PERSONAL RISK JUDGEMENT SURVEY

SPRING 2020
SUMMARY RESULTS

safe
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INTRODUCTION

Safe-esteem conducted a short survey to explore how general knowledge and intuition about personal risk correlate to probabilities derived from actual data, and how a risk-centric professional affiliation may affect judgment quality.

The survey reached hundreds of respondents across the United States and abroad. Two nearly identical versions of the survey were used to engage members of the general public, as well as professionals in the safety and security, executive protection, travel risk management, and duty of care industries.

Our ability to estimate risk, reduce uncertainty about what is likely to injure or kill us, and the quality of our survival decision making are as relevant today as they have been throughout the evolution of our species. The skills and competencies needed today to succeed at these tasks, to survive and thrive, are nonetheless different from those of our ancestors. This survey is one small component in Safe-esteem's strategy and mission to empower people around the world to lead smarter, safer and unafraid lives.

RESULTS SUMMARY

Survey topics focused on several broad risk judgment themes: (1) the weighting of key risk factors; (2) assessing how an individual's profile and background affects risk exposure; (3) the perception of violent crime risks for major travel destinations, specifically in relative terms to a home region; and, finally (4) participants' confidence in their judgment and/or travel risk knowledge and whether personalized data-driven risk information would be desirable.

1.   KEY RISK CONTRIBUTORS

Participants were asked to estimate the relative weight of three major personal risk factors: crime, accidents, and health, and specifically which of these would most likely contribute to a fatal incident involving a US-based individual.

> *US mortality data show that health by a wide margin is the most impactful of these three domains and the largest contributor to mortality. Yet survey participants skewed toward crime and accident risks, overestimating the likelihood of an individual being killed in one of these situations versus dying from a health condition or disease. This risk bias held across backgrounds, including those professionally engaged in executive protection and travel intelligence, as well as the general public (see Figure 1).*

Likelihood of Fatal Incidents
(i.e. "*What is most likely going to kill them?*")
Relative weight between the three major personal risk domains:
Crime, Accidents and Health (suicide excluded)
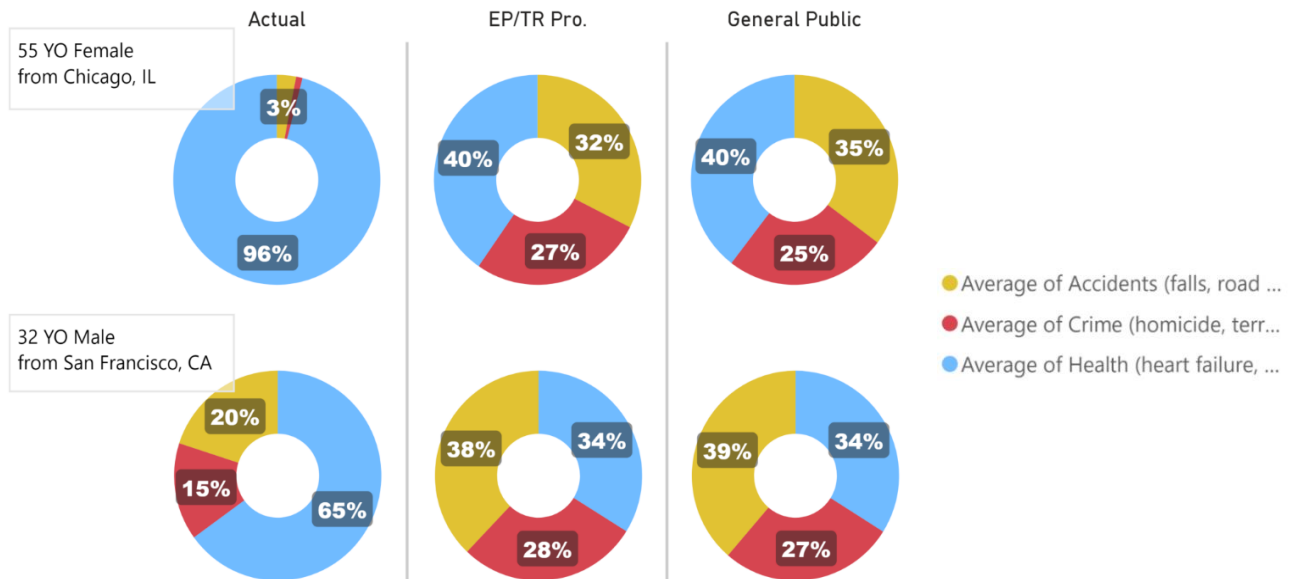
© Safe-esteem

Figure 1

2. CRIME RISK AND PERSONAL CHARACTERISTICS

In addition to the previous question which elicited estimates for two distinct demographic profiles, this topic area was also addressed by a question around the safety of a female executive versus a female waitress, both of whom were residing in the city of San Francisco, California. The executive notionally worked for a Silicon Valley technology company, while the waitress was employed at a local restaurant. Based on these profile assumptions, the question asked which of the individuals would more likely fall victim to a serious violent crime (aggravated assault, robbery, rape, or murder) excluding any other factors such as behavior or direct threats.

Crime data in the United States strongly correlates income with the likelihood of violent crime victimization. If we assume the waitress is making an annual salary of $50K or less, and the Bay Area technology executive has a salary of $250K or more - and absent any other risk factors - the correct estimate would be that the executive is approximately forty percent less likely to become a victim.[1]

While age and gender differences did not produce significantly different estimates (see Figure 1) the individuals' profession (executive vs. waitress) weighted more heavily on the estimates. Neither group (professionals or general public) appeared to have a shared and sufficient appreciation of the significance of age and gender in the probability of criminal victimization, nor about the size and directionality of income as a contributing risk factor (see Figure 2).
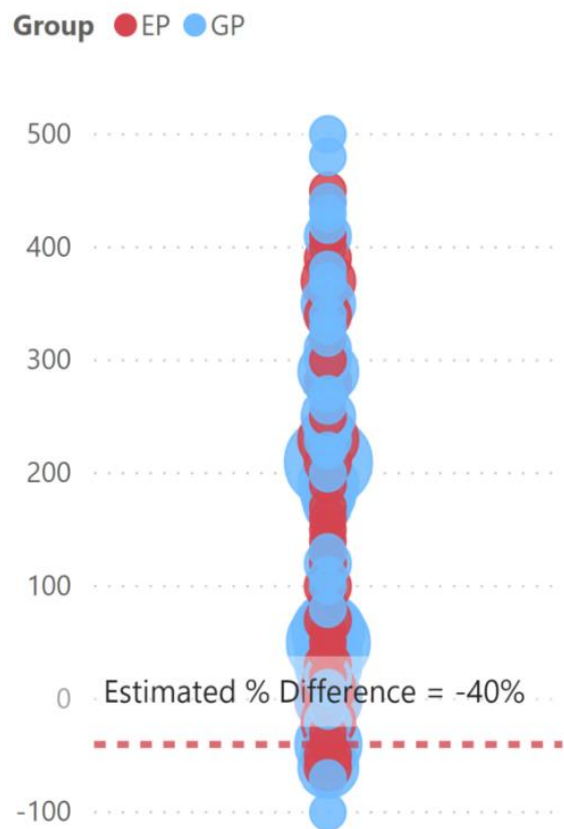

Figure 2

[1] Criminal Victimization, 2018 - Rachel E. Morgan, Ph.D., Barbara A. Odenkirk, Ph.D., BJS Statisticians, September 10, 2019 NCJ 253043

3.   TRAVEL DESTINATION RISK

Travel is one of the most common and frequent instances of relative risk assessment by the general public (i.e., by way of online searches about how safe an international destination may be) or protection professionals. Looking at this key aspect, survey questions focused on perceptions of travel risk within the United States, as well as several popular global destinations. One question was framed around a middle-aged female from Dallas, Texas, looking at home environment risk versus Rome, Mexico City, Tokyo, Rio de Janeiro, and Atlanta. A second question looked at a 29-year old male from New York City, juxtaposed against a hypothetical itinerary of Paris, New Orleans, Nassau (Bahamas), St. Louis, and Hong Kong. Both questions were focused on the extent to which location influenced lethal violent crime risk, including murder, terrorism, and extrajudicial killings.

Results in this critical dimension reflected two key takeaways: first, responses assumed a random pattern, strongly indicating there was virtually no consensus among participants about on-the-ground homicide risks. Second, and as noteworthy, executive protection and security professionals showed no greater accuracy in their risk judgment in relation to location-specific data when compared to the responses of the general public (See Figure 3, and Figures 6, 7 on page 6 for a visual representation of the responses' distribution for each city mentioned in the survey.)
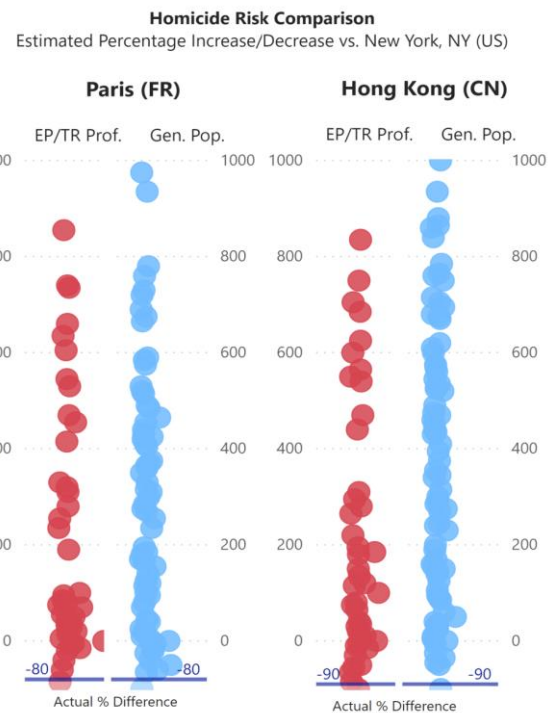

Homicide Risk Comparison
Estimated Percentage Increase/Decrease vs. New York, NY (US)

Figure 3

Photo by slon_dot_pics from Pexels

4. CONFIDENCE AND OPENNESS TO DATA

A final segment looked at participants' confidence in their personal risk judgment and whether data-driven, personalized and real-time risk information would be desirable.

About 75 percent of participants held a high confidence level about their risk judgment. Executive protection and other security professionals expressed greater confidence than those in unrelated industries, despite no measurably higher quality of risk estimation (Figure 4).

Given the gaps we see between perceived and data-driven estimates, and the absence of any indication of consensus – particularly about severe violent crime while traveling – it is safe to assume there may be insufficient appreciation for the amount of uncertainty of this judgment domain, and severe overconfidence in the quality of personal and travel risk assumptions. These results align with the extensive research literature about overconfidence bias in judgement and decision making.[3]

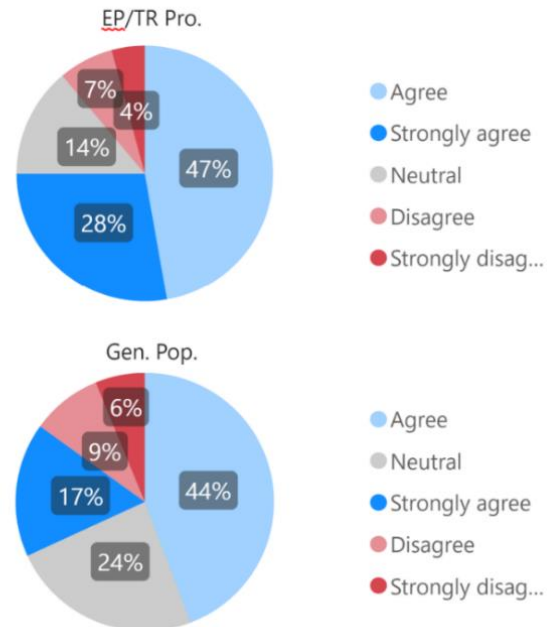"I have an accurate understanding and knowledge about my personal risk and safety at home and when traveling."

EP/TR Pro.

7% • 4% • 14% • 47% • 28%

- Agree
- Strongly agree
- Neutral
- Disagree
- Strongly disag...

Gen. Pop.

6% • 9% • 17% • 44% • 24%

- Agree
- Neutral
- Strongly agree
- Disagree
- Strongly disag...

Figure 4

"I would want access to real-time, data-driven information about my personal risk and safety."

21% • 21% • 12% • 13% • 14% • 8% • 3% • 3%

Agree · Neutral · Strongly agree · Strongly disagree · Disagree
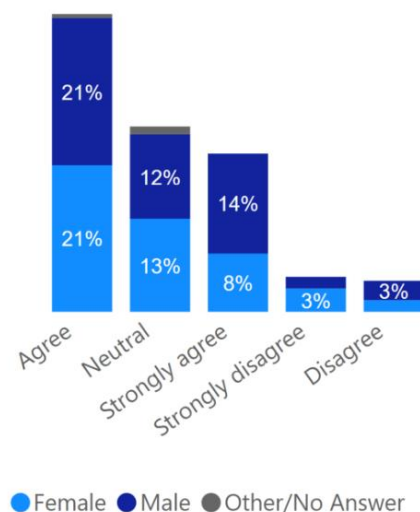
● Female ● Male ● Other/No Answer

Figure 5

Most survey respondents expressed interest in real-time personal risk and safety data, with less than 10% expressing no interest in such type of information (Figure 5)

(3) G. Montebello, D. Winterfield, "Cognitive and Motivational Biases in Decision and Risk Analysis", Risk Analysis, 2015.

ADDITIONAL RESULTS & HIGHLIGHTS

Homicide Risk Comparison: Destination vs. Home

Survey results present a heavily scattered, near-random response pattern that indicates virtually no consensus exists among survey participants about on-the-ground homicide risks in the specified locations (Figures 6, 7).
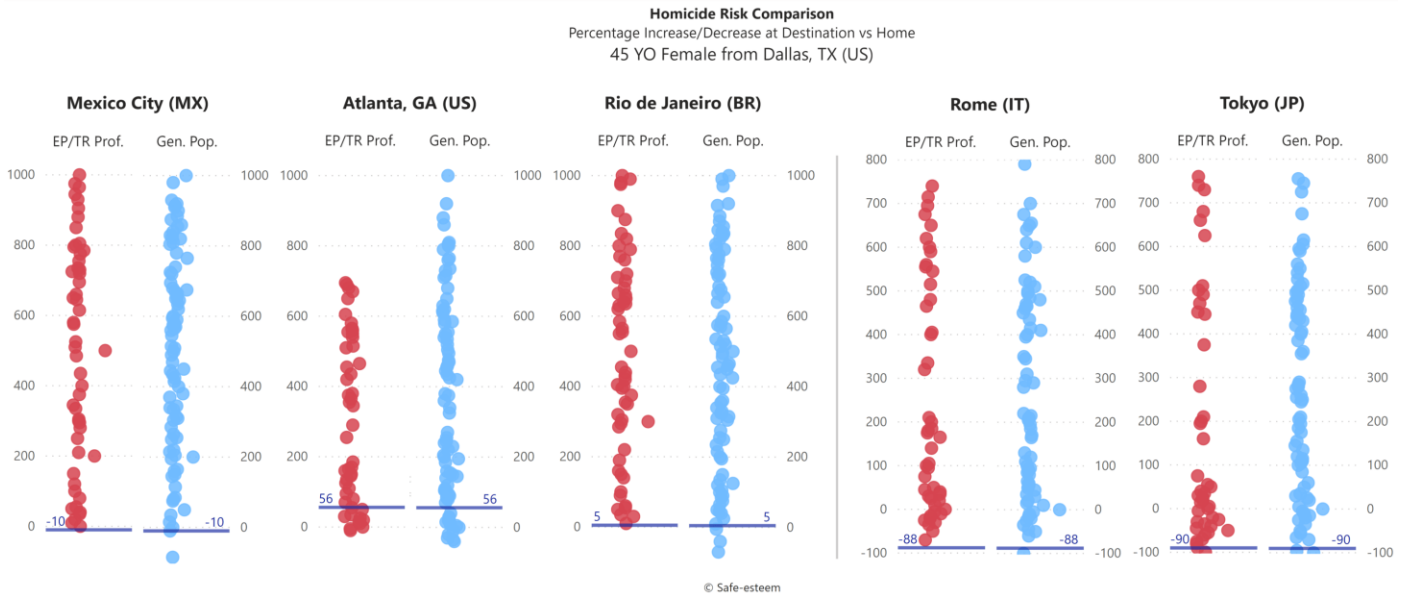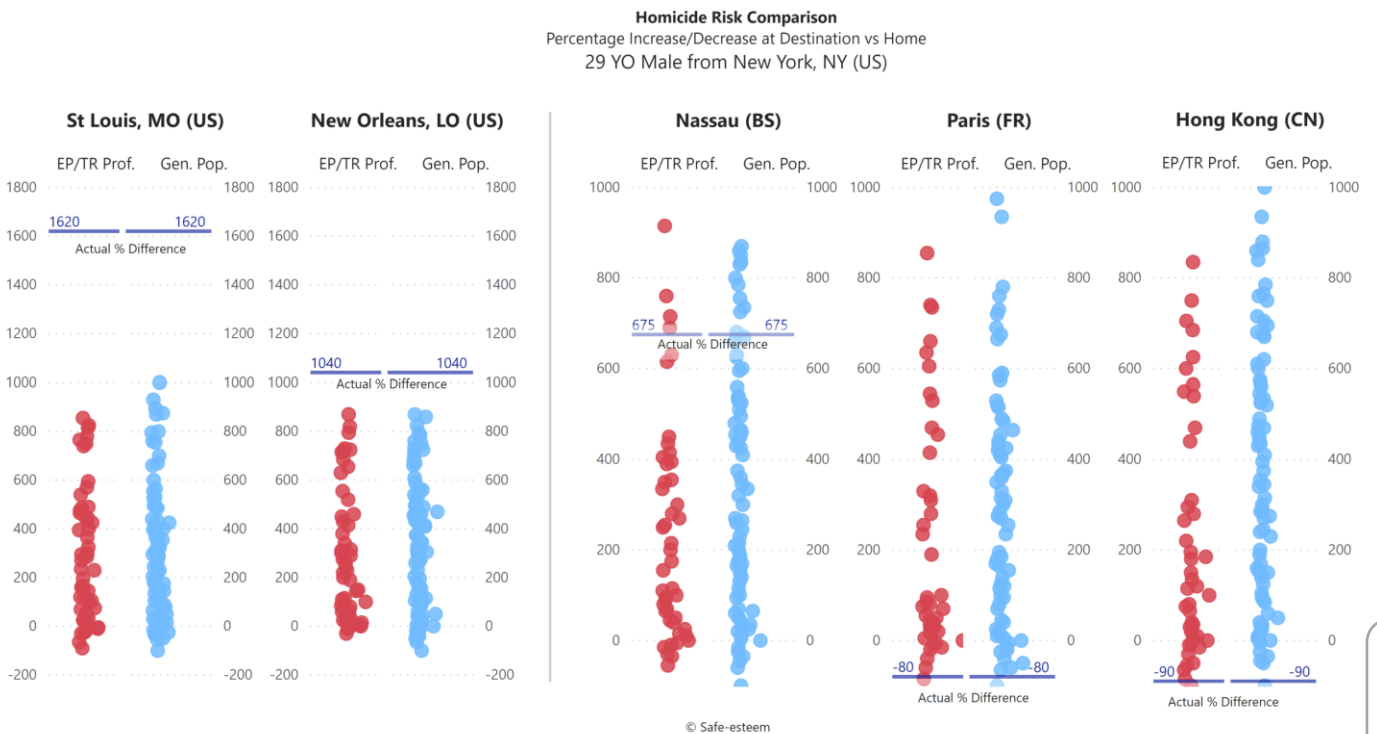
Homicide Risk Comparison
Percentage Increase/Decrease at Destination vs Home
45 YO Female from Dallas, TX (US)

© Safe-esteem

Figure 6

Homicide Risk Comparison
Percentage Increase/Decrease at Destination vs Home
29 YO Male from New York, NY (US)

© Safe-esteem

Figure 7

6

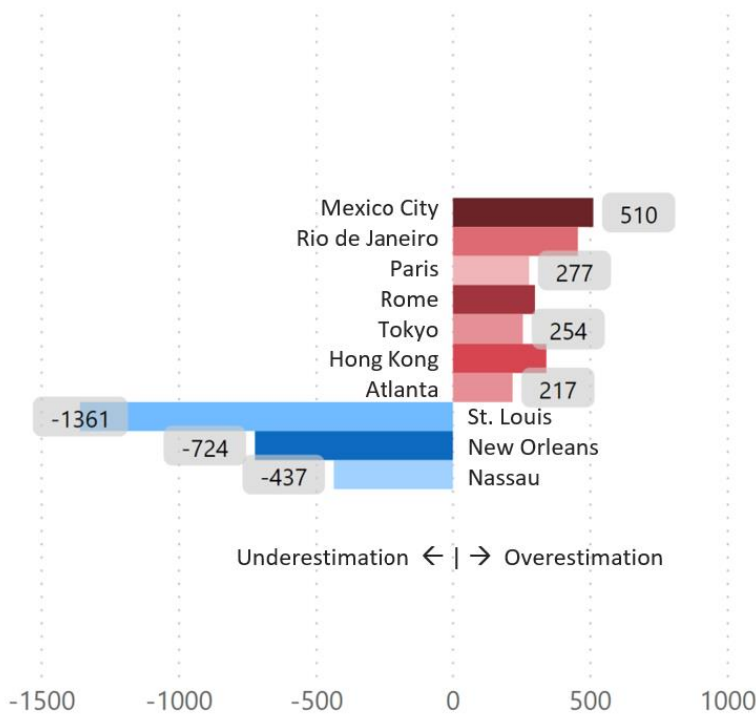## Average Percentage Points Deviation of Estimates vs. Data

Figure 8

In almost all examples of international destinations there was a stark overestimation of location risk as measured against actual crime data. In contrast, risk of homicide for selected US cities was heavily underestimated by most.

The average participant estimate of the homicide rate difference between New York City and St. Louis was about thirteen times below the actual one (Figure 8).

Mexico City and Rio de Janeiro were viewed by participants as having the highest risk levels, while US locations St. Louis and New Orleans present much higher homicide risk based on actual data (Figure 9 below shows homicide rates per 100,000 population of the cities included in the survey).

The fact that Paris and Hong Kong, two locations with low absolute and relative homicide rates, were also rated by survey participants as being of significantly higher risk, could be attributed to well-documented availability bias and substitution heuristic.[4]

Recent high levels of media coverage focused on street demonstrations and civil disobedience in both locations may have unduly influenced perceptions regarding the typology and severity of the risk at these locations.
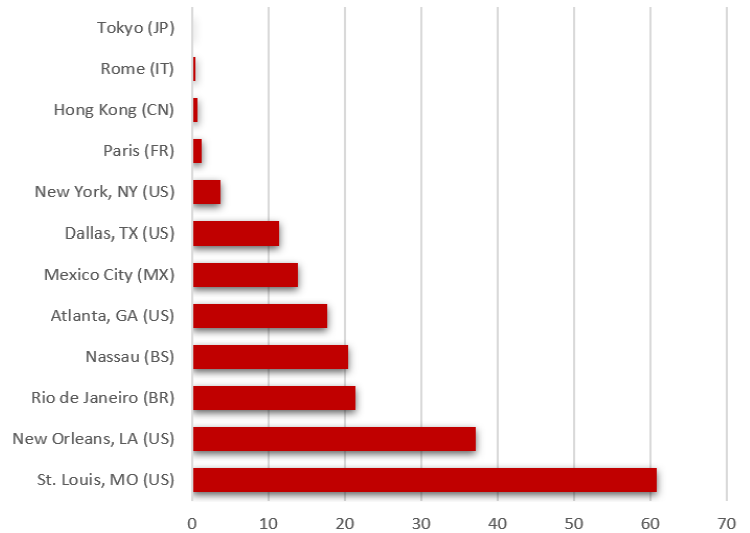
Homicide Rates 2018

Figure 9

[4] Daniel Kahneman, Thinking Fast and Slow (New York: Farrar, Straus and Giroux, 2011).

CONCLUDING COMMENTS

Personal risk & safety is arguably the most timeless and consequential domain of judgment and decision making. And yet it is also one plagued by extreme bias, uncertainty and innumeracy.

The very definition of risk is shaped by cultural and linguistic framing and assumptions which are often deep seated, subconscious, and deeply emotional. As a probabilistic concept, it also suffers from our widespread mathematical inadequacy, and our tendency to ignore statistics and data in favor of experience and anecdotes.

We're excited to share the results of this recent survey, which has helped highlight in initial form how significant risk bias and uncertainty can be across all segments of the population, even when conditions and assumptions are reduced to fewer than those of real-life circumstances.

Accurate and personalized statistical estimates about the likelihood of incidents or victimization cannot fully cover all real-world situations. Yet we estimate a wide-array of risks continually, mostly unconsciously and based on very scant or biased information, to make everyday decisions about our commute to work, when dropping kids at school, and of course when planning our travels. Looking ahead, it seems clear that data-driven support offers great potential to help reduce uncertainty and improve decision making quality for anyone, particularly security, executive protection, and travel risk professionals.

About Safe-esteem

Safe-esteem, Inc. is a technology company that harnesses data science, human and artificial intelligence, and real-world international risk management expertise to innovate and improve how personal risk is measured, communicated, and managed. The company is based in Miami Beach, Florida, USA. To learn more, visit us at: Safe-esteem.com