

TECH SCOUTING: FUTURE OF WEARABLES

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To better understand disruptive companies and technologies in the wearables industry, a top consulting firm used Quid to analyze 2,394 company profiles and 2,948 patent applications.





COMPANIES

Companies involved with wearables technology focus on seven main areas, with software and app development being the largest and most central topic.

Other large categories included health and medical care, and hardware and materials for devices.



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A deeper dive into specific sub-categories **reveals an industry with wide-ranging applications.** Central themes include **fitness**, **action sports**, and **language recognition**.



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Network with 2394 companies. Colored by clusters. Sized by degree. Labeled by clusters.

App development and hardware have consistently attracted investors, but investment is rapidly diversifying.

Health & medical, AI & human interaction, and safety & assistive technology are emerging areas of investor interest.



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Safety and assistive technologies, for instance, is the fastest growing segment in the wearables industry, with 54.3% CAGR for the last three years, followed by AI and human interaction.

	Tags	Number of Companies	Founding Year Median	Investment Received Count Total	Investment Received Amount		Inv. CAGR
					Total	Median	(2015-2018)
	Software & App Development	642	2013	483	\$2.4B	\$1.9M	-14.5%
	Hardware & Materials	400	2008	538	\$5.3B	\$7.5M	-28%
	Health & Medical	384	2014	493	\$1.2B	\$1.5M	16%
	Safety & Assistive Technology	335	2014	358	\$597.5M	\$670.0K	54.3%
	Sports & Fitness	274	2014	300	\$1.1B	\$1.0M	-9.2%
	AI & Human Interaction	233	2014	319	\$1.8B	\$2.2M	30.4%
	Apparel	126	2013	132	\$644.0M	\$5.0M	-25.9%



Samsung and Acer are leading on acquisitions of wearable technology firms, with a dominant focus on those producing hardware and materials.

Other top acquirers include large technology and telecommunications firms such as Apple, Intel, Alphabet, and Blackberry.



Top Acquisitions by Company



Some companies within the rapidly growing safety and assistive technology category **also may have broader applications across the industry**, signaling larger trends.

Companies that have high inter-cluster connectivity share similar language with those in other categories and may have wide-ranging utility across the entire network.



SENTIMOTO

Sentimoto Ltd produces sensors that capture and send key physiological and environmental data to mobile devices. The technology can be applied across workplace safety, health, and emergency alert categories.

SENSINITE

Sensinite Oy manufactures sensor technology that can be used to detect nuclear radiation. These sensors have wideranging applications across emergency alert and health sectors.

saphibeat

Saphibeat Technologies produces AI-based wearable devices that track data for performance, safety, and social sharing. The technology can be applied broadly to emergency alert systems, action sports, telecommunications, and health.



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Founded Investment Received Industry City Country Company Type Operating Status Events Top Investors 2013 \$33.1K (1) Health Care Technology London United Kingdom Private Operating \$33.1K Private Investment Bethnal Green Investors (1)



Bridging nodes fill gaps between clusters and **can reveal opportunities for innovation** within the wearables industry.

Companies already taking advantage of whitespace opportunities are bridging distinct use cases.





TECHNOLOGIES

Patent applications for wearables technology largely focused on data management, **batteries**, and **hardware**, with **intelligent systems** and **health and medical** as central themes.



Top categories for wearable patent applications included heart rate trackers, payment and authentication systems, and augmented reality/virtual reality.



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Network with 2948 patents. Colored by clusters. Sized by degree. Labeled by clusters.

Patents for intelligent interfaces jumped in the past year for things like wearable robots, automatic language translation, and human-computer interface via smart ring.

On the whole, patent applications appear to be shifting away from technology categories such as **heart rate trackers** and **detection**.





Nubia Technology, a Chinese company, is dominating the patent filings for Intelligent Interfaces, with many filed within the last year or two.

The company is reportedly working on wearable phones, with a 5G smartphone to be released in 2019.



Patent Assignees for Intelligent Interfaces



Bar chart of patent assignees by number of patents. Colored by time period.

Credit card companies are filing many recent patent applications for payment and authentication technologies; however, tech firms have typically been dominant.

Both VISA and Capital One filed patents in 2018. Tech companies like Apple, Samsung, Intel, IBM, and Amazon filed the majority of patents during the five-year time period.





Samsung is most frequent to cite and be cited by other companies in patent filings, meaning it is both influential and influenced by others in the industry.



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Scatterplot of patent citations by company. Colored by company.

Haptic Feedback, the use of touch to communicate with users, and earpieces were new and highly cited categories within the wearables industry, indicating high potential areas for future growth.



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HOW TO READ A NETWORK

Similar nodes cluster together, and clusters are grouped by color. Connections represent similar language across nodes.

The density of a cluster indicates how similar or diverse the nodes are within it Each node represents a document Centrally located nodes are core concepts in the network and share language with many other nodes A bridging node between two clusters indicates the document is at an intersection between two concepts.

Greater distance between clusters indicates a lower number of interrelated documents

TEXT ANALYTICS BACKGROUND







Quid reads any text to identify key words, phrases, people, companies and institutions. Then Quid compares words from each document to create links between them based on similar language. Quid repeats the process at immense scale, producing a network that shows how similar all the documents are to one another.

