



Healthcare Market Updates



Symbol	Change
TMX	+0.15
CHK	+2.35
AAPL	+0.14
PRTG	-0.14
AMZN	-0.73
TSLA	+1.08
AVGO	-0.87
SIRI	-0.65

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Wearables

Omron HeartGuide: The First Blood Pressure Monitoring Smartwatch

January 4, 2019 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (Smartwatch + App)	 Therapeutic Areas	Blood pressure monitoring
 Applications	Remote Patient Monitoring	 Geographic Focus	US / Global
 Segment Focus	Clinical Grade	 Topics (News type)	Competitive Intelligence
 Companies	Omron Healthcare	 Others	NA

ANALYST TAKE:

- **Synopsis:** Omron Healthcare (TYO:6645) launched its HeartGuide wearable blood pressure monitor, touting it as the world's first such device.
- **Industry Needs:** Blood pressure (BP) is one of most critical health vitals monitored to facilitate early diagnosis of a patient's deteriorating health condition. With increasing prevalence of chronic diseases and the geriatric population, concepts such as self health management and preventive care programs continue to gain prominence to bend the cost curve. Considering ongoing digital transformation of the healthcare industry, there is a dire need for patient-centric digital solutions for BP monitoring that are designed to promote self-health management practices and help to track patient's health status remotely. Furthermore, research studies also suggest that regular self-monitoring of critical vitals such as BP can reduce stroke risk by up to 20% and cut the risk of coronary artery disease by 10%.

Omron HeartGuide: The First Blood Pressure Monitoring Smartwatch

January 4, 2019 (2/2)

- **Value Proposition:** The HeartGuide is an FDA-cleared, wearable oscillometric blood pressure monitor intended for personal use and styled to function as a wrist watch. The device features a cuff in the wrist watch band which inflates to measure systolic and diastolic pressures at a clinical level of accuracy, the company claims. As per the company, the newly launched HeartGuide also monitors physical activity including steps taken, distance walked, calories burned and sleep quality. The system is intended to connect to a free, proprietary mobile app from the company to monitor their lifestyle and heart health.
- Based on Frost & Sullivan's research, despite BP monitoring being a standard of care for regular health screening tests, innovation around BP devices/solutions have been limited in the past few decades. So far BP monitoring devices that comprise an inflatable cuff continue as the gold standard for both point-of-care and home-based BP monitoring. However, as the industry move towards preventive care concepts, healthcare industry needs more easy to devices/solutions that can seamlessly integrate into users' daily life. Entailing this Frost & Sullivan views HeartGuide's commercial launch as a breakthrough for the healthcare industry. As the first wrist-worn personal device for blood pressure monitoring, the HeartGuide would be a substantial boon for heart data collection and management among consumers. For example, given that BP fluctuates throughout the day, regular self-monitoring by HeartGuide would now empower consumers to take immediate action on their heart health numbers and fuels a more productive patient-physician dialogue to evolve treatments and improve outcomes. Additionally, Omron has few other heart monitoring devices in their pipeline, such as a blood pressure monitor and ECG combo device intended for use in the home. This product comes as a result of the company's ongoing collaborations with mobile ECG company AliveCor, in which Omron is a major backer.
- While Omron as one of the leading BP monitoring device OEMs globally realizes its commercialization success for the HeartGuide smartwatch, other companies such as Asus (VivoWatch BP) also have plans to bring medical-grade blood pressure monitoring during 2019. Entailing this Frost & Sullivan anticipates increased competition in the clinical-grade BP monitoring wearable segment during this 2019. Frost & Sullivan also believes future success of these wearable based BP monitors will depend on how these companies manage to differentiate by moving beyond the device play to data driven clinically meaningful health insight services.
- **Target End-User:** Healthcare consumers, homecare/ remote care settings, research and clinical trials sponsors, insurance and wellness programs.

WEBLINK: <https://bit.ly/2Faa075>

Teva Wins FDA Approval for Digital Inhaler Combining Powder with Sensors, App – December 24, 2018 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (Wearable + App)	 Therapeutic Areas	COPD / asthma
 Applications	Remote Patient Monitoring	 Geographic Focus	US/Americas
 Segment Focus	Clinical Grade	 Topics (News type)	Competitive Intelligence
 Companies	Teva Pharmaceuticals	 Others	NA

ANALYST TAKE:

- **Synopsis:** Teva Pharmaceuticals' sensor-packed, app-connected digital inhaler called 'ProAir Digihaler' has recently received marketing approval from the US FDA, according to a release from the company. The device will first become available next year through a "small number" of healthcare system pilot partnerships, with a full national launch currently planned for 2020.
- **Industry Needs:** According to 2016 data from the [CDC](#), roughly 26.5 million adults and children living in the US have asthma, many of whom use inhalers as part of their treatment regimen. Additionally, due to lack of proactive monitoring approximately 1.7 million emergency department visits with asthma as the primary diagnosis occurred in 2015. Easily recording inhaler use with the device not only helps patients and providers monitor adherence, but helps correct any errors when dispensing treatment.

Teva Wins FDA Approval for Digital Inhaler Combining Powder with Sensors, App – December 24, 2018 (2/2)

- **Value Proposition:** Teva recently announced the FDA approval for its respiratory digital therapeutic called ProAir® Digihaler™ (albuterol sulfate 117 mcg) inhalation powder, touting it as the first and only digital inhaler with built-in sensors and a companion mobile app designed to provide inhaler use information to people with asthma and COPD. ProAir Digihaler is indicated for the treatment or prevention of bronchospasm in patients aged four years and older with reversible obstructive airway disease, as well as for prevention of exercise-induced bronchospasm (EIB) in patients aged four years and older. According to company's press release, the digital inhaler will be available this year through a limited amount of "Early Experience" Programs and a national release of ProAir Digihaler is expected in 2020.
- **How it Works?** The digital inhaler has built-in sensors that detect inhaler use and measure inspiratory flow. The data is sent to a companion mobile app using Bluetooth Wireless Technology for patients and health care professionals to review over time, according to the release.
- As the healthcare industry moves towards value-based care and reimbursement, medication adherence continues to be a critical challenge for providers and pharma companies to justify the outcomes of their treatment and drugs. For example, one of the challenges physicians are faced with in caring for their asthma and COPD patients is knowing if their patients are using their inhaled medication as they should. Considering this Frost & Sullivan views Teva's ProAir® Digihaler more like a digital therapy that empowers physicians to periodically track data on their patients' inhaler usage and allow them to have more productive conversations about identifying issues and how to manage their illness. The recent approval for ProAir® Digihaler comes a bit over three years after Teva announced its purchase of Gecko Health Innovations, a Cambridge, Massachusetts-based maker of smart inhalers. Frost & Sullivan views this as a great case example demonstrating the partnership potential for wearable companies with innovative pharma companies for their future digital therapeutic initiatives.
- Frost & Sullivan also anticipates increased competition in the digital inhaler market during 2019 with the current market currently led by companies such as Adherium and Propeller Health. This year Adherium received prescription and over-the-counter FDA clearances for its Hailie (formerly Smartinhaler) sensors for a variety of inhaled medication dispensers. Propeller, on the other hand, was acquired earlier this month by fellow digital respiratory health company ResMed for \$225 million.
- **Target End-User:** COPD Patients, homecare / remote care settings, research and clinical trials sponsors, insurance and wellness programs.

WEBLINK: <https://bit.ly/2rUUgMs>

Heartbit to Debut Wearable Electrocardiography System at CES 2019

January 2, 2019 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device) + AI	 Therapeutic Areas	Cardiac health
 Applications	Remote monitoring, Preventive care	 Geographic Focus	Hungary / Europe
 Segment Focus	Consumer	 Topics (News type)	Competitive Intelligence
 Companies	HeartBit	 Others	BOSCH and IBM Watson

ANALYST TAKE:

- **Synopsis:** Heartbit, a wearable three-lead ECG heart monitoring device that athletes can wear during training, will debut next week at CES 2019. The company envisions its heart monitoring product to be significant value to both athletes and the healthcare industry.
- **Industry Need:** As per WHO estimates, 7.3 million people die of cardiovascular diseases (CVD), particularly heart attacks and strokes every year globally. For example, heart disease has been the biggest killer in the US since 1920, and involves spending of more than \$110 billion/year. However, among all the deaths caused by CVD, about two-thirds of them happen in out-of-hospital settings. This demands robust remote monitoring solutions such as wearables to promote preventive care practices. For example, as per a Mayo Clinic study (2015), digital health intervention among early-stage CVD populations can reduce 40% relative risk and 7.5% absolute risk in CVD events, hospitalizations, and deaths.

Heartbit to Debut Wearable Electrocardiography System at CES 2019

January 2, 2019 (2/2)

- **Value Proposition:** The device uses a custom algorithm to detect and provide warning signals about the heart's stress level during warmup, activity, and recovery post-workout. Equipped with BOSCH sensors and using IBM Watson machine learning technology, Heartbit claims the device is capable of analyzing a user's activity patterns and prepare actionable charts and reports to warn of possible arrhythmia, ischemia, and other hidden heart diseases which could lead to sudden cardiac arrest or stroke. For clinical validation, Heartbit also collaborates closely with the Cardiac Bioelectric Imaging Research Laboratory at the Medical Informatics R&D Centre at the University of Pannonia in Hungary. Dr. György Kozmann, a Hungarian scientist with over 50 years of experience in physics, biology, and information technology, is both an investor and lead developer in the company.
- **How it works?** The ECG sensors are integrated into training T-shirts, with the measuring device attaching to the shirt at the bottom of the sternum. The Heartbit mobile app (available on both the Apple Store and Google Play) can track an individual's workout history and offer personalized training plans based on cardiac status and desired goals.
- Frost & Sullivan observes wearables solutions for Cardiac health monitoring as one of the most competitive market with leading players such as Alivecor, QardioCore, and Apple among others already providing medical-grade solutions. Furthermore, HeartBit is not the only wearable device OEM that is trying to leverage converging technologies such as big data analytics and AI to provide meaningful health insights. Despite this Frost & Sullivan believes there is huge growth potential for intelligent solutions that can empower patients with seamless integration of remote monitoring solutions into daily life for early diagnosis and health promotion. Moving forward it will be interesting to watch how these players would achieve differential market positioning by targeting focused applications and more importantly translate their current/future collaboration to move beyond the me-too value proposition. More specifically, it will be equally critical to identify the differential value proposition and optimum market positioning for ECG monitors to curtail competition and ensure future success.
- **Target End-User:** Parents, Athletes cardiac rehab centres, telecardiology, clinical trials

WEBLINK: <https://bit.ly/2AvRq5n>

UW-Madison Project Uses mHealth to Study Nurse Stress, Fatigue – January 2, 2019

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device)	 Therapeutic Areas	Occupational Health (Stress, Sleep, and activity monitoring)
 Applications	Remote monitoring, Preventive care	 Geographic Focus	US
 Segment Focus	Consumer Grade	 Topics (News type)	Partnership / Competitive Intelligence
 Companies	Fitbit	 Others	NA

ANALYST TAKE:

- **Synopsis:** A University of Wisconsin-Madison researcher is using Fitbits to track nurse activity and sleep in an mHealth project aimed at reducing stress and fatigue in an often overworked provider population.
- **Value Proposition:** University of Wisconsin-Madison School of Nursing Professor Linsey Steege will use the popular digital health wearable to track the activities of selected nurses throughout the day, gathering data on their steps, heart rate and sleep. Her goal is to identify factors that cause fatigue and stress on an often-overlooked (and overworked) but vital care provider population.
- Frost & Sullivan views this as a great market positioning strategy by Fitbit to expand its wearable applications from patient focus to augment caregivers in monitoring and managing their occupational health. Fitbit is already working with University of Michigan researchers on similar initiatives where students are using Fitbits in a long-term project to analyze stress levels in medical school interns.
- **End-Users:** Health Systems and Hospitals

WEBLINK: <https://bit.ly/2EQTn02>

BrainScope Receives FDA Clearance for Multi-Modal, Multi-Parameter Concussion Assessment – January 2, 2019 (1/2)

Applicable Product Categories: Wearables

 Technologies	Wearable (Smartwatch + App)	 Therapeutic Areas	Mental and Behavioral Health monitoring
 Applications	Patient Monitoring	 Geographic Focus	US/ Global
 Segment Focus	Clinical Grade	 Topics (News type)	Competitive Intelligence
 Companies	BrainScope	 Others	NA

ANALYST TAKE:

- **Synopsis:** BrainScope received FDA clearance to include new indication language for its BrainScope One concussion assessment device.
- **Value Proposition:** BrainScope®, a medical neuro-technology company focused on concussion and mild traumatic brain injury (mTBI) assessment, announced today that it has received FDA clearance to include additional language in its product's Indications for Use (IFU), adding key terminology related to “multi-modal, multi-parameter assessment” of “concussion” and “mild Traumatic Brain Injury”, as well as an expanded and clarified overall IFU. Following a multi-parameter assessment, the company’s device can determine the likelihood and severity of a concussion or mild traumatic brain injury.
- Frost & Sullivan believes, the additional FDA labeling for BrainScope’s wearable device now positions BrainScope with unique capabilities of as medical-grade device with labeling distinctively and specifically for this particular disease state. In addition to being able to objectively and reliably identify patients who may have a brain bleed using the product’s Structural Injury Classifier, BrainScope One uses the same electroencephalogram (EEG) signal and other capabilities on the device to objectively determine the likelihood of the presence and severity of a concussion. All capabilities are summarized on a panel of multimodal, multi-parameter results, greatly facilitating clinical concussion assessment.

WEBLINK: <https://bit.ly/2F7F8D9>



Mobile Phones/ mHealth

Medtronic, IBM Watson debut hypoglycemia prediction feature for diabetes app – January 3, 2019 (1/2)

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth App; Artificial Intelligence; Predictive Analytics	 Therapeutic Areas	Diabetes
 Applications	AI enabled prediction of hypoglycemia events	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	Tech Innovation
 Companies	Medtronic; IBM Watson	 Others	-

ANALYST TAKE:

Synopsis: Medtronic and IBM Watson announced launch of an enhanced functionality of its Sugar IQ app, known as IQcast, with the capability to predict hypoglycemic events up to 4 hours in advance.

Industry Need

- Hypoglycemia, or a sudden decrease in blood sugar levels lower than 70 mg/dL (as per the American Diabetes Association), is one of the leading drawbacks of diabetes which, if left un-attended for long, may lead to brain seizures, coma or even death.
- The biggest drawback of a hypoglycemia event is its unpredictable nature with the patient caught unawares more often than not. Additionally, hypoglycemia unawareness, a condition where the patient doesn't recognize if the glucose levels have gone below 70 mg/dL, puts the person at increased risks of severe low blood sugar reactions.

Medtronic, IBM Watson debut hypoglycemia prediction feature for diabetes app – January 3, 2019 (2/2)

Value Proposition:

- The new feature, called IQcast, informs users of their chances of dropping below the target blood glucose range within the next one to four hours based on a low, medium and high rating. The user could then take appropriate preventive measures to prepare for the hypoglycemic event.
- These personalized predictions are generated by leveraging AI and data analytics tools on data collected through Medtronic's Sugar.IQ app and Guardian Connect CGM system.
- Medtronic's Sugar IQ app, which leverages IBM Watson's AI capabilities, has been able to achieve an extra 36 minutes per day in healthy glucose range among patients using it in conjunction with the Guardian Connect System. Frost & Sullivan believes that the addition of IQcast feature would further enhance the system's effectiveness in daily management of diabetes.
- Frost & Sullivan research finds that other similar digital solutions, such as Ascensia Diabetes' Contour Diabetes app, as well as Glooko's diabetes analytics platform, offer personalized insights on the user's glucose levels, which helps patients uncover unknown patterns in blood glucose readings and enhance self management. Frost & Sullivan also notes Samsung's 2017 partnership with Welldoc for a D2C version of the BlueStar app as part of its mHealth app Samsung Health. While, the effectiveness of the latest IQcast feature is yet to be tested, it is likely to add value to Medtronic's diabetes management portfolio and also enable greater data driven risk sharing and value based partnerships with health systems, similar to its partnership with United Healthcare for management of diabetes and reduced readmissions and healthcare costs through patient centered solutions.
- **Target End-User:** Diabetic patients, Doctors, health systems

WEBLINK: <https://bit.ly/2F815mh>

Otsuka and Click Therapeutics Collaborate to Develop and Commercialize Digital Therapeutics for Patients with Major Depressive Disorder – January 3, 2019 (1/2)

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth App; Digital Therapeutics	 Therapeutic Areas	Mental Health, Major Depressive Disorder (MDD)
 Applications	Software as a Medical Device	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	M&A/ Partnerships
 Companies	Otsuka, Click Therapeutics	 Others	-

ANALYST TAKE:

Synopsis: Otsuka and Click Therapeutics, the maker software based medical treatment solutions, announced a partnership to develop a new digital therapeutic for MDD to be used with or without prescription drugs.

Industry Need

- The World Health Organization (WHO) pegs annual incidence of depression at over 300 million people worldwide, with the same claiming more than 800,000 lives due to suicide.
- Add to this, the limited focus, financing and number of professionals in the clinical sector aimed at coping mental health issues (WHO estimates 1-6% of healthcare budgets are allocated to mental health in various countries), digital therapeutics emerges as a major alternative therapy option for this sector.

Otsuka and Click Therapeutics Collaborate to Develop and Commercialize Digital Therapeutics for Patients with Major Depressive Disorder – January 3, 2019 (2/2)

Value Proposition:

- The two companies have partnered to develop prescription digital therapeutic treatment for MDD, that will apply cognitive therapy principles with or without prescription drug usage. The partnership will leverage Click's software application expertise to develop a tailored mHealth solution and Otsuka's expertise in developing approved prescription therapies for patients with serious mental illnesses.
- Otsuka is expected to invest around \$300 million for the funding and development of the solution with \$10 million in payments to Click for upfront regulatory milestones, followed by a \$20 million development funding. This will eventually be followed by \$272 million in funding and royalty payments to Click Therapeutics, subject to achievement of certain commercial milestones for the solution.
- Frost & Sullivan research finds that 2018 has been a milestone year for digital therapeutics with the FDA approving the first ever software-only therapeutic reSET for substance abuse disorder, followed by clearance of reSET-O for opioid use disorder, a joint collaboration between Pear Therapeutics and Sandoz, a division of Novartis. Click Therapeutics has also been busy striking deals in 2018, with a \$17 million funding round led by Sanofi Ventures in July 2018, followed by this one. Also, Otsuka has been at the forefront of the 'beyond-the-pill' strategy in the mental health area, with a partnership with Proteus to embed ingestible sensor in its Abilify pill (a drug-device combination), for improving adherence to the anti-psychotic medication (for treatment of schizophrenia). With this background, Otsuka's move is not surprising, but one that will probably shape the future of the industry.
- **Target End-User:** Depression Patients, Health Systems

WEBLINK: <https://bit.ly/2VsT93Y>

Can a Video Game-Based "Digital Medicine" Help Children with Autism and Co-occurring ADHD? – January 3, 2019

Applicable Product Categories: Mobile Phones

 Technologies	mHealth App, Digital Therapeutics	 Therapeutic Areas	Autism, Attention-deficit/hyperactivity disorder (ADHD)
 Applications	Gamified digital medicine for autism and ADHD	 Geographic Focus	US
 Segment Focus	Clinical/ Consumer Grade	 Topics (News type)	Care Delivery Innovation
 Companies	Akili Interactive Labs	 Others	Children's Hospital of Philadelphia (CHOP)

ANALYST TAKE:

- **Synopsis:** Akili Interactive's pilot study, in collaboration with CHOP, known as Project: Evo, has announced topline data for its gamified approach to treat children with autism and ADHD with a 95% rate of adherence among those assigned a multi-tasking version and 98% among those given education treatment.
- Akili, a niche player in the field of digital therapeutics, has been actively pursuing FDA clearance of its Project: Evo backed by fair amount of clinical evidence. The company also raised \$68 million in funding in 2018 further enhancing its backing to just over \$140 million.
- Frost & Sullivan research finds that the US digital therapeutics market was worth \$889.0 million in 2017 and is forecast to reach \$4.42 billion in 2023. This represents a 2017–2023 CAGR of 30.7%. The pediatric ADHD market is appealing due to its size, with around 6.4 million children being diagnosed with ADHD in the US alone, further accentuated by increasing drug abuse in children. While, it remains to be seen whether Akili's solution wins a clinical tag, it could be a game changing value proposition for smartphone companies, who could enter into exclusive distribution partnerships with such targets utilizing its smartphone market footprint.

WEBLINK: <https://prn.to/2s9pW0P>



Smart Home Devices & Appliances

GMO Houseplant Purifies Air of Hazardous Compounds

– December 19, 2018

Applicable Product Categories:

Smart Smart Home Devices / Air Purifier

 Technologies	GMO Plants	 Therapeutic Areas	COPD, asthma, allergies, other respiratory conditions
 Applications	Air Purification	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Technology Innovation
 Companies	University of Washington	 Others	-

ANALYST TAKE:

- **Synopsis:** A new genetically modified houseplant has been developed that can tackle even the smallest hazardous compounds that are too small to be trapped in HEPA filters – chloroform and benzene. Small amounts of these chemicals build up in homes when showering or boiling water, or store cars or lawn mowers in the garage.
- Frost & Sullivan believes this can be a great complimentary product for home air purifiers; presence of such small pollutants being tracked by monitoring devices. Additional capabilities, that home purifiers may not currently cater to, may also be researched to be introduced with a GMO approach. However, the debate surrounding genetic modifications continues.

WEBLINK: <https://bit.ly/2ArWelQ>

These were the 25 most popular Alexa Skills of 2018, according to Amazon

– December 31, 2018

Applicable Product Categories:

Smart Voice Assistants



ANALYST TAKE:

- **Synopsis:** Amazon's top 25 skills for 2018 include Fitbit (to check daily progress), Headspace (guided meditation) and sleep and relaxation sounds (to help relax and sleep).
- Frost & Sullivan believes this is the first step towards health applications, and also that voice assistants technology is great for mental health applications – it offers discrete solutions in the comfort of one's home (though the above applications are only for meditation and sleep), and can help improve mental wellness at any time of the day. If the ranking was segmented by age groups, the older groups' top skills may have resulted in not just Fitbit skills, but also other health devices (such as Omron's blood pressure monitoring) for example. Overall, this points to the convenience factor that voice technology can provide for mundane use cases, and we expect it to only grow.

WEBLINK: <https://bit.ly/2ArWelQ>

Google Assistant users can now access Lifesum to enter calories, health goals

– January 3, 2019

Applicable Product Categories:

Smart Voice Assistants

 Technologies	IoT, AI	 Therapeutic Areas	Obesity. Diabetes, hypertension and heart disease
 Applications	Voice Assistants, skills	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Technology Innovation
 Companies	Lifesum, Google	 Others	-

ANALYST TAKE:

- **Synopsis:** “Lifesum, a Swedish health tracking app, will now be available to Google Assistant users. This integration will allow users to keep a record of their meals, water consumption and weight by talking to their Google Assistant.”
- Once opened the user can tell Google Assistant about their water consumption and meals, including size. All of that information will then be entered into the app automatically.
- Frost & Sullivan believes this approach (voice interactivity) solves one major challenge of calorie / food tracking apps – of entering the data manually. This is especially true for the obese and on those on weight loss goals, but also for diabetics who are on insulin; diabetics need to calculate the amount of insulin they need to take based on the amount of carbohydrates ingested. Several apps try to solve this challenge, but require manual entry, or taking a picture of the food and having a ‘nutrition coach’ enter the amount for you. Having voice interfaces to provide this functionality makes it much more convenient, especially using google assistant that can accessed on a users’ smartphone or the Google Home device.

WEBLINK: <https://bit.ly/2F8f6AC>

Other Interesting Articles

When available, other interesting articles will be covered here in short.

News Title	Link	Remarks
Should ASEAN partner with Japan to build its smart cities?	https://bit.ly/2BXwhkq	The smart city movement is taking roots in the Asian region as well, and the next step for them (long-term, 5-10 years) would be to look at health initiatives as well. Japan has smart technologies to support those initiatives also.
Amazon won Christmas again this year	https://bit.ly/2F5QzLM	Not just Amazon, but even Google's smart speaker app was the most downloaded this holiday season. Coupled with sales information, this points to smart home speakers being a top gift this Christmas.
In a test of voice assistants, Microsoft's ranked worst in nearly every category	https://bit.ly/2saCaGo	In a series of 800 questions, Google Home understood all, and answered 88% correctly. Amazon Echo, Apple HomePod and Microsoft Invoke were tested.
Beijing uses face-detecting smart locks to curb public housing abuses	https://engt.co/2F7mDzB	China is big on facial recognition tech, and smart locks are being used in a very novel way, with complete disregard to privacy though.
Chinese home sharing site Xiaozhu to roll out facial recognition-enabled smart locks in Chengdu pilot scheme	https://bit.ly/2RngiFQ	Xiaozhu (China's AirBnb) is also using facial recognition, but for user authentication. There are thoughts around using facial recognition in the US for patient identification for example, but yet to gain momentum.
Why we picked the google home hub as the best smart home product of 2018	https://bit.ly/2GTeFMb	Android Central chose the Google Home Hub as the best smart home product for 2018.

Other Interesting Articles (continued)

When available, other interesting articles will be covered here in short.

News Title	Link	Remarks
Report: 5G Rollout to Generate \$1.3trn Revenue by 2025	https://bit.ly/2F6wGVt	UN's International Telecommunication Union estimates that within 5 years of 5G rollout in 2020, it will generate \$1.3 trillion in revenue among operators, and accounts for smart home controls, as well as remote patient monitoring and telehealth.
Korean-style apartment complexes go global	https://bit.ly/2AvOk0Y	Korean government has signed deals with several countries for building residential towns on the lines of "Korean-style smart towns" that integrate high-end apartments with technologies. Countries include Paraguay, Bolivia, Algeria, Ethiopia, Iraq, Saudi Arabia, Kuwait, Nepal, India, Indonesia, Vietnam and China.
Huawei promises highest level of cyber security	https://bit.ly/2F96rgg	Could be a proposed differentiator, to tout cybersecurity features, but more crucial is the importance attributed to cybersecurity, which is fast becoming a major cause of concern across industries.
Whirlpool conducts survey on smart home needs	https://bit.ly/2CpQyyH	Whirlpool's survey results point to latent needs for smart home appliances, but the lack of 'healthcare' as a focus in the survey points to either Whirlpool not looking in to this application, or withholding results on that aspect.
Think your smart home is secure? William & Mary computer scientists show that's not the case	https://bit.ly/2GURSzE	State of smart home cybersecurity is abysmal, and is pointed out through this article. With healthcare applications the importance of cybersecurity grows manifold, owing to privacy regulations around the world.