

# User Centred Design In a Mobile Health World

**Presenter: James Brennan**  
Business Development Manager

AusBiotech National Conference  
**2011**

Great products = Great experiences





“D+I’s Knowledge of all aspects of product development has resulted in an enormous amount of value being added to the final result”

Stewart Bartlett, COO,  
Signostics



“D+I was selected for the project due to their ability to create world class design that we felt would be appropriate for the global market”

Paul Chapman, President,  
Chattanooga Group



“D+I has always continued to perform under tight development constraints, meeting the demands for high volume, low cost production in critical project lead-times”

Gareth Owen, Managing Director,  
Ingenico

# Over 100 industry awards



AUSTRALIAN INTERNATIONAL  
DESIGN AWARD



AUSTRALIAN INTERNATIONAL  
DESIGN MARK



AUSTRALIAN  
DESIGN AWARD



AUSTRALIAN  
DESIGN MARK



NSW ENGINEERING  
EXCELLENCE AWARDS



NATIONAL ENGINEERING  
EXCELLENCE AWARDS



IDSA GOLD IDEA AWARD



IDSA SILVER IDEA AWARD



INTERNATIONAL FORUM  
DESIGN AWARD



PLASTIC INNOVATION  
AWARD



POWERHOUSE MUSEUM  
SELECTIONS



MIAMI BOAT SHOW  
INNOVATION AWARD



ID MAGAZINE  
DESIGN DISTINCTIONS



CHICAGO ATHENAEUM  
GOOD DESIGN AWARDS



CATIA AWARD FOR  
DESIGN AND  
ENGINEERING EXCELLENCE



FIAA AUSTRALIAN  
FURNITURE OF THE  
YEAR AWARD



MEDICAL DESIGN  
EXCELLENCE AWARD



THE PREMIER'S NSW  
EXPORT AWARD



CFIA AWARD FOR  
EXCELLENCE IN DESIGN &  
MANUFACTURE



EDN  
INNOVATION AWARD



DAME  
DESIGN AWARD



ENDEAVOUR AWARD



SESAMES AWARD



AQUATECH INNOVATION  
AWARD



NEW ZEALAND BEST  
AWARD

# What do we mean by User Centred Design?



## User-centered design can be characterized as a multi-stage problem solving process

- It requires designers to analyze and foresee how users are likely to use a product,
- And also to test the validity of their assumptions with regards to user behaviour in real world tests with actual users.
- Such testing is necessary as it is often very difficult for the designers of a product to understand intuitively what a first-time user of their design experiences, and what each user's learning curve may look like.



We discover 'design  
actionable insights'  
and deliver  
technological  
innovation

Design is about  
people not  
things





## What are the benefits? Particularly in more regulated environments such as FDA approval of medical devices

- Easier to use devices, controls and displays
- Safer connections between devices and peripherals (power cords, leads, tubing and cartridges)
- Better understanding of the device's status and operation
- Better understanding of a patients medical condition
- More effective alarm, maintenance and repair
- Reduced needs for user training
- Reduced risk of error, adverse effects and product recall





# DYNAMIC CONTROLS

*Christchurch  
New Zealand*

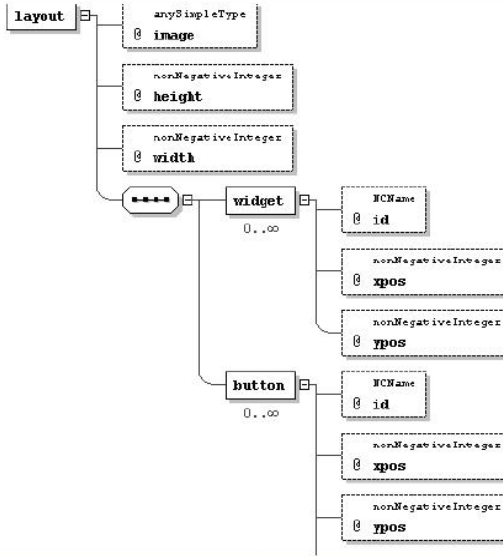


# DISCOVERY



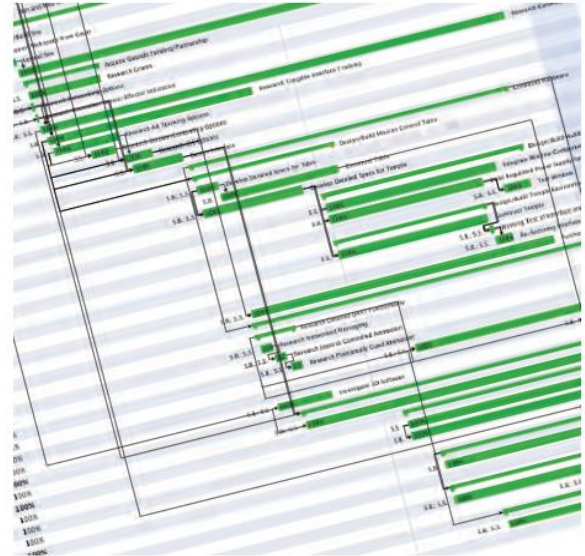
## FAMILIARISE

+ familiarize and understand your system



## ESTABLISH

- + establish protocols, limitations, advantages of hardware + software
- + investigate + recommend development tools
- + establish architecture and hard points



## PLAN

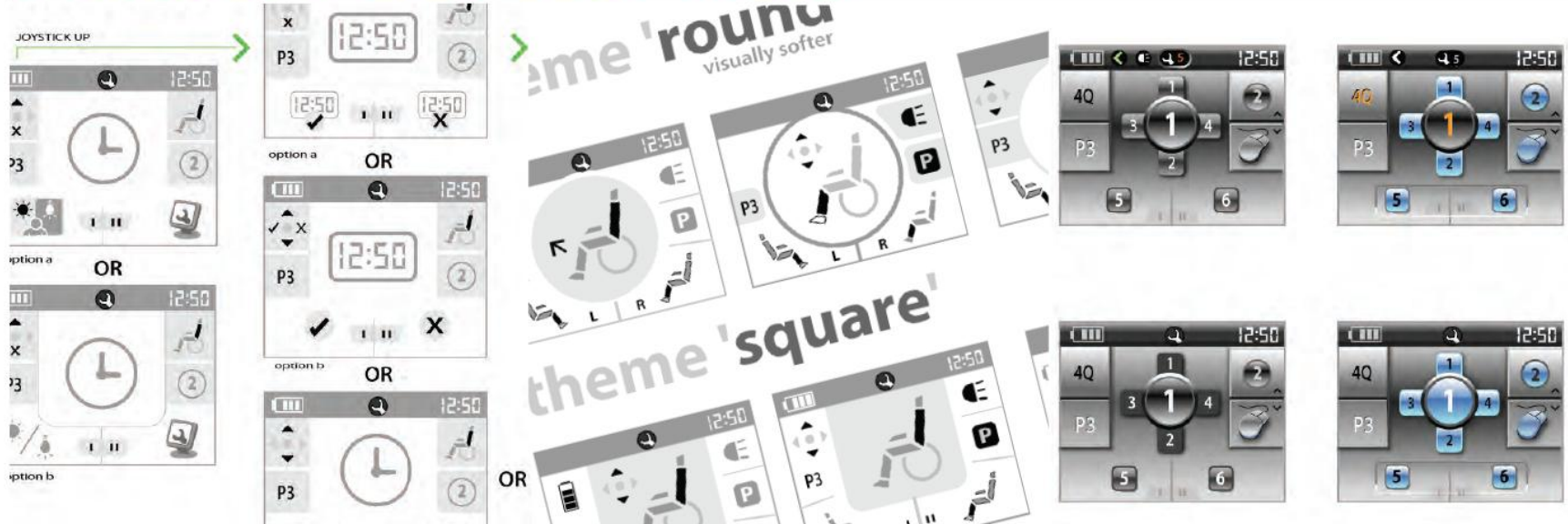
+ project plan milestones and establish communication methods

# MAP

- + map out and iterate workflow
- + layout individual screens against transition from one application to the other.
- + explore and test multiple ideas to identify the right solution.



# CONCEPT DEVELOPMENT



## USER FLOWS

- + focus on streamlining the user flow of 2-3 key processes

## LAYOUTS

- + explore themes of layouts
- + establish information hierarchy

## DESIGN

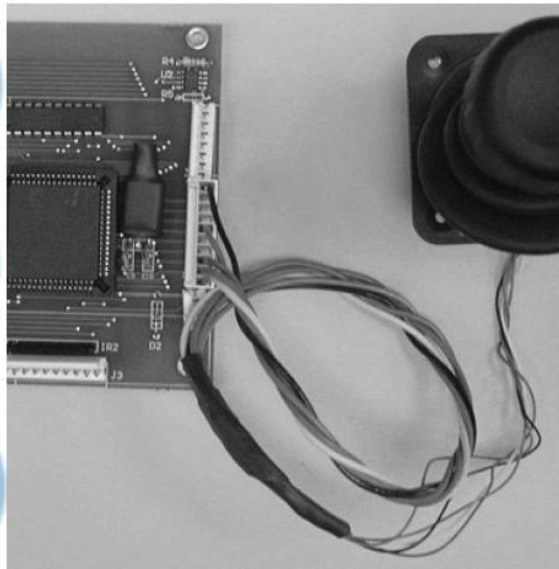
- + application of styling and visual cues to enhance user flow and navigation.

# USER TESTING



## STIMULI

- + prepare assets and graphical icons to test against user interpretation
- + prepare questionnaires and testing methodology



## PROTOTYPE

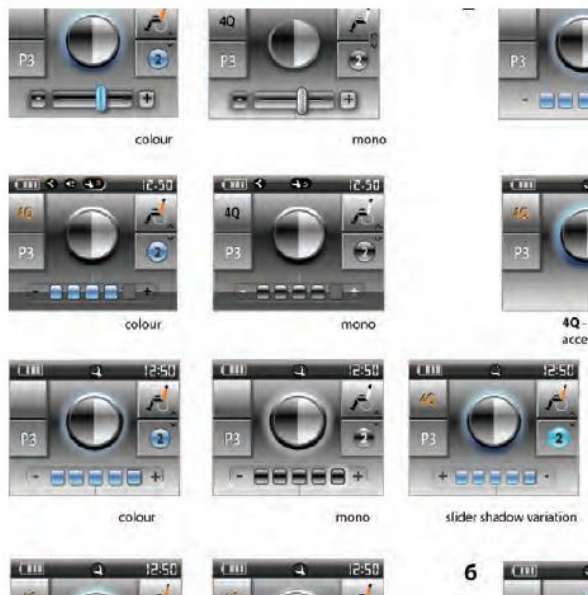
- + produce simulator to help mimic actual interaction.



## TEST

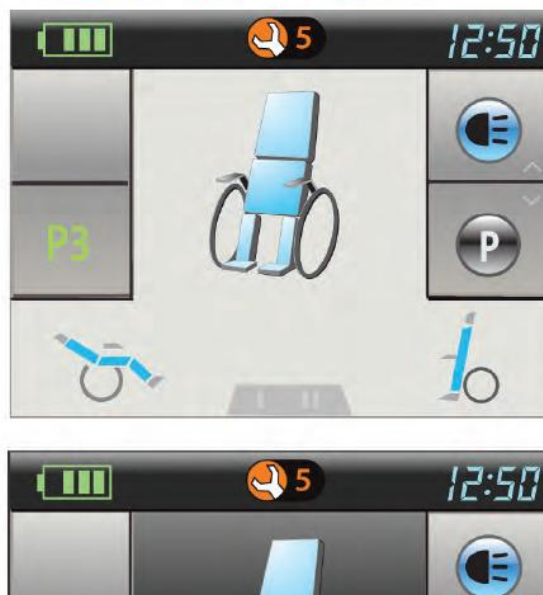
- + present all testing material to users to identify errors/misinterpretations/clashes in process

# DELIVERY OF INTERACTION



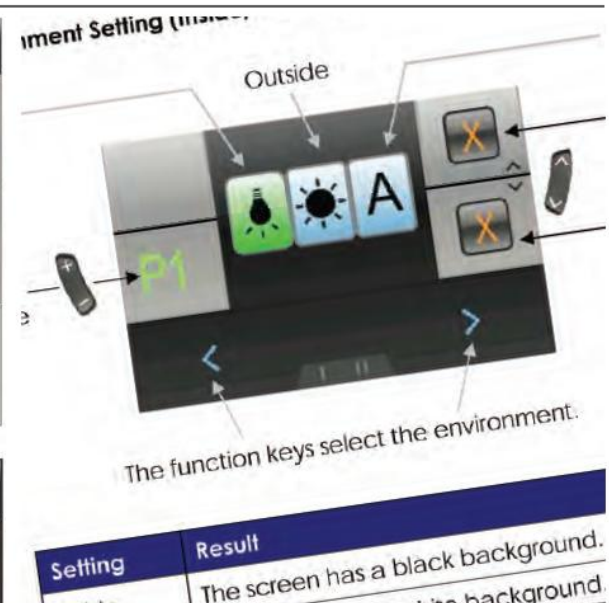
## ITERATE

+ respond to user testing and refine assets and usability



## FINALISE

+ complete all screen assets for software development



## SPECIFY

Setting	Result
Background	The screen has a black background.
Buttons	Buttons have a white background.

+ specify all visual assets through a style guide









Telemedcare  
**Clinical Monitoring Unit for Self - Management**  
2009



## THE FUTURE?

- Interactive mobility, breathtaking functionality
- Mobile devices are already used to test for various cancers, motion detection capabilities, optical sensing
- If it can be imagined it can be made
- Chronic diseases obesity, diabetes, heart disease contributed to by lifestyle factors
- Can we make an impact with social interaction?
- Feedback loops, peer-to-peer support or incentives by the government if you are doing 'validated' exercise and eating the right foods?
- The concept of health 'teams' supporting an individual; personal doctor, family, co-workers or anonymous social networks?



DESIGN + INDUSTRY

Thankyou

**Sydney**

115 Mullens St  
Balmain NSW 2041  
Australia  
+61 2 9555 1166

**Melbourne**

616 Balcombe Rd  
Black Rock VIC 3193  
Australia  
+61 3 9589 3000

[design-industry.com](http://design-industry.com)