



Intel Corporation

# Backgrounder

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## Meet the Finalists: Intel ‘Make It Wearable’ challenge

SANTA CLARA, Calif., Oct. 31, 2014 – Ten teams have been selected as finalists in the Intel “Make it Wearable” challenge, vying for the USD\$500,000 grand prize. All creations are powered by Intel® Edison, a postage-stamp size computer.



**Arc Pendant (United Kingdom): Already improving navigation safety and simplicity, Arc Pendant will infiltrate the home, fitness center and roads.**

[Introductory video](#)

After years of struggling to efficiently navigate London on his bike, team member Tom Shrive realized there had to be a better way to traverse the streets without having to constantly check GPS on one’s phone. Teaming up with several friends, including a data scientist and product development specialist, he founded Arc Wearables with the goal of creating a non-visual, non-audio navigation tool and voice activation system. Arc Pendant, a discrete sports and activity necklace, monitors information from the body through vibrations and relays it back to the user with touch sensors to provide a safer, more seamless way to get around.



**BABYBE (Germany and Chile): An emotional prosthetic in the form of a bionic mattress that connects mothers and babies through the process of artificial incubation in a Neo Intensive Care Unit (NICU).**

[Introductory video](#)

After visiting several hospitals around the world, the leader of BABYBE identified an opportunity for technology to step in and considerably improve a pre-term newborn’s life by strengthening the bond between mother and child. For pre-term infants who are restricted to incubators, physical contact with parents is essential to encourage natural biological development and bonding, but this is often not possible. BABYBE helps bridge the gap and aims to keep parents and babies connect during the baby’s time in the incubator. The bionic mattress brings haptic information from the mother to the baby in real time. BABYBE has already passed several extensive clinical tests with tremendous results. The current solution, Kangaroo Mother Care,

mimics the way adults hold their babies skin-to-skin on their belly, but due to medical and/or social reasons, this method is unfortunately only viable in one out of five cases.



**BLOCKS (United Kingdom): Join the BLOCK party – where fashion meets function to eliminate the need to constantly upgrade wearable technology.**

[Introductory video](#)

Today technology evolves so quickly that people are in a constant cadence of upgrading their devices. “Old” devices are often cast off and wasted. BLOCKS, created by friends from Imperial College London, aims to solve this problem with a new wearable technology hardware and software platform. The modular system allows people to select individual blocks of cutting-edge technology with custom functions and style that can be snapped together to create one piece of hardware. Instead of purchasing new wearable devices every time they are released, BLOCKS enables you to easily replace pieces bit by bit. Whether your lifestyle requires a heart-rate block to measure your pulse, an activity tracker to log your movements, a GPS block for directions or a microphone block to record voice messages, BLOCKS unites all personalized needs and is enabled with gesture control to boot.



**First V1sion (Spain): A wearable ‘player perspective’ broadcast system that allows the athlete’s point of view to be shown for spectators.**

[Introductory video](#)

The First V1sion team is an entrepreneurial group that was inspired by their collective excitement about experiencing their favorite sport from the player’s perspective. They wanted to step into their idols’ shoes, similar to the experience already enabled in motor racing and Formula 1 where you are able to enjoy the driver’s perspective via helmet and onboard cameras. The First V1sion team tested the product with a professional soccer player from Liga BBVA, a Spanish football league, and applied the learnings to create a device for sports like soccer, basketball or tennis. It uses Intel® Edison and integrates a camera and RF transmitter designed to be in contact with the human body in order to enable fans to experience their favorite sport from the player’s perspective.



**Open Bionics (United Kingdom): Bionic man turns his hand to robotic innovation to bring customized products to amputees.**

[Introductory video](#)

Intel® Edison helped turn Joel Gibbard’s primitive teenage experiment into a major scientific breakthrough that has the capacity to benefit amputees around the globe. After prototyping and iterating on different versions of a prosthetic hand over the years, he was able to dedicate his full energy to creating a low-cost robotic prosthetic as part of his final project at university in

Plymouth. Led by Joel, the Open Bionics team has leveraged low cost, high efficiency 3-D printing and scanning to bring customized products to amputees for less than USD\$1,000.



**Nixie (USA and Germany): The first wearable camera that can fly and can compose the perfect shot from an awesome perspective, capturing the moment without interrupting the moment.**

[Introductory video](#)

A group of life-long friends and tinkerers from across the globe turned their passions into an entrepreneurial pursuit in the form of Nixie, an Intel® Edison-based flying wearable camera. Leveraging their experience in physics, engineering, business, videography and a love for outdoor action sports, they experimented with developing advanced quad-copters. They first researched the possibility of making them waterproof and then tinkered with other flying devices, such as glasses. Not content with these creations, the team set their sights on the goal of making an autonomous and wearable device. They learned about the Intel “Make It Wearable” challenge just six days before the submission deadline and worked across the Atlantic – from San Francisco to Austria – to develop their project, which provides instant camera activation from the flick of your wrist, enabling aerial photography that doesn’t interrupt a beautiful moment yet captures the memory in photo form.



**ProGlove (Germany): A professional wearable production tool that enables employees to work faster and easier while providing vital business intelligence**

[Introductory video](#)

One week before the Intel “Make It Wearable” challenge submission deadline an idea that was born out of physical struggle experienced by one of the team members occurred to the ProGlove team. Team captain Paul Gunther, a long time manufacturing production line worker, suffers from reduced sight, so the team was inspired to create a sensor glove that could relay vital information through a series of vibrations. ProGlove, which seeks to reduce physical work stress, improve ergonomics, eliminate cumbersome movements and ultimately remove the need for additional tools, is the only finalist entry to create a wearable aimed at the professional enterprise market. ProGlove incorporates several tools into one and makes them wearable, ultimately giving the employee an extra free hand. ProGlove helps an employee work without making errors, as every movement is automatically checked, thus cutting overall production costs. Analyzing the “big data” from the glove and its environment further enables early warning systems to be quickly recognized to prevent future problems in the assembly line.



**Snowcookie (Poland): Snow sports become safer and more social while providing real time feedback with Snowcookie.**

[Introductory video](#)

The Snowcookie team brought together expertise from fields including medicine, physics, robotics and virtual reality. They are united by their passion for winter sports. Their goal was to develop a device that makes skiing and snowboarding injury-free, easier to learn and even more fun. For example, Snowcookie can predict if a user has enough energy for additional ski runs and suggests taking a break when the user seems tired. It can even call an ambulance if a skier gets injured. In addition, Snowcookie gathers data from several sensors and provides the user with in-depth analysis of their skills. Within the Snowcookie app, a wearer can easily compare their skills with others, share updates and compete, enhancing the winter sports experience.



**Wristify (USA): Sam Shames runs hot. His mom runs cold. He figured there must be a way for them to coexist.**

[Introductory video](#)

The Wristify team was founded by four MIT students who first came together to work on an entry for the MIT MADMEC materials-science design competition. Their prototype for a thermoelectric bracelet to monitor air and skin temperature walked away with the USD\$10,000 first prize. While designed as a fashionable piece of jewelry to provide personal comfort, the team's ultimate aim is to reduce the energy consumption of buildings by cooling and heating the individual – not the building. Bolstered by their win, the team founded [embr labs](#) and has been working ever since on making the Wristify bracelet a reality. Working with Intel® Edison has allowed them to harness the incredible amount of processing power, memory and Wi-Fi capabilities to turn their core patent pending personal heating and cooling technology into a connected and intelligent system. Now that the device can collect and transmit data, they have been able to tap into machine learning capabilities to detect and predict when an individual will be uncomfortable, so that heating and cooling options can kick in wirelessly.



**BabyGuard: Smart Healthcare (PRC).**

[Introductory video](#)

BabyGuard is a wearable device to detect the health status of expectant mother and baby, and it provides customized parenting advice. With BabyGuard, mothers can relax and enjoy every moment interacting with their babies.

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