# Attention in the Digital Age

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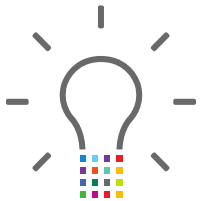
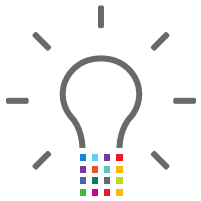
Microsoft

# Objectives



Understand the changing nature of attention in the context of digital lifestyles and connected lives



Establish what changes in attention might mean for digital advertising

# Contents:

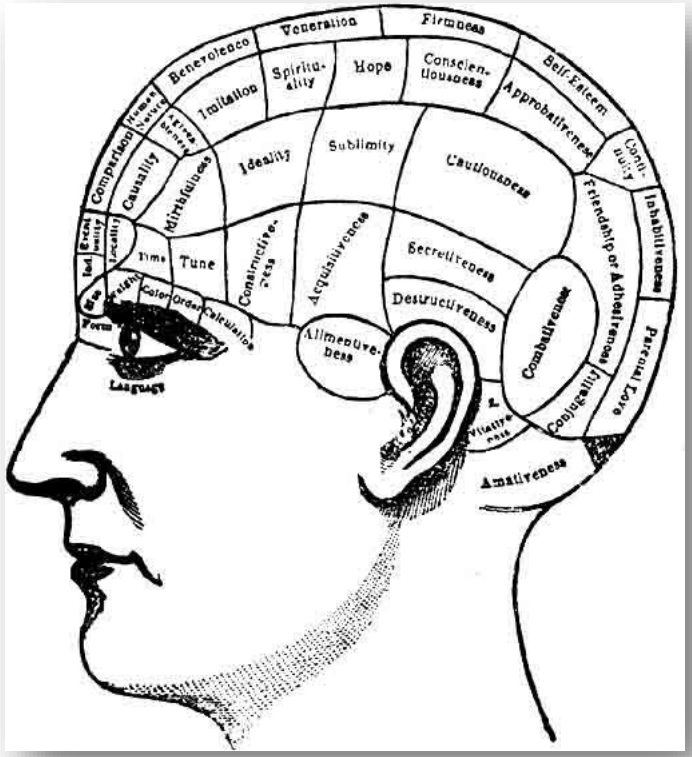
# Background

# Neuroplasticity and Attention

During most of the 20th Century, the scientific consensus was that the brain had a relatively stable structure that remained consistent apart for a period of development and change in childhood.

More recently, neuroscience has revealed changes in neural pathways and synapses due to changes in behaviour, environment, neural processes, thinking, emotions, as well as changes resulting from bodily injury.

This means that everyday experience whether that be learning to dance, play computer games or learning a musical instrument can change the brain structure and ultimately impact on cognitive skills like attention and focus.



# How technology could impact attention

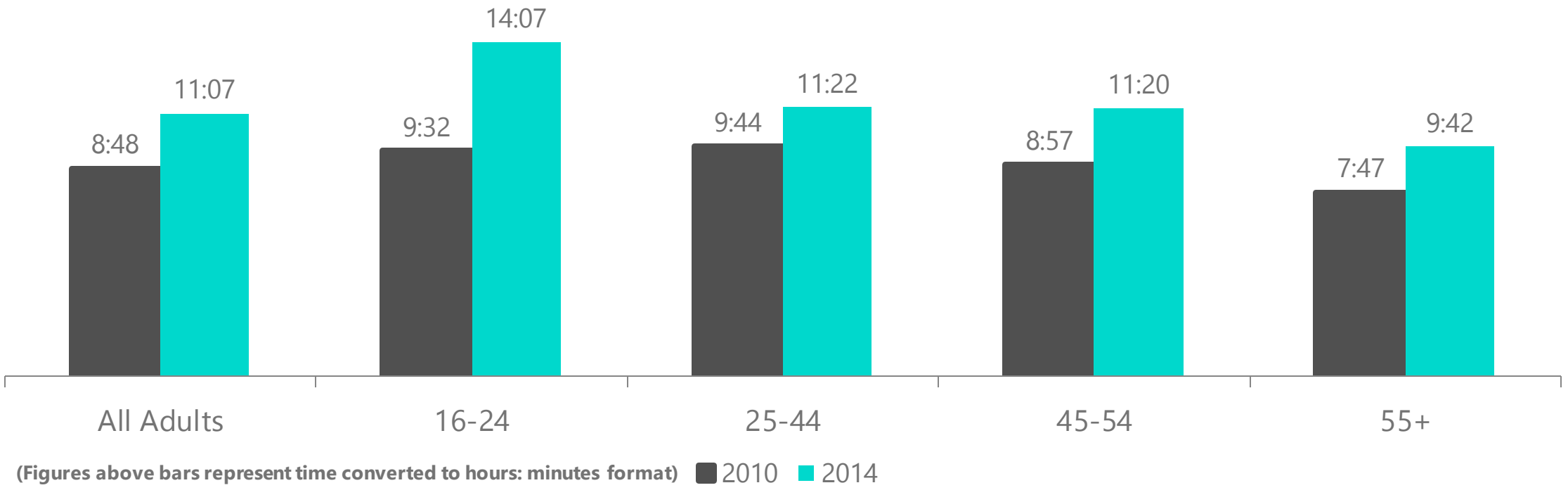
The structure of the brain changes in response to changes in behaviour, environment and neural processing.

The brain's cognitive functioning shifts in response to regular, intensive use of technology resulting in development of new cognitive talents that better suit a more digital lifestyle

Source: http://en.wikipedia.org/wiki/Neuroplasticity

# Across all ages a greater proportion of our day is spent consuming media – increasingly through digital devices

Total time spent consuming media and communications per day, 2010 vs 2014




With digital devices accounting for so much more of our everyday media consumption, it is important to explore any links which might exist between our digital lifestyles and any changes on our day-to-day attention abilities.

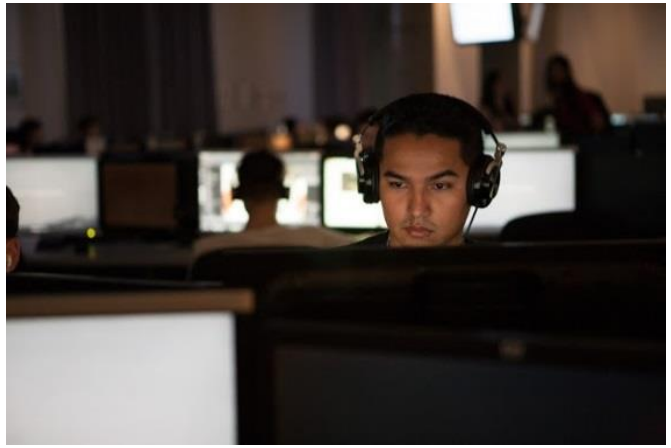
Data Source: *OFCOM: Communications Market Report 2014*

# Introduction

# How we define attention in this study: Sohlberg and Mateer's model of attention

## Sustained:

Maintain consistent attention during repetitive activity



## Selective:

Maintain attention in the face of distracting stimuli

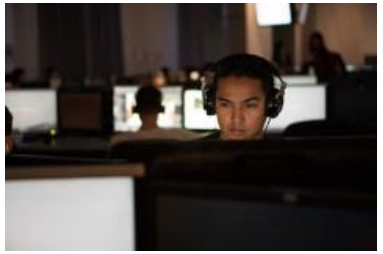
## Alternating:

Shift attention between tasks demanding different cognitive skills

Reference: McKay Moore Sohlberg, Catherine A. Mateer (1989). Introduction to cognitive rehabilitation: theory and practice. New York: Guilford Press

# Moving beyond attention spans

## Sustained:
Prolonged
Focus



## Selective:
Avoiding
Distraction

## Alternating:
Efficiently
Switching Tasks

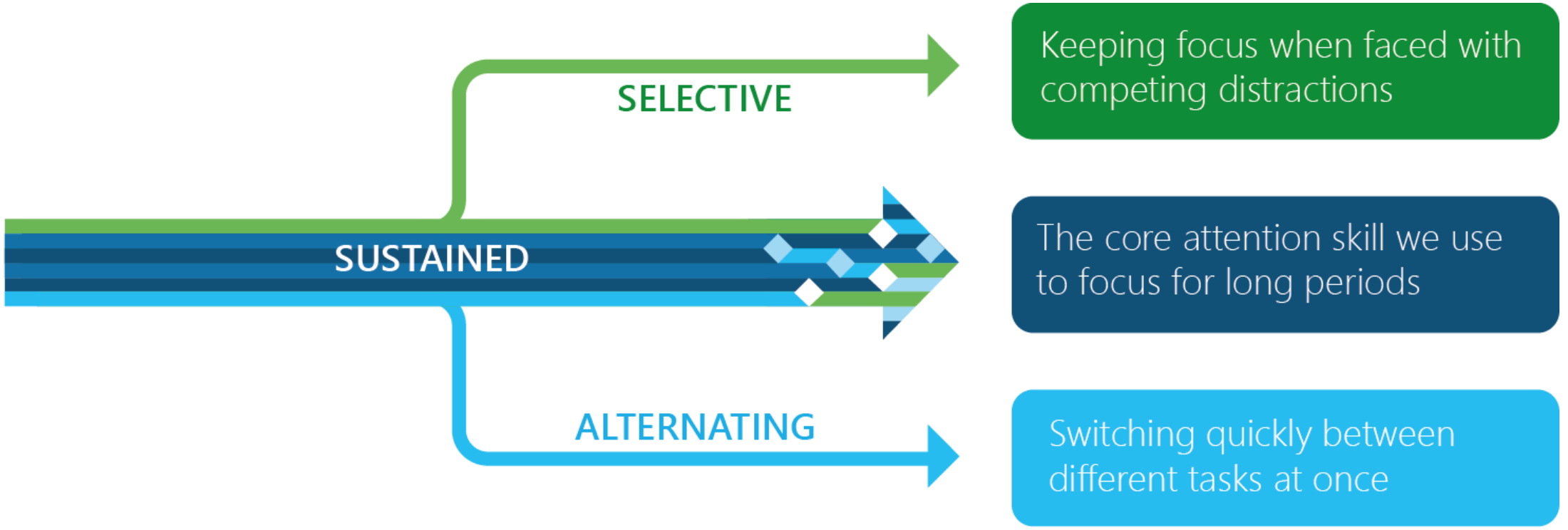
Attention is more than a test  of just how long you can concentrate for; it is more accurately represented as three distinct but interrelated skills.

This allows us to highlight the subtle differences in attention skills between different people – rather than suggesting that people have “good” or “bad” attention, or that one type of attention is better than another.

In real life, different tasks and lifestyles require a different sets of attention skills, for example, a lawyer is going to need a different set of attention skills to a teacher. Our approach matches attention to consumer’s everyday lives.

# How do these different types of attention work together?

We use all three attention types every day but sustained attention is the core skill we use to help us stay on task. Selective and alternating help us channel sustained in different ways.



# We used two research phases to measure the impact on attention

In this research we consider and observe both how digital activity impacts consumer's cognitive attention skills and what this means in terms of their behaviour.

With this in mind our research is divided into two phases:

Our research methodology was designed to capture the overall impact of digital activity and reflect consumer's underlying tendencies rather than attention states associated with particular devices

| | Quantitative Phase | Qualitative Phase |
|---|---|---|
| Objective | Measures cognitive attention skills and lifestyle factors that might affect attention (including digital activities) | Captures how people use and apply their attention to their digital lives |
| Method | 2000 people completed our online survey providing data on their digital lifestyles, demographics and attitudes | 5 x in-home depth interviews and digital ethnographies |

# Executive Summary

# Findings: The impact of digital activity…

- Attention is influenced by **three things**: the **volume**, the **intensity** and the **style** of our everyday digital media consumption

- **The style in which the media is consumed** is a particularly important factor that **dictates attention skills**. For example, watching TV whilst doing cognitively demanding tasks like messaging friends particularly impacts attention skills

- Selective and Alternating attention are the **essential cognitive tools** for getting the most out of digital media

- Our **digital saviness** dictates whether we are more likely to employ **Selective or Alternating Attention** to navigate / make the most out of multi-screen environments

- By **examining Selective and Alternating attention** skills, we can start to think about **three attention modes** that characterise consumer's approach to the use of digital media and devices in their everyday lives

# Findings: What this means in terms of consumer behaviour…

We identified **three natural attention modes** reflecting consumer use of digital technology:

1. **Attention Ninja**
2. **Attention Pragmatist**
3. **Attention Ambidextrous**

Whilst **every consumer will have a natural mode**, they are often **forced to adopt other modes** to cope with the diversity of everyday tasks and challenges they face

**Attention Ninja** mode; **compartmentalize tasks** to control their attention. Individual activities are allocated specific devices and usually work and play are kept completely separate.

**Attention Pragmatist** mode; **some degree of compartmentalisation** but use attention skills to combine activities, rather than having rigid rules to organise the day

**Attention Ambidextrous** mode; **regularly blend tasks together** across devices, do household admin, work and social media activities at the same time. Feel it enhances productivity

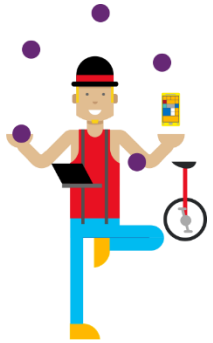
# Findings: What this means for advertisers…

**Ninja mode** - high degree of focus and compartmentalisation of tasks and devices, resistant to moving away from their current task.

**Advertising Suggestion - out of the ordinary or well targeted so they will be prepared to stop what they are doing and take notice.**

**Pragmatist mode** - comfortable switching, they are good at prioritising so will quickly move away from content that isn't suiting their needs at that moment in time.

**Advertising Suggestion - be engaging, entertaining and if possible interactive to ensure that engagement is maximised.**



**Ambidextrous mode** - move effortlessly between devices, they engage with information from a variety of sources to enhance their enjoyment or productivity.

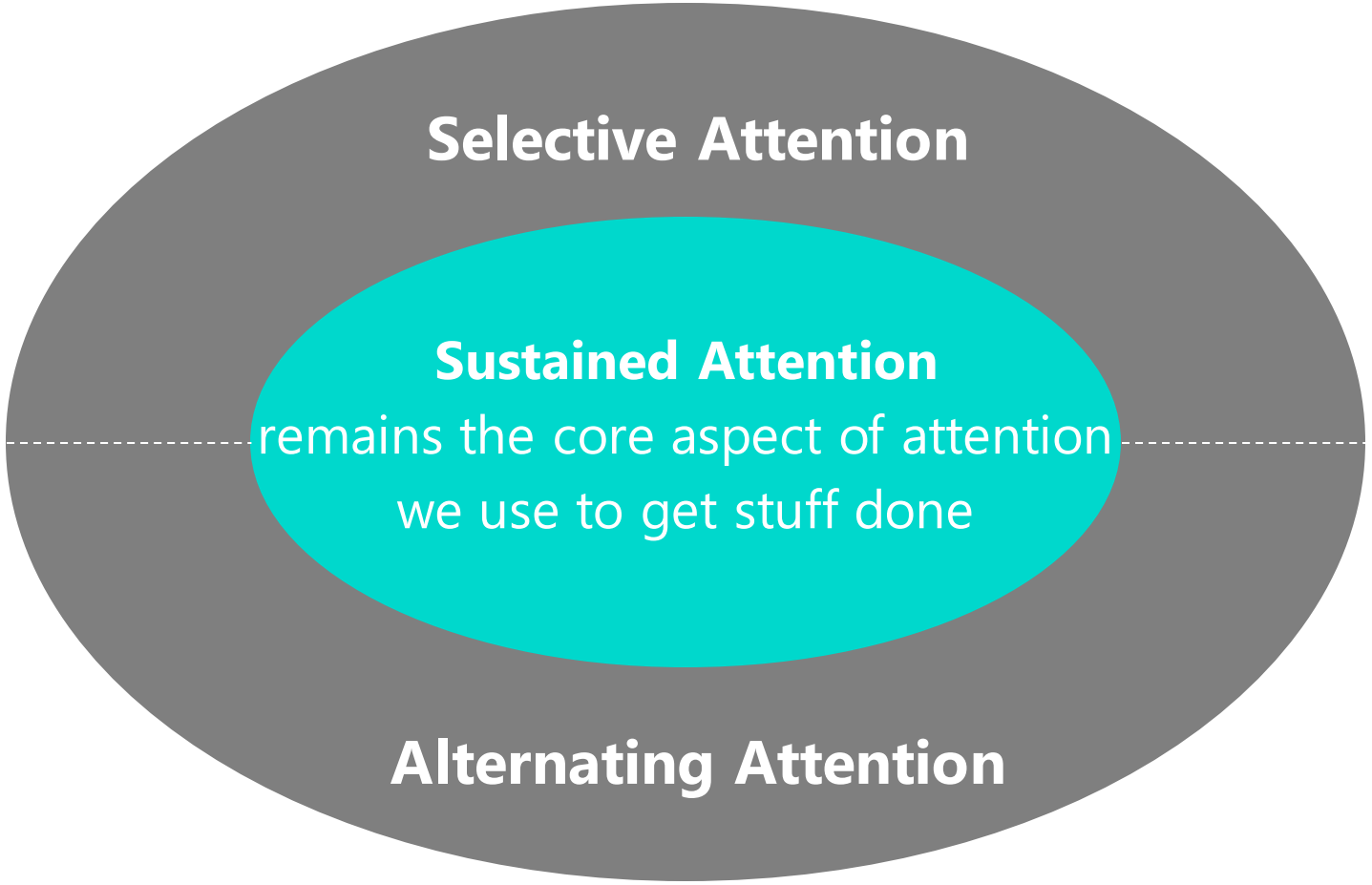
**Advertising Suggestion - be short, to the point and cross-platform so that they encounter it on a variety of devices and in a variety of contexts.**

# Conclusion

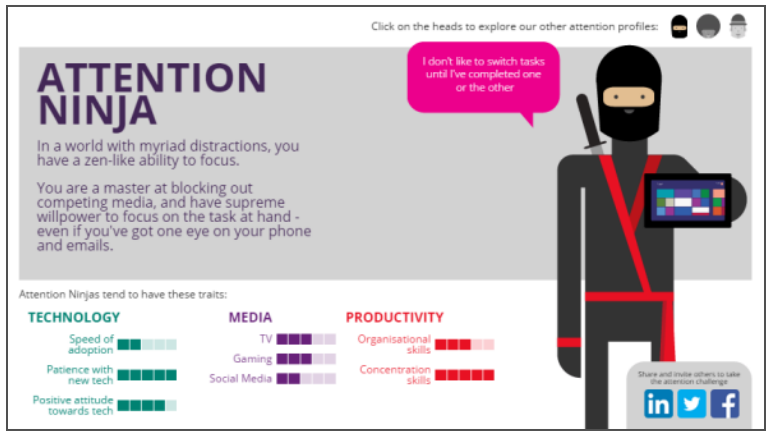
# Selective and alternating attention differentiate consumers

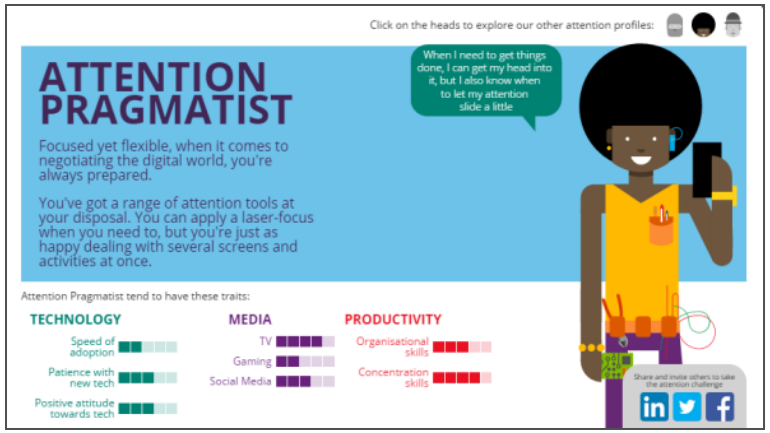
Whilst Sustained Attention remains at the heart of our attention, it is variations in Selective and Alternating that characterize how we as individuals navigate digital technology and integrate it into our lives.

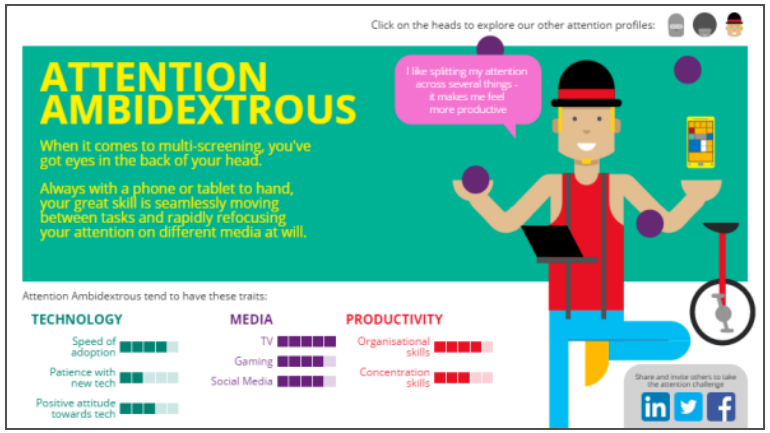
We used these differences in Selective and Alternating attention to produce three attention modes that embody these differences in attention and what they mean in real-life contexts



# Using quant findings we built three modes that capture differences in selective and alternating attention…



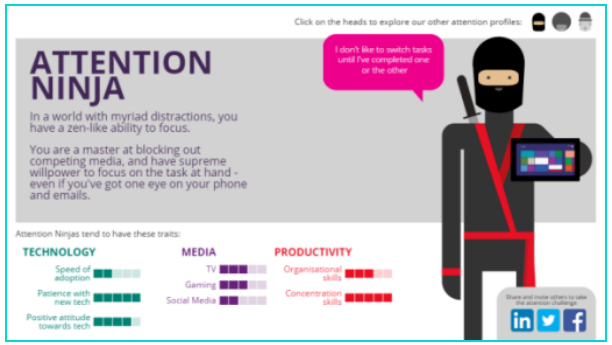

**Selective Attention** ⟷ **Alternating Attention**

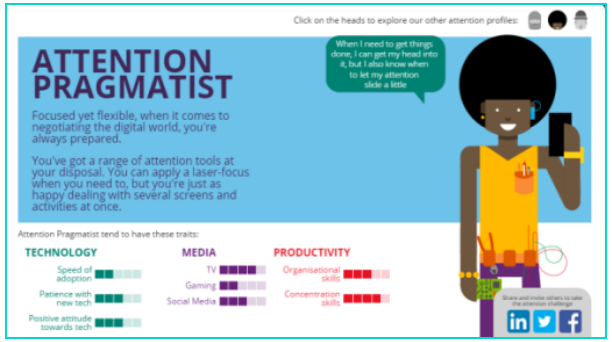
We used these modes to understand and explore behaviour of consumers qualitatively and how these attention is applied in everyday situations

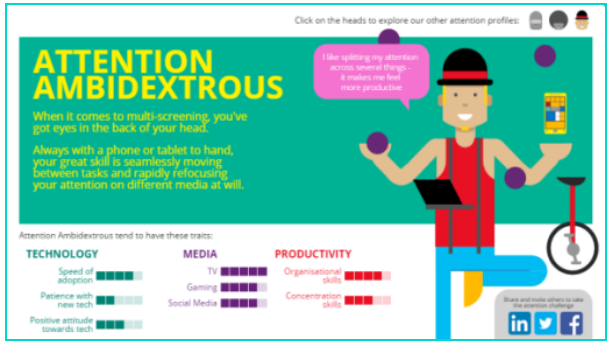
# Attention is evolving and diversifying

Our study suggests that our brains are changing in response to use of digital technology and the result is an evolution of attention skills.

But there is also a broader range of demographic and lifestyle factors mitigating the impact of digital technology on attention. Thus we see a range of attention modes adopted by consumers to deal with the increasing integration of digital technology within their everyday life.



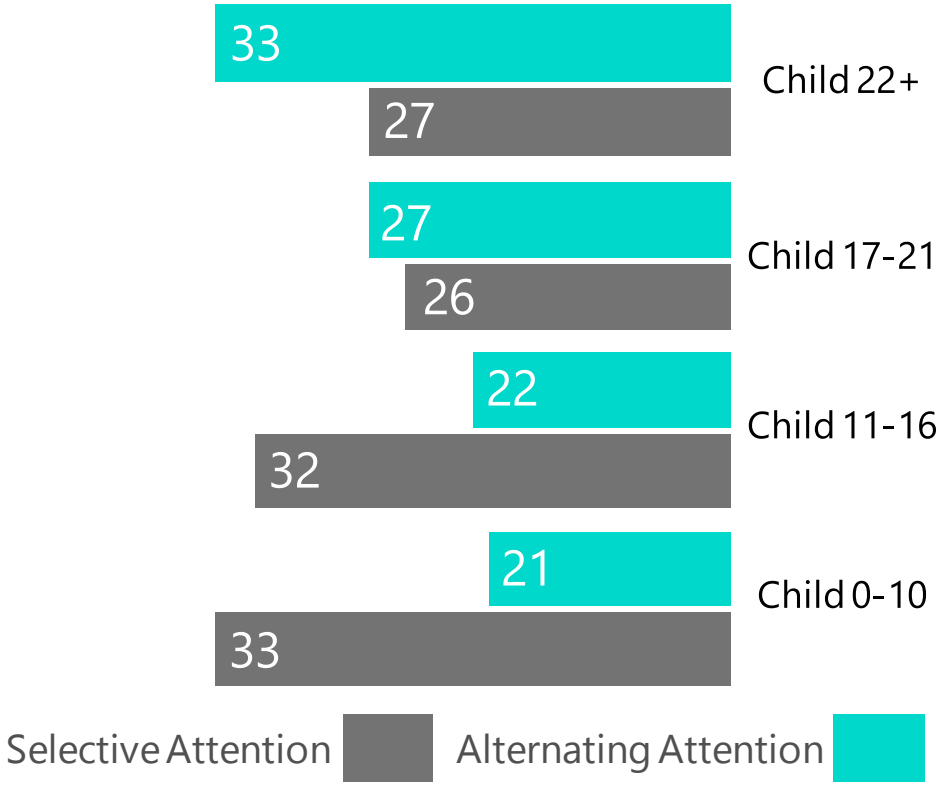



# Demographics hide differences that impact attention, for example there are differences between mums…

Mums of younger children tend to have better selective attention whilst mums of older children tend to have better alternating attention.

This suggests that to make the best use of attention we can't just consider consumer's broad demographic groupings, we also need to consider the impact of more specific factors on their lifestyle.

Thinking about consumers as having different attention modes allows us to construct advertising strategies that address their attention styles and matches their lifestyles.



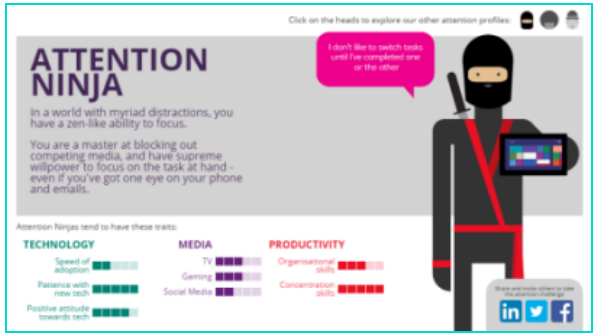
# Consumers have a natural attention mode but can adopt others if incentivised

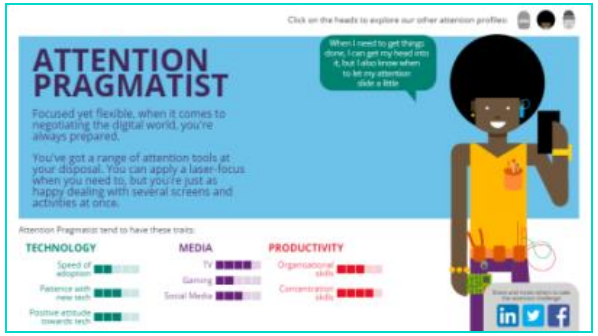
Consumers have a natural tendency toward one mode of attention for a range of reasons, but it is important to remember they are not strait-jacketed by it. However, it is more challenging to adopt an Ambidextrous mode if you are more naturally a Ninja. A task has to be important to incentivise people to move a long way from their natural attention mode.

The same consumers could be Attention Ninjas in the office, Pragmatists when they mixed work and play and Ambidextrous when they looked after their kids.

# Platforms and Attention Modes

Certain attention modes align with certain activities and platforms. Ad designs that are sensitive to the likely attention modes will increase consumer engagement.





| | | | |
|---|---|---|---|
| Advertising Challenge | High degree of focus / difficult to divert from their task | Needs to work hard to keep them engaged | Moving rapidly between devices to juggle tasks |
| Suggested Solution | Targeted or out of the ordinary ads to grab attention | Maximise engagement through interactive ads | Cross-platform campaigns to engage in a variety of contexts |

**Want to find out more?**
**Email: MSAStudy@Microsoft.com**

**We'd be happy to come in and present our findings**