



# Designing for Wearables

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# What We'll Cover

## Discover the different dimensions for successful wearable design

- Current trends
- Market value & ecosystem perspective
- Social acceptability
- Naturalness of function and user interaction
- A slightly different approach wearables design

# Symphony Teleca at a Glance

6000+ Innovation Experts



32 Global Offices

600+ Customers

17 Global Delivery Centers

# Our Wearables Applications Work..



facebook



Twitter



MINI Gallery



Speedometer



SOS



D-day



Dice



Bottle Spin



TBT Navigation

# Trends to Exploit

- **The Network:**
  - bi-directional access and sharing of information and context
- **The Cloud:**
  - Worlds largest co-processor and storage
- **Analytics**
  - Turning data and social knowledge into useful context and information
- **Fab/Maker Movement**
  - Scale only works if many need the same.
  - Expect the unexpected – your projects can create new needs!

# Trends to be Aware of

- **Cognitive load**
- **Personal Presence**
- **Social Convention**

# Designing for Wearables – Isn't That Easy?

- There are an abundance of first order use cases
- Easy entry from a hardware design perspective
- Many ongoing projects that one can learn from

# Designing for Wearables – Why This is Hard...

- **Designing sticky wearable use cases is hard**
  - Going beyond a gadget that creates short term excitement
- **Key questions to ask**
  - How much real marketable value is being delivered
  - Is there a viable model for creating an ecosystem
  - What about social acceptability of the wearable
  - How natural is the user interaction model
  - What is the product market entry point



# Let's Look at Three Categories of Wearables

## Sensor-based Devices



## Notification/Light Interaction Devices



**Immersive experience  
alternatives to today's  
mobile devices**



# Sensor-Based Devices

- **Characteristics**
  - Monitor and report data gathered through sensors – primarily health/fitness
  - Can (and should) be fashioned as jewelry
- **Interaction model**
  - Mostly Passive
- **Cloud-based aspects**
  - Analytics on your data, on groups of data sets...
- **Social-based aspects**
  - Should expand our social interactions, not change them
  - Social sharing of processed sensor data, building communities

# Notification/Light Interaction Devices

- **Characteristics**
  - Contextual information at a glance with simple information drill down
  - Can serve as a platform for sensors as well
  - Tethered communication model, extension to other devices (Smartphones)
- **Interaction model**
  - Touch, swipe
- **Cloud-based aspects**
  - Displays cloud-delivered contextual information
- **Social-based aspects**
  - Should expand our social interactions, not change them
  - Expands the platforms for existing social sharing sites, communities

# Immersive Experience Devices

- **Characteristics**
  - Rich image/video capability
  - Deep information drill down
  - Bi-directional internet communication
- **Interaction model**
  - Touch, multi-directional swipe
  - Motion, Facial gestures, Voice
- **Cloud-based aspects**
  - Richly connected to cloud-delivered context and content
- **Social-based aspects**
  - Perceived intrusive, distracts you from conversation with others
  - Expands the platforms for existing social sharing sites, communities

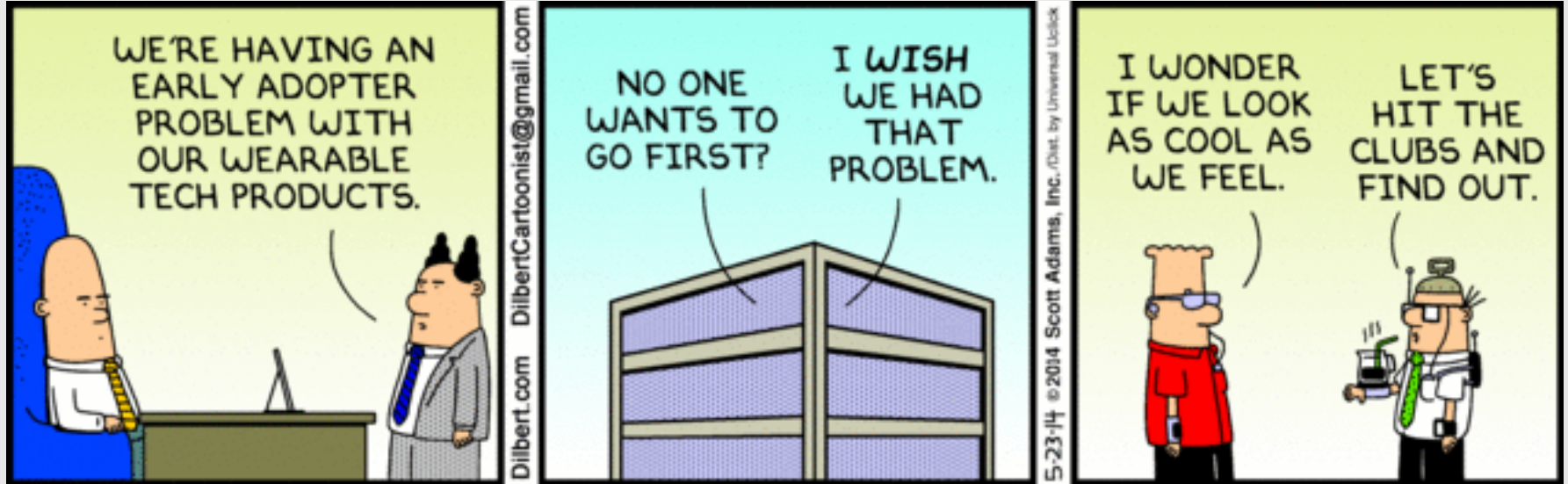
# (Negative) Marketable Value Delivered

- **Wearables must deliver on real value, either:**
  - Provides me with information that is important to me (or my social network)
  - Reduces friction in my daily life
  - Expands, enhances my social interaction with others
- **Instead, today, we see too much of**
  - Health – without a real value proposition beyond fairly narrow areas
  - A lot of black bands – didn't we just go through this with Smartphones?
- **The alternative – go beyond one or two use cases**
  - Holder of context about “me” and sensors...

# (Real) Marketable Value Delivered

- **Going Beyond Singletary Use Cases**
- **Host context about “me” and hosting sensors...**
- **Wearables to enhance safety and capability**
- **Use opt-in models with new/extended use cases that add value**

# Social Acceptability



# Social Acceptability

- **Wearables should expand our social interactions, not change them. We should be putting them on for others as much as for ourselves**
- **Function needs to follow form, not the other way round**
- **Value delivered through social network interaction helps, but only if social acceptability of wearing the device enhances instead of detracts.**



# Ecosystem Viability

**“Devices without deep science and multi-sensor competence are doomed”**

*A Wearables Startup Playbook – Techcrunch April 12*

**“Manufacturers have to provide a fun and addictive social experience for wearers ...”**

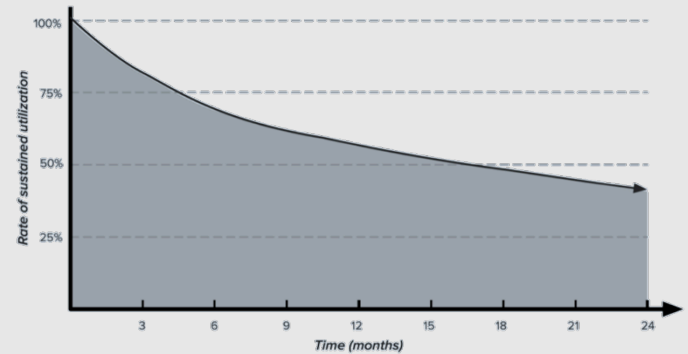
*The Case Against Wearables, or Why We Won't All Look Like the Borg this year – Mar 3 Forbes*

**“Judging from iModerate's data, it's possible that Nike has decided that creating awareness to move enough \$149 FuelBand retail units wouldn't be worth the marketing dollars.”**

*Nike FuelBand and Other Health Wearables Have Branding Issues – Addweek May*

**“The exit of Nike from its FuelBand product shows how difficult hardware can be and that the real value is in the service and the data”**

*[www.radiofreemobile.com/wearables-out-of-fuel](http://www.radiofreemobile.com/wearables-out-of-fuel)*



*Declining Rate of Sustained Activity Tracker Use Over Ownership  
(Endeavour Partners, September 2013)*

# Ecosystem Viability – Key Themes

- Its not just what your device can do, but what it enables within a larger ecosystem – normalized data analysis, new context, and especially - social interaction, 3<sup>rd</sup> Party created value
- Open API's and loose coupling
- Forcing users to buy (\$) a new set of accessories creates a barrier to continued use
- It doesn't have to be “your” ecosystem – tap into exciting work pioneered by others like Polar for example

# Naturalness of the User Interaction Model

- **Light interaction devices are just that – light interaction**
- **Use models that we already know**
  - Turn the wrist and glance – just as we have since the 1920s
  - Touch, Swipe
  - Vibrate, Flash in response to notifications
  - Voice

# Finally, A Different Approach

- **Along with the areas presented...**
- **Use of color to convey information - keeping in mind the implications of color changes by country...**
- **Remember that wearables fit into the broader category of the “Internet of Things” (IoT) – build a system of systems**
- **Use rapid prototyping to build out the device/cloud feature set – in collaboration with customers and partners**

# Putting it All Together

- **We use devices because they bring value and reduce friction in our lives. This rule applies to wearables as well**
- **Social plays a huge role in adoption**
- **Ecosystems play a huge role in adoption**
- **Understand the limitations and strengths of the natural interaction model of a device**

Go beyond ordinary.  
Wherever you want to go,  
we'll get you there. Faster.





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