Trends in Technology Education Series

2019: The Year of Data

HOW DATA IS DRIVING DECISIONS IN CYBERSEC, PRIVACY, AND ANALYTICS

PRESENTED BY "JEDI" JON O'KEEFE

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Introduction

Jon O'Keefe
Technology Education Jedi
Logical Operations
jedijon@logicaloperations.com

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500 Billion Internet Connected Devices by 2030

IDC: Expect 175 zettabytes of data worldwide by 2025

By 2025, IDC says worldwide data will grow 61% to 175 zettabytes, with as much of the data residing in the cloud as in data centers.

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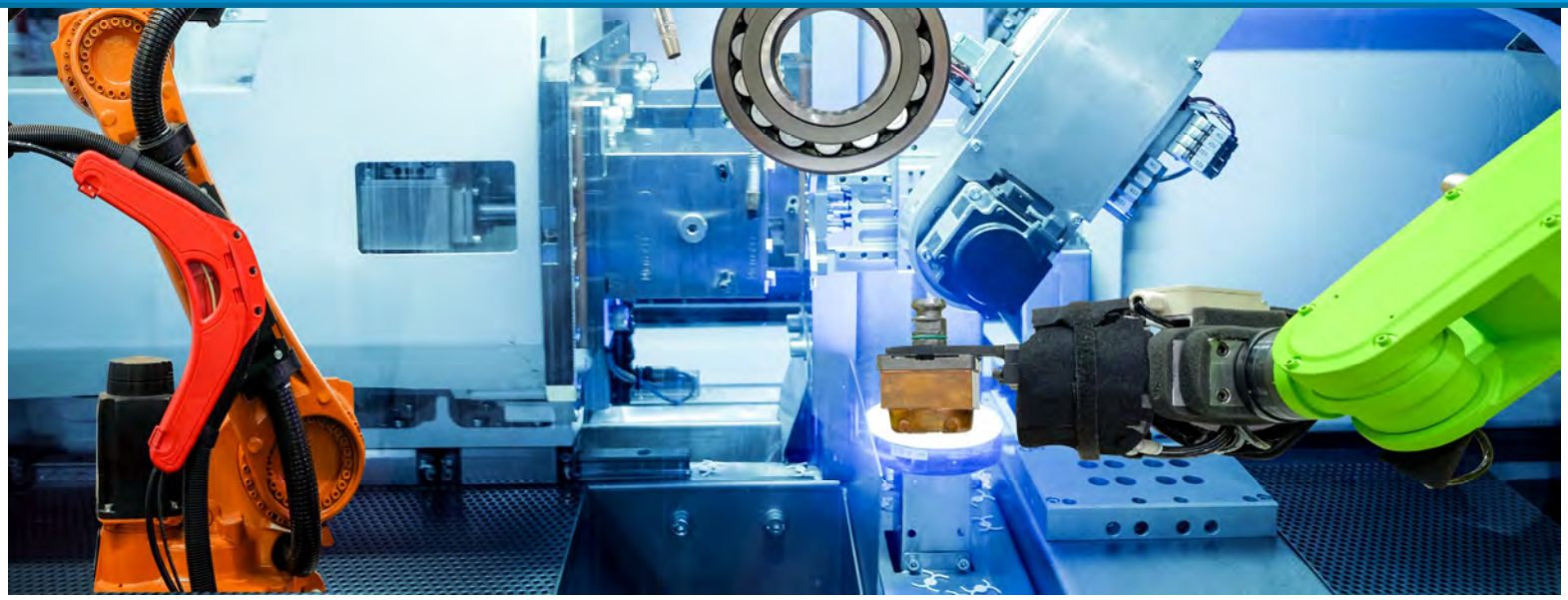
GLOBALLY 375 MILLION Employees may need to switch occupational categories by 2030, and will need proper training to do so



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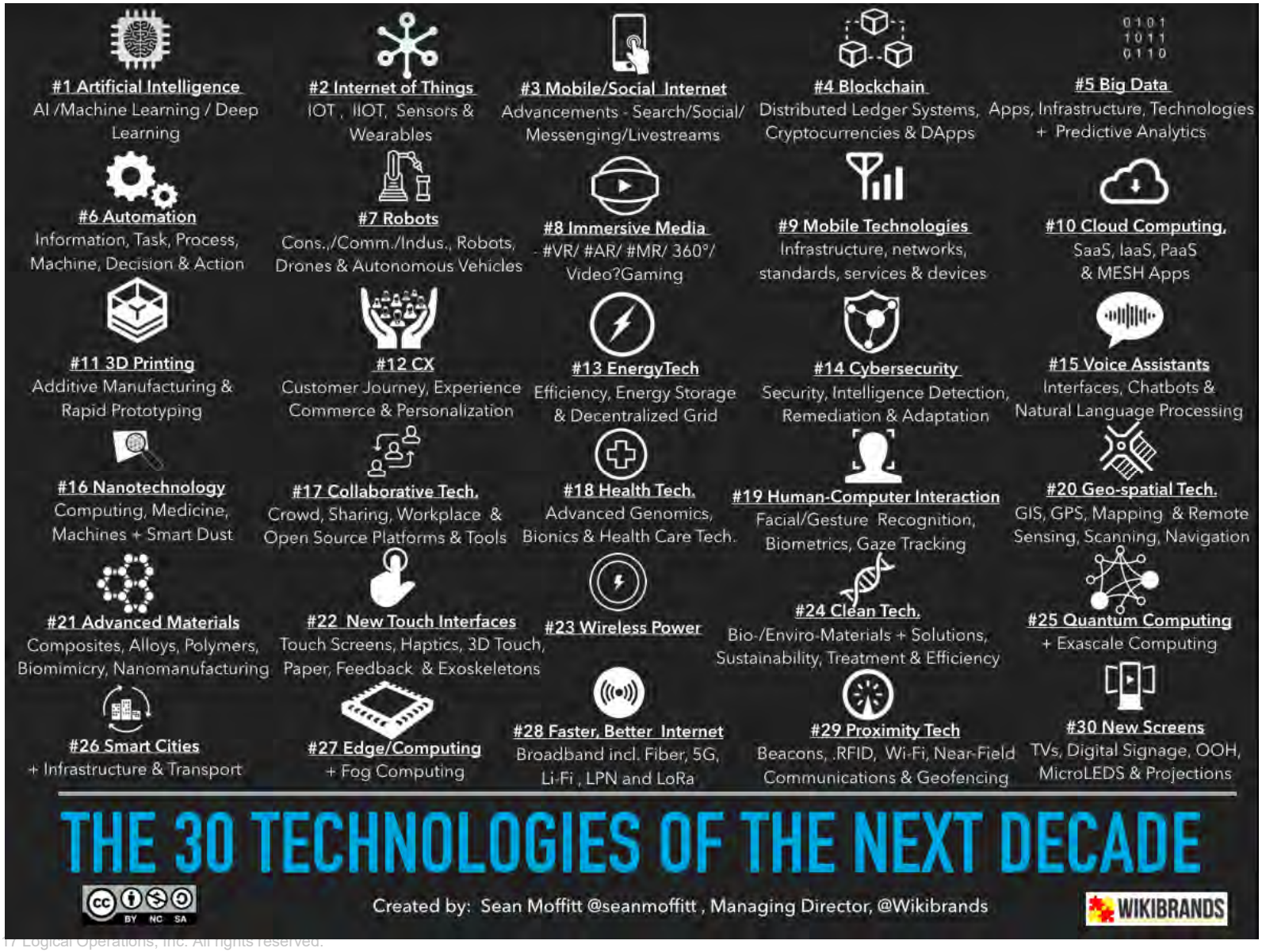
Top 30 Technologies of the 2020s



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Summary

500 Billion Internet Connected Devices – Symantec

175 Billion Terabytes of Data and Growing – IDC

375 Million People Displaced by AI – Forbes.com

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2019 is the Year of Data

"The world's most valuable resource is no longer oil, but data."

7 of the 10 most valuable companies in the world are built on tying data to human behavior

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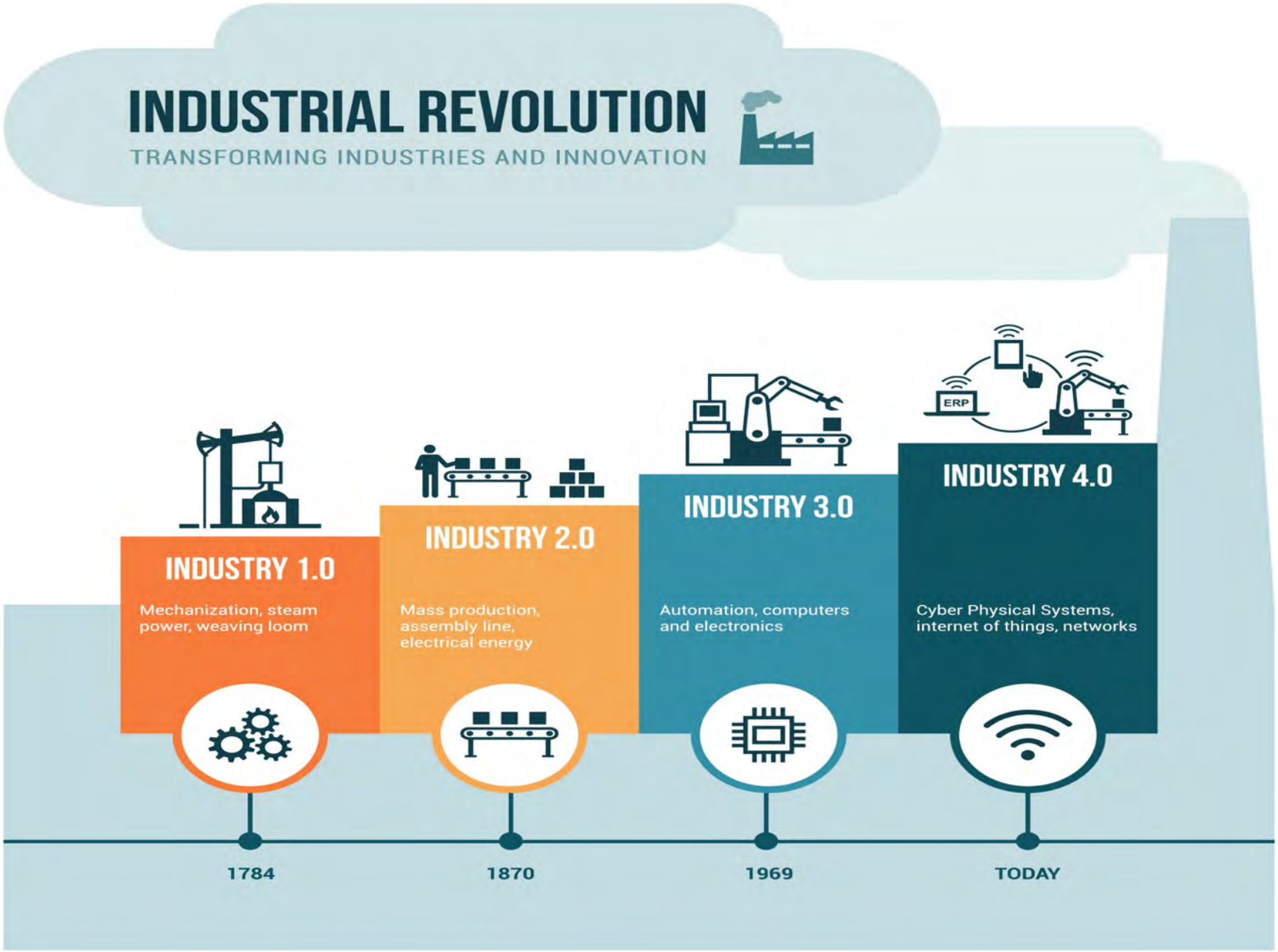
INDUSTRIAL REVOLUTION

TRANSFORMING INDUSTRIES AND INNOVATION



The Fourth Industrial Revolution

State of Training in 2019

EMPLOYEE TRAINING
and development is the biggest HR focus area in 2019

IT Certifications will be a $3 Billion Industry in 2019

66 PERCENT
of all organizations agree or strongly agree that retention is a growing concern **(up from 59 percent last year)**

NEARLY HALF
of all organizations say that strong job market has increased their turnover rate

Sources: Payscale CBP Report and McKinsey Global Institute

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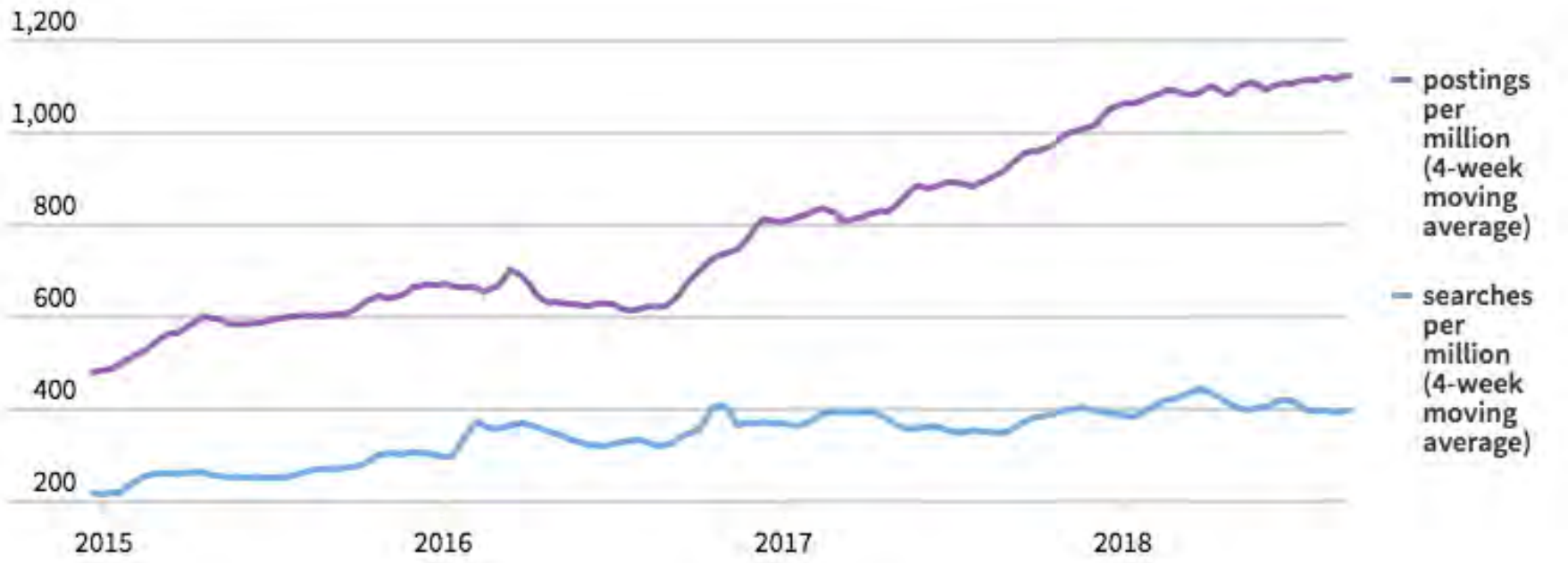
Data Science and Analytics

Data Science has taken off like discounted Nutella in a European supermarket – *Clint Chegin, Product Scientist at Indeed*



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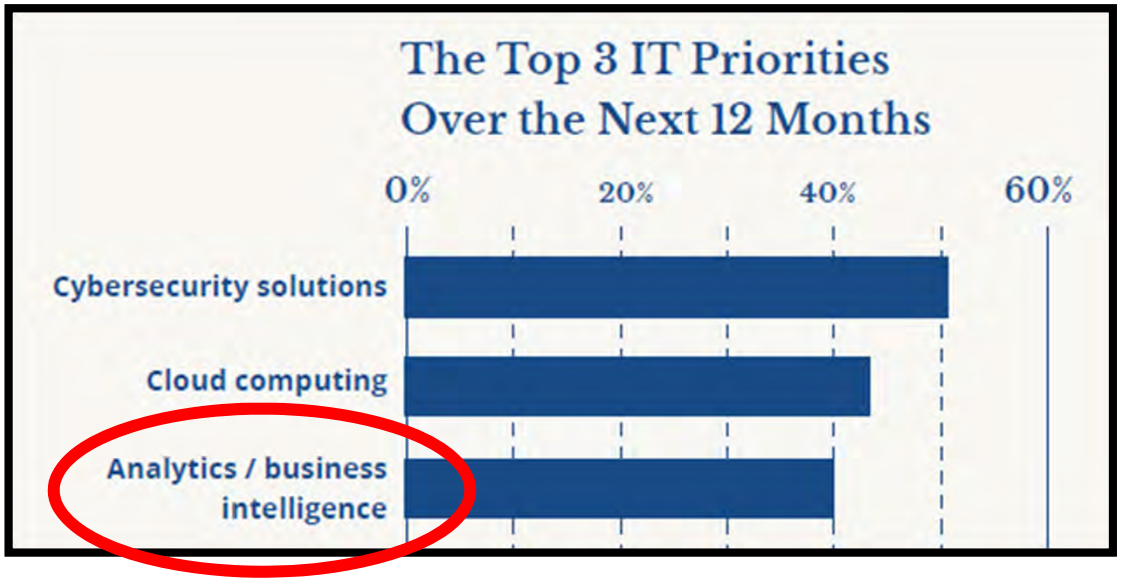
Recent 2019 State of IT Training Report



Source: NH 2019 State of IT Training Report

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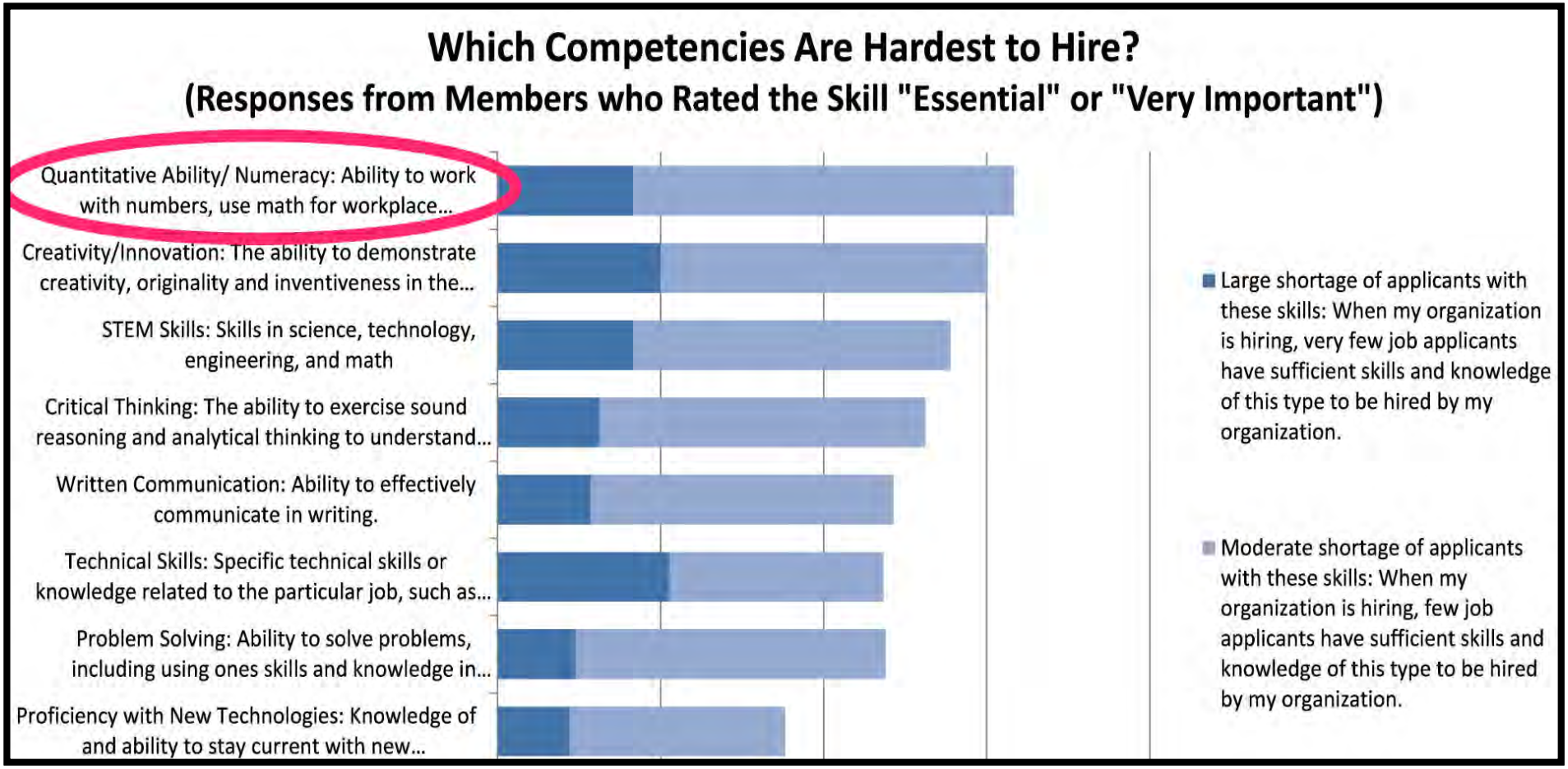

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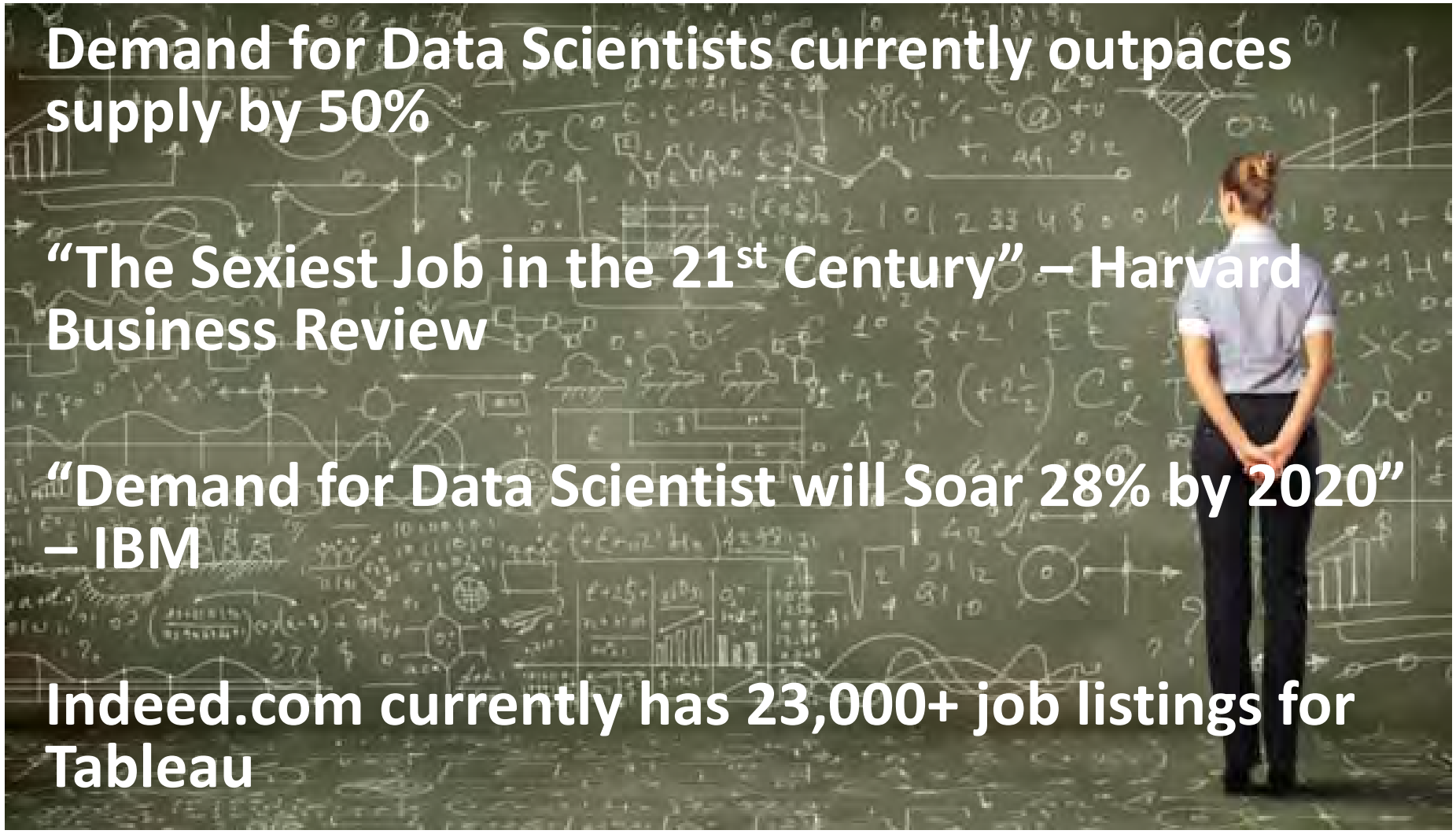
Source: Committee For Economic Development 2019 Report

Data Scientist in 2019



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Case Study - Chipotle

Saving 10,000 hours per month

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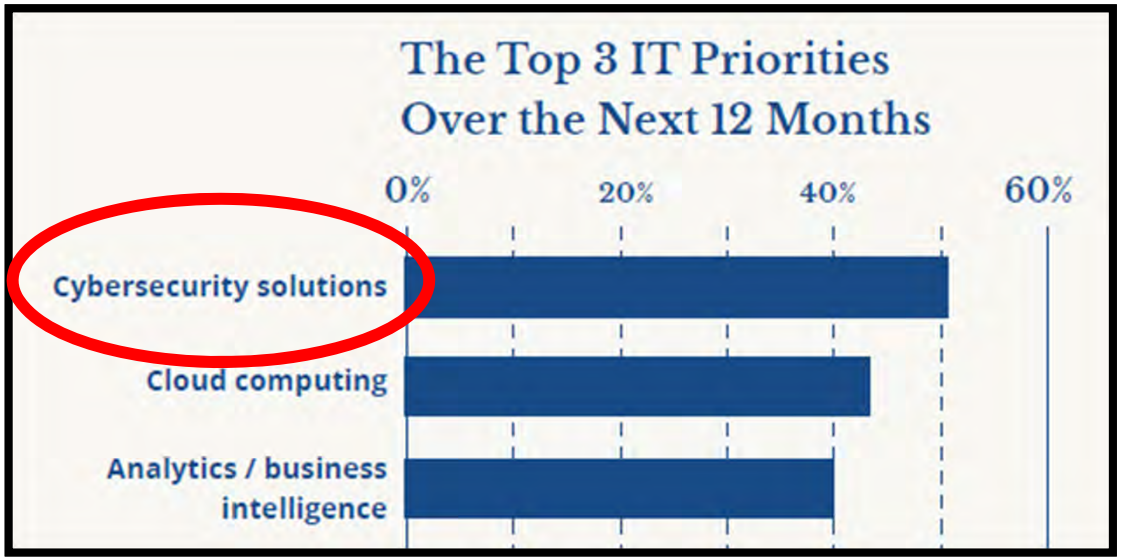
Cybersecurity

Recent 2019 State of IT Training Report



Source: NH 2019 State of IT Training Report

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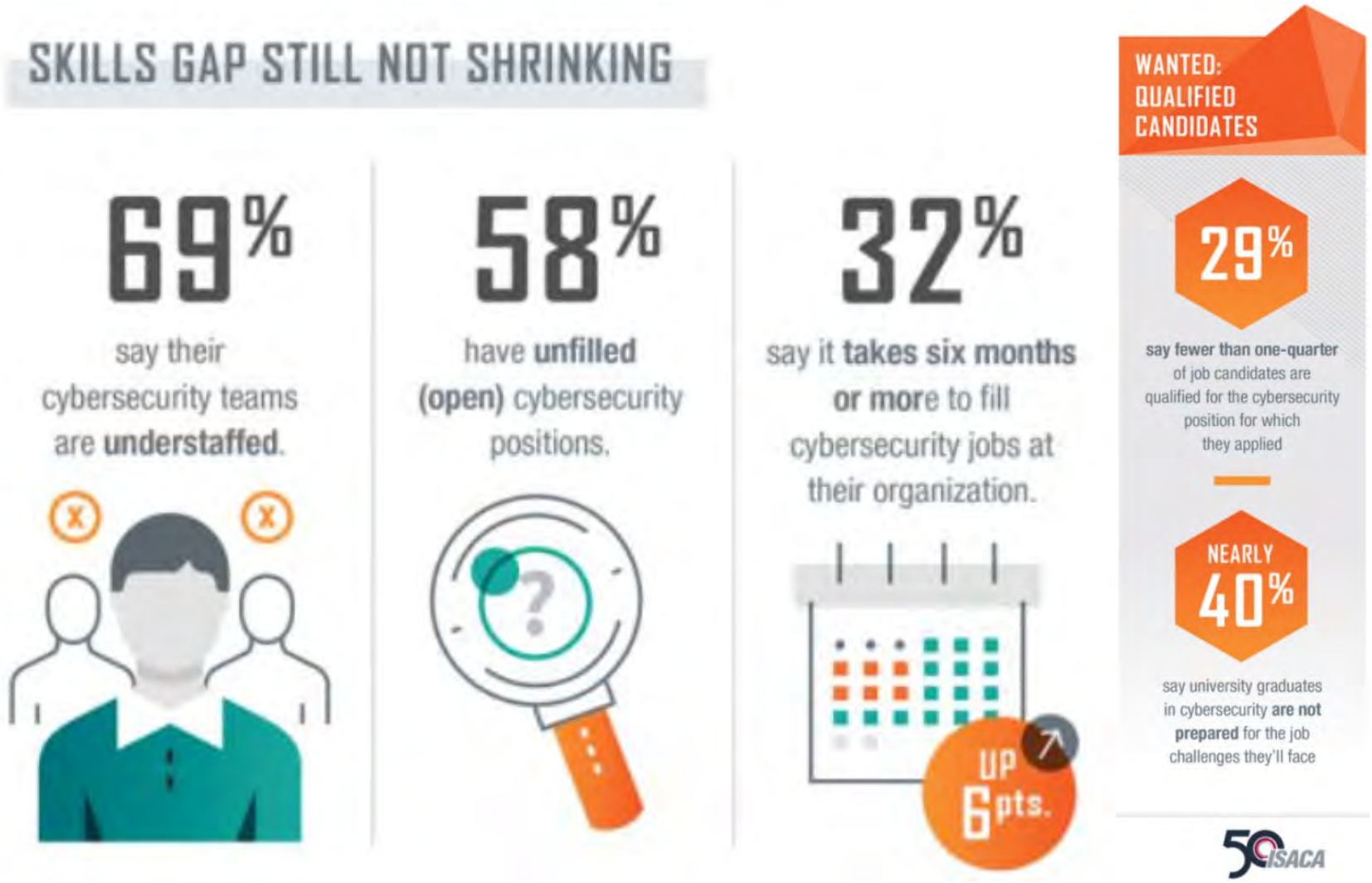
Cybersecurity Skills Gap



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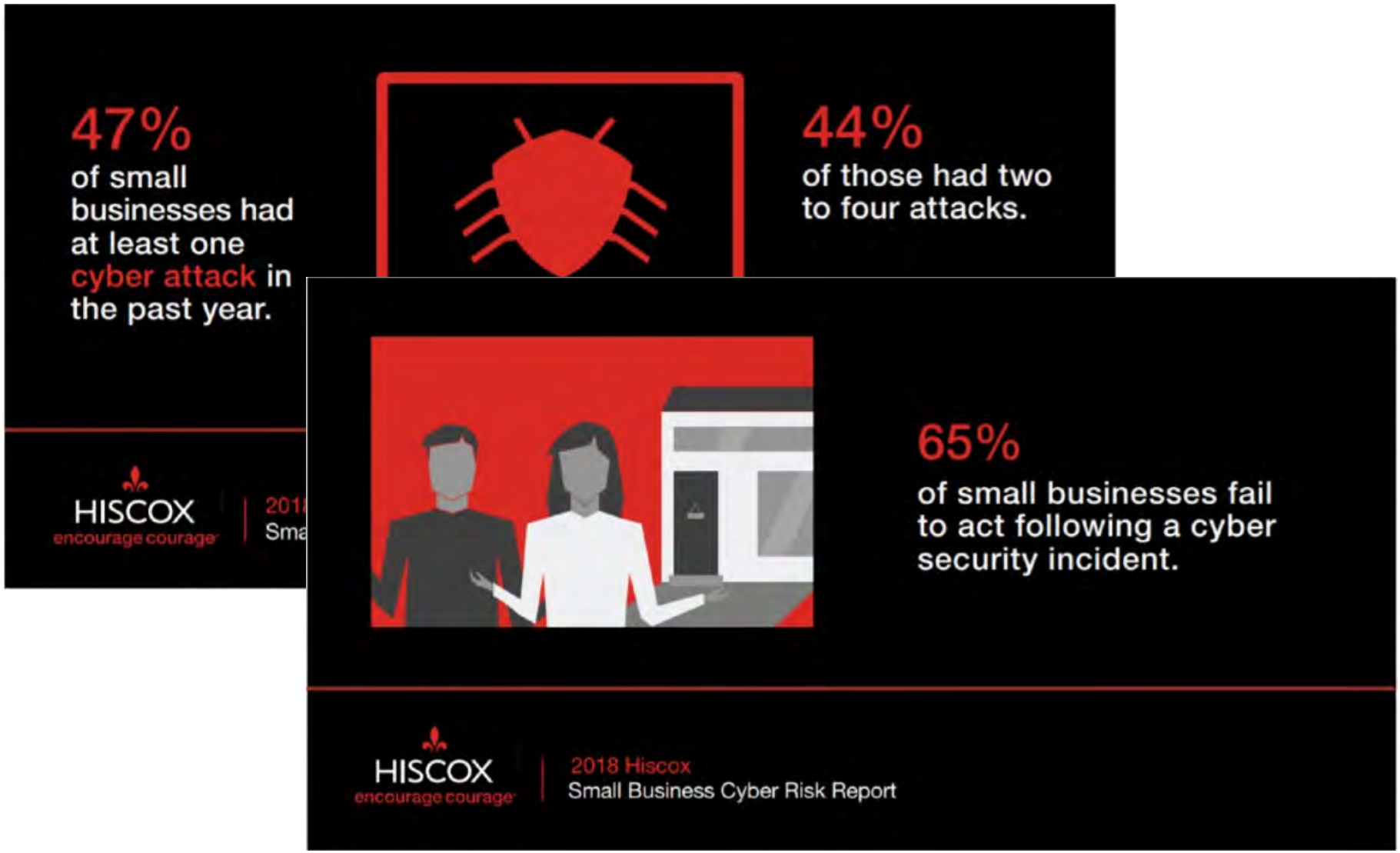
Cybersecurity in 2019



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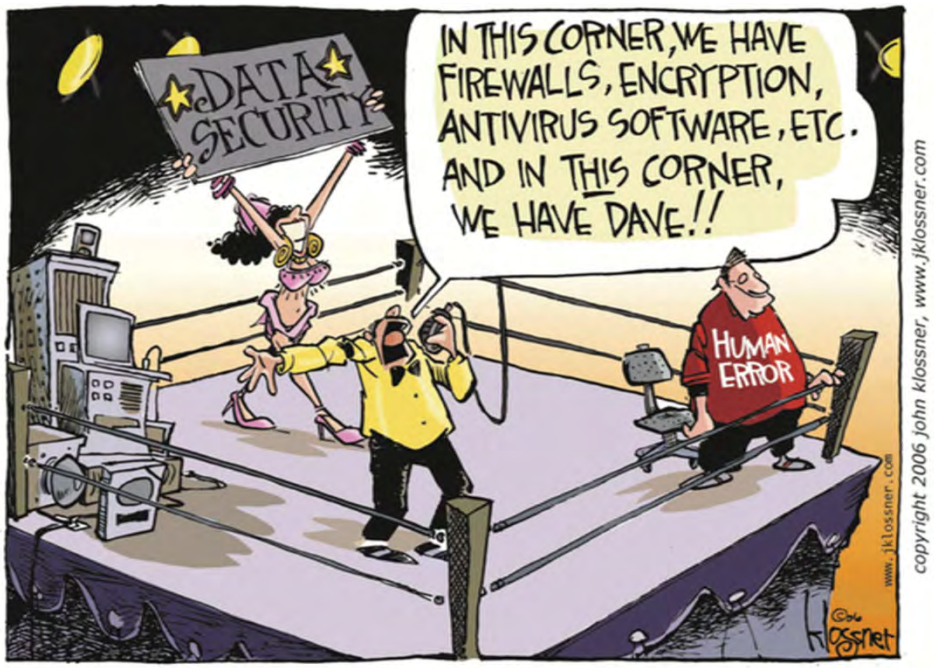
The Human Element



Human error accounts for **90%** of all cybersecurity incidents

- TechRadar.com

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Data records lost or stolen since 2013

https://breachlevelindex.com/
(April 2019)

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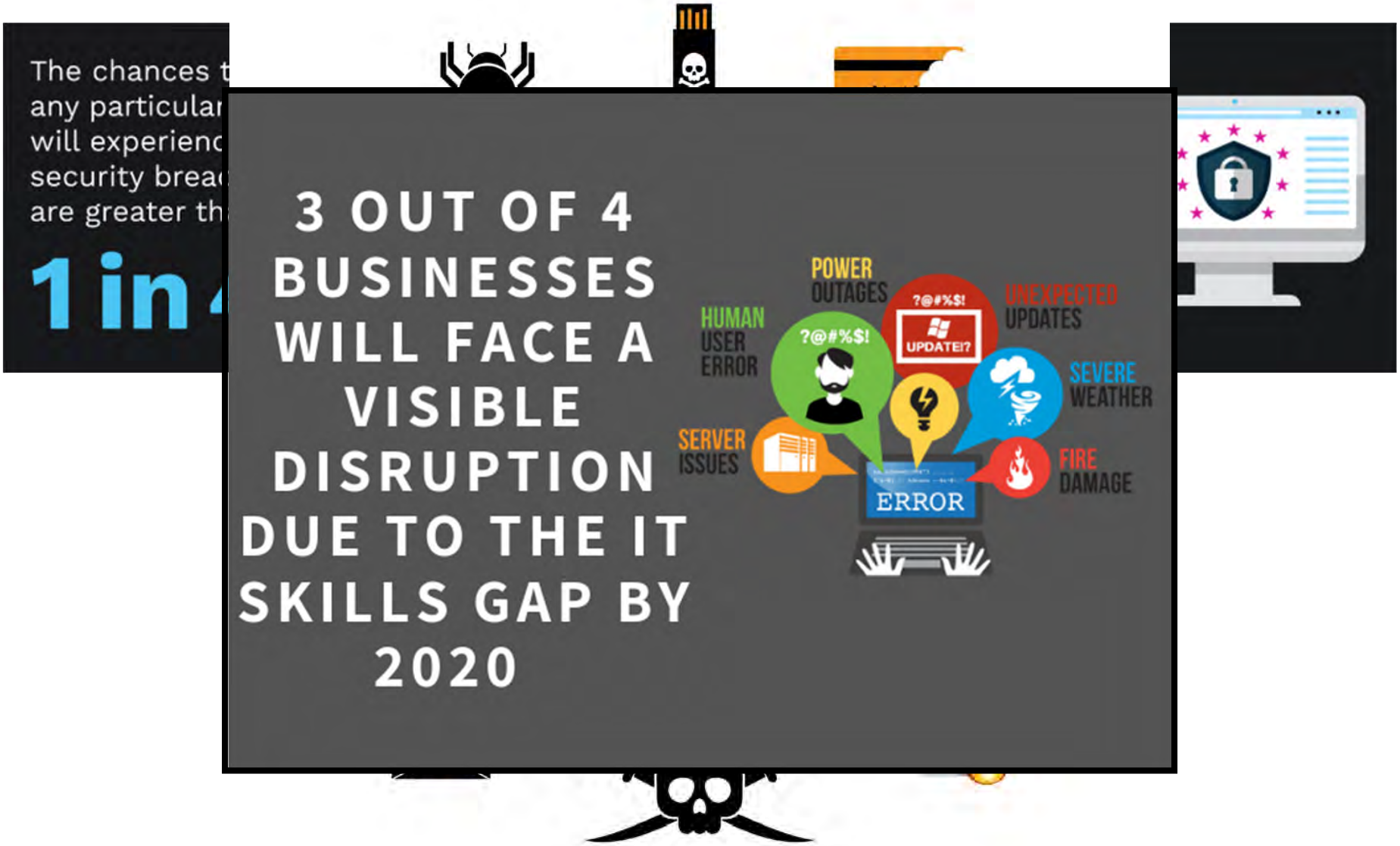
Cybersecurity in 2019



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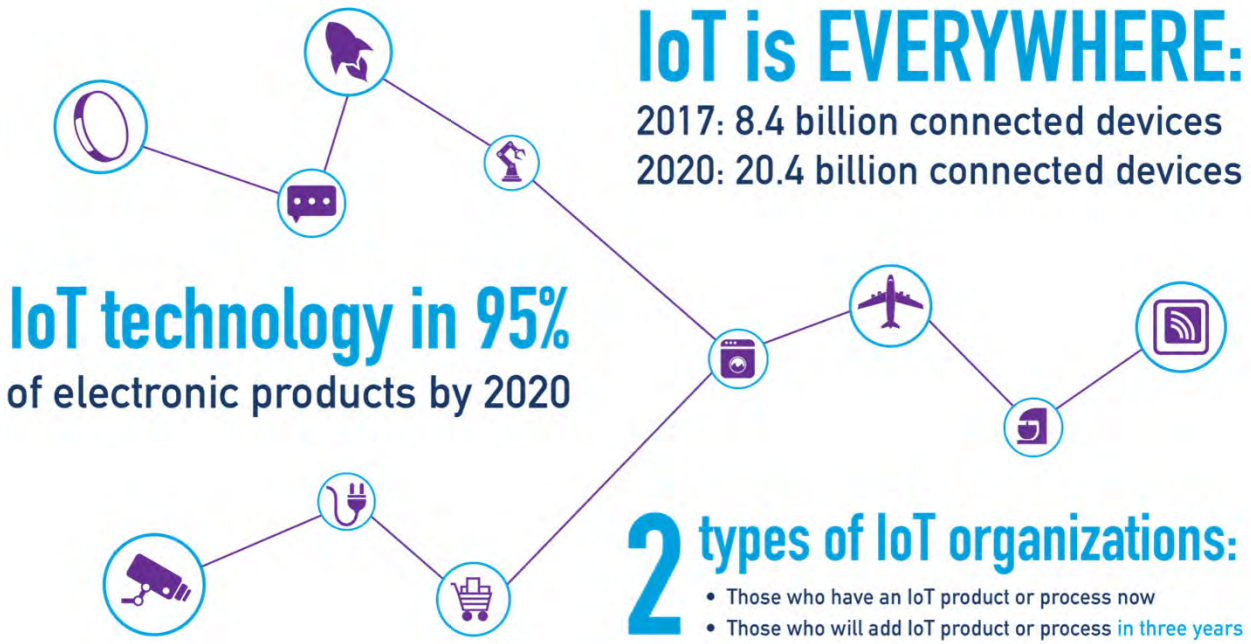
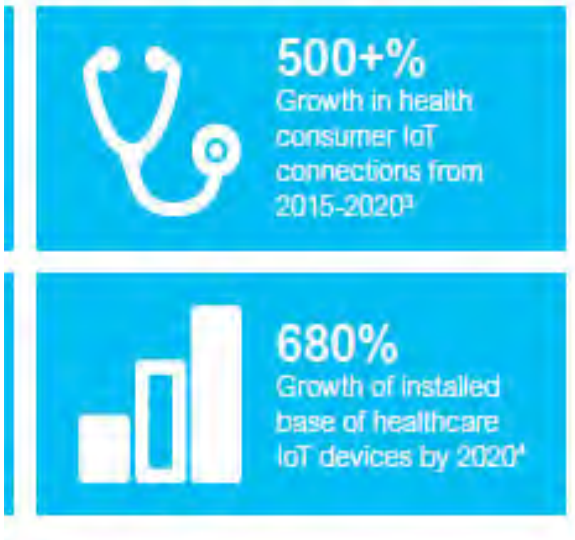
IoT

IoT in 2019





IoT in Healthcare is a $534 Billion Market by 2025

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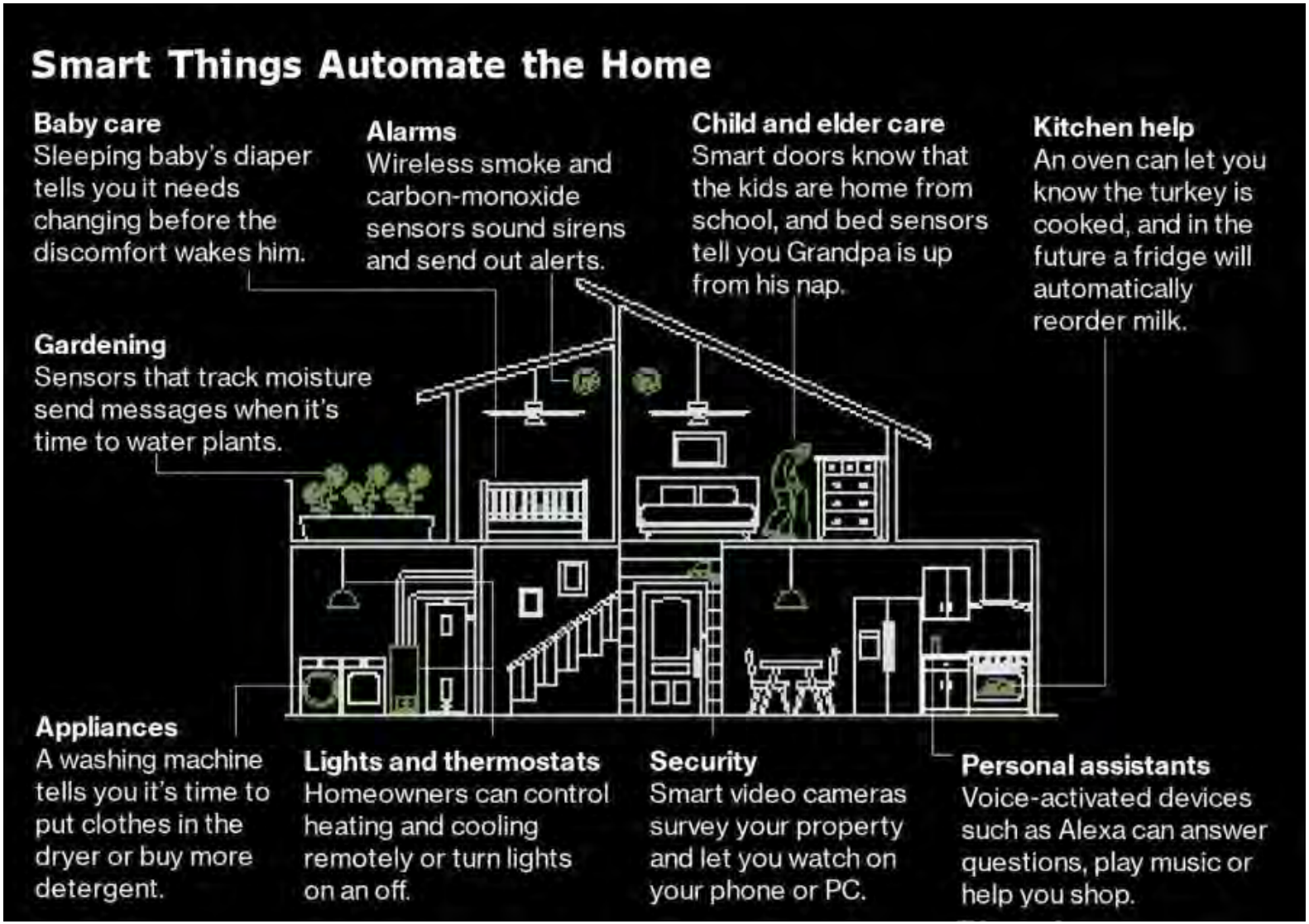

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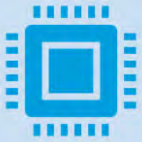
Fewer than 20% of risk professionals can identify a majority of their organization's IoT devices – Ponemon Institute

IoT devices typically attacked within 5 minutes – NETSCOUT's Threat Intelligence Report



76% of risk professionals think IoT leaves them at risk of cyber attacks – Ponemon Institute

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ONLY 14% OF IOT PLATFORMS ARE ENTERPRISE READY

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Mirai botnet attack

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TOP PASSWORDS USED IN IOT ATTACKS (YEAR)

PASSWORDS	PERCENT
123456	24.6
[BLANK]	17.0
system	4.3
sh	4.0
shell	1.9
admin	1.3
1234	1.0
password	1.0
enable	1.0
12345	0.9

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Types of botnet attacks

Price Scraping	Content Scraping	Account Takeover
Account Creation	Credit Card Fraud	Denial of Service

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Data Privacy

Data Privacy in 2019

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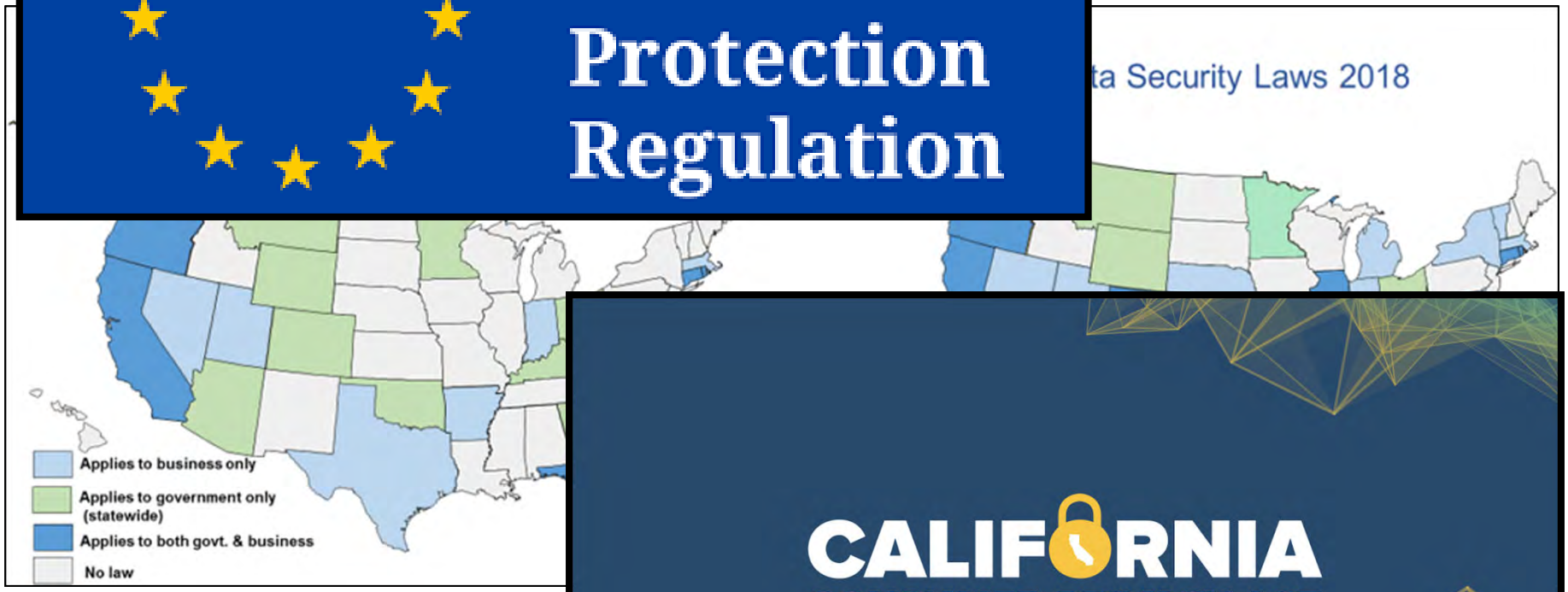
Key Privacy Laws

General Data Protection Regulation



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6 Key Features of GDPR

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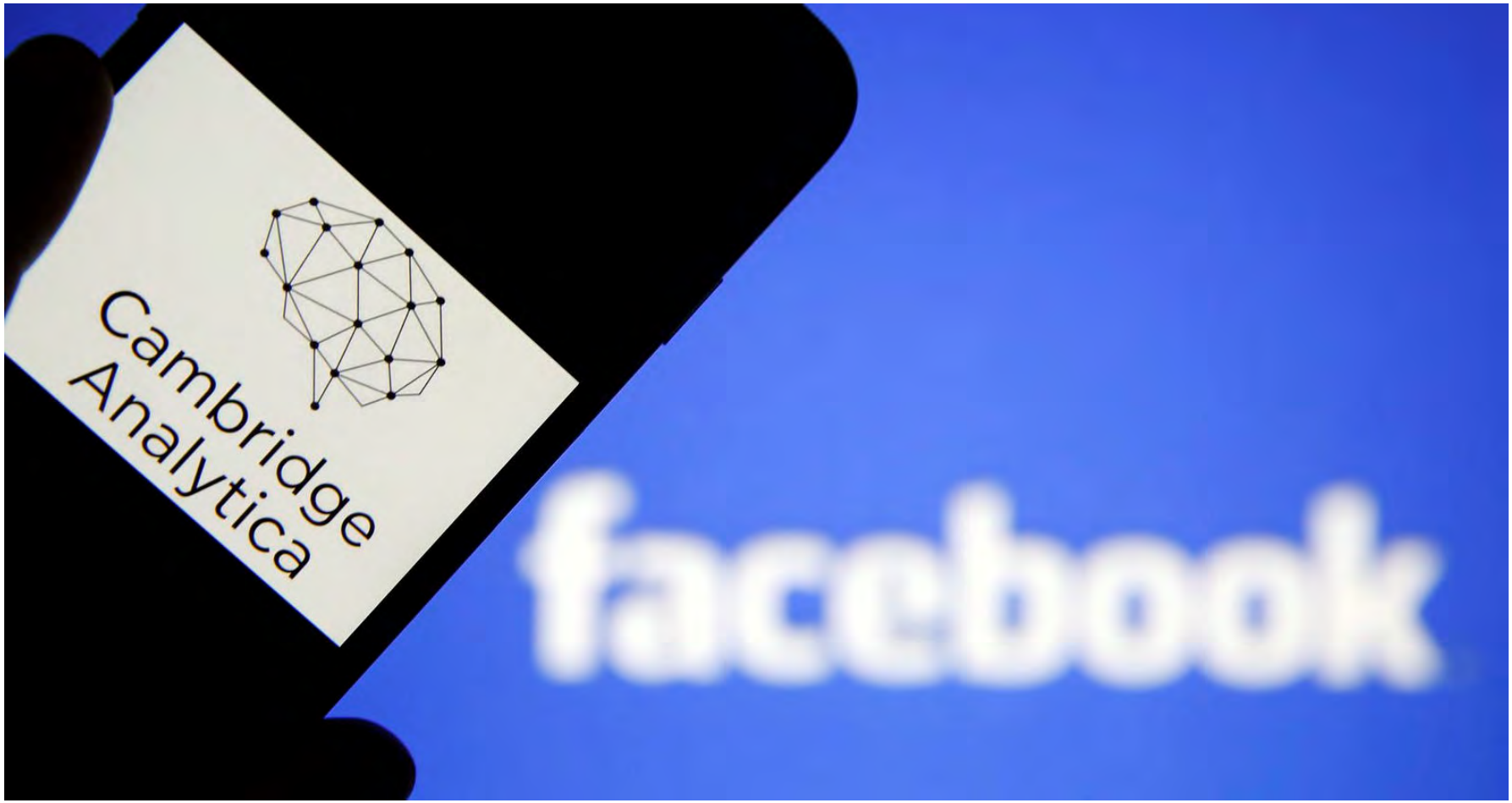

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This is Your Digital Life

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This is Your Digital Life

- Your public FB profile, including Name and Gender
- Birthdate
- Current City
- Photos
- Email Address
- Facebook Messages
- Friends list
- Posts and Posts on other users' timelines

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300k people used the app, but 87m profiles were harvested

FB friends had no way of knowing their data was being harvested

Data shared with numerous entities including SCL Elections Limited (Cambridge Analytica)

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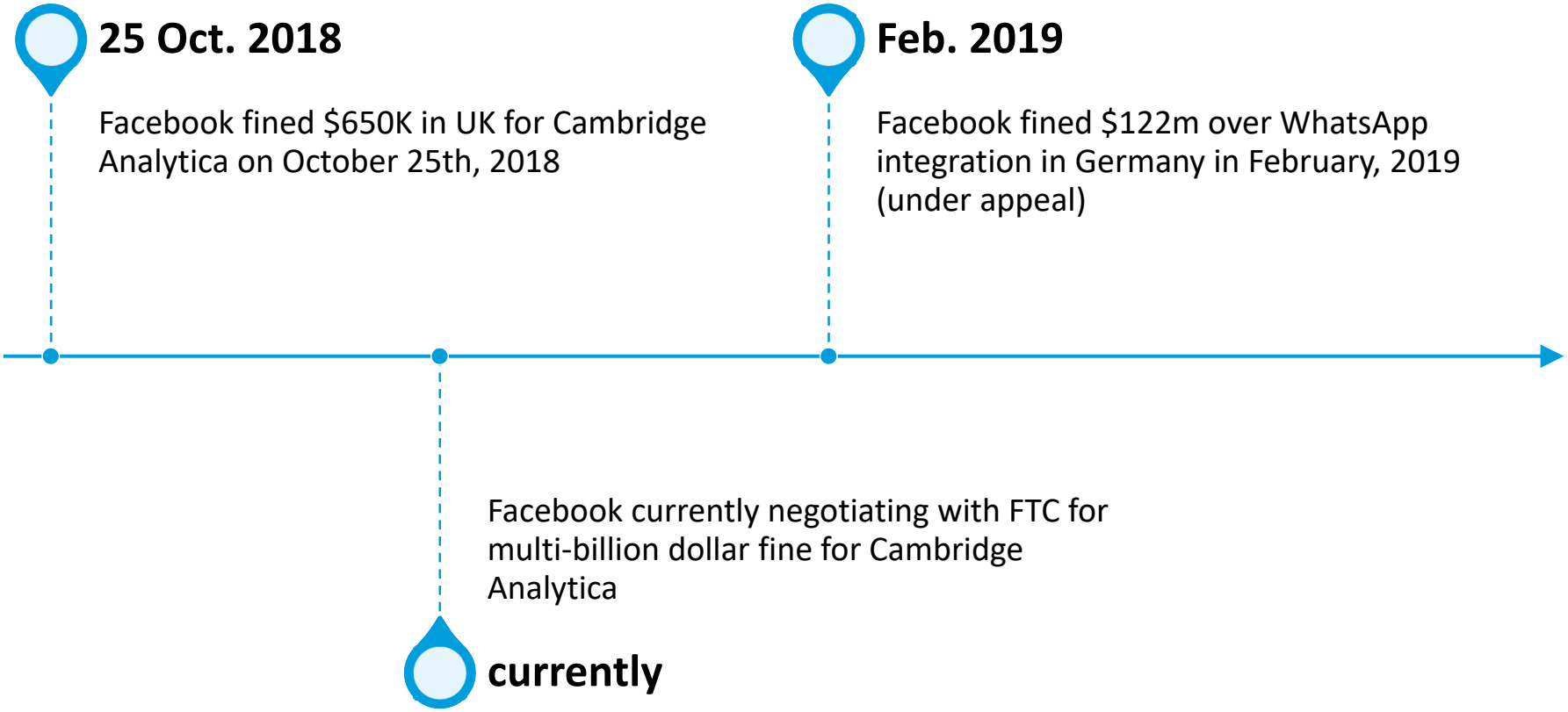

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https://www.youtube.com/user/LogicalOperations/

Five Good Questions
Trends in Technology Education

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Questions?

JediJon@logicaloperations.com
(585)350-7073
www.linkedin.com/in/jonokeefe

Thank You

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