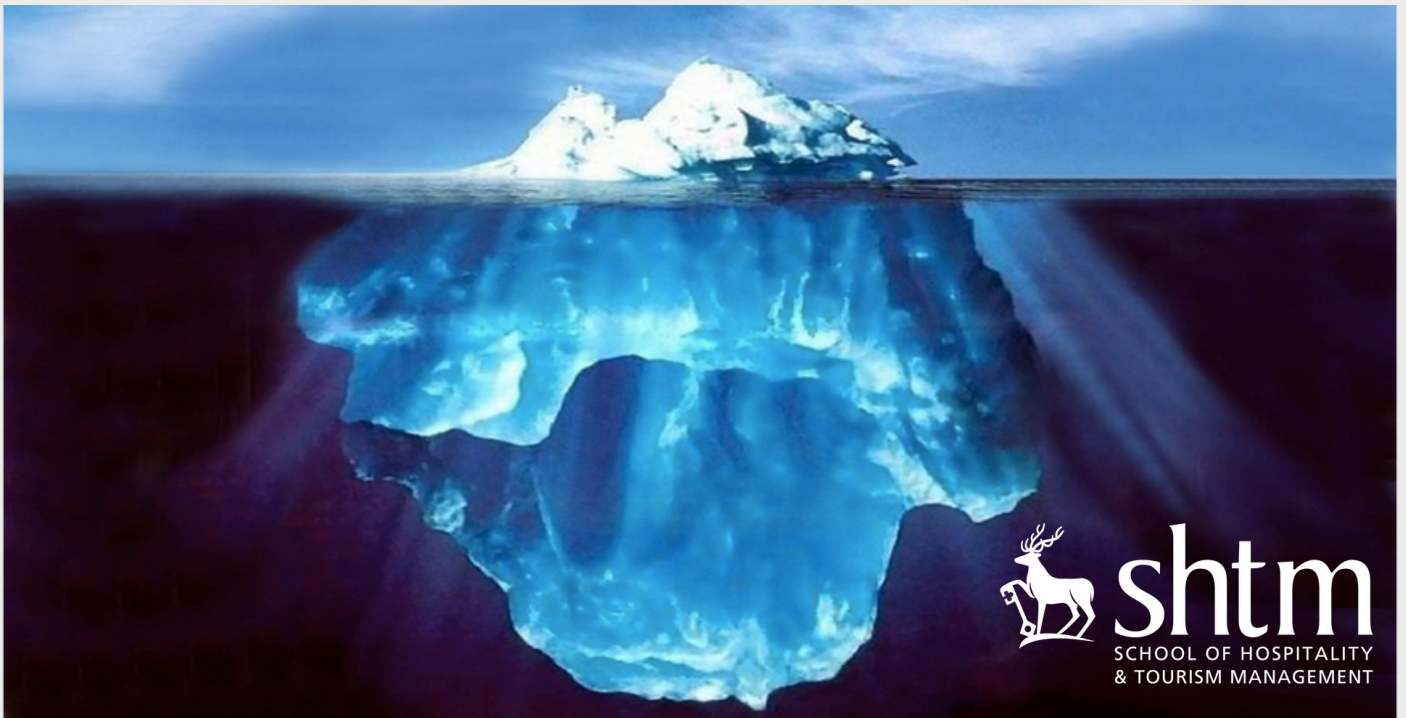


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INDUSTRY WEEKLY DIGEST

YOUR WEEKLY DIGEST OF CONTEMPORARY INDUSTRY TRENDS



WHAT THE BODY TELLS

a new lens on
consumer behaviour

Human behaviour arises from the interplay between acting, feeling, and thinking. However, much of human behaviour is guided by subconscious, automatic processes like habits; can be hidden from view, as with soft emotions, or be irrational or involuntary, as seen in phobias.

Biosensor technology allows us to capture data from physiological systems to better understand the subconscious behaviour. That is, we can measure biological signals from eyes, face, muscles, brain, skin, heart, and voice.

In this digest, [Dr Pablo Pereira-Doel](#) delves deeper into these possibilities and explains the opportunity for Industry to tap into this capability in the [School of Hospitality and Tourism Management](#).

Have a great weekend!



SHTM DIGITAL LAB USES THE LATEST BIOSENSOR TECHNOLOGY TO BETTER UNDERSTAND CONSUMER BEHAVIOUR IN HOSPITALITY, TOURISM, EVENTS, AND TRANSPORT RESEARCH, SO BETTER EXPERIENCES CAN BE DESIGNED.

Dr Pablo Pereira-Doel

Continuous advances in biosensor technology enable new approaches to quantitatively measure subconscious behaviour. Our Digital Lab leverages these technologies in addition to the **iMotions** platform to develop multimodal biometric analysis to better understand consumer behaviour in the visiting economy. This can be applied in areas such as user experience, web/app design, marketing communications, or product testing.

Eye trackers, whether on-screen, webcams, mobile glasses, or VR headsets, capture eyes movements, gaze patterns and attention on visual content. Eye trackers allow measuring scanpaths (i.e., the sequence in exploring the content) and heatmaps (i.e., where most attention was put on). They also provide quantitative metrics for the areas of interest (AOI) in the content, such as ratio (i.e., % of participants looking at an AOI), time to first fixation (i.e., time lapse to first see the AOI), dwell time (i.e., time spent in an AOI), eye fixation counts and average duration of fixation, revisits to AOI (i.e., how often the AIO was looked back), gaze transitions, among others.

Electrodermal activity (EDA) devices capture electrical conductance in the skin to reflect emotional arousal levels triggered by the visual content. Key EDA metrics reflect the emotional peaks count, the peaks per minute, and the peak amplitude. An alternative/complement device is the **electrocardiography (ECG)**, which captures heart rate and its variability, indicating the ability to regulate emotions, stress levels, and cognitive load.

Facial expression analysis (FEA) detects the emotion expressed through the facial muscles while looking at the visual content. The metrics indicate the probability of specific emotion (e.g., joy, anger, surprise, fear, contempt, sadness, and disgust), on an individual and aggregated level.

Our collaborations with organisations such as **Accor**, **Booking.com**, or **Considerate Group** provide relevant insights for the design of better experiences. If you want to discuss opportunities, contact **Dr Pablo Pereira Doel**, Digital Lab lead.

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