



INTRODUCTION

iVMS has innovated advanced technology that can detect the onset of dementia approximately 7 years in advance through driving behaviour. This unique technology will allow families with a history of dementia or even those without the ability to receive early intervention, which is key to their future progress.



PLUG & PLAY

Our device is easy to install in the car, just plug it into a specified slot. Then all you have to do is drive and we will analyse the data and provide you with a report that you can present to your doctor if need be.

DRUG FREE

Our technology is drug and scan free, we do not want you to go through unnecessary tests if you do not need it. Let your driving behaviour with iVMS technology do the work for you.

POST DIAGNOSIS

iVMS are with you every step of the way. Whether you have recently been diagnosed with the onset of dementia or have suffered for a few years, we can support you to be mobile and enjoy your independence. Our advanced technology will allow you to create geofences around specific areas you do not want to drive beyond. Additionally we have a 'loved ones' detection feature that will allow people to know your movements and they can be instantly contacted in an emergency situation with your location.



Nurturing, Mobility & Independence

Build your journey
with us.

Beyond Diagnosis

Post diagnosis can be a difficult time for you and your family. At iVMS we want you to be mobile and independent in your vehicle in the safest way possible. We have developed a holistic concept that allows your loved ones and emergency services to instantly track your location in an event of an emergency. Most importantly iVMS allows you to track your own behaviour and analyse your own movements. You or your loved ones can even trace where you have parked your vehicle remotely, if you have forgotten your car location. In addition to this you will be able to use your vehicle without a key or mobiliser if you have forgotten or misplaced it with our AI face detection technology. The innovative features of iVMS technology will provide you, your family and friends the ability to create zones that you cannot drive beyond. Providing a safe environment for everyone concerned. These unique services will support you to detect your own progress at your own pace, making it a tailor fit solution for all.

HOW iVMS CAN HELP

SOS



**CONTROLLED
ZONES**



**TRACK &
DETECT**



info@vmsinnovations.com



www.vmsinnovations.com



Dementia Support

"It's not how much you do, but how much love you put in the doing." – Mother Teresa

SITUATIONS' DETECTIONS:

1- Lost Destination Trip:

Regular Trip Occurrence: (no. of times) = 10

Regular Trip Occurrence with in Last: (days) = 30

Lost Destination: (no. of times) = 3

Lost Destination with in Last: (days) = 60

2- Hard Accelerations:

Hard Accelerations Detected per Trip: (no. of times) = 7

3- Hard Brakes:

Hard Brakes Detected per Trip: (no. of times) = 6

4- Sharp Turns:

Sharp Turns Detected per Trip: (no. of times) = 6

5- Crashes:

Crashes Detected per Trip: (no. of times) = 2

Crashes Detected within Last: (in days) = 90

6- Slow Driving Speed:

Slow Driving Speed Detected per Trip: (no. of times) = 5

Slow Driving Speed Detected lesser than allowed speed limit: (in %) = 52

7- Road Signs:

Road Signs Disobeyed Detected per Trip: (in %) = 40

8- Controlled Zone:

Breach of Controlled Zone: (no. of times) = 3

Breach of Controlled Zone with in Last: (days) = 60

ALERT/NOTIFICATION: (in case of any sign of dementia has been detected)

Hi, 'John Smith' with Driving License: '11223344' on vehicle 'ABC 123' may require your urgent assistance. 'John Smith' current location is at 'ABC, Corby NN17 1TA, UK'.

iVMS has detected evidence to support the signs of the onset of Dementia in 'John Smith' Click [here](#) to download report summary and take this report to your doctor.

Alzheimer/Dementia Symptoms Detected:

- 1- Forgetting regular routes more than 3 times in last 60 days.
- 2- Breaching of Controlled Zone detected 3 times in last 60 days.

DEMENTIA SUPPORT REPORT:

Date Range 1

May 1, 2022 - May 31, 2022

Date Range 2

June 1, 2022 - June 30, 2022

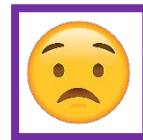
Driver

Select Driver

VIEW REPORT

Summary:

Average increase in driving behavior pattern, leading to dementia symptoms = 25.83%



DATE RANGE 1		DATE RANGE 2		CHANGE IN DRIVING BEHAVIOUR PATTERN (%)
BEHAVIOR	VALUES	BEHAVIOR	VALUES	
Lost Destination:		Lost Destination:		
Lost Destination: (no. of times)	3	Lost Destination: (no. of times)	4	33.33
Lost Destination with in Last: (days)	60	Lost Destination with in Last: (days)	60	
Hard Accelerations:		Hard Accelerations:		
Hard Accelerations Detected per Trip: (no. of times)	7	Hard Accelerations Detected per Trip: (no. of times)	7	0.00
Hard Brakes:		Hard Brakes:		
Hard Brakes Detected per Trip: (no. of times)	6	Hard Brakes Detected per Trip: (no. of times)	7	16.67
Sharp Turns:		Sharp Turns:		
Sharp Turns Detected per Trip: (no. of times)	6	Sharp Turns Detected per Trip: (no. of times)	8	33.33
Crashes:		Crashes:		
Crashes Detected per Trip: (no. of times)	2	Crashes Detected per Trip: (no. of times)	2	0.00
Crashes Detected within Last: (in days)	90	Crashes Detected within Last: (in days)	90	
Slow Driving Speed:		Slow Driving Speed:		
Slow Driving Speed Detected per Trip: (no. of times)	5	Slow Driving Speed Detected per Trip: (no. of times)	7	40.00
Slow Driving Speed Detected lesser than allowed speed limit: (in %)	52	Slow Driving Speed Detected lesser than allowed speed limit: (in %)	52	
Road Signs:		Road Signs:		
Road Signs Disobeyed Detected per Trip: (in %)	40	Road Signs Disobeyed Detected per Trip: (in %)	60	50.00
Controlled Zone:		Controlled Zone:		
Breach of Controlled Zone: (no. of times)	3	Breach of Controlled Zone: (no. of times)	4	33.33
Breach of Controlled Zone with in Last: (days)	60	Breach of Controlled Zone with in Last: (days)	60	

SOME VISUAL TESTS FOR ASSESSING SEVERITY OF DEMENTIA:

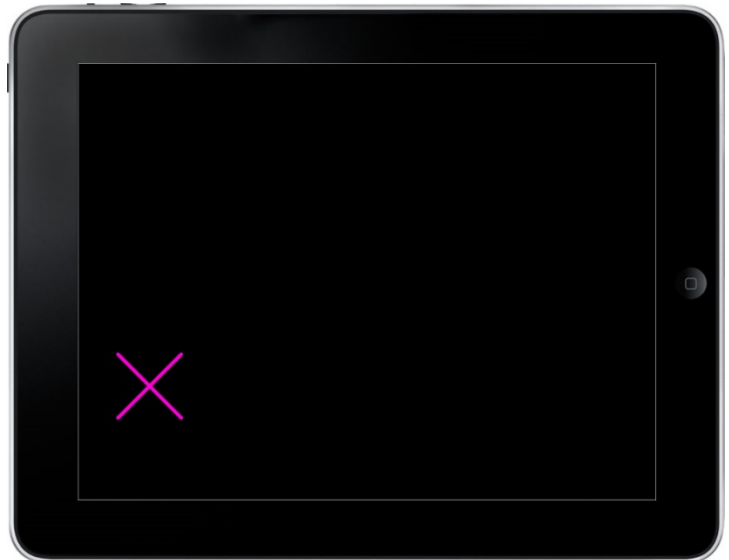
MOTOR SCREENING TASK

What does it test?

The MOT is a task that can be used to assess participants' general ability to understand and complete tasks using the iPad technology and can highlight if any sensorimotor or hearing deficits may impinge on performance. It also allows patients to become familiar with using a touchscreen.

What does the task involve?

A flashing cross appears onscreen, in varying locations which participants must touch as quickly and accurately as possible.



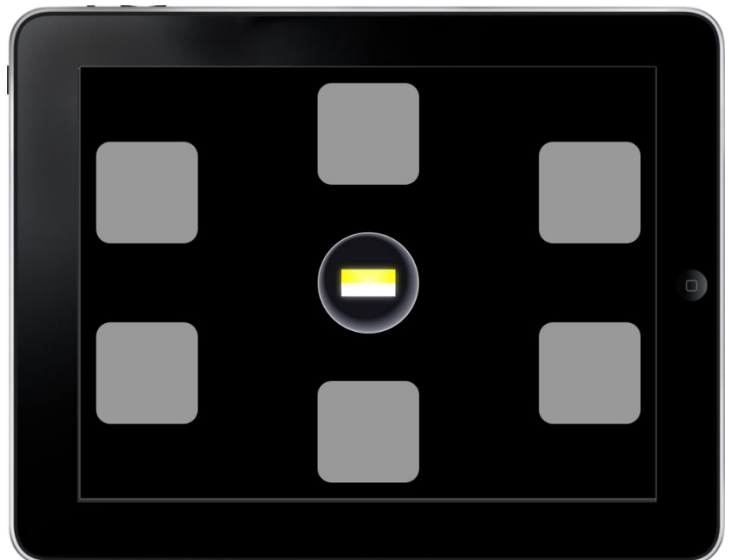
PAIRED ASSOCIATES LEARNING

What does it test?

PAL tests visual associative learning and memory and gives insight into individuals' episodic memory abilities. This is typically impaired in Alzheimer's Disease and has also been found to be best at predicting later Alzheimer's Disease in patients with Mild Cognitive Impairments. It is a key component of the dementia test battery.

What does the task involve?

Boxes are displayed around the edge of the screen. In a random order, each one opens once to reveal either a pattern or nothing. At least one box contains a pattern. The patterns are then shown one at a time in the centre of the screen and the participant must touch the box where the pattern had been displayed originally. If an error is made, the patterns are presented again in their respective locations. The task progressively becomes more difficult as the test goes on.



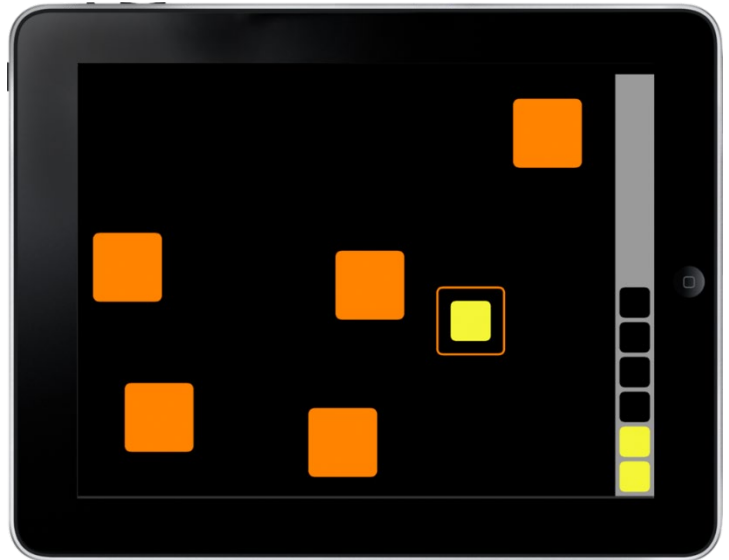
SPATIAL WORKING MEMORY

What does it test?

SWM looks at how good participants are at retaining and utilising visuospatial information. It is self-ordered and since participants must employ a strategy it also provides insight into executive function.

What does the task involve?

An array of coloured boxes contain tokens which participants must search for by touching the boxes. As the test progresses, the number of boxes increases, making the task more difficult. Crucially, participants must not return to a box in which they have previously found a token.



REACTION TIME

What does it test?

RTI measures how quickly and accurately the individual can react, both in terms of their mental and motor response speed, and their vigilance. It can also show if the participant has issues of impulsivity and if premature or preservative responding occurs.

What does the task involve?

Participants must hold down a button at the bottom of the screen until a dot appears in a circle at the top of the screen, which they must touch as quickly as possible. This dot can appear in just one circle (simple RTI) or in one of five different circles (five-choice RTI).



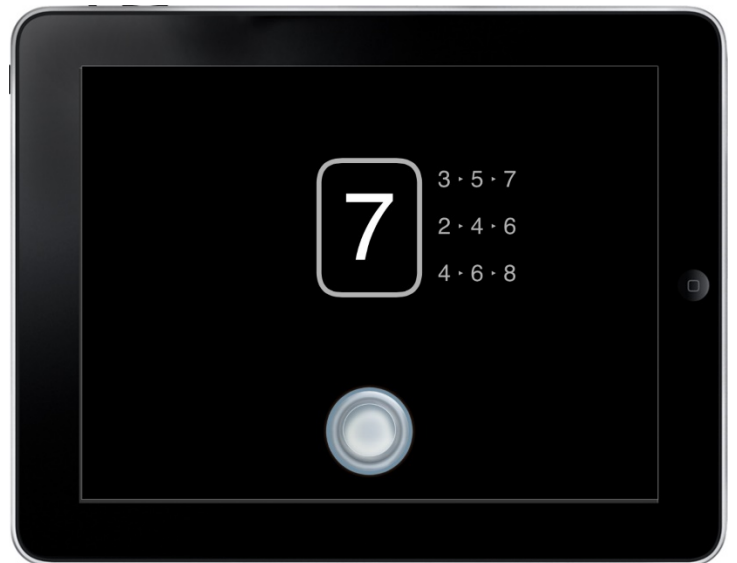
RAPID VISUAL INFORMATION PROCESSING

What does it test?

RVP tests how well participants can sustain their visual attention and how they cope with a task requiring continuous performance.

What does the task involve?

Single digits appear in the centre of the screen, with 100 digits being shown per minute. A panel to the right of the central square displays the target sequences which participants must respond to. When the participant detects a sequence they must press a blue button at the bottom of the screen. There are 9 target sequences per minute.



DELAYED MATCHING TO SAMPLE

What does it test?

In DMS participants' visual recognition memory and short-term visual memory are measured by looking at how good they are at both simultaneous and delayed matching of an array of visual stimuli to a target.

What does the task involve?

Participants are shown non-verbalisable patterns which they must match to one of four options shown below it by touching the correct pattern from the four. The sample pattern is either hidden from view and the choice made after a delay or the sample is still visible alongside the four choices.



PATTERN RECOGNITION MEMORY

What does it test?

PRM is a test of visual pattern recognition memory in a 2-choice forced discrimination paradigm. The neurological underpinnings of impaired pattern recognition in early AD may be thinning of the parahippocampal gyri.

What does the task involve?

Participants are presented with non-verbalisable patterns. In the first recognition phase, the participant is required to choose between a pattern they have already seen and a novel pattern. The second recognition phase can be given either immediately or after a delay.



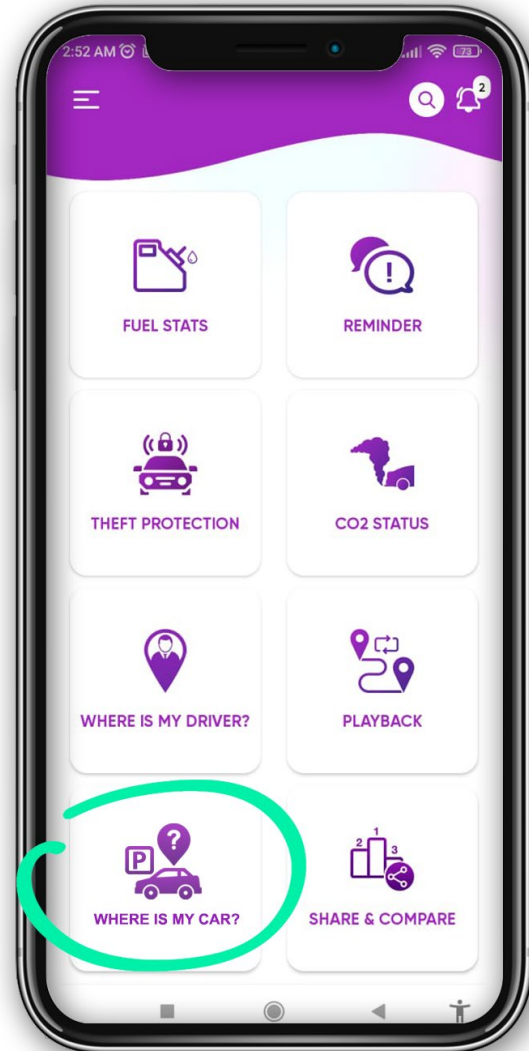
PARKED CAR LOCATOR ASSISTS

You emerge from the supermarket, struggling under the weight of the extra bread and chocolate biscuits you've bought and then... you draw a total blank... **where did you park the car?**

So now no worries, iVMS APP will lead you to your car.

iVMS automatically detects your parked location and save it. It allows you to add a photo of the location, set a timer for you to be reminded (handy if you need to put money in a parking meter or need a reminder to check your location) and also add a note to yourself.

This following this strategy has worked nicely and has relieved the anxiety when you felt when you left home not knowing if you would find your car once parked. iVMS wants you to feel **Not today Alzheimer's, not today**, You are not going to steal my independence for quite sometime.



MEDICATION ALERTS

Medication alert will remind the driver to take their medication with them before setting off on their journey, as well as reminding them at the time medication is required to be taken - providing them with an image of their medication for clarity.

