

SENTRY

1 December 2022

# Public Knowledge and Attitudes about Biometrics and Security

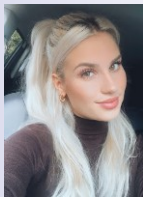
## Acknowledgement:



CNS#1822190

Thanks also to

Jyoti Sinha & Madison Neurohr



**Mark G. Frank**

*Srirangaraj Setlur & Wenyao Xu*



# So what? Who cares?

OPM hack's unprecedented haul: 1.1 million fingerprints

by Jose Pagliery @JosePagliery  
April 10, 2015 7:52 PM ET



Apple hit with second biometric data privacy suit as BIPA settlements reached and debated

May 11, 2020 | Chris Burt

CATEGORIES Biometrics News | Facial Recognition | Workforce Management



- **Space:** Public concerns over essential biometric technology (*Privacy, reliability, bias, health hazards*)
- **Problem:** Public must “**buy in**” to the use of biometrics in security settings
- **Solution:** Conduct largest survey to date on public knowledge and attitudes
- **Results:** Findings relevant to information campaigns
- **TRL:** 8 (*as reference info for creating educational campaigns*)

# So what? Who cares?

- Method: *Develop 52 item survey.*
  - *Obtained 1,008 respondents from Amazon mechanical turk (AMT gets wider sample than UG)*
  - Sample: 44% Female/55% Male, US Citizens
    - 75% White
    - Ages range 18-77 median age 37;
    - 50% with Bachelor's degree
    - **Sample matters as largest previous survey was 282 respondents weighted toward undergrads**

## Bottom line:

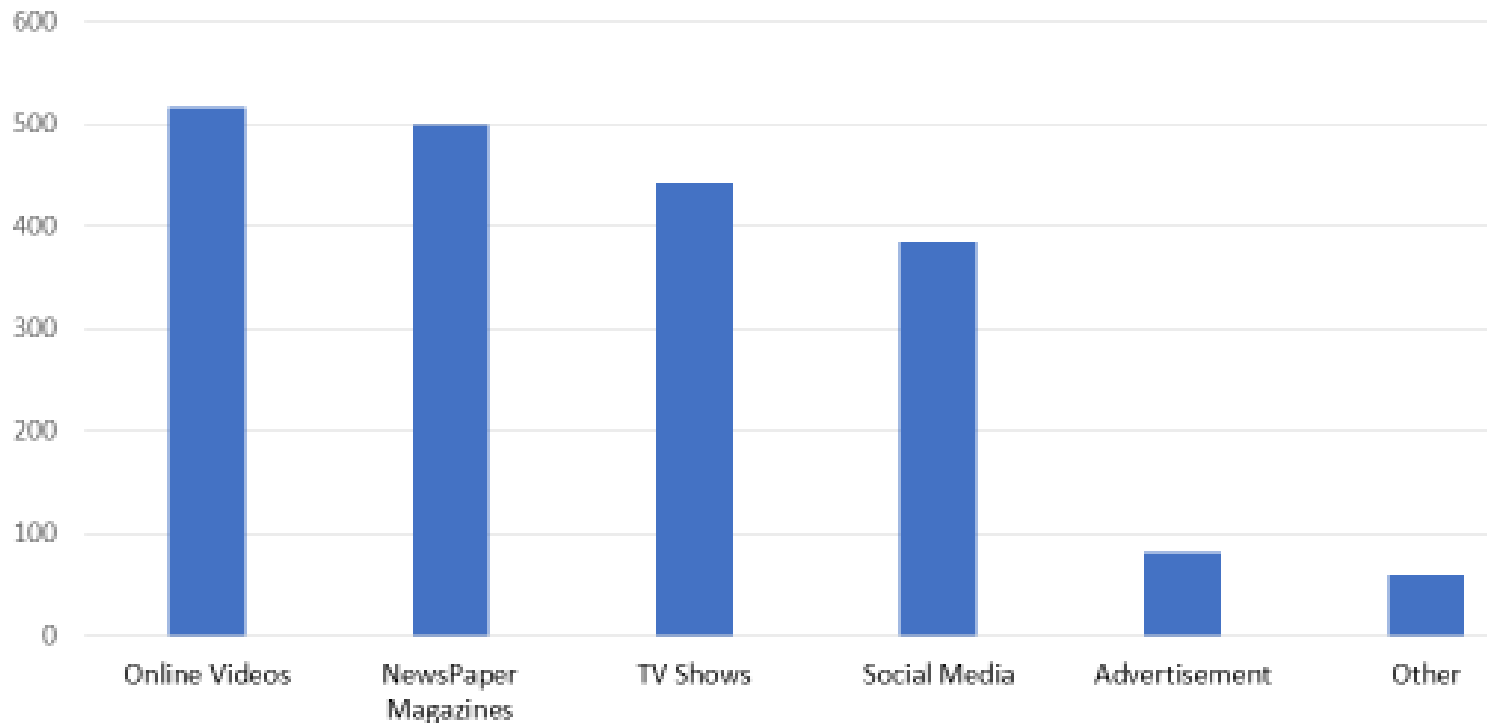
- Respondents get info mainly **online** or **newspapers**
- They trust **universities** and **health care** – most influential too
- Seem to **trust/accept** biometrics – **not** in favor of banning, more favored to **expand** usage, concerns about **theft**
- **Don't see** much of a **bias** in use of biometrics
- **Fear hackers, terrorists, foreign gov'ts** w their biometrics
- **Do seem to trust our government** more than expected
- **Don't believe** a major **health risk** to biometric use
- Strongly believe in **funding, educating,** and **legal** strategies to remedy
- *Trust most a partnership between private industry, government, and academia for biometric standards*
- **Suggests strategies for getting maximum public acceptance for security usage** (*where, who, how...*)

## Suggested strategies:

- **Fund work on improving biometrics through Universities / Health care agencies and promulgate that educational information through them.**
  - *Let them take the lead in posting info online or in newspapers.*
- **The government host and *advertise* results of biometric summits to decide which biometrics to use, how to use them, with known participation from private industry and academia. Include:**
  - *Mention of protections and remedies for any breach of biometric information.*
  - *Mention the involvement of many communities (ethnic, gender) in the process.*
  - *Remind the public that hackers, terrorists, and foreign gov'ts are the 'other'.*
  - *Remind public of no health risk to them to use biometrics.*
- **Other ideas? Questions?**

# Where do they get their information:

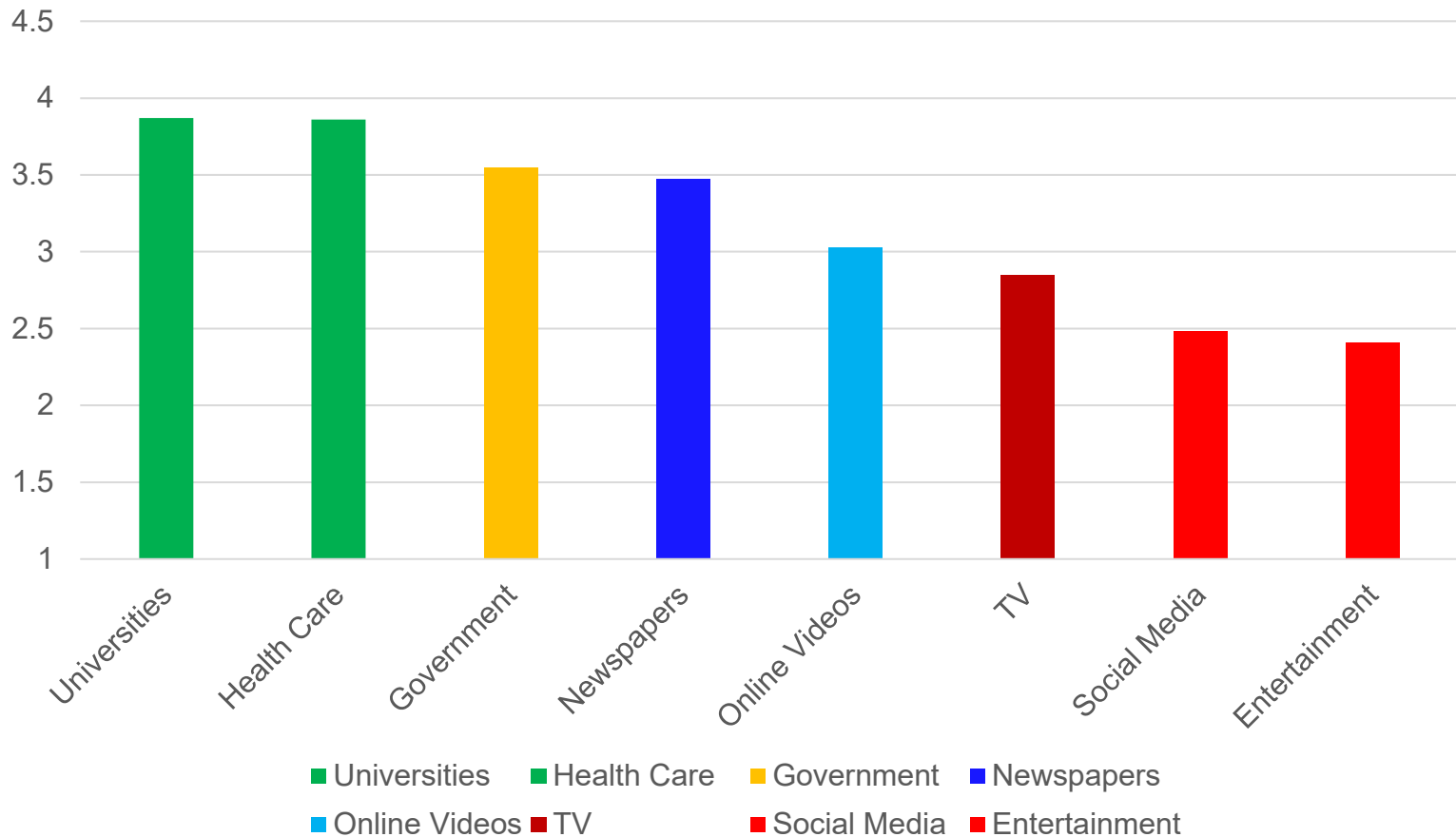
Question12. Where do you typically get your information about biometrics? (click all that apply)



# Who do they trust?

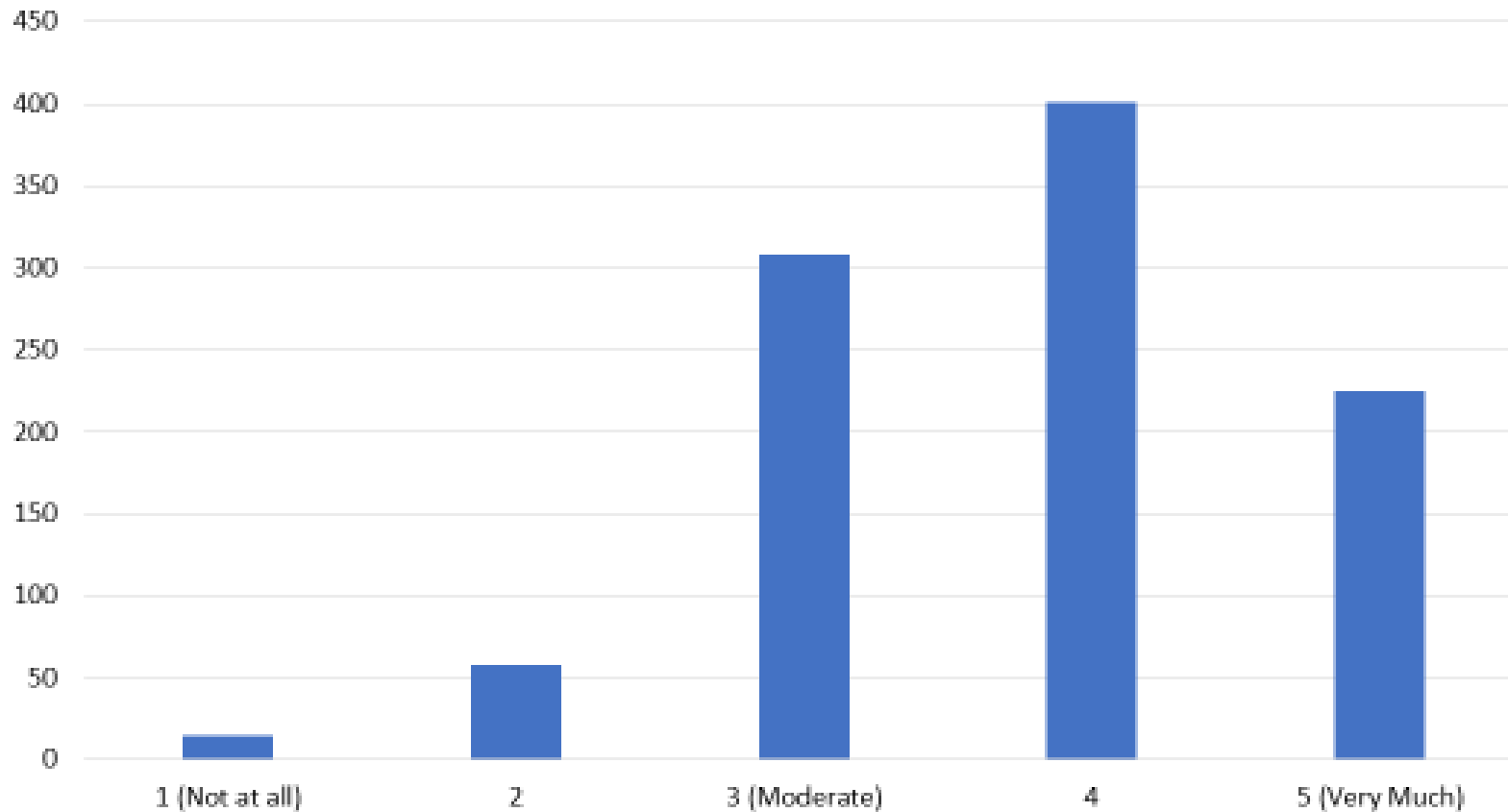
Question13. Rate the credibility (trustworthiness) of the following sources of information about biometrics and their use.

Credibility of Sources (5= Highest)



# Who do they trust?

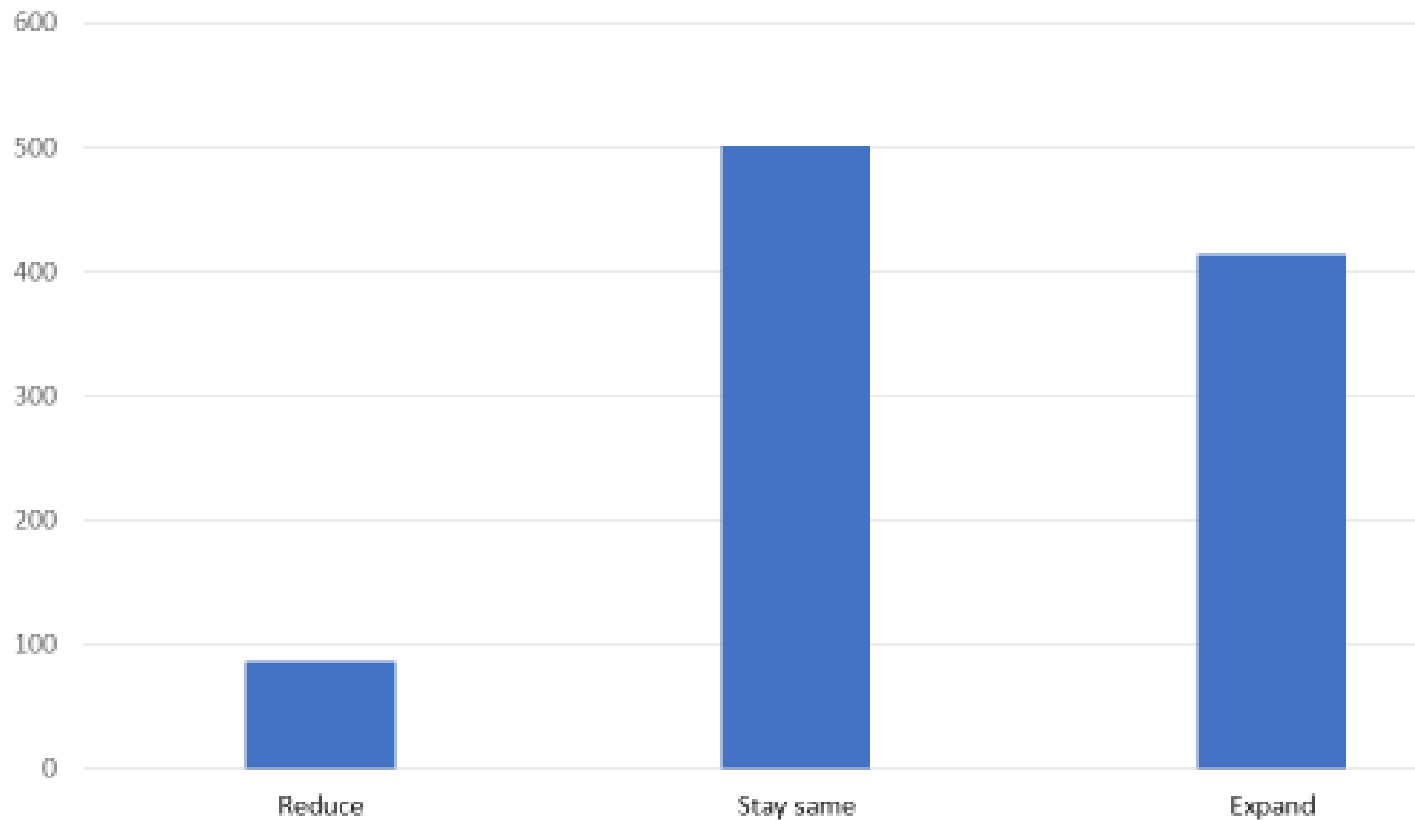
Question14:- In general, how much do you trust biometrics as a means of verifying your identity?





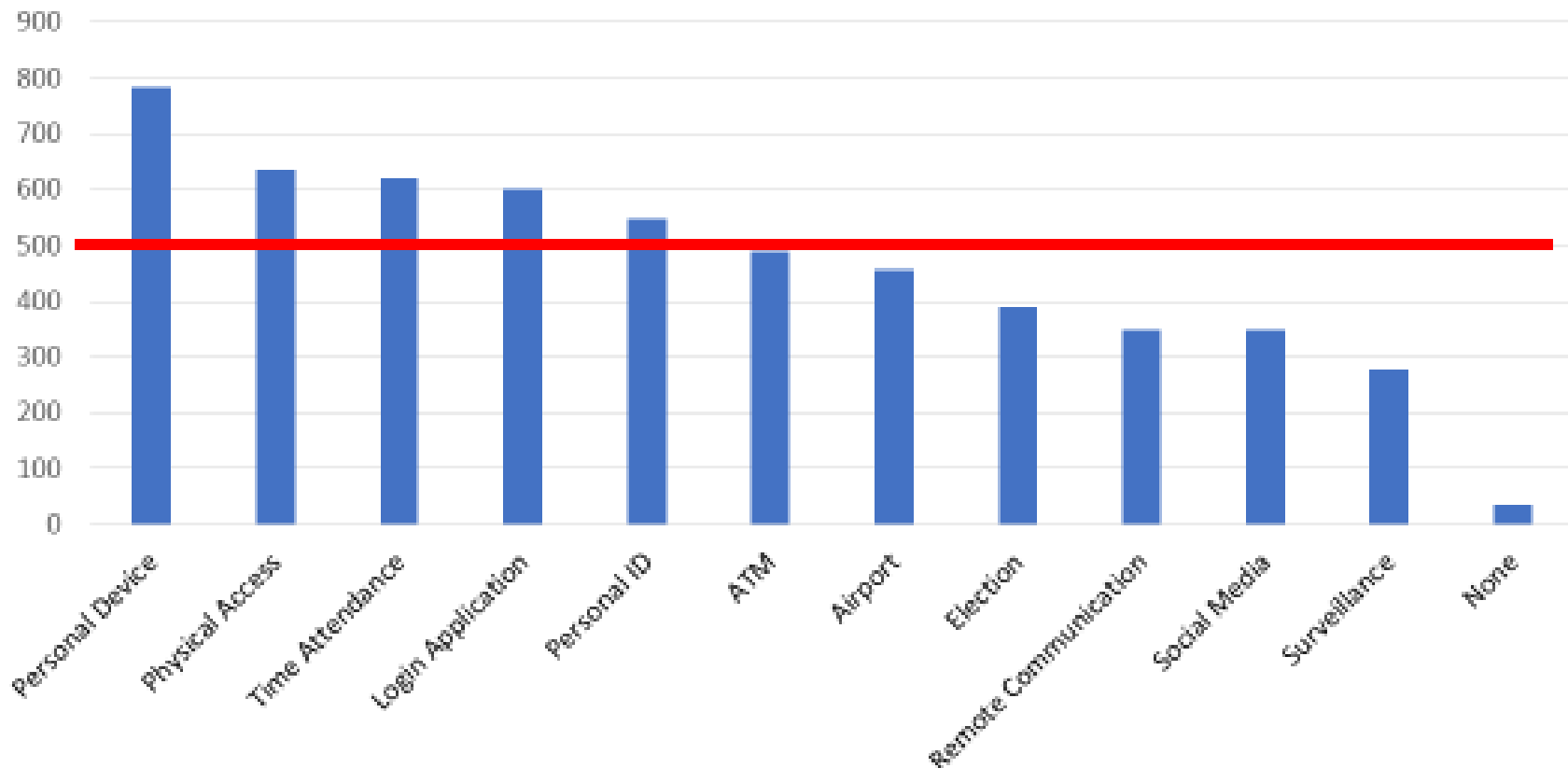
# Who do they trust?

15. In general, what is your opinion on the extent of the current use of biometrics for verifying identity?



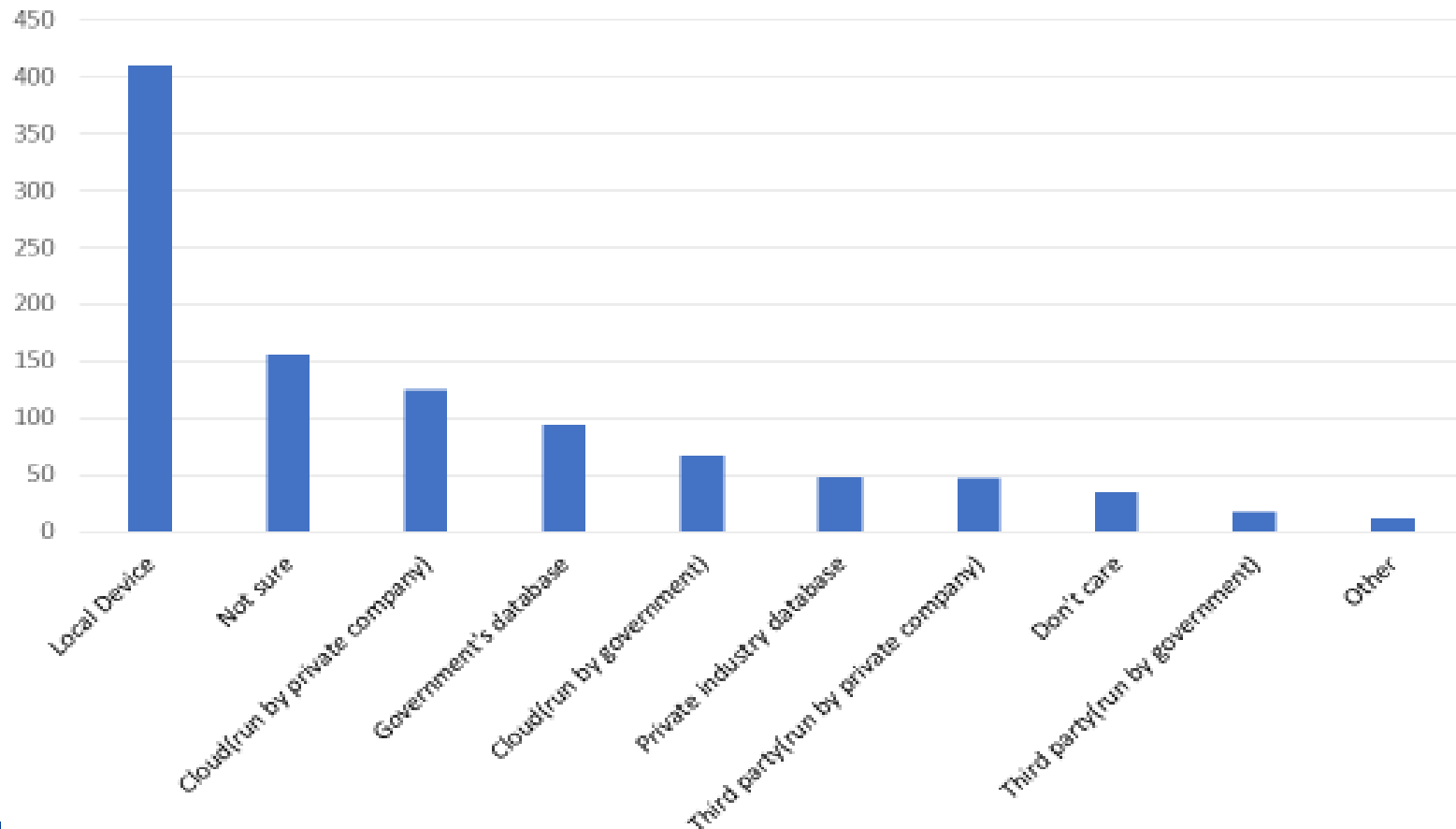
# Who do they trust?

16. In which of the following applications are you comfortable with the use of biometric technologies? (Check all that apply)



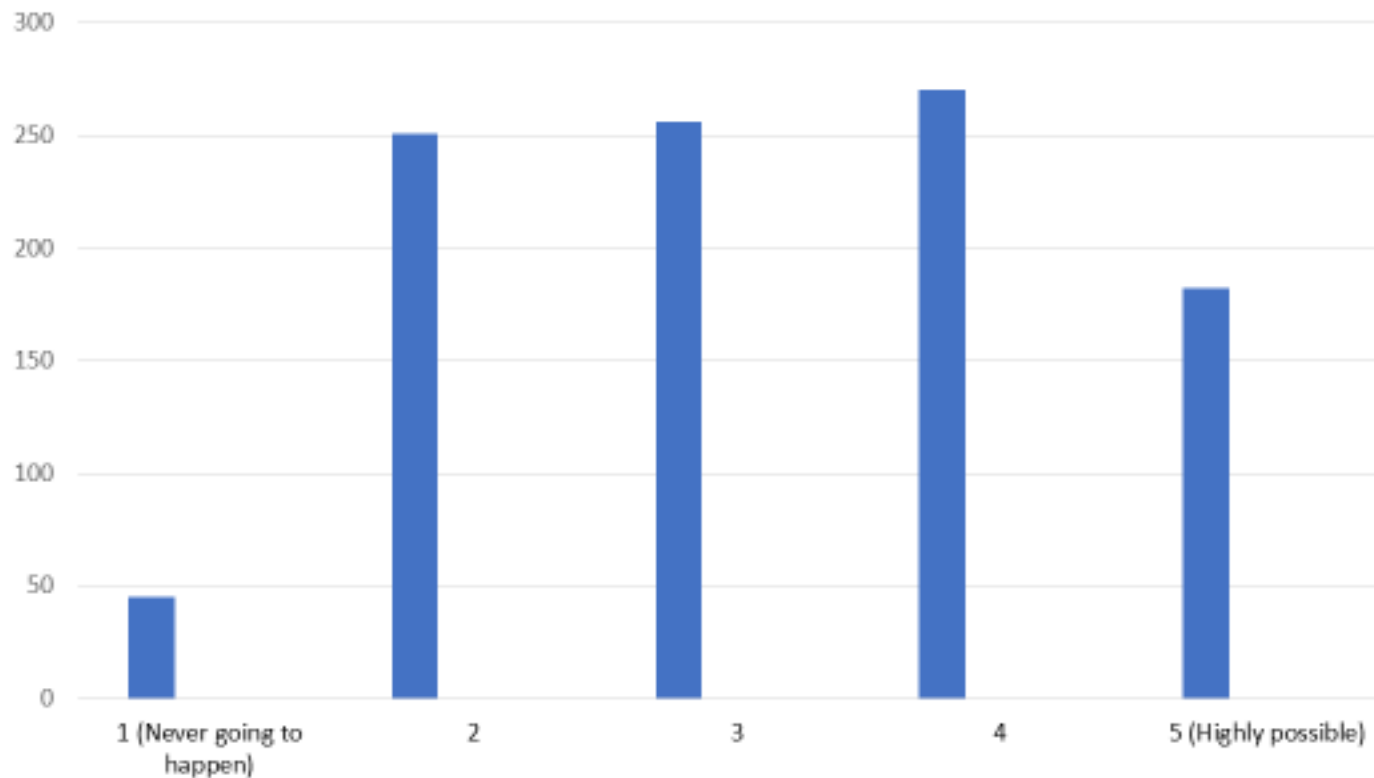
# Who do they trust?

46. If given a choice, where do you prefer that your biometric credentials are stored?



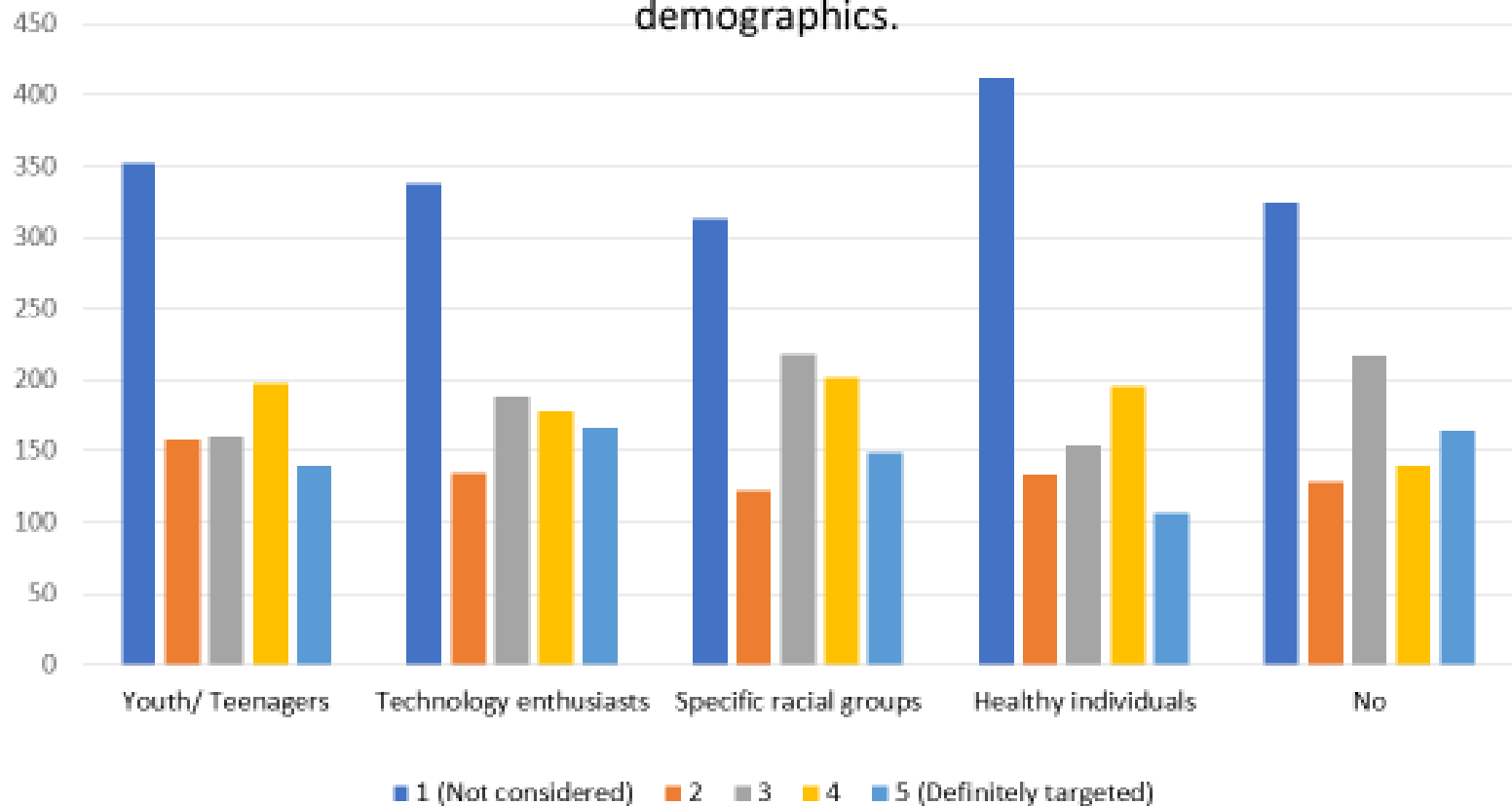
# Who do they trust?

41. How concerned are you about your biometric information being stolen?



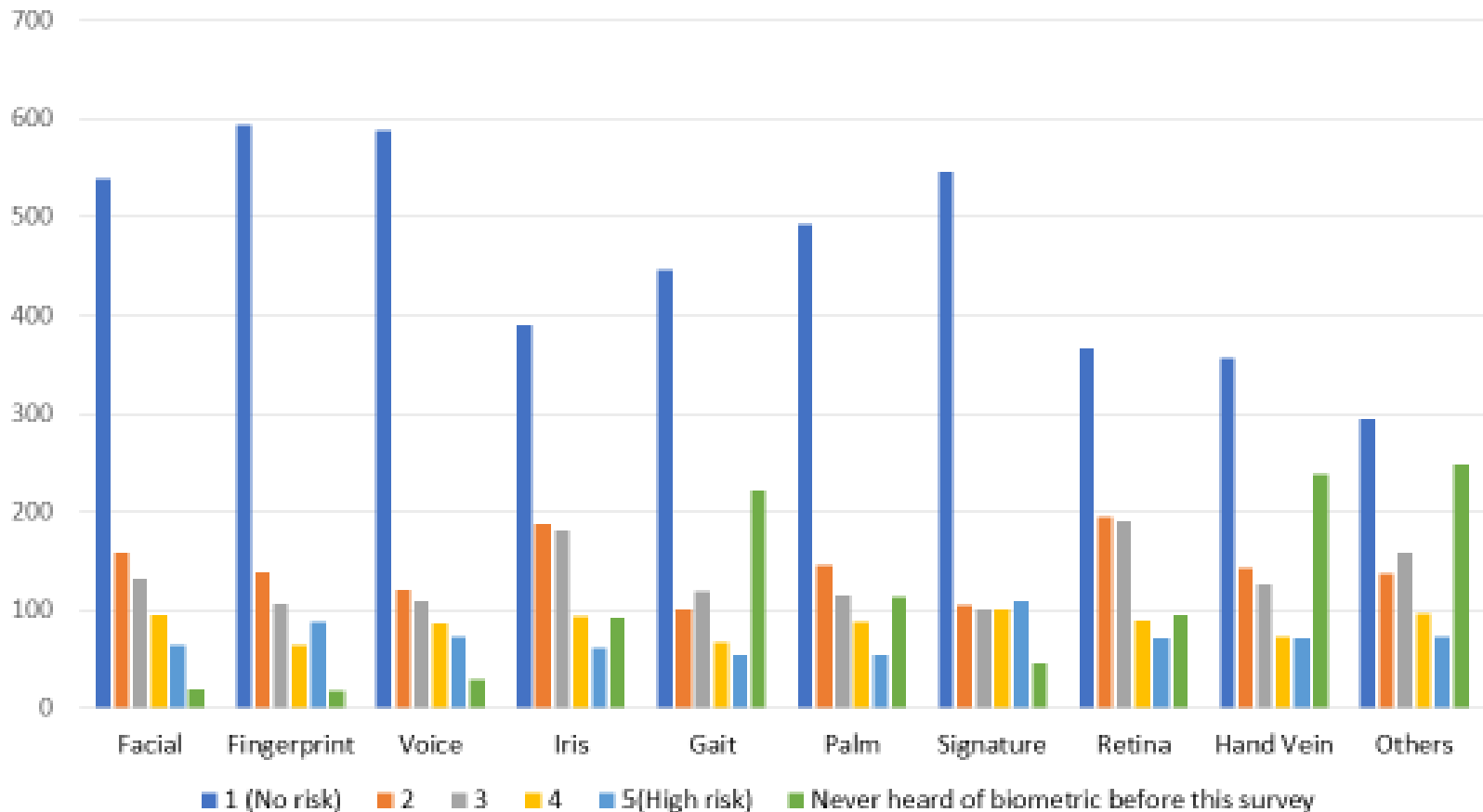
# Who do they trust - bias?

Question39:- Do you believe that biometrics are designed with biases towards a "particular target demographic"? If so, rate the likelihood that biases exist towards the following target demographics.



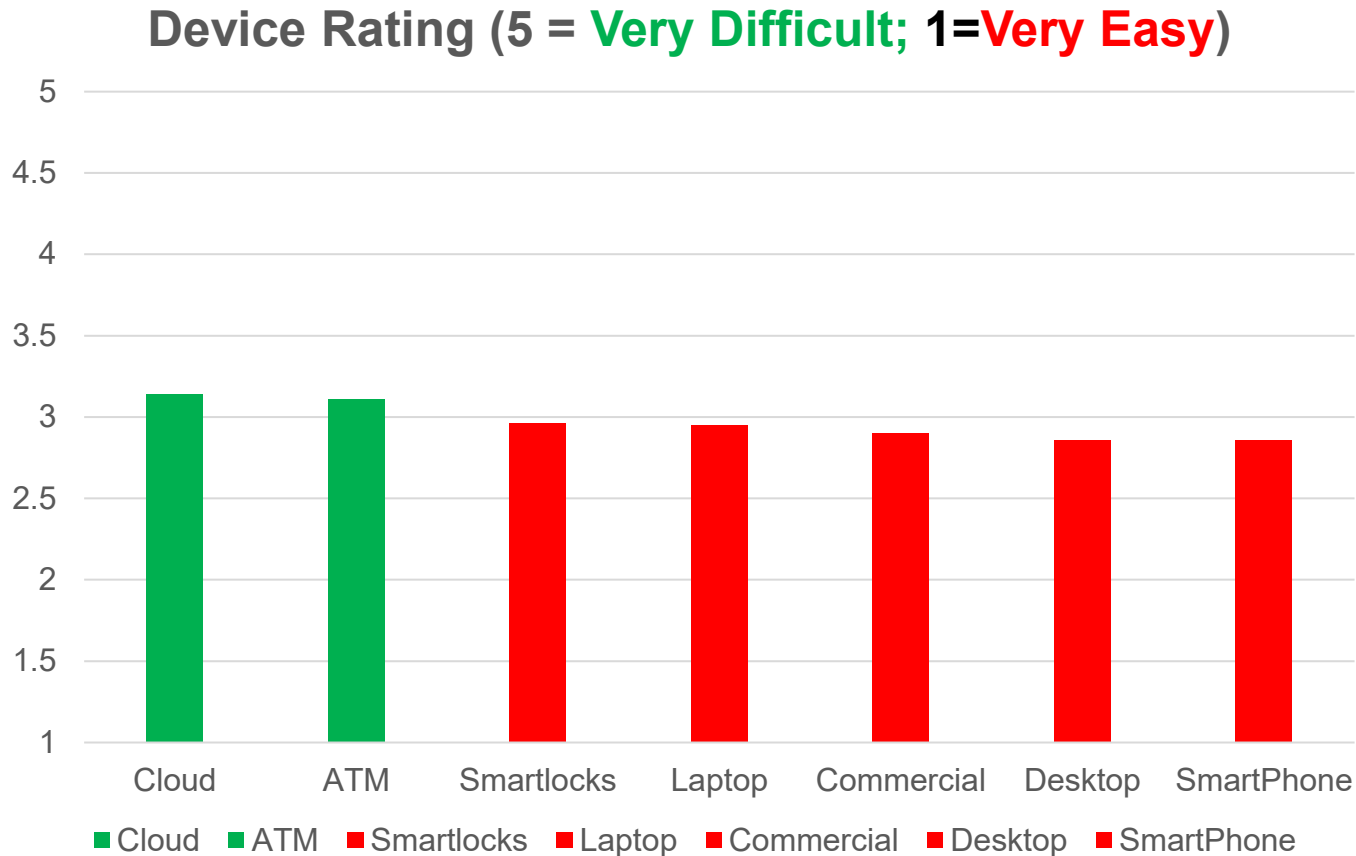
# Who do they trust – *health risk*?

42. Do you think there is a health risk associated with the use of the following biometrics?



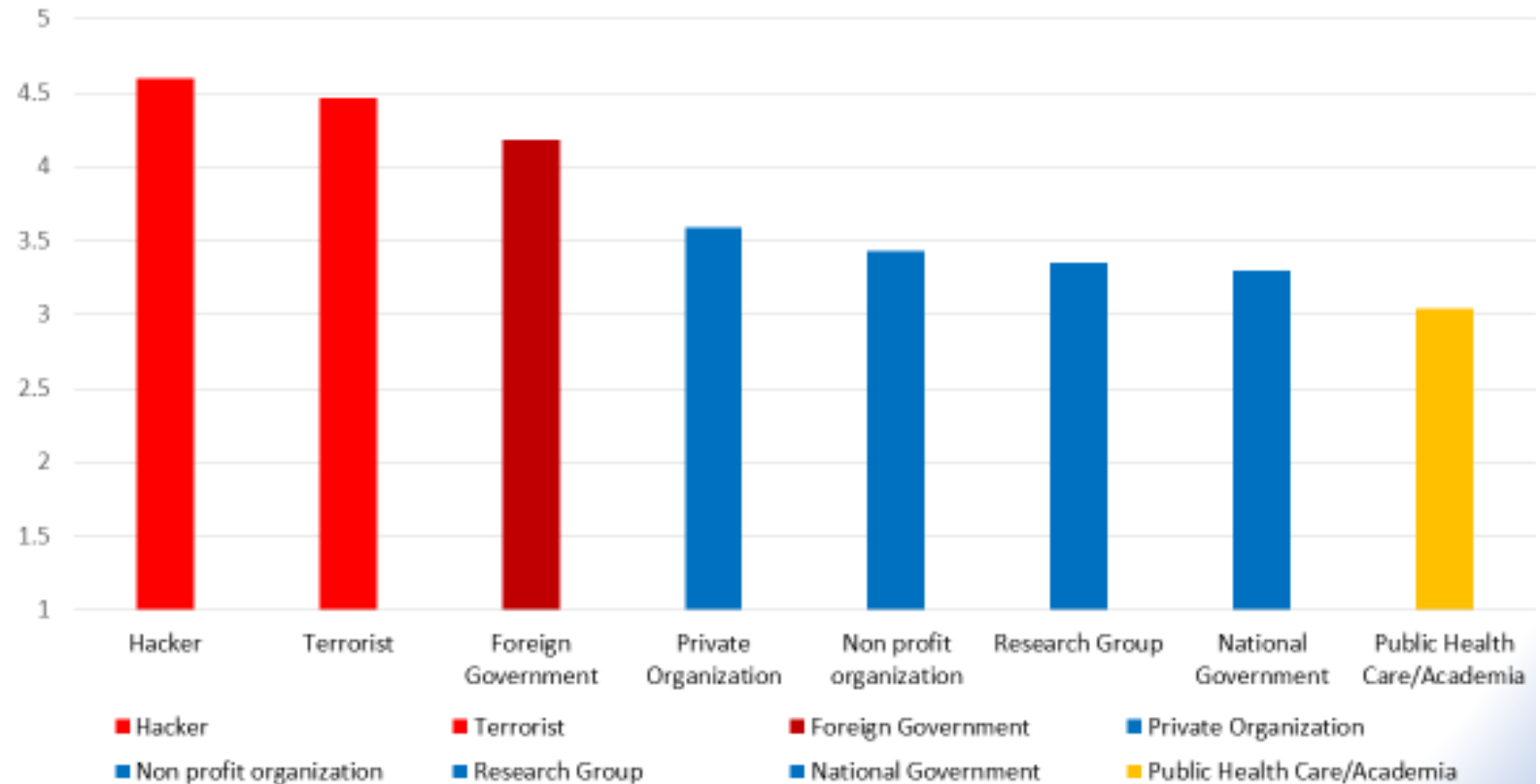
# Which do you fear hacking?

Question47. In your opinion, how difficult is it for a hacker to access the biometric information in each of these devices?



# Who do you fear having your info?

49. How concerned would you be if the following groups had access to your biometric information?

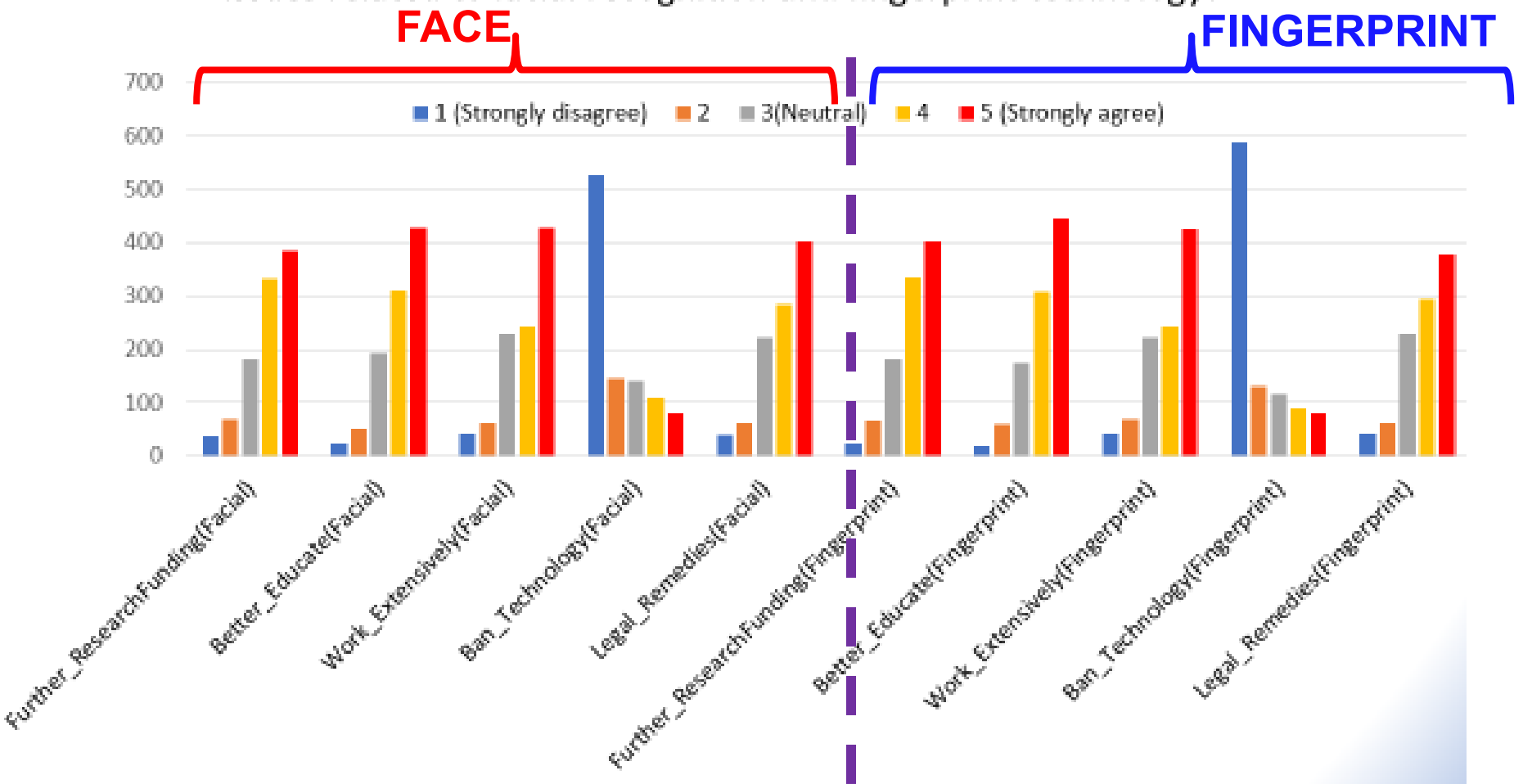


1:- Not all concerned 5:- Very Concerned



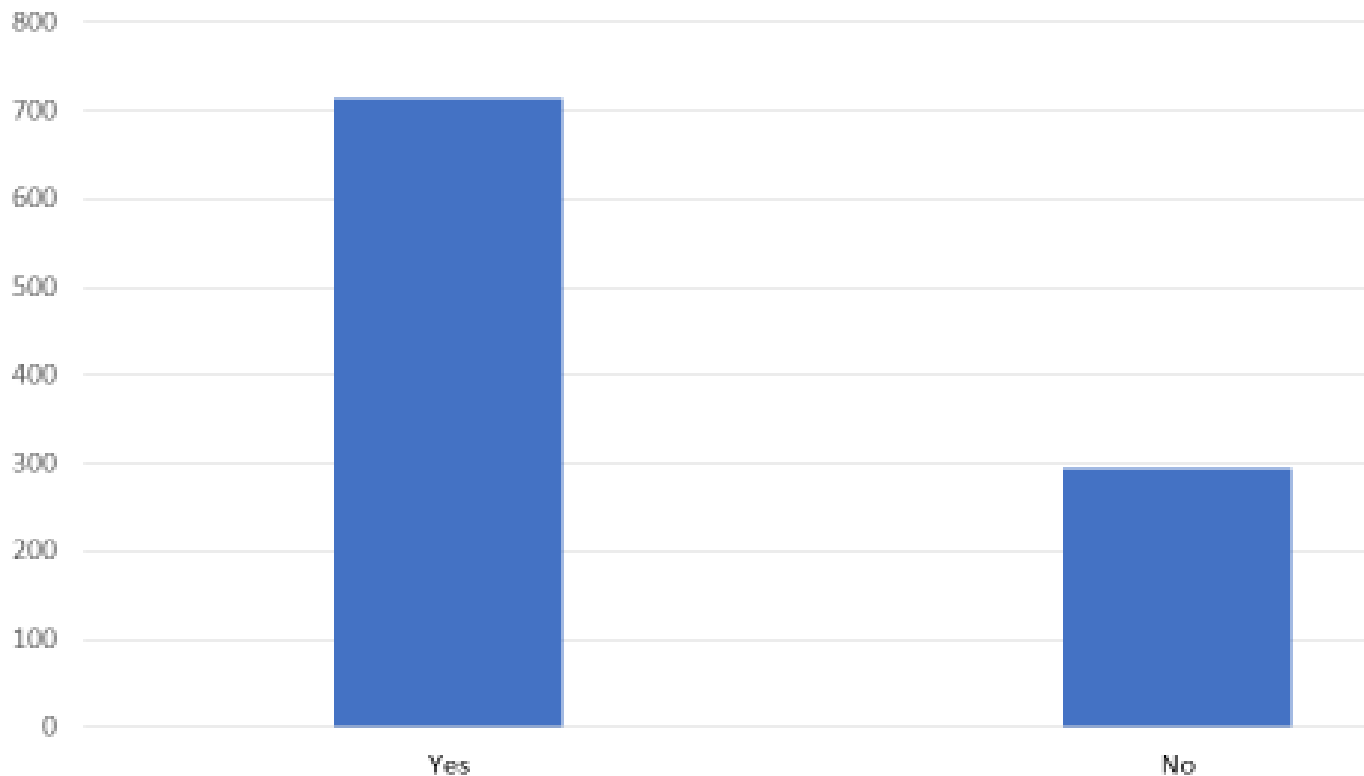
# What is the best way forward?

33. What do you think of the following strategies designed to address such issues related to facial recognition and fingerprint technology?



# What is the best way forward?

51. Should there be a minimum standard of accuracy established for a biometric prior to use?



# What is the best way forward?

52. If yes, who should establish the standard? (choose just one)

