

Smartwatch New user Experience

Satomi Michitsuta
Casio Computer Co.Ltd.

Back Ground

Past Watches



Heartrate Monitor

- 1987
- JP-100W



Phone Dialer

- 1987
- DBA-800
- Automatic phone dialing
- DTMF



Pressure

- 1989
- BM-100
- Barometer
- Altimeter
- Depth meter
- Semiconductor sensor



Map meter

- 1989
- MAP-100
- Optical sensor



Accelerometer

- 1989
- ECX-100
- Number of steps
- Distance
- Speed
- Acceleration sensor



Tach Panel User Interface

- 1991
- VDB-1000
- Touch panel on the user interface
- GUI
- Telephone number memo
- Schedule



Blood Pressure Monitor

- 1992
- BP-100
- Acceleration pulse wave
- Ir-LED and electrode



Remote Control

- 1993
- CMD-10
- Remote Control TV, VCR and STB
- Preset code and learning function



Wirelesses Connection

- 1998
- HBX-100
- Schedule synchronize OUTLOOK
- Connect PC and PDA(Palm Pilot)
- Telephone memo
- Kanji-Font



Recording Voice

- 1999
- DBC-V500
- Voice record function



Digital Music Player

- March 2000
- WMP-1
- Watch size Digital Music Player
- Playback MP3 file
- USB IF with rechargeable Battery
- App for PC and MAC



Digital Camera

- Jun 2000
- WQV-1 / WQV-3
- Watch size Digital Camera
- Ir Interface
- App for PC and MAC

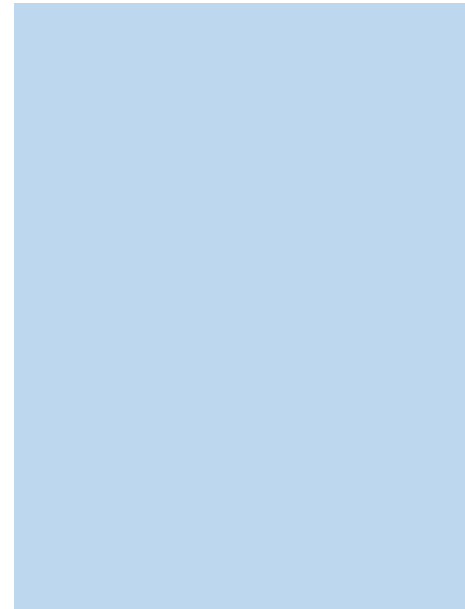


Color LCD Display

- March 2000
- WQV-10
- World First Color Display watch

GPS

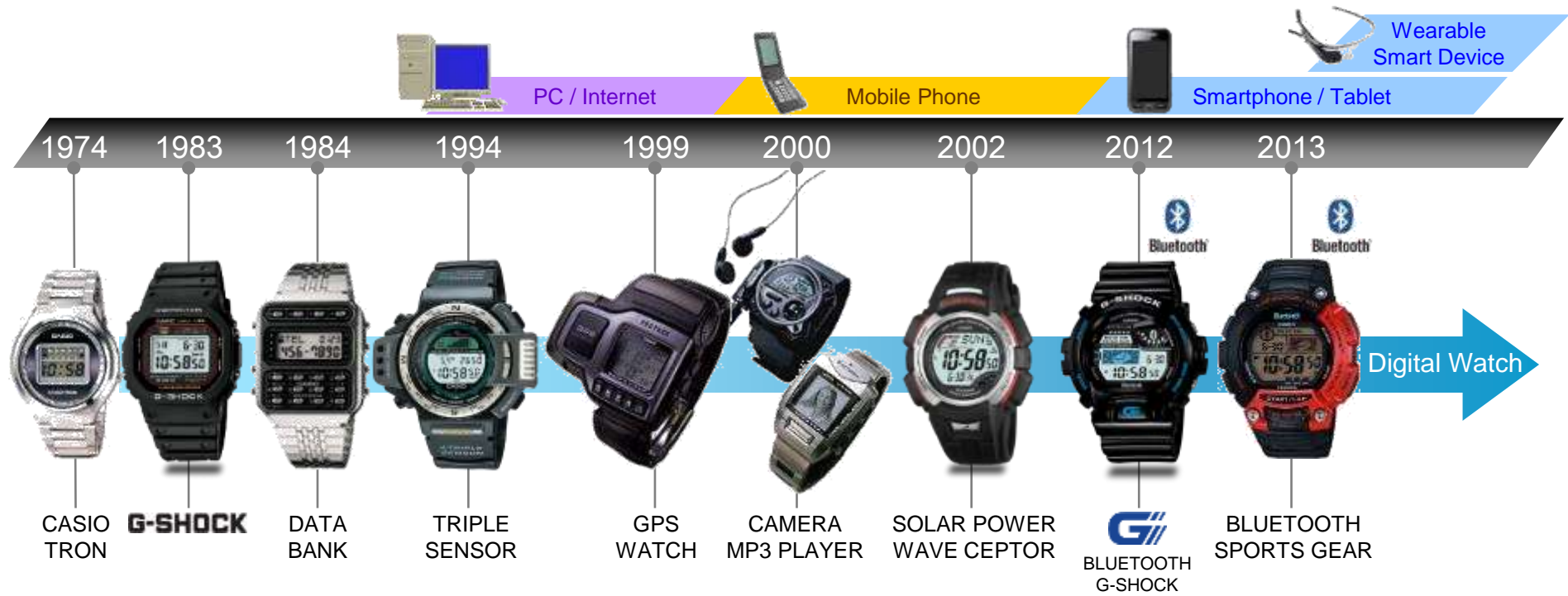
- 1999
- PRT-1GP
- 2000
- PRT-2GP
- Reachable Battery





Electric Money

- 2004
- GWS-900
- Electric Money for Gas station “Speed Pass”



These watches are prototypes.

These watches are prototypes.

Seriously :

We made it as a main stream products. But...

These watches are prototypes.
They are not available in our
current product lineup.

Why?

Market Background



Using IrDA for data connection

- 1998
 - Before Windows98
- Scheduler
 - Microsoft Outlook 97
 - Microsoft Schedule +
 - Lotus Organizer R2.1J
- Very few people using Scheduler APP.

Market Background



- March 2000
- 18 month before the iPod (23 Oct 2011)
- CD Golden Age
- Someone using MP3 as illegal copying
- Casio did not have the idea to make iTunes
- App for
 - Windows98
 - Windows2000
 - Mac OS 8.6

Concern

- Market is not ready for Smart Watch

| One more thing..

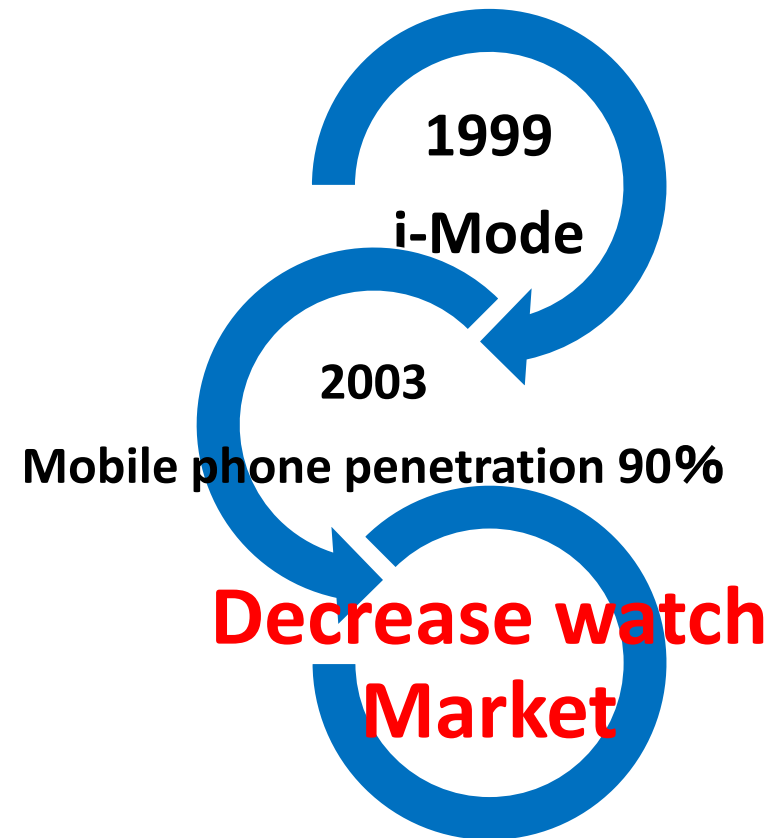
- Smart Phone and iPhone had incorporate these features.

Prototypes watch

- Windows CE watch – Microsoft(1995)
- Java watch - Sun Microsystem(1996)
- Linux watch – IBM(1998)
- Zenith watch(FM multiplex) - Microsoft
- GSM phone watch – SIEMENS (2002)

Bluetooth 4.0 Development (Low Energy)

2004 Mobile Phone Connected Watch idea



Mobile Phone connected watch
has possibility new market.

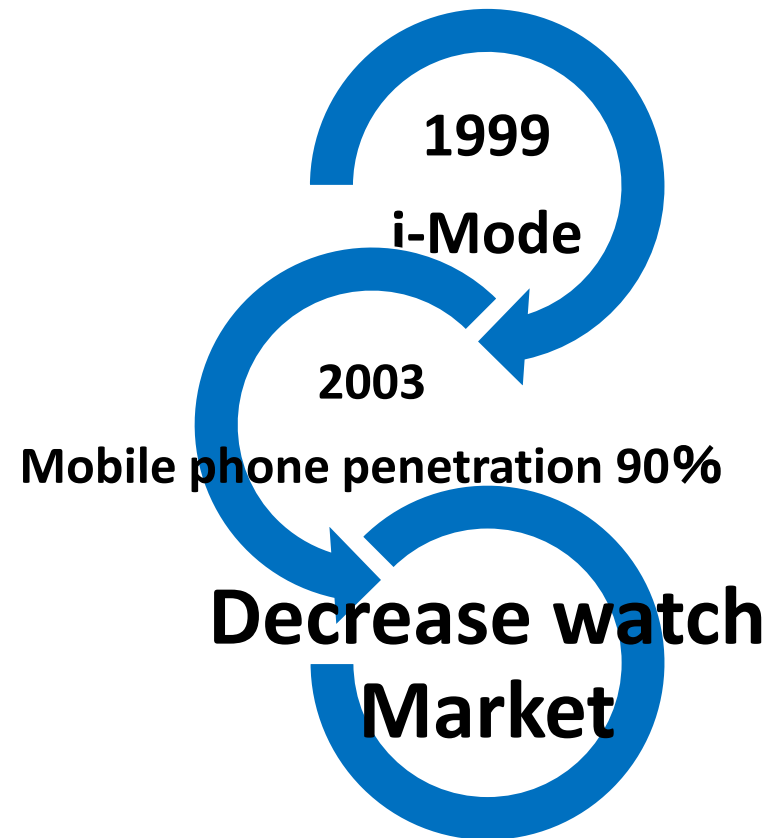
- How to?
- What technology?

Bluetooth : Just Born!

- Rechargeable : Require Large size battery
- Not fit for Watch size



Mobile Phone Connected Watch idea



Mobile Phone connected watch
has possibility new market.

- How to?
- What technology?

Bluetooth : Just Born!

- Rechargeable : Require Large size battery
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No one use rechargeable watch

| Need new technology

- Wireless connection
- Battery operation
 - Coin battery
 - Solar power

wibree project by NOKIA

Wibree Forum Members (prior to integration)



wibree became
Bluetooth
project

Development Bluetooth 4.0

- Bluetooth 4.0 Specification
- New Profiles for watch

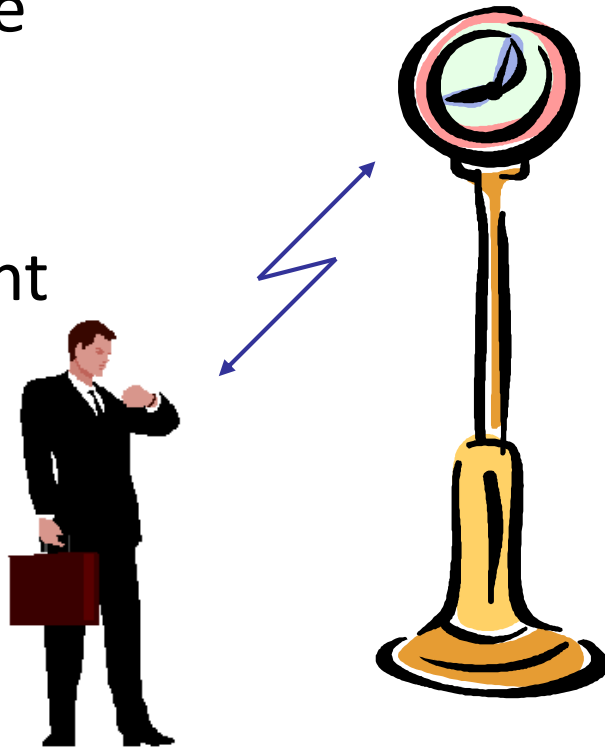
Watch Profile Working Group

- Chairman : Satomi Michitsuta
- Watch = Personal User Interface Device (PUID)
- A Part of Bluetooth SIG
- 60 Member Companies ,227 Individuals

Bluetooth Watch Use case

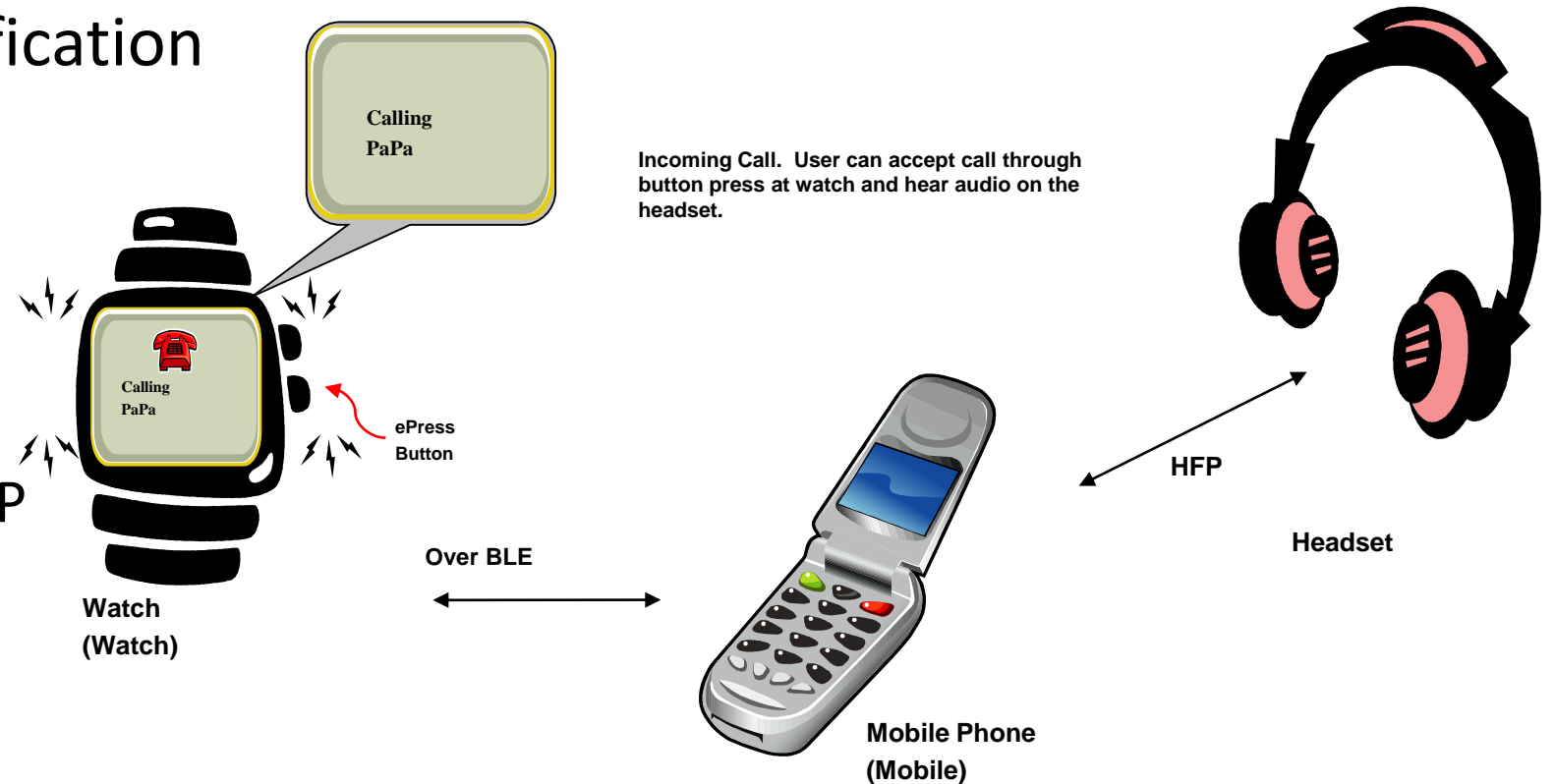
Use Case 1 : Time Update

- High accuracy time
- Time update local time when you move to different time zone
- Pre programed Daylight Saving time



Use case 2 : Notification

- E-mail Notification
- Incoming Call Notification
- SMS Notification
- Other Notification
 - Earth quick
 - Weather
 - Some new SNS APP



Use case 3 : Proximity

- Find your phone if you miss place.

Bluetooth 4.0 watch

World First Bluetooth 4.0 Connected watch

Best Of CES 2011: PopSci's Products Of The Future

By Corinne Iazzio, John Mahoney, Dan Nosowitz & Stan Horaczek Posted 01.06.2011 at 8:53 pm [2 Comments](#)



5 OF 17

Casio Bluetooth Watch

Dan Nosowitz

I know, I know: A Bluetooth watch? Is this another in the long line of failed "smart watch" experiments that implored gullible gadget lovers to attempt to read emails on a half-inch monochrome screen?

Thankfully, not at all: [Casio's new Bluetooth watch concept](#) syncs with a smartphone in ways that make sense and don't overreach. It uses an ultra-low-power version of Bluetooth (a gadget using this new type of Bluetooth can last for a year on a normal watch battery) to sync with an Android smartphone, mostly for notifications. Got a new phone call, email, or text message? You'll get a little beep and the name of the sender or caller on your wrist, even if the phone is in your bag or deep in a pocket on silent mode. It also has a "track my phone" feature that'll stop the undignified practice of asking for a friend's phone to call your own, only to find it somehow sitting next to the toilet. The Bluetooth watch is a "concept" because it hasn't been officially announced in a product yet--but in [our hands-on experience](#), it's perfectly functional and ready for release. You might see this in a G-Shock watch later this year.

GB-5600A/GB-6900A

2011



Fist Bluetooth Connected watch



- Automatic local time update
- Incoming call notification
- E-mail notification
- Find Phone

One year Battery Life
24/7 connection

GB-5600A/GB-6900A

2012



20 Oct 2012

Work with iPhone

GB-6900B/GBX-6900

2012-2014



Apple iPhone

Google

21 Sep 2013

Works with iPhone and Some Android Phone

ANCS

WWDC 2011

- WWDC : Apple World Wide Developer Conference
- Apple announced ANCS (Apple Notification Center Service)
- Apple Original Profile but based on PUID-WG notification profile
- iOS7



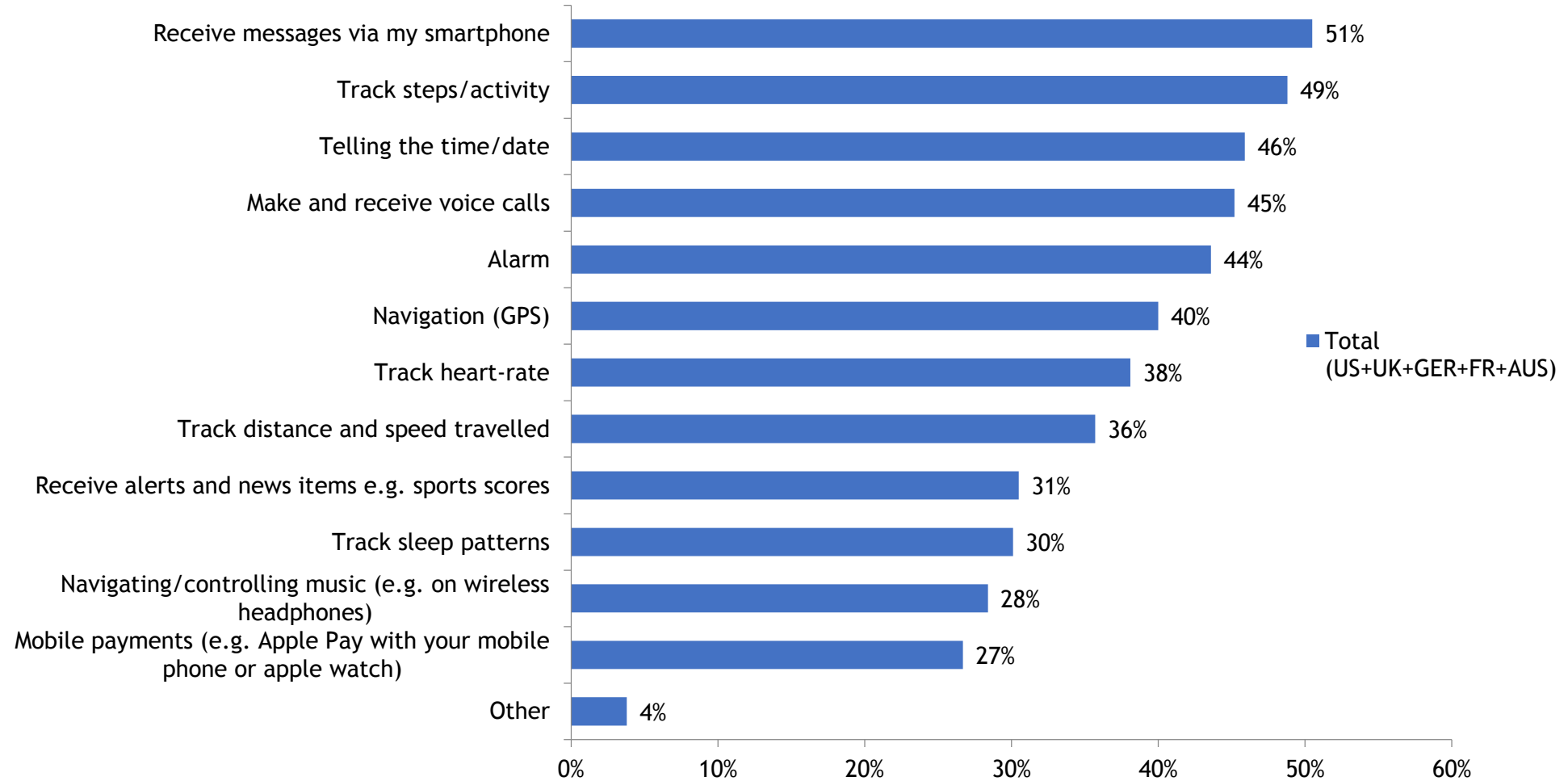
World First ANCS Watch

- 2011
- STB-1000
- iPhone connection without APP.

Wearable Market

Futuresource

What do you use your Smartwatch for?

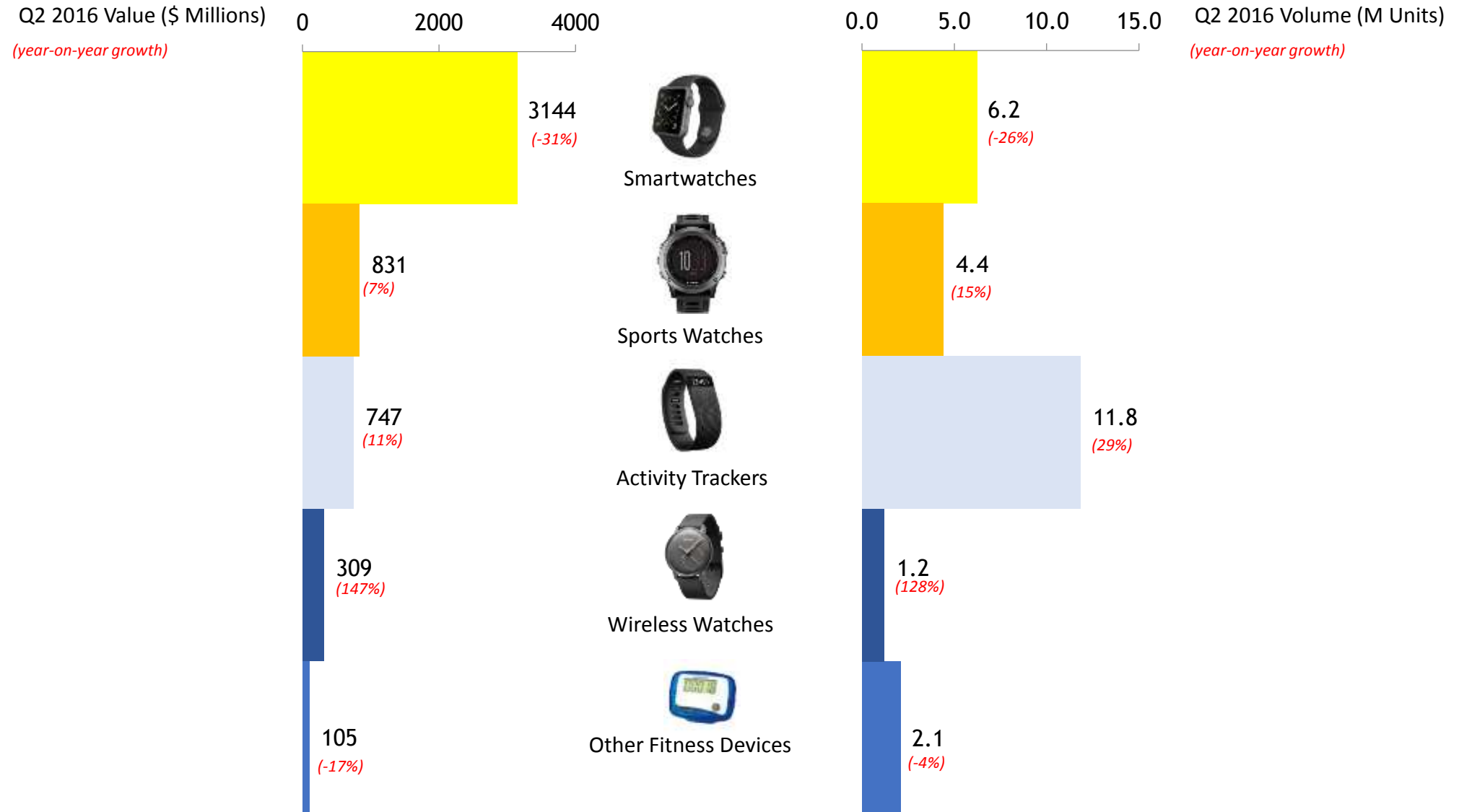


Source: Living with Digital Wave 11 (LWD 11) January 2016

Base: All wearables owners from The US, UK, Australia, France and Germany (5000)

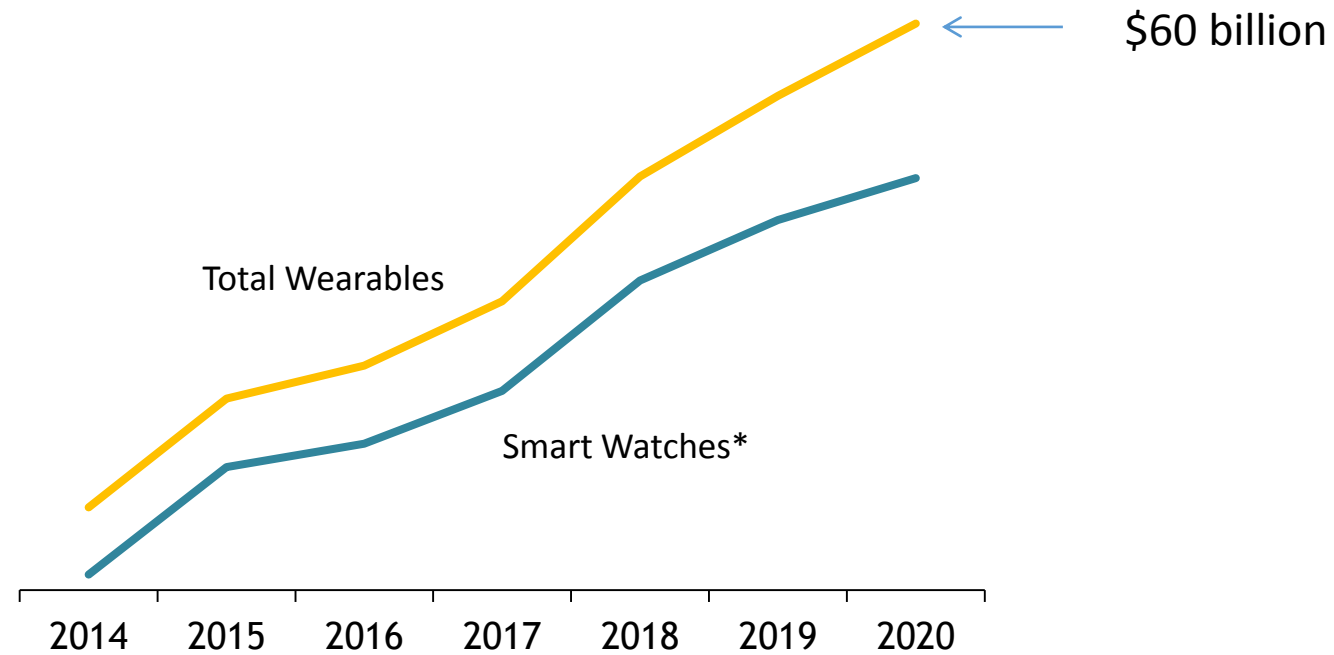
SMARTWATCHES & ACTIVITY TRACKERS DRIVING OVERALL GROWTH

Q2 2016 Worldwide Market Value and Volume by Product Type



Wearables a Hot Market Zone despite stuttering. Driven By Smart Watches

Worldwide Wearables Market (\$ Retail Revenues)



Casio's Strategy

Casio's Strategy

Connected Watch

- Conventional Watch Market

Smart Watch

- Still a part of Gadgets Market
- But it has possibly to develop new Market

Casio's Strategy

Connected Watch

- Conventional Watch Market
- Time update from Mobile phone to watch
- Watch configuration
 - World time
 - Beep setting
- DST file and Firmware update(OTA)

Smart Watch

- Still a part of Gadgets Market
- But it has possibly to develop new Market
- Android Eco System

New Strategy

Connected Watch



Solar Power

Smart Watch(Android Wear)



Connected Watch



Connected Analog watch



SHB-200CG-9A



SHB-200SG-7A

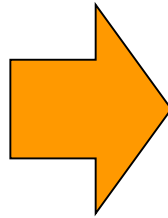


SHB-200D-7A

Connected Analog watch

Smart Watch

Why Outdoor?

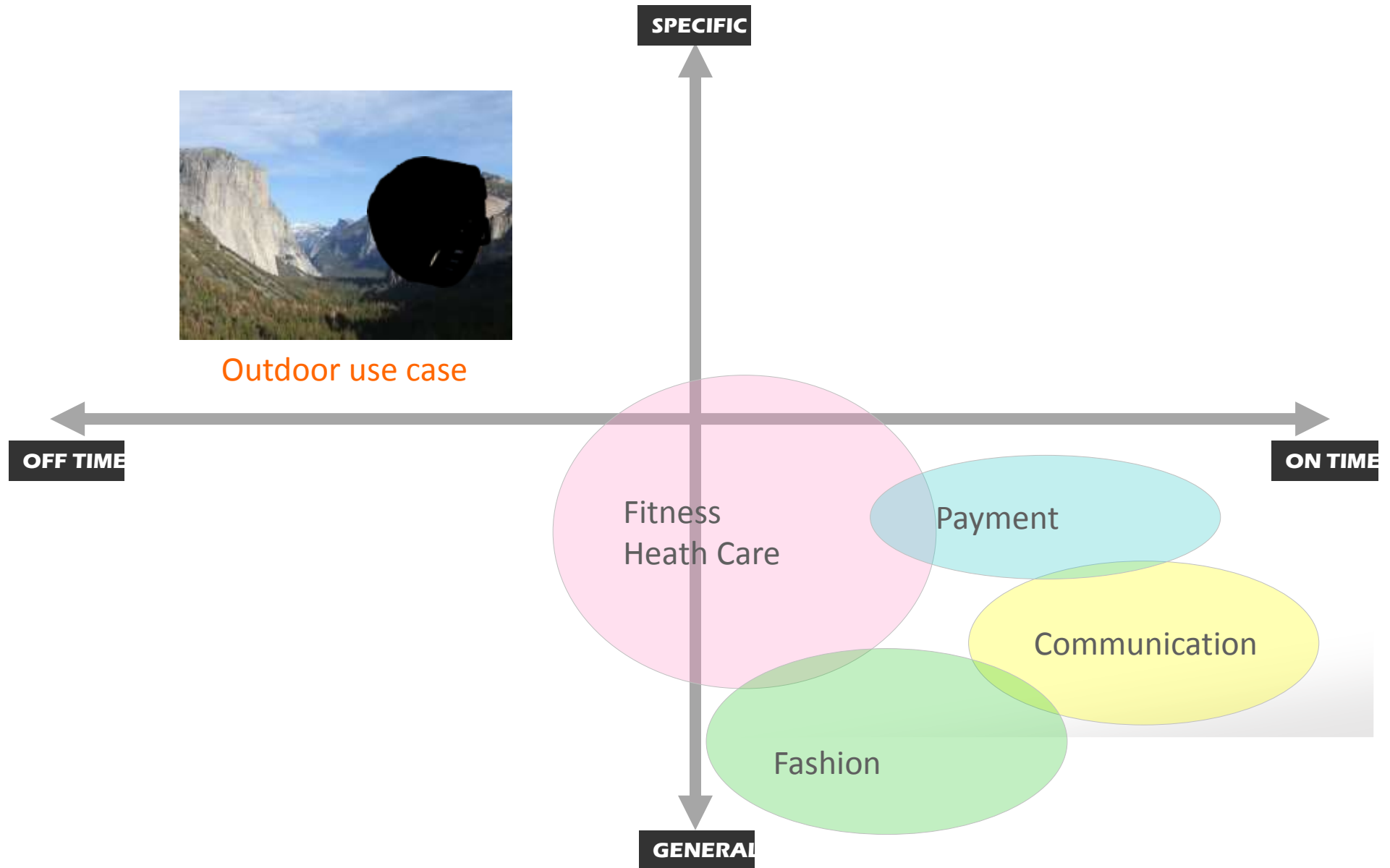


Easy to use

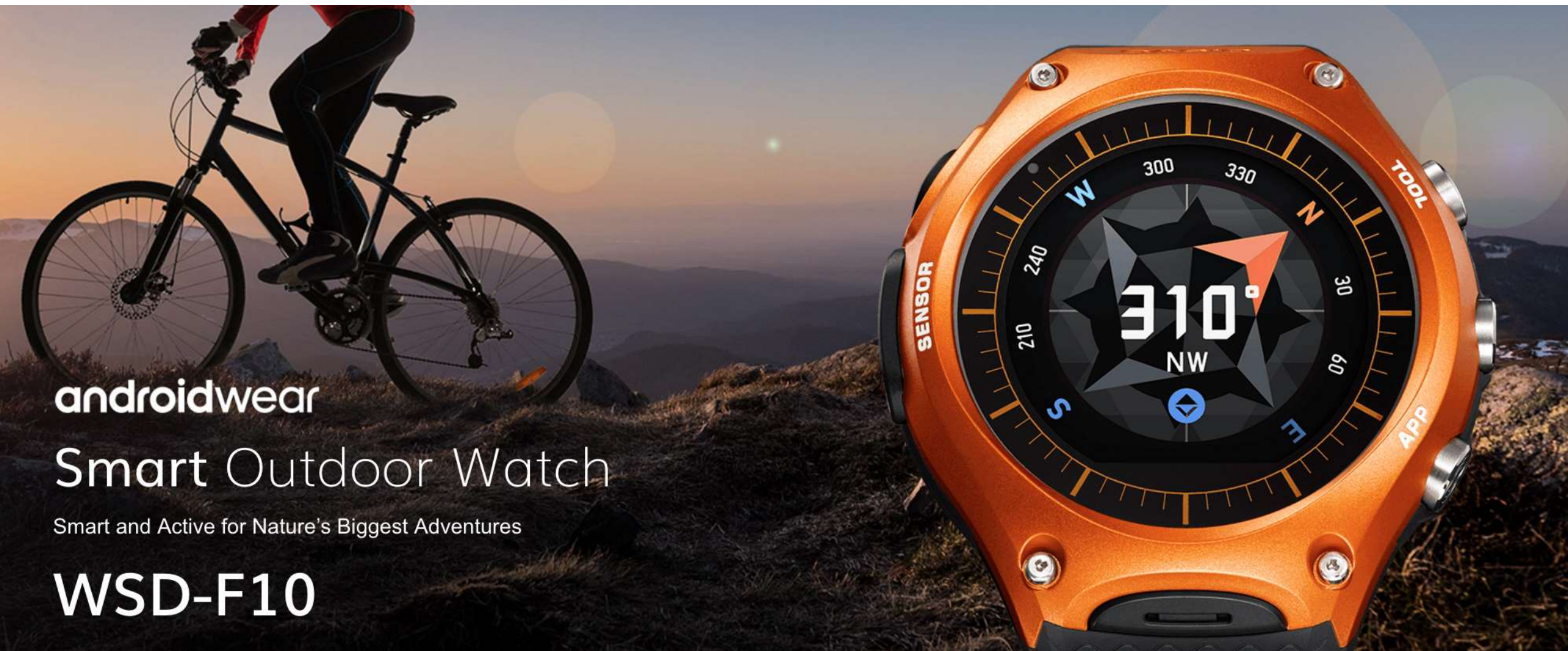
Key function

- World First Water resist (50m) Smart Watch
- Two Layer LCD (Color and B/W)
- Mil Standard Anti shock and dust resist

Casio's Strategy for Smart Watch



- [Video](#)
- <https://www.youtube.com/watch?v=aXWhv0Yd5Sg>



androidwear

Smart Outdoor Watch

Smart and Active for Nature's Biggest Adventures

WSD-F10



*Water resistant 5 atm
World first Smart watch*



Two layer LCD(BW and Color)



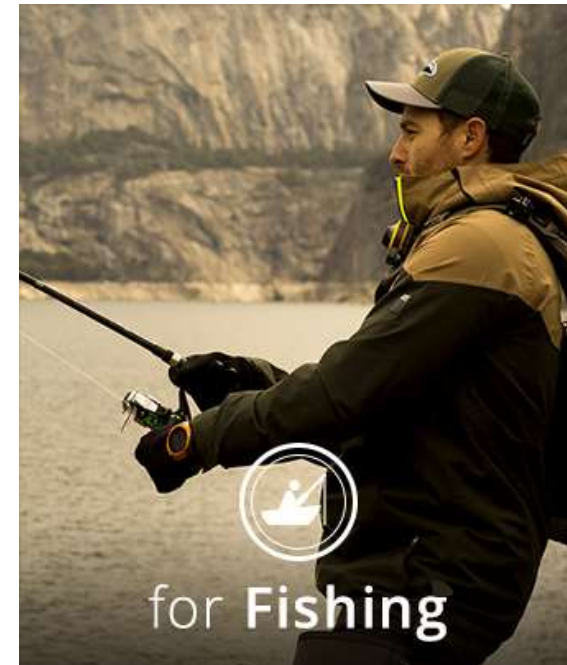
MIL-STD



*Drop
Random Vibration
Humidity
Solar-Radiation
Non-Operating Altitude
Operating Altitude
Non-Operating High
Temperature
Non-Operating Low*

Concept

Let's Start!
New Outdoor Activity





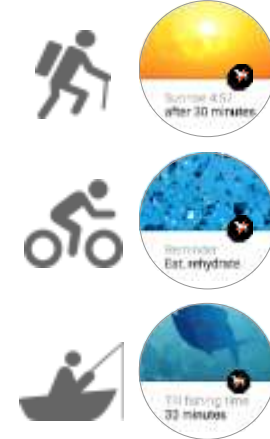
TOOL



ACTIVITY



MOMENT SETTER



Camera(EXILIM) Controller



Apps for outdoor use



Various Watch face



What is Next

Concern

- Looking for “killer” App.
- Useful functions, confusing to the customer
- Useful functions, confusing to the retailer

Education

- “killer “ App
- Use Case
- Digital Marketing

What is Digital Marketing

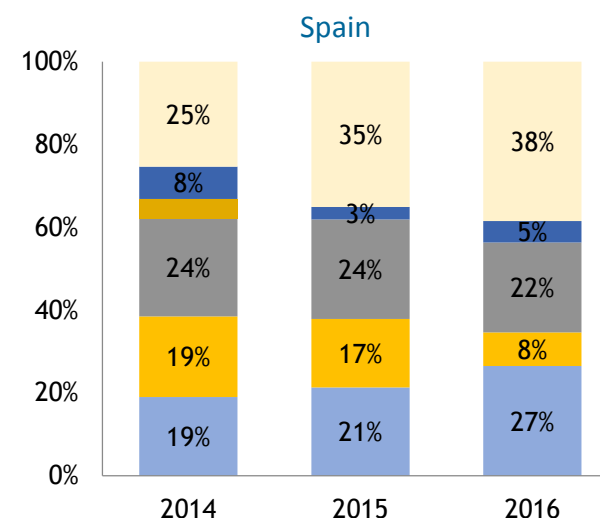
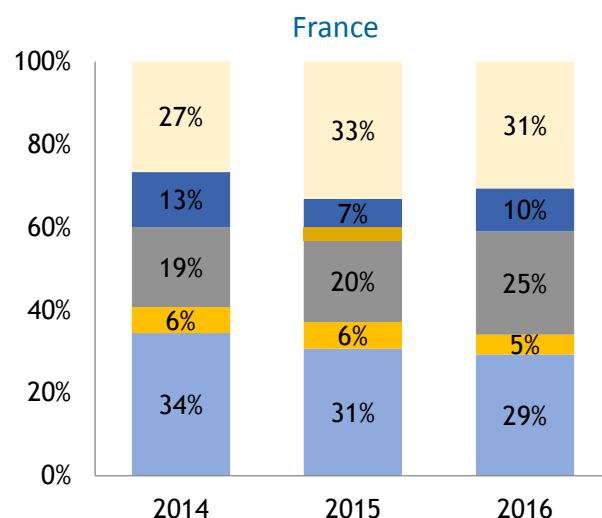
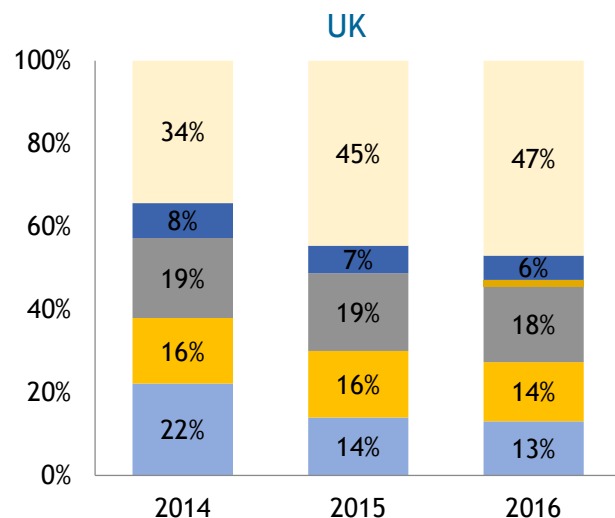
- Digital Marketing is the promotion of products.
- Via one or more forms of electronic media.
- Marketing campaigns and understand what is working and what isn't.

Digital Marketing in Casio

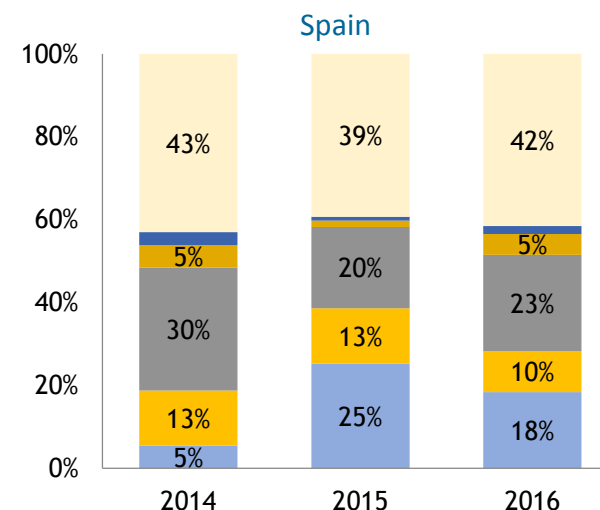
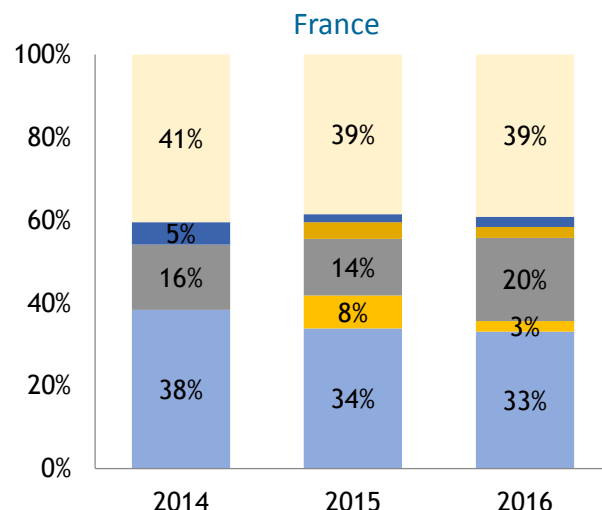
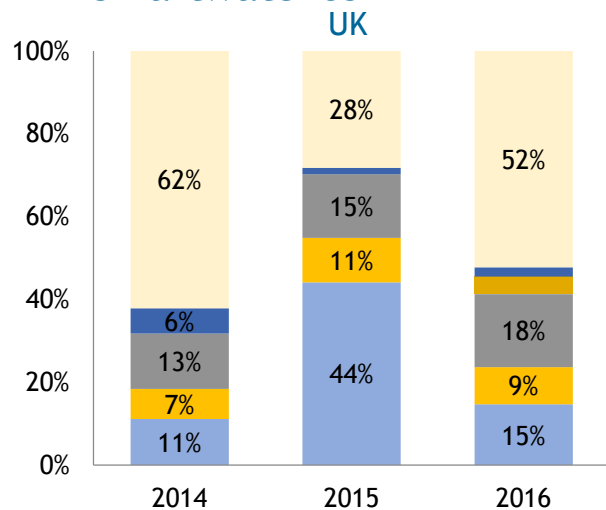
- How to use smart watch
 - Trekking
 - Cycling
 - Fishing

RETAIL DISTRIBUTION – SHARE OF UNITS PURCHASED BY CHANNEL

Activity trackers



Smartwatches



Pureplay Others Mobile Operators Mass Indie & BG CE Specialists

Education

- Watch Store
 - Online Shop
 - CE Specialist
-
- Digital Marketing is one method to develop Connected Watch and Smart Watch market.

Standardization

- Connected Watch
- Connectivity mobile phone and other device to Watch
- Standalone connected watch
- Next generation LTE(Cat.0 and Cat.M)
-

