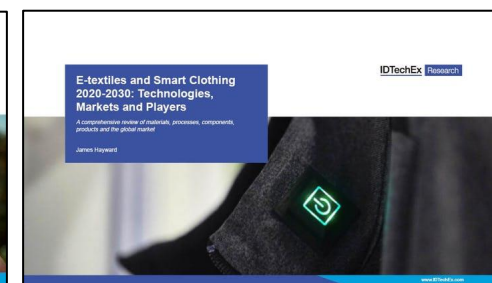
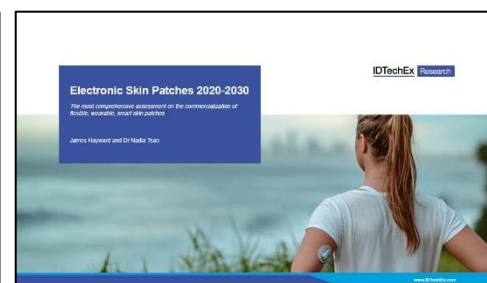
Wearables: State of the Industry

Annual revenue from wearable technology products



Wearable technology research portfolio from IDTechEx

Report title	Topics covered	Pages	Market data
Wearable Technology Forecasts 2020-2030	Full sector historic market data and forecasts, overviews from other reports and bespoke sections on other products such as smartwatches	269	All: Historic data from 2010-2019 Forecast from 2020-2030 + Impact assessment of COVID-19 (via primer) <i>Sub-reports only contain forecasts for relevant products.</i> IDTechEx Research
Hearables 2020-2030	Ear-worn products, including headphones, hearing aids, and related areas, plus discussion of underlying industry and technology trends	254	
Electronic Skin Patches 2020-2030	All products worn on the skin, including continuous glucose monitors, cardiac monitors, remote patient monitoring, electrotherapy, and many more	405	
Augmented, Mixed and Virtual Reality 2020-2030	Covering headset technology, forecasts and players assessment across all of XR (VR, AR & MR)	198	
E-textiles & Smart Clothing 2020-2030	Comprehensive review of materials, processes, components, products and the global market	524	

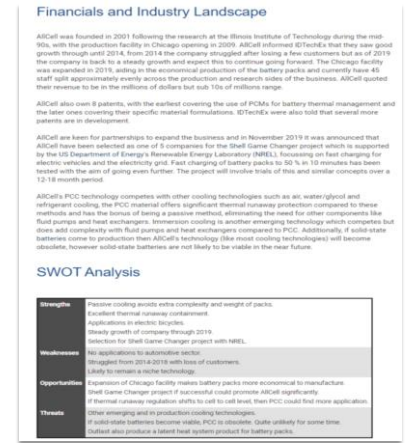
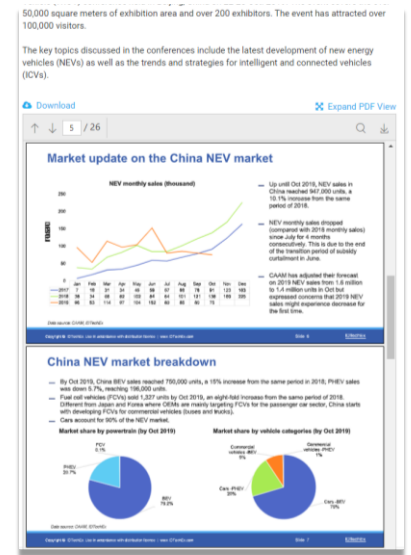
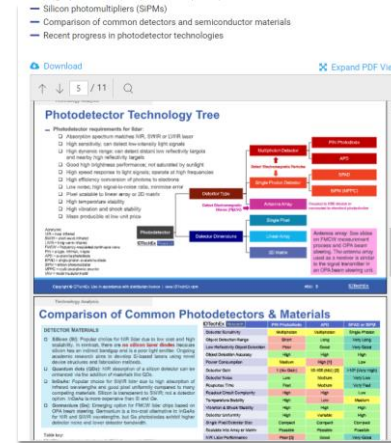
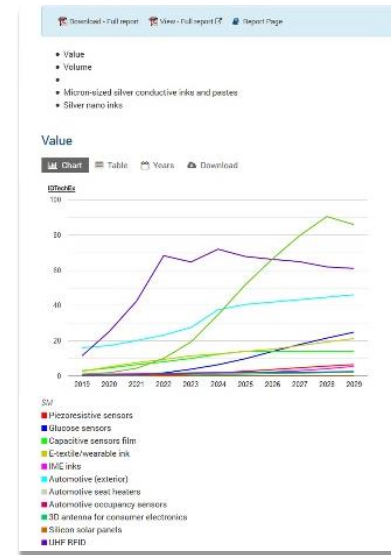


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- Company slideshows (>4,000*)
- Analyst access time, briefings & strategic advisory sessions
- As of January 2020

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Wearable Technology

[Click here for the full list](#)

- Wearable Technology Forecasts **Overview Report**
- Advanced Wound Care Technologies
- Augmented, Mixed and Virtual Reality
- E-textiles and Smart Clothing
- Electronic Skin Patches
- Haptics
- Hearables
- Voice, Speech, Conversation-Based User Interfaces
- Wearable Sensors
- Wearable Technology for Animals

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