



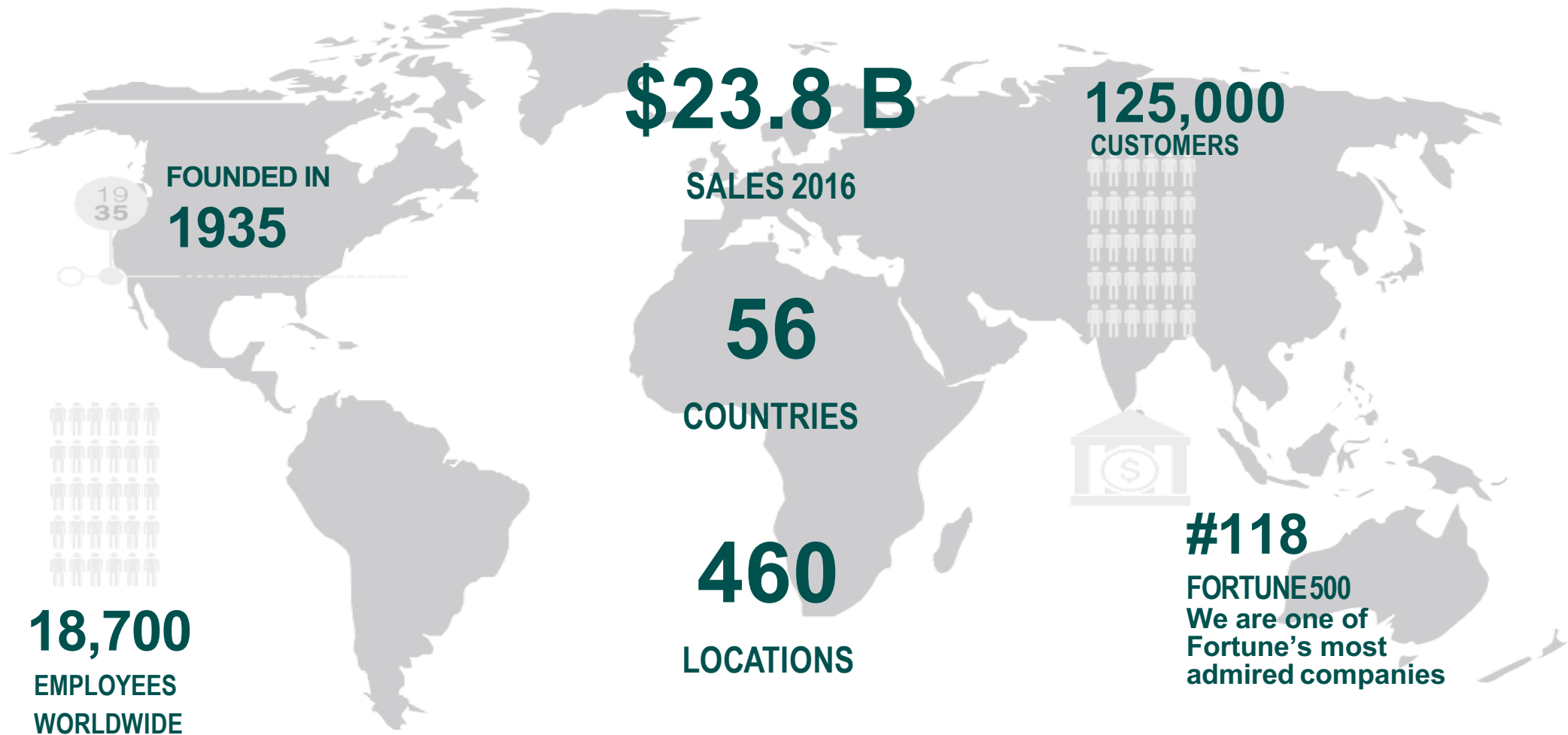
# Arrow IoT

## 2017 Hot Issues in Health

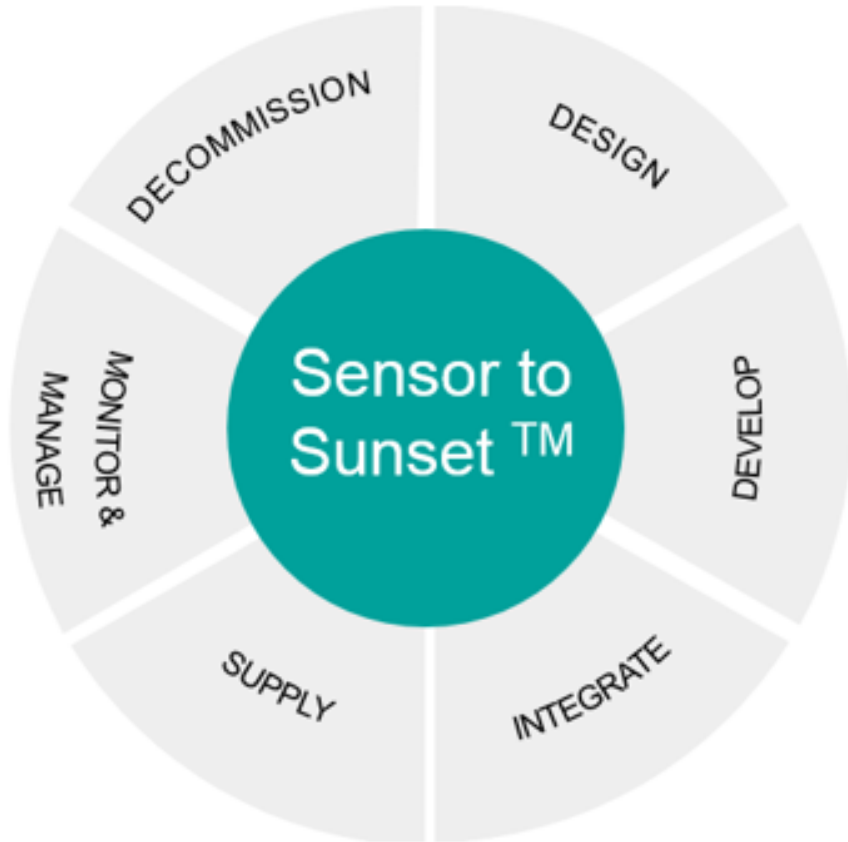
Aiden Mitchell  
Vice President, IoT Global Solutions



# Arrow – A Global Industry Leader



# Arrow IoT



## Mission

To offer a **complete** solution enabling businesses to deploy, manage, monitor, analyze and monetize secure connected devices throughout their entire lifecycle globally. **From Sensor to Sunset™**

# THE 3/4 DIMENSIONS OF DISRUPTION



3D PRINTING



ARTIFICIAL INTELLIGENCE



ADVANCED ROBOTICS



VIRTUAL REALITY



INTERNET OF THINGS

1. EMERGING TECHNOLOGY

D/

2. BUSINESS MODEL ENABLERS

CLOUD SERVICES

MINIATURISATION OF SENSORS

COMPUTER POWER

API ECONOMY

CROWDFUNDING

OPEN SOURCE

FREEMIUM

3. EXPONENTIAL ADOPTION CURVES



The intersection and interaction of Emerging Technologies, Innovative New Business Models, and Exponential Adoption Curves is leading to large scale disruption of industries at an unprecedented rate.



4. Supply Chain

# Solving for Great Business Outcomes



**Operate more efficiently:** *IoT enables companies to operate more efficiently and improve internal business processes - saving time, resources and money while improving productivity.*

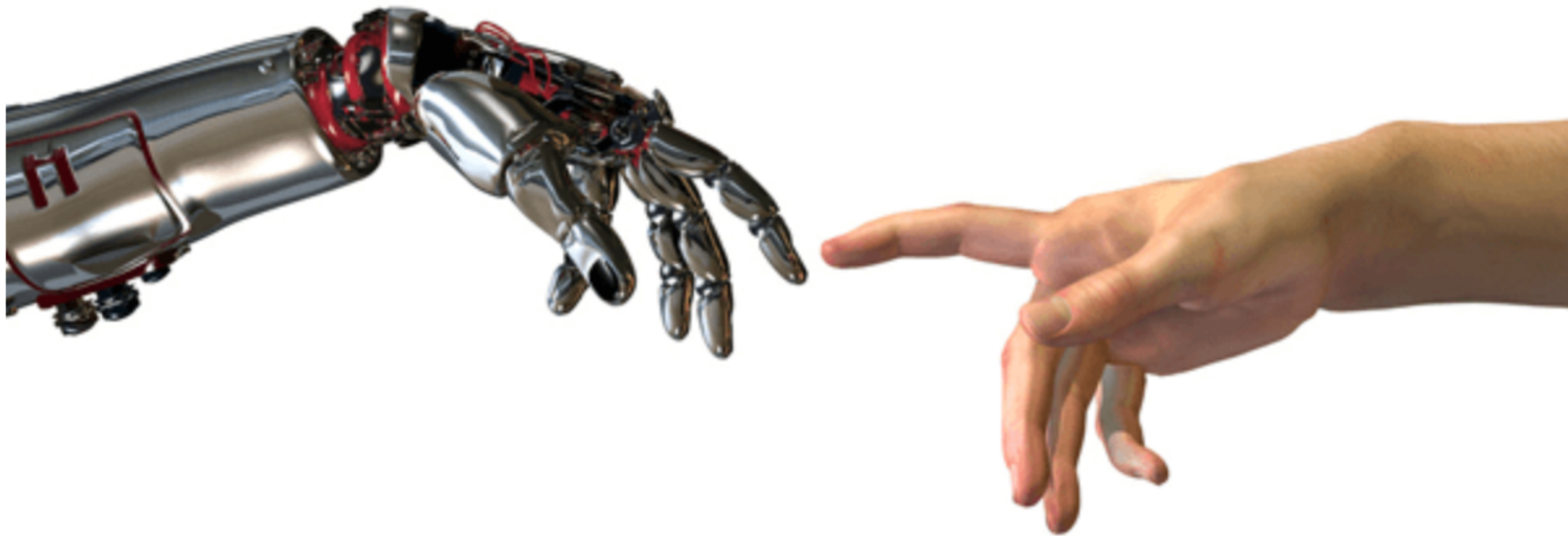


**Enhance the customer experience:** *Companies utilize insights generated from physical objects to tailor the customer experience and ultimately increase customer satisfaction and loyalty.*



**Add new revenue streams:** *Companies are seeking to grow their business by introducing new, differentiated and innovative solutions (products and services) to the market.*

# Where is Disruption in Your World?



# Saving our Vaccines

## Moving to Colorado!

### Bio-Medical refrigerator

#### Health issue and safety risk

Some medication must be kept at a specific temperature in order to maintain its efficiency. This is why pharmacists are responsible for keeping a log of temperatures daily. Failure to do so may put them in a bad position legally. Furthermore, if a power failure was to happen during the night, someone need to be warned as soon as possible in order to take action.

A DASBOX helps the pharmacists do just that. It monitors the temperature of the bio-medical refrigeration units. It will send the pharmacist a monthly report of normal situations and send him an SMS or an email in the case that something is wrong within his refrigeration unit.

DASBOX cool

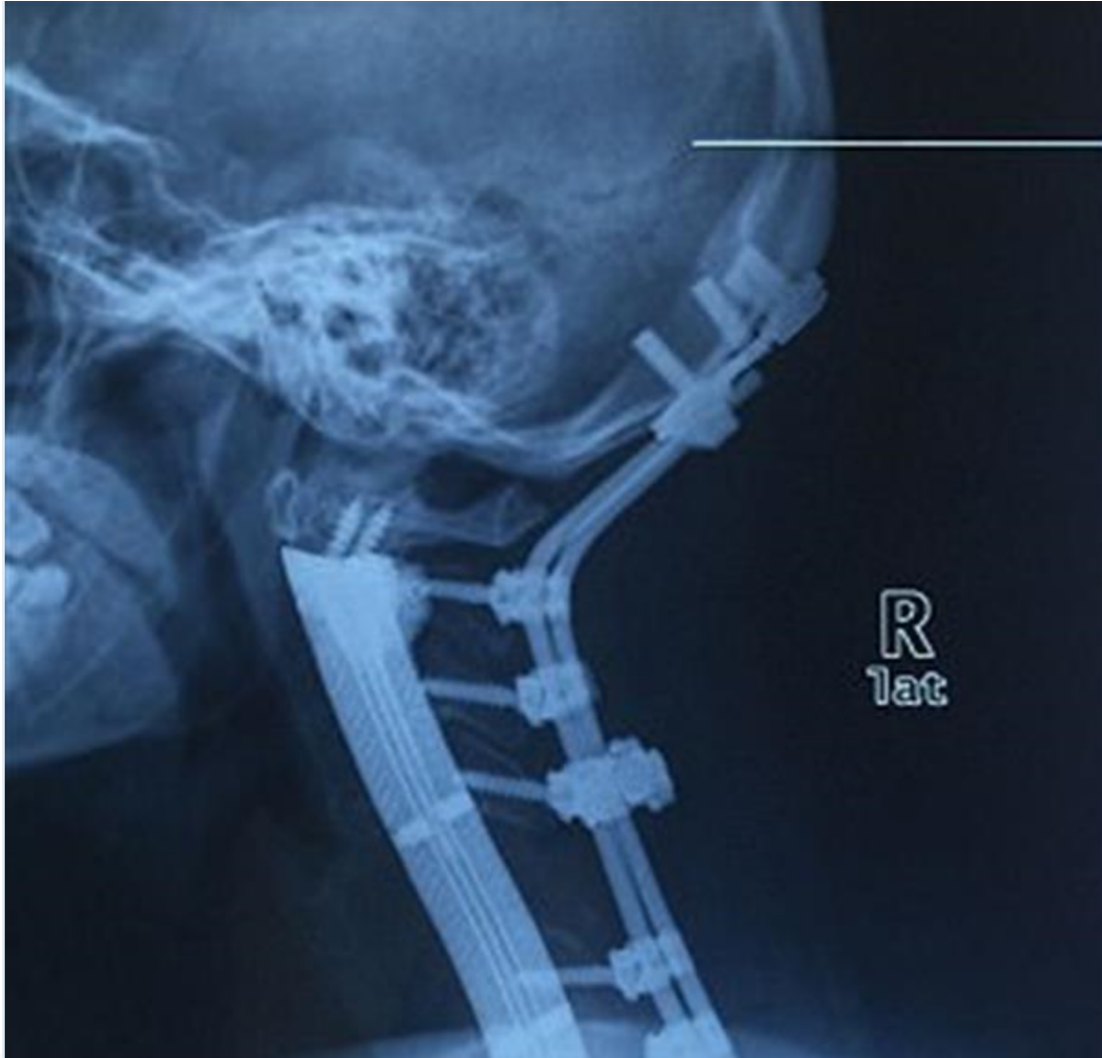
DAS  
BOX

10 data types  
3G gsm &  
LoRa network  
weatherized  
made for  
the cool supply  
chain



Vibration Displacement Temperature Humidity Barometric Pressure Geolocation Shock

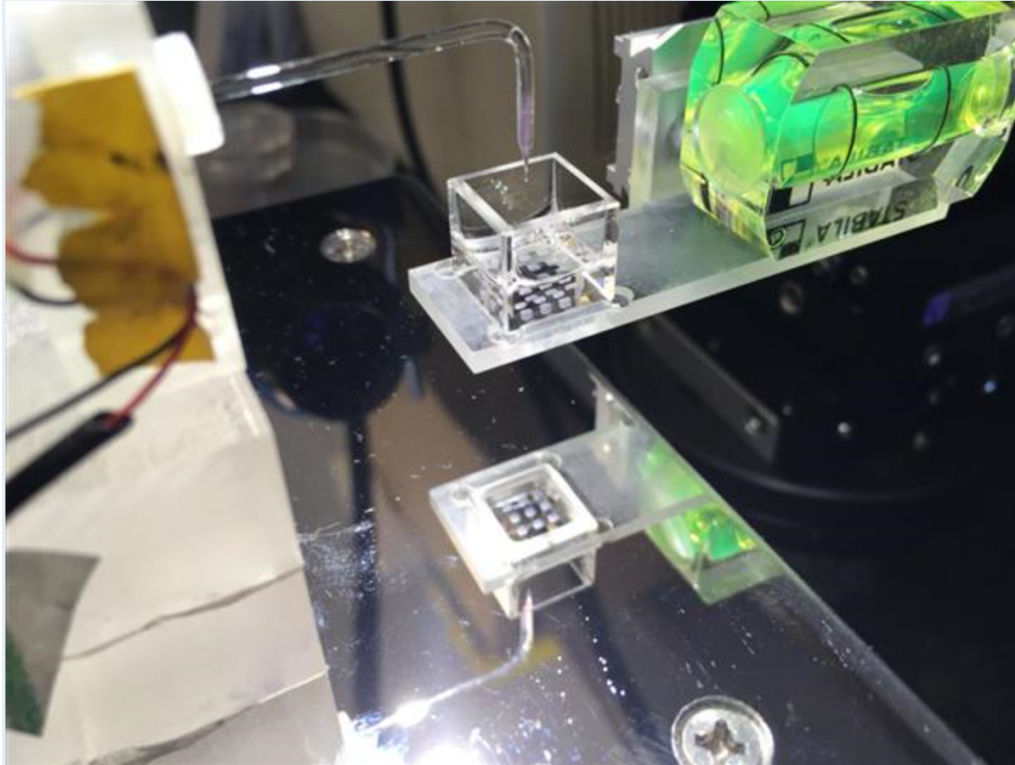
# 3D printed bones



This August, doctors at Shanghai Changzheng Hospital successfully carried out a complex vertebra replacement using 3D printed bones. 28 year old Xiao Wen had developed bone cancer in her neck, but an appropriate replacement implant was unavailable. Instead, doctors decided to create a 3D printed replica of the bone using titanium alloy.



# Bio Printed Organs



A team at Oxford University recently revealed a droplet based 3D printing technique that enables the growth of living structures from lab grown cells. This could be used to repair or replace damaged human organs, reduce the need for animal testing and improve the effectiveness of drugs.

# Brain to Computer Interfaces



Earlier this year, Elon Musk's medical research company Neuralink announced the development of neural lace technology. The product is essentially a brain implant which connects the mind to a computer via electrodes, letting humans upload and download content. It's almost impossible to imagine the possibilities of connecting our brains to computers. Nonetheless, other organisations are also working on the technology, including Facebook, the University of California and startup Kernel.

# Replica Nose



In the Netherlands, The eNose Company has developed a replica human nose that can successfully carry out 'artificial olfaction' – in other words, smelling without a real biological nose. Applications include screening diseases through body odour analysis and equipping law enforcement teams with the nasal sensitivity of sniffer dogs.

# Bionic Eyes



Ocumentics Technology Corporation is a company with a clear vision; sight without the need for glasses or contact lenses. In future, as Augmented and Virtual Reality see wider adoption, similar solutions may be developed using these mediums.

# Exoskeletons



**ReWalk**<sup>™</sup>  
*More Than Walking.*

Robotic exoskeletons are wearable machines that fit around the user's body. They have been used by the military to improve limb performance, enabling the wearer to pick up heavy objects effortlessly. Outside of the military, exoskeletons have found a noble application in healthcare. ReWalk Robotics, for example, designs exoskeletons for those suffering from paraplegia or spinal cord injuries in their lower bodies, giving them the ability to walk again.

# Fitbit. The Health Company.





One of the Largest Health  
and Fitness Databases

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82M

hours of heart  
rate data

79T

steps

5B

nights  
of sleep

160B

hours of exercise  
tracked

# Inspiring Behavior Change that Leads to Real Results



70% of daily Aria users lost weight in first 6 months

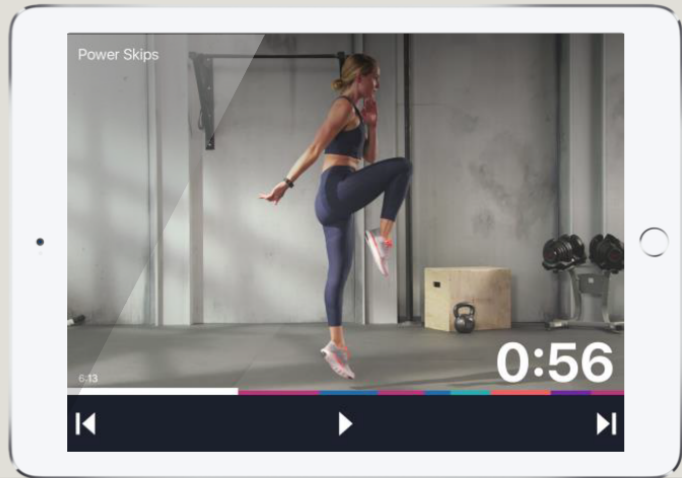
70% of low activity users moved more after two weeks of using Reminders to Move

2,000 more steps per day when participating in a Challenge

700 more steps per day by users with at least one friend



# Personalized Guidance and Coaching Offering



## Fitbit Coach

AVAILABLE

FALL

(5 LANGUAGES)



## Audio Coaching

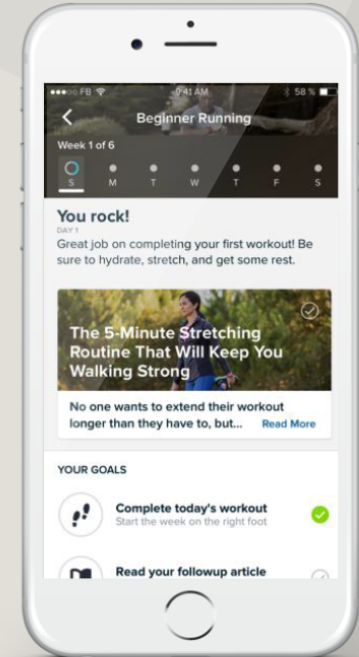
AVAILABLE WITH FITBIT COACH

FALL

(3 LANGUAGES)

AVAILABLE ON FITBIT IONIC

2018



## Guided Health Programs

AVAILABLE IN THE FITBIT APP

WINTER

(ENGLISH)

# Driving Positive Returns for Employers, Health Plans and Health Systems

1,300 Enterprise  
customers in 2016

70 of Fortune 500

2.6 million Fitbit users have  
connected their data into  
population health and health  
management platforms



Ditch the Egos.  
External Focus.



Create a Strong Strategy Team  
+ Collaborate



Learn about and Leverage your  
Ecosystem



# Thank You



**DSEDP selected Arrow as lead IoT Technology Advisor for Colorado Smart Cities Alliance**



**Arrow ranked 7<sup>th</sup> in Top IoT Implementers Classification by PYMNTS.com**



**Arrow Electronics partners with IBM to grow IoT business in APAC**



**Newly Launched Arrow Open Lab at Science Park Drives the Pursuit of Innovation in Hong Kong.**



**Arrow Electronics' IoT Program Demonstrates Distributors' Value in the 3rd Platform,**



**Arrow introduces single billing service to reduce IoT complexity**



**Arrow introduces services to monitor and manage connected devices**