MONASH University

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INFORMATION
TECHNOLOGY

Vision:
Improved development of mobile eHealth applications

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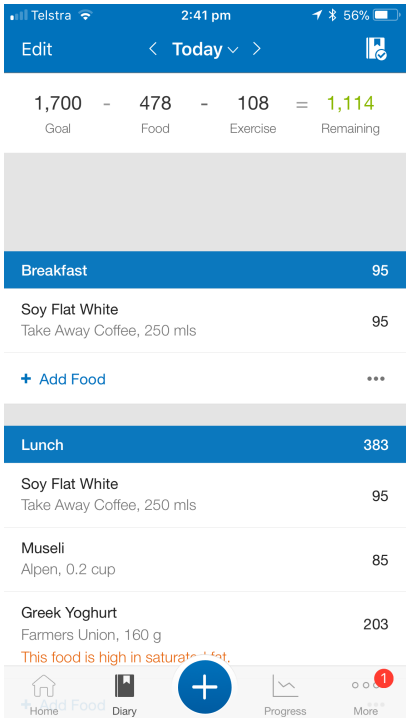
GROUP OF EIGHT AUSTRALIA

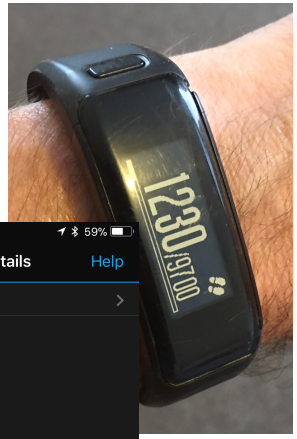
Outline

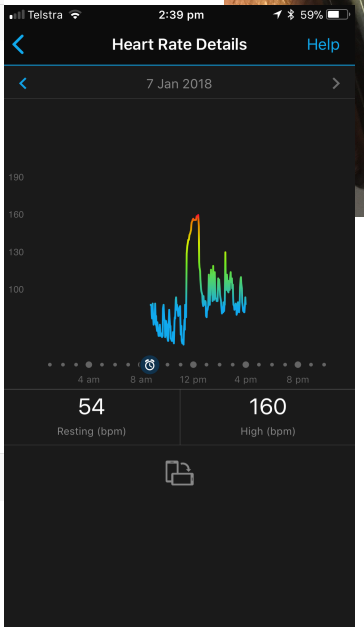
- The problem
- The key issues
- The vision
- Work to date
- Next steps…

Examples

Diet, pharmacology, activity adherence



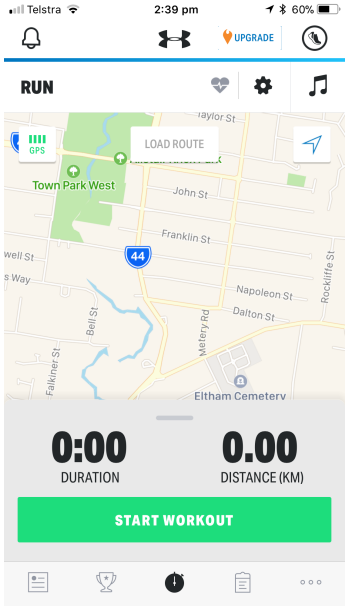




Wearables, Heart rate Monitoring etc

Augmented, virtual reality For training etc

Clinical apps



Exercise tracking

Its not a new approach / problem…

- An aside… we've been trying to build these for some time
- E.g. Our OOIS 2001 patient management WAP/WML example:

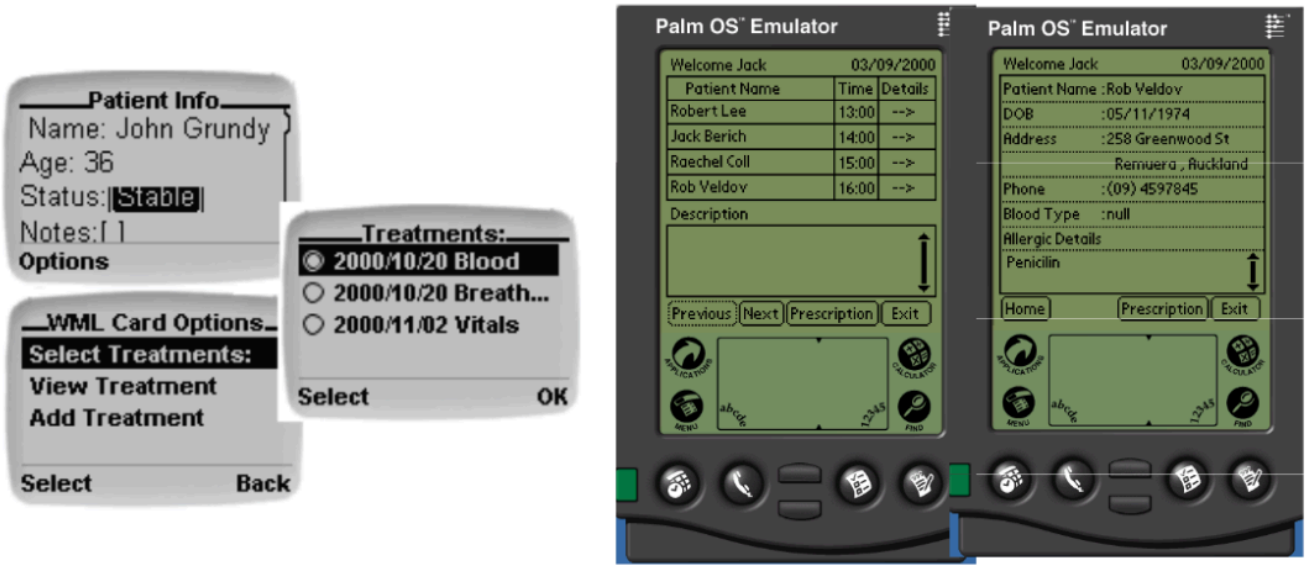


Figure 7. Examples of (a) staff WML and (b) staff PDA applet user interfaces.

Developing eHealth applications is HARD!!!

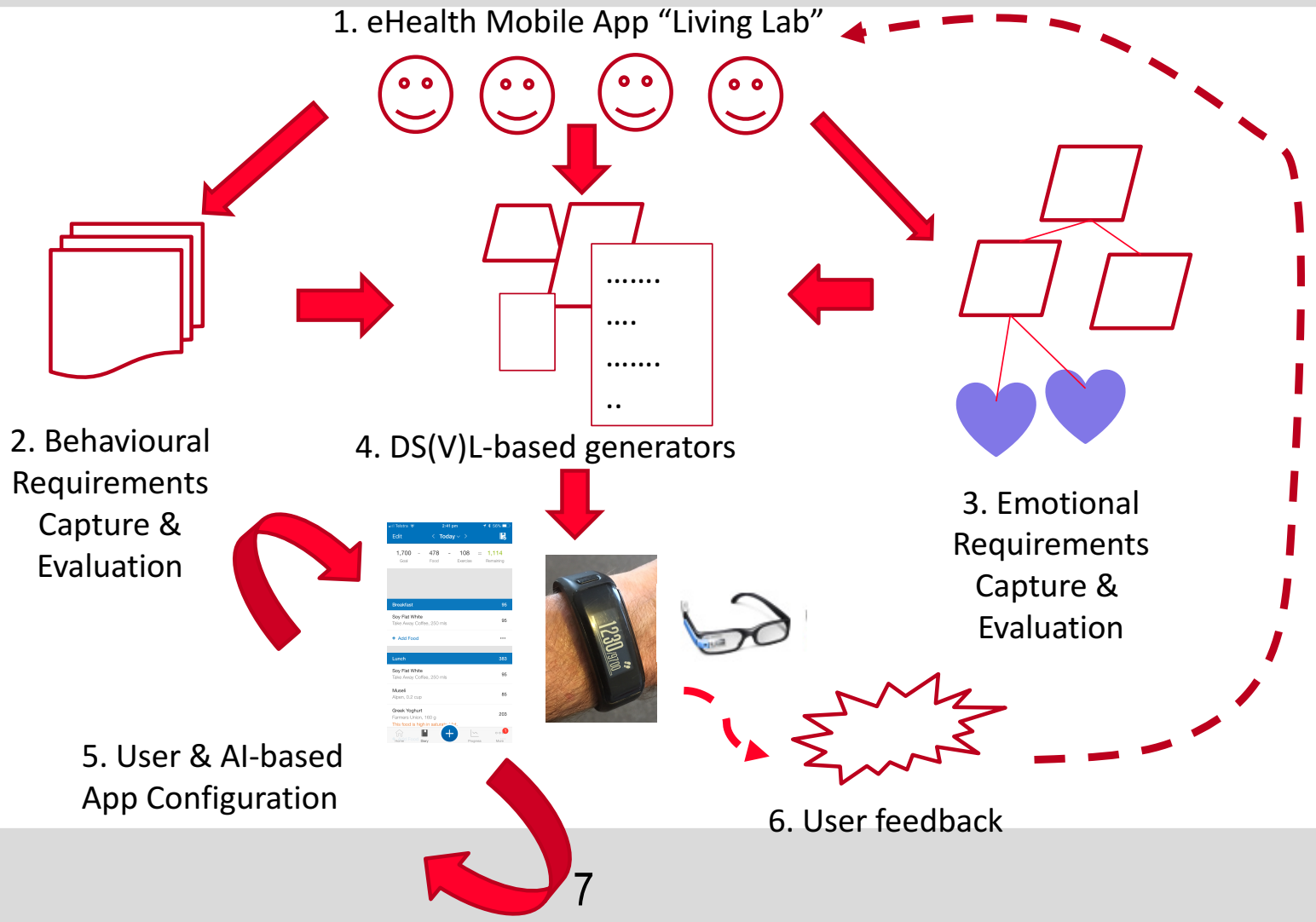
- Range of users
- Range of technologies
- Changing technologies
- Supporting app evolution
- Continuous development, deployment in eHealth domain

- Avoid solution looking for a problem scenarios…

Some key Issues

- What Development process to use?
- What are appropriate requirements Engineering approaches to use?
- How do we design and build these Mobile Apps?
- How support (re)configuration – different users, health challenges, deployments etc
- How get timely, effective end user feedback?
- How achieve sustainability of health behaviour change (via use of the app)?

The Vision


1. eHealth Mobile App “Living Lab”
2. Behavioural Requirements Capture & Evaluation
4. DS(V)L-based generators
3. Emotional Requirements Capture & Evaluation
5. User & AI-based App Configuration
6. User feedback

Progress to date

- Living lab – setting up inside aged care provider partner
- Behavioural requirements, change impact – extending modelling approaches to incorporate
- Emotional requirements engineering, evaluation – method and tools
- Mobile app generators – extending earlier work
- Configuration – extending earlier work, exploring AI-based adaptation
- Continuous feedback – integrating into app including sustainability of solution, interface and task usage, feedback on app/solution, integration into living lab process…

What next…

- Living lab set-up, evaluation for mobile apps
- Behaviour change + Emotion-based development
- App generation with focus on usability of solution as well as functionality
- Defect reporting – continuous feedback
- Continuous development including AI-based adaptation, living lab context

Questions???