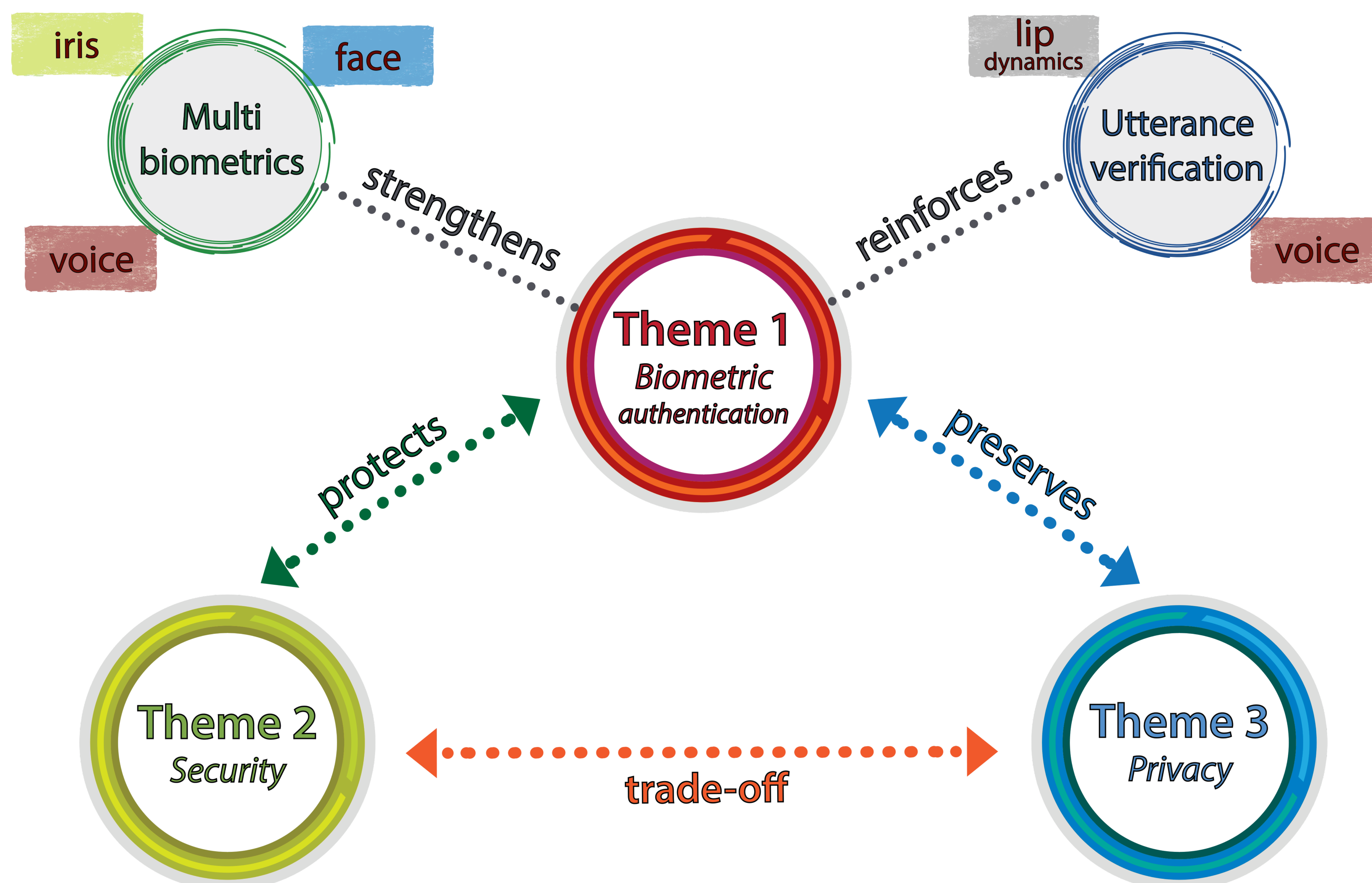# RESPECT

REliable, **S**ecure and **P**rivacy preserving multi-biometric p**E**rson authenti**C**a**T**ion

goals

The objectives of the RESPECT project are to simultaneously ensure both security protection and privacy preservation for multi-biometric audio-visual recognition systems. At the same time, recognition accuracy and reliability will be improved, thereby boosting confidence in future technologies and increasing their societal and economic benefits.

modules

iris · face
voice

Multi biometrics

lip dynamics
voice

Utterance verification

strengthens
reinforces

Theme 1 *Biometric authentication*

protects
preserves

Theme 2 *Security*

Theme 3 *Privacy*

trade-off

contributions

⦿ Theme 1 – Biometric authentication

- ○ improve the **accuracy** of biometric person authentication in unconstrained scenarios by the combination of three convenient biometric characteristics: **voice**, **iris**, and **face**;

- ○ reinforce **reliability** by adding dedicated mechanisms for **utterance verification** through the analysis of voice, **face**, and **lip dynamics**.

⦿ Theme 2 – Security

- ○ address security risks by delivering general **multi-biometric Presentation Attack Detection** (PAD) methods.

⦿ Theme 3 – Privacy

- ○ provide privacy-preserving **multi-biometric template protection** (BTP) schemes, e.g., based on advanced **cryptographic techniques** such as homomorphic encryption.

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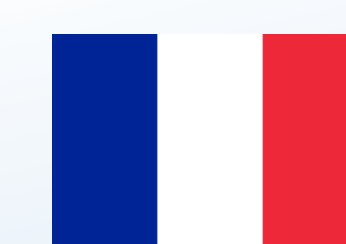
DFG Deutsche Forschungsgemeinschaft

da/sec BIOMETRICS AND INTERNET-SECURITY RESEARCH GROUP

EURECOM Sophia Antipolis

Inría inventors for the digital world

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