Panel Discussion:
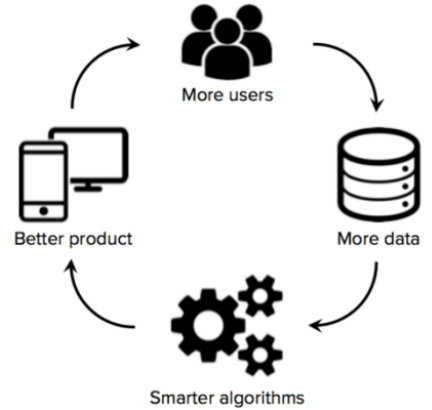## *What is better: A Standardised Open Source Algorithm Or an Innovative Proprietary Solution?*

Stephane Gentric Ph.D.
Associate Professor, LTCI, TelecomParis
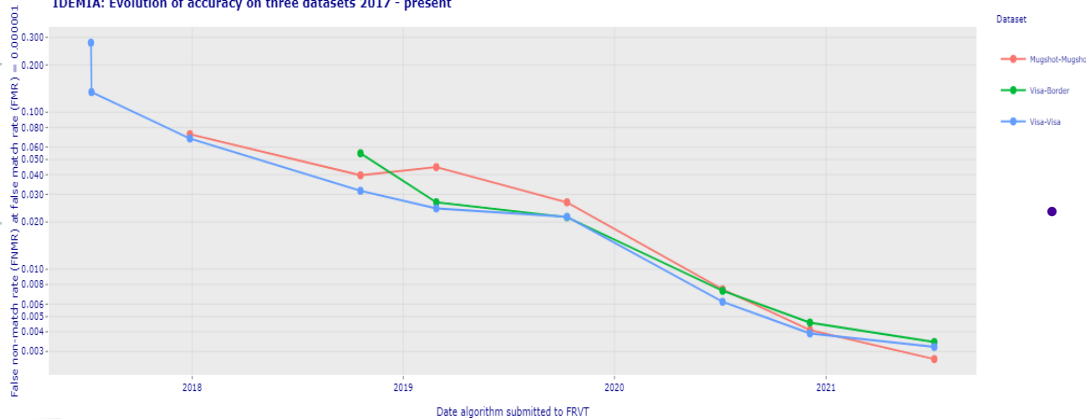Chief AI Scientist, Idemia
Fellow Expert

Maturity of existing qualities

- **Idemia is currently working closely with some customer to improve quality needs, usages and thresholding on operational data.**

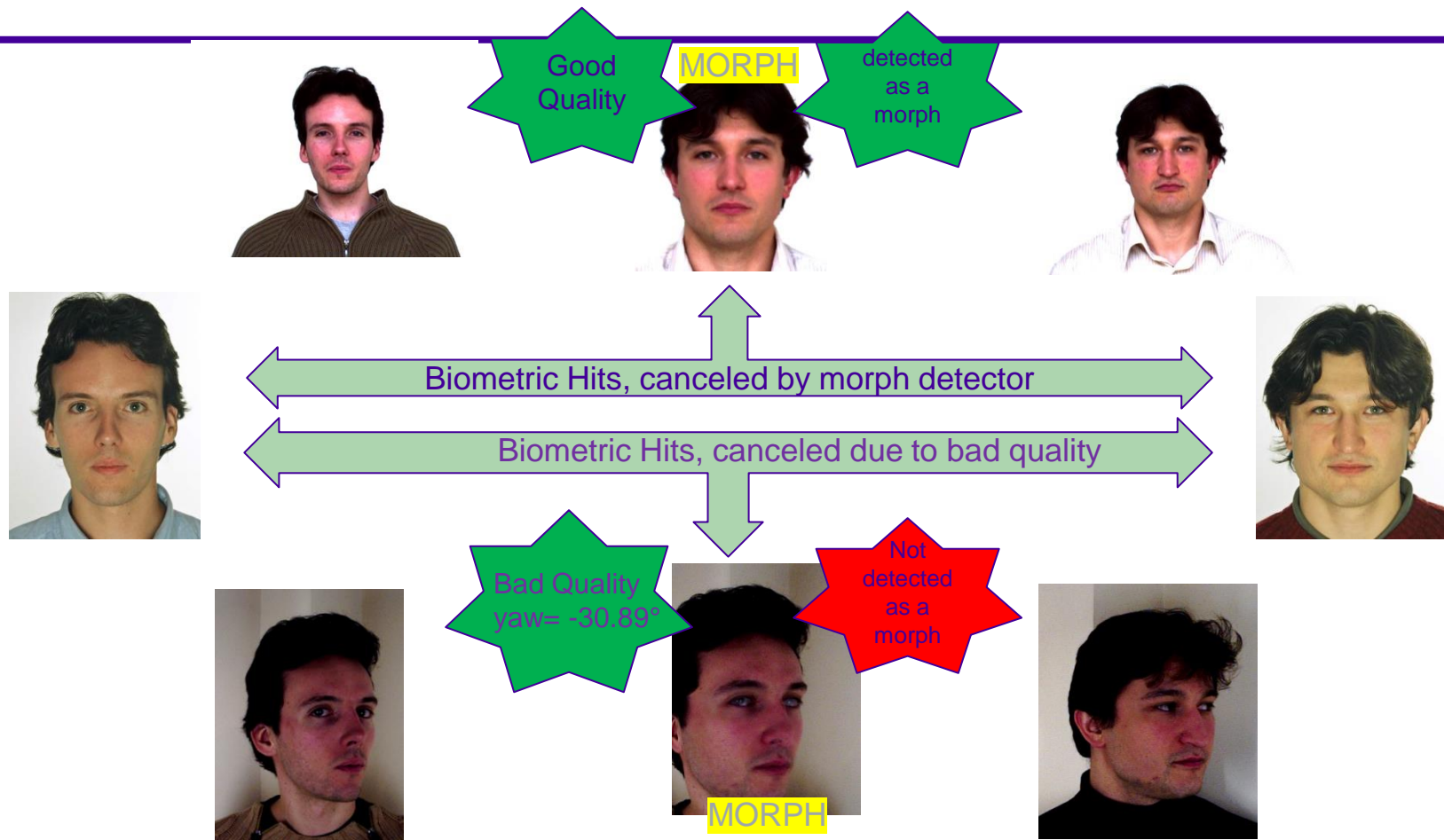- **Loops with customer are mandatory today as the maturity of proposed algorithms is low.**

More users

Better product

More data

Smarter algorithms

IDEMIA: Evolution of accuracy on three datasets 2017 – present

Dataset

— Mugshot-Mugshot
— Visa-Border
— Visa-Visa

False non match rate (FNMR) at false match rate (FMR) = 0.000001

Date algorithm submitted to FRVT

- **Competition between industrial has driven innovation and improvement of algorithms in our field**

Good quality algorithm are needed to fight against Morph Faces

Good Quality

MORPH

detected as a morph

Biometric Hits, canceled by morph detector

Biometric Hits, canceled due to bad quality

Bad Quality yaw= -30.89°

Not detected as a morph

MORPH

Topic raised by ISO SC-27 experts (cybersecurity)

MORPH

Not detected as a morph

Bad Quality

Biometric Hits Hits canceled due to bad Quality

Open source quality

Easy Adversarial Attack on quality

+ =

Good Quality yaw= -1.18°

MORPH+AA

Not detected as a morph

Biometric Hits

4
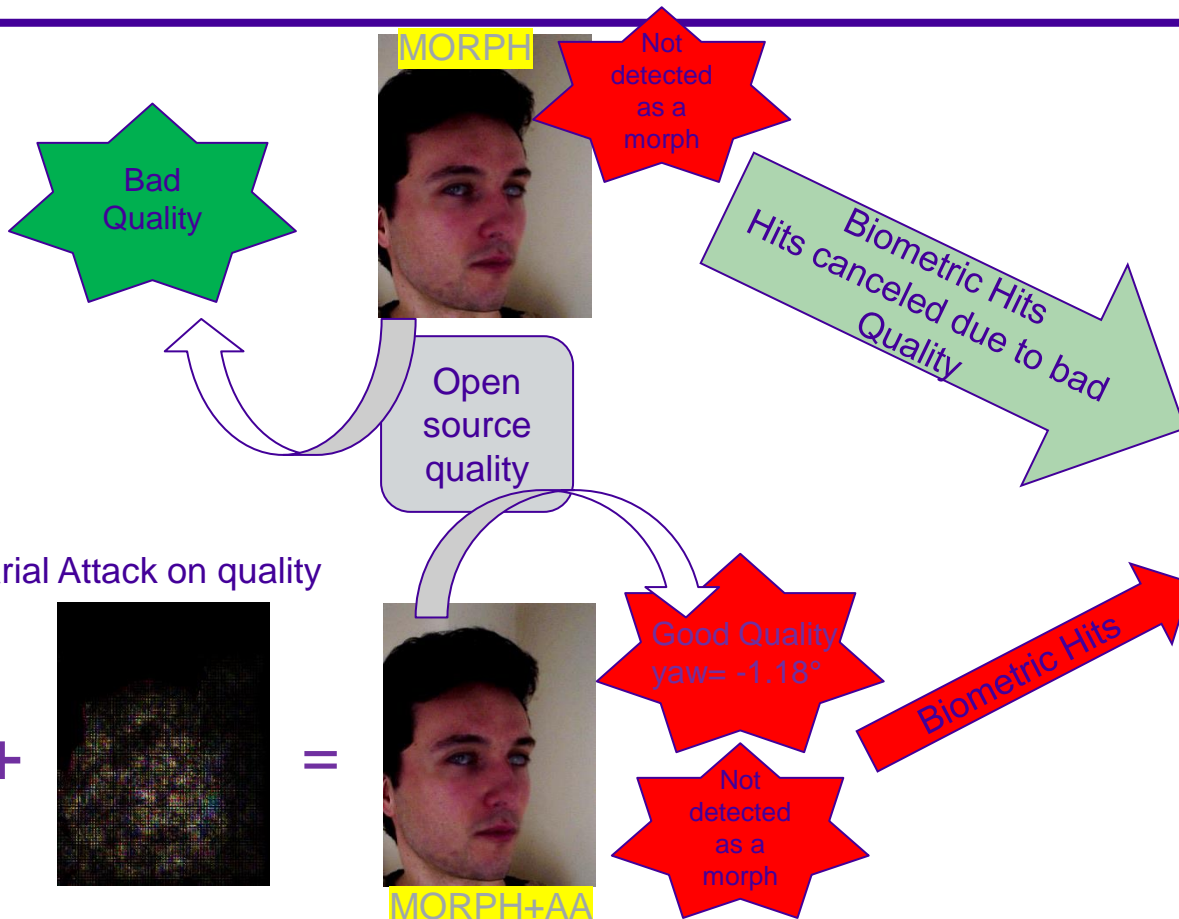
AI act and legal implications

- **The European AI act will impose duties on developers concerning the fairness of algorithms, the traceability of the data used, the security and auditability of learning, for high-risk algorithms.**

- **Compliance with GDPR of data used to learn most of existing open-source models is not traceable. Choosing those models would prohibit deployment for industrial purposes.**

- **The expected transparency of open-source solutions is lost when responsibility is shared by multiple and not liable third parties. It makes it impossible to guarantee compliance with legislation, as provider can not provide a proper technical documentation.**

- **It seems premature today to impose an open-source solution that could not be deployed by manufacturers. We recommend leaving the possibility of also having proprietary solutions in the future ISO standard.**

Thank You

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