



SAPIENZA
UNIVERSITÀ DI ROMA

www.brainsigns.com

BRAIN Signs

getting answers without asking questions



Scientific reliability - Determination - Orientation to the future



Who we are

BrainSigns srl is a spin-off company from Sapienza University of Rome performing innovative neuroscience applications, based on scientific skilled measurements of cerebral and biometric activity. Currently the spin-off members are Dr. Arianna Trettel (president with marketing research skills), Prof. Fabio Babiloni (scientific director, professor at university with high impact factor score in brain international research as biomedical engineer and as phisyologist) and a team of PhD and expert university researchers with neuroscience, biomedical engineering, communication & marketing, and psychology know-how.

What we do

In the marketing area, BrainSigns offers the possibility of measure and understand the instinctive emotional and cognitive response, that drives the most of human people everyday decisions, as in static as in mobile experimental situations.



**Electroencefalography
(EEG)**



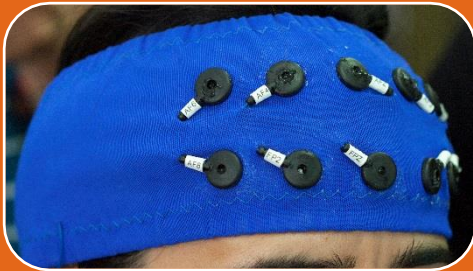
**Electrocardiography
(ECG)**



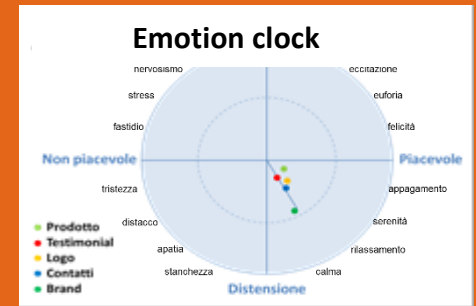
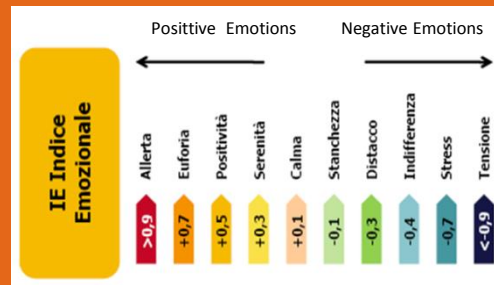
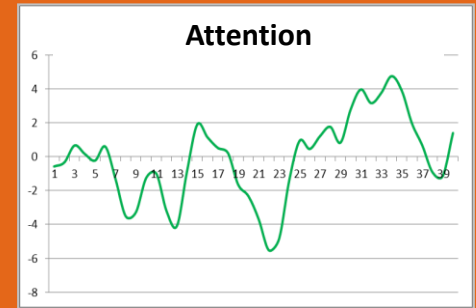
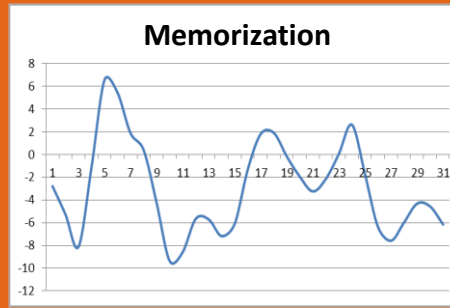
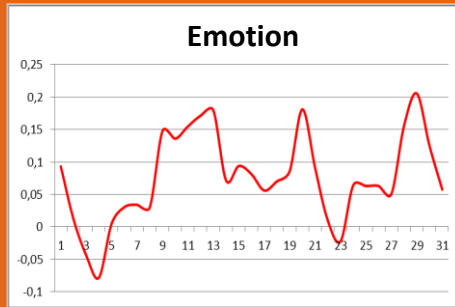
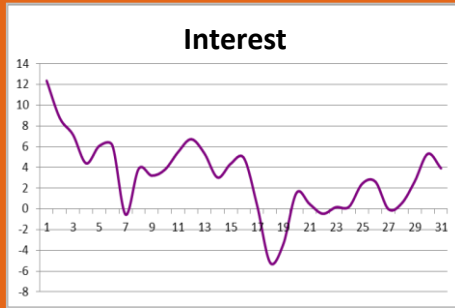
**Galvanic Skin Response
(GSR)**



Eye-tracker



Measurable indexes



The evaluation of the instinctive physiological response is obtained by signals' analysis through indicators of emotion, pleasantness, memorization and attention during the experimental experience.

The indicators of memorization, attention and pleasantness are cerebral reactions detected as frequency bands of EEG signal. The emotional indicator comes from the combination of skin conductance and heart rate, measurable secs. by secs. with a single dimension index with a reference scale, or placeable on a two dimensional «emotion clock»

Number and tracking of fixations and eye gazes

With eye-tracker technology it is possible to evaluate the efficacy of a logo, a fixed image, a section of a website, or a specific area in a store. The indicators detected can be:

- the variation in percentage of the eye fixation in specific areas;
- the fixations paths on each image .



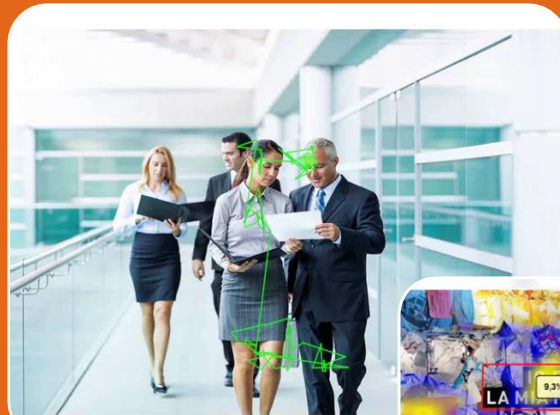
First exposition



Second exposition

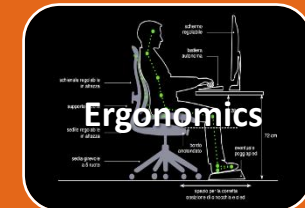
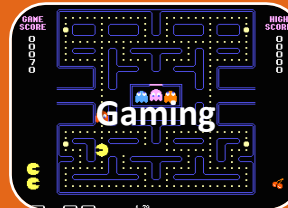


Third exposition





The methods previously exposed are really interesting and innovative for their applications in marketing research; they in fact, can be applied for exemple in the areas beside:



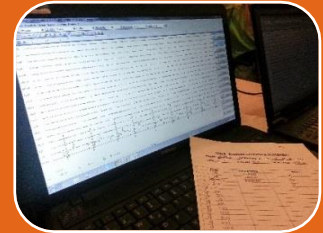
Typical phases of a neuromarketing test

1. Biometric sensors for the detection of emotional and cognitive measures are weared with the help of a technician. The experimental task can be:

- a) fixed (tester seated in front of a screen);
- b) mobile (tester explores real environments).

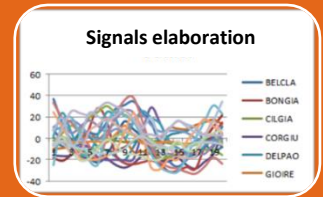


2. The **signals** are detected during the perception of a stimulus (e.g. advertising spot, fixed image, website navigation, etc.).



3. At the end, if useful to the research, a short **interview** is taken.

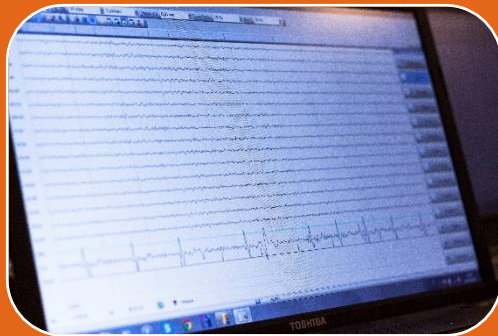
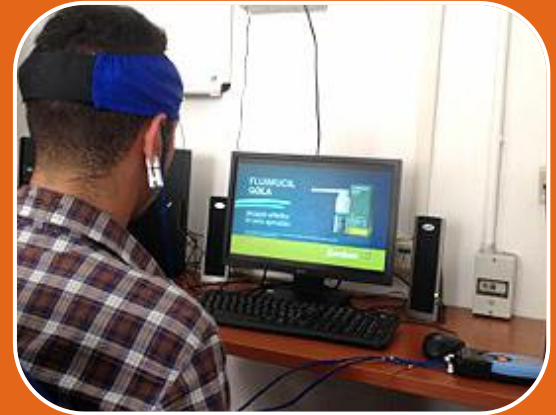
4. The **signals** recorded are **elaborated** and studied.



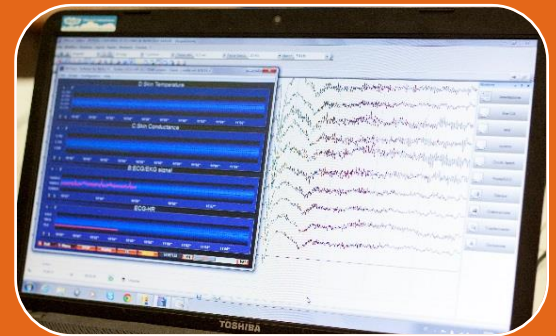
5. The test ends with the presentation of results to the **clients**.

Test for advertising spot/fixed images

Test subjects



Acquisition of
the signals



Advertising spot: experimental set-up

Vision of a movie that includes the spot/s in test

The movie viewed by the testers lasts about 20-25 minutes and includes two advertising breaks, among which the spots of the clients. The breaks are inserted in a documentary.

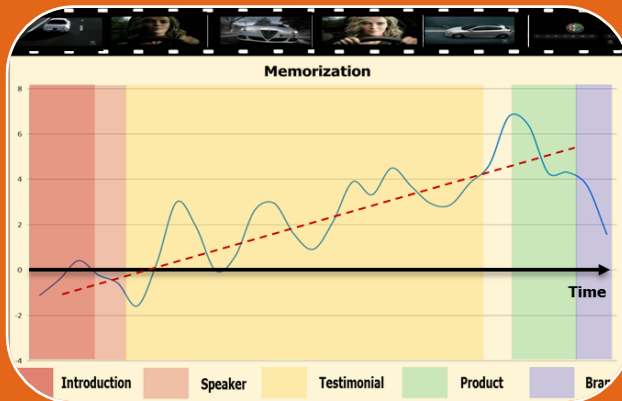
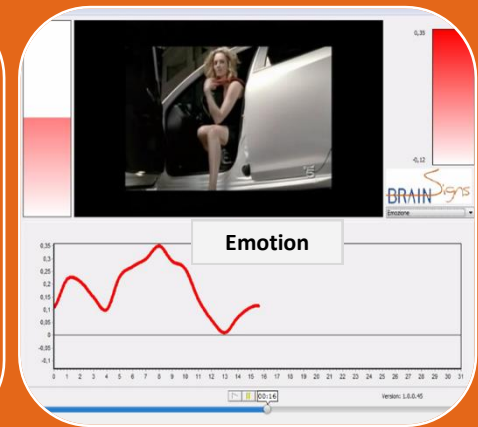
Film1	Break 1						Break 2					
Trasmissione	Filler 1a	Filler 1b	Spot 1	Filler 1c	Filler 1d	Trasmissione	Filler 1e	Filler 1f	Filler 1g	Filler 1h	Filler 1i	Trasmissione
	30"	30"	30"	30"	30"		30"	30"	30"	30"	30"	



Examples of advertising breaks used in a test

Advertising spot: options of analysis

Frame by frame analysis:
second by second analysis for
each frame to understand
which parts are more or less
efficient of the spot in test.



Segment analysis: analysis of the spot segments
to understand the moments more or less impressive
of the spot in test divided into areas (e.g. intro,
speaker, testimonial, product, brand, etc.).

Advertising spot – application for

Having indication for reduction in time of a TV ad: to produce a reduced much effective version of a spot (e.g. from 30" to 20" or 15").



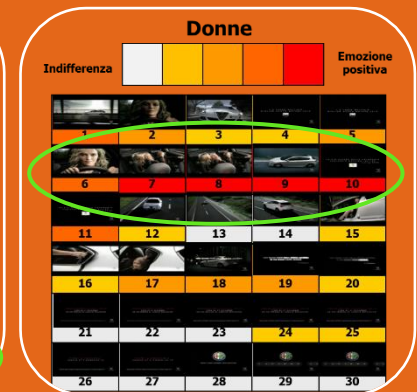
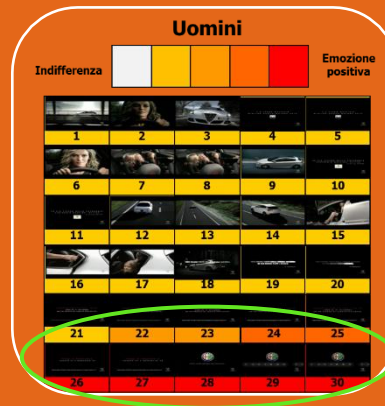
Original spot 30 seconds



Reduced spot to 15 seconds

Pre-test analysis: to optimize the editing of a spot before it goes on air. The sequences could be improved in pleasantness, emotional involvement and ease of comprehension towards different targets.

Sub-groups analysis (e.g. men/women, users/no-users, Roma/Milano, etc.): sub-categories analysis of the testers to evaluate if significant differences are present in the perception of the stimulus.



Advertising spot: tag cloud to analysis of the dialogues

Tag Cloud spot ISP - Memorization

la sua casa
leggere il fascicolo informativo sentirti protetto
Quest'uomo è venuto in banca
la sua salute fanno anche le polizze
Perchè qui in Intesa Sanpaolo un mondo in cui puoi
ma perchè in una banca?
ma perchè non me lo dite?
ad assicurare la sua famiglia è possibile
Per storie impossibili
prima della sottoscrizione

Tag Cloud spot ISP - Pleasantness

fanno anche le polizze Per storie impossibili
la sua salute ma perchè non me lo dite?
ma perchè in una banca? Perchè qui in Intesa Sanpaolo
la sua casa ad assicurare la sua famiglia è possibile
leggere il fascicolo informativo prima della sottoscrizione
Quest'uomo è venuto in banca
un mondo in cui puoi

The emotional and cognitive response of each phase of the spot can be visualized as a tag cloud.

Advertising spot: comparison between different cultures

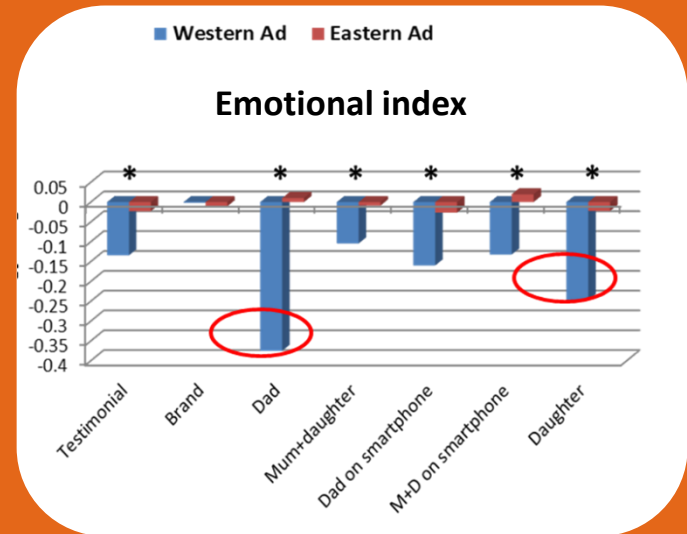
The neuromarketing can be useful to analyse the instinctive perception of a creative idea on people of different nationality. Here are the results of two versions of an Apple spot (same story board but European or Chinese actors) .



European spot



Asian spot



The emotional index presents a clear divergence of appreciation: the spot with European characters is less appreciated by Chinese tester, but not significant differences are present for the brand.

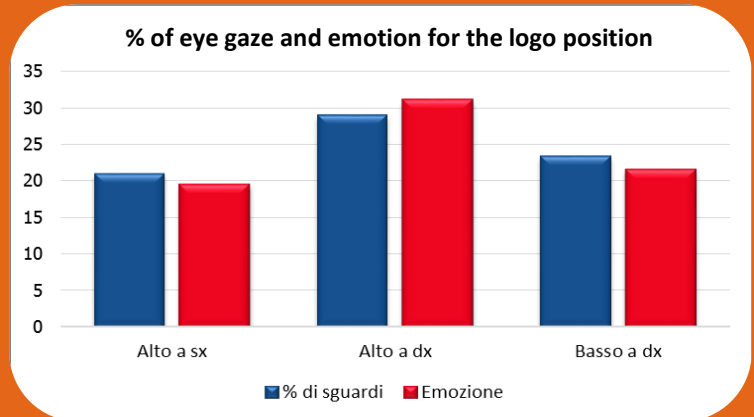
Billboards and printed material

With the eye-tracker technique is possible to evaluate the efficacy of billboards and printed material, for example the position of a logo on the image.



With the simultaneous use of ECG and GSR techniques is possible to measure the emotion as well.

The graphic beside shows that the testers have higher percentage of eye gaze (blu columns) and emotional involvement (red columns) when the logo is located on the right above.



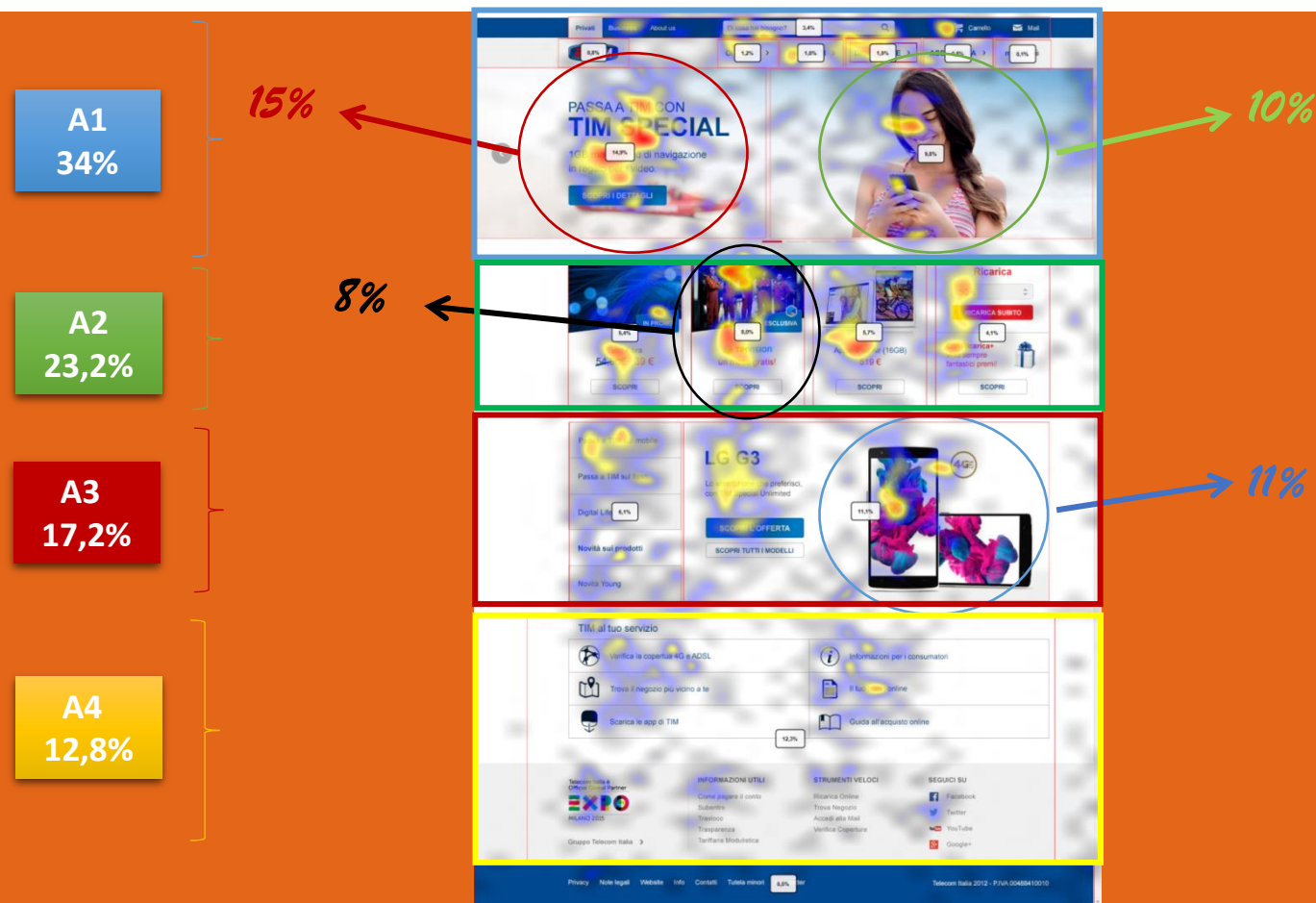
Retail: access to the shelves, communications perceptions, and spaces fruition



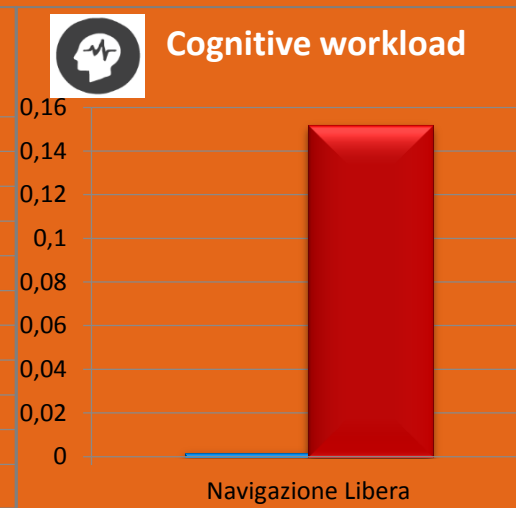
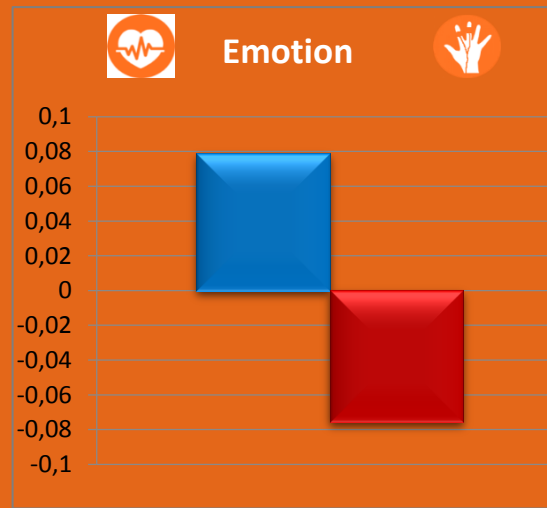
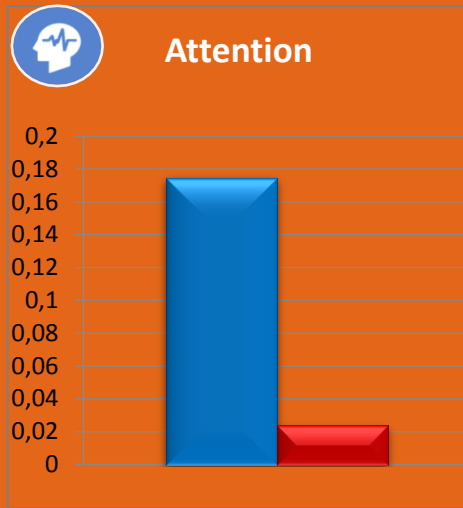
The experiments with EEG, mobile eye-tracker, HR and GSR can be performed on people exploring store environments to evaluate, for example, the efficacy of the shelves and/or products placement, the perception of different areas of the store or the effect of POS adverts



Web – Homepage visual perception



Web – Free Home page navigation – 2 minutes - 2 competitor website - neuromarketing indicators



- ✓ Website of BRAND «Blue» better perform because it causes more selective Attention, more positive Emotion and less Cognitive Workload (typically higher when something is difficult to understand)

BrainSigns offers to the companies different typologies of neuromarketing tests.

Open client test: three times a year, BrainSigns offers to the companies the possibility to share a study for testing video advertising or fixed image, by optimizing the costs. This kind of service is ideal to try a neuromarketing test with moderated investment.

Dedicated test for spots and images with fixed time experimental set up:

- a company tests its advertising communication (TV, printed, internet, etc.) to obtain some indications for optimization or interesting insights to deepen with traditional techniques;
- a company tests its communication ideas for better choosing future developments.

Dedicated test on products and websites with fixed or variable time experimental set up:

- a company tests of packaging or video products (fixed time) or in direct experience (tactile, tasting etc.) to obtain some indications on the perceptual reaction.

Dedicated test of «environmental experience»:

- a company tests the experience of an exhibition area, a store, a shelf fitting etc., to highlight perceptual insights useful to improve the efficacy in exhibition or selling.

If necessary, BrainSigns can integrate the neuromarketing tests with traditional research methods.

Qualitative as interviews and analysis of Individuals in-depth or in focus group , or behaviour observations during specific tasks or during site fruition

Quantitative survey analysis with personal or via web interviews and traditional questionnaires that can also include times reaction measurement (implicit response).



Office

Sapienza - Università di Roma
Dipartimento di Fisiologia e
Farmacologia
Piazzale Aldo Moro, 5
00185 Roma

Administrative Office

Via Sesto Celere, 7c
00152 Roma
+39 06 5898999

Contacts

Prof. Fabio Babiloni
Scientific director
+39 06 49910941
+39 328 7697914
fabio.babiloni@brainsigns.com

Dr. Arianna Trettel
President
+39 3293213993
arianna.trettel@brainsigns.com

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