

INFO3315 - HCI

Week 3 – Empathy, research .. Personas, analysis

Overview of tute/lecture goals

Personas

- Elements
- Evidence to define them
- Primary persona
- Informed definition of persona goals

Assignment 1 personas

- Research foundations: TTM, studies of commercial systems, academic studies
- Online survey to give some information about learning goals and feedback preferences in this class
- Explore how the choice of primary persona affects interface designs in terms of user goals because different groups have different primary persona

Semester Overview

Analyse

Design

Implement

Evaluate

Theory

People, Context...

Analyse

Design

Implement

Evaluate

Tute/lecture
focus

Lab Create personas

Analyse

Design

Implement

Evaluate

Identify the
goals of the
primary
persona

Activity: Groups of 2-3 review each other's concept map on **personas**

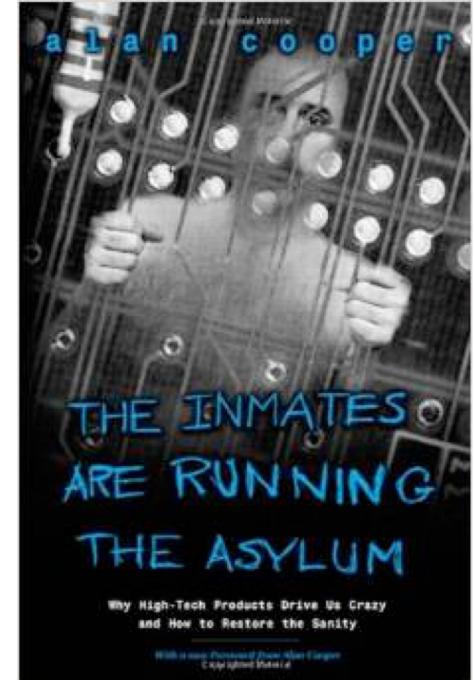
More about personas

Google n-grams



- “Personas, like all powerful tools, can be grasped in an instant but can take months or years to master.”

http://www.cooper.com/journal/2003/08/the_origin_of_personas.html



- Story telling **episodic memory**
- Concrete
- Light-weight tool for group discussion
 - Would Lana understand this sentence?

From usability.gov

- “create **reliable** and **realistic representations** of your **key audience segments** for reference ...
 - Represent a **major** user group for your system
 - Express and focus on the **major needs** and **expectations** of the **most important** user groups
 - **how they're likely to use the system**
 - Aid in uncovering **universal features and functionality**
 - Describe **real people** with **backgrounds, goals, and values**”

[*with site replaced by system*]

Elements of a Persona: **believable** + **inform** design

- Persona Group
- Fictional name
- Job titles and major responsibilities
- Demographics such as age, education, ethnicity, and family status
- The **goals and tasks** they are trying to complete using the *system*
- Their physical, social, and technological environment
- A quote that sums up what matters most to the persona as it relates to your *system*
- Casual pictures representing that user group

[with site replaced by system]

Persona:	USDA Senior Manager Gatekeeper
Photo:	
Fictional name:	Matthew Johnson
Job title/ major responsibilities:	Program Staff Director, USDA
Demographics:	<ul style="list-style-type: none"> • 51 years old • Married • Father of three children • Grandfather of one child • Has a Ph.D. in Agricultural Economics.
Goals and tasks:	<p>He is focused, goal-oriented within a strong leadership role. One of his concerns is maintaining quality across all output of programs.</p> <p>Spends his work time:</p> <ul style="list-style-type: none"> • Requesting and reviewing research reports, • preparing memos and briefs for agency heads, and • supervising staff efforts in food safety and inspection.
Environment:	<p>He is comfortable using a computer and refers to himself as an intermediate Internet user. He is connected via a T1 connection at work and dial-up at home. He uses email extensively and uses the web about 1.5 hours during his work day.</p>
Quote:	"Can you get me that staff analysis by Tuesday?"

How to build personas

- Observe:
 - Study users who will use your system to understand why they need it and what they need it to do for them
- Ask:
 - interviews, questionnaires
 - available literature that did these
- Experience:
 - Try doing what your intended users do

How to build personas

- Observe:
 - Study users who will use your system to understand why they need it and what they need it to do for them
... review your own phone data??
- Ask:
 - interviews, questionnaires ... today's class
 - available literature that did these
- Experience:
 - Try doing what your intended users do
 - ... try making sense of your own data
 - ... Try out some available interfaces

Some challenges with personas

What is an info3315 persona?

- Rich description of an **imaginary, but plausible, specific, memorable, “concrete” person**
 - Name
 - Picture
 - Life details ..
 - Minimalist but sufficient to be **believable**, and **inform design** for a system about physical activity
- Based on experience, discuss and write down a first cut at a persona for students who will end out with a grade:
 - D or HD
 - Bare pass

Why is a persona useful?

- Builds on our ability to think about people, when we “know” them
- Valuable as a **communication tool** for the **design team** and other stakeholders
- Helps in **discussions in design group** and making **design trade-offs** eg
 - Alice would not want.... but Bob would (based on Alice and Bob preferences in their personas)
 - Carol would not understand ... (based on Carol’s background knowledge in her persona)
- Designs can be constantly evaluated against the personas

Perfecting your personas

http://www.cooper.com/journal/2001/08/perfecting_your_personas

- **Add life to the personas, but remember they're design tools first**
- **Use the right goals**
- **Consider experience goals** describe how the persona wants to feel when using a product;
 - eg. having fun and **not feeling stupid**.
 - Not every persona needs an experience goal;
 - In most persona sets, there is one persona who represents people with a lot of anxiety about technology. One of this person's goals is to avoid feeling stupid.
- Most persona goals should be **end goals** that focus on what the persona could get out of using a well-designed product or service.
- **Personas must be specific to the design problem**

Reconciling market segments and personas

Elaine Brechin, May 15, 2008

http://www.cooper.com/journal/2002/03/reconciling_market_segments_an

Market **segmentation** and **personas** are two different ... complementary tools that organizations can use to **design** and **sell** successful pro

Marketers classify consumers according to a set of

- Demographics such as age, race, education,
- geographic variables and location
- Psychographic and behavioral variables like attitudes, lifestyle, values, ideology, risk aversion, and decision-making patterns ...

... to forecast marketplace acceptance of products and services,

They can also be powerful tools for convincing executives to build a product. ... eg X people might buy a product or service for Y dollars ... potential return on investment.

Personas are a set of fictional, representative user archetypes based on the behaviors, attitudes, and goals of the people we interview in our research phase.

Personas have names, personalities, pictures, personal backgrounds, families, and, most importantly, goals; **they are not "average" users but specific characters**. A persona is a stand-in for a unique **group of people who share common goals**;

Benefits of personas

http://www.steptwo.com.au/papers/kmc_personas/

- users' goals and needs become a common point of focus for the team
- the team can concentrate on designing for a manageable set of personas knowing that they represent the needs of many users
- they are relatively quick to develop and replace the need to canvas the whole user community and spend months gathering user requirements
- they help avoid the trap of building what users ask for rather than what they will actually use
- design efforts can be prioritised based on the personas
- disagreements over design decisions can be sorted out by referring back to the personas
- designs can be constantly evaluated against the personas, reducing the frequency of large and expensive usability tests.
- Used this to augment my info3315 person definition

Activity 2: *Background information*

Things we need to consider for your Assignment 1 persona:

TTM + activity level

Primary personas

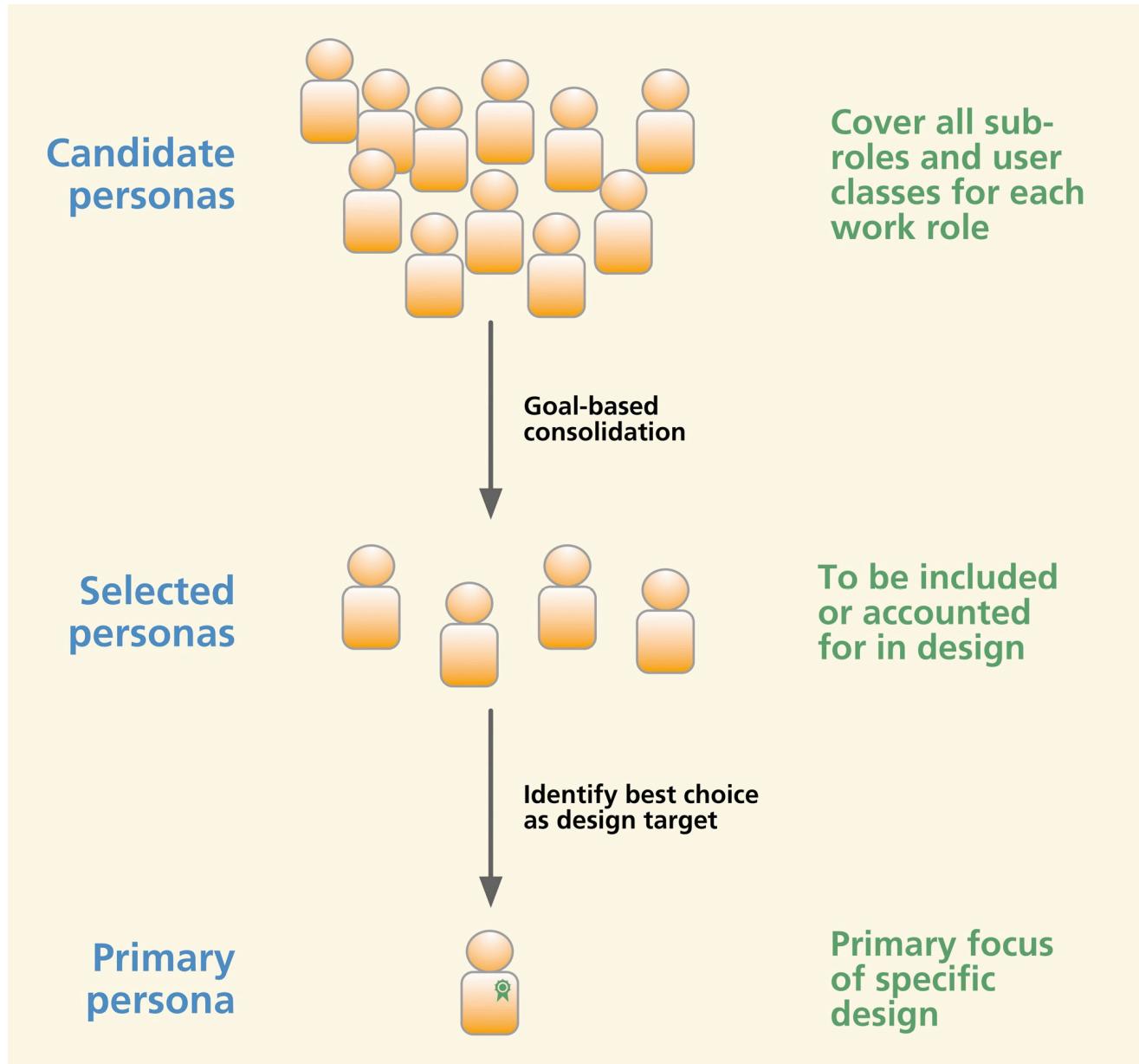
Transtheoretic model of behaviour change



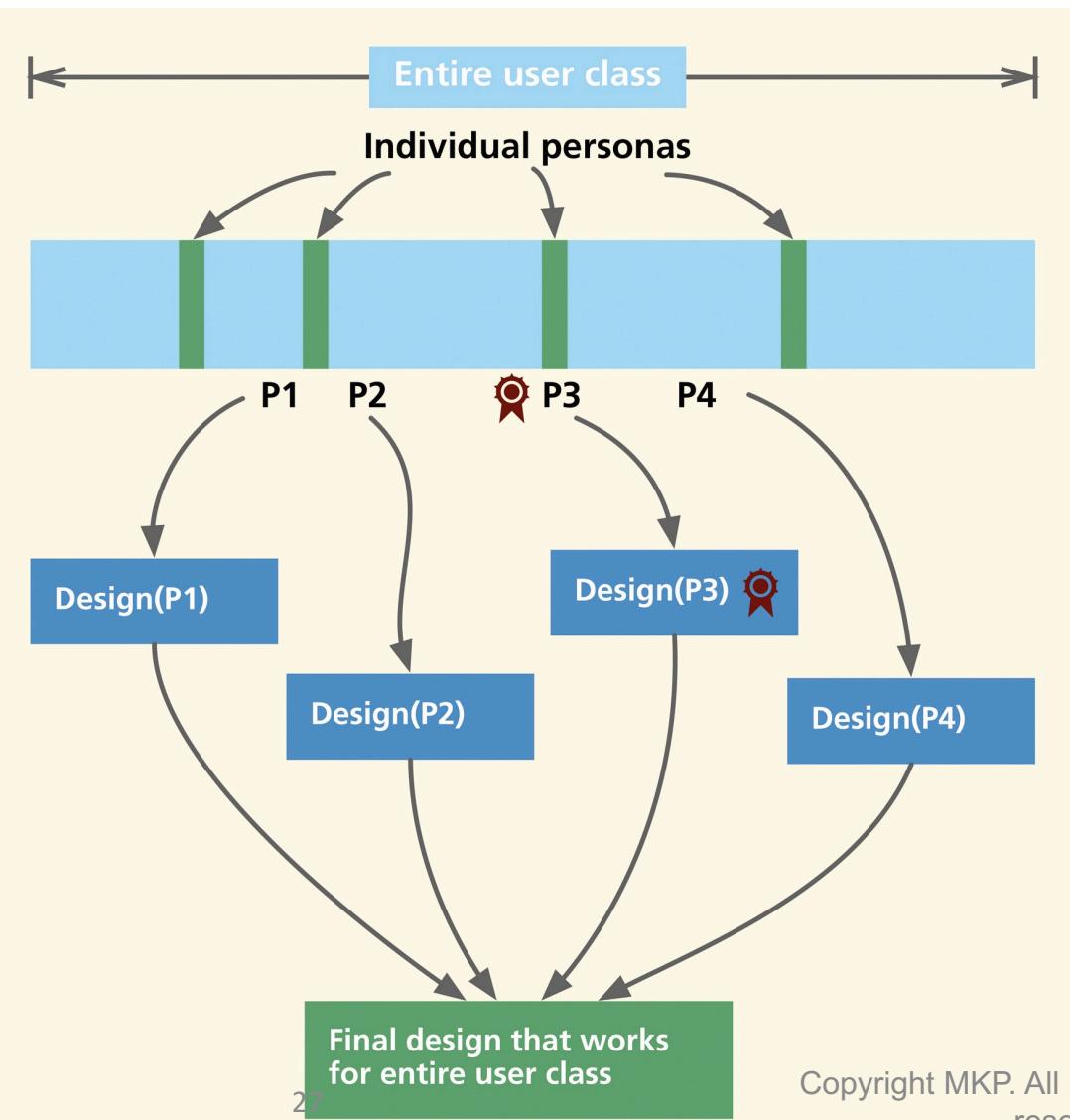
Stages by Processes of Change



Choosing a primary persona



Using personas in design



Activity 2: *Groups* identify information the group to collect to inform personas

Focus on Primary persona that represents people who are very inactive and in contemplation stage

Why are you doing this?

What information would you like
to inform the design of your
persona for Assignment 1?

Groups: Identify information the group would like to collect to inform the definition of personas, defining 3 questions to ask, 3 observations to do

Focus on Primary persona that represents people who are
very inactive and in contemplation stage

Then *individual* questionnaire

Linking Personas and Tasks

Gaining insight into user requirements and tasks

We observe users

We ask users about their needs and the way they work and learn

We identify all the personas that seem potentially useful to characterise different subgroups among the users

We create a list of **goals/tasks** they need to do

- Different personas .. Different tasks
- These are the tasks that the interface must be able to support
- These are the ones you need to consider in usability evaluations

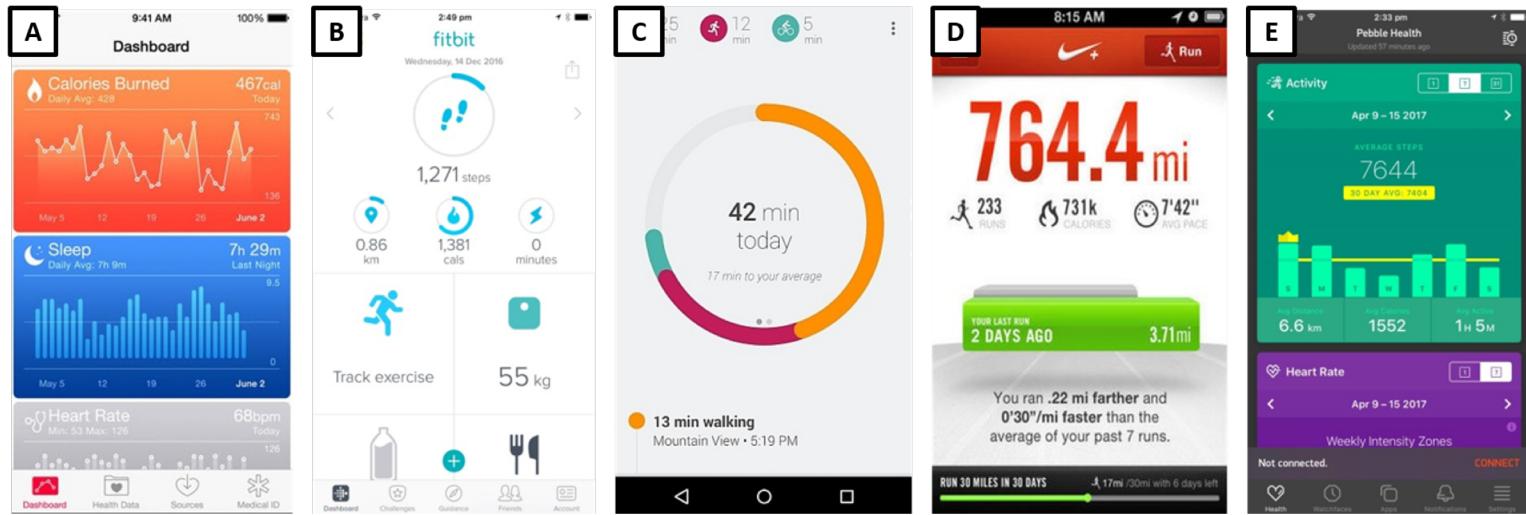
User goals and tasks

- What does the user need to be able to do?
- Think of the tasks a persona needs to be able to do
- Task design is difficult to do well
- Task design is really important
 - For design
 - For evaluation
 - For Assignment 1, any project with a UI

What we can learn from other
studies of people?

Be a detective about actual user
goals that drove design of
commercial interfaces

Commercial visualisations



A: Apple health, B: Fitbit, C: Google Fit, D: Nike+ and E: Pebble



WEEKLY STATS



Hi, Judy K.!

Here are your stats for Aug. 7 - Aug. 13



Mon.

Best Day!
15,422

Wed.



Thurs.



Fri.



Sat.



Sun.



Wed.



Thurs.



Fri.



Sat.



Sun.



66,783

total steps

Avg. 9,540 steps per day. ▼ 10,281 fewer than last week



46.93

total km
▼ 3.05 km below last week

1,695

avg. daily calorie burn
▼ 33 cals. fewer than last week

371

total active minutes
▲ 33 min since last week

0 of 5 days

exercising this week
same as previous week

6 of 9 hrs

avg. hrs with 250+ steps
▼ 1 hrs lower than last week

0.0 kg

no weight change
same as previous week

VIEW DASHBOARD

Let's be friends



BLOG



WEEKLY STATS



Hi, Judy K.!

Here are your stats for Jul. 31 - Aug. 6



70,994 total steps

Avg. 10,142 steps per day. ▲10,281 more than last week



[VIEW DASHBOARD](#)

Let's be friends



BLOG

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What can we learn from studies of users of Fitbits (and ways to display information)

Lie Ming Tang, Margot Day, Lina Engelen, Philip Poronnik, Adrian Bauman, and Judy Kay. 2016. Daily & Hourly Adherence: Towards Understanding Activity Tracker Accuracy. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (CHI EA '16). ACM, New York, NY, USA, 3211-3218. DOI: <https://doi.org/10.1145/2851581.2892438>

Students with loan device for one
semester

IT students v Med Sci

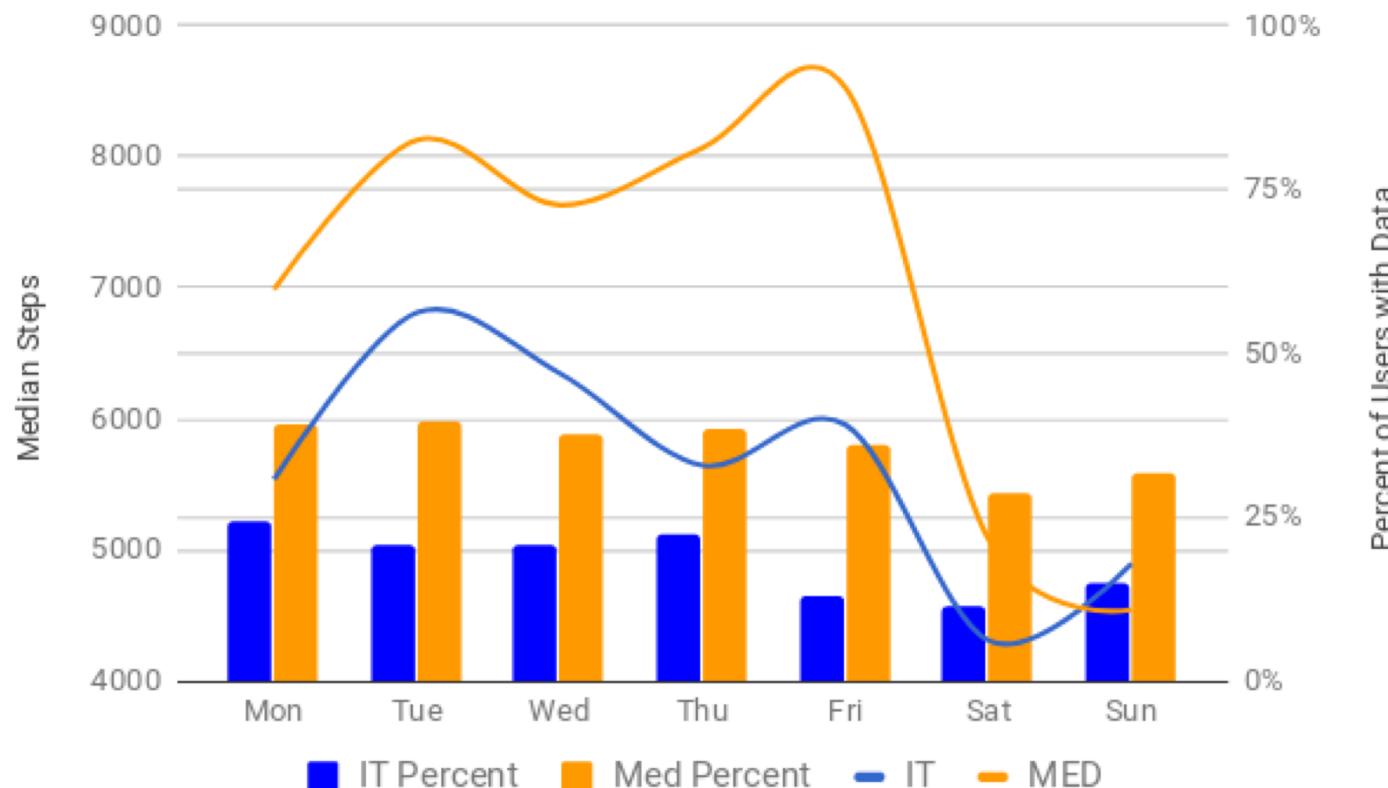
Who do predict would be more active?

ie persona based on no evidence....

From our study.....

Discuss what you learn from this.

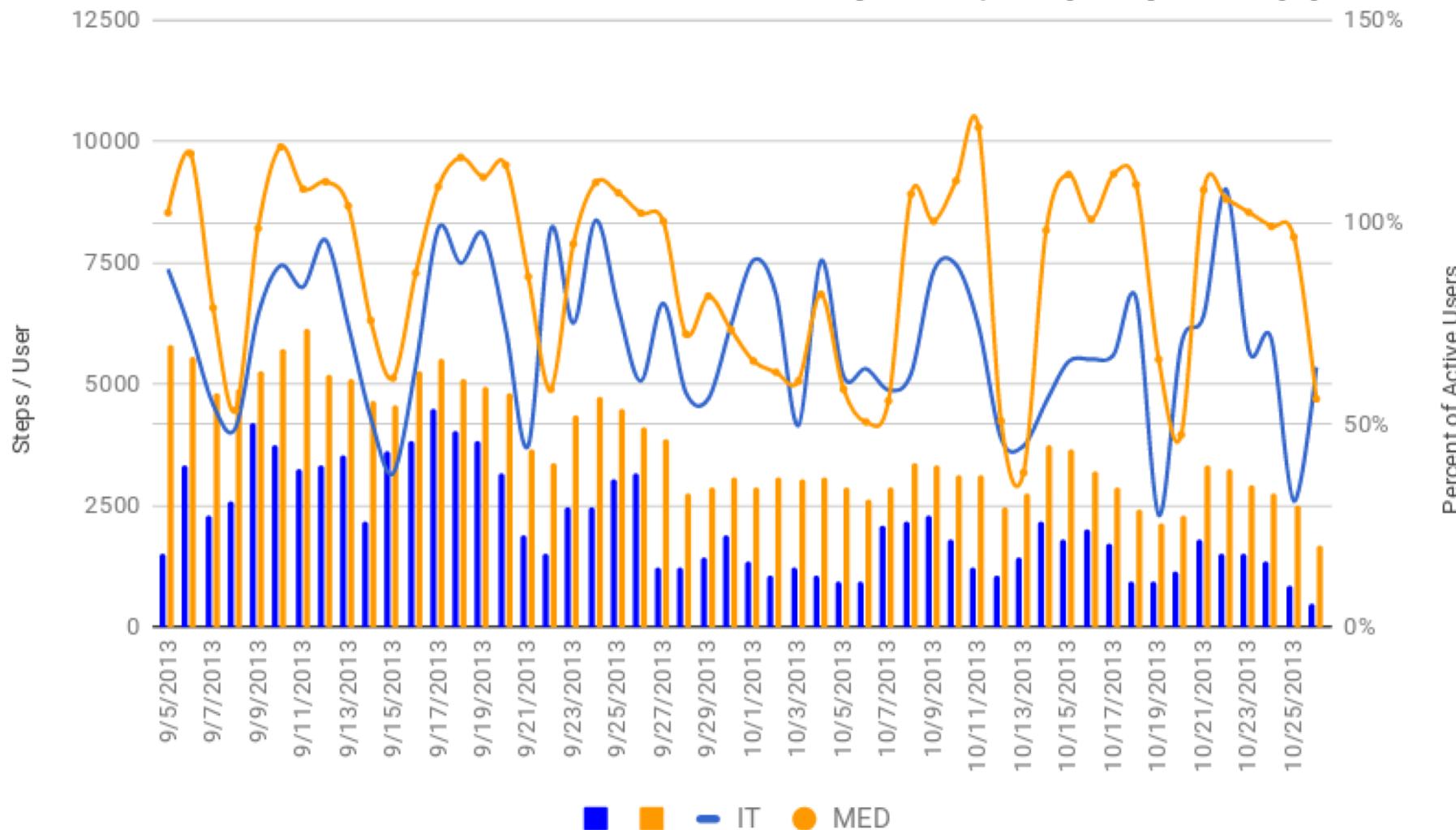
Median Steps vs Day of Week (% users with data)



Longer term data

Discuss what you learn from this for Ass 1.

Median Steps vs Percent of Users with Data



People who are long term trackers of physical activity....

Lie Ming Tang and Judy Kay. 2017. Harnessing Long Term Physical Activity Data—How Long-term Trackers Use Data and How an Adherence-based Interface Supports New Insights. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 1, 2, Article 26 (June 2017), 28 pages. DOI: <https://doi.org/10.1145/3090091>

Our core questions

- How do long-term trackers use data?
 - Interviews to learn about people's goals
- How to create an interface to long term data?
 - IStuckWithIt
 - Adherence: how much people wear their tracker
- Can long term trackers gain insights from IStuckWithIt?

The promise:

long term physical activity data can
help people reflect, plan and monitor

What is the reality:

How do people *actually* use their
long term physical activity data?
Do they reflect, plan and monitor?

Spoiler...

People hardly use it at all.....

How do people *actually* use their
long term physical activity data?

Do they reflect, plan and monitor?

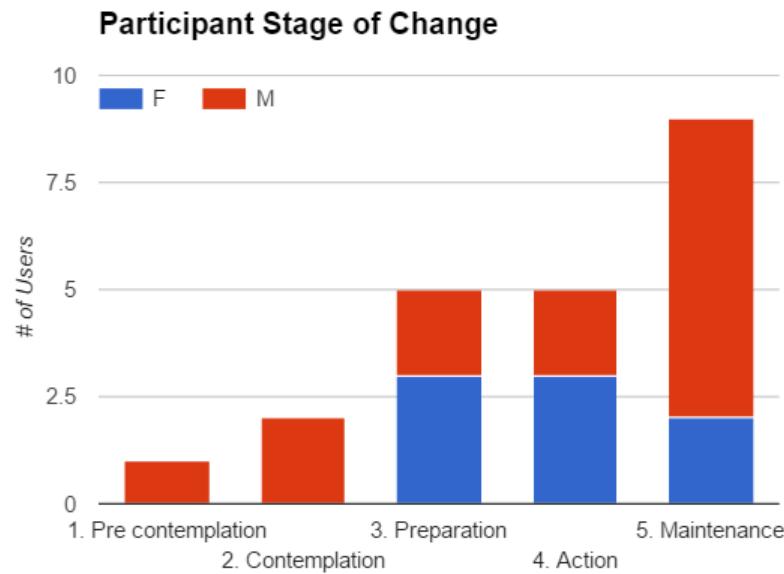
How do long term FitBit users actually use their long term data:

Interviewed 21 FitBit users (7 women)

Tracking time: 23 months average (6 <1 year)

Highly educated, value tracking

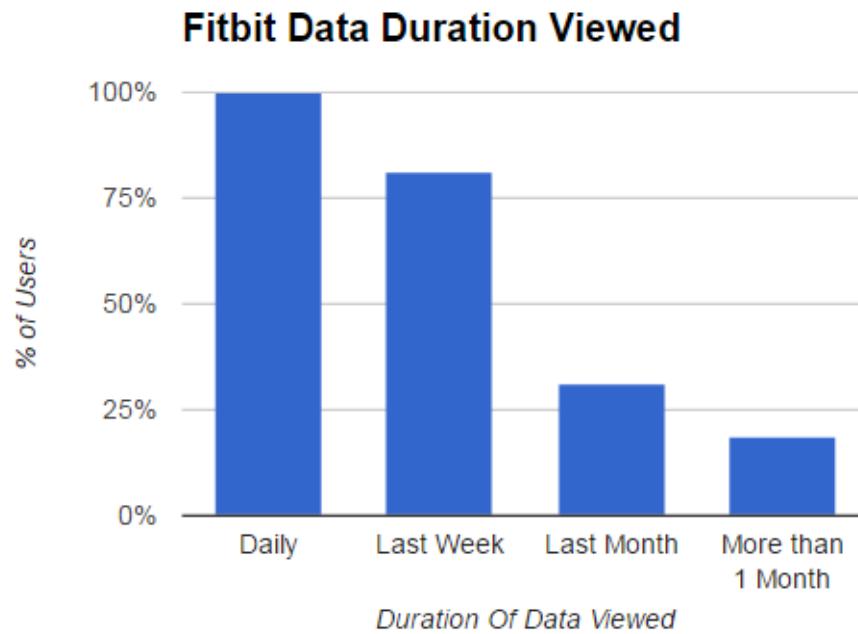
Stage of TTM activity goals



What our trackers do?

- Reasons for tracking:
 - awareness (13), goal monitoring (8)
- Targets for steps
 - 10,000 steps default is dominant (14)
 - Just 3 based target on data history
- About tracking
 - Many tracked other data eg weight, heart rate, sleeeeeep...
 - About half used social features
- Rated tracking as important
 - average 6 on 7-point Likert scale
- Actual use of data
 - Mostly short term
 - **Minimal use of long term data (1 uses spreadsheet monthly)**

What data did they view



So do they know how many steps
they walk?

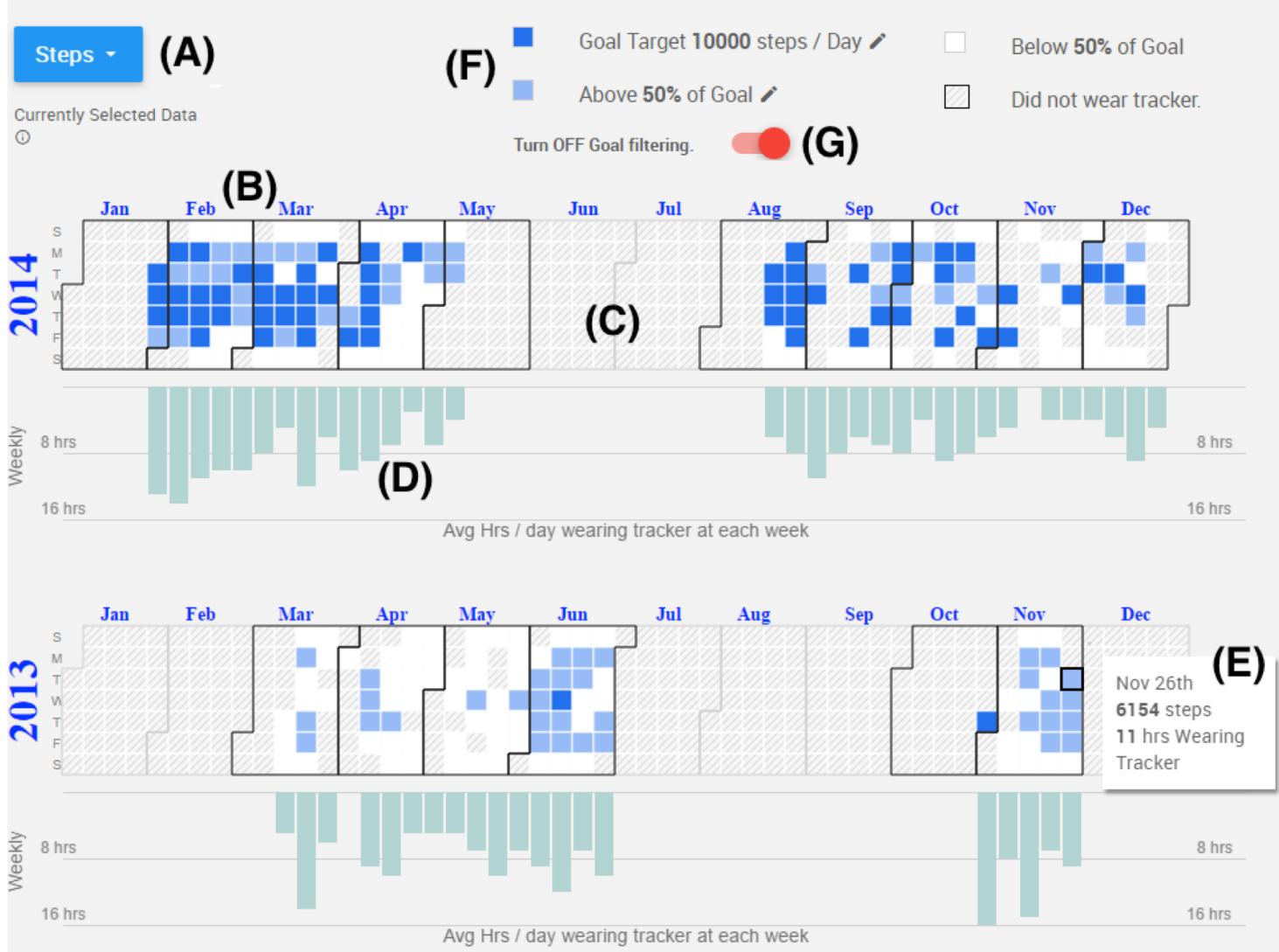
Average estimate error 20% (SD 16%)

Range in error 3% .. 57%

How to create an interface to long term data?

IStuckWithIt

Adherence



Can long term trackers gain insights from IStuckWithIt?

IStuckWithIt
Adherence

Insights about activity

- Insights about wearing behaviour in daily and hourly adherence.
- *Inferences about context and factors around notable features in daily and hourly adherence.*
- *Insights from goal adherence patterns, steps and active minutes.*

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