

# MEMARGON

IS A PORTMANTEAU AND BLENDED FROM

'MEMORY' AND 'HEXAGON'







THE INNER COURTYARD IS
DESIGNATED TO NATURE. IN THE
PARK AND GARDEN RESIDENTS
ARE WELCOME TO ENJOY BEING
IN NATURE OR HELP GARDENING
TO KEEP THEMSELVES ACTIVE.

INVESTOR DECK
FUTURE REAL-ESTATE

### - VISION

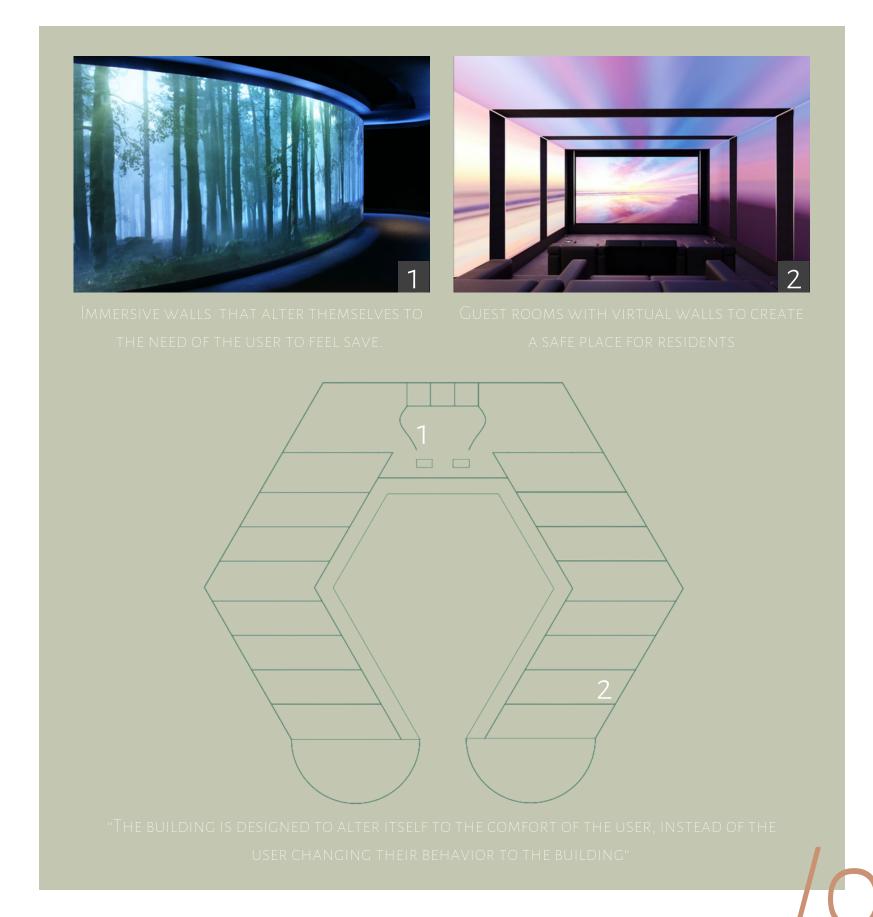
MEMARGON AIMS TO REVOLUTIONISE

HEALTHCARE, PREVENT DEMENTIA BY USING VR

GAMING TECHNOLOGIES AND ELEVATE THE LIFE

QUALITY OF THOSE WHO ARE SICK, THROUGH

INDIVIDUAL CONSIDERATION AND CARE.



\*IN 2050

152 MILLION

PEOPLE WILL SUFFER
FROM DEMENTIA

### 25 PERCENT

PEOPLE ARE SOCIALLY ISOLATED,

IMPLYING A 50% INCREASED

RISK OF DEMENTIA

### 1.1 TRILLION

ESTIMATED HEALTHCARE COST

MAKE DEMENTIA THE

MOST EXPENSIVE DISEASE

1.5 BILLION PEOPLE AGED 65 OR OLDER

(United Nations, 2019)

## TARGET MARKET /03

#### PEOPLE SUFFERING FROM DEMENTIA

LIVE IN THE BUILDING WHILE GETTING ATTENTION ACCORDING TO THEIR INDIVIDUAL

NEEDS AND BY RECEIVING TRAINING BY NEUROTECHNOLOGICALLY STEERED VR GAMES TO

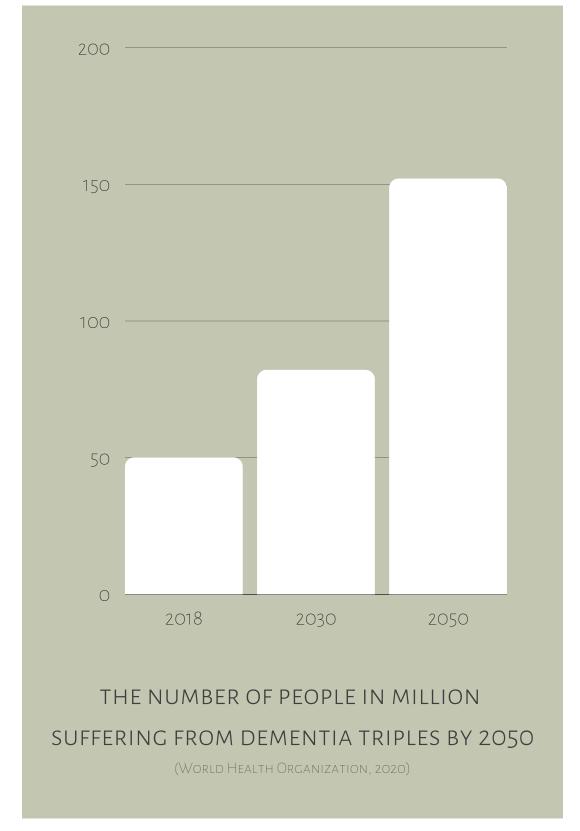
ENHANCE THEIR MEMORY

#### PEOPLE PROSPECTED TO SUFFER FROM DEMENTIA

ARE INVITED TO LIVE IN THE BUILDING AND ACTIVELY TRAIN THEIR MEMORY BY PLAYING SPECIFIC VR GAMES TO STIMULATE BRAIN GROWTH

#### PEOPLE AIMING TO ASSIST DEMENTIA PATIENTS

CO-LIVE IN THE BUILDING AND ACTIVELY ENGAGE WITH DEMENTIA PATIENTS AS THIS BETTERS THE DEVELOPMENT OF THE DISEASE



IVESTOR DECK | MEMARGON | 202



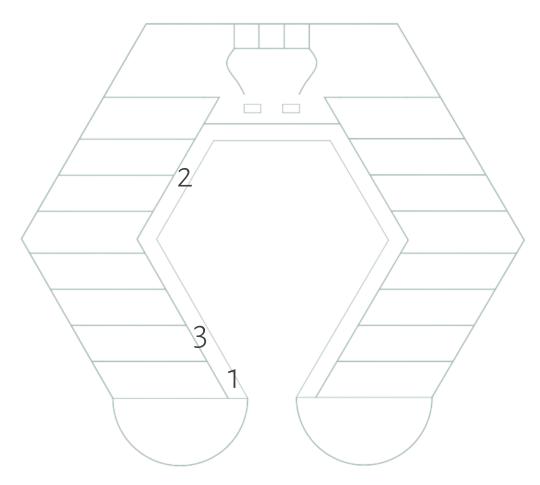
ROUND BUILDING DESIGN FOR USER SAFETY, TO ALWAYS LET THE USER RETURN TO THE ENTRANCE



CLEVER LIGHTING DESIGN TO GUIDE THE USER IN THE RIGHT DIRECTION



Al powered window panels outside each door to remind users for important things and screen their health



"The building uses AI features to guide the user through the buildign and to assess the condition of the user"

### THERAPY & PREVENTION

Use EEG sensors and develop serious vr games for dementia care to stimulate brain growth and memory (Ning et al., 2020) (see appendix neurotechnology)

#### CARE

FACILITIES DEVELOPED FOR THE DIFFERENT STAGES OF DEMENTIA AIMING TO KEEP PATIENTS INDEPENDENT WHILE CATERING THEIR NEEDS IN AN EMPATHIC AND CUSTOMIZED BUILDING

#### LIVING

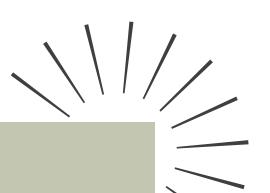
LIVING SPACES FOR NON DEMENTIA PATIENTS TO STIMULATE INTER-GENERATIONAL INTERACTION RESULTING IN A WEAKER DISEASE DEVELOPMENT



### THE SOLUTION

## /05

# BUSINESS MODEL



ELEVATING PEOPLE'S LIFE QUALITY

AND CONTRIBUTING TO SOCIETY AND

THE PLANET IS CONSIDERED A SOURCE

OF PROFIT SIMILAR TO MONETARY

PROFIT (FRENCH, 2016)

### HOW DO WE GENERATE PROFIT?

- RENTING OUT LIVING FACILITIES TO BOTH PATIENTS AND PEOPLE CO-LIVING WITH PATIENTS
- CARING ABOUT PEOPLE SUFFERING FROM DEMENTIA
- PROVIDING PREVENTIVE TREATMENT
- ENHANCE PATIENTS LIFE QUALITY
- CONTRIBUTE TO A BETTER TOMORROW

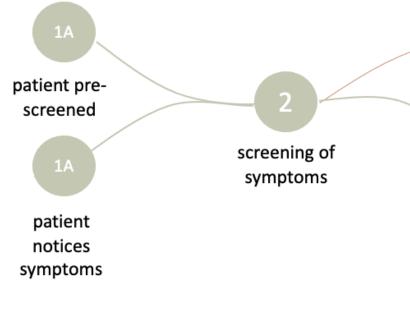
### WHO IS PAYING THE BILLS?

- UNIVERSAL HEALTHCARE SYSTEMS FOR PEOPLE SUFFERING FROM

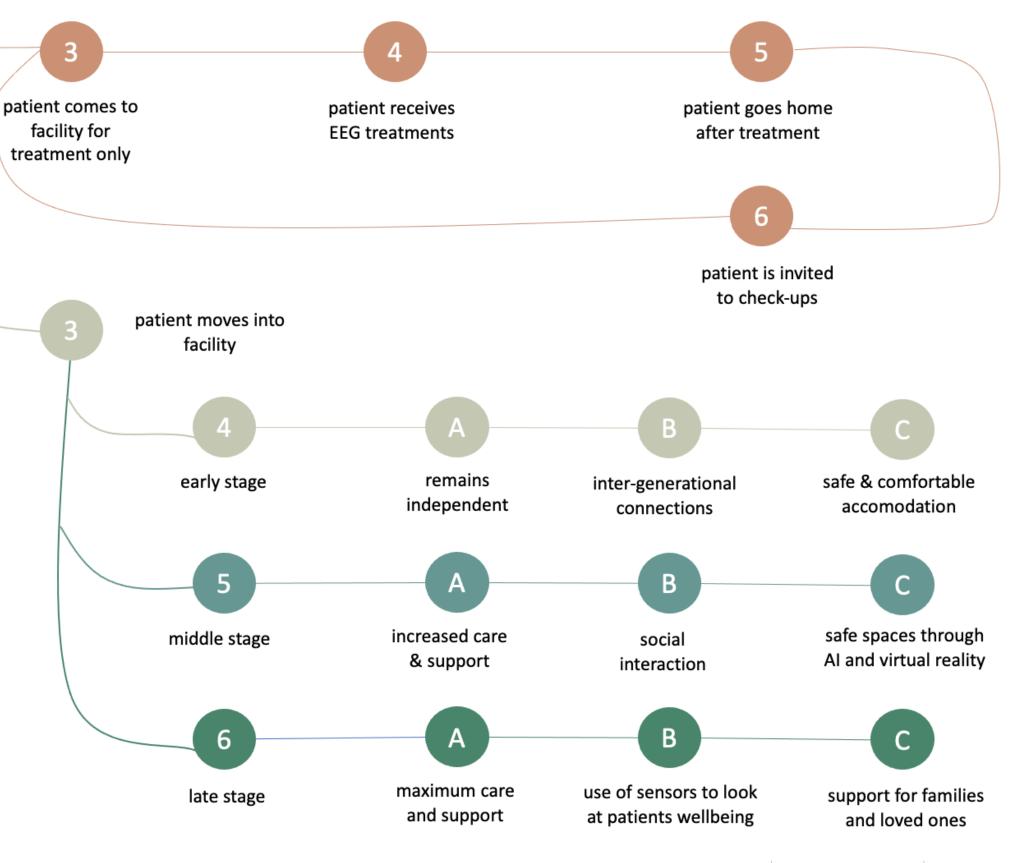
  DEMENTIA AND PROSPECTED TO SUFFER FROM IT, AS PREVENTIVE

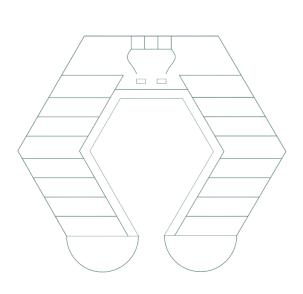
  THERAPY IS CHEAPER THAN THE TREATMENT
- GOVERNMENT BY MEANS OF SUBSIDIES FOR PATIENTS AND PEOPLE WANTING TO HELP AND CONTRIBUTE TO SOCIETY
- PRIVATE PERSONS WHO ARE CO-LIVING WITH PATIENTS AND THOSE WANTING MORE AMENITIES

### VALIDATION ROADMAP



VALIDATION ROADMAP IS DESIGNED FOR PEOPLE SUFFERING FROM DEMENTIA OR PROSPECTED SUFFER FROM IT. NORMAL RESIDENTS INTERACT WITHPATIENTS BUT DO NOT NECESSARILY RECEIVE SPECIAL TREATMENTS OR CARE.



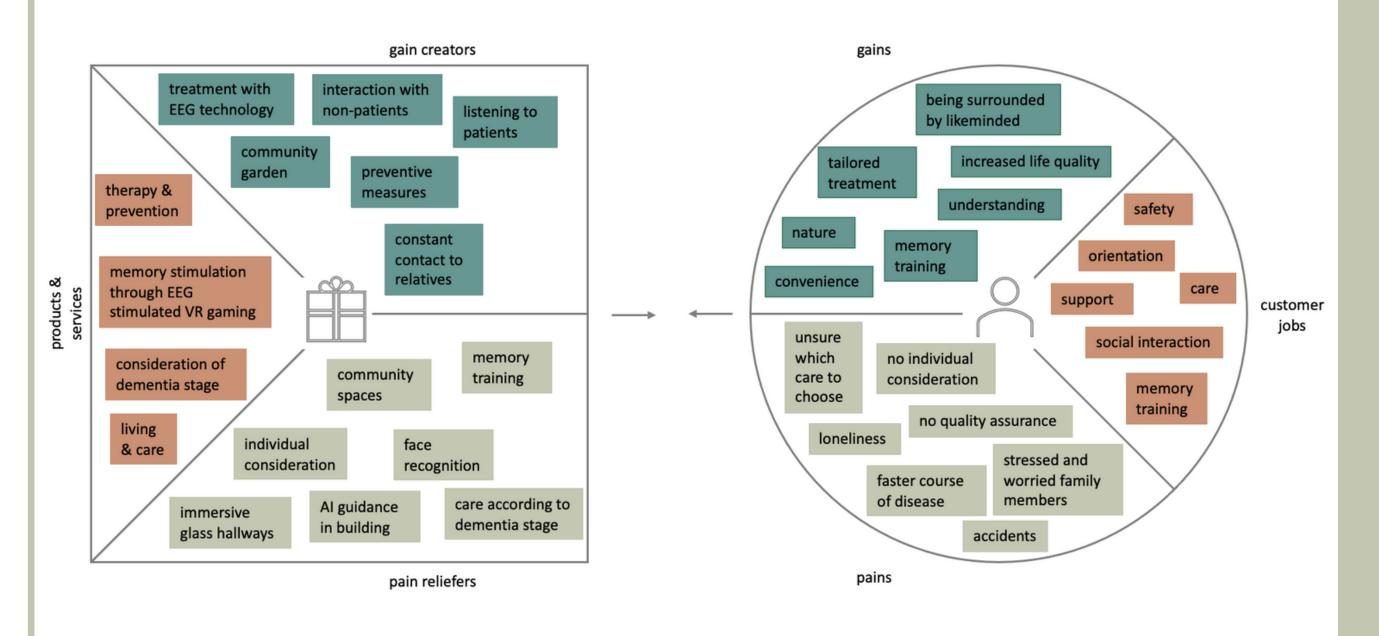


### 07 SALES & MARKETING STRATEGY

EXPERIENCE
ENGAGEMENT
EXCLUSIVITY

**EMOTION** 

MEMARGON USES ITS GAIN
CREATORS AND PAIN
RELIEFERS TO ADVERTISE
THE BENEFITS FOR
DEMENTIA PATIENTS.
HENCE, EMOTIONALLY
COMMUNICATING THE
ASSOCIATED VALUE
PROPOSITION.







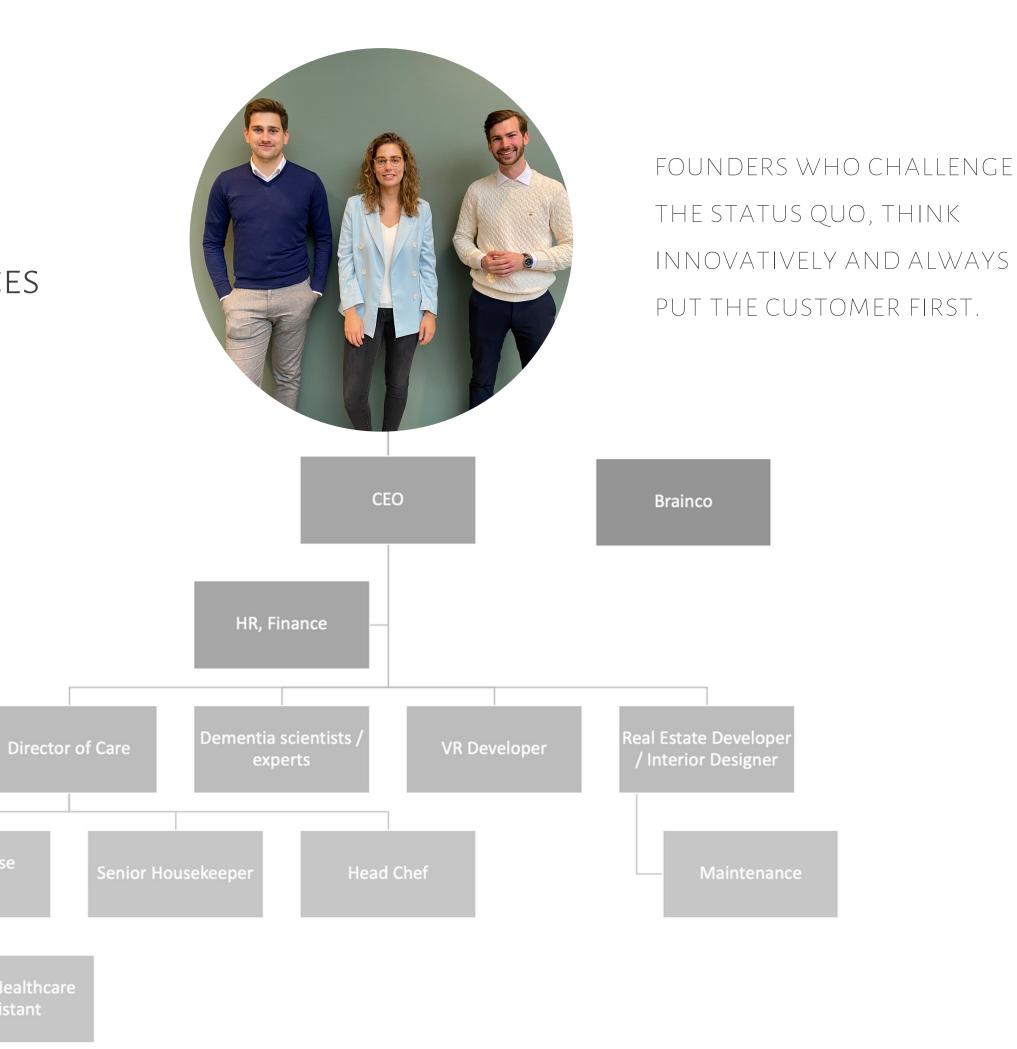
# TEAM /08

#### ORGANIZATIONAL DIAGRAM TO SUCCES

EXTERNAL EXPERTISE IS NEEDED TO ENHANCE KNOWLEDGE IN MEDICAL ISSUES related to dementia, VR gaming and REAL ESTATE DEVELOPMENT. A PARTNERSHIP WITH TECH START-UP BRAINCO FURTHER CONTRIBUTES TO OVERALL SUCCESS.

Clinical Nurse

Senior Healthcare



# /09

## FINANCIALS

			Year 1	Year 2	Year 3	Year 4	Year 5
R	evenue						
		Patient treatment	€ 2.592.000,00	€ 2.851.200,00	€ 3.136.320,00	€ 3.449.952,00	€ 3.794.947,20
		Patient therapy	€ 1.440.000,00	€ 1.612.800,00	€ 1.806.336,00	€ 2.023.096,32	€ 2.265.867,88
		Regular residents	€ 288.000,00	€ 311.040,00	€ 335.923,20	€ 362.797,06	€ 391.820,82
To	otal revenue						
			€ 4.320.000,00	€ 4.775.040,00	€ 5.278.579,20	€ 5.835.845,38	€ 6.452.635,90
D	irect Costs						
		Payroll Patient treatment	€ 1.740.960,00	€ 1.915.056,00	€ 2.106.561,60	€ 2.317.217,76	€ 2.548.939,54
		Payroll Patient therapy	€ 360.000,00	€ 403.200,00	€ 451.584,00	€ 505.774,08	€ 566.466,97
		Payroll Regular residents	€ 49.920,00	€ 53.913,60	€ 58.226,69	€ 62.884,82	€ 67.915,61
		Other direct costs	€ 129.600,00	€ 143.251,20	€ 158.357,38	€ 175.075,36	€ 193.579,08
To	otal Direct costs		€ 2.280.480,00	€ 2.515.420,80	€ 2.774.729,66	€ 3.060.952,02	€ 3.376.901,19
G	ross operating profit		€ 2.039.520,00	€ 2.259.619,20	€ 2.503.849,54	€ 2.774.893,35	€ 3.075.734,71
Fi	ixed costs						
		Depreciation		€ 1.098.846,15			
		Interest	€ 1.999.900,00	€ 1.933.236,67	€ 1.866.573,33	€ 1.799.910,00	€ 1.733.246,67
EI	ВТ		-€ 1.059.226,15	-€ 772.463,62	-€ 461.569,95	-€ 123.862,80	€ 243.641,89
		Tax					€ 73.092,57
N	let Income		-€ 1.059.226,15	-€ 772.463,62	-€ 461.569,95	-€ 123.862,80	€ 170.549,32



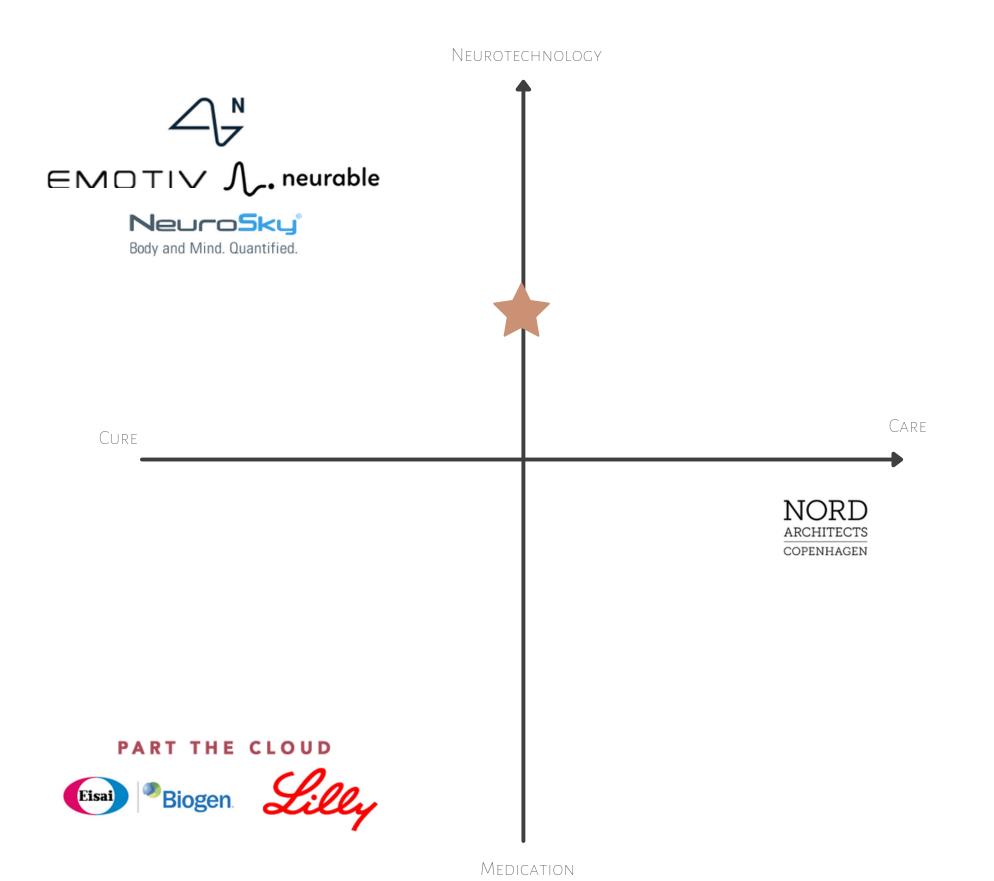
ONYX SOLAR - TRANSPARENT SOLAR PANELS GENERATING ELECTRICITY TO POWER THE BUILDING



WATER FILTRATION SYSTEMS HELP TO "UPCYCLE" 80% OF ALL WATER USED. REDUCING THE NEED FOR FRESH WATER AND REDUCING COSTS FOR UTILITIES.



The building is consisting out of off-site prefabricated components. Decreasing the time of construction and optimising efficiency.

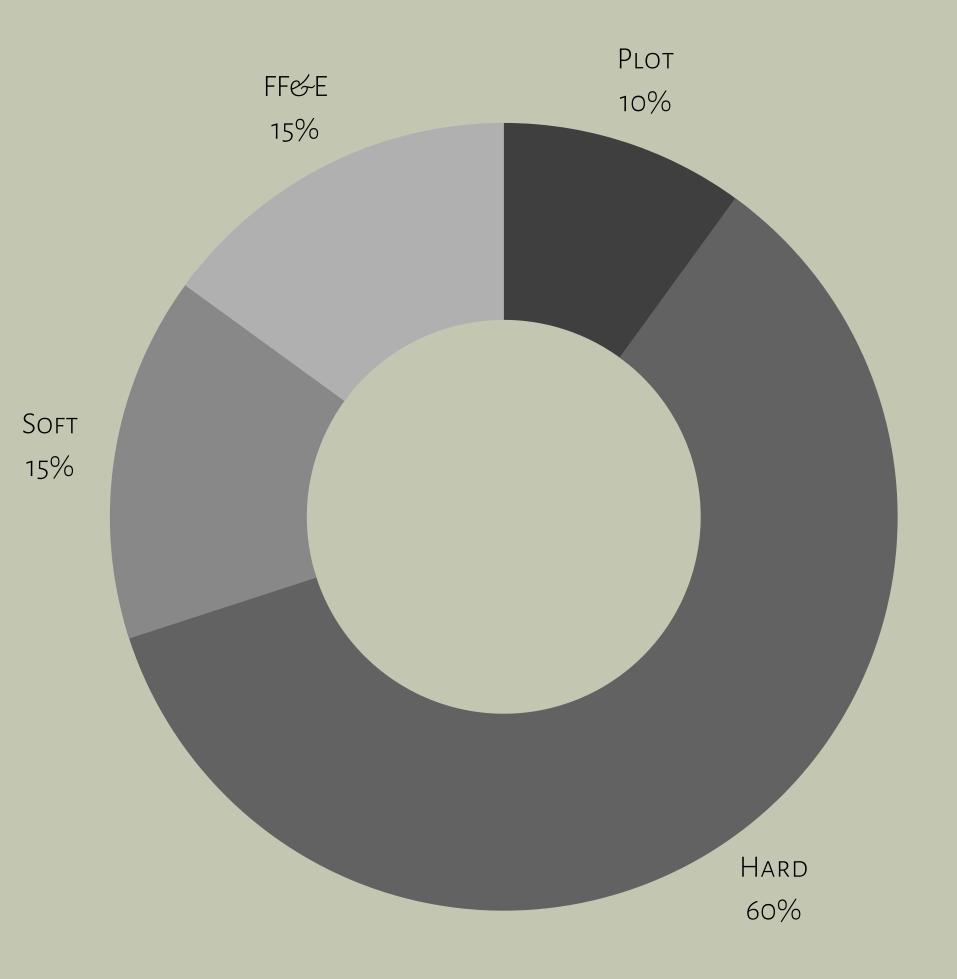




### COMPETITION

MEMARGON USES NEUROTECHNOLOGY TO PREVENT DEMENTIA AND PUTS THE PATIENT AT THE CENTRE OF ATTENTION IN HEALTHCARE.

IT DIFFERENTIATES ITSELF EFFECTIVELY FROM
THE COMPETITION AIMING TO CURE
DEMENTIA WITH EITHER NEUROTECHNOLOGY
OR MEDICATION, OR SOLELY CARE ABOUT THE
PATIENTS



## INVESTMENTS /11



5.71 MILLION € PLOT:

34.28 MILLION € HARD:

8.57 MILLION € SOFT:

8.57 MILLION € FF&E:

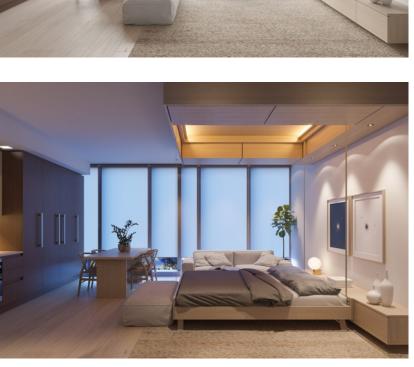
57.14 MILLION € \* TOTAL:

\* COSTS ARE CALCULATED WITH AN ESTIMATED CONSTRUCTION COST OF 259.733 € PER ROOM WHICH IS THE AVERAGE COST OF A MODERN DEMENTIA CONCEPT AS WELL AS 3/4-STAR HOTELS (NORD ARCHITECTS A/S, 2021; FIXR, 2021).

THE SPREAD BETWEEN PLOT, HARD, SOFT AND FF&E COSTS IS ESTIMATED USING ACTUAL NUMBERS OF TWO REAL ESTATE ADVISORIES. THE FF&E COSTS WERE ESTIMATED HIGHER as usual as only state-of-the-art technologies are implemented (CBRE, 2020; FIXR, 2021)

## APPENDIX CONCLUSION





QUALITY, ISSUES

Al HELPS MEMARGON TO ADAPT TO THE NEEDS AND COMFORT OF THE USER, INSTEAD OF THE USER ADAPTING ITS BEHAVIOUR TO THE BUILDING. RESULTING IN INCREASED LIFE-INDEPENDENCE AND SAFETY FOR RESIDENTS WITH MENTAL HEALTH

INVESTING IN US MEANS INVESTING IN AN UPLIFT IN LIFE QUALITY FOR PEOPLE SUFFERING FROM DEMENTIA OR PROSPECTED TO SUFFER FROM IT. IT IMPLIES A BETTER FUTURE FOR US AND OUR CHILDREN.

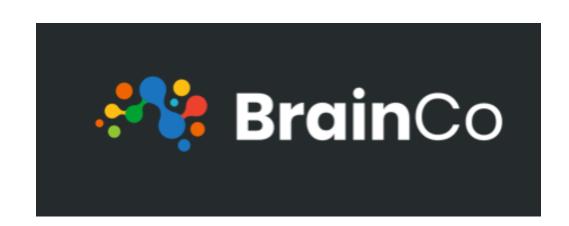
# APPENDIX NEUROTECHNOLOGY - #1

Neurotechnology aims to study the brain, expand its abilities and treat illnesses by bringing together the human central nervous system and machines via brain-computer interfaces (BCI) (Martín, 2019). Frequently, it is dismissed as science-fiction but gained more and more attention due to its achievements (ibid). Neurotechnology enables possibilities to enhance the abilities of the nervous system. There are noninvasive alternatives to the surgical enrichment of the brain. The most widely spread noninvasive alternative is electroencephalography (EEG). This technology relies on sensors placed on the scalp to register brain waves created by nervous impulses in the brain (ibid).

A STUDY CONDUCTED BY THE MIT MEDIA LAB IN CAMBRIDGE, MASSACHUSETTS USA, TESTED WEARABLE EEG AND ITS ABILITY TO MONITOR AND REDIRECT A HUMAN'S ATTENTION IN REAL TIME (KOSMYNA ET AL., 2018). SPECIFICALLY, THEY PROOFED THE FEASIBILITY TO NUDGE A PERSON TO BECOME ATTENTIVE AGAIN BY USING REAL TIME SUBTLE, HAPTIC OR AUDIO FEEDBACK. HENCE, THE PARTICIPANTS ATTENTION AND PERFORMANCE INCREASED SIGNIFICANTLY BY USING NEUROFEEDBACK WHICH IS A SPECIFIC FORM OF BIOFEEDBACK (IBID).

Neurofeedback is based on measuring brain waves, while using feedback to reward desirable brain waves and inhibit undesirable ones (Sitaram et al., 2017). Over time, the brain is trained to focus on the production of the rewarded brain waves (ibid). A study conducted by Vincent Monastra, PhD from Binghamton University and his team, used this principle to proof the increase in attention among children with ADHD through neurofeedback (Monastra, 2005). The study revealed that children who are no longer medicated but received neurofeedback had learned being attentive just as children without ADHD (ibid).

# APPENDIX NEUROTECHNOLOGY - #2



BRAINCO IS A STARTUP FOUNDED IN 2015 AND INCUBATED AT THE HARVARD INNOVATION LAB (BRAINCO INC., 2020). THE COMPANY LEVERAGES ITS R&D EXPERTISE IN ARTIFICIAL INTELLIGENCE TO CULTIVATE COGNITIVE TRAINING TECHNOLOGY. THEIR AIM IS TO DEVELOP CUTTING-EDGE EEG SCIENCE, ENGINEERING, AND ALGORITHM DEVELOPMENT TO SOLVE REAL-WORLD CHALLENGES (IBID). FURTHER, THE STARTUP IS RESPONSIBLE FOR THE DEVELOPMENT OF EEG DIADEMS AND THE RESPECTIVE VIDEO GAME 'FUTUREOASIS' TO IMPROVE CONCENTRATION AMONG CHILDREN WITH A CONCENTRATION DEFICIT (MARTÍN, 2020). THIS PROOFS THAT PRINCIPLES OF THE GAMING INDUSTRY CAN BE USED TO ACTUALLY TREAT PATIENTS AND SIMULTANEOUSLY REVOLUTIONIZES THE WAY WE PERCEIVE HEALTHCARE NOWADAYS.

Even though EEG sensors were developed and research for medical reasons, the technology proofed its potential in the gaming industry (Martín, 2020). In the video game 'World of Warcraft' one is able to mentally control an avatar using a BCI. Awakening, which is a video game developed by Neurable eliminated all physical controllable. The player is forced to focus his attention to levitate objects in the game. However, Adam Molnar, founder of Neurable, sees his invention not so much as a game but rather as application to understand the powerful possibilities provided by BCI technology (IBID).

# APPENDIX FINANCE

### Assumptions Occupancy

		Year 1	Year 2	Year 3	Year 4	Year 5	
Occupancy							
	Patients Treatment relative	60%	66%	73%	80%	88%	180 Residences available
	Patients Treatment Absolute	108	119	131	144	158	
	Patients Therapy Absolute	50%	56%	63%	70%	79%	360 spots per year availalbe
	Patients Therapy Absolute	180	202	226	253	283	
	Regular Residents Relative	60%	65%	70%	76%	82%	40 Residences available
	Regular Residents Absolute	24	26	28	30	33	
	Total number of residents	132	145	159	174	191	

- Treatment occupancy starts at 60% in year 1 and is expected to grow 10% each year
- Therapy occupancy starts at 50% in year 1 and is expected to grow 12% each year
- REGULAR RESIDENT OCCUPANCY STARTS AT 60% IN YEAR 1 AND IS EXPECTED TO GROW 8% EACH YEAR

### REMAINING

	Per month	Per year	One time
Price of treatment for patients	€ 2.000	€ 24.000	
Price of therapy for patients			€ 8.000
Price of rent for regular residents	€ 1.000	€ 12.000	
Direct payroll per patient in treatment	€ 1.343	€ 16.120	
Direct payroll per patient in therapy	€ 1.343	€ 16.120	€ 2.000
Direct payroll per regular resident	€ 173	€ 2.080	
Other direct costs (medicine, food, etc) 3% of revenu			

- Prices of treatment and therapy have been benchmarked with other therapies and treatments in similar stages
- Payroll costs have been calculated based and benchmarked on the average need and costs of care of a patient (CCW, 2021)

  (Waternet, 2021)

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