WE ARE DESIGNERS --
SMART LIVING, IoT, GERONTECHNOLOGY

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• 老人「福祉」科技，老齢福祉科技，樂齡科技...

“DESIGN technology and environment for independent living and social participation of older persons in good health, comfort and safety”

• Scope of Gerontechnology: Health, Housing, Mobility, Communication, Leisure, Work

Forbes 2016/09/20
THE NEXT HOTTEST THING IN SILICON VALLEY: GERONTECHNOLOGY
Are you using telehealth systems to care the older adults at home?

Wearable devices or, Leap beads 智慧佛珠?

Smart home, smart wheelchair, smart anything?
Designers vs. Technologists

Which do you think the older adults will like better?

Which walking stick do you like better?

http://rehabwheelchair.com/

https://agegracefully.shop/

Smart Standard Walking Stick (Auto-Fall-Alarm/Radio/MP3)

- 4 Pivoting Angle LED Lights
- Selection Switch: LED/ LED+ Flashing/ Off * Activate/Deactivate Alarm (Hold-Press 3 sec)
- Speakers (Alarm)
- Soft-Grip Handle Handy Wrist Cord
- Micro SD Card Slot
- Volume Key: Up
- Scan Key: Forward
- Selections Key: * On/Off (Pressing) * Radio/MP3 (Hold-Press)
- Scan Key: Backward
- Volume Key: Down

- 10 Step Adjustable Height: 68 - 90 cm
- Flashing Lights
- Locked Collar
- High Strength Aluminium Shaft
- Soft Pivoting Head Self Standing Base
- Net Weight: 520g
Persuasive technology: How to create that new behavior?

- User Centered Design: \textit{NEEDS} \neq \textit{MOTIVATION}

More fun than functions…

\[ B = \text{motivation} \]

\[ \text{triggers succeed here} \]

\[ \text{triggers fail here} \]

\[ \text{Action Line} \]

\[ \text{High Motivation} \]

\[ \text{Increasing likeliness to perform target behavior} \]

\[ \text{Low Motivation} \]

\[ \text{Low Ability} \]

\[ \text{High Ability} \]

\[ \text{Fogg Behavior Model} \]

\[ \text{www.BehaviorModel.org} \]
If the telehealth system is used to connect the older adult with family members...

**THE SON IS THE TRIGGER**

**CARE, INTERACTION, CONNECTION, IN ADDITION TO HEALTH MONITORING**
**Smart Home / Smart Living?**

- **CHT Smart Home**
  - Service controller, wireless gas detector, wireless motion detector, wireless smart plug, wireless temperature/humidity sensor, wireless smoke detector, wireless reed switch, wireless IP camera, wireless remote controller

- **SERCOMM Smart Home Control**

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**ARE THEY REALLY SELLING “LIVING”?**
Transform artifacts seen in everyday lives into Internet of Things

SUPPORTING THE CAREGIVERS!

Fogg Behavior Model
BehaviorModel.org

Motivation
High
Low

Triggers fail here
Triggers succeed here

Action Line

Hard to Do
ability
Easy to Do

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IoT Bedroom: Event alert, M2M, Personalized information

**WhizTouch**: IoT light / call button

**WhizPad**: sleep monitoring / leave bed alert

**WhizCarpet**: mobility monitoring / fall alert

**BP and BG Measurement**

**WhizConnect**: Bluetooth devices

**MiBand** for indoor tracking

**Personalized information on mobile devices**
**WhizPad** is a very comfortable mattress capable of motion sensing

- Special foam to reduce the risk of bed ulcer
- Leave bed alert in 3 stages to reduce risk of fall
- In-bed activity / sleep quality monitoring
Whiz Carpet can be easily assembled into the room
Gerontotechnology needs transdisciplinary talents with designers’ mindset

• Design thinking!

[Diagram showing the design thinking process: Define, Ideate, Prototype, Test, with arrows connecting Empathize, Learn About Your Audience, Brainstorm and Come up with Creative Solutions, Build Representation of Your Ideas, Test Your Ideas]

IDEO (http://www.ideo.com)
CEO Tim Brown

CREATIVITY ➔ PROTOTYPE ➔ PRODUCT ➔ SALES

NEXT CHAPTER…
Transdisciplinary learning
Real world problems and experience

• 18 hours, 1 credit design workshop
• 12 credit undergraduate program
• 2-year master degree program

“DESIGN” IS OUR COMMON LANGUAGE...

Thank you