The Power and Promise of Technological Change and the Challenge of Remaining Human

Dr. Colrain M. Zuppo, PhD, SHRM-SCP, SPHR, GPHR

Rate of Technological Change

"The changing nature of technology and work…[is] an antecedent to social and organizational developments." Zuppo, 2011

De**human**ization
De**real**ization
De**person**alization

Our Responsibility: Society

Dynamics

Job Disruption
& Employment Shifts

Inequality & Access

Privacy & Cybersecurity

Healthcare Transformation

Ethical AI & Bias

Global Governance & Regulation

Ethical & Legal Dilemmas

Weaponization of Technology

Environmental Sustainability

Moral & Existential Questions

Future-proofing is an "everyone" problem.

Gaps between the haves and have-nots will WIDEN. Unless…

Invest in education & training
Develop policies & regulations
Support R&D
Promote Global Cooperation

In the AI Revolution, WHY will be the catalyst.

AI will not steal your job.
The person who knows how to use AI will.

AI Will Create 97 Million Jobs, But Workers Don't Have The Skills Required (Yet)

It's time to upskill workers; a World Economic Forum report states that 97 million new jobs will be created by 2025 due to AI.
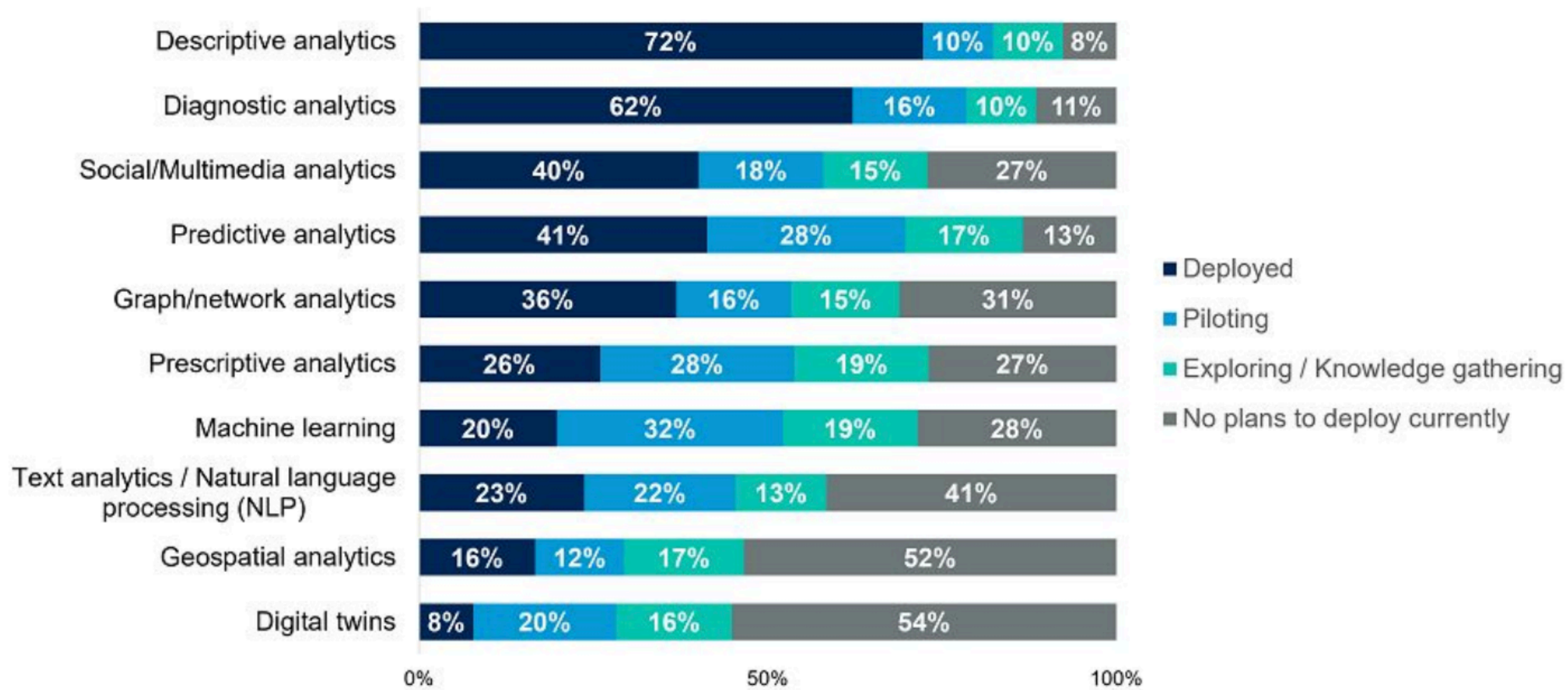
by **Emma Ascott** — November 19, 2021   in **Tech**   Reading Time: 6 mins read

A A

Photo by ThisisEngineering RAEng on Unsplash

Skills & Strategy

	Deployed	Piloting	Exploring / Knowledge gathering	No plans to deploy currently
Descriptive analytics	72%	10%	10%	8%
Diagnostic analytics	62%	16%	10%	11%
Social/Multimedia analytics	40%	18%	15%	27%
Predictive analytics	41%	28%	17%	13%
Graph/network analytics	36%	16%	15%	31%
Prescriptive analytics	26%	28%	19%	27%
Machine learning	20%	32%	19%	28%
Text analytics / Natural language processing (NLP)	23%	22%	13%	41%
Geospatial analytics	16%	12%	17%	52%
Digital twins	8%	20%	16%	54%

n = 209, excludes "discontinued or planning to discontinue use"
Q: Please review the below list of analytics techniques and indicate if your Corporate Strategy Function is currently using or planning to use them? Please select one answer. Source: Gartner 2023 Strategy Leader Technology Survey
Note: Numbers may not add to 100% due to omission of a "discontinued or planning to discontinue use" option.
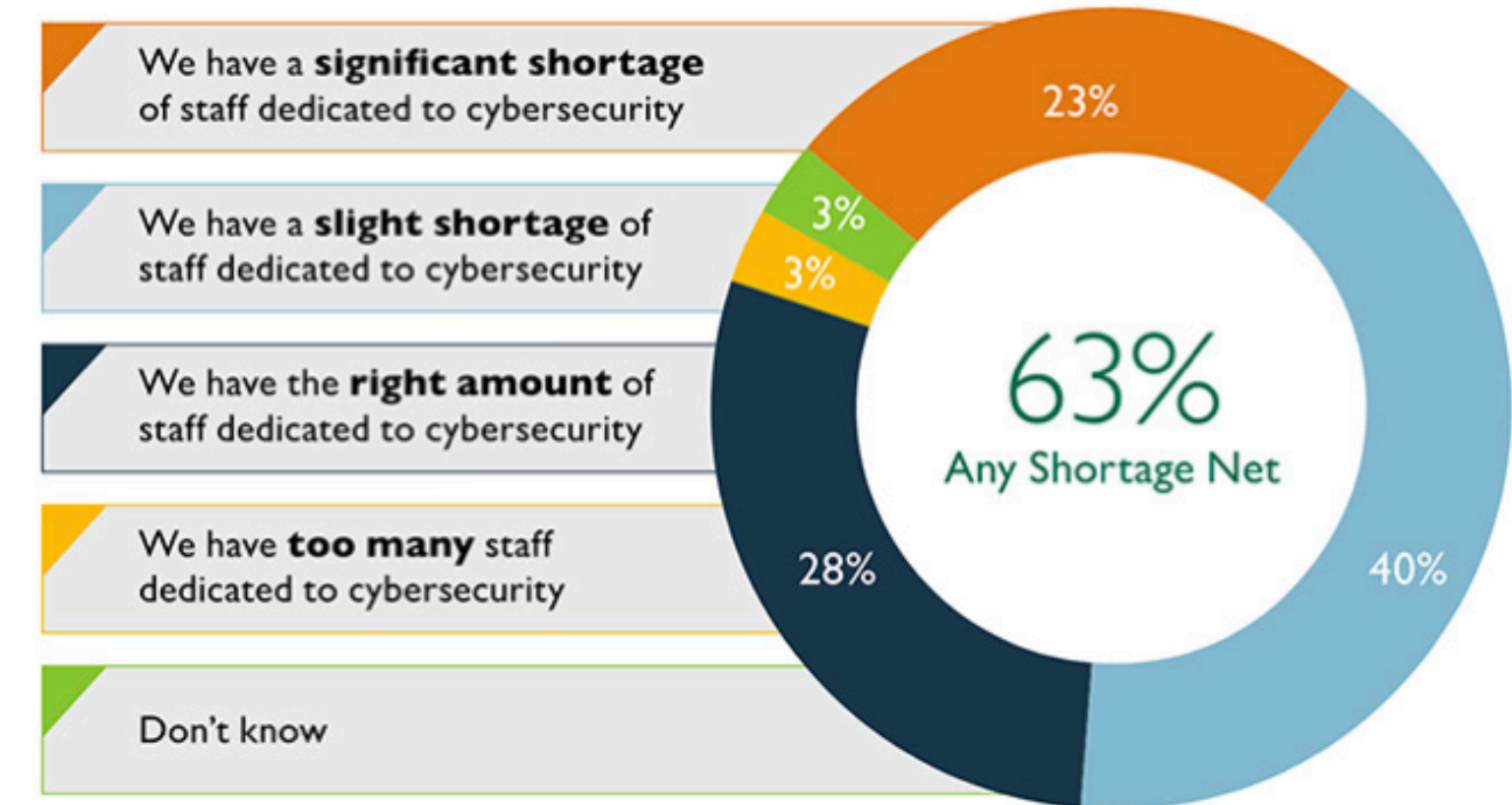
Gartner.

Reality:
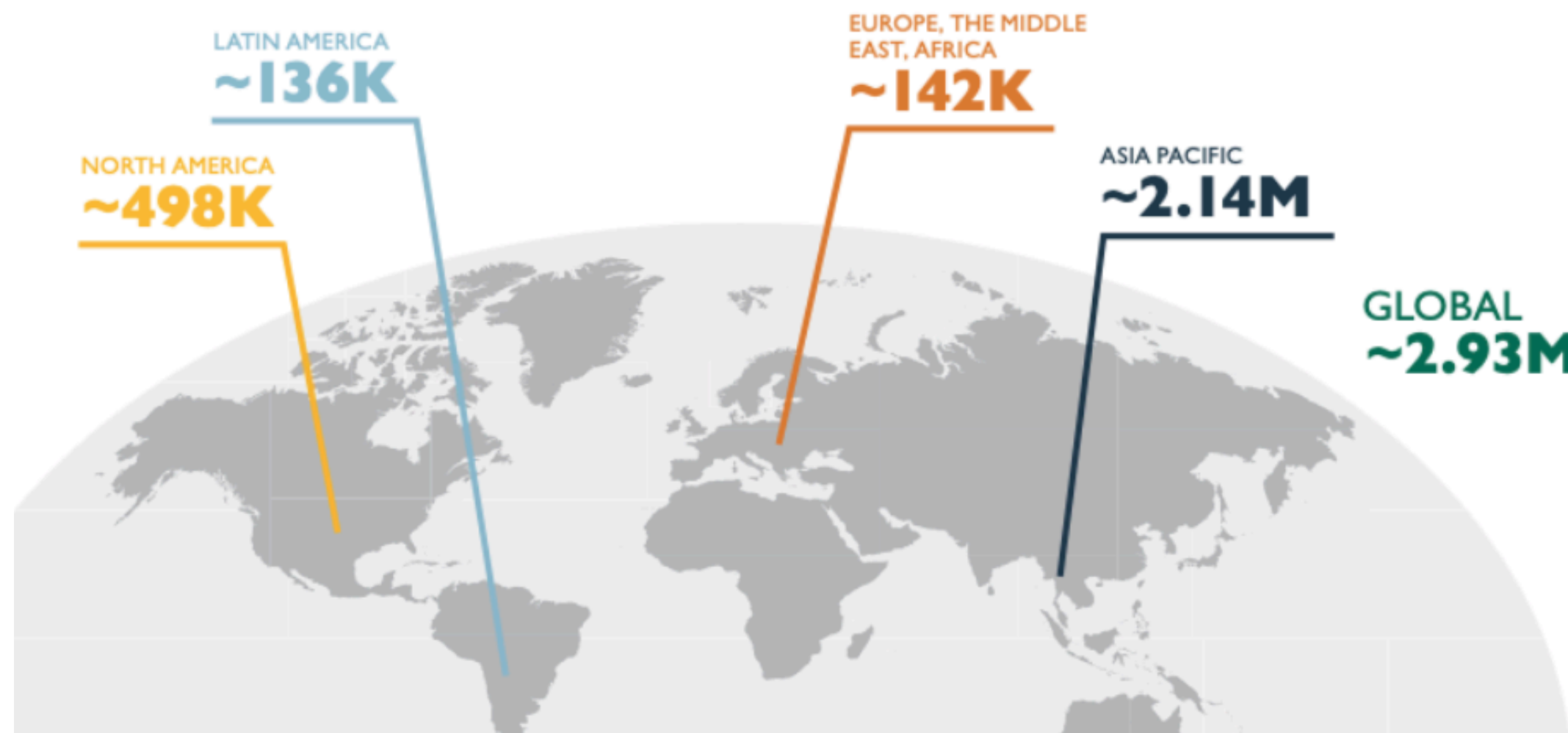# Everything is Strategic

VAST WORKFORCE SHORTAGE

Traditional education models are not lowering the cyber threat, nor are they closing the cyber workforce gap

Current Cybersecurity Staffing & Level of Risk Caused by Staff Shortage

We have a **significant shortage** of staff dedicated to cybersecurity — 23%

We have a **slight shortage** of staff dedicated to cybersecurity — 40%

We have the **right amount** of staff dedicated to cybersecurity — 28%

We have **too many** staff dedicated to cybersecurity — 3%

Don't know — 3%

63% Any Shortage Net

Gap in Cybersecurity Professionals by Region

NORTH AMERICA ~498K

LATIN AMERICA ~136K

EUROPE, THE MIDDLE EAST, AFRICA ~142K

ASIA PACIFIC ~2.14M

GLOBAL ~2.93M

of phishing and BEC scams per year

Phishing Complaints ▪ BEC/EAC Complaints

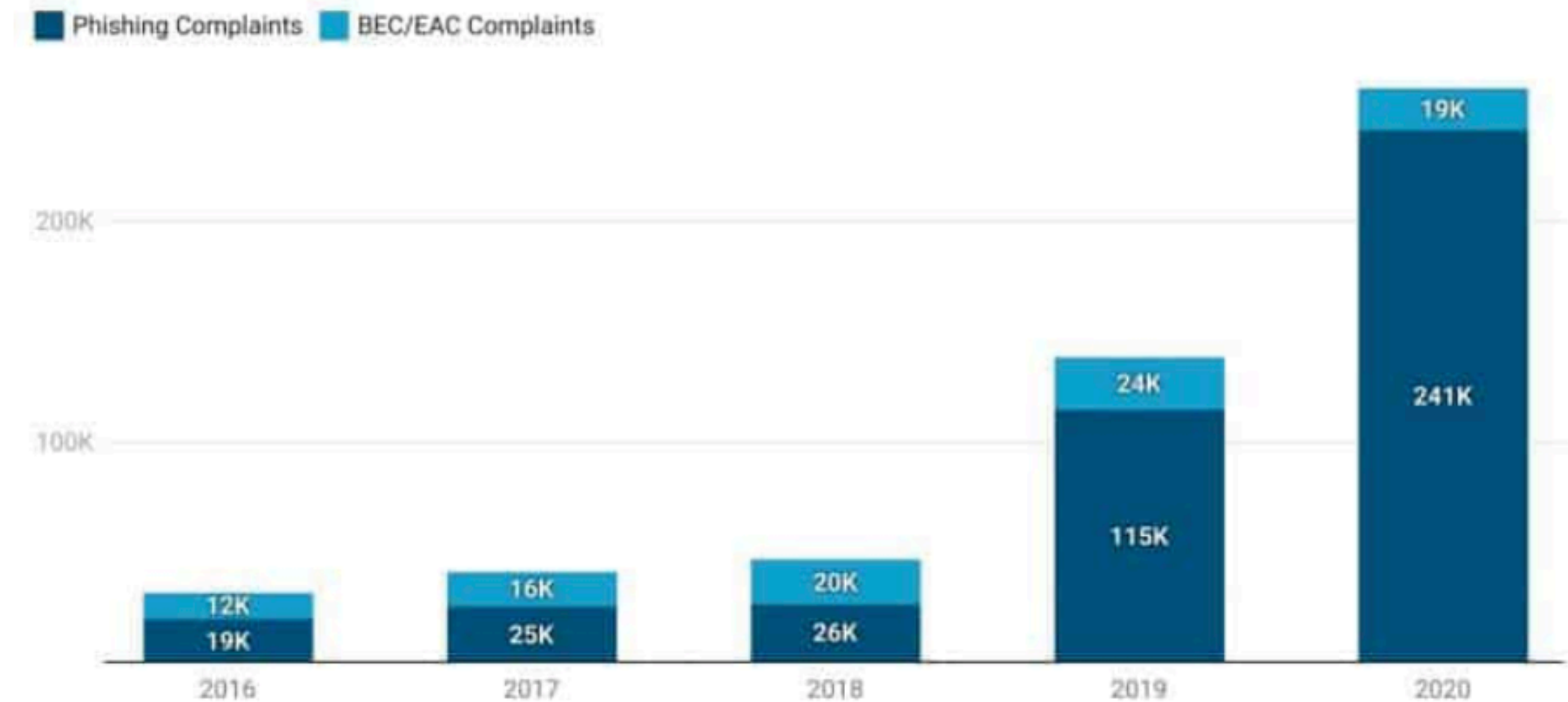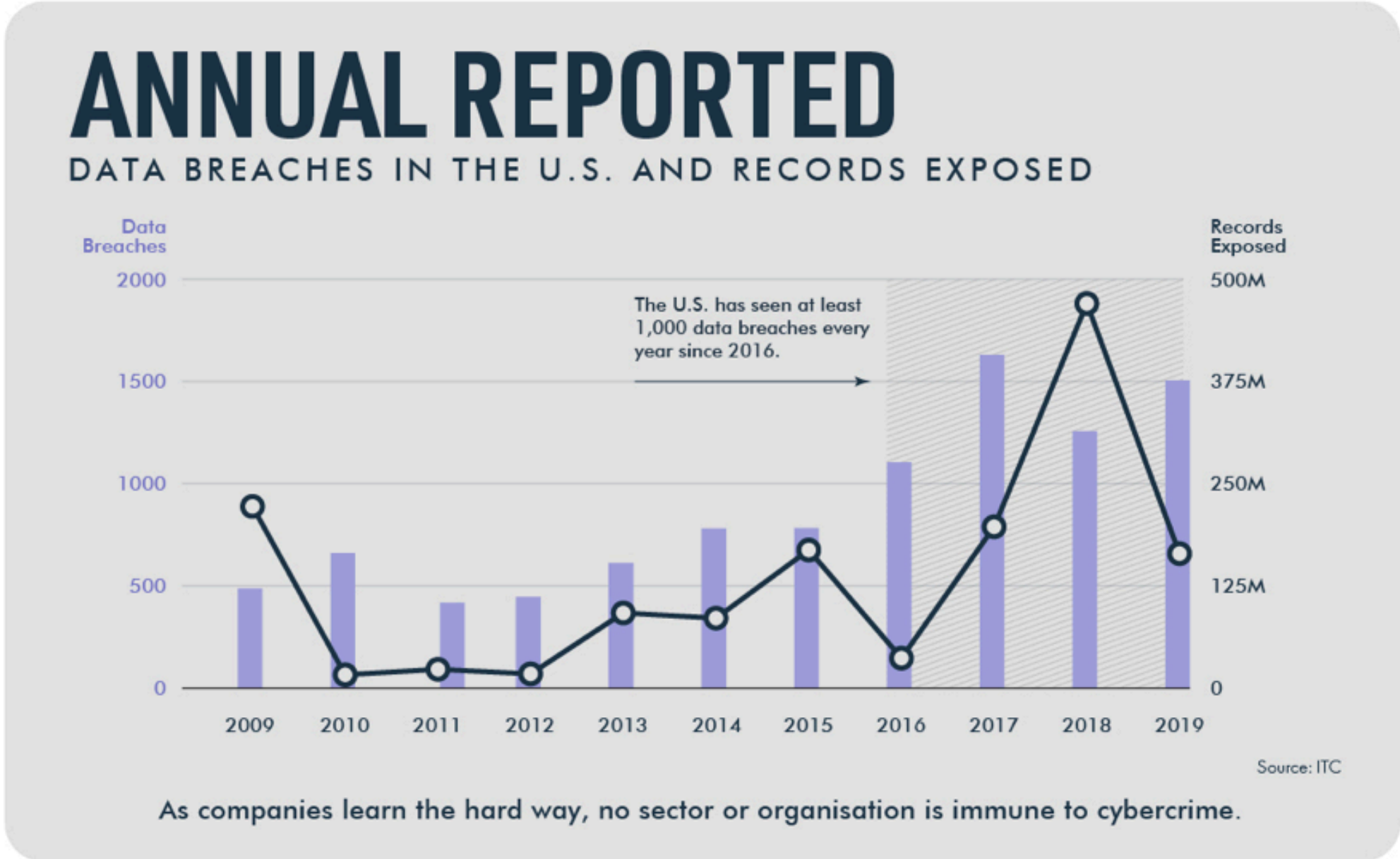| Year	BEC/EAC	Phishing
2016	12K	19K
2017	16K	25K
2018	20K	26K
2019	24K	115K
2020	19K	241K

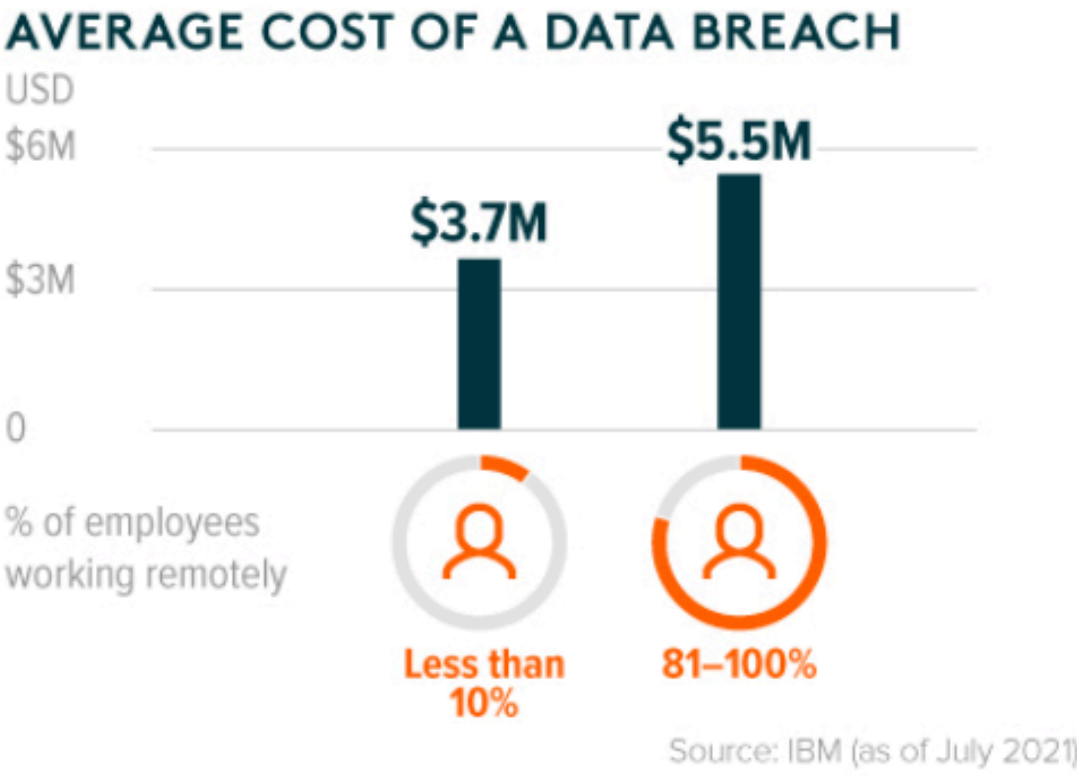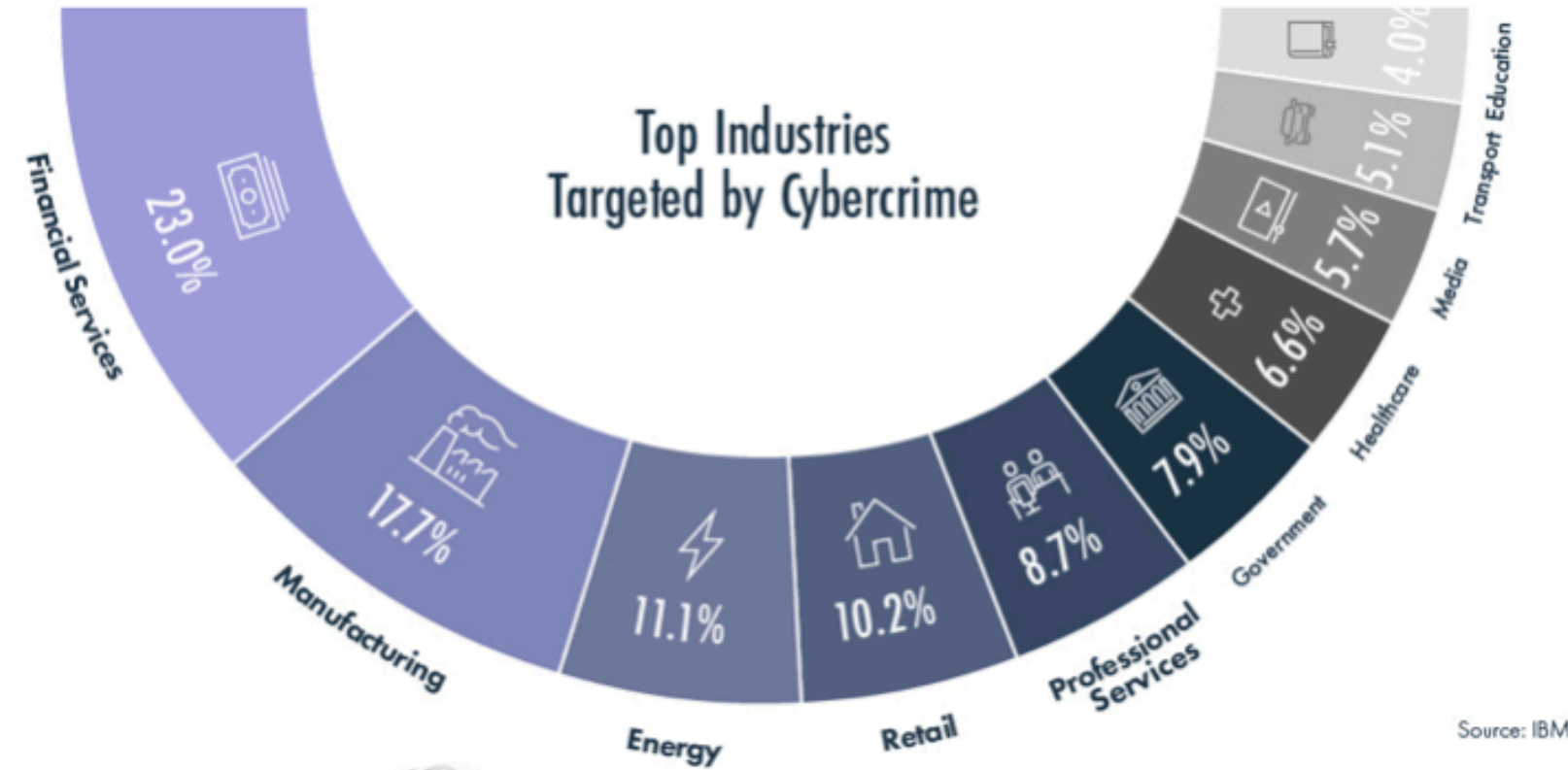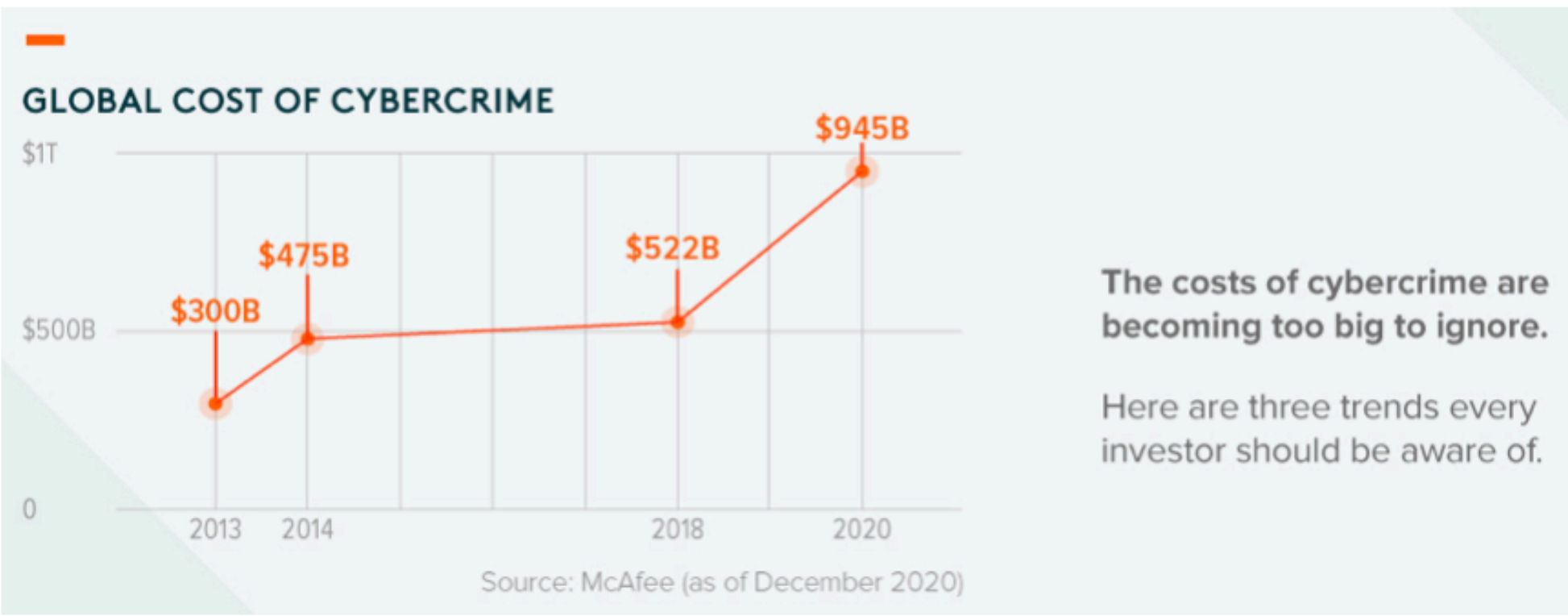Chart: Comparitech • Source: IC3 • Created with Datawrapper

INCREASING ATTAC

90 % of incidents and breaches are caused by human error due to <u>insufficient education</u> – costing hundreds of billions of dollars annually

ANNUAL REPORTED
DATA BREACHES IN THE U.S. AND RECORDS EXPOSED

The U.S. has seen at least 1,000 data breaches every year since 2016.

Source: ITC

As companies learn the hard way, no sector or organisation is immune to cybercrime.

Top Industries Targeted by Cybercrime

Financial Services 23.0%
Manufacturing 17.7%
Energy 11.1%
Retail 10.2%
Professional Services 8.7%
Government 7.9%
Healthcare 6.6%
Media 5.7%
Transport 5.1%
Education 4.0%

Source: IBM

Cybersecurity Jobs Report: 3.5 Million Openings Through 2025
Cybersecurity Ventures
November 11, 2021, 10:06 GMT

GLOBAL COST OF CYBERCRIME

$1T
$500B

$300B — 2013
$475B — 2014
$522B — 2018
$945B — 2020

The costs of cybercrime are becoming too big to ignore.

Here are three trends every investor should be aware of.

Source: McAfee (as of December 2020)

AVERAGE COST OF A DATA BREACH
USD
$6M
$3M
0

$3.7M
$5.5M

% of employees working remotely

Less than 10%
81–100%

Source: IBM (as of July 2021)

Brookings, 2017
545 Occupations
90% Of American Jobs
0% Do not require digital skills

At last: a business case for hiring POTENTIAL.

Failure of Imagination

will be the biggest human challenge with regard to training.

Curious will win.

Partnerships & Platform

2023 Women of Cyber Sport (33% of players)

Courtesy of Cyber Sports Limited www.cybersportsltd.org

Specific Skills for AI

Statistics
Programming
Mathematics
Data Science
Machine Learning
Natural Language Programming
Computer Vision
Ethics
Strong Communication Skills* (tech/non-tech)
Problem Solving Skills

TRANSFERABLE SKILLS
INTUITION
RISK TAKING
ENTREPRENEURIAL THINKING
LEARNING/UNLEARNING

cybersportsltd.org

CYBER SPORTS LIMITED

Not-For-Profit - Cyber Education through Sport

About   Challenges   Contact

Log In

LEARNING TO DEFEAT HACKERS THROUGH GAMING!

Inclusive Games for Every Player

99% OF JOBS USE TECHNOLOGY TODAY
EVERY STUDENT SHOULD BE CYBER AWARE

Cyber Sports   Esports

Got any questions? I'm happy to help.

Our responsibility is to be good stewards of technology to minimize the deleterious effects on humanity.

linkedin.com/in/corizuppo/

Many thanks to:

GLOBAL SCIENTIFIC GUILD
Where Wisdom Meets Science

Panelists:
Dr. Dawna Drum, PhD
Dr. Jeffrey Daniels, PhD

The Team at
Cyber Sports Limited
cybersportsltd.org

Intern:
Mr. Andrew Makowski

Abstract Content Edit:
Mr. Stev Gregory

□△○ | brick house blue