



# The Internet of Healthy Things

Joseph Kvedar, MD

October 29, 2015

## Praise for The Internet of Healthy Things™

No one has done more to power the creation of new models of healthcare delivery than Joe Kvedar and his colleagues at Partners HealthCare...

– *Harry L. Leider, MD, MBA, Chief Medical Officer and Group Vice President, Walgreen Company*

Long before anyone had even heard the term “connected health,” Joe Kvedar was hard at work inventing this new field. The Internet of Healthy Things is packed with real-world information, clinical care models and practical guidance to fuel the disruption of healthcare delivery.

– *Gregg Meyer, MD, Chief Clinical Officer, Partners HealthCare*

Joe Kvedar provides entrepreneurs, innovators and investors with a roadmap for innovation that is grounded in practical business terms and clinical gravitas, while emphasizing the need for personalization and an understanding of human behavior. Anyone who wants to make an impact in the digital health space should read this book.

– *Halle Tecco, Founder and Managing Director, Rock Health*

Joe Kvedar is one of the greatest HIT influencers of our generation. He has the rare ability to envision our future in this non-linear era and convene world-class thought leaders in Boston each year. This book captures the vision and wisdom of a landmark healthcare pioneer.

– *Andrew R. Watson, MD, MLitt, FACS, FACHE, Chief Medical Information Officer, International and Commercial Services, University of Pennsylvania Medical Center; Medical Director, UPMC Telemedicine*

Today, we are at the cusp of technology shaping health and wellness for millions. Seeing the future of care delivery through Joe Kvedar’s eyes is an epiphany. The Internet of Healthy Things is leading the way forward and I encourage us all to get on board today.

– *Krishna Yeshwant, MD, MBA, Investor*

THE INTERNET OF HEALTHY THINGS™

JOSEPH C. KVEDAR, MD

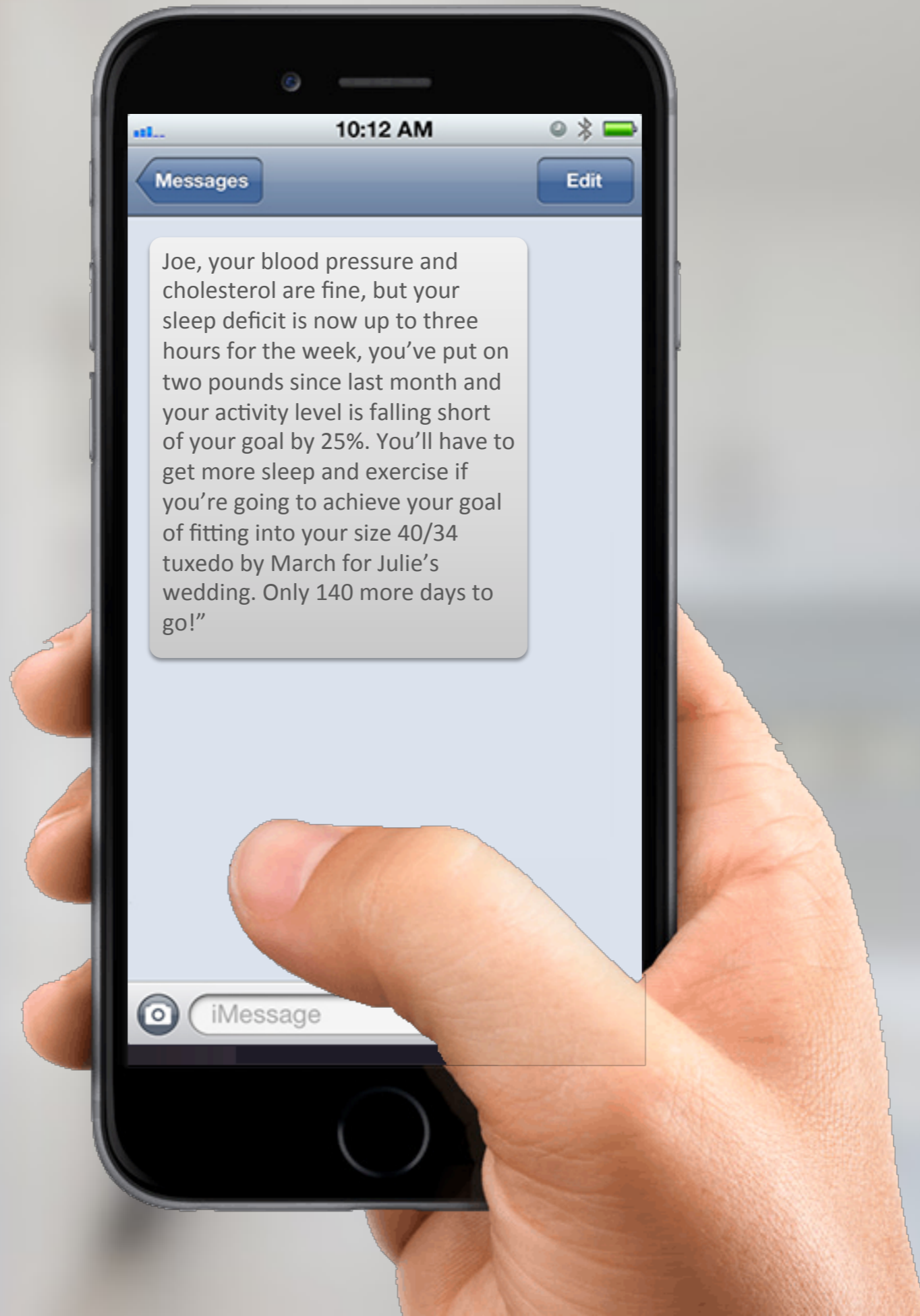
# THE INTERNET OF HEALTHY THINGS™



**JOSEPH C. KVEDAR, MD**

Carol Colman • Gina Cella

Forward by Harry L. Leider, MD, MBA  
Walgreen’s Chief Medical Officer



10:12 AM

Messages

Edit

Joe, your blood pressure and cholesterol are fine, but your sleep deficit is now up to three hours for the week, you've put on two pounds since last month and your activity level is falling short of your goal by 25%. You'll have to get more sleep and exercise if you're going to achieve your goal of fitting into your size 40/34 tuxedo by March for Julie's wedding. Only 140 more days to go!"



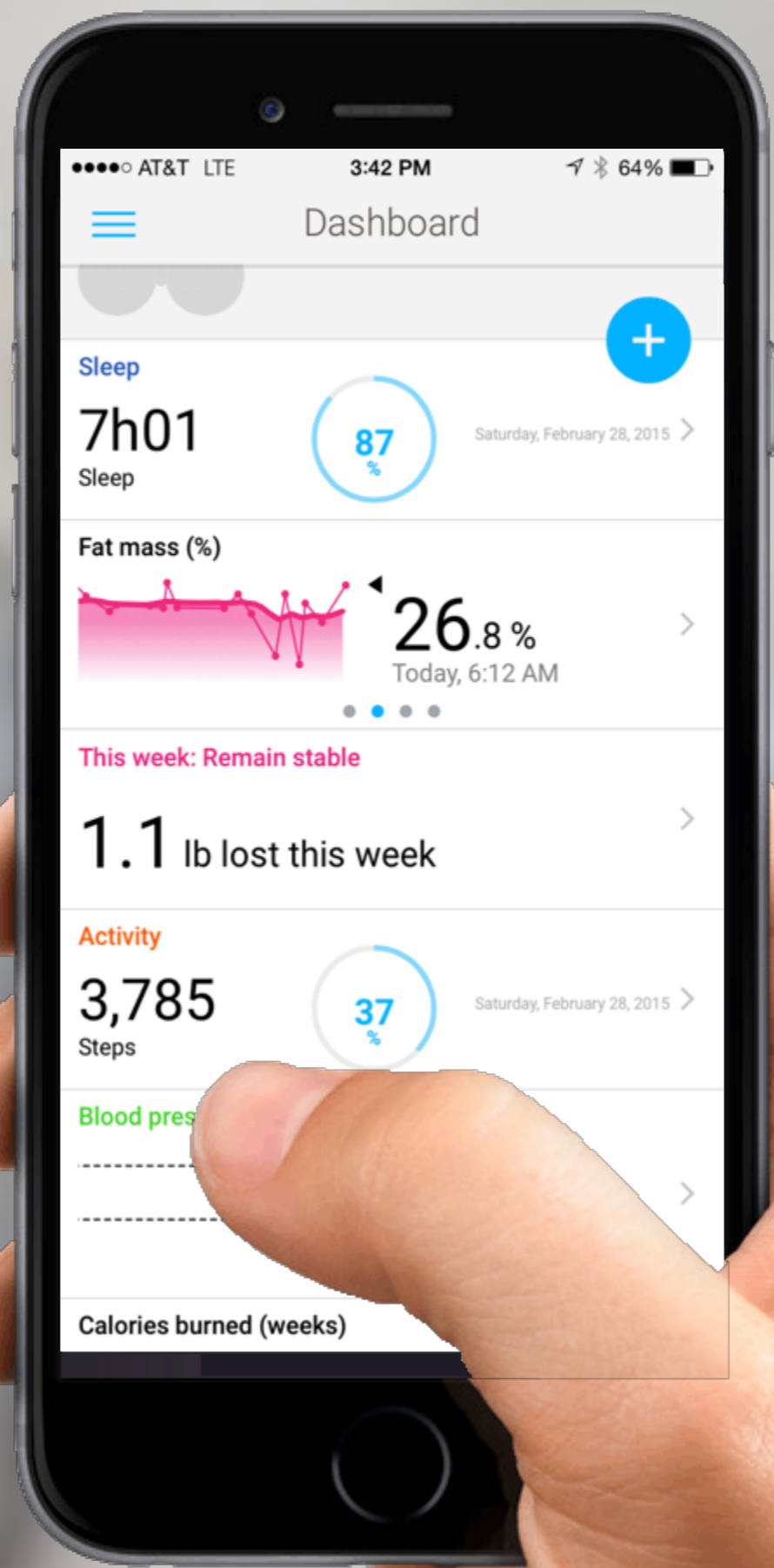
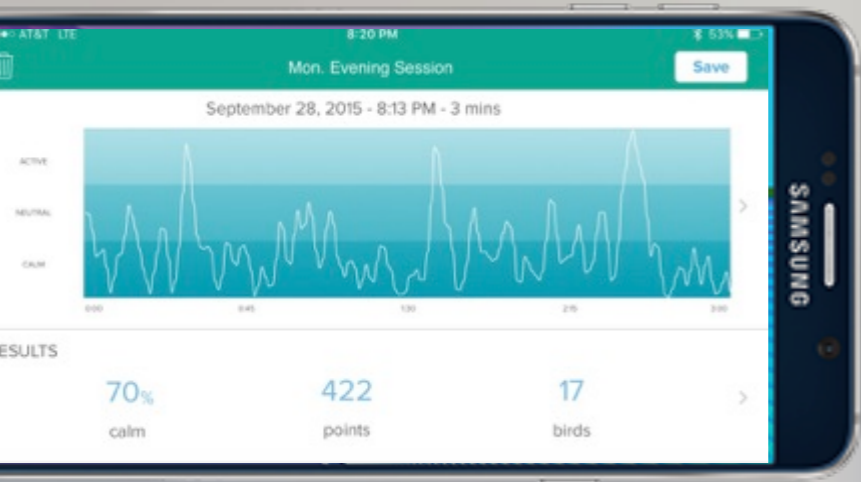
iMessage

# Sam reminds me of choices



VS

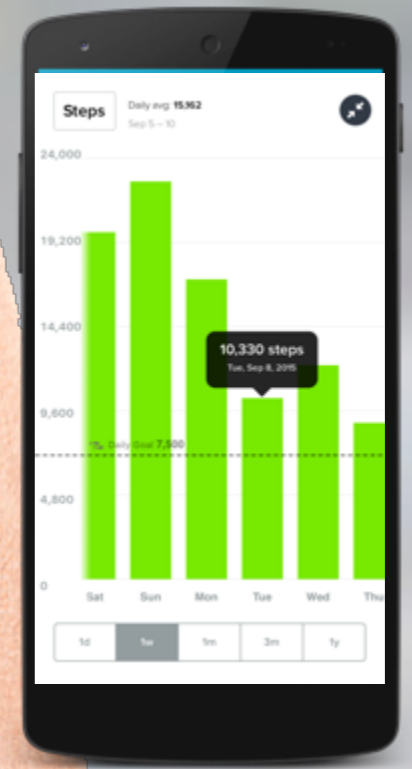
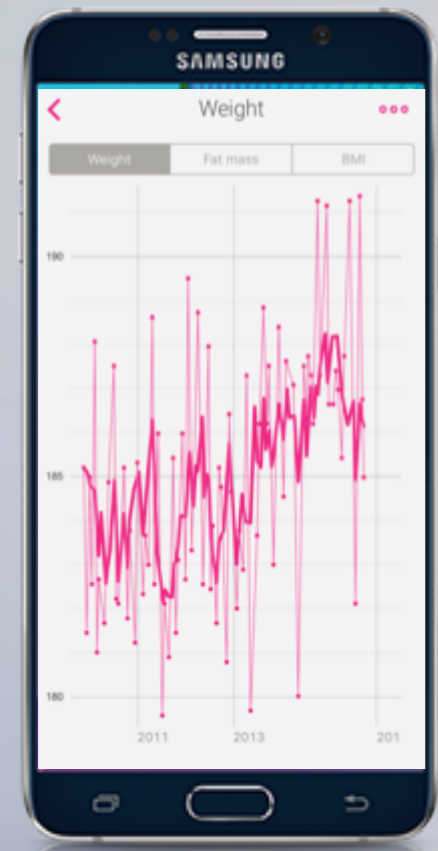
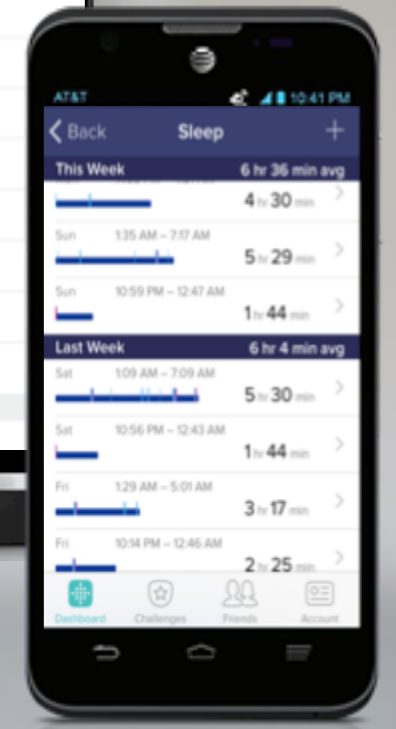


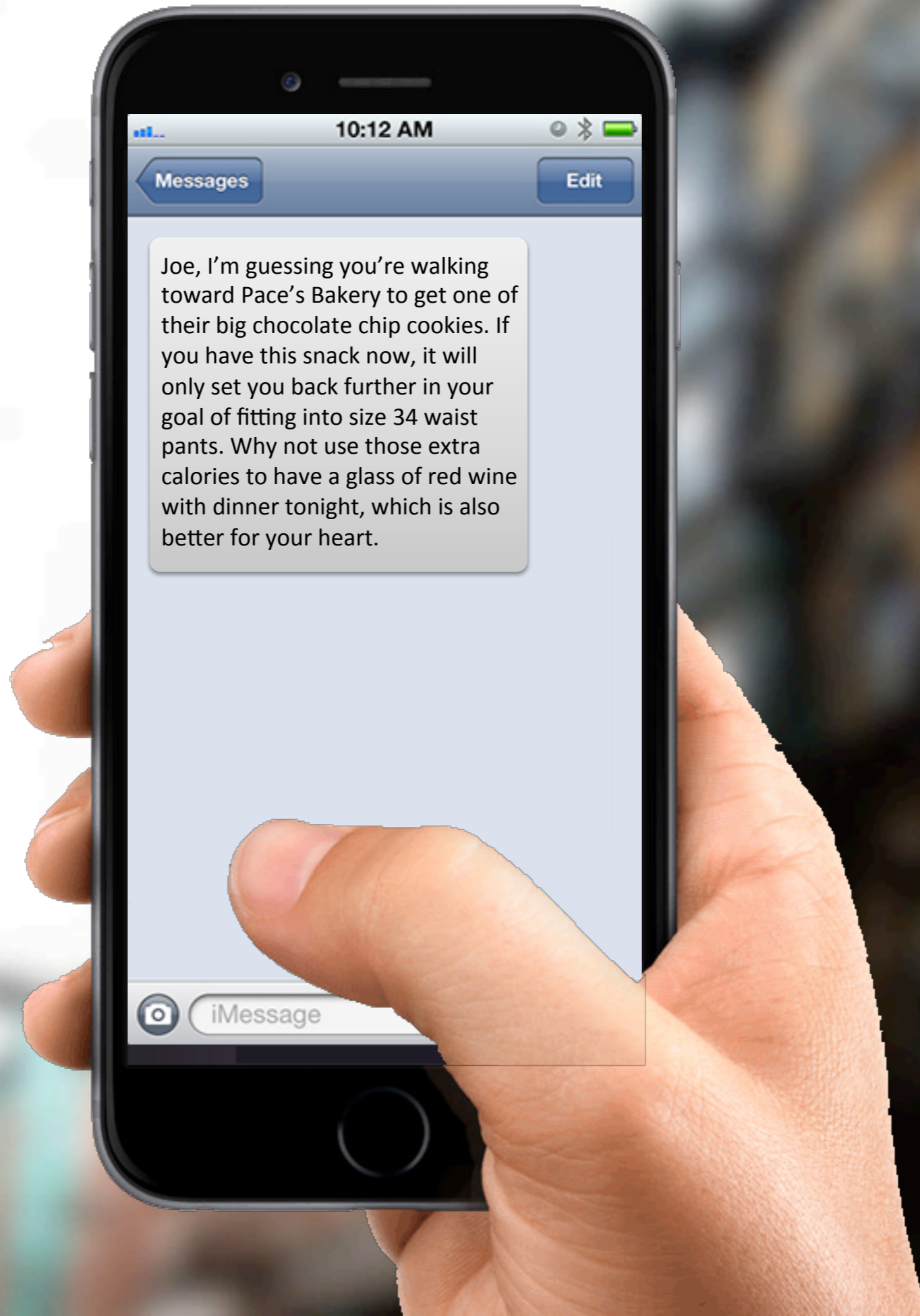


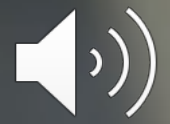
SONY 10:35

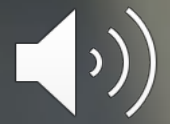
Weight	Fat mass	BMI
September 2015		
185.0 lb	26.5%	
Sep 26, 2015, 6:29 AM		
186.1 lb	25.5%	
Sep 25, 2015, 4:27 AM		
186.5 lb	25.1%	
Sep 23, 2015, 4:26 AM		
185.5 lb	26.5%	
Sep 18, 2015, 5:12 AM		
186.7 lb	25.5%	
Sep 15, 2015, 4:24 AM		
186.7 lb	23.5%	
Sep 9, 2015, 4:24 AM		
184.5 lb	25.2%	
Sep 4, 2015, 4:38 AM		
188.7 lb	19.5%	
Sep 2, 2015, 11:32 AM		
184.7 lb	25.2%	
Sep 1, 2015, 4:36 AM		
August 2015		
184.4 lb	26.5%	

XPERIA









Messages

Edit

10:12 AM

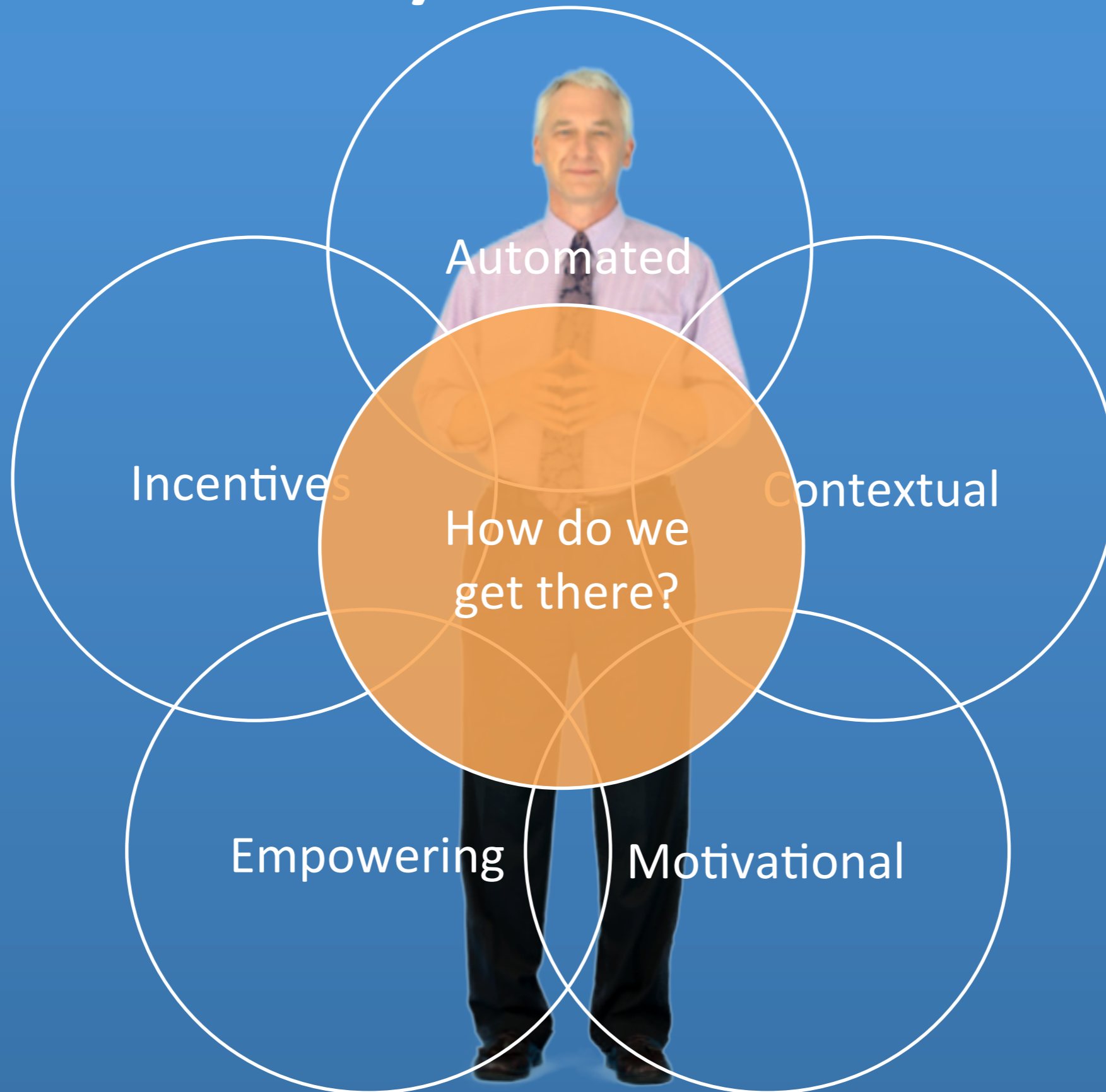
Joe, have you thought about taking up swimming again? I have a coupon from the Boston Sports Club two blocks from your office offering a six-month membership at half price. On top of that incentive, there are five other people in your online social network considering this opportunity, I see three time slots each week when you could meet at least one of them for a swim. You don't have to make up your mind right now, just think it over."



iMessage



# The (near term) future



# Automating Healthcare



Data

Aggregation/  
Normalization

New Sensors



Analytics



Engagement

# Automating Healthcare



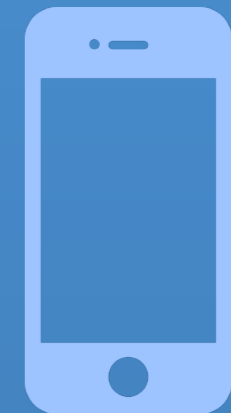
Data

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Engagement

# Validic



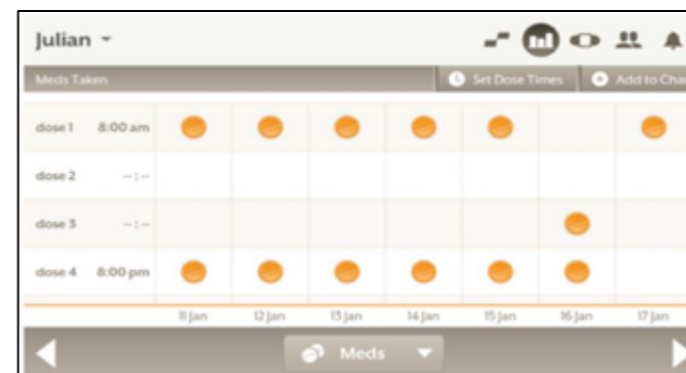
# Spire



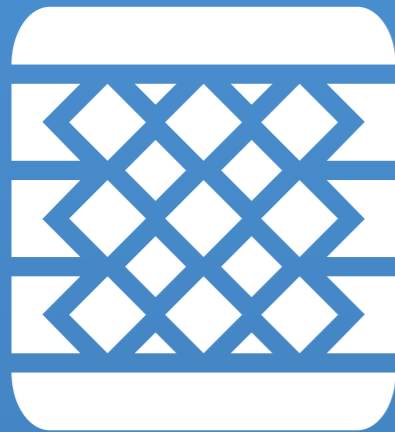
# Muse



# Proteus



# Business opportunities remaining



Normalization



Frictionless  
data capture



Integration



# Automating Healthcare



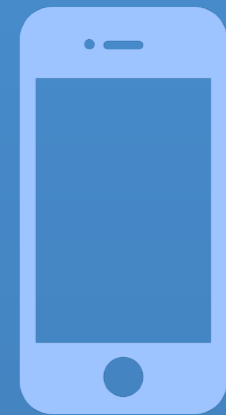
Data

Aggregation/  
Normalization

New Sensors



Analytics



Engagement

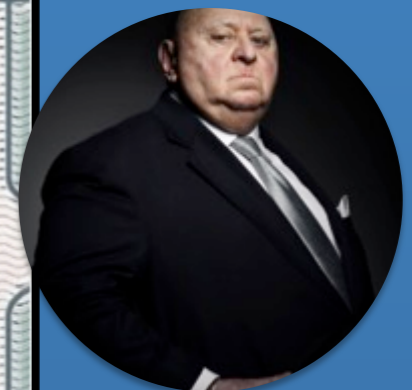
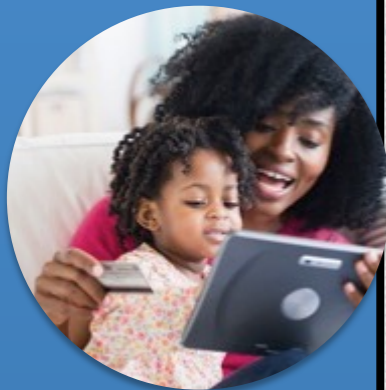
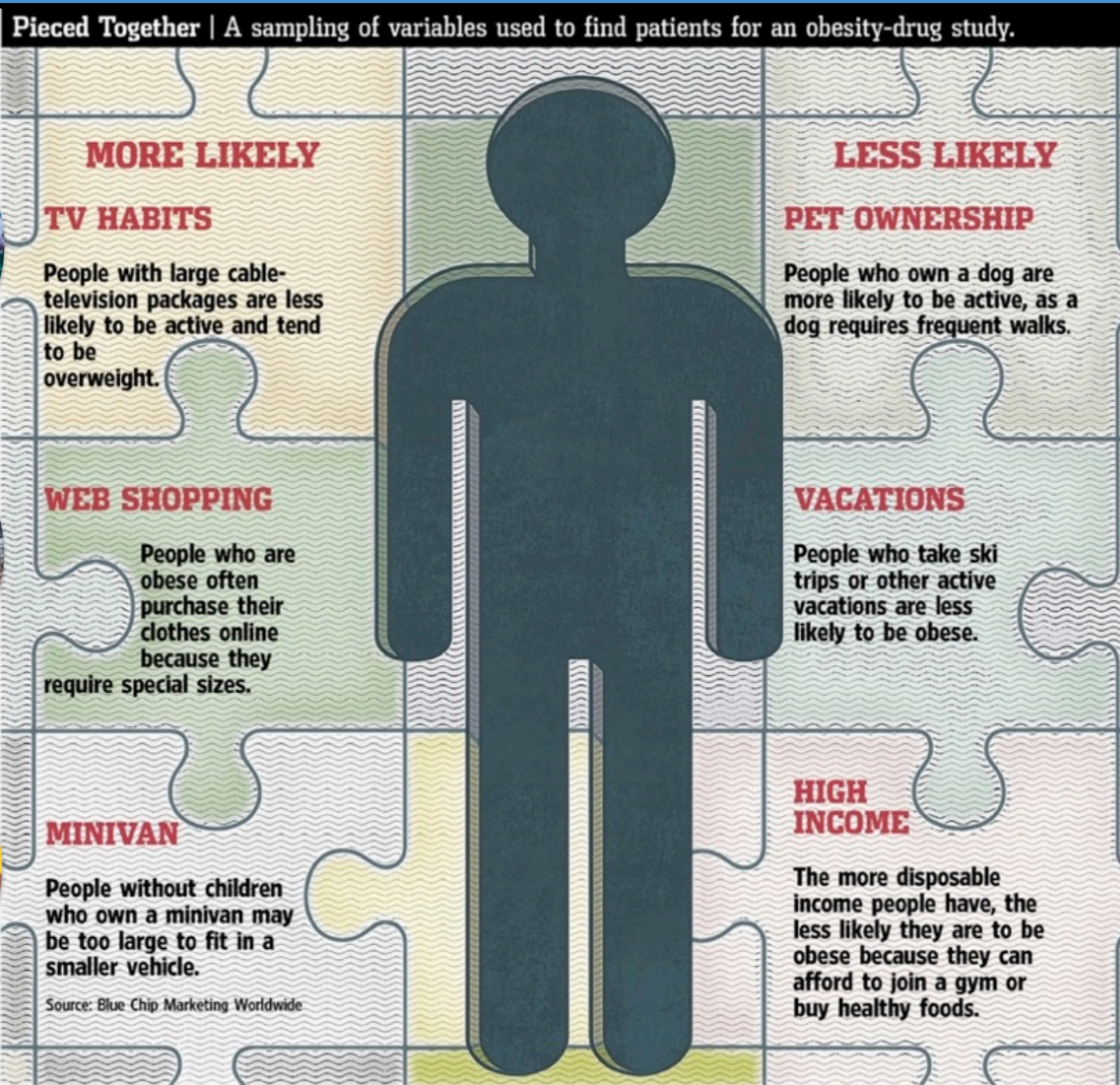
# The state of the art of predictive analytics



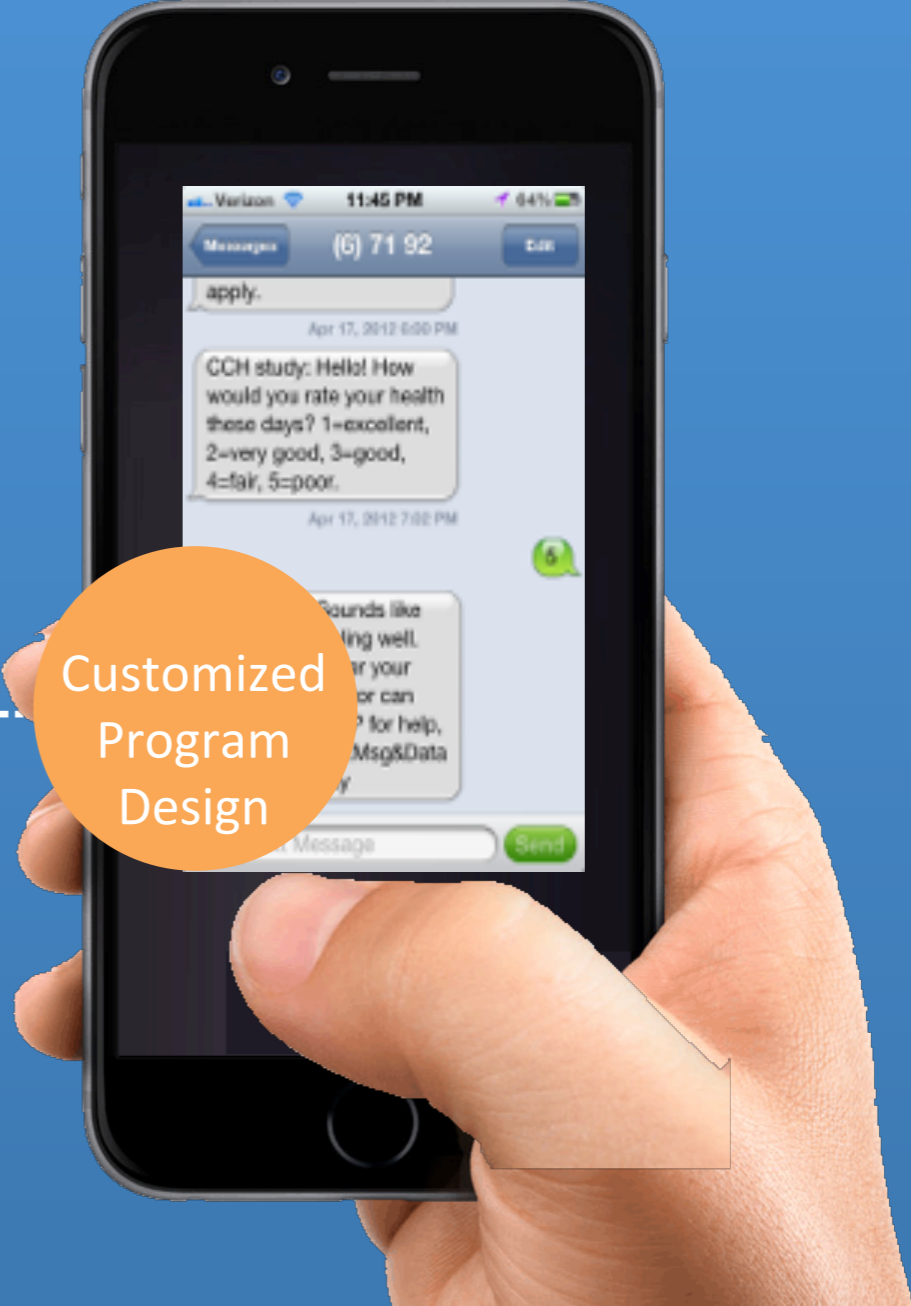
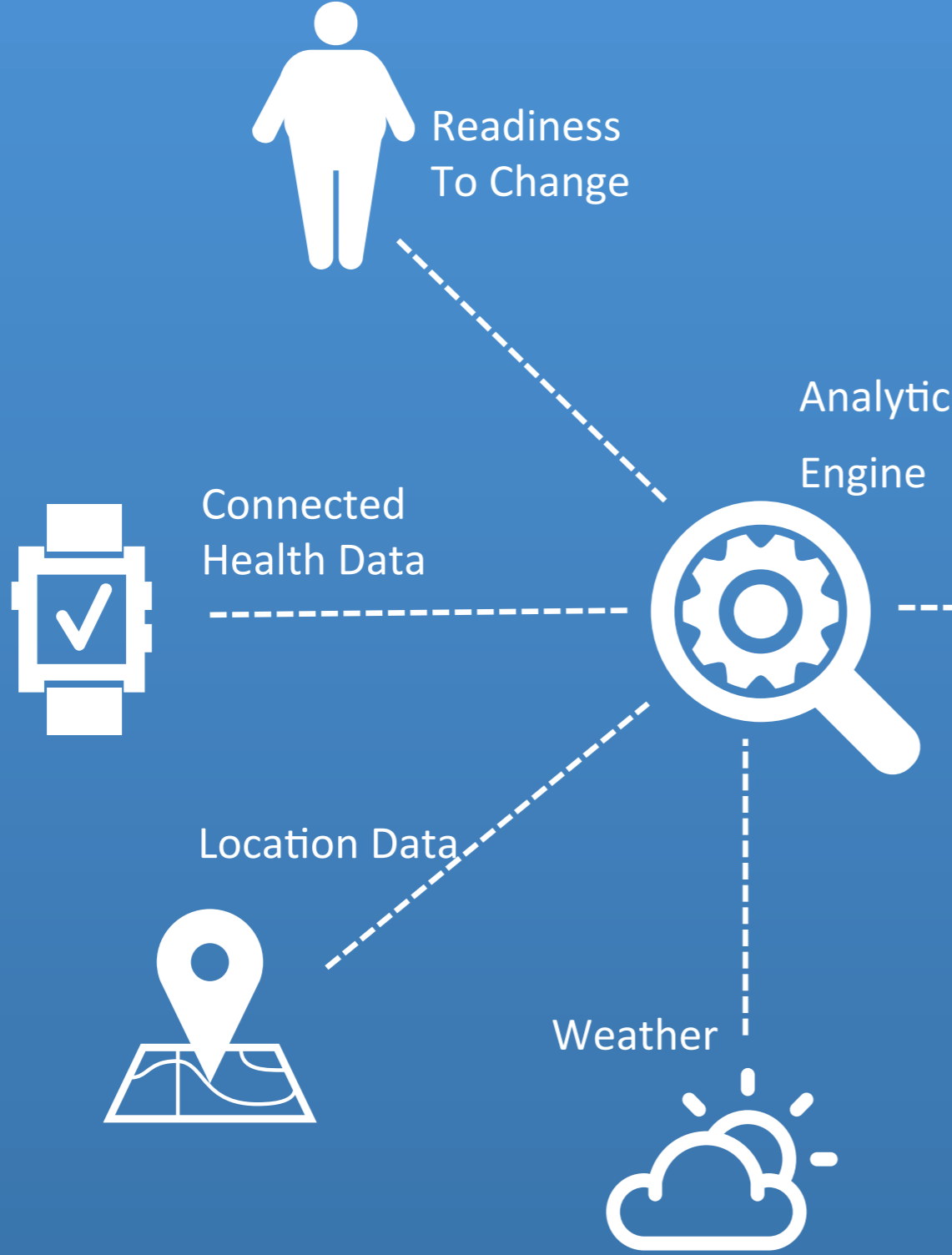
“a sudden uptick in how often family members contact their health plan about caregiver support and the available benefits is often a good indicator of impending acute risk”

“ The magazines that you read—whether you subscribe to *Runners Daily* or *Barbecue Daily*—say a lot about you”

# How Big is Big Data?



# Data driven health messaging



# Business opportunities remaining



For healthcare it is not good enough to say “people like Joe did X, therefore, Joe will likely do X”

We have to take predictive analytics down to the individual level

# Automating Healthcare



Data Aggregation/  
Normalization

New Sensors



Analytics



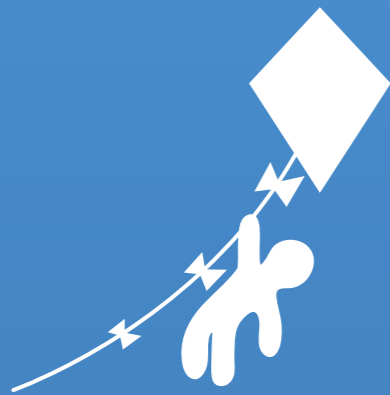
Engagement

# Keys to engagement



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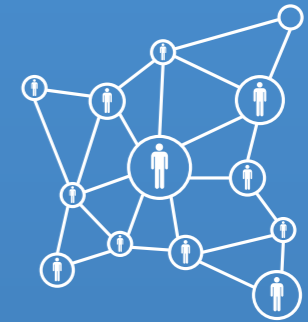
## Strategies



Make it about life



Make it personal



Reinforce social connections

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## Tactics



Employ subliminal messaging



Use unpredictable rewards



Use the sentinel effect

# Omada Health



omada

OUR SOLUTION   OUTCOMES   ABOUT US   NEWS   [CONTACT US](#)

We help employers and health plans tackle *chronic disease* in the most engaging, effective, and scalable way possible.

[SEE HOW IT WORKS](#)   [REQUEST DEMO](#)

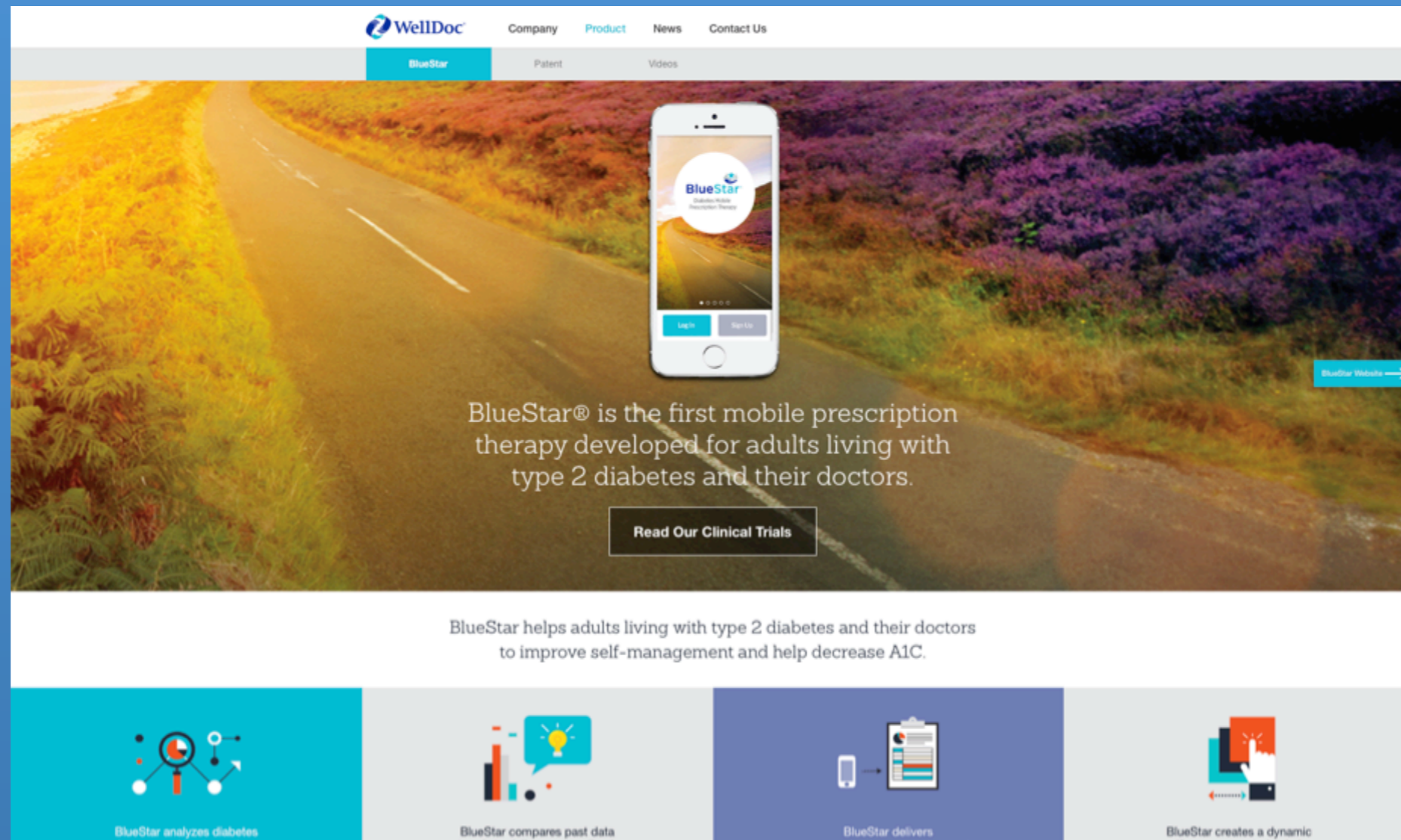
NEWS: Omada Health Raises \$48 Million to Fight Obesity-Related Chronic Disease.   [READ MORE](#)   [×](#)

THE PARTICIPANT EXPERIENCE

Prevent is a 16-week online digital health program that coordinates everything *people at risk for chronic disease* need to embrace lasting change.



# Well Doc



The screenshot shows the WellDoc website with a navigation bar containing 'WellDoc', 'Company', 'Product', 'News', and 'Contact Us'. Below this is a secondary bar with 'BlueStar', 'Patent', and 'Videos'. The main content area features a large image of a smartphone displaying the BlueStar app interface, set against a background of a winding road through a field of purple flowers. Text below the image reads: 'BlueStar® is the first mobile prescription therapy developed for adults living with type 2 diabetes and their doctors.' A button labeled 'Read Our Clinical Trials' is positioned below the text. To the right of the image is a 'BlueStar Website' link with a right-pointing arrow. Below the main image is a white banner with the text: 'BlueStar helps adults living with type 2 diabetes and their doctors to improve self-management and help decrease A1C.' At the bottom, there are four feature cards: 1. 'BlueStar analyzes diabetes' with a network diagram icon. 2. 'BlueStar compares past data' with a bar chart and lightbulb icon. 3. 'BlueStar delivers' with a smartphone and clipboard icon. 4. 'BlueStar creates a dynamic' with a hand pointing to a screen icon.

# Business opportunities remaining



Consumer  
centric design



Fitting into  
every day life



Personalization



Sentinel effect



The cHealth Blog:  
[chealthblog.connectedhealth.org](http://chealthblog.connectedhealth.org)  
[www.partners.org/connectedhealth](http://www.partners.org/connectedhealth)

Annual Symposium:  
October 20-21 2016; Boston

LinkedIn Group:  
Connected Health Community

Twitter:  
[@connectedhealth](https://twitter.com/connectedhealth)  
[@jkvedar](https://twitter.com/jkvedar)

Contact me: [jkvedar@partners.org](mailto:jkvedar@partners.org)

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