



Developing Wearable Apps that Earn User Loyalty

Damian Roskill

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Damian Roskill

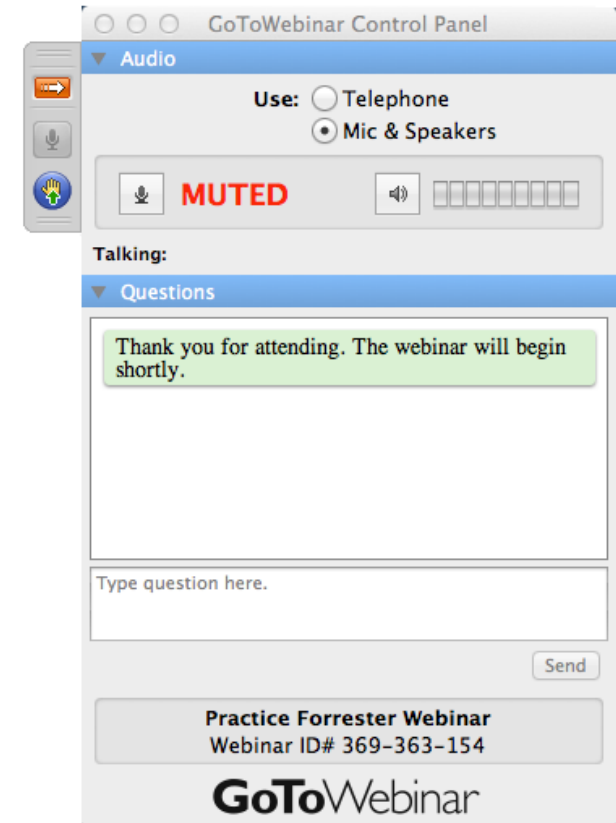
VP, Marketing

Applause, Inc

@droskill

droskill@applause.com

- **Today's webinar will be recorded. You will be emailed a link.**
- **Please enter your questions in the Question box. We will answer as many as possible at the end.**
- **If you're having technical difficulties, try logging in with a different browser.**
- **The Twitter hashtag for today's webinar is #applausewearables**



- **The state of wearable adoption**
- **Satisfying lofty user expectations**
- **The 5 biggest challenges of developing high-quality experiences**
- **Wearable testing best practices**
- **Q&A / upcoming customer experience webinar**

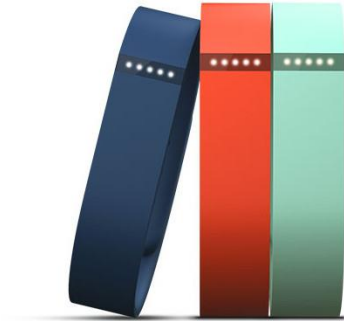






WEARABLES A FEW YEARS AGO





WEARABLES TOMORROW



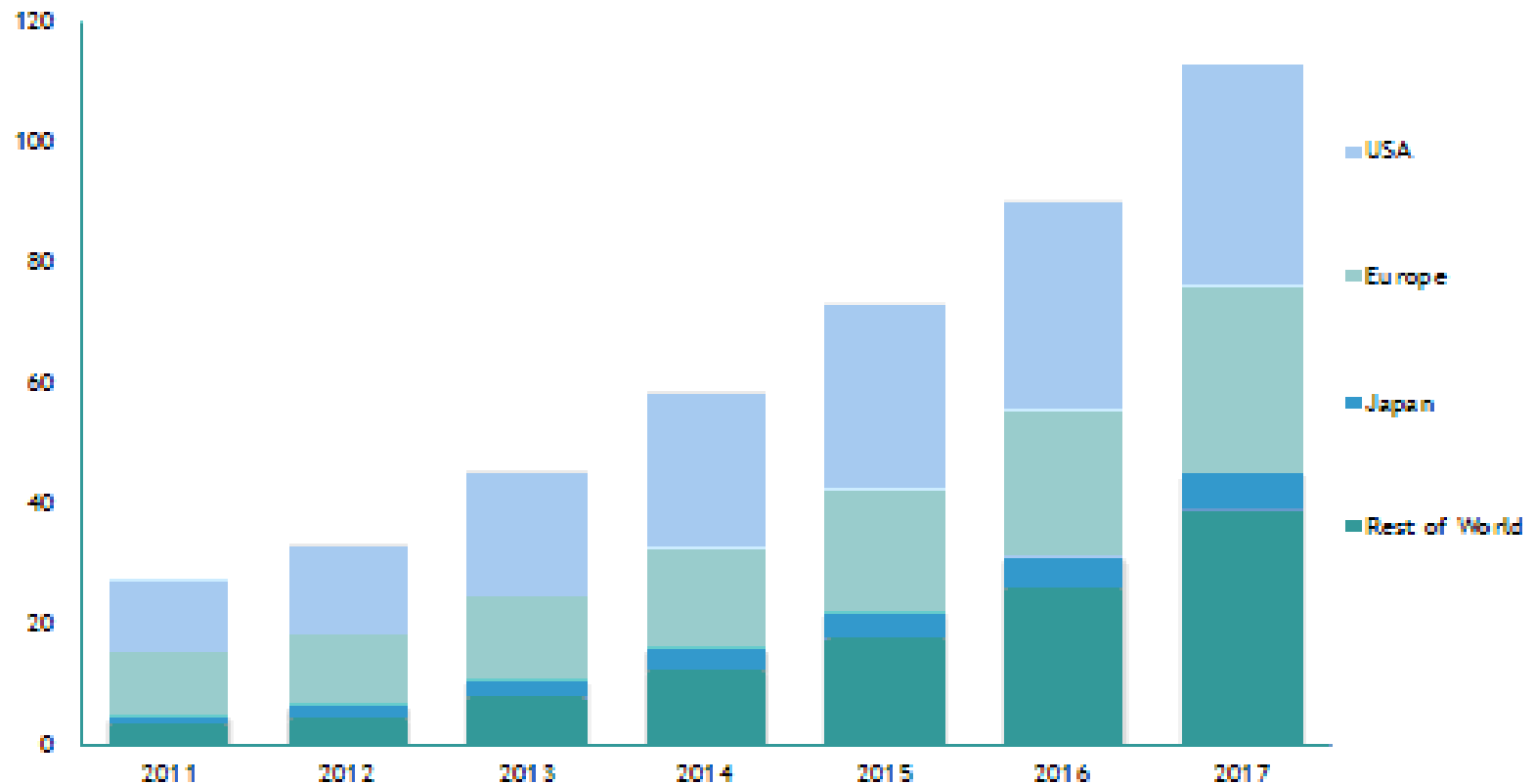


User Adoption of Connected Devices

WEARABLE TECHNOLOGY FORECASTS BY REGION

Comprises Wearable Fitness Devices, Smartwatches and Smartglasses

Volume (M Units)



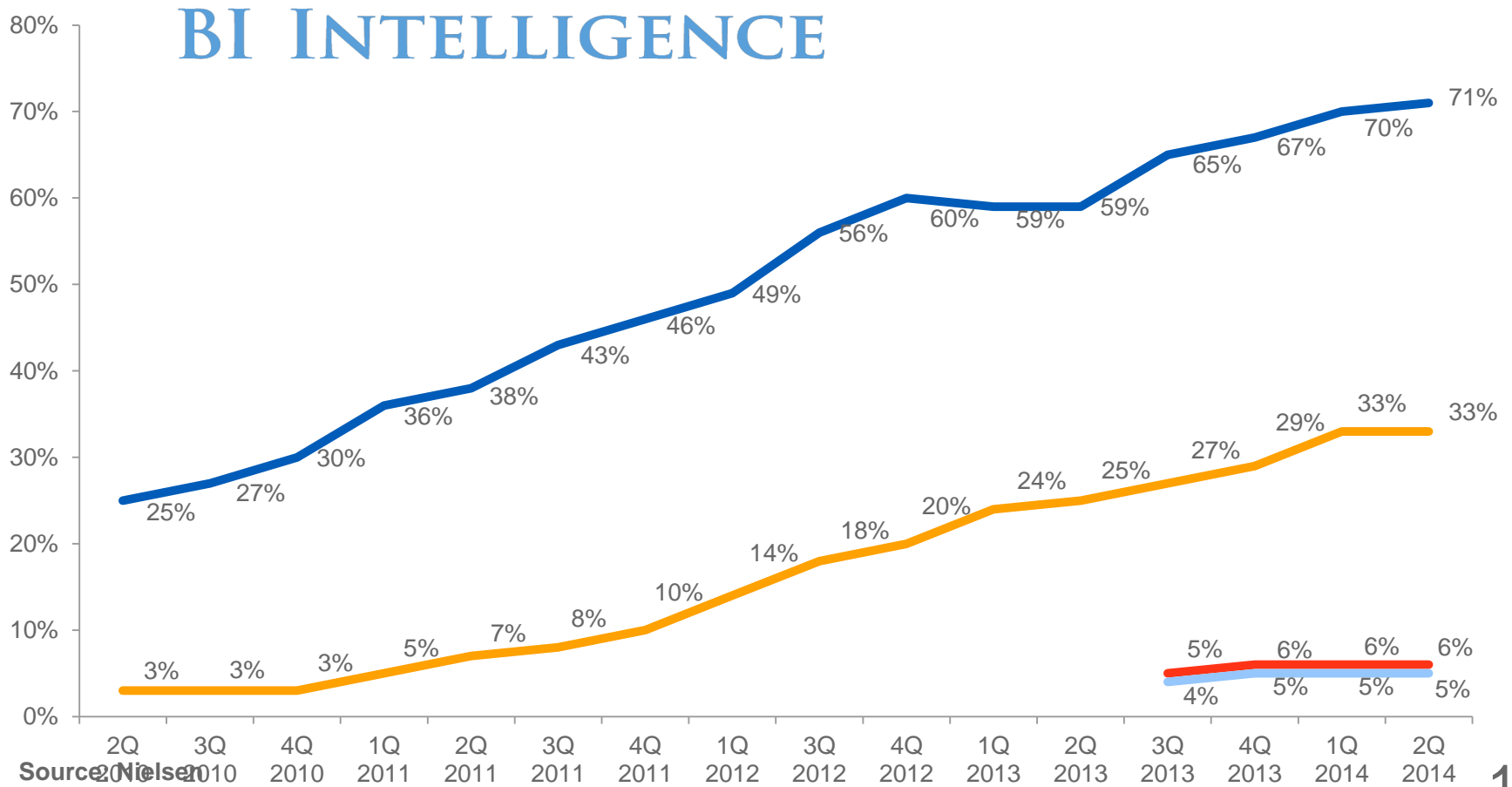
OR IS IT GROWING?

...



User Adoption of Connected Devices

Smartphone Tablet Cars Home/Wearables



theguardian

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Search

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[News](#) > [Technology](#) > [Wearable technology](#)

Wearables: one-third of consumers abandoning devices

Hundreds of Galaxy Gear smartwatches are listed on eBay barely six months after launch. Why isn't the wearable tech market taking off?



Charles Arthur

Follow @charlesarthur Follow @guardiantech
theguardian.com, Tuesday 1 April 2014 07:31 EDT

Jump to comments (167)

Shop by category

All

[Back to search results](#) | Listed in category: [Mobile Phones & Communication](#) > [Smart Watches](#)

Samsung Galaxy Gear Smart Watch Black



Item: **New**
condition:
Time left: 3d 11h (04 Apr, 2014 22:53:08 BST)

Current bid: **£0.99** (2 bids)

Enter £1.04 or more

Place bid

Add to Watch list

Add to collection

100% positive feedback

New condition

A UK eBay listing for a Samsung Galaxy Gear smartwatch: the seller says they got it free and don't want it. Photograph: Guardian

The advert was blunt: a second-hand Samsung Galaxy Gear smartwatch for sale, priced at "£100 ONO". For a device which cost £299 in September, surely that's a bargain?

Share 650

Tweet 1,844

+1 170

Share 589

Email



Technology

Wearable technology ·
Smartwatches ·
Smartphones · Software ·
Android · Google

Life and style

Fitness

More analysis

Crack the code to win a tour of the Science Museum



Win an all expenses paid trip to London and a tour of the new Information Age exhibition at the Science Museum, if you can crack the Morse code.

[Click here](#) to find out

Today's best video



Amateur footage shows ferocity of blizzard in Himalayas

Amateur footage shot by British hiker Paul Sheridan shows the deadly blizzard that engulfed Nepal's popular Annapurna trail in the Himalayas



'Sex toy' sculpture raises eyebrows

Inflatable sculpture causes stir in Paris for its resemblance to a sex toy



New dinosaur species remains discovered

Scientists discover the remains of a new species of dinosaur in Venezuela



The Judge, Northern Soul, Palo Alto and Citizenfour: Guardian film show

Our film critics review this week's releases

29 comments

AND PRICES ARE DROPPING FAST

ebay Shop by category ▼

galaxy Gear Smart Watches ▼

Refine your search for galaxy Gear

Categories

- Cell Phones & Accessories
- Smart Watches

Brand see all

- ☐ Samsung (857)
- ☐ Unbranded/Generic (32)

Band Color see all


- ☐ Black (78)
- ☐ White (15)

Compatible Operating System see all

Condition see all

- ☐ New (524)
- ☐ New other (see details) (125)
- ☐ Manufacturer refurbished (31)
- ☐ Seller refurbished (18)
- ☐ Used (238)
- ☐ For parts or not working (20)

Price

\$ to \$ 



Format see all

- ☒ All Listings (944)
- ☐ Auction (236)
- ☐ Buy It Now (776)

Item Location see all


- ☒ Default

All Listings Auction Buy It Now

Sort: Best Match ▼ View:  

All > Cell Phones & Accessories > Smart Watches

galaxy Gear 944 listings [+ Follow this search](#)




Samsung Galaxy Gear 2 Neo SM-R381 Smart Watch Heart Monitor - Charcoal Black


♥Unbeatable Price♥Trusted Seller ♥ Fast Free Shipping ♥


\$159.95

Buy It Now

Free shipping

 **FAST 'N FREE** - Est. delivery by Thu, Oct. 23

 Top Rated Plus




Beautiful Condition Galaxy Gear 2 SM-R380 Fitness Smart Watch - Silver/Black

\$192.50

4 bids

3m left (Today 7:14PM)


Est. delivery by Mon, Oct. 27



Samsung Mobile SM-V700 Galaxy Gear Digital Smartwatch Wrist Watch - Jet Black

****USA SELLER****FAST SHIPPING****TOP SELLER****


\$109.95

Trending at \$140.00 

Buy It Now

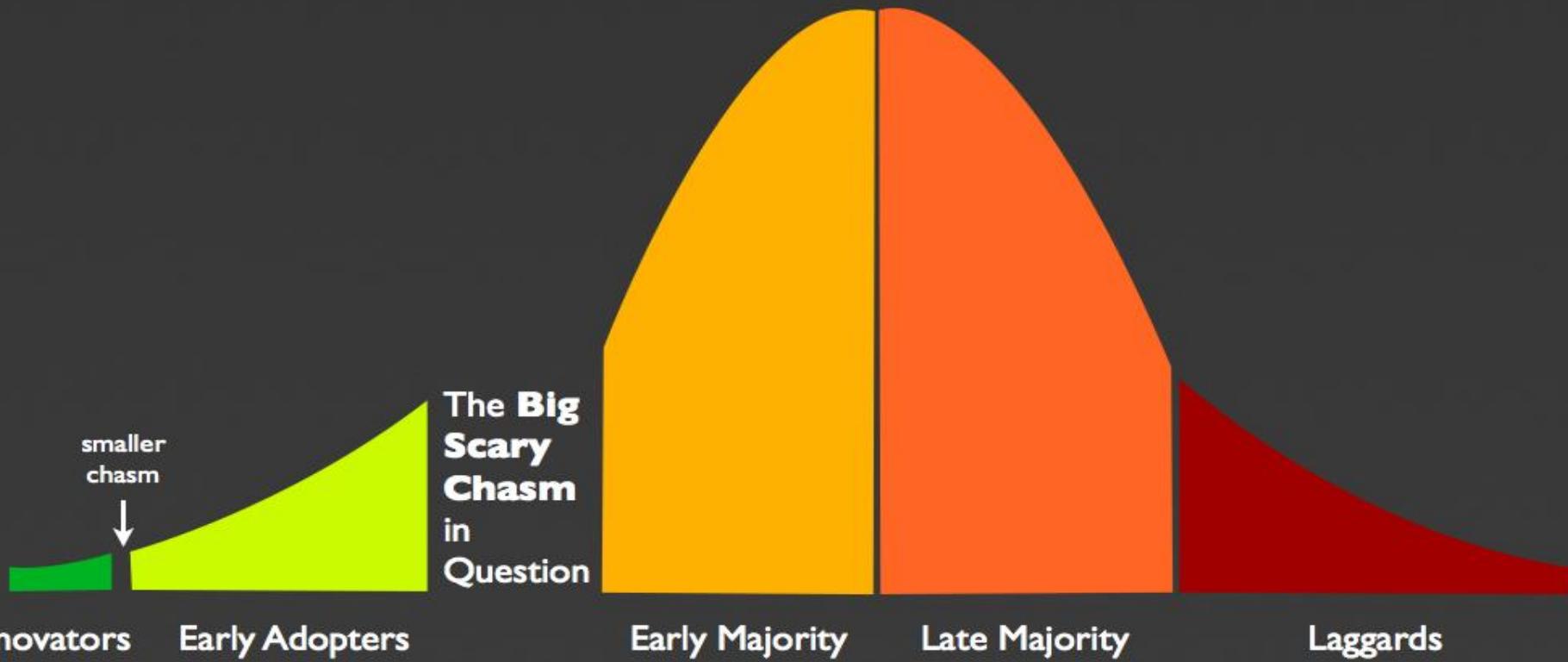
Free shipping

868 sold

 **FAST 'N FREE** - Est. delivery by Thu, Oct. 23

Crossing the Chasm

Geoffrey Moore - 1991



NOT LIKELY


...



**Aaron Levie** 

@levie

Lead Magician (and CEO) at Box (@boxHQ); Huge ABBA fan. I don't fully endorse anything I say below. Go 🇺🇸

 Palo Alto box.com Joined March 2007 Tweet to Aaron Levie 57 Followers you knowTWEETS
3,004FOLLOWING
497FOLLOWERS
138KFAVORITES
5,316

Tweets

Tweets & replies

Photos & videos

**Aaron Levie** @levie · 19h

Things to know when making conservative predictions about a new Apple product:

1. You will be wrong
2. It will be referenced forever



374



504

**Aaron Levie** @levie · Mar 14

With blogging, we had content creators and consumers. With live video, we'll have "people that have gone outside" and "people that haven't."



117



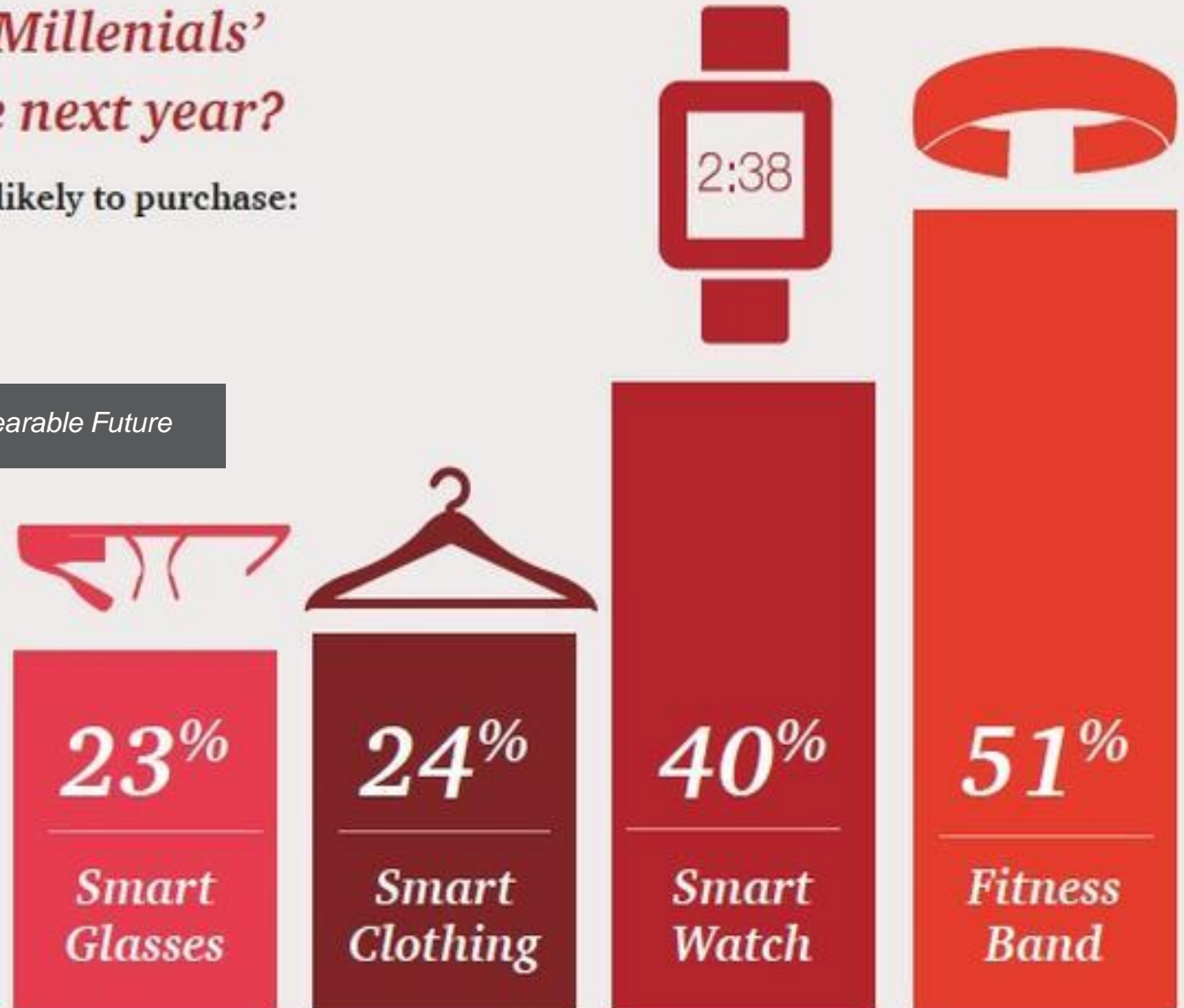
188



What's up with Millennials' purchases in the next year?

Percentage of Millennials likely to purchase:

PricewaterhouseCoopers' *The Wearable Future*



BUT IT IS GETTING HARDER



MANY WON'T MAKE IT



Joel Saget / Pool via Reuters

WHY



THE MAIN CHALLENGE



WEARABLES MUST DO MORE THAN JUST WORK

THEY HAVE TO DELIGHT YOUR USERS



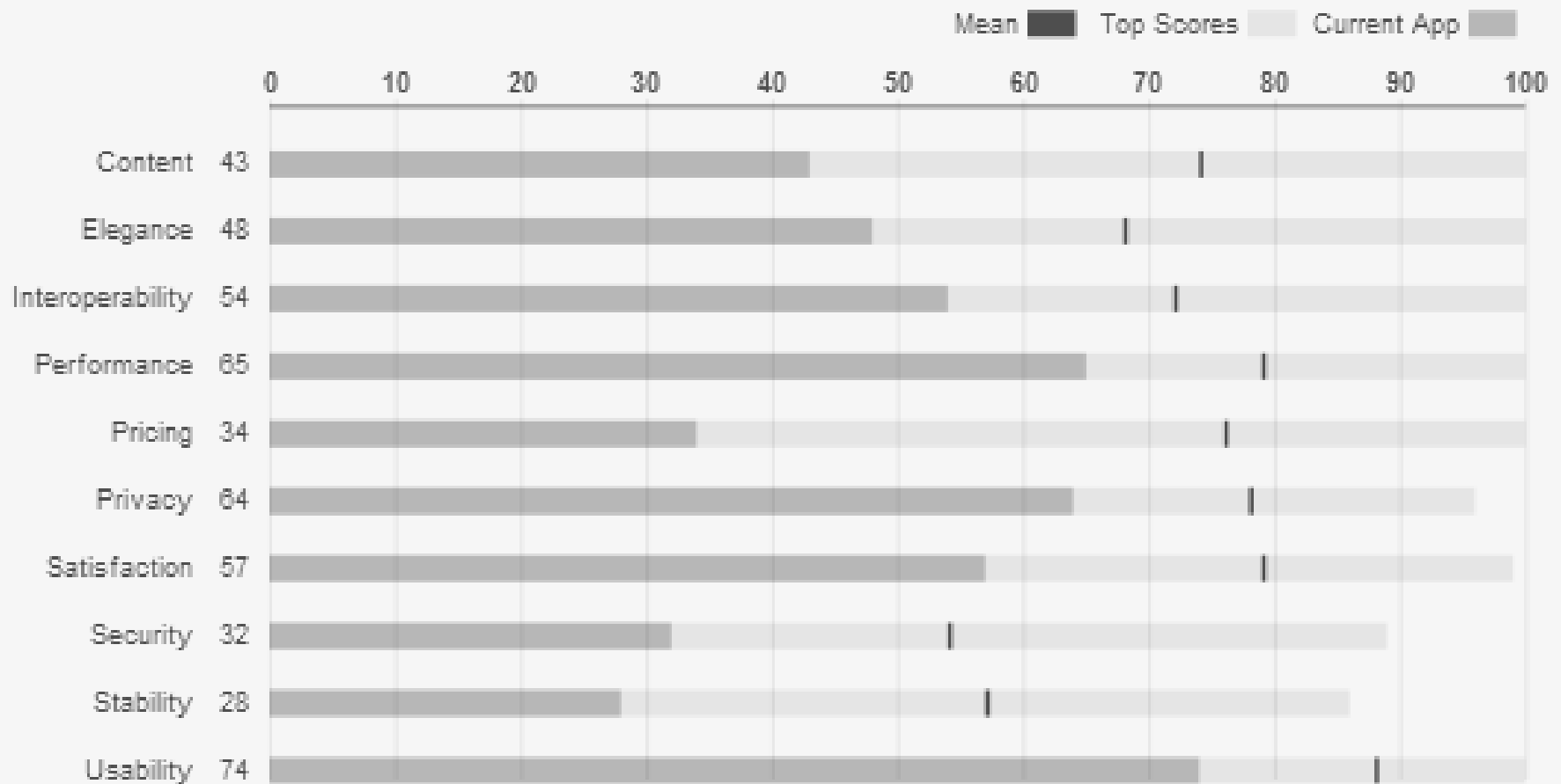
MUST WORK THE FIRST AND EVERY TIME





Fitbit Activity and Calorie Tracker

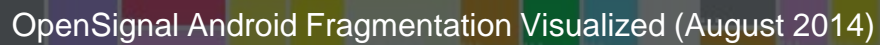
🍏 Health & Fitness | Applause Score: 57/100



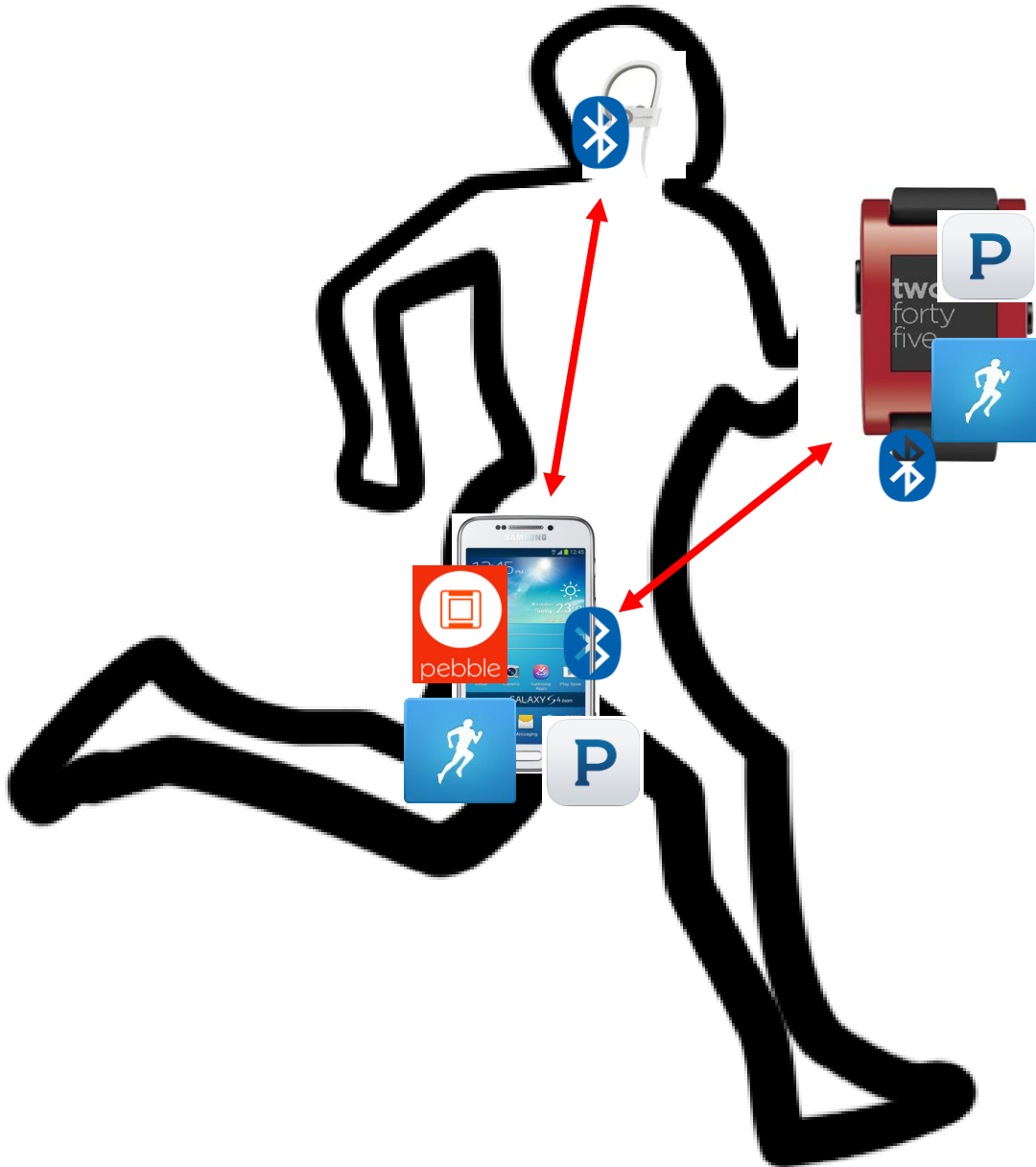
WHICH IS HARD, AS
OUR WORLD HAS...

...

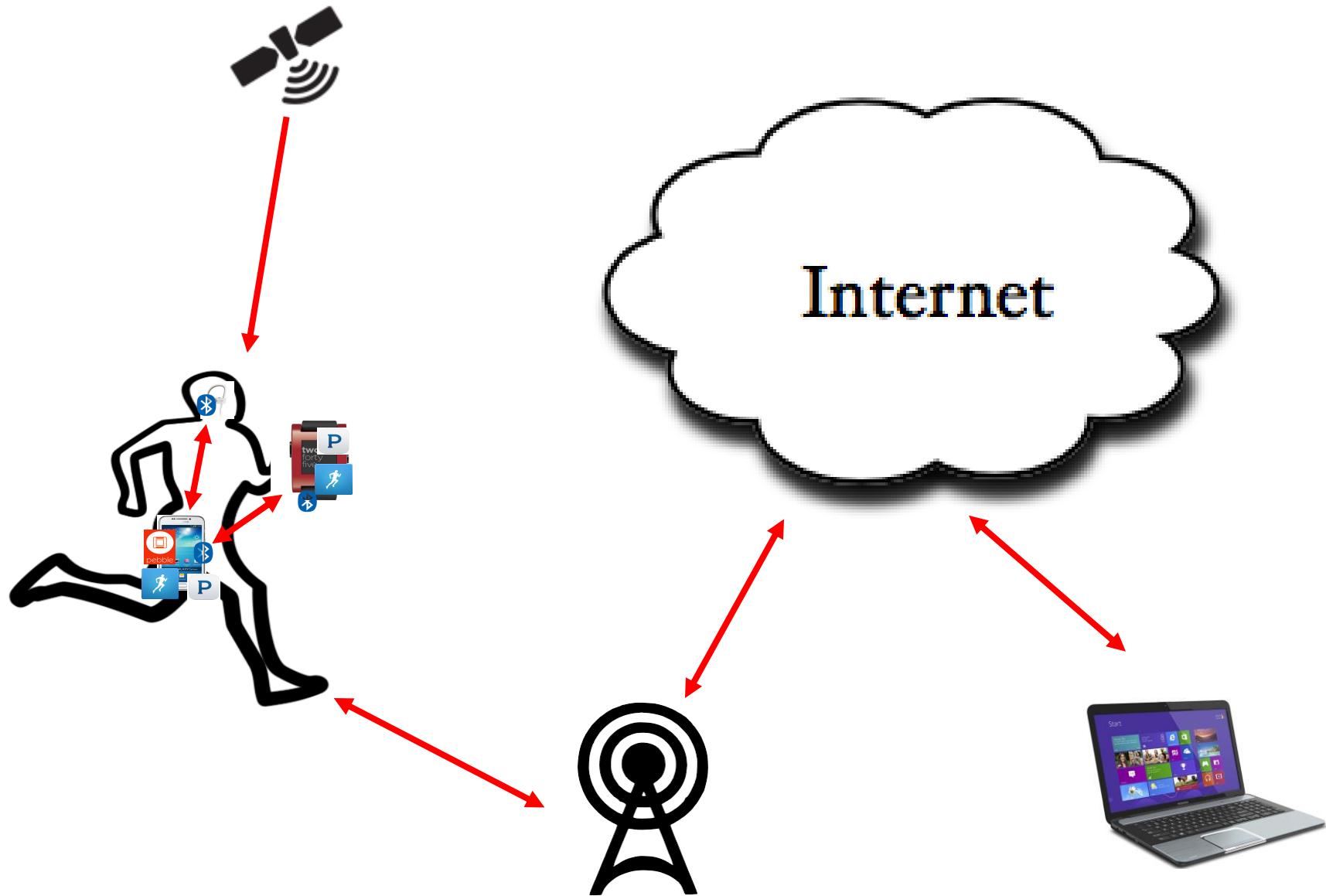




MORE INTEROP THAN EVER



MORE INTEROP THAN EVER





3:21 PM on Thursday, January 15, 2015

Afternoon Run

Add a description

5.0mi 28:51 5:44/mi
Distance Moving Time Pace

Elevation 0ft Calories 700
Elapsed Time 28:51

Device: [Strava Android App](#) Shoes: —

Splits

Mile	Pace	GAP	Elev (ft)
1	2:58	2:58	-8
2	3:48	3:47	6
3	7:12	7:12	-0
4	7:29	7:30	-5
5	7:11	7:11	1

WORLD RECORD!!!!



Terrain Map

ONLY AS GOOD AS ITS WEAKEST LINK



Source: Cisco VNI Mobile, 2014

MORE VARIABLES THAN EVER



MORE COMPETITION THAN EVER



MILLIONS OF APPS – AND THAT'S JUST MOBILE

MORE VOCAL USERS THAN EVER



Ok but occasionally infuriating!
by The Chant Ninja – Mar 19, 2014

I both love and hate this app. It does a pretty good job, but the water mark and the streaming video can look quite nice. That said, the problems are numerous. Sometimes it tries to stream audio-only rather than video and audio if your connection is low quality. I wonder who could possibly want this! Furthermore, sometimes the whole app will ... [More](#)

2 out of 2 customers found this review helpful.

Cheri Daniels @Historiana · Apr 4

Just gonna say the @weatherchannel app for the iPad is the WORST app I have ever encountered...even after updates! #fail #crash

Expand

Reply Retweet Favorite More

CinCity @CinCityNobre · Apr 5

So i was loving the @Citibank mobile deposits feature but alas there was an upgrade and now the app crashes

Britta Mirasolo March 27, 2014

★★★★★

Not fully functional I p family to pick up and c

Ok but occasionally infuriating! ★★★★★
by The Chant Ninja – Mar 19, 2014

I both love and hate this app. It does a pretty good job, but the water mark and the streaming video can look quite nice. That said, the problems are numerous. Sometimes it tries to stream audio-only rather than video and audio if your connection is low quality. I wonder who could possibly want this! Furthermore, sometimes the whole app will ... [More](#)

2 out of 2 customers found this review helpful.

Was this review helpful? Yes | No | Report a Concern

Useless ★★★★★
by jmercmom – Jan 27, 2014

If I could give is app zero stars I would. It's pretty much use less. It hangs up all the time and thr to get flight info. I. Comparison to the competition u can do nothing on this app. Others allow ch rescheduling flights etc. this app allows none of this. Also what little that does work requires you thing for minutes while it try's to get data.

Daniel Bishop

★★★★★

This app is great Works 100% of the time. It has all the music you could ever want plus local stations. A+

ROBERT PHILLIP'S December 2, 2013

★★★★★

Easy to use and detailed Nice app that

Chris Harris @_ChrisHarris · Mar 24

Love the design of the new Camera Plus icon. Notice I flat iOS7 look but with depth and shadow. [appsto.re/gi](#)

[View details](#) Reply Retweet Favorite

Amber Terronez April 7, 2014

★★★★★

Samsung user No matter if I'm using Wi-Fi or my 4G it constantly just stops not sure if it's buffering or what no point in listening to this app if I can't even listen to a full song without it stopping fix bug asap

WHAT CAN WE DO

...



“Any sufficiently advanced technology
is indistinguishable from magic.”

~Arthur C. Clarke



WE NEED TO CREATE MAGIC



WHERE ARE WE COMING FROM



WORKED WITH OVER 40 WEARABLE COMPANIES

HUNDREDS OF PROJECTS COMPLETED

IN-THE-WILD TESTING IN 40+ COUNTRIES

THOUSANDS OF BUGS FIXED



MEET THE CHALLENGES

...



- **Your app shouldn't be everything to everyone at every time**
 - Know your user
 - Know the environment of your user
- **It's about transposing not transporting**
 - What are the elements that keep your app unique
 - What's relevant
- **Test where your users are**
 - A lab won't tell you what walking around is like
 - Listening early and often



- **Where do you draw the line?**
 - Who do you integrate with?
 - What happens when you say no?
- **Integrations means more testing**
 - It's a moving target
 - Users don't care who broke their experience, you're to blame
- **Users don't listen**
 - Think beyond your minimum requirements
 - Think outside of your standard environments



android wear

- **Who wants to charge their clothes?**
 - Do you respect users' battery life?
 - Do you play well with others?
- **Balance notifications with relevance**
 - Not just about the connection
 - Turning on the screen
- **Testing how well you play with others**
 - Your impact on battery life may be minimal, but what happens when you are going for the same resource
 - What is real life battery usage

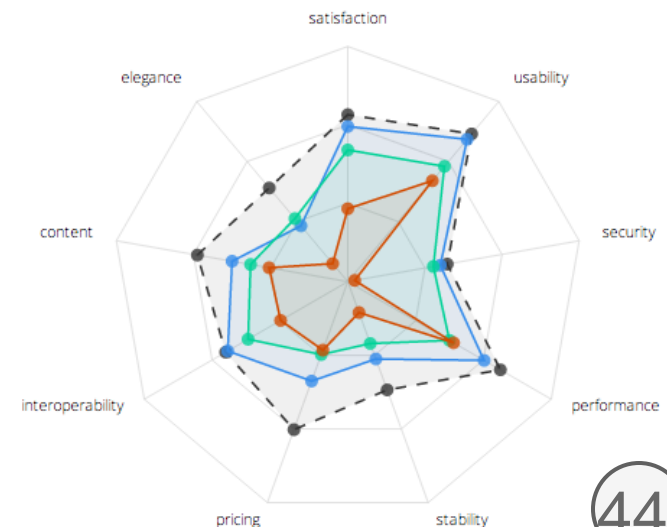


- **What happens in the absence of a connection?**
 - Unintentional disconnects
 - Users that just want to tune out
- **Are you friendly failing**
 - Test for errors
 - Test for experience?



- **You have to be in tune to what your users are saying**
 - Monitoring app stores
 - Listening to customer support channels
- **It's okay to be reactive but better to be proactive**
 - Beta testing
 - In-the-wild testing
 - Usability testing
 - Crash monitoring
 - App store feedback

A screenshot of an app store search results page. At the top, there's a search bar with a US flag icon and the text "Search for apps". Below the search bar, there's a section titled "OPTIONS" with two items: "Show Category Stats" and "Show Collection Stats". Below that, there's a section titled "APPS" with a list of three apps. Each app entry includes an icon, the app name, a rating, and a set of icons (a close button, a heart, and an eye). The first app is "Fitbit" with a rating of 63. The second app is "UP - Band Requ..." with a rating of 52. The third app is "Pebble Smartwa..." with a rating of 37.



BEAT THE CHALLENGES

...





YOU NEED A PORTFOLIO APPROACH

- Testing beyond the traditional QA lab
- Test where and how your users work, live & play
- Discover crashes & user feedback in real-time
- Listen to what your target users are saying in:
 - the app stores
 - social media
 - ecommerce sites
- Automate where practical to gain coverage and speed

Your Test Labs Are Here



Your Users Are Here



Wearables need real-world testing, where users live, work & play

- **Get lazy and get greedy**

- Use devices at varying battery charges
- Use all your greedy apps and services at once
- Use in varying weather conditions
- Let your battery die



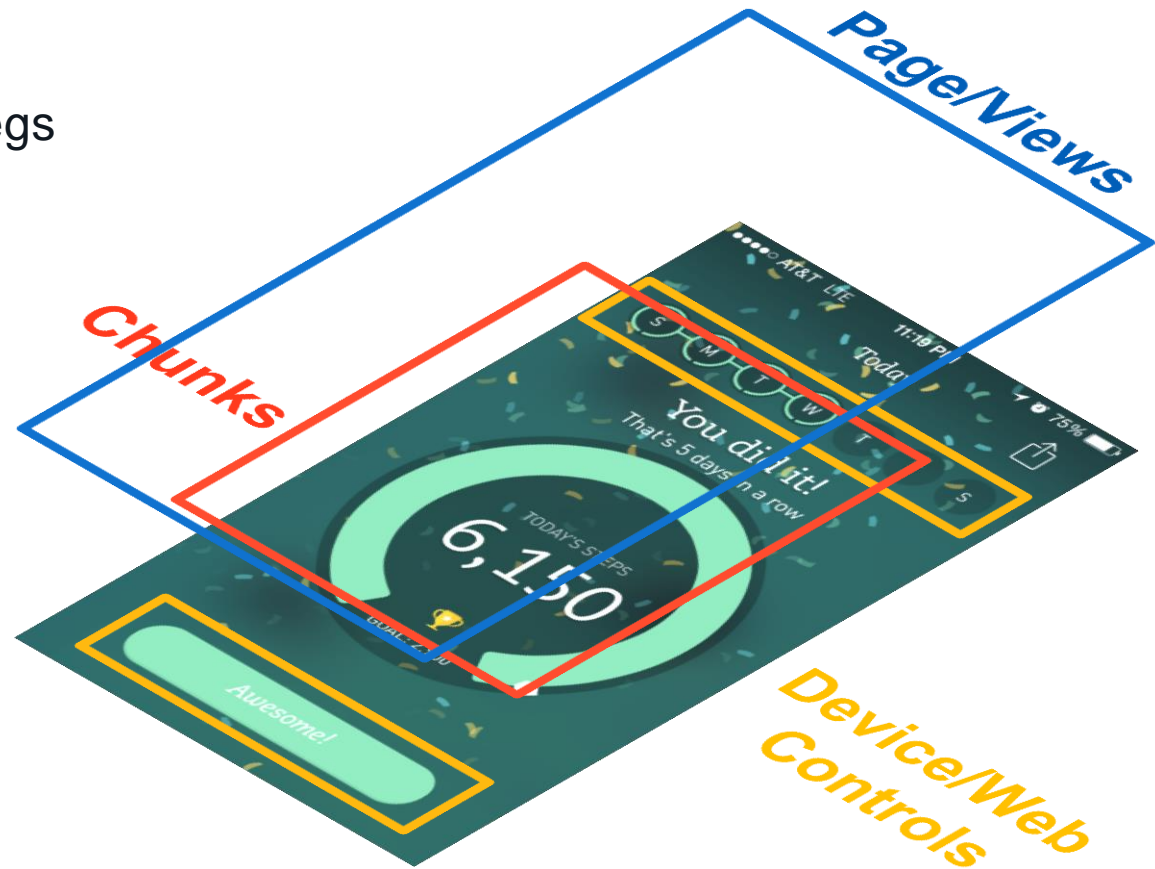
- **Test your wearables under real world conditions**

- Take them to common and extreme locations
- Give them to real people (incented and not incented)
- Use them as intended (on the move, in subways, without signal)
- Live with them (Longitudinal study)
- Embed analytics and easy feedback mechanisms into your devices and apps

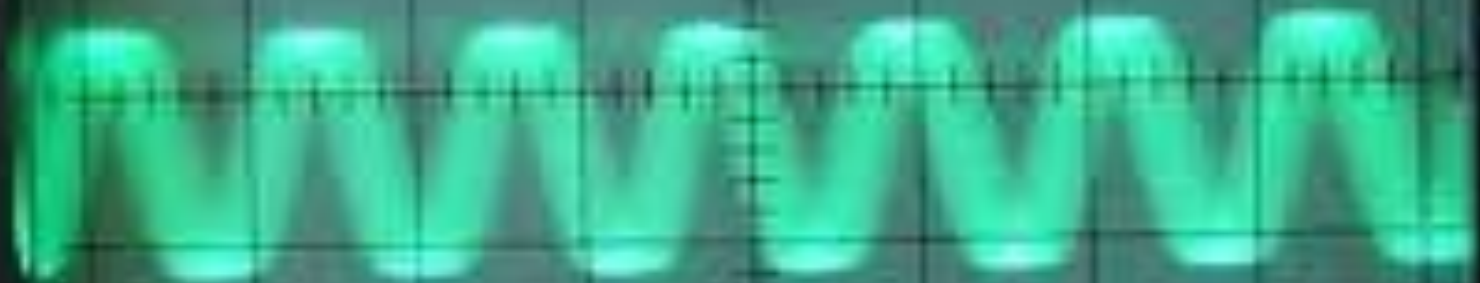
- **Get lost**
 - Go into the deep dark woods or similar urban feature
 - Go fast between mobile towers
 - Switch between wi-fi, varying network strengths and zero signal
- **Get dirty**
 - Don't just use factory settings
 - Put a bunch of apps on there
 - Use multiple apps and services at once
 - Hit different networks
 - Bounce between data sources
 - Take a phone call or seven
 - Use competitor apps/devices in parallel



- **Keep it simple**
 - Small tests
 - Focus on arms and legs
 - Maintenance is key
 - Tie to CI
- **Separate the layers**
 - Hardware test
 - Unit test
 - API test
 - UI test
 - Full stack test
- **Use real devices**
 - Simulators/Emulators for dev
 - Real devices for build validation and new platform validation



FIND THE SIGNALS



Latest Crashes

[view more](#) ▾

Build version: New version (89)
Device: GT-P1010, Android (2.2.1 (XWKB8))
Last occurrence: 27 Feb, 2012 |  **Anonymous**

53
occ

 **java.lang.IllegalArgumentException -> No files specified for upload**



No builds uploaded yet

339032

Sessions Opened Today

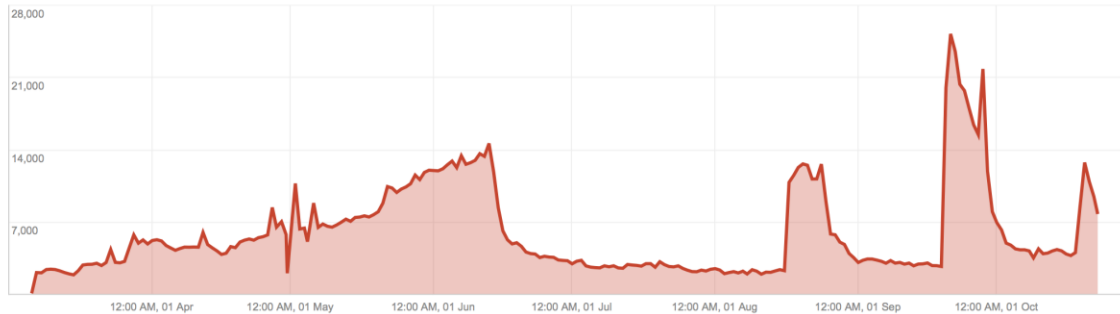
7279

Crashes Occured Today

18770

Installations Today

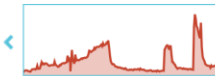
Support

[Pre-production](#) [Production](#)Crashes per day (UTC) [Live chart](#)[Totals](#) [Intensity](#) [Daily Activity](#)

Sessions



Crashes



Installations



ver. 1.013 (13) 04 Sep, 2013

iPhone 4 GSM, iPhone OS 7.0

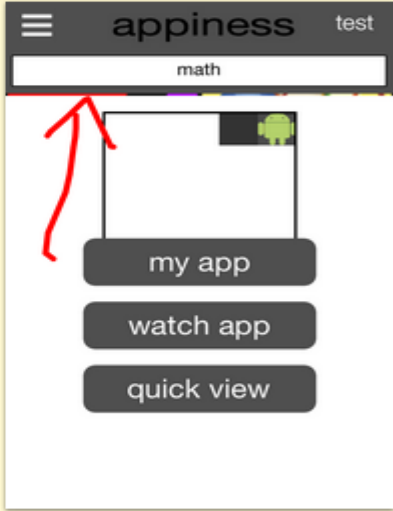


Fumim

Right swipe doesn't work from detail article view. When shifted after tapping on "menu" icon, left swipe

ver. 1.013 (13) 04 Sep, 2013

iPhone 4 GSM, iPhone OS 7.0




Fumim


Line of pixels left over from previous screen

Session Details

Your applications > appiness > Sessions > 89368082



12 minutes @ 04 Sep, 2013









Fumim

Ver.

1.013 (13)

Starting conditions

 iPhone 4 GSM	 Unknown	 80.00%	 640x960	 AT&T	 Unknown
Type	Time	Code			

CONDITION 01:52:03.316 screen:
orientation: **Portrait**

CONDITION 01:52:04.731 networking:
networking:
active-interface: **wifi**
interfaces:
wifi:
medium:
ssid: **local2**
bssid: **90:72:40:10:b3:a**
netmask-ipv6: **0.0.0.0**
data_received: **515652.375**

BUG

02:01:15.183 Right swipe doesn't work from detail article view. When shifted after tapping on "menu" icon, left swipe doesn't work (but tapping on menu icon again works)



Pebble

Lifestyle | Applause Score: 40/100

Dashboard

Compare

Clusters

Reviews

Applause Stats



Todo List



Top Clusters

EXPORT CSV




ALL

90+ days



Cluster Stats



The todo list is a great way to track and share actionable data. Use the  icon on clusters, issues, or attributes.

I **love** it so much that I even back the **Pebble** Time project! I **just** hope it will **support** Chinese very soon.

10 • 12/1/2014 - 3/9/2015 • ★ 4.20

Won't stay **connected** to my **pebble**. I can understand when I loses **connection** to my **pebble** when I walk far away from my **phone**. What I don't u...

19 • 11/11/2014 - 3/4/2015 • ★ 2.38

Accessibility services on after installing **Pebble** app (which renders it unusable) - it seems that OK button is disabled for some reason. ed...

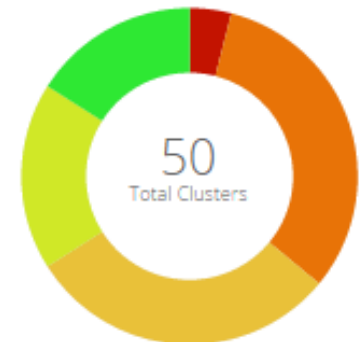
4 • 11/12/2014 - 12/9/2014 • ★ 1.75

Great addiations. I **love** that we can finally action notifications on the **watch** in the same style as the iPhone. I wish android would allow i...

13 • 2/16/2015 - 3/8/2015 • ★ 4.69

Can't **connect** anymore, stuck on screen with a URL that doesn't do anything.. Thanks... **Now** own another dumb watch.

6 • 12/1/2014 - 12/9/2014 • ★ 1.83



5 Star average clusters	8
4 Star average clusters	9
3 Star average clusters	15
2 Star average clusters	16
1 Star average clusters	2



Fitbit

Health & Fitness | Applause Score: 48/100

[Dashboard](#)
[Compare](#)
[Clusters](#)
[Reviews](#)
[Applause Stats](#)


US Search for apps (limit 5)

OPTIONS

Show Category Stats ☒

Show Collection Stats ☐

APPS



Fitbit

48



RunKeeper - GP...

70



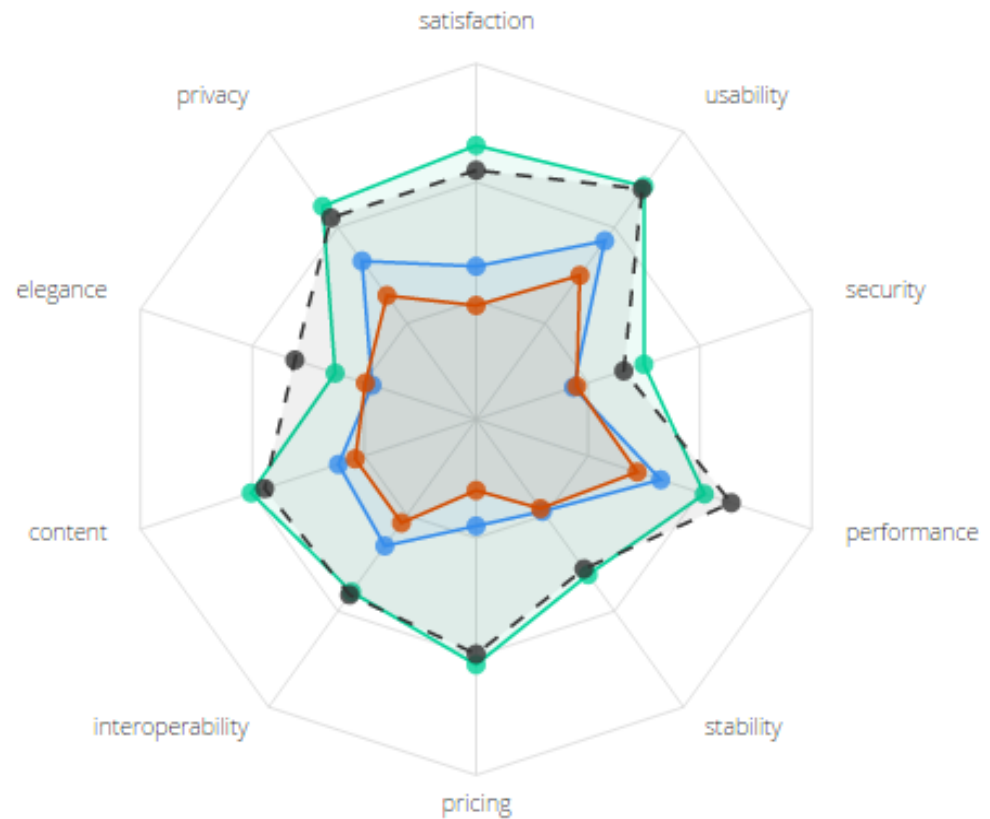
UP - Requires ...

40

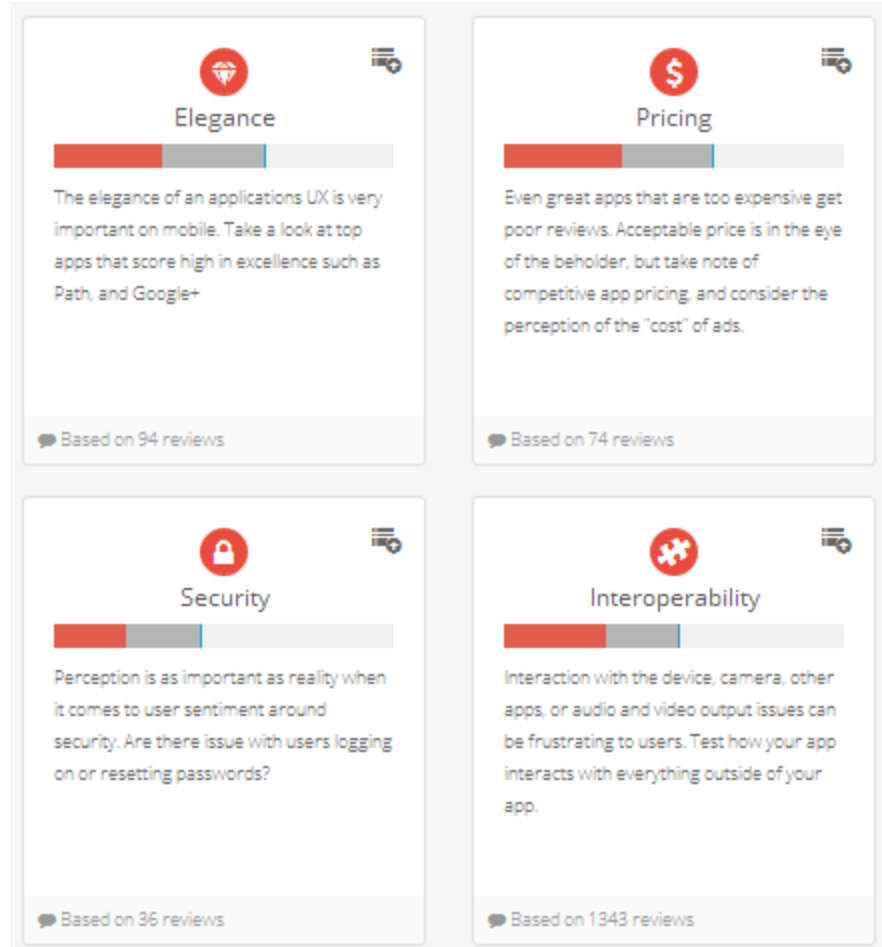


RECOMMENDED APPS

Category



- **End opinion-based debates**
- **Continual improvement**
- **Measure what matters**
- **Compare to competitors**
- **Measure before & after launch**



RECAP

...



- **Wearables are growing, but the chasm will catch all but the most appealing**
- **Appealing is measured against 10 attributes of quality**
- **5 Challenges Sucking Products Into The Chasm**
 - Usability
 - Compatibility
 - Battery life
 - Disconnecting
 - Users talk



- **But you're in control**
 - Test In-The-Wild
 - Get real
 - Get dirty
 - Get greedy
 - Get lost
 - Implement appropriate amounts of test automation
 - Test early and often
 - Monitor feedback
 - Implicit and explicit feedback
 - Direct user feedback in context
 - Find the signal and listen to it

AND REMEMBER



YOUR BRAND IS EVERYTHING

To get started with Applause today:

- Visit <http://www.applause.com/wearables>
 - Download our new wearables testing whitepaper
- Email us at sales@applause.com
- Connect with an app quality advisor: **844.300.2777**



CONTACT US

- **Creating Loyal Customers Through Winning Digital Experiences featuring Applause and guest Forrester Research**
 - Wed 4/22 @ 1pm EST

Register:

www.applause.com/webinars

Thank you!

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