

DNB311 ID7 CAPSTONE

ASSISTIVE DEMENTIA  
DESIGN THROUGH IMPROVED  
COMMUNICATIVE METHODS



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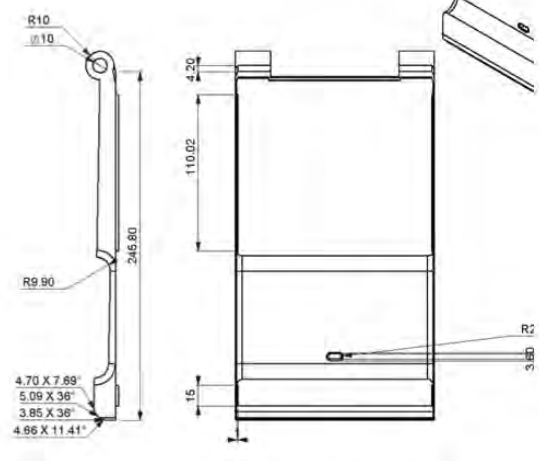
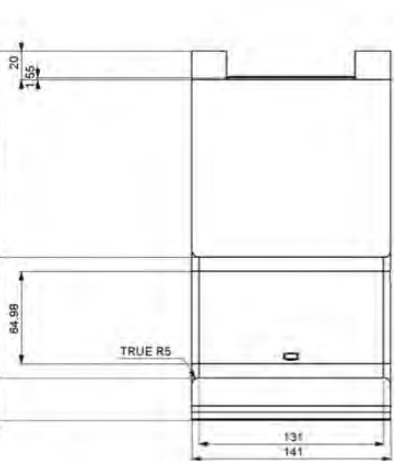
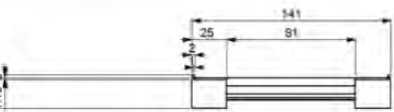
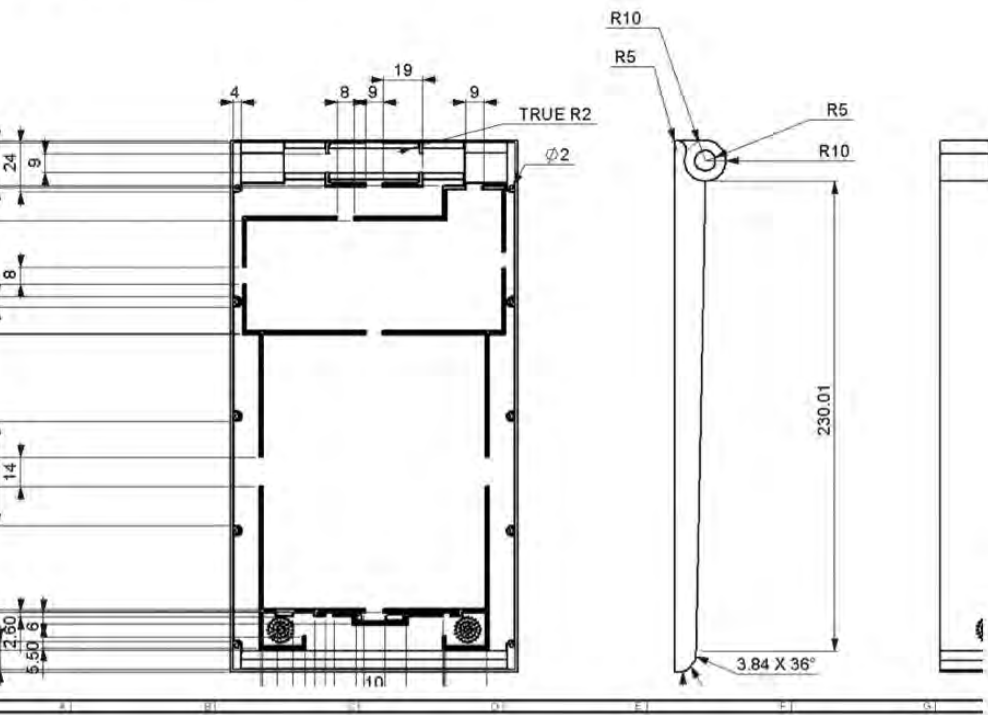
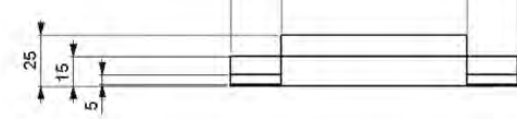
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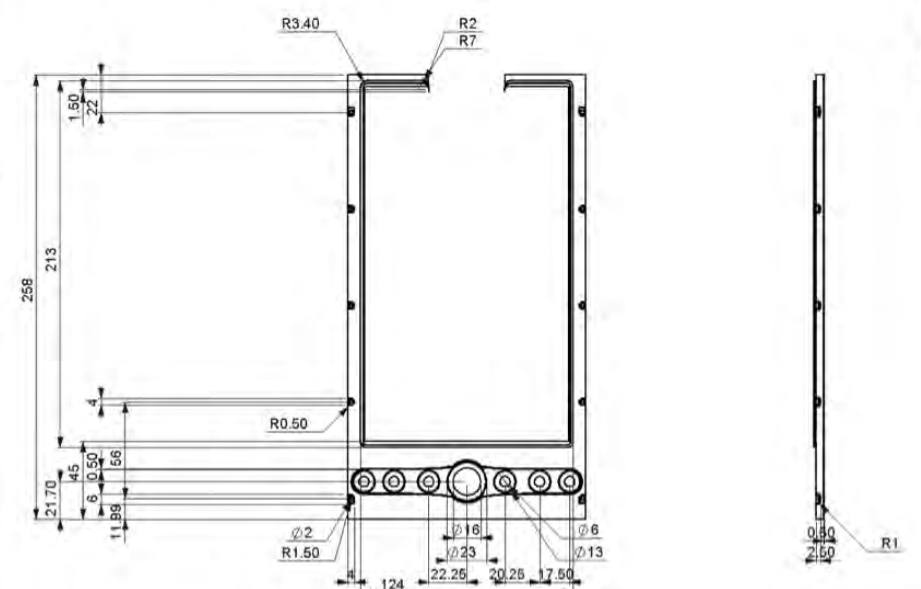
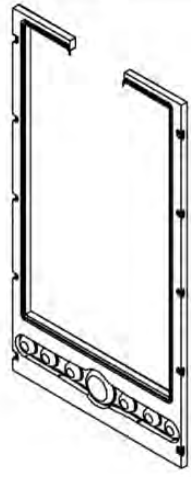
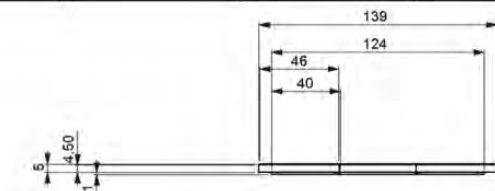
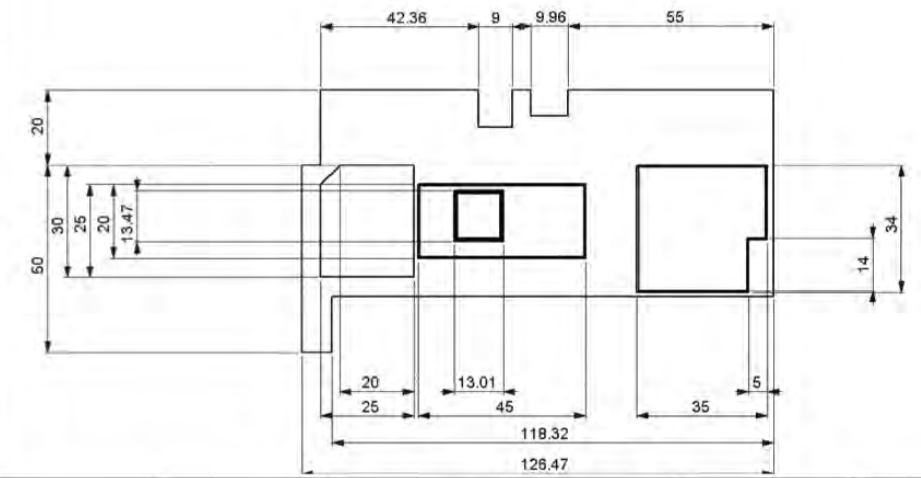
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R0.50



# WEEK 1 PREP

26/07/23

## CONTENT TO EXPLORE:

↳ DESIGN FOR MEDICAL/SLEEP APNEA INDUSTRY.

↳ AIR MINI SLEEP APNEA DEVICE, DESIGN TO BE MORE TRANSPORTABLE. INBUILT BATTERY, WATER STORAGE, ENHANCED BLUETOOTH CONNECTIVITY. INCORPORATE ALL CPAP DEVICE FUNCTIONS INTO THIS SMALLER PACKAGE. INCORPORATE A SLING OR SOME WAY TO ATTACH DEVICE TO THE WAIST.



↳ DESIGN FOR ACCESSIBILITY FOR PEOPLE WITH DEMENTIA

↳ SWEDEN HAVE A SYSTEM FOR COLOUR CODING

THINGS TO ASSIST WITH MEMORY. Eg. SUPERMARKETS ARE RED & DOCTORS/MEDICAL ARE GREEN

### Brain teasers pay off

Challenging the brain regularly by using a computer, doing crosswords or playing chess may be better at avoiding dementia than some creative pastimes such as knitting or even socialising with friends.

A new Monash University study that involved more than 10,000 Australians over 70 also found that brain teasers appear to support prolonged good cognitive

health. The study reported that people who read routinely and those who engaged in mental tasks such as education classes were 9 to 11 per cent less likely to develop dementia.

Creative hobbies like crafting, knitting and painting, and passive activities like reading helped reduce the risk by 7 per cent. Socialising made no discernible difference.

v1 - B0ME03201M\*

^

I FOUND THIS REPORT IN THE NEWSPAPER

WHAT MAKES ME PASSIONATE ABOUT THESE 2 DESIGN OPPORTUNITIES?

BOTH AREAS ARE FOCUSING ON MAKING LIFE FOR THE USER EASIER & LESS STRENUOUS, ASSISTING THE MAIN USER & THOSE AROUND THEM.

EXPERTS & END USERS FOR THESE?

↳ SLEEP APNEA/CPAP DEVICE IMPROVEMENTS, I WORK IN THIS INDUSTRY & HAVE VARIOUS DEVICES & LEARNING MATERIAL I CAN USE

↳ DEMENTIA ACCESSIBILITY DESIGN, MY FATHER & GRAND MOTHER HAVE DEMENTIA, & THIS WOULD BE MY OPPORTUNITY TO MAKE THEIR LIVES BETTER

# PEOPLE, ACTIVITIES & CONTEXT

P - DEMENTIA PATIENT, CARER, NDIS, FAMILY, FRIENDS

A - DAY-TO-DAY, ACTIVITIES/DAYS OUT WITH NDIS CARER.

- WHAT DO PEOPLE DO WITH DEMENTIA AT HOME WHEN BY THEMSELVES? HOW DO THEY GET THROUGH THE DAY?

C - HOW IS THE HOUSE LAID OUT FOR EVERYTHING TO BE EASILY ACCESSIBLE?

- HOW CAN ITEMS IN THE HOUSE & OTHER ACTIVITIES BE EASILY REMEMBERED WITHOUT MUCH TROUBLE?



WEEK 2

26/07/23

LECTURE





# INTRO SCHEDULE

ENVIRONMENTALLY CONSCIOUS

PRAGMATIC VISIONARY

ATTENTION TO DETAIL

CAPTIVATED (ING)

BUSINESS MINDED

SOCIAL CONSCIOUS

# RESEARCH PROJECT

## 1. BEGIN REVIEW ON LITERATURE

↳ ACADEMIC ARTICLES, INDUSTRY REPORTS

↳ CATEGORISE KEY THEMES

↳ KEEP A RECORD OF SOURCES

## 2. EXPLORE ALREADY EXISTING CONCEPTS/IDEAS

↳ CURRENT SOLUTIONS THAT ARE PERFORMING POORLY

↳ HOWEL DESIGN OPPORTUNITY?

↳ KEEP RECORD OF INFO & IMAGES

BEGIN SKETCHING FROM DAY ONE, MOOD BOARDS &

INSPIRATION, DRR too

26/07/23

RESEARCH ON

DEMENTIA/DISABILITY

SOLUTIONS IN SWEDEN

## BETTER HEALTH CHANNEL - DEMENTIA SAFETY

- ↳ SWEDEN RANKS THE HIGHEST IN DEMENTIA CARE IN EUROPE 2021. FOLLOWED BY FINLAND & GERMANY
- ↳ THE BEST LIVING ENVIRONMENT FOR DEMENTIA IS ONE THAT HELPS THEM TO BE AS HAPPY & INDEPENDENT AS POSSIBLE.
- ↳ FAMILIARITY WITH ENVIRONMENT & ROUTINES
- ↳ HOME ENVIRONMENT, HELP THEM KNOW WHERE THEY ARE, & HELP FIND WHERE TO GO



# ALZHEIMER EUROPE

↳ 24 MAY 2018 - SWEDISH GOVERNMENT  
LAUNCHED STRATEGY TO IMPROVE DEMENTIA  
CARE

↳ WORLD HEALTH ORGANIZATION (WHO)  
GLOBAL ACTION PLAN ON  
DEMENTIA (2017 - 2025)

↳ GOVERNMENT'S STRATEGY FOCUSES ON  
IMPROVING 7 KEY STRATEGIC AREAS:

COLLABORATION BETWEEN HEALTH & SOCIAL CARE,  
STAFFING, KNOWLEDGE & SKILLS, MONITORING &  
EVALUATION, FAMILY & FRIENDS, SOCIETY, ASSISTIVE TECH

## DEMENTIA CARE: INTERNATIONAL PERSPECTIVES

- ↳ 90,000 VARIOUS FORMS OF LIVING FOR ELDERLY,  
70% OF THESE ARE OCCUPIED BY PEOPLE  
WITH DEMENTIA
- ↳ GROUP HOMES DESCRIBES SPECIFIC HOMES  
FOR PEOPLE WITH DEMENTIA, WHICH  
25,000 PEOPLE HAVE ACCESS TO.
- ↳ PAST 25 YEARS, NUMBER OF BEDS  
FOR PEOPLE WITH DEMENTIA HAS  
DECLINED SHARPLY.

↳ SWEDEN - TRAINING PROGRAMS FOR RELATIVES & SHORT-TERM ACCOMMODATION FOR THOSE WITH DEMENTIA. ALLOWS RELATIVES TO HAVE A TEMPORARY BREAK FROM CARE BURDEN.

↳ INITIAL DIAGNOSIS ASSESSMENT TAKES PLACE IN PRIMARY CARE. IF NO DIAGNOSIS IS MET, PATIENT IS REFERRED TO A MEMORY CLINIC WITH GERIATRIC EXPERTISE.



↳ GUIDELINES SUGGEST TO FOCUS MORE ON PATIENT'S LIFESTYLE, VALUES ETC. RATHER THAN THE DISEASE

↳ THE PRIMARY OBJECTIVE OF CARERS IS TO CARE FOR DEMENTIA PATIENTS AT HOME FOR AS LONG AS POSSIBLE, TO PROVIDE HELP, TRAVEL OPPORTUNITIES, ACTIVITIES ETC.

↳ DISTRICT NURSES RESPONSIBLE FOR PROVISION OF MEDICATIONS, & PRIMARY CARE PHYSICIANS RESPONSIBLE FOR ANNUAL FOLLOW-UPS. WHAT ABOUT AUSTRALIA?



# NATIONAL GUIDELINES HAVE IDENTIFIED SOME MAIN FINDINGS:

- ◆ Less than half of patients being investigated in primary care undergo a complete baseline dementia assessment, and nearly half have a non-specific dementia diagnosis.
- ◆ The number of registered dementia investigations and prescriptions of anti-dementia drugs differ greatly between counties.
- ◆ Among people with lower levels of education and those born outside the Nordic countries, there are a smaller number receiving treatment with anti-dementia drugs. However, they are more often treated with antipsychotics.
- ◆ County councils and municipalities need to provide regular training and guidance for staff working in health and social care for people with dementia.
- ◆ The number of places in special dementia care facilities have increased but varies considerably between municipalities.

↳ THE SWEDISH DEMENTIA REGISTRY (SUEDEM) - NATIONAL QUALITY REGISTRY ON DEMENTIA.

↳ LAUNCHED IN MAY 2007, FINANCED BY THE SWEDISH ASSOCIATION OF LOCAL AUTHORITIES & REGIONS & THE SWEDISH BRAIN POWER NETWORK.

↳ 90%+ MEMORY CLINICS IN SWEDEN ARE PARTICIPATING WITH 'SUEDEM'!

'SUEDEM' HAS PROVIDED A NUMBER OF QUALITY  
PARAMETERS: } FUTURE



- ◆ Time from referral to initiation of workup: aim for 1 month—currently 40 days.
- ◆ Time from initiation of workup to diagnosis: aim for 1 month—currently 56 days.
- ◆ Over 90% of patients undergoing baseline dementia workup according to national guidelines—currently 78%.
- ◆ 90% of patients diagnosed with AD should be treated with cholinesterase inhibitors—currently 76%.
- ◆ 100% of patients should be followed up once a year.
- ◆ No gender differences in care.
- ◆ Almost half of newly diagnosed patients (48%) are living alone.

↳ MORE OF A FOCUS IS NEEDED FOR THOSE STILL IN EARLY STAGES / CLINICAL PHASES.

↳ HEALTHCARE SYSTEM CANNOT OFFER CUSTOM PROGRAMS FOR THOSE STILL WORKING & DURING SICK LEAVES.

↳ MORE ATTENTION TO DIFFERENT CULTURAL BACKGROUNDS & MORE FORMAL EDUCATION FOR NON-MEDICAL HOME CARE & ASSISTANCE.



## BMC HEALTH SERVICES - ELDERCARE SERVICES

BELOW RESULTS ARE BASED ON ELDERCARE SERVICES IN SWEDEN;

↳ SOME SAY NO SEX DIFFERENCE WITH HOME CARE

↳ HOMECARE SERVICE MORE COMMON FOR OLDER MAN RATHER THAN WOMEN.

↳ WOMEN USED RESIDENTIAL CARE FOR LONGER PERIOD BEFORE DEATH THAN MEN.

↳ OLDER PEOPLE LIVING ALONE GOT MORE RESIDENTIAL CARE

## BEING PATIENT - SWEDEN'S AFFORDABLE HOMES

HOW CAN HOMES/LIVING SPACES BE BETTER DESIGNED TO ALLOW DEMENTIA PATIENTS TO LIVE INDEPENDENTLY FOR AS LONG AS POSSIBLE?

↳ DIAGNOSED PATIENTS WILL EVENTUALLY EITHER REQUIRE 24/7 CARE AT HOME, OR BE MOVED TO A NURSING HOME.

↳ 'SILVIABO' - DESIGNED GROUP APARTMENTS THAT PROVIDE PEOPLE WITH DEMENTIA EASIER LIVING & CAREGIVING.



↳ THESE SPECIALLY DESIGNED HOUSES HAVE SAFE FEATURES FOR THESE PATIENTS

↳ ADULT DAYCARE ACROSS THE STREET FROM THE APARTMENTS, EASY TO BRING PATIENT TO & FROM

↳ HELPS RELIEVE BURNOUT & STRESS FOR FAMILIES/CAREGIVERS. THIS ALSO ALLOWS THE DEMENTIA PATIENTS TO CONTINUE LIVING INDEPENDENTLY FOR AS LONG AS POSSIBLE, & IMPROVING THEIR QUALITY OF LIFE.

## DEMENTIA-FRIENDLY FEATURES OF HOUSE DESIGN:

- ↳ 48" WIDE, EVEN WALKWAYS OUTDOORS
- ↳ LARGE SIGNS FOR NAVIGATION
- ↳ TIMED POWER SOCKETS, EXTRA GRIP HANDLES,  
COUNTER SPACE NEXT TO FRIDGES
- ↳ ALARM BUTTONS, STRONG LIGHTING & ANTI-SLIP  
FLOORS IN THE BATHROOMS
- ↳ OUTDOOR CLUBHOUSE & GREENHOUSE FOR  
SOCIALISING
- ↳ ROOMY ELEVATORS WITH EXTRA PRONOUNCED  
BUTTONS
- ↳ WIDE ENTRANCES, AUTOMATIC DOORS, EXTRA  
LIGHTING IN COMMON AREAS & WIND/RAIN  
SHELTERS OUTSIDE EACH APARTMENT."



# SWEDEN'S ELDERLY CARE, LIVE INDEPENDENTLY

## PREVENTIVE HEALTHCARE STRATEGIES

↳ PRESCRIPTIVE PHYSICAL ACTIVITY

↳ THESE ARE MONITORED BY DOCTORS &  
SOMETIMES COMBINED WITH MEDICATION

↳ PERSONAL INJURY IS A MAIN HEALTH  
ISSUE, EFFORTS ARE MADE TO REDUCE  
FALL INJURIES

↳ SPECIAL MUNICIPAL 'FIXERS' ARE MADE  
READILY AVAILABLE TO HELP WITH  
CHANGING LIGHTBULBS FOR EXAMPLE

↳ STIMULATION THROUGH VARIOUS SOURCES  
(PAINTING, MUSIC, READING) ARE  
IMPORTANT FOR WELL-BEING. CARE HOMES  
ENGAGE IN AT LEAST ONE OF THESE  
ACTIVITIES PER DAY



02/08/23

MORE GENERAL  
DEMENTIA / DISABILITY

DESIGN RESEARCH

# US AGAINST ALZHEIMERS

## GUIDELINES TO FOLLOW:

↳ DON'T TELL THEM THEY ARE WRONG AT  
SOMETHING

↳ DON'T ARGUE

↳ DON'T ASK IF THEY REMEMBER SOMETHING

↳ DON'T REMIND THEM THAT THEIR LOVED  
ONE IS DEAD

↳ DON'T BRING UP UPSETTING TOPICS TO  
THEM

# UNIVERSAL DESIGN AUSTRALIA

↳ CREATING AN INCLUSIVE SOCIETY,  
IT IS A DESIGN THINKING PROCESS

8 GOALS OF UNIVERSAL DESIGN:

↳ BODY FIT, COMFORT, AWARENESS,  
UNDERSTANDING, WELLNESS, SOCIAL  
INTEGRATION, PERSONALISATION &  
CULTURAL APPROPRIATENESS



↳ PARTICIPATING IN  
EVERYDAY ACTIVITIES  
BENEFITS HEALTH  
& WELL-BEING. THIS  
IS OFTEN AFFECTED AS  
PEOPLE ARE EXCLUDED  
DUE TO BARRIERS,  
INCONVENIENCES & VARIOUS  
DIFFICULTIES.

Herston Biomed  
Fabrication



RESEARCH

02/08/23

WEEK 2  
LECTURE



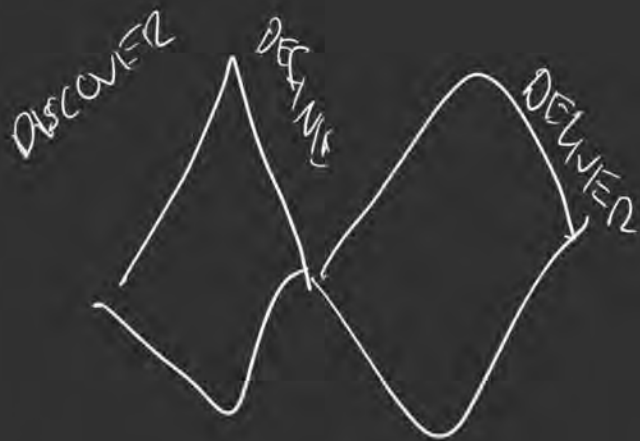
# QUALITATIVE RESEARCH PROCESS

WHAT ARE YOU GAINING FROM THE EXPERIENCE?

↳ PHILOSOPHY, THINKING, APPROACH, TECHNIQUES, SKILLS

DESIGNING FOR PEOPLE ← READ THIS BOOK  
HENRY DREYFUSS

ALWAYS BRING IN SUSTAINABLE THINKING



DOUBLE DIAMOND METHOD  
FOR THIS PROJECT



ZURB

IBM

GOOGLE

IDEO



VARIOUS DOUBLE DIAMOND METHODS

RESEARCH

IDEO: FEASIBILITY, VIABILITY, ...



THIS



DESIGN THINKING PENDULUM



↳ CONSTANTLY MOVING, MACRO TO MICRO & BACK ETC.

QUANTITATIVE & QUALITATIVE & MIXED RESEARCH



BASED ON TESTING THEORY, MEASURED IN NUMBERS & VARIABLES



BASED ON BUILDING COMPLEX, HOLISTIC PICTURE OF WORLD. CONDUCTED IN NATURAL SETTINGS, REPORTING DETAILED VIEWS OF PARTICIPANTS

QUAN - OBJECTIVE & SINGULAR

QUAL - CONSTRUCTED BY INDIVIDUALS

## SAMPLING

- ↳ EVENT
- ↳ RETROSPECTIVE
- ↳ REPEATED

## METHODS

METHODOLOGY - RESEARCH Q'S, QUALITATIVE ETC.

‡ METHODS - TOOLS USED

## QUALITATIVE METHODS - 2+ METHODS USED

- ↳ INTERVIEWS (STRUCTURED, UNSTRUCTURED)
- ↳ SURVEYS
- ↳ OBSERVATIONS
- ↳ THINK/TALK ALOUD PROTOCOLS

FOCUS GROUPS

ORAL HISTORIES

FIELD NOTES

PUBLIC CULTURE / ARCHIVAL TEXTS

## SAMPLING

INTERVIEW - 1-3 (DEPENDING ON LENGTH) \*

SURVEYS - 5-10 \*

OBSERVATIONS - 1-3 \*

OBSERVATIONS + CONCURRENT PROTOCOLS - 1-2 \*

# ETHICS

- ↳ MUST FOLLOW: AUSTRALIAN CODE FOR THE RESPONSIBLE CONDUCT OF RESEARCH
- ↳ IMPORTANT TO TAKE RESPONSIBILITY TO CONDUCT RESEARCH APPROPRIATELY & ACCURATELY
- ↳ CONSENT FORMS FOR PARTICIPANTS, KEEP A COPY OF THESE
- ↳ NEED TO PROVIDE ACCURATE & CONSISTENT INFORMATION ABOUT PROJECT & WHAT THEY ARE REQUIRED TO DO & THE PURPOSE OF THE RESEARCH
- ↳ PARTICIPANTS CAN WITHDRAW FROM RESEARCH AT ANY TIME



## NEED TO DO

- ↳ RESEARCH TOPIC (ARTICLES, RESOURCES)
- ↳ CONCEPTS & EXISTING PRODUCTS
- ↳ DECIDE HOW TO CONDUCT RESEARCH
- ↳ REACH OUT TO PARTICIPANTS
- ↳ CONDUCT RESEARCH

02/08/23

WEEK 2 FOLLOW  
UP RESEARCH, NOTES  
& PLANNING

# DAY-TO-DAY SCHEDULE - ALZHEIMER'S ASSOCIATION

DAILY PLAN EXAMPLE ) DEMENTIA PATIENTS  
FROM ALZHEIMER'S ENJOY JOINING OTHERS  
ASSOCIATION) IN THEIR ACTIVITIES

↳ STRUCTURED & PLEASANT  
REDUCES AGITATION & IMPROVES  
MOOD

↳ AS CONDITION WORSENS, FURTHER  
FLEXIBILITY WILL NEED TO BE  
ADAPTED FOR DAILY ROUTINE

↳ DO 'POP-UPS' CAUSE CONFUSION  
& ANXIETY?

## Daily plan example (for early- to middle-stages of the disease)

### Morning

- Wash, brush teeth, get dressed
- Prepare and eat breakfast
- Have a conversation over coffee
- Discuss the newspaper, try a craft project, reminisce about old photos
- Take a break, have some quiet time
- Do some chores together
- Take a walk, play an active game

### Afternoon

- Prepare and eat lunch, read mail, wash dishes
- Listen to music, do crossword puzzles, watch TV
- Do some gardening, take a walk, visit a friend
- Take a short break or nap

### Evening

- Prepare and eat dinner, clean up the kitchen
- Reminisce over coffee and dessert
- Play cards, watch a movie, give a message
- Take a bath, get ready for bed, read a book



## PHYSICAL ISSUES - ARTICLE SPRINGER

- ↳ CLAIM NONE OF THE STUDIES LOOKED AT DAILY LIVING ACTIVITY ISSUES & ONLY AT RECREATIONAL
- ↳ DIFFERENT TYPES OF DEMENTIA PERFORM DIFFERENTLY, & NOT OFTEN CONSIDERED WITH THE EFFECTS OF CARDIO-VASCULAR, COGNITIVE, WELL-BEING
- ↳ WHEN BALANCED CORRECTLY, PHYSICAL ACTIVITY HAS POTENTIAL BENEFITS
  - ↳ COGNITION, MOOD, BEHAVIOUR, PHYSICAL CONDITION, SOCIAL BENEFITS
- ↳ IN LATER STAGES, WALKING GETS GRADUALLY WORSE, GETTING THEMSELVES UP/STANDING FROM CHAIR/BED, BALANCE & INCREASED CHANCE OF FALLING

## ARTICLE SPRINGER - EARLY STAGE DEMENTIA

↳ HIGH INTENSITY AEROBIC EXERCISE, IMPROVE EXECUTIVE FUNCTION FOR WOMEN WITH MCI

↳ (CARDIOVASCULAR FITNESS - BRAIN ATROPHY) REDUCED

↳ HIGHER LEVELS OF PARTICIPATION IN AQUATIC EXERCISES YIELDED GREATER IMPROVEMENTS IN OVERALL FUNCTIONING

↳ NON-PARTICIPANTS SHOWED FUNCTIONING DECLINE

## ARTICLE SPRINGER - LATE STAGE

↳ EXERCISE PROGRAM AFTERMATH, SPEECH & RECOGNITION  
PROBLEMS DECREASED

↳ HAND GRIP & MUSCLE STRENGTH EXERCISES

INCREASED 'SEVERE DEMENTIA' MUSCLE STRENGTH

↳ ARGUED INCREASED MUSCLE STRENGTH SUPPORTED  
DIGNITY, INDEPENDENTLY USED BATHROOMS & TRAVELLED  
AROUND EASIER

↳ PHYSICAL ACTIVITY = SOCIAL BENEFIT &

INTERACTION



## ARTICLE SPRINGER - MODERATE TO SEVERE STAGE

↳ DEPRESSION & ANXIETY TESTED CHAIR-BASED EXERCISES

↳ DISPLAYED IMMEDIATE & CONTINUOUS IMPROVEMENT

↳ WALKING STUDY WAS CONDUCTED WITH PARTICIPANTS THAT HAD CARDIO-VASCULAR DISEASE. AS SUCH,

DIDN'T SEE MUCH IMPROVEMENT

↳ DIFFERENT WALKING PROGRAM SAW IMPROVEMENT IN COMMUNICATION OF PEOPLE WITH DEMENTIA, COMPARED TO BEING ONLY A CONVERSATION PROGRAM

# RAF'S SURVEY/Q'S / RESEARCH TIPS

## ETHICS

↳ CONSENT - FORMS & TEMPLATES MUST BE COMPLETED FIRST

↳ MINIMUM RESEARCH & WHAT YOU'RE ASKING

↳ LET RESEARCH GUIDE YOU - USING DATA TO BACK-UP DIRECTION

↳ ASK THE RIGHT Q'S BASED ON RESEARCH & RESEARCH PROBLEMS.

## ↳ CONSISTENCY

↳ CONSISTENT FORMAT & APPLICATION FOR ALL PARTICIPANTS

↳ SURVEYS - EASY, INTERVIEWS - BE CONSISTENT

↳ ALL FACE TO FACE

↳ CONSENT FORM MUST BE VERY SIMILAR

↳ INTRODUCTION

↳ QUESTIONS

↳ DATA COLLECTION METHOD - CAN BE EFFECTIVE

WITH PRACTICING PILOT STUDIES

↳ BE HONEST ABOUT DATA LIMITATIONS IN PRES



- ↳ OBSERVATIONS DAY & NIGHT BEING DIFFERENT
- ↳ INCLUDE DAY & TIME IN DATA COLLECTING
- ↳ BE CAREFUL ABOUT OBSERVATION TIMES

↳ TRY TO AVOID LEADING PARTICIPANTS

↳ Eg. IS THAT DIFFICULT FOR YOU?

↳ RATHER CAN YOU TELL ME THE DIFFICULTY OF IT - UNBIASED → SAME FOR SURVEYS ETC.

↳ CAN YOU TELL ME MORE ABOUT THAT?

↳ KEEP OBSERVATION Q'S MORE GENERAL

↳ HAVE SOME CONSISTENT Q'S & SOME THAT ARE  
MORE TAILORED TO THEIR EXPERTISE

↳ EMPHASIS THE INFO WILL BE USED FOR  
UNI PROJECT & FOR PROTOTYPES / CONCEPTS

06/08/23

PRE-EXISTING

DEMENTIA PRODUCTS





## KOTO SIMPLE MUSIC PLAYER

↳ DESIGNED TO BE SIMPLE & EASY TO OPERATE

- ↳ FAMILY, CARERS INITIALLY SET UP PLAYER BY UNLOADING MUSIC ONTO IT
- ↳ DOES NOT REQUIRE ANY PREVIOUS KNOWLEDGE TO OPERATE - HAS BEEN TRIALED
- ↳ DESIGN IS SIMILAR TO AN OLD RADIO, INSTANTLY RECOGNISED AS SOMETHING THAT PLAYS MUSIC
- ↳ LIFT FLAP TO PLAY & PAUSE. IMPROVES QUALITY OF LIFE, ESPECIALLY ALONE. TO BE LEFT TURNED ON.



## DAYCLOS

↳ DIGITAL & EASY TO READ  
↳ B & W, WITH ADDITIONAL COLOUR SETTINGS

↳ 15 DIFFERENT LANGUAGES

↳ CHANGES BETWEEN 'BEFORE DAWN, MORNING, AFTERNOON, EVENING & NIGHT', DEPENDING ON TIME.

↳ AUTO NIGHT DIMMER

↳ BOLD LETTERING & NUMBERS, WHICH ALLOWS FOR CLEARER CLARITY





## METACAT SMART INTERACTIVE ROBOTIC CAT

↳ SOOTHING & ENGAGING

↳ PROVIDES EMOTIONAL SUPPORT,  
REDUCES ANXIETY & AGITATION

↳ ENCOURAGES SOCIAL INTERACTION,  
SENSE OF COMPANIONSHIP & JOY  
WITHIN CARE ENVIRONMENT

↳ THERAPEUTIC TOOL FOR ENHANCING  
COGNITIVE STIMULATION & WELL-BEING

↳ REALISTIC FUR THAT'S NON-ALLERGIC

↳ SIMULATED HEARTBEAT, VARIOUS MODES, SENSORS  
THAT REACT TO TOUCH & AUTO SLEEP  
FUNCTION





## PROXIMITY BUTTON

- ↳ PRODUCT IS TO SOLVE WANDERING - RESULTS FROM PATIENT'S CONFUSION & MEMORY LOSS
- ↳ ALZHEIMER'S ASSOCIATION

- MORE THAN 60% DEMENTIA PATIENTS WANDER

- ↳ DESIGN IS SIMPLE & DISCREET, USES BLUETOOTH
- ↳ USED AS AN 'EARLY WARNING SYSTEM' BY USING BEACON TECHNOLOGY WHEN LEAVING A SAFETY RADIUS FROM CAREGIVER, CAN BE VIEWED IN AN APP
- ↳ RESTORES PATIENT'S FREEDOM & ALLOWS THEM TO LEAD ACTIVE LIVES
- ↳ DESIGNED BY METTLE STUDIO FOR PROXIMITY CARE



## WEARABLE TECH WRISTBAND

↳ FEATURES NFC, STORES ESSENTIAL INFO ABOUT USER (NAME, DETAILS OF NEXT OF KIN)

↳ CAN BE ACCESSED WHEN MOBILE APP IS OPEN NEARBY, AVOIDS PHYSICAL CONTACT WHICH MAY CAUSE UNNECESSARY STRESS

↳ CAN BE USED BY EMERGENCY SERVICES, HEALTH PROFESSIONALS, COMMUNITY MEMBERS TO HELP THE LOST/CONFUSED PATIENT

↳ DEVELOPED BY A COLLAB BETWEEN THE CHARITY (SENIOR CITIZEN LIAISON TEAM), AND POLICE & FIRE & RESCUE

↳ RELIES HEAVILY ON PUBLIC GOODWILL





## SLOW ALZHEIMERS HEADBAND

↳ SLOWS THE DEVELOPMENT OF ALZHEIMERS

↳ DESIGNED BY YBRAIN

↳ "USING ELECTRICAL SIGNALS, LESSENS THE SEVERITY

- OF THE WEARER'S DEGENERATIVE NEUROLOGICAL CONDITION, STIMULATES SPECIFIC PARTS OF THE BRAIN"

↳ FEATURES A PAIR OF SENSORS

↳ USED FOR THOSE WITH THE CONDITION ALREADY, † ELDERS THAT HAVE MILD SYMPTOMS, WHICH COULD LEAD TO

EARLY OBSERVATIONS OF DEMENTIA ALZHEIMERS

↳ LAUNCHED FIRST FUNCTIONAL PROTOTYPE IN KOREA





## DEMENTIA ISOLATION ASSISTIVE TECH

↳ CONCEPT RESEARCH AT MANCHESTER METROPOLITAN UNIVERSITY, IN COLLAB WITH STOCKPORT MEMORY CLINIC & KMS SOLUTIONS

↳ WEARABLE TECH, PHONE APPS & SATELLITE TRACKING ASSIST PATIENTS TO HAVE INCREASED INDEPENDENCE

↳ "REDUCE SOCIAL ISOLATION & IMPROVE HEALTH OUTCOMES

↳ CARER CAN LOCATE DEMENTIA PATIENT WHILE THEY MOVE AROUND INDEPENDENTLY IN SAFE AREAS, & CAN CONTACT THEM IN EMERGENCIES

↳ MEMORY ISSUES & CONFUSION

↳ INCREASED ISOLATION LEADS TO FURTHER STRESS OF PARTNER / CARER



## SENIOR SOS/PERSONAL ALARM

↳ ALREADY IN USE IN MOST SENIOR CARE HOMES

### AUTO-DIAL ALARMS

↳ SENDS ALERT TO PRESET PHONE NUMBERS WHEN PERSONAL ALARM IS PRESSED, LOCATED AS A 'SOS' BUTTON

↳ THERE ARE ALWAYS 3 THINGS THAT ARE ALWAYS ON - GPS LOCATION, ANY INCREASES IN SPEED & MOVEMENTS

- THAT ARE SUDDEN (INDICATING A POSSIBLE FALL)

↳ PENDENT & SMARTWATCH, SHARE SIMILAR FUNCTIONS

↳ SMART WATCHES FEATURE ADDITIONAL FEATURES, THERE ARE ALSO PENDENTS THAT HAVE SCREENS

↳ MAINLY PURCHASED THROUGH AGE CARE HOMES, BUT INDIVIDUALS LIVING AT HOME MAY BE ABLE TO GET ONE THROUGH GOVERNMENT HOME SUPPORT SERVICES OR NDIS

↳ INCLUDES CHARGING DOCKS OR CABLE & GEO FENCING



## PRE-EXISTING PRODUCT CONCLUSIONS

- ↳ ALZHEIMER'S DISEASE IS THE MORE COMMON TYPE OF DEMENTIA, PROGRESSIVELY WORSENS MEMORY, COGNITION & BEHAVIOUR. THIS PROGRESSES UNTIL DAILY LIVING BECOMES QUITE DIFFICULT.
- ↳ ASSISTIVE TECHNOLOGY THAT ALLOWS DEMENTIA PATIENTS BE MORE INDEPENDENT LIFTS THEIR MOOD
  - ↳ ALSO LIFTS SOME STRESS FROM PARTNERS/CARERS
- ↳ LOCATION & COMMUNICATIVE SOLUTIONS FOR WEARABLES FURTHERS THIS INDEPENDENCE
- ↳ ALL OF THESE CPS WEARABLES ARE DEVELOPED & DISTRIBUTED OVERSEAS. WHEREAS, AUSTRALIA ONLY HAS PRODUCTS TO ASSIST AT HOME
- ↳ EVENTHOUGH MOST OF THE PUBLIC ARE HAPPY TO ASSIST ELDERLY WITH THIS DISEASE, THE DESIGN CANNOT 'FULLY' RELY ON THE PUBLIC TO UTILISE IT.



## PRE-EXISTING PRODUCT CONCLUSIONS CONT.

- ↳ SIMILAR DESIGN CONCEPT ALREADY IN USE, PERHAPS MY DESIGN CAN BE MORE CATERED TO ALZHEIMERS?
- ↳ COLOUR THAT SIGNIFIES HELP & PUBLIC RECOGNITION, SOMETHING THAT STAYS ON THEM, IN CASE THEY FORGET OR WANDER
- ↳ SIMILAR GPS & EMERGENCY ALERTS SHOULD BE FINE, AS MY CONCEPT SHOULD BE MORE CATERED TO THIS DISEASE

ROB MUM'S MODEL DEVICE USED: ADVANCED CARE  
N14823

08/08/23

CONTACTING,

CONCEPT RESEARCH

§ CONCEPTING

## CONTACTS

PRIMARY - DAD - PERSON WITH DEMENTIA

SECONDARY - MUM - PARTNER  
- FRED - CARER

PROFESSIONAL - DOCTORS/NURSES - DAD HAS A  
MEETING WITH THEM LATER IN  
AUGUST

- ROB - CONNECTIONS TO DEMENTIA  
WARD - 'TRICARE' ELDERLY CARE

- POSSIBLE FURTHER CONTACTS  
TO OTHER PROFESSIONAL  
PRACTICES/WARDS



## PRODUCT THOUGHTS & IDEAS

↳ SPECIALISED TABLET THAT HAS TIME, REMINDERS & OTHER USES, WITH VARIETY OF DESIGN VARIATIONS.

DIFFERENT SEVERITIES OF DEMENTIA CAN ALTERNATE INFO THAT IS SHOWN. HALF SCREEN?

↳ REAR COMPARTMENT HOUSES TABLETS WHICH ARE CATEGORISED & DISPENCED WHEN REMINDER IS DISMISSED. CAN BE REFILLED BY CARER.

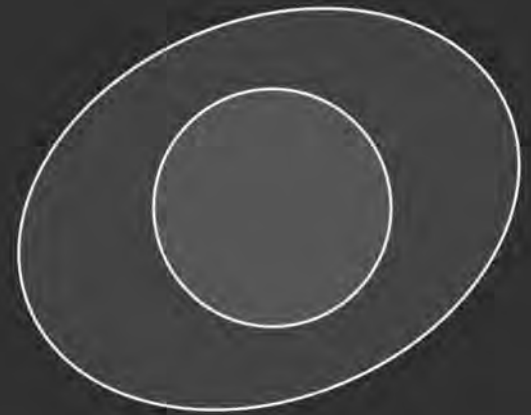
↳ ALLOWS DEMENTIA PATIENT TO BE SOMEWHAT INDEPENDENT, WITHOUT HAVING TO RELY ON A CARER/PARTNER TO REMIND THEM OF THINGS.

↳ SOCIAL ACTIVITIES WITH OTHER DEMENTIA PATIENTS ARE AUTOMATICALLY ADDED TO REMINDERS

↳ DOCTORS/NURSES/CARERS/PARTNERS CAN ADD REMOTELY

## PRODUCT IDEA - PUBLIC RECOGNITION

- ↳ RECOGNITION - SIMILAR TO A WHITE CANE FOR BLIND, HEARING IMPAIRMENT DEVICES FOR DEAF
- ↳ BUTTON ON FRONT TO ALERT PARTNER/CARER TO THEIR POSITION, CIRCULAR PIN?
- ↳ SOMETHING TO PROVIDE INDEPENDENCE FOR LONGER
- ↳ COLOUR CODED FOR EASY RECOGNITION OR IF THEY FORGET?
- ↳ SIMPLE & EASY TO RECHARGE
- ↳ ATTACH TO CLOTHING





# CONCEPT 1 - DEMENTIA HUB

SEE-THROUGH PANEL ON TOP TO VIEW PILL LEVELS

INTERACTIVE SCREEN THAT FEATURED DATES, EVENTS, MEDICATION REMINDERS ETC.



PULL-OUT PANEL TO TOP-UP MEDICATION

PILL EXIT COMPARTMENT

PATIENT CAN INSERT MEMORABILIA OF LOVED ONES

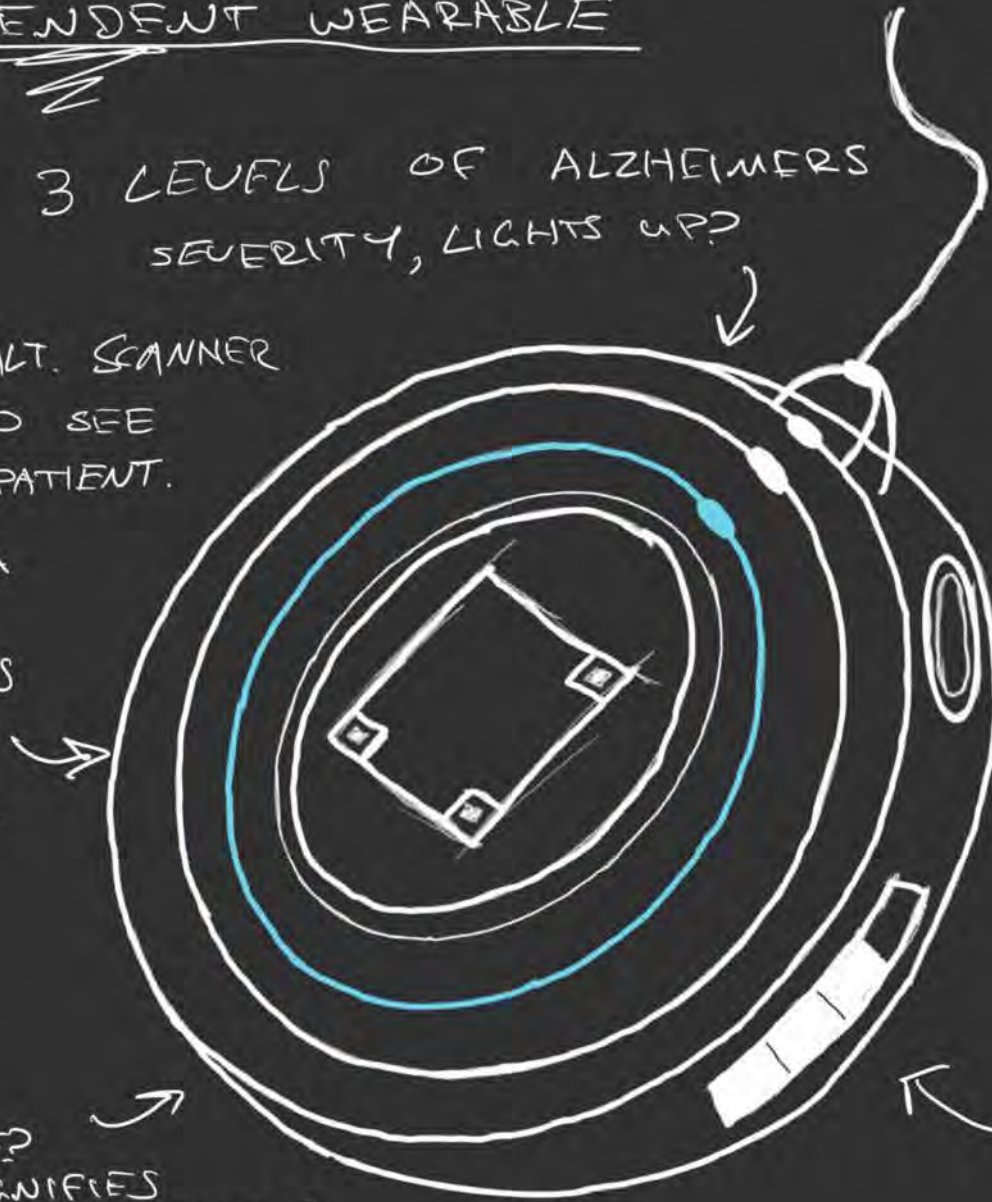


# CONCEPT 2 - PENDENT WEARABLE

3 LEVELS OF ALZHEIMERS  
SEVERITY, LIGHTS UP?

QR CODE OR ALT. SCANNER  
ALLOWS PUBLIC TO SEE  
BASIC INFO ON PATIENT.  
ALSO ACTS AS A  
SOS BUTTON.  
CAN THE PATIENT'S  
VOICE ACTIVATE  
MORE INFO ON  
SOMEONE'S PHONE?

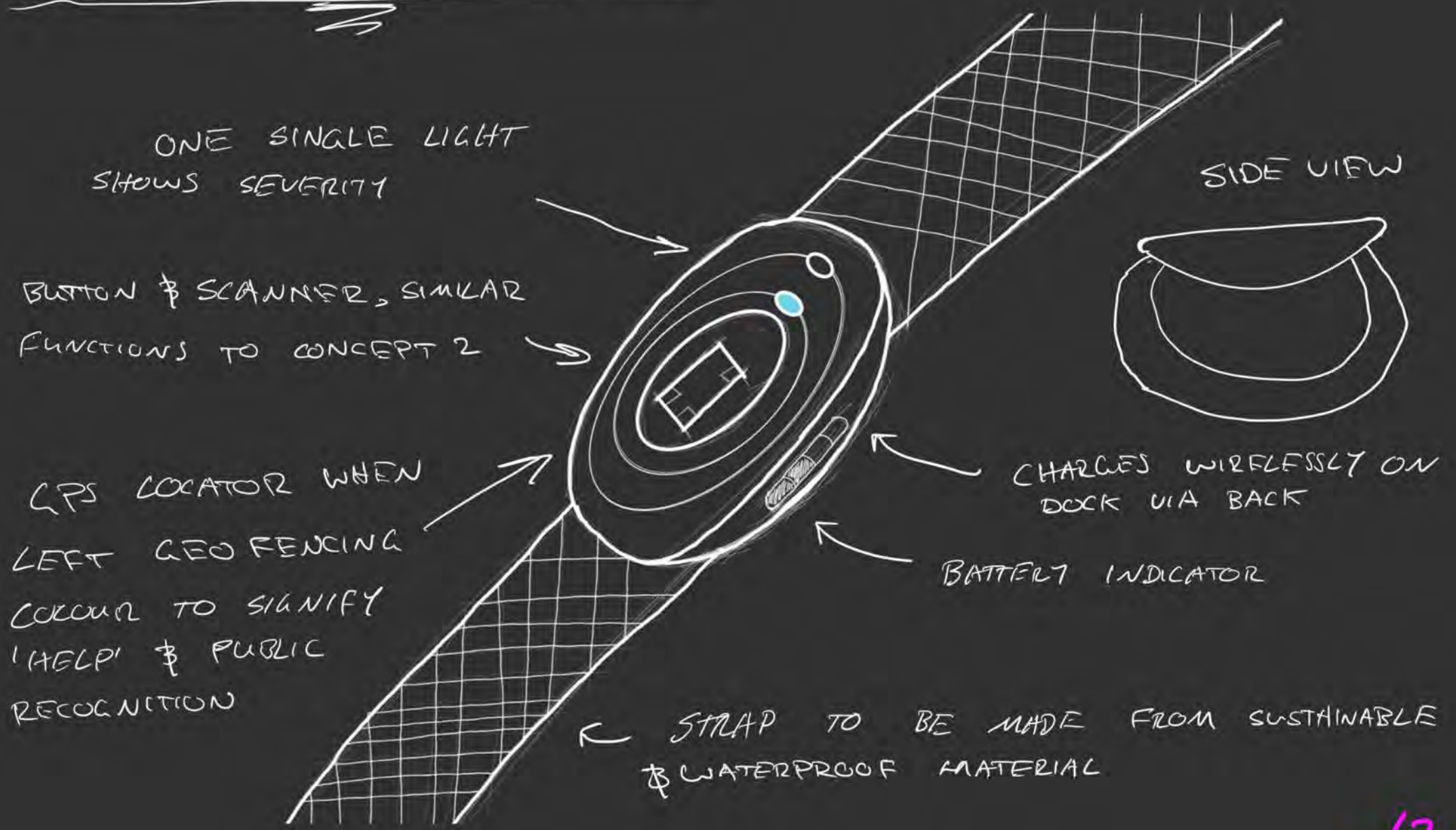
WHAT COLOURS  
SHOULD THIS BE?  
WHAT COLOUR SIGNIFIES  
HELP TO DEMENTIA PATIENTS?



CHARGING PORT FOR  
INTERNAL BATTERY.  
CHARGING DOCK?

BATTERY LEVEL  
INDICATOR. WHAT  
COLOUR SHOULD  
LIGHT THIS UP?

# CONCEPT 3 - WRISTBAND / WATCH



ONE SINGLE LIGHT SHOWS SEVERITY

BUTTON & SCANNER, SIMILAR FUNCTIONS TO CONCEPT 2

GPS LOCATOR WHEN LEFT GEO FENCING COLOUR TO SIGNIFY 'HELP' & PUBLIC RECOGNITION

SIDE VIEW

CHARGES WIRELESSLY ON DOCK VIA BACK

BATTERY INDICATOR

STRAP TO BE MADE FROM SUSTAINABLE & WATERPROOF MATERIAL



## CONCEPT CONCLUSIONS/FEEDBACK

- ↳ HUB CONCEPT IS TOO GENERAL & COULD BE USED FOR ANY SORT OF MENTAL DISEASE OR SENIOR PATIENTS
  - ↳ COULD BE SURPASSED BY A REMINDER ON A MOBILE DEVICE
- ↳ TRACKING/RECOGNITION WRISTBAND & PENDENT SHARE SIMILAR ATTRIBUTES TO ALREADY EXISTING PRODUCTS, HOWEVER, IT HAS MORE FEATURES, ALARM SYSTEMS, PUBLIC RECOGNITION & BETTER DESIGN/STYLING THAN THE OTHER PRODUCTS
  - ↳ THE PENDENT/WRISTBAND IS ALSO MORE FOCUSED ON DEMENTIA & ALZHEIMERS
- ↳ PENDENT WOULD NEED TO BE PUT ON & REMOVED EACH DAY & MAY REDUCE FREEDOM OF MOTION
- ↳ WRISTBAND WOULD BE A MORE PERMANENT SOLUTION, ONLY NEEDING TO BE TAKEN OFF TO RECHARGE EVERY NOW & THEN



09/08/23

WEEK 3

LECTURE  
Z

# LIT REVIEW & METHODS

## WHY RESEARCH?

- ↳ JUSTIFY POSITION
- ↳ FOCUS AN APPROACH OR METHOD
- ↳ IN-DEPTH FINDING
- ↳ UNDERSTANDING USER NEEDS/HIDDEN NEEDS
- ↳ UNCOVERING SOMETHING NOVEL

## OBJECTIVES:

- ↳ STRATEGIC POSITION OF HUMAN-CENTRED DESIGN RESEARCH
- ↳ RELEVANCE OF QUALITATIVE RESEARCH APPROACH
- ↳ IMPORTANCE OF RESEARCH WITHIN DESIGN CONTEXT

## LITERATURE REVIEW: WHAT?

- ↳ DETERMINE WHAT HAS ALREADY BEEN WRITTEN ON THE TOPIC
- ↳ PROVIDE AN OVERVIEW ON KEY CONCEPTS
- ↳ IDENTIFY MAJOR RELATIONSHIPS OR PATTERNS
- ↳ IDENTIFY STRENGTHS & WEAKNESSES
- ↳ IDENTIFY ANY GAPS IN RESEARCH
- ↳ IDENTIFY ANY CONFLICTING EVIDENCE
- ↳ PROVIDE A SOLID BACKGROUND TO A RESEARCH PAPER'S INVESTIGATION

TIP: HAVE A FIGURE THAT SUMMARISES PARTS OF THE LITERATURE REVIEW



## HOW TO?

USE GOOGLE SCHOLAR, LIBRARY & CITEWRITE

PURPOSE - REVIEW EXISTING AVAILABLE LITERATURE. DETERMINE CRITICAL TOPIC AREAS YOU SHOULD COVER & RELATIONSHIP BETWEEN THEM

SEARCH ON LITERATURE - USE SOURCES THAT ARE RELEVANT & CURRENT. FIND COMMON THEMES IN LITERATURE

NOTE BIBLIOGRAPHICAL DETAILS

↳ PUBLICATION TITLE, DATE, AUTHORS, PAGE NUMBERS & PUBLISHERS

FIND FOCUS

↳ TAKE NOTES AS THEY ARE READ, START TO ORGANISE YOUR REVIEW AROUND THEMES (IDEAS). CONSIDER USING TABLE / CONCEPT MAP TO IDENTIFY SOURCES.

## SURVEYS

↳ QUALTRICS

↳ QUT KEY SURVEY

↳ SURVEY MONKEY

↳ GOOGLE FORMS

↳ QUANTITATIVE - SCALES, CHECK BOX, ETC.

↳ QUALITATIVE - SHORT ANSWERS FOR OPEN-ENDED Q'S

↳ 5-10 MINUTES TO COMPLETE

↳ DON'T ASK LEADING Q'S (MAKE THEM UNBIASED)

↳ AVOID USING ABSOLUTES (ALWAYS, NEVER, ALL, ETC.)

BY CLICKING NEXT, YOU'VE READ THE  
INFORMATION & CONSENT

} USE MIX OF THESE

## INTERVIEWS

↳ STRUCTURED

↳ SEMI-STRUCTURED ← DO THIS

↳ OPEN-ENDED

↳ BUILD RAPPORT - START PERSONAL DISCUSSION

↳ DEFINE CLEAR PURPOSE

↳ ASK BASIC DEMOGRAPHIC Q'S

↳ TALK LESS & LISTEN MORE

↳ DON'T ASK LEADING Q'S

↳ AVOID ABSOLUTES

↳ PROMPT INTERVIEWEE FOR MORE INFORMATION  
(IF NECESSARY)



## OBSERVATIONS

- ↳ NATURALISTIC
- ↳ PARTICIPANT
- ↳ STRUCTURED
- ↳ ARCHIVAL
- ↳ DETERMINE WHAT YOU WANT TO OBSERVE
- ↳ ESTABLISH RECORDING METHOD
- ↳ COLLECT BASIC DEMOGRAPHIC Q'S
- ↳ PROVIDE CLEAR INSTRUCTIONS
- ↳ RECORD DESCRIPTIONS, CONTEXT & PROCESS
- ↳ TRY ASKING PARTICIPANTS TO CONDUCT TALK/TALK-ALoud PROTOCOL
- ↳ DON'T MAKE OBSERVATIONS TOO LONG

## NEED TO BE DONE

SELECT METHODS / RECRUIT PARTICIPANTS / DEPLOY RESEARCH

↳ SELECT 2 METHODS (MINIMUM)

↳ DESIGN & DEVELOP METHODS

↳ CREATE CONSENT FORMS

↳ RECRUIT PARTICIPANTS

↳ DEPLOY STUDY METHODICALLY & RIGOROUSLY

↳ COLLECT STUDY DATA

TIP: ANNONOMISE PARTICIPANTS

I.E. PARTICIPANT 1, NO NAMES

ACADEMIC SOURCES: 15+

WEEK 3 FOLLOW-UP

11/08/23

RESEARCH & NOTES





## WEARABLE CONCEPT NOTES

PRIMARY USER - DEMENTIA/ALZHEIMER PATIENTS

CONTEXT - PROVIDING INDEPENDENCE TO THOSE WANTING TO GO OUTSIDE & EXPLORE

SECONDARY - CARERS FROM DEMENTIA PLACE WITH MEETING LATER IN AUGUST. ASK THEM FOR THINGS/PRODUCTS TO ASSIST THEIR DEMENTIA PATIENTS.

ATTACHMENT - ALONG COLLAR, ONTO SHIRT, NECKLACE OR WRISTBAND

TECHNOLOGY - GPS, NFC, TRACKING, CALLING CARERS/PARTNERS

AESTHETICS - SIMPLISTIC, EASY TO OPERATE, SIGNIFY TO PATIENTS IT'S THERE TO ASSIST, APPROPRIATE COLOUR & FORM

## SURVEY / INTERVIEW NOTES

- ↳ SHOWCASE VARIOUS FORMS OF DEVICES (TABLETOP, DUMB & SMART WEARABLE), WHICH WOULD BE BETTER?
- ↳ "THIS PRODUCT EXISTED BEFORE & DIDN'T WORK", WHY DIDN'T IT WORK, WHAT CAN I IMPROVE?

## ↳ INTERVIEWS, OBSERVATIONS & SURVEYS

- ↳ SINCE THESE INTERVIEWS ARE CATER IN AUGUST, SHOWCASE CONCEPTS & SEE WHICH ONES ARE MORE LIKED
- ↳ PRESENT & USE ALL RESEARCH GATHERED BY THAT POINT

FURTHER ACADEMIC

SOURCES 4-10

11/08/23

-18/08/23



## FRONTIERS - COLOUR CHOICE PREFERENCE FOR ALZHEIMERS (4)

- ↳ ALZHEIMER PATIENTS CHOOSE "FORMS CORRESPONDING TO AUXILIARY COLOURS".
- ↳ THESE ARE VIOLET, BROWN, BLACK & GREY, ON THE LUSCHER COLOUR TEST
  - ↳ PERSONALITY CHARACTERISTICS: "SENSITIVENESS, RELAXATION, COERCION, & NUMBNESS"
- ↳ THEY HAVE THE NEED TO BE WELCOMED TO A ENVIRONMENT THAT THEY ARE COMFORTABLE BEING IN
- ↳ "EMOTIONAL INSECURITY & INSTABILITY" CAUSE FEELINGS OF PERSONAL CHANGE

## ANALYSIS OF THE USE OF COLOUR FOR EARLY DEMENTIA

⑤

- ↳ PAINTINGS WITH ALZHEIMER PATIENTS YIELDED A REDUCTION IN COLOUR VARIATIONS
- ↳ EARLY STAGES - YELLOW TO RED
- ↳ LATER STAGES - DARKER COLOURS
- ↳ "DIFFICULTY WITH DISCRIMINATING BETWEEN BLUE TO GREEN"
- ↳ EARLY STAGES DRAWINGS WERE NOTED TO BE SIMPLIFIED, REDUCTION IN SIZE, & "DISORDERS OF SPATIAL RELATIONS & PERSPECTIVES"

## AGING & DEMENTIA FRIENDLY DESIGN - ICONS & SIGNAGE

⑥

- ↳ SIGNAGE - SHOULD CONTAIN ICONS & TEXT
  - ↳ SHOULD NOT FULLY RELY ON TEXT, BUT USE ICONS & PICTURES ALONGSIDE IT
  - ↳ SIMPLE & UNCLUTTERED, CONTAINING VERY FEW WORDS
  - ↳ CLEAR CONTRAST BETWEEN BACKGROUND & TEXT
- ↳ ALZHEIMERS NEGATIVELY IMPACTS THE PATIENTS UNDERSTANDING OF SIGNS & ICONS
  - ↳ ICONS SHOULD BE FAMILIAR TO THEM



## AGING & DEMENTIA FRIENDLY DESIGN - COLOUR

(6)

- ↳ COLOUR IN BUILDING - CAN HELP DIFFERENTIATE VARIOUS PARTS
- ↳ THERE CAN BE PARTICULAR COLOURS THAT CAN PROVOKE EMOTIONS, BEHAVIOURS, & HEALTH OUTCOMES
  - ↳ COLOURS CHOSEN SHOULD NOT PROVOKE FEELINGS OF EMPTINESS, ANXIETY, ANGER ETC.
- ↳ ALZHEIMERS PATIENTS AFFECTS THEIR "ABILITY TO DISCRIMINATE BETWEEN COLOURS, ESPECIALLY IN THE BLUE & GREEN RANGE, LESS SO IN RED & YELLOW RANGE"
  - ↳ ALSO "LESS SENSITIVE TO CONTRAST, REQUIRED TO BE STRONGER FOR THEM TO NOTICE IT"
- ↳ STRONG & BRIGHT COLOURS - OBJECT RECALL IS IMPROVED

## ETHICAL ISSUES IN PREVENTING ALZHEIMERS & OTHER CHALLENGES

(7)

- ↳ BRAIN HEALTH & GENERAL HEALTH PRACTICES (SOCIAL OUTINGS, PHYSICAL EXERCISE ETC.) CAN BE INCORPORATED TO PREVENT COGNITIVE DECLINE OF COGNITIVE BRAIN FUNCTION.
- ↳ AUTHOR SUGGESTS "CHANGES TO COMMUNITY & CULTURE THROUGH EDUCATING PEOPLE GROUPS WOULD BE MORE BENEFICIAL THAN FOCUSING ON THE INDIVIDUALS!"
- ↳ SAFE GREEN HOUSES FOR FAMILIES TO WALK AROUND INSTEAD OF INVESTING IN INDIVIDUAL EXERCISE PROGRAMS, AN EXAMPLE THE AUTHOR PROVIDED
- ↳ "BRAIN FITNESS & NEUROTECHNOLOGY SPACE" - LARGE SPACE OF PREVENTION METHODS
  - ↳ KEEPING MIND ACTIVE USING DIGITAL DEVICES
- ↳ ARE PEOPLE THAT EXCEL IN EDUCATION LESS LIKELY TO GET COGNITIVE AGING?

## ETHICAL ALZHEIMER'S PREVENTION CONT.

⑦

- ↳ DEMENTIA PATIENTS ARE MORE AT RISK TO NATURAL DISASTERS AS THEY CANNOT PLAN FOR IT
- ↳ "ALZHEIMER'S FIELD - FULL OF UNREPLICATED RESULTS & UNFULFILLED PROMISES"



# DIMENTIA TRAINING AUSTRALIA WEBINAR - DESIGNING FOR OLDER PEOPLE

⑧  
16/08/23  
1PM

- ↳ ONLINE CONVERSATION ABOUT DESIGNING FOR OLDER PEOPLE
- ↳ DISCUSSION WHICH BRINGS IN ARCHITECTS, INTERIOR DESIGNERS, LANDSCAPE ARCHITECTS & HEALTH PROFESSIONALS
- ↳ INITIAL DISCUSSION IS ON CO-DESIGN & CONSULTATION
- ↳ FUTURE TOPICS WILL BE BROUGHT TO LIGHT FROM ATTENDEES

## PRESENTERS

- ↳ NICK SEEMANN - ARCHITECT & LEAD CONSULTANT OF DTA'S ENVIRONMENTS TEAM
- ↳ LIZ FUGGLE - ARCHITECT, CONSTRUCTIVE DIALOGUE ARCHITECTS

**Online Discussion Group Community of Practice 2023**  
Designing for older people

**Interested in a conversation about designing for older people?**

To complement our Design Masterclass series, we are forming a monthly virtual Discussion Group focused on improving buildings. These meetings will bring together architects, interior designers, landscape architects and healthcare professionals.

Guest presenters will share their insights and everyone is encouraged to be a part of the discussion. Our aim is to learn from each other, reflect on our own practice and connect with like-minded people.

Join us for meaningful discussions to effect change.

**Meeting dates:**  
14 June  
12 July  
08 August  
03 September  
06 October  
02 November

**Times:**  
1pm-1.45pm

**Question: 1 hour CAD**

**Cost:** Free. This meeting is fully funded by Department of Health and Aged Care.

**Nick Seemann** and **Liz Fuggle** are presenting on issues and the social culture of the built environment aged care through and a specialist for the Australian Government Department of Health and Aged Care.

To find out more about Design Masterclasses, visit the QR code.

For further details and to register for Community of Practice, scan the QR code.

DTA Dementia Training Australia

Supported by funding from the Australian Government Department of Health and Aged Care, the Department of Health and Aged Care, the Department of Health and Aged Care, the Department of Health and Aged Care, the Department of Health and Aged Care.

Logos: Dementia Training Australia, LA TROSE, CAT, Australian Government Department of Health and Aged Care.

THE WEBINAR FEATURED VARIOUS ARCHITECTS FROM BACKGROUNDS IN AGED CARE BUILT ENVIRONMENT, CAREERS FROM THESE DEMENTIA AGE CARE WERE ALSO PART OF THE DISCUSSION.

## WEBINAR NOTES

(8)

### PRIVACY - HIERARCHY OF SPACE

↳ PUBLIC & PRIVATE SPACES

↳ NORMAL HOMES FEATURE BEDROOMS & SUCH TO BE PRIVATE SPACES, AGE CARE HOMES DO NOT HAVE THAT LUXURY AS THEY NORMALLY FEATURE ENSUITES & BEDROOMS

↳ INCREASED PRIVACY = INCREASED SOCIALIZATION

↳ MORE CONFIDENCE IN YOUR OWN SPACE

TOTAL OBSERVATION

TOTAL DEFENSIBLE

### BREAK-OUT ROOMS

#### KEY RISK TO PRIVACY IN AGED CARE

↳ WONDERRING RESIDENTS - MAY WONDER INTO OTHER RESIDENT'S ROOMS - NOT OUT OF MALICE

↳ BREACH OF PRIVACY, GET CONFUSED OR LOOKING FOR EXITS

↳ NURSE STATION - KEEPS AN EYE ON ALL PATIENTS - DEGRADES LIVING CONDITION



- ↳ TECHNOLOGY CAN BE QUITE INVASIVE IN TERMS OF WATCHING RESIDENTS, CCTV CAMERAS CAN BE INTRUSIVE, DOESN'T FEEL LIKE HOME ⑧
- ↳ INTRUSIVE MOVES INTO RESIDENT ROOMS
- ↳ VARIOUS ROOMS LIKE QUITE SIMILAR, & THEY GET CONFUSED
- ↳ DIFFICULT FOR STAFF TO IDENTIFY RESIDENTS GOING INTO THE WRONG ROOMS
- ↳ STAFF TELL RESIDENTS THEY'RE GOING WRONG PLACES, CAN BE SEEN AS AN ATTACK SO THE RESIDENTS GET DEFENSIVE
- ↳ 'WAYFINDER' ON RESIDENTS DOORS
- ↳ ALWAYS LEAVING DOORS OPEN FOR NURSES
- ↳ ANY QUICKER WAY TO ATTEND FALLEN DEMENTIA RESIDENTS
- ↳ WALKING PAST BEDROOMS TO ACCESS SHARED AREAS IS NOT GOOD DESIGN
- ↳ NURSES SHOULD BE ABLE TO SEE COMMUNITY SPACES, BUT CAN ONLY SEE DOWN A CORRIDOR WHERE BEDROOMS CONNECT
- ↳ RESIDENTS STILL WANT TO SEE STAFF BUT DON'T WANT TO FEEL LIKE THEIR ON DISPLAY



## WEARABLE DEVICES FOR ASSESSING FUNCTION IN DEMENTIA

9

- ↳ PLENTY OF INFO & ACADEMIC REPORTS THAT LOOK INTO THE EARLY DETECTION OF ALZHEIMERS, BUT NOT MUCH ON THEIR LIVING ONCE DIAGNOSED
- ↳ ALTHOUGH TECHNOLOGY SEEMS TO BE A PROMISING SOLUTION, CHALLENGING FOR OLDER PEOPLE & HEALTH PROFESSIONALS TO ADAPT.
- ↳ DEVICES THAT ARE HEAVY ON TECHNOLOGY FUNCTION, MIGHT BE QUITE HEAVY FOR THEIR USES, WHICH IS NOT IDEAL FOR DEMENTIA PATIENTS
  - ↳ DESIGN NEEDS TO BE LIGHTWEIGHT, COMFORTABLE, NOT TOO TECHNOLOGY RELIANT (TOUCHSCREEN) & APPROPRIATE FOR THE END USERS & CARE GIVERS
- ↳ OLDER PEOPLE & CARERS CAN 'FACE CONSIDERABLE STRESS WITH NEWLY INTRODUCED TECHNOLOGY'
- ↳ COMMON BARRIERS FOR TECHNOLOGY ADAPTATION FOR OLDER PEOPLE: "FAMILIARITY & ACCESS, NEED FOR ASSISTANCE, TRUST, PRIVACY IMPLICATIONS, DESIGN, REDUCED DEXTERITY, PRECISION, & PHYSICAL ISSUES"

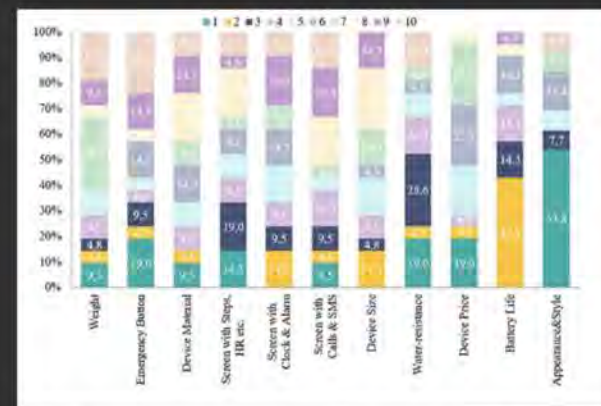
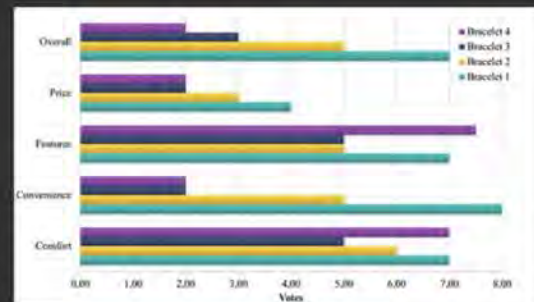
# WEARABLE DEVICES CONT.

9

↳ MOST HIGHLIGHTING BENEFITS FOR TECHNOLOGY ADAPTATION FOR OLDER PEOPLE: "SAFETY, PERCEIVED USEFULNESS, INDEPENDENCE, & REDUCED BURDEN ON CARERS/FAMILIES"

↳ ARTICLE PERFORMED STUDY WHERE 4 BRACELETS WERE HANDED OUT TO VARIOUS OLDER PEOPLE WHERE FEATURES & ACCESSIBILITY WAS DISCUSSED. THESE WERE THE

4 DEVICES:



1, 2, & 4 WERE THE MOST COMFORTABLE

APPEARANCE & STYLE, BATTERY LIFE & WATER RESISTANCE WERE THE HIGHEST RATED FEATURES



## CARERS' SUPPORT NEEDS FOR CARING SOMEONE WITH DEMENTIA

(10)

- ↳ 4 MAIN CATEGORIES WERE IDENTIFIED OF CARERS' SUPPORT NEEDS:
  - ↳ "NEEDS IN DAILY LIFE WHEN CARING FOR SOMEONE WITH DEMENTIA"
  - ↳ NEEDS TO FOCUS ON THEMSELVES
  - ↳ NEEDS TO MAINTAIN OWN WELL-BEING
  - ↳ NEEDS TO COMMUNICATE & INTERACT WITH SURROUNDINGS"
- ↳ CARING SUCCESS CAN DEPEND ON POSITIVE EXPERIENCES, BETTER QUALITY RELATIONSHIPS & IF ROLE COMES MORE NATURAL.
- ↳ CARERS FOCUS ON DEMENTIA PATIENTS' NEEDS FIRST, WITHOUT KNOWING THEIRS
- ↳ "COMPARED TO OTHER CHRONIC ILLNESSES, DEMENTIA CARING CAN BE QUITE BURDENSOME"
- ↳ CARERS FEEL THEY HAVE AN EXTRAORDINARY FEELING OF RESPONSIBILITY TO THE PERSON WITH DEMENTIA, WILLING TO SACRIFICE WELL-BEING TO BENEFIT THE PATIENT.



EARLY OBSERVATIONS 11/08/23  
-18/08/23  
‡ SURVEY NOTES

## OBSERVATIONS AT HOME



↳ MUM UPDATES THIS WHITEBOARD WEEKLY FOR DAD TO FOLLOW.

↳ THIS ALLEVIATES ANY STRESS OF MUM HAVING TO RESCHEDULE ANY APPOINTMENTS/CARED DAYS

↳ DAD'S SHORT-TERM MEMORY IS NOT GOOD, SO THIS BOARD IS THE ONE PLACE HE HAS TO LOOK AT TO REMIND HIM OF THINGS

↳ DATE IS WRITTEN IN A DIFFERENT COLOUR & IN BOLD

↳ DAYS & EVENTS ARE WRITTEN WEEKLY & UNDERNEATH THE DATE, THESE ARE REMOVED FROM THE BOARD ONCE THE DAY PASSES

## OBSERVATIONS OF DAD

- ↳ DIAGNOSED WITH LEWY BODY DISEASE & PARKINSONS - MIDDLE STAGE
- ↳ HAS DIFFICULTY COMPLETING DAILY TASKS, & OFTEN REQUIRES HELP
- ↳ CAN'T GO OUT IN PUBLIC WITHOUT REQUIRING A CARER TO LOOK AFTER HIM
- ↳ OFTEN GETS CONFUSED ABOUT TASKS & WHAT HE'S DOING
- ↳ REQUIRES PHONE AT ALL TIME IN CASE OF EMERGENCY
- ↳ FORGETS WHAT TIME & DAY IT IS OFTEN
- ↳ NOT MUCH/LITTLE INDEPENDENCE LEFT



## MATER MEMORY CLINIC NOTES

↳ MUM GOT IN TOUCH WITH THE MEMORY CLINIC ABOUT ME COMING ALONG TO DAD'S APPOINTMENT. SHE ALSO SENT A WEBINAR LINK, WHICH WENT LIVE 16TH AUGUST AT 1PM, (I HAVE NOTED DOWN INFO FROM THIS IN MY ACADEMIC SOURCES).

↳ THESE ARE THE RESEARCH TECHNIQUES THAT I WILL CONDUCT:

1. SURVEYS WILL BE SENT OUT PRIOR TO THE APPOINTMENT, AS THIS APPOINTMENT IS DUE FOR 24TH AUGUST
2. INTERVIEWS WILL BE CONDUCTED WITH CAITLIN & OTHER HOSPITAL STAFF (IF POSSIBLE). ASKING ABOUT MY CONCEPTS TOO.
3. OBSERVATIONS WILL BE EXECUTED BY INSPECTING THE MEMORY MEETING & OTHER PRACTICES THROUGHOUT THE CLINIC. HOW DO THE STAFF ASSIST THOSE WITH DEMENTIA / ALZHEIMERS?

Hi Mina,

I'm sorry for not getting back to you sooner. Yes of course we would be happy to help out. 😊

Sounds like a very interesting project. I came across this webinar and had saved it for my partner who works in design. Perhaps your son would like to see it too, if he hasn't already.

[https://dta.com.au/events/design-community-of-practice/?mc\\_cid=e3bc3ef5b7&mc\\_bid=e895d44ad5](https://dta.com.au/events/design-community-of-practice/?mc_cid=e3bc3ef5b7&mc_bid=e895d44ad5)

Kind regards,

Caitlin

SURVEY NOTES & RESEARCH Q'S - FOR CARERS - MATERN MEMORY CLINIC

HOW CAN SOMEONE WITH DEMENTIA  
BE MORE INDEPENDENT?  
OPEN DIALOGUE

HOW DIFFICULT DO DEMENTIA PATIENTS  
FIND TECHNOLOGY?  
SCALE MODEL

HOW CAN WE KEEP DEMENTIA/ALZHEIMER  
PATIENTS SAFE IN PUBLIC?

HOW PRONE & OFTEN ARE ALZHEIMERS  
PATIENTS TO GETTING LOST WITHOUT A  
CARER IN THE MIDDLE TO SEVERE STAGES?  
LIKELY, NOT LIKELY MODEL

ARE ALZHEIMER PATIENTS MORE LIKELY  
TO BE CONTENT WHEN GIVEN THE  
OPPORTUNITY TO BE MORE INDEPENDENT?

HAVE YOU SEEN ANY PREFERENCES  
TOWARDS ANY PARTICULAR COLOUR  
IN THE MIDDLE TO SEVERE STAGES?

HOW EFFECTIVE & TRUSTWORTHY  
WOULD A PERSONAL ALARM DEVICE  
BE ON A DEMENTIA PATIENT?  
SCALE MODEL

THERE ARE DEMENTIA WEARABLES  
THAT HAVE BEEN CONCEPTED OVERSEAS,  
HAVE YOU HEARD ANY IMPLEMENTS  
OF THAT TECHNOLOGY HERE?  
OPEN DIALOGUE

DO WEARABLES HAVE AN IMPORTANT  
PLACE IN THE MEDICAL, HEALTH &  
AGED/DISABILITY CARE SECTOR?  
SCALE MODEL

16/08/23

WEEK 4

LECTURE

PT1 - SURVEYS & INTERVIEWS  
DATA ANALYSIS



# RESEARCH THROUGH DESIGN - UNIVERSAL DESIGN

## RESEARCH

### ↳ LITERATURE REVIEW

↳ GAPS IN RESEARCH, WHAT HASN'T BEEN DONE?

↳ PARTICIPANT REVIEWS - FINDING TRUTHS

↳ CHECK ASSUMPTIONS

### ↳ DETERMINE AIM

### ↳ DEFINE OBJECTIVES

RIGOUR - BE HONEST ABOUT VIABILITY OF RESEARCH

## RESEARCH DESIGN

### ↳ METHODOLOGY

### ↳ METHODS

### ↳ PROTOCOLS

### ↳ RECRUITMENT STRATEGY

### ↳ ETHICS

LIT REVIEW - ACADEMIC WRITING PIECE THAT DEMONSTRATES UNDERSTANDING OF LITERATURE

DATA REVIEW - COMBINE DATA

SURVEY

↳ APPROACH

↳ MIXED RESEARCH - ANALYSE QUANTITATIVE & QUALITATIVE DATA WITHIN SAME STUDY

↳ ANALYSIS

↳ DESCRIPTIVE STATISTICS - SUMMARY OF DATA SAMPLES

FOCUS GROUPS

↳ APPROACH

↳ SEMI-STRUCTURED INTERVIEW - NOT PLANNED Q'S, THEN GO LOOSELY AFTERWARDS

↳ PHOTO ELICITATION - USE IMAGES TO ELICIT COMMENT

↳ CO-CREATION ACTIVITY - COLLABORATING WITH STAKEHOLDERS TO GUIDE PROCESS

↳ ANALYSIS

↳ THEMATIC ANALYSIS - CLOSELY EXAMINE DATA TO IDENTIFY COMMON THEMES, TOPICS, IDEAS

↳ TOPIC MODELLING - IDENTIFY TOPICS THAT BEST DESCRIBES SET OF DOCUMENTS.

TOPICS ONLY COME UP DURING THIS PROCESS

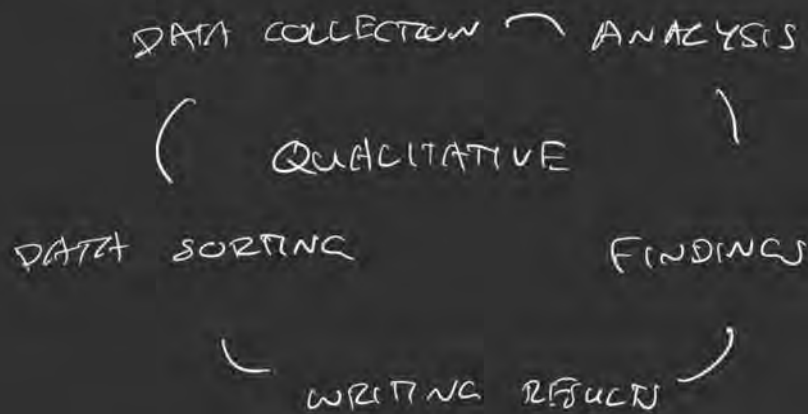
RESEARCH FINDINGS - IDENTIFY RELATIONSHIPS

↳ SPLIT INTO THEMES THAT RELATE TO KEY TOPICS

IDENTIFY DESIGN OPPORTUNITIES

## DATA ANALYSIS

- WHEN YOU GET DATA BACK
- ↳ GO BACK TO YOUR TOPIC
    - ↳ WHAT ARE YOU INTERESTED IN?
    - ↳ IS THERE A PROBLEM/OPPORTUNITY?
    - ↳ WHAT IS CONTEXT?
  - ↳ IDENTIFY THE VARIABLES
    - ↳ i.e. AGE, CONTEXT, TIME OF DAY, WEATHER, ACTION, CHOICES



## 8 STEPS TO CONSIDER

1. GET A SENSE OF THE WHOLE
2. PICK ONE DOC & STUDY IN DETAIL
3. MAKE LIST OF TOPICS THAT HAVE RISEN. CLUSTER SIMILAR TOPICS INTO LISTS & DEVELOP CODES
4. TAKE CODES & GO BACK TO DATA
5. FIND DESCRIPTIONS FOR TOPICS & TURN INTO CATEGORIES
6. MAKE FINAL DECISION ON ABBREVIATION FOR CATEGORIES
7. ASSEMBLE DATA MATERIAL BELONGING TO EACH CATEGORY & PERFORM PRELIM ANALYSIS
8. IF NECESSARY RECODE EXISTING DATA



QUALITATIVE RIGOUR + VERIFICATION

↳ IDENTIFY & MENTION STUDY LIMITATIONS

## SURVEYS

### LEVELS OF MEASUREMENT:

#### NOMINAL / CATEGORICAL

- ↳ DIFFERENT CATEGORIES, NO ORDER TO CATEGORIES
- ↳ SUMMARISING: NO. OF RESPONSES TO EACH CATEGORY, PERCENTAGE OF RESPONSES, COLLAPSE CATEGORIES

#### ORDINAL

- ↳ CATEGORIES THAT HAVE ORDER, DISTANCE BETWEEN CATEGORIES UNKNOWN
- ↳ SUMMARISING: REPORT SIMILAR TO CATEGORICAL, CAN COLLAPSE

## INTERVAL / RATIO

- ↳ ORDERED, DISTANCE BETWEEN DATA KNOWN, NUMERICAL DATA
- ↳ SUMMARISING: REPORTING NUMBER & PERCENTAGES OF RESPONSES, COLLAPSE DATA, DESCRIPTIVE STATISTICS - CENTRAL TENDENCY & VARIABILITY

### CENTRAL TENDENCY

- ↳ DESCRIBES DATA SET BY TYPICAL VALUE & DISTRIBUTION - MEAN (AVERAGE), MEDIAN (MIDDLE VALUE), MODE (MOST OFTEN)

### SENTENCE (TEXT)

- ↳ SHORT / LONG RESPONSES
- ↳ ANALYSIS OF TEXT CONTENT: PRINCIPLES OF QUALITATIVE ANALYSIS APPLY, IDENTIFY / CODIFY KEYWORDS TO CONVERT TO CATEGORICAL DATA, COUNT & REPORT FREQUENCY OF KEYWORDS

## MULTIVARIATE ANALYSIS

- ↳ MORE THAN ONE VARIABLE ANALYSED
- ↳ SHOW COMPARISONS, CONTRASTS, DIFFERENCES
- ↳ SHOW CAUSALITY, MECHANISM, STRUCTURE, EXPLANATION
- ↳ SHOW MULTIVARIATE DATA (2 OR MORE)

FOR BIVARIATE (2 VARIABLES) USE  
A CROSS TABULATION GRAPH  
(FISCHER DIAGRAM)

## INTERVIEW ANALYSIS APPROACH

- ↳ APPLY STRUCTURE TO DATA
- ↳ IDENTIFY COMMON THEMES
- ↳ IDENTIFY PATTERNS & RELATIONSHIPS

## 2 ANALYSIS METHODS:

- ↳ CONTENT / THEMATIC ANALYSIS
- ↳ AFFINITY DIAGRAMMING

## CONTENT ANALYSIS


- ↳ REQUIRES CODING
- ↳ ASSIGNING CATEGORIES / THEMES TO TEXT
- ↳ SIMILAR TO ANNOTATING A DOC WITH COMMENTS
- ↳ DEVELOPING A CODING SCHEME
- ↳ LINK BACK TO RESEARCH Q'S
- ↳ APPLY CODING SCHEME FROM EXISTING FRAMEWORK OR METHOD
- ↳ DERIVING CODES FROM LITERATURE CONCEPTS
- ↳ DEVELOPE OWN CODES INDUCTIVELY

### CODING TEXT

Coding schemes usually involve multiple levels:

- Category
- Code
- Sub-code

Considers a mix of subjective and objective codes:




### CODING TEXT

Using a word processor / print out:

- MS Word
- Pages

Manual coding and analysis:

- Apply codes using comments and highlights
- Manual analysis



### CODING TEXT


Using specialised software:

- NVivo
- Atlas.ti
- Atlas.ti CLOUD (limited functional) (<https://atlasti.com/cloud/>)

Atlas.ti trial (<https://atlasti.com/free-trial-version/>)

Requires transcribed data:

- User creation of coding scheme
- User application of coding scheme
- Software generated analysis





## RELATIONAL ANALYSIS

↳ RELATIONSHIP BETWEEN CODES CAN BE INFERRED BY PROXIMITY: 2 OVERLAPPING CODES HAVE RELATIONSHIP, CO-OCCURRENCE



## AFFINITY DIAGRAMMING

↳ IDENTIFYING, SORTING INDIVIDUAL DATA POINTS INTO THEMES & SUB THEMES

↳ CAN BE DONE WITH TRANSCRIBED DATA OR AUDIO RECORDINGS

\* NOTE DOWN Q'S THAT LEAD TO FURTHER INFO

## REPORTING RESULTS

↳ SUMMARY TABLE IDENTIFYING THEMES & RELATED CONCEPTS

↳ INTERPRETATION IN TEXT

↳ SUPPORTING QUOTES

### AFFINITY DIAGRAMMING

Using raw audio data:

1. Start with raw audio recordings.
2. As you listen through the recording, individual concepts are written down on Post-its.
3. Concepts (Post-its) are then arranged into themes.
4. A different coloured Post-it is then used to label the themes.



16/08/23

# WEEK 4 LECTURE

PT2 - OBSERVATIONS  
DATA ANALYSIS



## WHAT YOU NEED TO DO

### Thoroughly describe the evidence

Is it clear to your reader what they are looking at?  
Provide more detailed explanation in text if required.

- Avoid unnecessary elements or decoration
- No 3D graphics! Keep it simple.
- Label all variables presented (include a legend if needed)
- Always include an informative caption
- Research topic should dictate data presentation
- You should be able to clearly tell your story with a series of simple tables and figures.
- Be careful about adding too many layers of information / complexity
- Simple and direct is always best

2022-08-28 14:11:28

## WHAT YOU NEED TO DO

### Data visualisation resources

- [serialmentor.com/dataviz](https://www.serialmentor.com/dataviz)
- [flowingdata.com](https://flowingdata.com)
- [data-to-viz.com](https://data-to-viz.com)
- [Rawgraphs.io](https://rawgraphs.io)

Create custom graphs:

- Adobe Illustrator
- Affinity Designer

2022-08-28 14:13:48

## AI NOTES

1 PG - 400-450 WORDS (IF PAGE IS FULL OF TEXT)



WEEK 4-6

CONSENT FORMS, SURVEY,  
OBSERVATIONS & INTERVIEWS

16/08/23

- 01/09/23

CONSENT FORMS

**PARTICIPANT INFORMATION FOR CAPSTONE RESEARCH PROJECT**  
- Survey -  
**Dementia Alzheimer's Independence & Accessibility**

**Research team:**

Principal Researcher:	Dean Buiatti	Industrial Design Student
Unit Coordinator(s):	Rafael Gomez	Coordinator
	Tim Williams	Sessional
	<b>School of Design/Faculty of Creative Industries, Education and Social Justice</b>	

**Why is the study being conducted?**

This research project is being undertaken as part of an Industrial Design Capstone project for Dean Buiatti.

The purpose of this project is to gather research into the lives of people living with Dementia Alzheimer's, their independence, and their impact on carers, and partners/ family.

You are invited to participate in this research project because you have experience in exploring and helping those with this disease, and your input will be heavily appreciated.

**What does participation involve?**

Participation will involve completing an online questionnaire with Likert scale answers (strongly agree - strongly disagree) and a few open, short answer style questions, that will take approximately 3 minutes of your time.

**Questions will include:**

- How can someone with Dementia be more independent?
- Are Dementia Alzheimer patients more likely to be content when/ if given the opportunity to be more independent?
- Do wearables have an important role in the medical, health and aged/ disability care sector?

Your participation in this research project is entirely voluntary. If you agree to participate you do have to complete any question(s) you are uncomfortable answering. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT. If you do agree to participate you can withdraw from the research project during your participation without comment or penalty. However, as the survey does not request any personal identifying information once it has been submitted it will not be possible to withdraw.

You will be able to review your responses before submitting and save a copy of your responses after submitting the survey.

**What are the possible benefits for me if I take part?**

It is expected that this research project will / will not benefit you directly. The outcomes of the research, however, may benefit my research report outcome. You can request a brief summary of the outcomes of the study by emailing me at [n10686843@qut.edu.au](mailto:n10686843@qut.edu.au).

**What are the possible risks for me if I take part?**

There are no risks beyond normal day-to-day living associated with your participation in this research project.

**What about privacy and confidentiality?**

All comments and responses are anonymous i.e. it will not be possible to identify you at any stage of the research, because personal identifying information is not sought in any of the responses and no traceable information is collected via the server or survey tool.

Any data collected as part of this research project will be stored securely on personal computers or password protected cloud storage systems (not on public storage systems). Data will be deleted once the project is complete at the end of the semester.

**How do I give my consent to participate?**

The submission or return of the completed survey is accepted as an indication of your consent to participate in this research project.

**What if I have questions about the research project?**

If you have any questions or require further information, please contact me:

Dean Buiatti      [n10686843@qut.edu.au](mailto:n10686843@qut.edu.au)

**What if I have a concern or complaint regarding the conduct of the research project?**

The researcher is committed to research integrity and the ethical conduct of research projects. If you wish to discuss the study with someone not directly involved, particularly in relation to matters concerning policies, information or complaints about the conduct of the study or your rights as a participant, you may contact the Unit Coordinator on email (Rafael Gomez) [r.gomez@qut.edu.au](mailto:r.gomez@qut.edu.au) or (Tim Williams) [tim.williams@qut.edu.au](mailto:tim.williams@qut.edu.au)

**Thank you for helping with this research project. Please keep this sheet for your information.**

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# CONSENT FORMS

**PARTICIPANT INFORMATION FOR CAPSTONE RESEARCH PROJECT**  
– Interview / Observations –

**Dementia Alzheimer's Independence & Accessibility**

**Research team:**

Principal Researcher:	Dean Buiatti	Industrial Design Student
Unit Coordinator(s):	Rafael Gomez	Coordinator
	Tim Williams	Sessional

**School of Design/Faculty of Creative Industries, Education and Social Justice**  
**Queensland University of Technology (QUT)**

**Why is the study being conducted?**  
This research project is being undertaken as part of an Industrial Design Capstone project for Dean Buiatti.

The purpose of this project is to gather research into the lives of people living with Dementia Alzheimer's, their independence, and their impact on carers, and partners/ family. It is also to gather input on how these patients are given information and what is being done to assist them, to better their day-to-day.

You are invited to participate in this research project because you have experience in exploring and helping those with this disease, and your input will be heavily appreciated.

**What does participation involve?**  
Your participation will involve an audio recorded interview at The Mater Memory Clinic or other agreed location that will take approximately 10-15 minutes of your time.

Questions will include:  
How long have you been in this industry for, what was your reason for joining and helping those with the disease?  
Do pop-ups or unplanned activities/ things to do cause them anxiety?  
How do you keep yourself from getting frustrated when they often forget things?

Your participation in this research project is entirely voluntary. If you do agree to participate you can withdraw from the research project without comment or penalty. You can withdraw anytime during the interview. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT.  
You will be able to review a transcript of your responses after the interview.

**What are the possible benefits for me if I take part?**  
It is expected that this research project will / will not benefit you directly. The outcomes of the research, however, may benefit my research report outcome. You can request a brief summary of the outcomes of the study by emailing me at [n10686843@qut.edu.au](mailto:n10686843@qut.edu.au).

**What are the possible risks for me if I take part?**

There are no risks beyond normal day-to-day living associated with your participation in this research project.

**What about privacy and confidentiality?**  
Any personal information that could potentially identify you may be removed or changed before the summary of results are disseminated.

Any data collected as part of this research project will be stored securely on personal computers or password protected cloud storage systems (not on public storage systems). Data will be deleted once the project is complete at the end of the semester.

As the research project involves an audio recording:

- You will have the opportunity to verify your comments and responses prior to final inclusion.
- The recording will not be used for any other purpose.
- Only I (Dean Buiatti) will have access to the recording.
- It is possible to participate in the research project without being recorded.

Every effort will be made to ensure that the data you provide cannot be traced back to you in reports, publications, and other forms of presentation. For example, we will only include the relevant part of a quote, we will not use any names, or names will be changed, and/or details such as dates and specific circumstances will be excluded. Nevertheless, while unlikely, it is possible that if you are quoted directly your identity may become known.

**How do I give my consent to participate?**  
We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

**What if I have questions about the research project?**  
If you have any questions or require further information, please contact me:

Dean Buiatti [n10686843@qut.edu.au](mailto:n10686843@qut.edu.au)

**What if I have a concern or complaint regarding the conduct of the research project?**  
The researcher is committed to research integrity and the ethical conduct of research projects. If you wish to discuss the study with someone not directly involved, particularly in relation to matters concerning policies, information or complaints about the conduct of the study or your rights as a participant, you may contact the Unit Coordinator on email (Rafael Gomez) [r.gomez@qut.edu.au](mailto:r.gomez@qut.edu.au) or (Tim Williams) [tim.williams@qut.edu.au](mailto:tim.williams@qut.edu.au).

**Thank you for helping with this research project. Please keep this sheet for your information.**

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# SIGNED CONSENT FORMS FROM CAITLIN

<p align="center"><b>CONSENT FORM FOR CAPSTONE RESEARCH PROJECT</b> - Interview -</p> <p align="center"><b>Dementia Alzheimer's Independence &amp; Accessibility</b></p>
--

Research team:  
Dean Bulatti [n10686543@out.edu.au](mailto:n10686543@out.edu.au)

**Statement of consent**

By signing below, you are indicating that you:

- Have read and understood the information document regarding this research project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw without comment or penalty.
- Understand that if you have concerns about the ethical conduct of the research project you can contact me on email above.
- Understand that the research project will include an audio recording.
- Agree to participate in the research project.

Please tick the relevant box below:

- I agree for the interview to be recorded.  
 I do not agree for the interview to be recorded.

Name Caitlin McElligott

Signature [Signature]

Date 24 Aug 2023

Please return the signed consent form to the researcher.

<p align="center"><b>CONSENT FORM FOR CAPSTONE RESEARCH PROJECT</b> - Observations -</p> <p align="center"><b>Dementia Alzheimer's Independence &amp; Accessibility</b></p>
---

Research team:  
Dean Bulatti [n10686543@out.edu.au](mailto:n10686543@out.edu.au)

**Statement of consent**

By signing below, you are indicating that you:

- Have read and understood the information document regarding this research project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw without comment or penalty.
- Understand that if you have concerns about the ethical conduct of the research project you can contact me on email above.
- Agree to participate in the research project.

Name Caitlin McElligott

Signature [Signature]

Date 28 Aug 2023

Please return the signed consent form to the researcher.

<p align="center"><b>IMAGE RELEASE FOR CAPSTONE RESEARCH PROJECT</b></p> <p align="center"><b>Dementia Alzheimer's Independence &amp; Accessibility</b></p>
---

Your participation in the research project involves photographs and audio recordings of you. These may be sufficiently clear to identify you as an individual, although all care will be taken to de-identify you on any presentation as part of the unit requirements (e.g. blur your face, blur identifying features, crop you from images if possible, etc).

As well as for the purposes described in the information sheet for the research, I would like to use these photographs and audio recordings of individuals in my presentations as part of DNB311 Industrial Design 7: Capstone project unit requirements, non-commercial purposes of the subject (e.g. to present as part of the final project presentation).

Such dissemination may reveal personal information about you in an unusual way i.e. in the context of the research, and may mean, e.g. that family members, friends and other people more generally become aware of your participation in this study.

You can decline this invitation without comment or penalty, and still be in the study. You will have the opportunity to view the photographs and audio recordings as we plan to use them.

Once the images and audio are published it will not be possible to withdraw your consent.

If you agree to have your images and audio used, please complete, and sign the consent below.

Research team contacts:  
Dean Bulatti [n10686543@out.edu.au](mailto:n10686543@out.edu.au)

**Statement of consent**

By signing below, you are indicating that you:

- Have read and understood the information about this image release.
- Have had any questions answered to my satisfaction.
- Understand if I have any additional questions I can contact the research team.
- Understand I can decline this invitation without comment or penalty.

Please tick the relevant box below:

- I agree to QUT using images and audio of me from this research as described above.

I would like to review images of me before they are used in this research as described.

- No.  
 Yes. The best way to contact me for this purpose is by \_\_\_\_\_

Name Caitlin McElligott

Signature [Signature]

Date 24 Aug 2023

Please return the signed consent form to the researcher.  
A copy will be provided for your records.

# SIGNED CONSENT FORMS FROM FRED



**CONSENT FORM FOR CAPSTONE RESEARCH PROJECT**  
- Interview -

---

**Dementia Alzheimer's Independence & Accessibility**

**Research team:**  
Dean Buatti: [d17066241@uic.edu](mailto:d17066241@uic.edu)

**Statement of consent**  
By signing below, you are indicating that you:

- Have read and understood the information document regarding this research project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw without comment or penalty.
- Understand that if you have concerns about the ethical conduct of the research project you can contact me on email above.
- Understand that the research project will include an audio recording.
- Agree to participate in the research project.

**Please tick the relevant box below:**  
 I agree for the interview to be recorded.  
 I do not agree for the interview to be recorded.

Name: Fredrick Buddehard

Signature: [Signature]

Date: 26 August

Please return the signed consent form to the researcher:

**CONSENT FORM FOR CAPSTONE RESEARCH PROJECT**  
- Observations -

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**Dementia Alzheimer's Independence & Accessibility**

**Research team:**  
Dean Buatti: [d17066241@uic.edu](mailto:d17066241@uic.edu)

**Statement of consent**  
By signing below, you are indicating that you:

- Have read and understood the information document regarding this research project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw without comment or penalty.
- Understand that if you have concerns about the ethical conduct of the research project you can contact me on email above.
- Agree to participate in the research project.

Name: Fredrick Buddehard

Signature: [Signature]

Date: 26 August 2015

Please return the signed consent form to the researcher:

**IMAGE RELEASE FOR CAPSTONE RESEARCH PROJECT**

---

**Dementia Alzheimer's Independence & Accessibility**

Your participation in the research project involves photographs and audio recordings of you. These may be sufficiently clear to identify you as an individual, although all care will be taken to de-identify you on any presentation as part of the unit requirements (e.g. blur your face, blur identifying features, crop you from images if possible, etc).

As well as for the purposes described in the information sheet for the research, I would like to use these photographs and audio recordings of individuals in my presentations as part of DM311 Industrial Design 2 Capstone project unit requirements, non-commercial purposes of the subject (e.g. to present as part of the final project presentations).

Such dissemination may reveal personal information about you in an unusual way i.e. in the context of the research, and may mean, e.g. that family members, friends and other people more generally become aware of your participation in this study.

You can decline this invitation without comment or penalty, and still be in the study. You will have the opportunity to view the photographs and audio recordings as we plan to use them.

Once the images and audio are published it will not be possible to withdraw your consent.

If you agree to have your images and audio used, please complete, and sign the consent below.

**Research team contacts**  
Dean Buatti: [d17066241@uic.edu](mailto:d17066241@uic.edu)

**Statement of consent**  
By signing below, you are indicating that you:

- Have read and understood the information about this image release.
- Have had any questions answered to my satisfaction.
- Understand if I have any additional questions I can contact the research team.
- Understand I can decline this invitation without comment or penalty.

**Please tick the relevant box below:**  
 I agree to O&T using images and audio of me from this research as described above.

I would like to review images of me before they are used in this research as described:  
 No.  
 Yes. The best way to contact me for this purpose is by: \_\_\_\_\_

Name: Fredrick Buddehard

Signature: [Signature]

Date: 26 August 2015

Please return the signed consent form to the researcher:  
 A copy will be provided for your records.

# MEMORY CLINIC NOTES



## SURVEY LAYOUT & Q'S

↳ TO START THE SURVEY, I ASKED FOR THE PARTICIPANTS' CONSENT & WHAT THEIR OCCUPATION WAS. THIS WILL ASSIST ME IN CATEGORISING THE RESULTS LATER.

6:52 📶 93

[Services](#) ▸ Mater Memory and Cognitive Disorders Clinic

### Mater Memory and Cognitive Disorders Clinic

The Mater Memory and Cognitive Disorders Clinic is the first cognitive neurology clinic to be established in Queensland. The clinic, under the leadership of [Professor Peter Nestor](#), takes referrals from specialists and has particular focus on degenerative forms of suspected dementia including:

- Alzheimer's disease
- Mild cognitive impairment
- Posterior cortical atrophy
- Dementia with Lewy bodies
- Primary progressive aphasia
- Frontotemporal dementias
- Progressive supranuclear palsy and corticobasal syndrome
- Other acquired cognitive disorders of uncertain aetiology

**Services provided by the clinic include:**

- Assessment, diagnosis and management of acquired cognitive disorders
- CSF biomarker service for suspected Alzheimer's disease
- Counselling for patients diagnosed with dementia and their families

**Our team**

<a href="#">Prof Peter Nestor</a>	Professor of Cognitive Neurology
Dr Emily Ahern	Geriatrician
Caitlin McElligott	Research Nurse
Adam Masa	Psychologist

📍 materonline.org.au

1. I am not a doctor and I cannot provide a diagnosis.

2. Are Dementia/Alzheimer patients more likely to be contacted/visited if given the opportunity to be seen independently?

very likely

likely

neither likely nor unlikely

unlikely

very unlikely

3. I have no preference towards any particular colour in the slides to serve slides? If yes, please specify.

4. Do you have a preference towards any particular font in the slides to serve slides? If yes, please specify.

5. I have no preference towards any particular colour in the slides to serve slides? If yes, please specify.

6. Do you have a preference towards any particular font in the slides to serve slides? If yes, please specify.

### Dementia Alzheimer's Survey

Dementia Alzheimer's Survey for Final Year Uni Research

This survey's questions are to be used in a final year Industrial Design student's research assignment. The research assignment delves deep into Dementia Alzheimer's issues, of being independent and further assisting those caring for them. All answers are anonymous with the exception of an occupational question. Your consent for your answers will be required.

I consent to participate in this survey.

I do not consent to participate in this survey.

I am not sure.

7. Please provide your occupation.

8. Please provide your contact details (if you wish to be contacted).

9. Please provide your contact details (if you wish to be contacted).

I consent to participate in this survey.

I do not consent to participate in this survey.

I am not sure.

10. Please provide your contact details (if you wish to be contacted).



# SURVEY RESULTS

**Q2** Save as

What is your occupation?

Answered: 4 Skipped: 0

RESPONSES (4) WORD CLOUD TAGS (0) Sentiment: OFF

Search Responses Filter by tag

Showing 4 responses

- Doctor  
28/8/2023 04:37 pm [View respondent's answers](#)
- Doctor  
28/8/2023 04:13 pm [View respondent's answers](#)
- Registered Nurse  
28/8/2023 09:03 am [View respondent's answers](#)
- Support worker  
28/8/2023 07:34 am [View respondent's answers](#)

**Q3** Save as

How can someone with Dementia be more independent?

Answered: 4 Skipped: 0

RESPONSES (4) WORD CLOUD TAGS (0) Sentiment: OFF

Search Responses Filter by tag

Showing 4 responses

- By having support & a good environment.  
28/8/2023 04:27 pm [View respondent's answers](#)
- Community access supports; carer availability to support occupational/hobbies/interests.  
28/8/2023 04:31 pm [View respondent's answers](#)
- People with dementia need support to be independent. Unfortunately as the disease progresses people are unable to organise themselves to do independent activities, but with support they can feel as though they are keeping busy.  
28/8/2023 08:03 am [View respondent's answers](#)
- Depending on the stage of dementia. Lots of support, routines and reminders someone with dementia can have as much independence as it would be safe for them.  
28/8/2023 08:03 am [View respondent's answers](#)

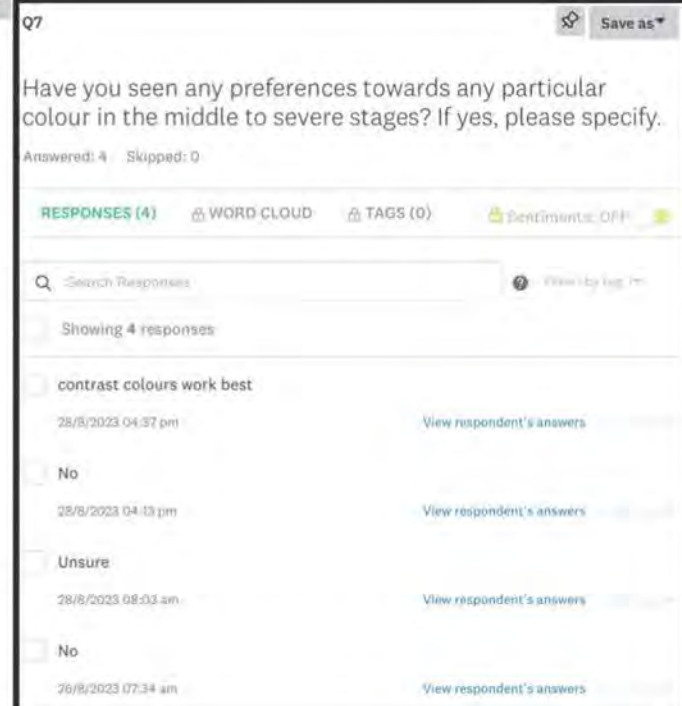
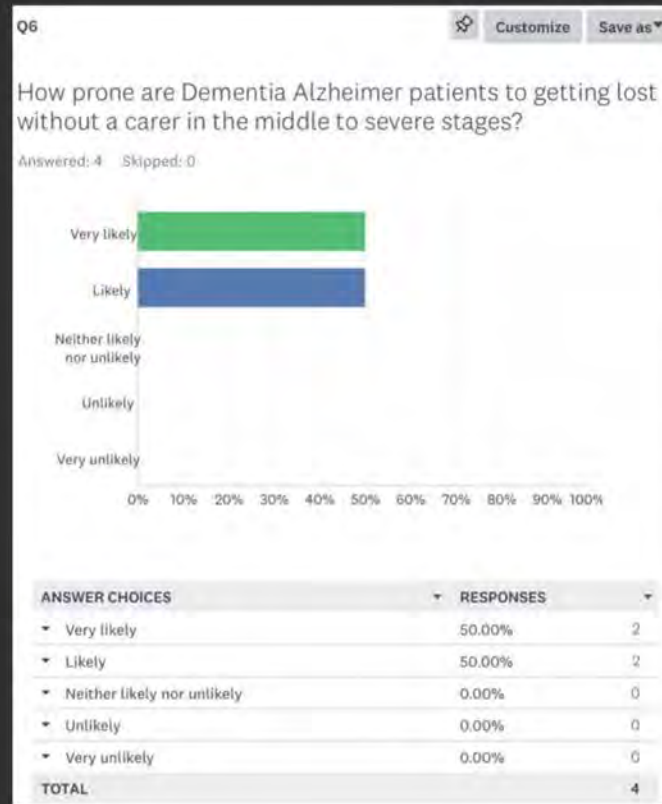
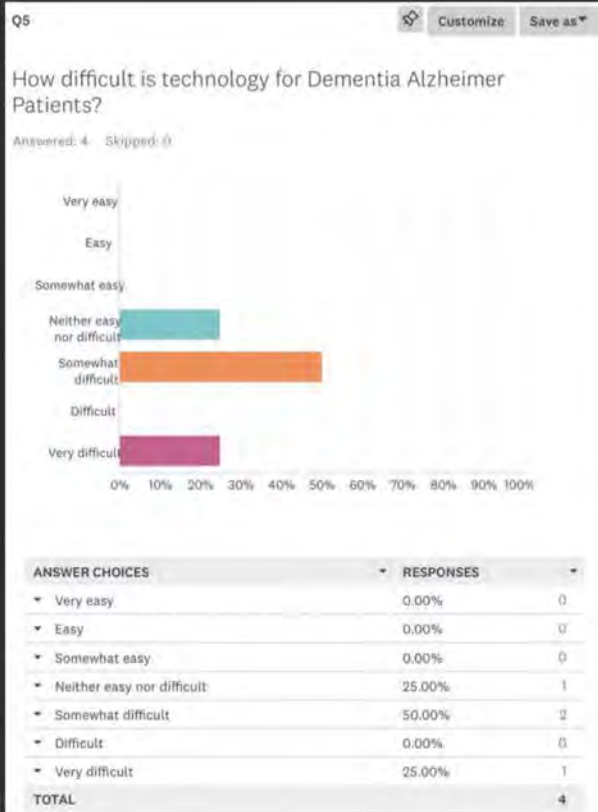
**Q4** Customize Save as

Are Dementia Alzheimer patients more likely to be content when/ if given the opportunity to be more independent?

Answered: 4 Skipped: 0

ANSWER CHOICES	RESPONSES
Very likely	75.00% 3
Likely	25.00% 1
Neither likely nor unlikely	0.00% 0
Unlikely	0.00% 0
Very unlikely	0.00% 0
<b>TOTAL</b>	<b>4</b>

# SURVEY RESULTS



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# SURVEY RESULTS



**Q9** Save as

There are Dementia wearables that have been conceived overseas, have you heard of any implementations of those technologies here?

Answered: 4 Skipped: 0

RESPONSES (4) WORD CLOUD TAGS (0) Sentiments: OFF

Search Responses Filter: by tag

Showing 4 responses

- no  
28/8/2023 04:37 pm View respondent's answers
- No  
28/8/2023 04:13 pm View respondent's answers
- Yes, we have seen personal alarm devices, however they only work as long as they are charged up.  
28/8/2023 08:03 am View respondent's answers
- No  
26/8/2023 07:34 am View respondent's answers

**Q10** Save as

Do wearables have an important role in the medical, health and aged/ disability care sector?

Answered: 4 Skipped: 0

RESPONSES (4) WORD CLOUD TAGS (0) Sentiments: OFF

Search Responses Filter: by tag

Showing 4 responses

- yes  
28/8/2023 04:37 pm View respondent's answers
- Potentially an area of interest to explore. I don't have knowledge of this firsthand.  
28/8/2023 04:13 pm View respondent's answers
- They could, but it is important to remember that sometimes people are unwell to a point where wearing a device may not be compatible.  
28/8/2023 08:03 am View respondent's answers
- I haven't had experience with it  
26/8/2023 07:34 am View respondent's answers

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## SURVEY TAKEAWAYS - QUALITATIVE

- ↳ ONLY 4 RESPONSES, BUT ARE FROM DIFFERENT DISCIPLINES, PROVIDING WIDER SCOPE OF KNOWLEDGE
  - ↳ 2 DOCTORS, NURSE & SUPPORT WORKER
- ↳ ALL AGREED FOR DEMENTIA PATIENTS TO HAVE MORE INTERDEPENDENCY, THEY NEED TO BE SUPPORTED BY CARERS.
  - ↳ WITH THIS SUPPORT THEY CAN DO THEIR PREFERRED ACTIVITIES, AS THEY AREN'T ABLE TO SUPPORT THEMSELVES.
- ↳ ALL HIGHLY AGREED THAT THESE PATIENTS WILL BE MORE CONTENT IF GIVEN THE OPPORTUNITY TO BE MORE INDEPENDENT
- ↳ TECHNOLOGY DIFFICULTIES AVERAGE AROUND 'SOMEWHAT DIFFICULT'

- ↳ ALL AGREED IT IS QUITE LIKELY FOR DEMENTIA ALZHEIMER'S PATIENTS TO GET LOST DURING MIDDLE TO SEVERE STAGES.
- ↳ 3/4 DID NOT SEE ANY PARTICULAR COLOUR PREFERENCE, 1 SAID THAT CONTRAST COLOURS WORK BEST.
- ↳ 3/4 SAID A PERSONAL ALARM DEVICE WOULD BE USEFUL, ONE DID NOT
- ↳ 3/4 HAVE NOT SEEN OR HEARD OF ANY IMPLEMENTATIONS OF DEMENTIA WEARABLES. ONE SAID THEY HAVE SEEN PERSONAL ALARM DEVICES USED
- ↳ IMPORTANT ROLE OF WEARABLES IN DISABILITY/AGED CARE SECTOR
  - ↳ YES, POTENTIAL AREA TO EXPLORE, 2 HAVE HAD NO EXPERIENCE WITH THEM, SOMETIMES PEOPLE ARE UNWELL TO A POINT WHERE A WEARABLE WOULD NOT BE BENEFICIAL.