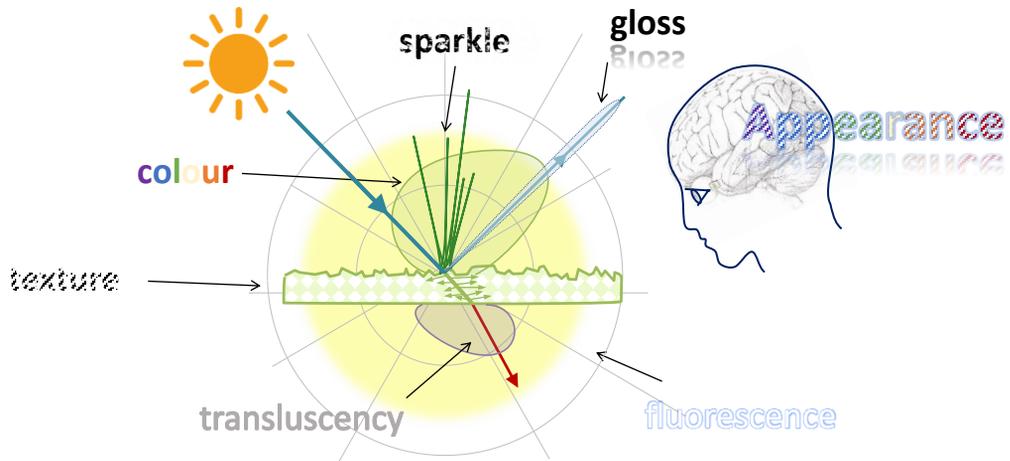


# European Metrological Network for the Measurement of Appearance

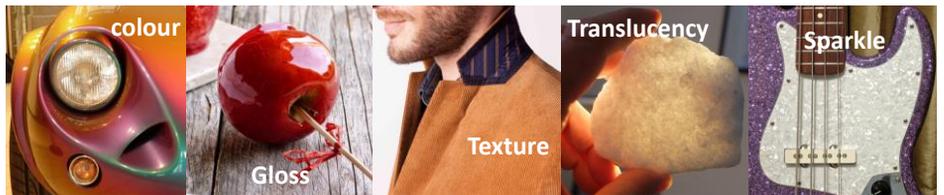
Contact : Gaël Obein, gael.obein@lecnam.net



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## Rational

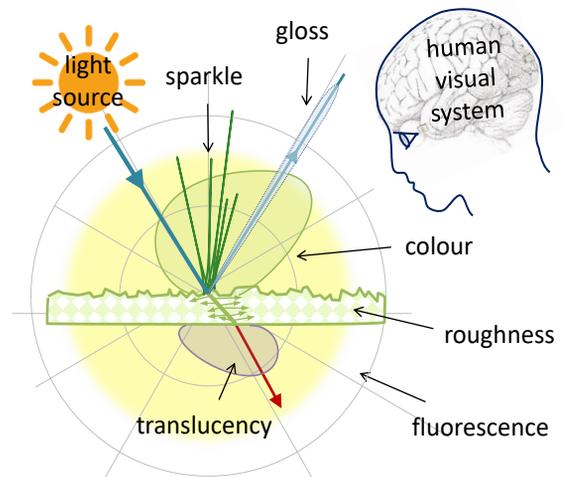


In industry, the control of appearance is essential, because it underpins perceptions of 'quality', and 'desirability' and is linked with consumer purchase decisions

Appearance is hard to measure because it is a perceptual quantity, defined by visual attributes like colour, gloss, texture, translucency, sparkle.

Appearance is accessed by measuring the spectral radiance according to different geometries and requests goniospectrophotometers

Since 10 years, to answer industrial needs, European NMIs have developed goniospectrophotometers and transfer artefacts (xDRreflect, BiRD)



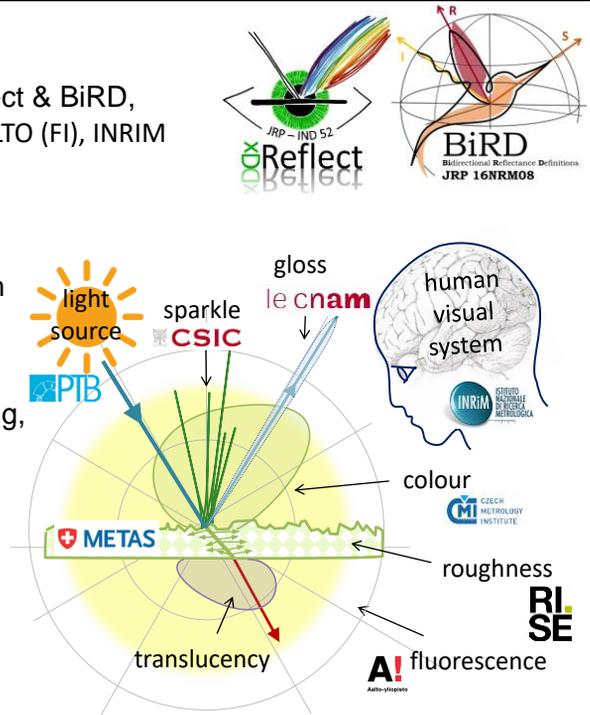
## Activities and actors

The network proposed by consortium from xDReflect & BiRD, which include LNE-CNAM (FR), CSIC (ES), PTB (GE), AALTO (FI), INRIM (IT), METAS (CH), CMI (CZ), RISE (SE).

The European Metrology of appearance is already organized as a network. Facilities are young and have been developed to cover all BRDF needs with complementarity keeping an overlapping area that allows comparison and improvement of the scales.

The topic interests broad industrial sectors (building, cosmetics, automotive, textile, food, 3DPrinters, virtual reality) and the group can count on the support of more than 25 industrial stakeholders.

Other fields of research could be connected to the network (Vision, Muséum research, materials science, psychology, )



## Outputs

The network aims to

- Formalize and promote the existing European network dedicated to the metrology of appearance in order to propose the most complete calibration service in the world on the topic
- Support the development of future facilities at national level in order to cover the future needs while avoiding competition and redundancy at a European level,
- Organize workshops where metrologists, industrials, academics and students can meet and discuss in order to initiate research
- Maintain a website that will act as a unique reference point for the measurement of appearance at the highest level and that will provide information at the state of the art in the field.

## Impact

Thanks to this network,

- The European metrology will keep its **dominant position** in the field of the measurement of appearance that has been initiated with EMPR and EMPIR programs.
- NMI will **avoid competition** and will **maintain their collaboration and complementarity**
- The normalization, the universities and the popular press will **have a clear address to ask questions and get answers from experts** on the measurement of appearance (remember the “Blue/Gold dress” buzz).
- Regular meetings (at least one per year) will be held **on long term** to gather industrials, academics and metrologists and propose useful research projects
  - Inside EMPIR program
  - In bilateral collaboration between an NMI and an industrial (confidentiality)
  - As expert in measurement in academic research project (ITN, ERC)