

STORAGE DEVELOPER CONFERENCE



BY Developers FOR Developers

Virtual Conference
September 28-29, 2021

A SNIA[®] Event

Privacy's Increasing Role in Technology

Presented by Cathleen Scerbo, VP, Chief Information Officer
International Association of Privacy Professionals

The Mission of the
IAPP is to Define,
Promote and
Improve the Privacy
Profession Globally.



International Assoc. of Privacy Professionals

Numbers At A Glance (as of 9/14/21)

71,953 members
in 155 countries



1062
corporate
members



nearly **5,000**
volunteers gave
20k hours in 2020

25,777
KnowledgeNet
attendees (ytd)



204 employees



training in **48**
countries



31,122
active certifications



2167+
privacy
tools &
resources





“The unprecedented speed and scale of technology innovation and progress in our era has meant new features and capabilities run ahead of the controls and laws we rely on to protect privacy.”

Julie Brill

Microsoft, Corporate VP, Chief Privacy Officer, and Deputy
General Counsel for Global Privacy and Regulatory Affairs



Playing on a boat moored outside the bay in Solovki, a holy place to the Russian Orthodox Church, which is a central pillar of support for President Vladimir V. Putin.

PHOTOGRAPHS BY SERGEY PONOMAREV FOR THE NEW YORK TIMES

U.S. DEFENSE PACT WITH AUSTRALIA ENRAGES FRANCE

RIFT OVER CHINA POLICY

Nuclear Submarine Sale Raises Stakes in the Pacific Region

By ROGER COHEN

PARIS — President Biden's announcement of a deal to help Australia deploy nuclear-powered submarines has strained the Western alliance, infuriating France and foreshadowing how the conflicting American and European responses to confrontation with China may redraw the global strategic map.

In announcing the deal on Wednesday, Mr. Biden said it was meant to reinforce alliances and update them as strategic priorities shift. But in drawing a Pacific ally closer to meet the China challenge, he appears to have alienated an important European one, aggravating already tense relations with Beijing.

France on Thursday reacted with outrage to the announcements that the United States and Britain would help Australia develop submarines, and that Australia was withdrawing from a \$66 billion deal to buy French-built submarines. At its heart, the diplomatic storm is also a business matter — a loss of revenue for France's military industry, and a gain for American companies.

Jean-Yves Le Drian, France's foreign minister, told Franceinfo radio that the submarine deal was a "unilateral, brutal, unpredictable decision" by the United States, and he compared the American move to the rash and sudden policy shifts common dur...

Trek in Search Of How Putin Shapes Russia

By ANTON TROIANOVSKI
She walked into the cafe wear...

Want to Drive A School Bus? You're Hired.

By GILIA HEYWARD
In Moscow, the City of...

Battle for Users' Privacy Will Transform Internet

By BRIAN X. CHEN

SAN FRANCISCO — Apple introduced a pop-up window for iPhones in April that asks people for their permission to be tracked by different apps.

Hundreds of Billions at Stake for Tech Titans and Advertisers

cial networking services to people without charge. But in exchange, people were tracked from site to site by technologies such as "cookies," and their personal data was used to target them with relevant marketing.

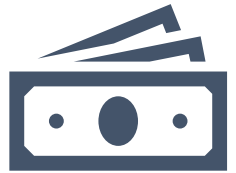
The New York Times

September 17, 2021

Today, Every Org is in Some State of Digital Transformation



70% of fortune 500 Companies in the US & EU have a digital strategy in place or are working on one.



IDC projects a worldwide spending of **\$2.3T** on digital transformation by 2023.



Digital transformation will represent **53%** of all **technology** investments, globally.

Customer Data is at the Heart of Digital Transformation



There are **31 billion** connected devices In the world today.

By 2025, that number is projected to be **75 billion**.



The rate of adoption of new technologies has enabled the **creation of data** at a rapid pace.

Every minute we voluntarily create and share data.

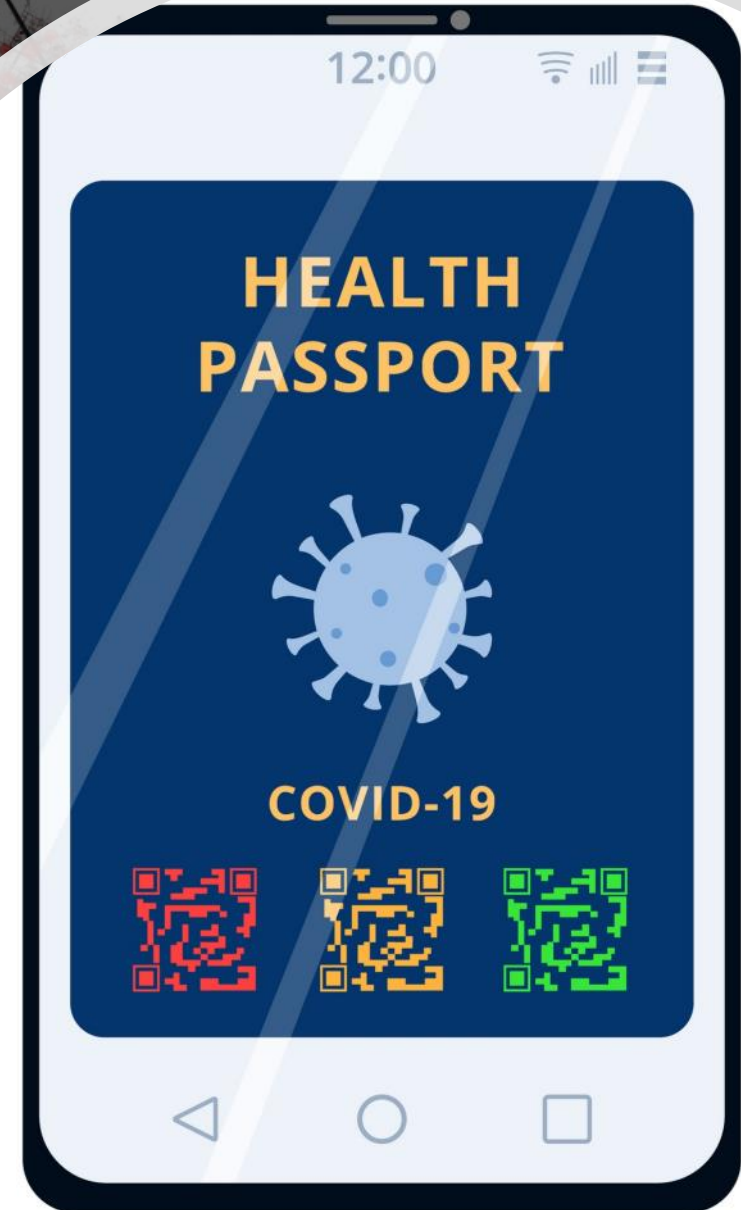
Currently estimate there are **40** Billion Trillion bytes of data.

Over **90%** of the data has been generated in the past 2 years.



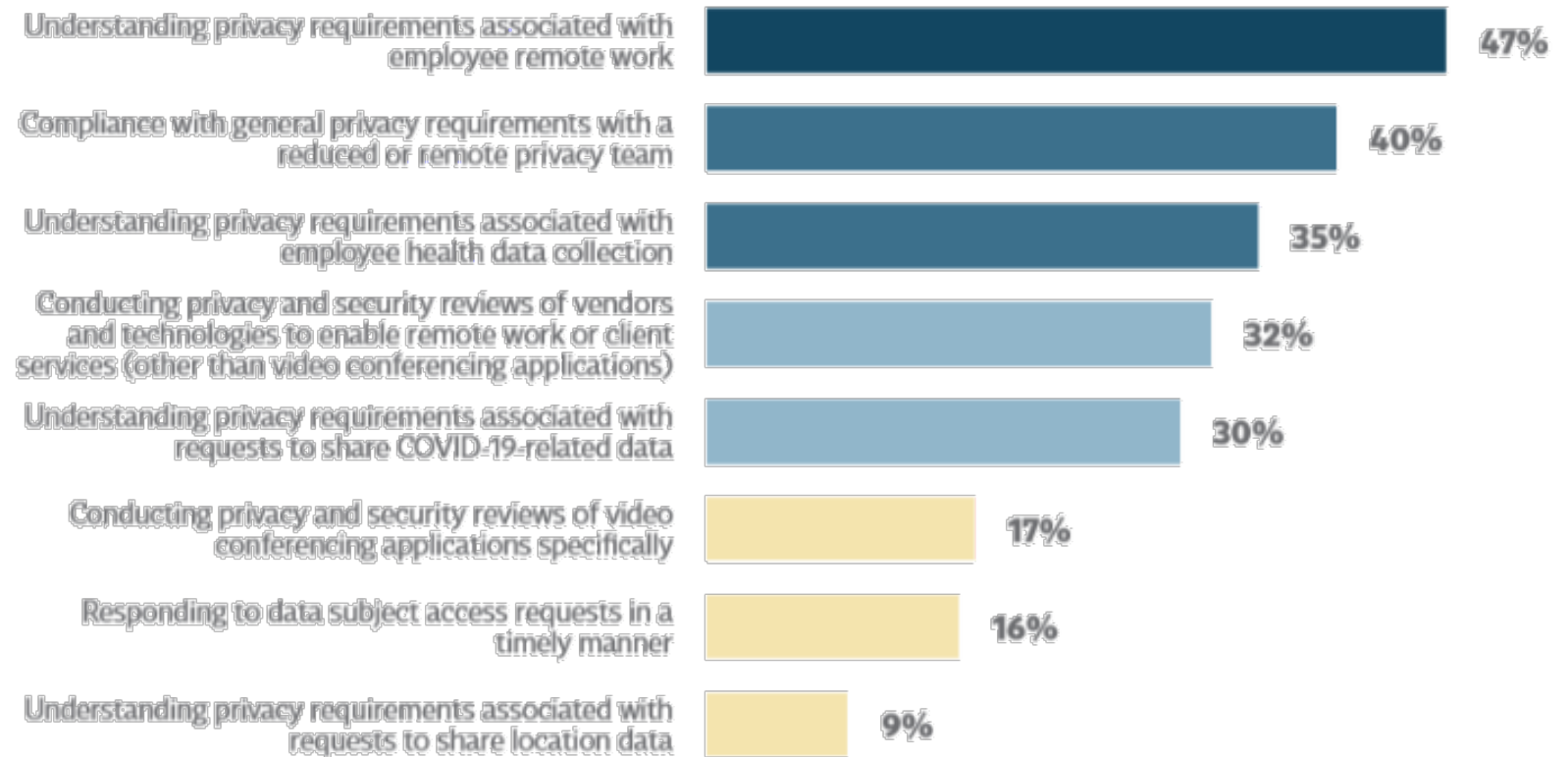
Emerging Covid-19 Tech impacts Privacy:

- Geolocation for contact tracing
- Health Screening for employees
- Immunity Passports



Challenges of Remote Work

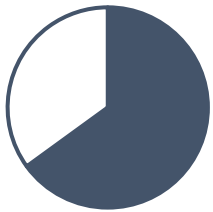
Navigating the WFH environment is by far the **biggest challenge** for privacy professionals.



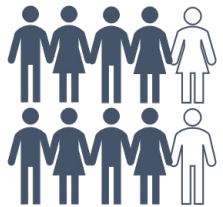
Enter Data Privacy Legislation



60 jurisdictions around the world have enacted or proposed postmodern privacy and data protection laws

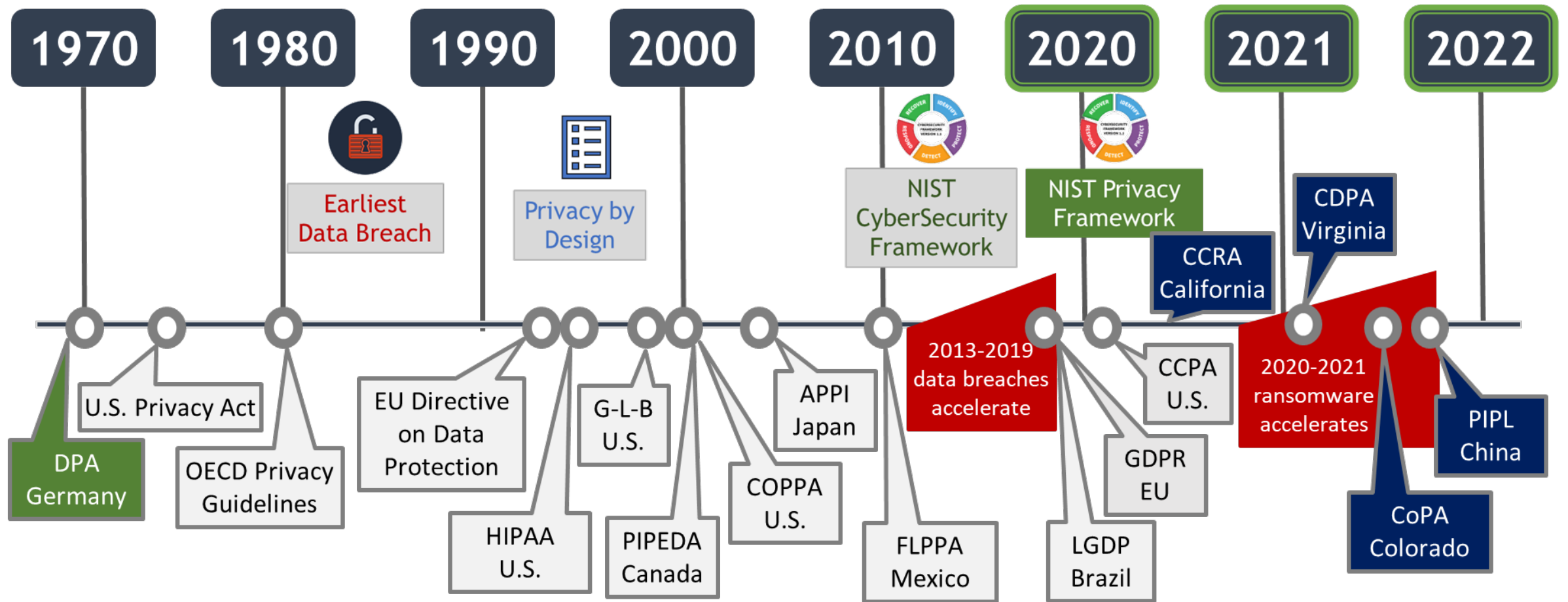


By 2023, over **65%** of the world's population will have its personal information covered by modern privacy regulation



In the U.S. alone, **80%** of consumers support federal data privacy legislation.

Accelerating Expansion of Privacy Regulation



What happens on your iPhone, stays on your iPhone.

apple.com/privacy

We all have our own privacy settings

So when it comes to your privacy on Facebook, we think you should have the same control. From the ads you see to your personal details, choose the settings that are right for you at facebook.com/privacy

Public

Your life is your business. Not ours.

Firefox fights for you.

161 countries have ID systems based on digital technology, reinforcing the need for robust privacy and data protection safeguards.

Source: 2018 ID4D Global Data
id4d.worldbank.org

Fake accounts are not your friends.

Facebook is disabling fake accounts. Because this is a place for friends, not for the things that get in the way.

Clickbait is not your friend.

Facebook is changing so you see more from your friends, and less of the stuff that gets in the way.

Fake news is not your friend.

Facebook is working hard to detect and reduce the spread of fake news. Because this is a place for friends, not for the things that get in the way.

Privacy as a Differentiator



Privacy, Security and Data Protection



Privacy is about content, context and usage. It requires ethics and trust.

Security and Data Protection are about technical “assurances”. They require rules and restrictions.

Key Principles of Privacy



Minimization

collect only what you need
and remove it when you
don't need it anymore



Notice & Consent

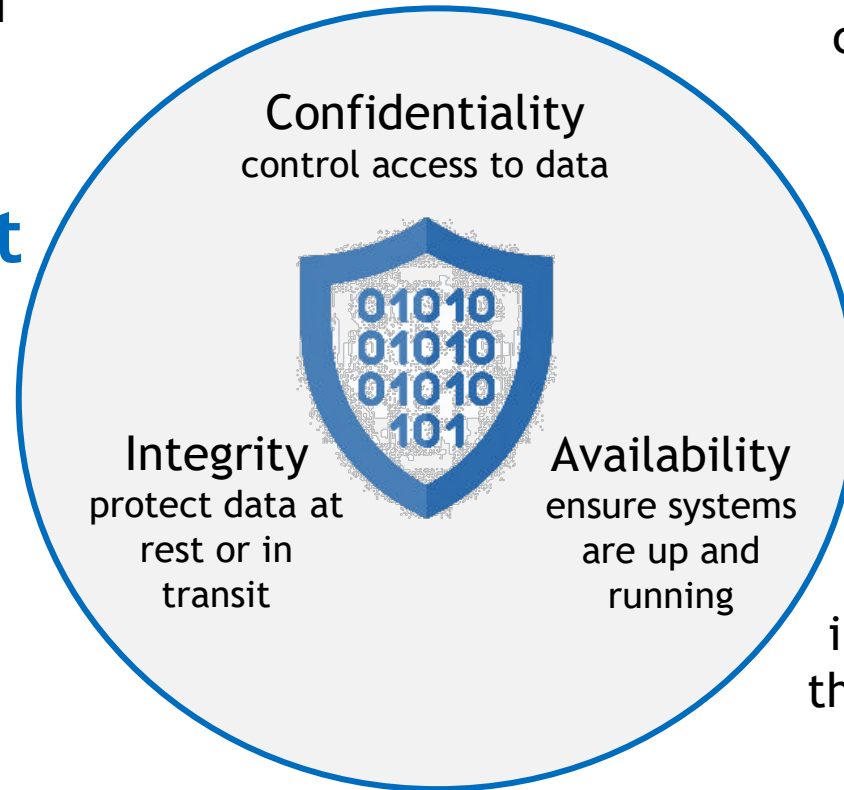
tell people what you're
doing with their data **AND**
get their consent **NOW**



Accountability

a data controller is
accountable for complying
with privacy principles

Security



Purpose Limitation



collect only for specified,
legitimate & explicit
purposes only & do not
use for any other
purpose

User Control



ensure people
can control their data
including, in certain laws,
the “right to be forgotten”

Privacy by Design

- Privacy Laws require compliance with the principles of Privacy by Design
- Impacts the way to plan, design, build, test and maintain applications
- Affects the way we vet and integrate Third Party Software



PROACTIVE, NOT REACTIVE PREVENTATIVE, NOT REMEDIAL

The approach anticipates and prevents privacy invasive events before they happen. It does not wait for an event or remediate after an event happens.



PRIVACY AS THE DEFAULT SETTING

No action is required on the part of the individual to protect their privacy - it's built into any given IT system or business practice.



PRIVACY EMBEDDED INTO THE DESIGN

IT Systems and business practices embed privacy into the design and architecture. Privacy is a built-in essential functionality. It is not bolted on or added after the fact.



FULL FUNCTIONALITY - POSITIVE-SUM. NOT ZERO-SUM

All legitimate objectives are included, avoiding the false dichotomies of Either/OR. Instead, it builds with Both/And.



END-TO-END SECURITY

Strong security measures extend throughout the entire lifecycle of the data involved. All data are security retained and securely and timely destroyed at the end of the process.



VISIBILITY & TRANSPARENCY


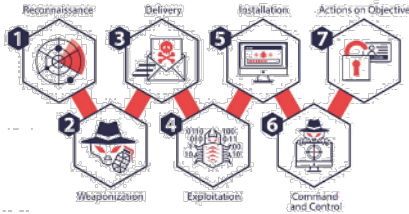


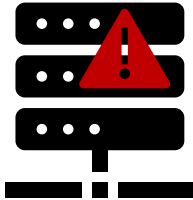



Whatever business practice or technology involved, its components are visible to users and providers. It's operating according to stated promises and can be verified



RESPECT FOR USER PRIVACY

With the individual in mind, solutions offer strong privacy defaults, appropriate notice and user-friendly options. It is user-centric.

Where Privacy and Security Meet

Security	Privacy
<p data-bbox="84 539 652 679">Incident Response / Breach Notification</p> <div data-bbox="772 454 1037 714"></div> <p data-bbox="723 729 1067 765">Extricate Bad Actors</p> <div data-bbox="1131 465 1538 676"></div> <p data-bbox="1126 732 1538 768">Execute Cyber Kill Chain</p>	<div data-bbox="1625 454 1997 714"></div> <p data-bbox="1623 729 2028 765">Identification of victims</p> <div data-bbox="2091 448 2430 691"></div> <p data-bbox="2158 729 2374 765">Notifications</p>
<p data-bbox="84 961 652 1100">Data Protection by Design & by Default</p> <div data-bbox="868 936 1059 1133"></div> <p data-bbox="744 1189 1518 1225">Ensure a system failure will fail to a safe state</p> <div data-bbox="1251 929 1409 1133"></div>	<div data-bbox="1704 893 2086 1126"></div> <div data-bbox="2142 962 2354 1110"></div> <p data-bbox="1651 1189 2369 1225">Only collect, use and keep what you need</p>

Impact of Privacy Practices

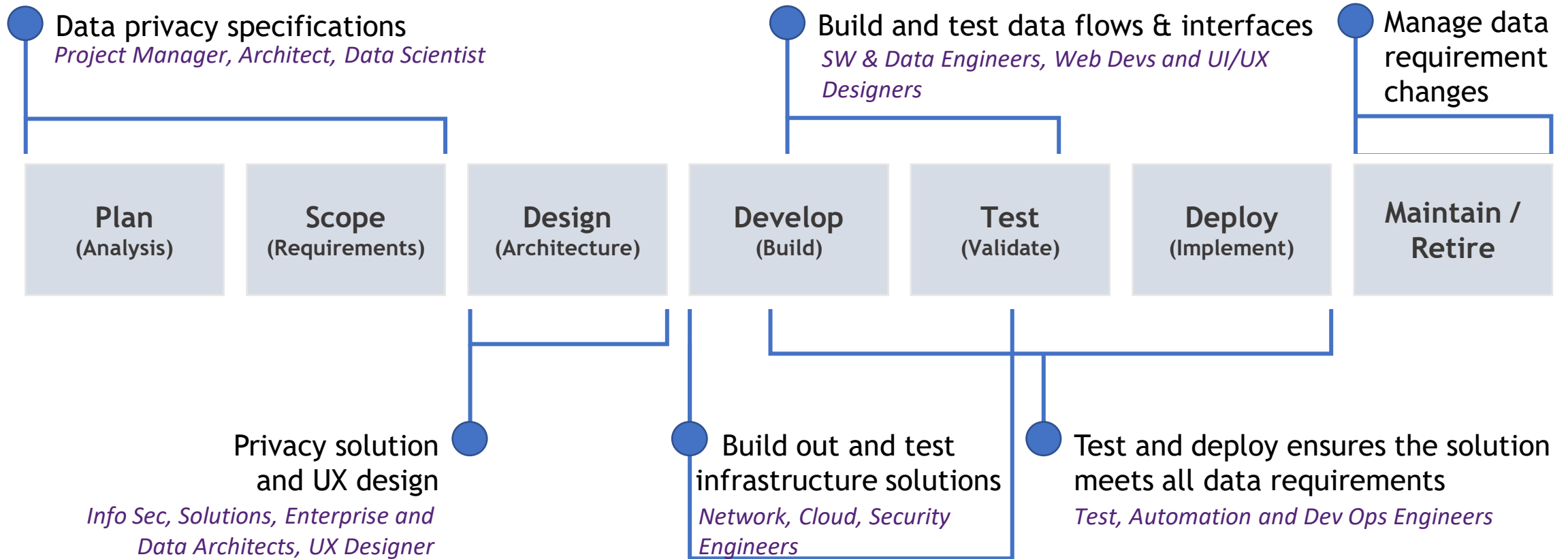


Organizations with the least rigorous privacy practices:

- Are nearly **80%** more likely to suffer a data breach
- Lose **7x** the number of records in a breach
- The Average Company shares data with **730** different vendors
- Vendors are responsible for **2 of 3** data breaches

Privacy throughout the SDLC

There are a variety of roles that need to understand PbD principles and practices.



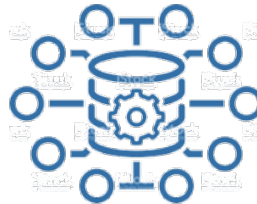
Impact of Privacy on Storage



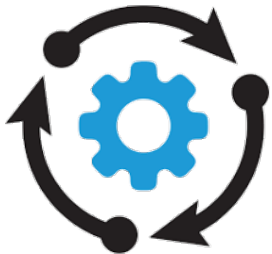
UNDERSTANDING



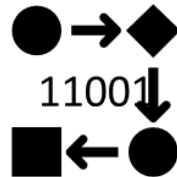
TECHNICAL DEBT



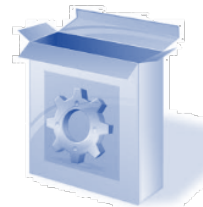
BIG DATA ADOPTION



DATA CONTROLS



DATA PROCESSING



VENDOR SELECTION



PHYSICAL
SECURITY



VIRTUAL
SECURITY

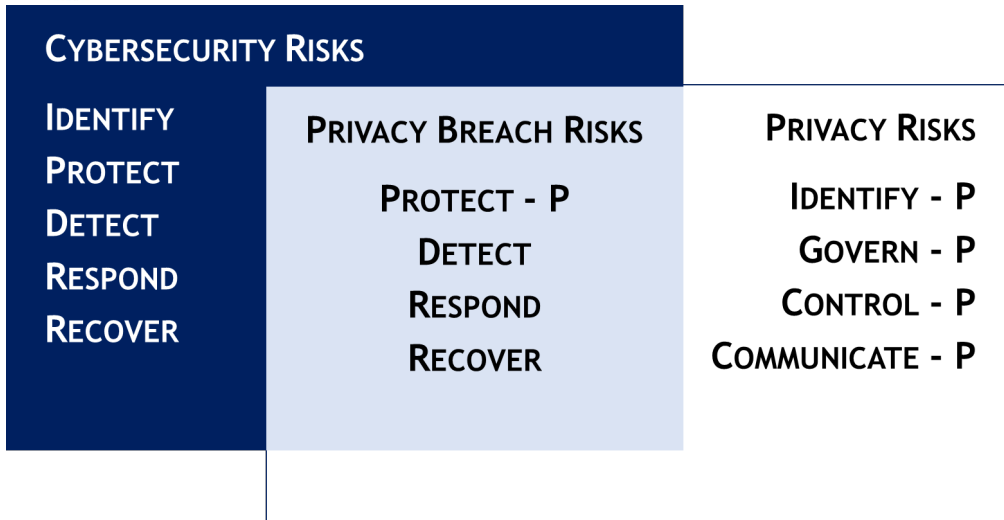


LOCALITY

Emerging Privacy Models



Tightly aligned to
NIST Security
Framework



Extended to provide
data privacy and
information security
standards for GDPR.



Privacy Tech Has Become a Whole New Industry

The number of privacy technology vendors has risen rapidly in the 4 years.

Growth of the Privacy Technology Marketplace



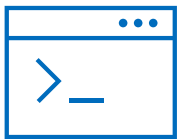
CIPT: Learning for Multiple Technology Professionals



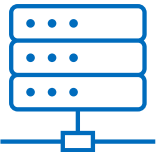
Info Security



Data Professional



SW Engineer

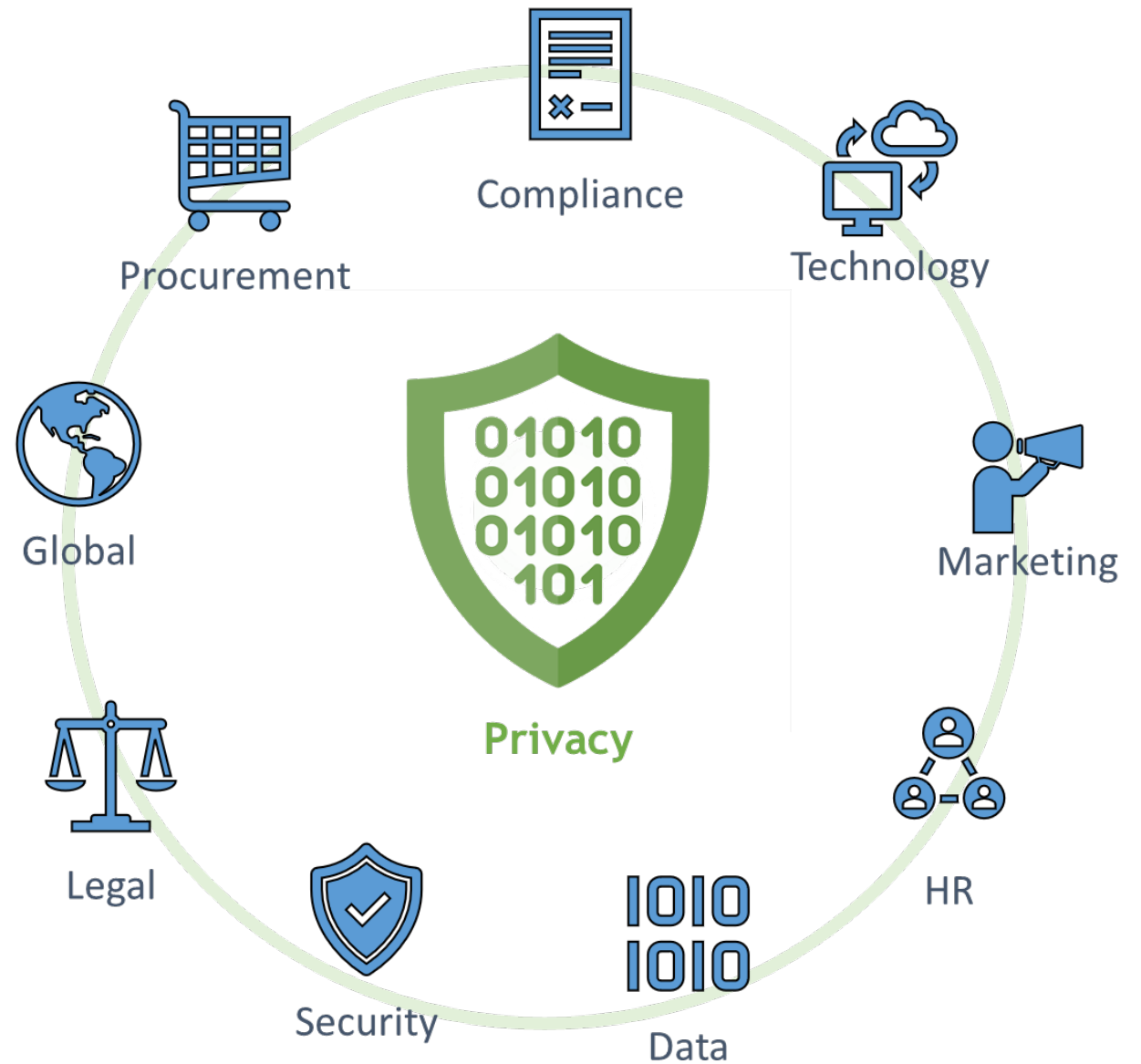


Infrastructure

I. Foundational Principles	8	10
A. Privacy Risk Models and Frameworks	0	2
B. Privacy by Design Foundational Principles	1	3
C. Value Sensitive Design	1	3
D. The Data Life Cycle	3	5
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C. Privacy Design Patterns	3	5
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Key Partnerships are critical for ensuring Privacy



From Conceptual to Hands On!

STORAGE DEVELOPER CONFERENCE

 **SDC²¹**
BY Developers FOR Developers

SEPTEMBER 28-29, VIRTUAL EVENT

Designing with Privacy in Mind

David Sietz, Systems / Solution Architect, **International Association of Privacy Professionals**

www.storagedeveloper.org

A  **SNIA** Event





Please take a moment to rate this session.

Your feedback is important to us.

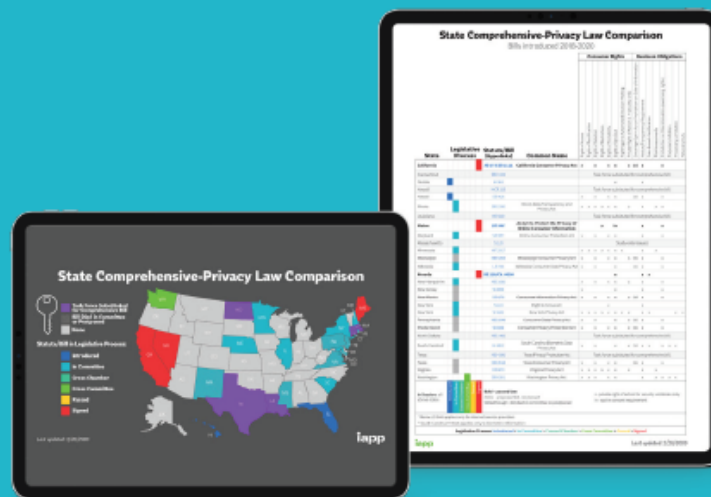


IAPP Resources

TOOLS & TRACKERS



The IAPP develops and maintains a variety of tools to help members keep up with the rapid developments in privacy and their impact on business and the profession, from global privacy legislation comparisons, to enforcement trackers, to directories and glossaries.



GDPR Genius

The "GDPR Genius" is an interactive tool that provides IAPP members with access to critical EU General Data Protection Regulation-related resources, by mapping requirements to relevant recitals, EU and member state guidance, relevant court cases, enforcement actions, and other resources and tools.

CCPA Genius

The "CCPA Genius" is an interactive tool that provides IAPP members with access to California Consumer Privacy Act-related resources by mapping the statutory requirements to the proposed regulations, the 2020 ballot initiative "CCPA 2.0," and other resources and tools.

US State Comprehensive Privacy Law Comparison

The IAPP's state law comparison tracker consists of proposed and enacted comprehensive privacy bills from across the U.S. to aid our members' efforts to stay abreast of the changing state-privacy landscape.

Global Privacy and Data Protection Enforcement Database

The IAPP's "Global Privacy and Data Protection Enforcement Database" is a collection of enforcement actions from all over the world.

Glossary

The IAPP "Glossary" is your go-to place to find definitions of important privacy terms.

CCPA Amendment Tracker

This tracker lists the status of all the amendments for the California Consumer Privacy Act with a chart displaying the bill number, a brief summary of the amendment, subject, lead author, status and last legislative action.

FTC Casebook

The "FTC Casebook" collates, organizes, indexes, tags and annotates the body of FTC privacy and data security jurisprudence — and makes it available for you to search and use.

ICO, CNIL, German and Spanish DPA Revised Cookies Guidelines: Convergence and Divergence

This tracker outlines the respective differences and similarities between the U.K., French, German and Spanish DPA revised cookie guidelines.

Data Protection Authorities

The IAPP "Data Protection Authorities" directory is the most comprehensive list of DPAs we've ever compiled with more than 150 enforcement authorities listed. Information included consists of websites, head authorities, data protection legislation and contact info.

Privacy Vendor List

The IAPP "Privacy Vendor List" offers information on organizations that can help you protect data, meet regulatory requirements, respond to breaches, set policies and more.

RESOURCE CENTER

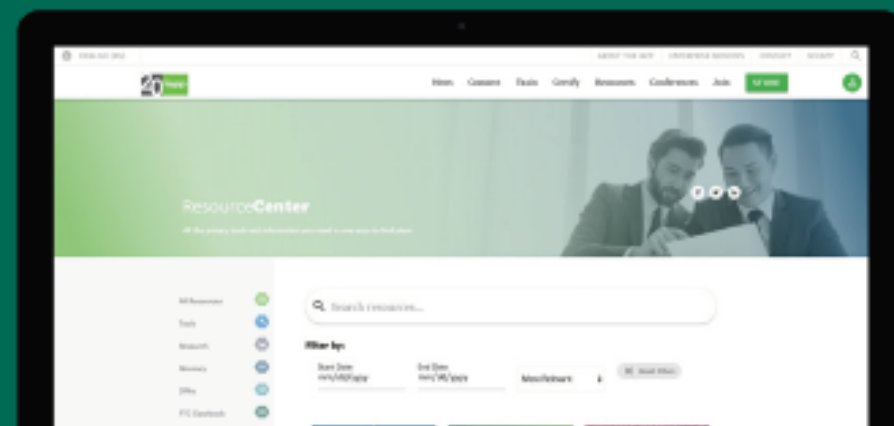
All the privacy tools and information
you need in one easy-to-find place.

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Privacy Topic Pages

Browse published content by popular privacy terms and topics.

- EU General Data Protection Regulation
- California Consumer Privacy Act
- DPO Toolkit
- The Industry of Privacy
- Accountability
- Artificial Intelligence
- Building Your Career
- Brexit
- Cloud Computing
- Crafting a Privacy Notice
- Cross-Device Tracking
- Deidentification
- Encryption
- EU ePrivacy Regulation
- EU-US Privacy Shield
- Financial Technology
- Geolocation
- Health Insurance Portability and Accountability Act
- How to Build a Privacy Program
- Organizational Privacy Policies
- Data Protection and Privacy Impact Assessments
- Privacy in Education
- Responding to a Breach
- Small- and Medium-Sized Businesses
- Telephone Consumer Protection Act
- Gramm-Leach-Bliley Act
- US Government
- Workplace Privacy



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White Papers

THE INFOSEC PROFESSIONAL'S Guide to Vital Privacy Knowledge

How individuals and teams can acquire the dual literacy they need



THE TECHNOLOGY INFRASTRUCTURE PROFESSIONAL'S Guide to Vital Privacy Knowledge

Skills For Minimizing Privacy Risk in System Development



FEATURES
A DETAILED PRIVACY
KNOWLEDGE MAP
FOR INFOSEC

HOW TO GET STARTED IN PRIVACY ENGINEERING

1 Pursue a cross-disciplinary education.

- If you are still in college or exploring higher-ed options, seek a degree in *privacy engineering*, computer science, software/computer engineering, networking, information systems, data science or analytics, cybersecurity, or other technical field, and take courses that focus on privacy.
- Look for opportunities to take data protection related courses across schools or pursue continuing education online, in areas such as cybersecurity, user testing, risk management, law, and UX or UI design.
- Practice privacy skills through an internship or externship with a local company, government privacy office, think tank or civil rights advocacy organization. Learn how to work with technical, legal and business professionals.

2 Search for career opportunities beyond Big Tech.

- Don't limit yourself as to where you might work or what your title might be. Nearly all companies and industries today require technology and data skills. Consider positions where privacy engineering is a component of the role that could grow, whether in more traditional companies that are expanding their digital presence, newer startups or as part of larger teams within more recognizable tech companies.
- Consider post-graduate fellowships in organizations with a privacy focus, such as the *IAPP Future of Privacy Forum* and academic research centers, such as *Berkman Klein Center for Internet & Society* at Harvard University.
- Explore privacy careers listed on the *IAPP's Career Central* page.

3 Write about privacy issues.

- Pick a niche that interests you, get smart about it, and start writing — blogs, papers, op-eds and even tweetstorms will all help you stand out in the field.
- Self-publish: Platforms like *LinkedIn* and *Medium* make it easy.
- Submit your work for consideration to the *IAPP's publications*, which are increasing coverage of more technical privacy developments.

4 Network, network, network: Engage with privacy professionals.

- Become a member of the IAPP and join the *Privacy Engineering Section*.
- Attend virtual and, when possible, in-person privacy conferences, IAPP privacy engineering forums, *PEPR*, *PETS*, *SCUPIS* and others, *KnowledgePoint* Chapter meetings, and after hours events. Some conferences provide scholarships for students. Or *pitch a session* for a speaker pass.
- Reach out to privacy professionals in your community and arrange to meet for coffee.
- Seek out open-source initiatives that focus on solving data and privacy problems to learn tech practices.
- Subscribe to a privacy email list, such as the *IAPP Privacy List*.

5 Become an expert in your own privacy.

- Learn to follow your data. Understand where it goes and who controls it.
- Manage your own privacy with mobile device settings, encryption, location tracking, etcetera.

6 Earn privacy credentials.

- Become a *Certified Information Privacy Technologist*.
- Earn privacy-related continuing education credits through conferences, trainings, etcetera.

7 Stay informed about privacy issues.

- Subscribe to mailing lists: *IAPP Daily Dashboard*, *Morning Consult Tech*, *New York Times Bits*, *ReCode*, *TechCrunch*, *opensource.com*.
- Follow interesting people and those they follow on Twitter, LinkedIn and other social media.

8 Find a niche.

- Dive deeper into a particular technology, standard, privacy framework or privacy-enhancing technique. Make it your specialty. You have to start somewhere, and having a home base makes it easier to wrap your head around the intersection of privacy, data and tech. A particular interest also demonstrates to employers that you are dedicated to the field.




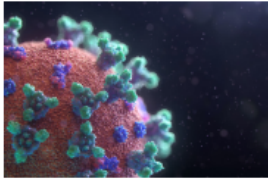

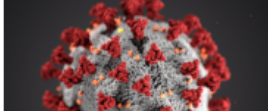


IAPP Westin Research Center

Original works. Groundbreaking research. Emerging scholars.

About the Center

The IAPP Westin Research Center was created in 2013 to encourage, enable and produce practical, applicable research and scholarship in privacy. Named for Dr. Alan Westin, a foundational scholar in the field of privacy, the IAPP Westin Research Center serves as a pathway for future leaders who aspire to join the privacy community.

	May 21, 2020 Deja vu? The politics of privacy legislation during COVID-19 Müge Fazlioglu	→
	May 12, 2020 CPRA's top-10 impactful provisions Caitlin Fennessy	→
	Apr 21, 2020 Sharing COVID-19 data with government authorities: Guidance from DPAs Müge Fazlioglu	→
	Apr 10, 2020 How is COVID-19 affecting privacy programs? A call for research action Müge Fazlioglu	→
	Mar 20, 2020 US Sen. Moran's new privacy bill: Stacking up the federal proposals Caitlin Fennessy	→
	Mar 11, 2020 COVID-19 response and data protection law in the EU and US	→

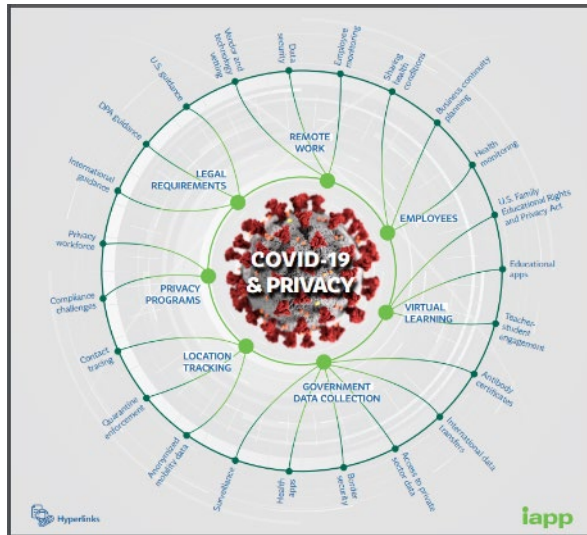
“Because privacy and security are sometimes thought to be the same, be prepared to teach others and explain the differences.”

1. Personally Identifiable Information has different meaning for different groups
2. Understand why personal information is being collected
3. Review the data stores to determine if the personal information is still needed
4. Work heavily with the Legal team
5. Review processes to determine where personal information is being shared

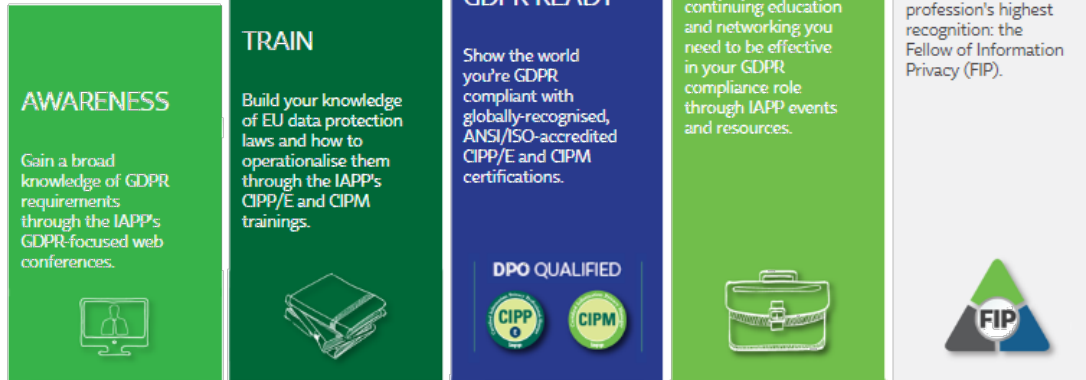
FIVE LESSONS

I Learned Transitioning from Security to Privacy

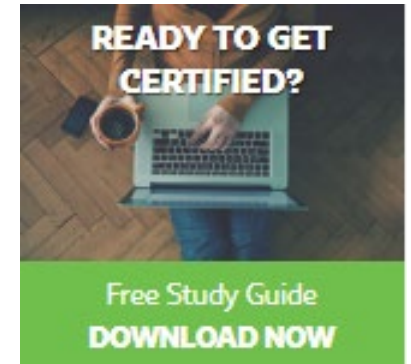
James Park, CIPT, Microsoft



IAPP: COVID-19 Guidance and Resources



The combination of the IAPP's Certified Information Privacy Professional/Europe (CIPP/E) and the Certified Information Privacy Manager (CIPM) will provide privacy professionals with the knowledge required to hold the role of a data protection officer (DPO), according to Eric Lachaud in "Should the DPO be certified?" in International Data Privacy Law, a journal published by Oxford University Press.



Training and Certification

IAPP PRIVACY ENGINEERING SECTION



Curated content and resources based on your specialty



Connections with industry peers who understand your goals and needs



Upcoming events relevant to your interests



Volunteer opportunities to get involved in a meaningful way



Direct access to other professionals via the Privacy List



Where privacy professionals working in the IT and privacy engineering fields come together and connect.

The Privacy Engineering Section offers a range of programs, events, content and networking opportunities through which privacy pros working in IT and related fields can connect and advance.

The **Certified Information Privacy Technologist** is the *world's first* and *only* ANSI/ISO-accredited certification in data protection. It cultivates a new type of tech professional — one who can secure highly complex interconnected technologies, while incorporating robust privacy solutions to ensure compliance with global data protection regulations.



Privacy Engineering and CIPT

IAPP Privacy. Security. Risk. 2021

Training October 19-20

Workshops October 20

Conference October 21-22
SAN DIEGO



- Keynotes
- Programs
- Workshops
- Trainings

Events

Think Globally, Learn Locally

KNOWLEDGENET CHAPTERS ARE WHERE IT'S AT.

Meet other privacy pros in your area, network and learn something new. KnowledgeNet Chapter activities take place across the world. Most meetings are eligible for CPE credits, and best of all—they're free for members!



Meetings

We're constantly adding new meetings and activities. See the current schedule to find out if there is one near you.

[RSVP now](#)



Chapter Volunteers

KnowledgeNet Chapter activities can only happen with the help of our dedicated volunteers.

[Meet the Chairs](#)

[Chair Resources](#)

[Meet the YPPs](#)

[YPP Resources](#)



Volunteer

Interested in getting more involved with your chapter? Learn about all chapter volunteer opportunities.

[Volunteer now](#)

Virtual Northern New
England KnowledgeNet
Coffee Chat: June 17,
2020 [Live Online](#) 12-1 pm

Connect!



Twitter: PrivacyPros

Instagram: IAPPprivacypros

Facebook: IAPPprivacypros

Youtube: IAPPvideos

Linkedin: international-association-of-privacy-professionals

Join!



IAPP PRIVACY ENGINEERING SECTION

The Privacy Engineering Section offers a range of programs, events, content and networking opportunities through which privacy pros working in IT and related fields can connect and advance.

Subscribe!

+ U.S. Privacy Digest:

Subscribed



Every Friday, the U.S. Privacy Digest rounds up the week's top U.S. privacy and data security news developments, delivering them right to your inbox.

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