PKF antares

PKF's Cyber Risk capabilities

Strategy
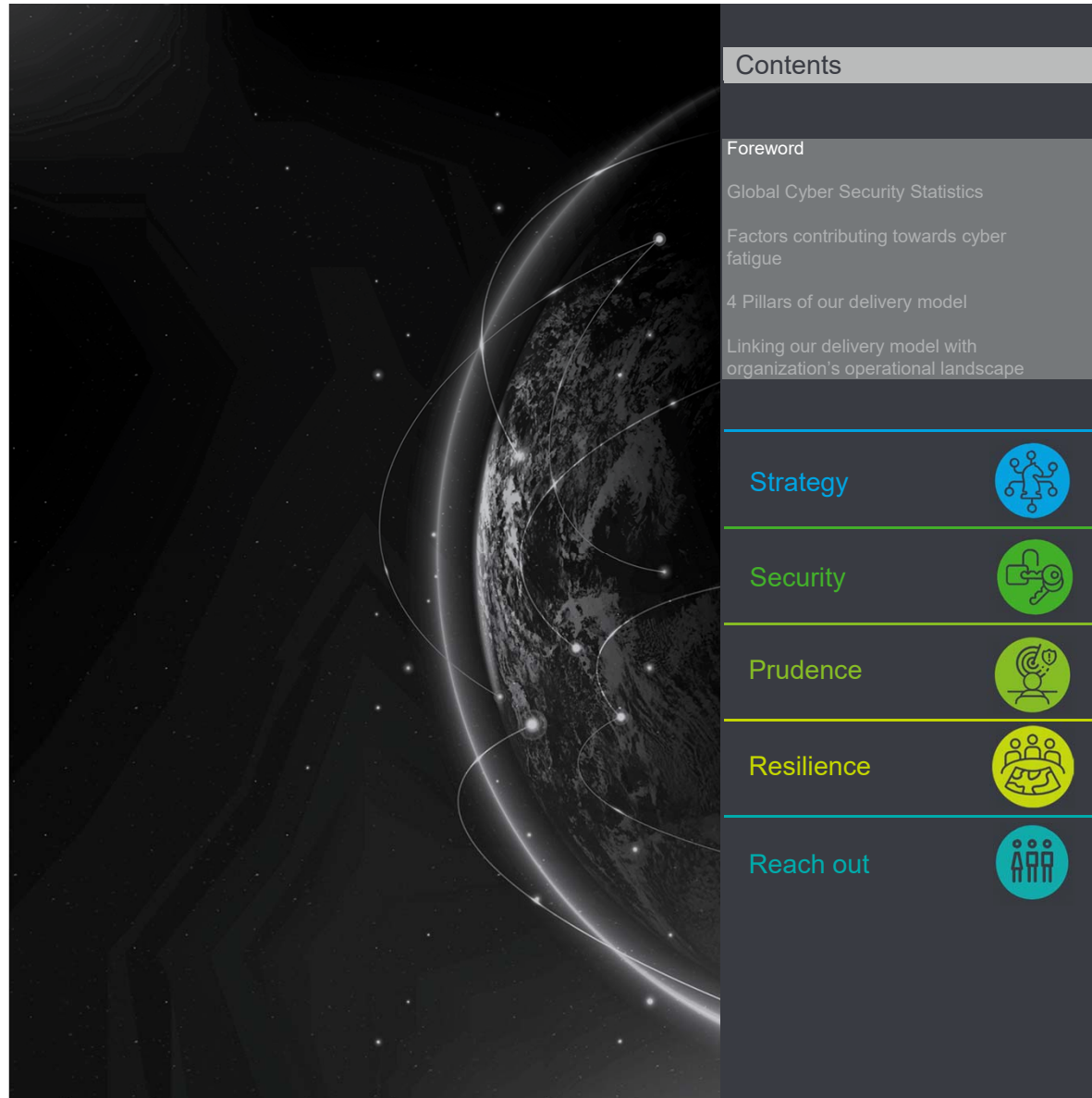**Security**
Prudence
Resilience

In an era of rapid digital transformation and the proliferation of ever-increasing amounts of data, cyber risk is rising-up the priority scale at organizations of all sizes and in all industries.

PKF's experience demonstrates that clients who have implemented cyber risk models have not only anticipated threats proactively but have dealt with them more effectively. They also achieved better business results, through improved financial performance.

Our cyber security team provide capabilities across the four main domains of cyber risk i.e.:
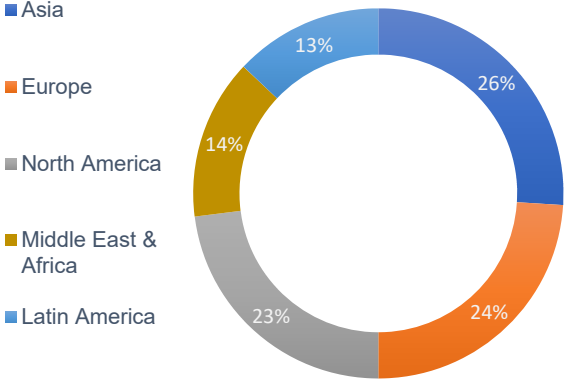
- Strategy
- Security
- Prudence
- Resilience

Our global alliances with vendors having diversified skillset provide access to a wide range of cyber risk technologies and skills which enables us to collectively deliver tailored services and exceed clients expectations.
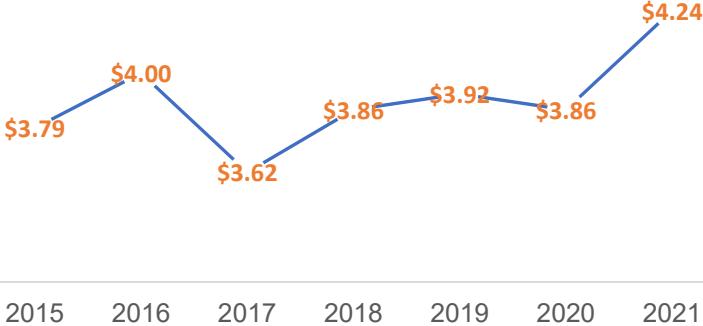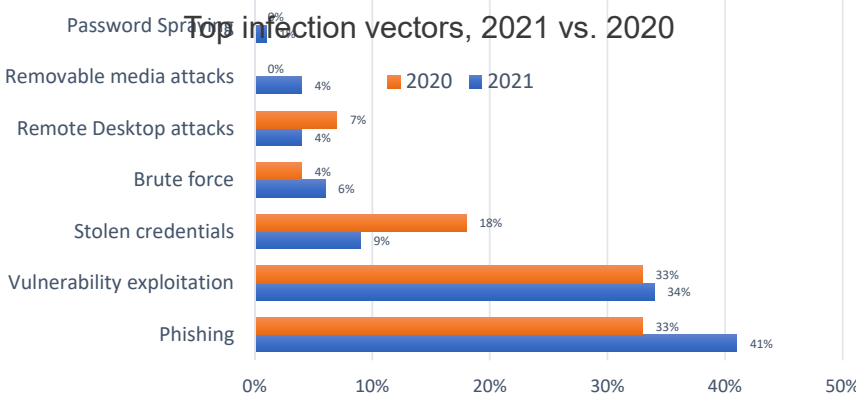
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Reach out

Global Cyber Security Statistics

Breakdown of Attacks by Geography, 2021

- Asia
- Europe
- North America
- Middle East & Africa
- Latin America

13% | 26% | 14% | 24% | 23%

Top infection vectors, 2021 vs. 2020

2020 | 2021

Vector	2020	2021
Password Spraying	0%	1%
Removable media attacks	4%	0%
Remote Desktop attacks	7%	4%
Brute force	4%	6%
Stolen credentials	18%	9%
Vulnerability exploitation	33%	34%
Phishing	33%	41%

0%   10%   20%   30%   40%   50%

Average Cost Of a Single Data Breach
(In US$ Millions)

$3.79 (2015) | $4.00 (2016) | $3.62 (2017) | $3.86 (2018) | $3.92 (2019) | $3.86 (2020) | $4.24 (2021)

2015 2016 2017 2018 2019 2020 2021
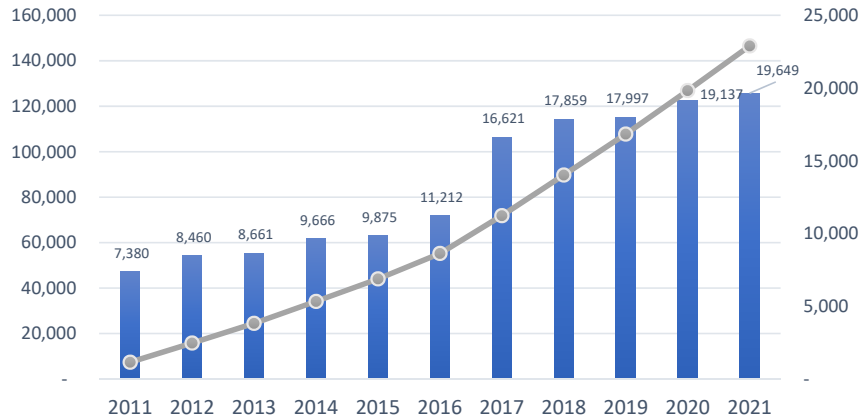
Vulnerabilities discovered by year, 2011-2021
New vulnerabilities identified each year, 2011-2021, and cumulative number

Year	Value
2011	7,380
2012	8,460
2013	8,661
2014	9,666
2015	9,875
2016	11,212
2017	16,621
2018	17,859
2019	17,997
2020	19,137
2021	19,649

160,000 · 140,000 · 120,000 · 100,000 · 80,000 · 60,000 · 40,000 · 20,000 · -

25,000 · 20,000 · 15,000 · 10,000 · 5,000 · -

Factors contributing towards Cyber Fatigue

Cybersecurity operations **incidents increase** as the result of the overwhelming burden of complexity

Vendors pitch new technology as the solution to cyber operations incidents

Increased Cyber Operations Incidents

Add Technology

New technology requires more people and processes

Technology and process complexity **decrease cybersecurity** effectiveness

Poor Human Performance

Cyber Fatigue

Add People and Processes

Fog develops, old management systems are overwhelmed

Loss of Process Visibility and Control

Operational Complexity Increases

Interactions between technology, processes and people **increase** geometrically

How can we help through 4 pillars of our delivery model

Strategy

We help executives develop a cyber risk program in line with the strategic objectives and risk appetite of the organization.

- Strategy, Transformation, and Assessment
- Cyber Risk Management and Compliance
- Cyber Training, Education, and Awareness

Security

We focus on establishing effective controls around the organization's most sensitive assets and balancing the need to reduce risk, while enabling productivity, business growth, and cost optimization objectives.

- Infrastructure Protection
- Vulnerability Management
- Application Protection
- Identity and Access Management
- Information Privacy and Protection

Prudence

We help you integrate threat data, IT data, and business data to equip security teams with context-rich intelligence to proactively detect and manage cyberthreats and respond more effectively to cyber incidents.

- Advanced Threat Readiness
- Cyber Risk Analytics
- Security Operations

Resilience

We combine proven proactive and reactive incident management processes and technologies that help customers rapidly adapt and respond to cyber disruptions whether from internal or external forces.
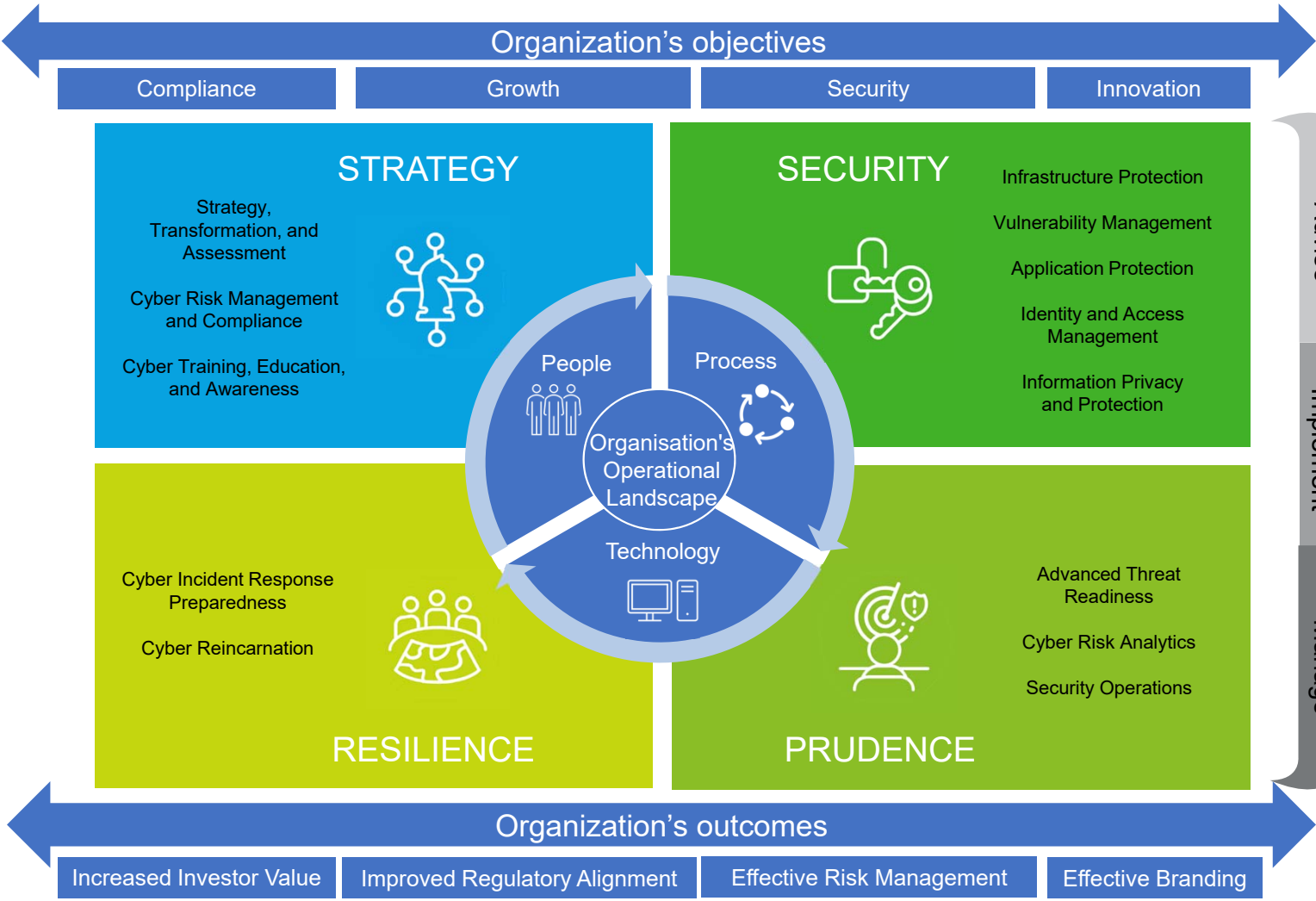
- Cyber Incident Response Preparedness
- Cyber Reincarnation

Advise

Implement

Manage

Delivery models

Linking 4 pillars of our delivery model with Organization's **People, Process and Technology** landscape as well as its **Objectives**

Organization's objectives

| Compliance | Growth | Security | Innovation |

STRATEGY

Strategy, Transformation, and Assessment

Cyber Risk Management and Compliance

Cyber Training, Education, and Awareness

SECURITY

Infrastructure Protection

Vulnerability Management

Application Protection

Identity and Access Management

Information Privacy and Protection

People

Process

Organisation's Operational Landscape

Technology

RESILIENCE

Cyber Incident Response Preparedness

Cyber Reincarnation

PRUDENCE

Advanced Threat Readiness

Cyber Risk Analytics

Security Operations

Advise

Implement

Manage

Delivery models

Organization's outcomes

| Increased Investor Value | Improved Regulatory Alignment | Effective Risk Management | Effective Branding |

Strategy

We help executives develop a cyber risk program in line with the strategic objectives and risk appetite of the organization.

Strategy, Transformation and Assessment

Challenges

Organizations increasingly depend on complex technology ecosystems for several
key purposes.

As cyberattacks become more frequent and severe, board members and executives are realizing that technology-based initiatives opens doors to cyber risks.

How PKF can help

Our services help organizations establish
their strategic direction and structures to develop effective cyber risk reporting.

They support the creation of executive-led cyber risk programs.

Key Solutions

Strategy, Roadmap, and Architecture
Advise | Implement

Defines cyber strategies, actionable cyber roadmaps, and reference architectures in line with the findings of a maturity assessment.

Cyber Target Operating Model
Advise | Implement

Constructs an appropriate target state for cyber risk roles, responsibilities, related processes, and governance functions.

Cyber Transformation
Advise | Implement | Manage

Mobilizes, manages, and delivers a structured and prioritized program of work to help organizations transform to improved cyber governance, security, vigilance, and resilience

Cyber Maturity Assessment
Advise | Implement | Manage

Enables organizations to identify and understand their key business risks and cyberthreat exposures.

Cyber Risk Quantification
Advise | Implement

Provides the information needed to make security investment decisions.

PKF's Key Differentiators

- Our Strategy framework (CSF) measures cyber posture and threat exposure
- A leading catalog of good practice standards for cyber risk, with proven success across industry sectors.

Cyber Risk Management and Compliance

Challenges

Understanding the current status of an organization's security posture requires constant evaluation of evolving risks, security standards, and cyber regulations.

How PKF can help

Our diverse experience in managing cyber risk and compliance can help organizations define tailored cyber risk management frameworks.

Key Solutions

Cyber Risk Management
Advise | Implement

Defines framework and methodologies to assess cyber risks for the organization to understand their magnitude and make informed decisions.

Cyber risk dashboarding
Advise | Implement | Manage

Designs and implements risk dashboard constituents, including Key Risk Indicators (KRIs) and dashboards to facilitate effective monitoring of cyber risk from the boardroom to the network.

Cyber Insurance
Advise | Implement

Evaluates coverage of existing insurance policies. Determines areas where residual cyber risk could be transferred to an insurer.

Third party risk management
Advise | Implement

Customizes services at each step of the third-party cyber risk management lifecycle. Provides end-to-end oversight of the third-party risk management program

Cyber Regulatory Compliance
Advise | Implement

Assists and prepares compliance with national and/or sectoral cybersecurity regulations.

Security Controls framework
Advise | Implement

Defines tailored security-control frameworks based on best practices as guiding principles. Develops policies, procedures, and standards

PKF's Key Differentiators

- Mature proprietary methodologies
- Strong experience in integrating cyber risk into the broader enterprise risk
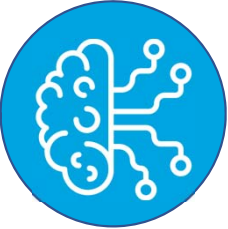- Deep knowledge and experience with security control frameworks and regulations.

Cyber Training, Education and Awareness

Challenges

Even with excellent people and technology in place, the organization's own employees are the weakest link when it comes to cybersecurity.

How PKF can help

We can help to accelerate behavioral change. Organizations that adopt the right behavior make themselves more secure, prudent, and Resilience when faced with cyberthreats.

Key Solutions

Insider Risk
Advise | Implement

We help to establish Potential Risk Indicators (PRIs) and create awareness of the main indicators of maturity in managing insider risk.

Technical Trainings
Advise | Implement

Delivers both introductory and highly specialized technical training in cybersecurity, either on-site or through a purpose-built online platform.

Cyber Security Awareness Program
Advise | Implement | Manage

We help develop a recognizable awareness campaign, multimedia content package, and communication tools.

Certification Readiness
Implement

Delivers training to prepare employees for qualifications such as, CISA, CISM, CISSP etc.

PKF's Key Differentiators

- Mature proprietary methodologies
- Build and deliver customized trainings that suit your organization's needs
- We collaborate to deliver it online or on-premise

Security

We focus on establishing effective controls around the organization's most sensitive assets and balancing the need to reduce risk, while enabling productivity, business growth, and cost optimization objectives.

Infrastructure Protection

Challenges

Hyper-connectivity is creating a new era for cyber infrastructure. Ever more connected devices pose new cybersecurity challenges for public and private-sector organizations as the volume of threats to their infrastructure rises.

How PKF can help

PKF has developed a set of services that comprehensively address cybersecurity challenges in the architecture, deployment, and maintenance of traditional and new infrastructure and technologies.

Key Solutions

IoT / OT Strategy & Roadmap
Advise | Implement | Manage

We help organizations undertake readiness assessments, align their IoT security vision with their overall mission and vision statements, build IoT roadmaps and adapt traditional governance models to new IoT developments.

Cloud Security
Advise | Implement | Manage

Evaluates client requirements, assesses cloud usage, builds the business case and cloud roadmaps, and assists with cloud vendor evaluation.

Network Strategy
Advise | Implement

Analyzes client infrastructure to identify and remedy the configuration of network components and help clients design their secure network architecture.

PKF's Key Differentiators

- We offer secure, end-to-end solution transformation capabilities, from vision alignment to the design of secure products.

Vulnerability Management

Challenges

New security vulnerabilities are published on daily basis and hackers are constantly looking for ways to gain access to systems and data.

Identifying, managing, and correcting vulnerabilities in an environment that consists of multiple applications, systems, and locations is a significant management challenge.

How PKF can help

PKF's team works side by side with organizations to remedy and manage these vulnerabilities.

we offer a range of managed solutions including vulnerability assessments, remediation support, and vulnerability management advisory.

Key Solutions

Vulnerability Assessment
Implement | Manage

Uses known hacking methods and vulnerabilities, tests the security of applications and IT systems, and achieves increased levels of security.

Vulnerability Remediation Support
Implement | Manage

Configures and manages vulnerability management solutions providing insight into the business-relevant vulnerabilities that matter.

Hacking as a Service (HAAS)
Manage

Provides periodical insight into an organization's potential vulnerabilities. Many organizations perform security tests only once while cyber criminals are constantly seeking to find and exploit new vulnerabilities.

Vulnerability Management Capability Design
Advise

Establishes vulnerability management processes, governance, capabilities, tools, and expertise for organizations.

PKF's Key Differentiators

- We utilize our proven method and cutting-edge vulnerability management tools.
- We offer a range of managed solutions including vulnerability assessments, remediation support, and vulnerability management advisory.

Application Protection

Challenges

Applications form a major part of every IT landscape. Ensuring they are protected requires secure design, implementation, and configuration.

Testing of the protection requires robust processes, dedicated resources, and a skilled team.

How PKF can help

We assist organizations to thoroughly assess the protection level of applications.

With specialized knowledge of large number of specific applications and secure development methods, We help secure the design, development, and configuration of applications.

Key Solutions

Secure by Design: Secure-SDLC
Implement | Advise

Assesses an organization's software development life cycle (SDLC) to determine if security is properly incorporated. In addition, we help organizations embed Secure by Design principles and controls.

Enterprise Application Architecture
Advise | Implement | Manage

Assesses the current state of an organization's applications and the security controls on the application layers for enterprise systems.

PKF's Key Differentiators

- We help organizations raise their situational risk awareness and actionable remediation insights, empowering them to regulate application portfolios effectively.

Identity and Access Management

Challenges

The traditional network perimeter has faded. In response, organizations are increasingly focusing on user identity assurance and information access controls.

How PKF can help

Identity and access are two of the key elements that underpin digital commerce and automated business processes.

We have established proven methodology to guide clients through the full IAM program lifecycle, from defining a clear vision and strategy for secure access to information assets, to the actual deployment and operation of IAM platforms, and integration with IT platforms.

Key Solutions

IAM Drivers Identification and Selection of IAM Investment Areas
Advise

Defines the objectives for IAM, such as enabling new information exchanges (e.g., low-friction customer registration), more efficient compliance demonstration (e.g., risk focused access reviews), and enhanced controls (e.g., monitoring of IT administrator actions).

IAM Functionality Design & Preparation
Advise | Implement

Formalizes requirements, designs a fitting solution landscape by selecting the most appropriate solution set, and transforms the organization and its processes to optimize returns on IAM investments.

IAM Current state assessment
Advise

Assesses the current maturity of IAM-related controls and pinpoints key improvement areas.

PKF's Key Differentiators

- Business and user-centric view of IAM.
- Experience of global best practices and IAM solution architectures.

Information Privacy & Protection

Challenges

Organizations need to be able to use, analyze, and share their data while ensuring compliance with invasive regulatory control and customer/employee privacy expectations.

How PKF can help

With an excellent track record in turning privacy-related challenges into tested, modular, and pragmatic solutions, We are dedicated to supporting organizations in navigating privacy risk.

Key Solutions

Privacy Maturity Assessments and Roadmap
Implement | Advise

Assesses and identifies the current state of an organization's GDPR readiness. This includes a prioritized and risk-based roadmap that clearly identifies actionable mitigating measures and short-term fixes.

Privacy Strategy and Transformation Program
Advise | Implement

Builds a holistic and tailored transformation program in close partnership with organizations. We help organizations incorporate fit for purpose privacy solutions in their DNA.

Data Loss Prevention (DLP)
Implement | Advise | Manage

Assists in identification, monitoring, and protection of data in motion, at rest, in use, and in the cloud.

Privacy by Design/Managed Services
Implement | Advise | Manage

Provides hands-on, technology-enabled services and controls, using best practices, an extensive toolkit including privacy impact assessments, Virtual Data Protection Officer (vDPO), Privacy/GDPR stress testing, data inventory, and data mapping.

Data Governance
Advise | Implement

Enables monitoring of access activity and improved visibility of risks to stored data across the business

Information Classification
Advise | Implement

Helps with integration and implementation of classification technology and programs

PKF's Key Differentiators

- Our highly integrated international team has in-depth and tested data privacy experience and ensures tailored data privacy/GDPR/Local Regulatory Privacy solutions.
- Our methodology is holistic and hands-on, integrating privacy tools and in-depth data protection knowledge.

Prudent

We integrate threat data, IT data, and business data to equip security teams with context-rich intelligence to proactively detect and manage cyberthreats and respond more effectively to cyber incidents.

Advanced Threat Readiness

Challenges

Threat techniques evolve daily in volume, intensity, and complexity as hackers seek new vulnerabilities in software to compromise key systems across organizations.

How PKF can help

PKF helps organizations assess and prepare their IT infrastructure, software, and third-parties by combining traditional ethical hacking principles and technical security reviews.

Key Solutions

Emerging and Disruptive Technologies Evaluation
Advise

Carries out security evaluations for new technologies and paradigms, helps organizations to anticipate security risks associated with their newly-adopted technologies.

Threat Readiness & Advisory
Implement | Advise | Manage

Helps most mature organizations Deal with advanced threats guiding Improvements of ROI on existing detection technologies.
By improving interaction between systems, applying realistic use cases, and staff training.

Forecasting Emerging Threats
Manage
Forecasts emerging threats, enabling organizations to adapt their security methods and policies to future threats.

Cyber Compromise Assessment
Advise | Manage

Examines an organization's network to identify potential compromised devices by monitoring for malicious network traffic and suspicious network activity.

Threat Modelling as a Service
Implement | Advise | Manage

Identifies assets, threat actors, vulnerabilities, targets, methods, and associated countermeasures to prevent or mitigate the effects of potential threats on an organization.

PKF's Key Differentiators

- Seamless integration with their vulnerability lifecycle management tasks.
- Address emerging threats from new and disruptive technologies.

Cyber Risk Analytics

Challenges

The greatest challenge organizations face today is the sheer abundance of threats, which makes it difficult to focus on those that pose the highest immediate risk.

How PKF can help

PKF's Cyber Risk Analytics solutions use advanced methods to analyze current cyberthreats and determine which are relevant and have the highest potential impact on strategic business objectives.

Key Solutions

SIEM Intelligence
Advise | Implement

Improves Security Information and Event Management (SIEM) services by assessing an organization's SIEM, analytics maturity and governance. We design a SIEM evolution roadmap, and design and develop use cases, as well as assist in SIEM provisioning.

Monitoring and Correlation
Advise | Manage

Enables organizations to view what is happening in cyberspace through advanced analytics. Either through monitoring and correlation advisory or log collection with our very own Managed Security Services (MSS) platforms

PKF's Key Differentiators

- A flexible, remotely managed service as well as an on-site delivery model.
- Broad experience with use cases and specific monitoring tools across a range of industries.

Security Operations

Challenges

Organizations need to develop their information security capabilities, to respond faster, work more efficiently, and protect their core business. To achieve this, it is imperative that they have a mature Security Operation Center (SOC) capability.

How PKF can help

We provide managed SOC services, on site and hosted, which integrate event monitoring and correlation with threat intelligence and a business-focused output. We also advise organizations on design and deployment of their own SOC.

Key Solutions

SOC Capability Design and Deployment
Advise | Implement

Assesses the people, process, and technology aspects of an organization's SOC.

Security threat monitoring
Advise | Implement | Manage

Offers a flexible and easily scalable service in which a team of certified analysts work 24/7 to detect malicious activities.

SOC Cyber Security Dashboard
Advise | Implement | Manage

Defines and develops cyber risk metrics, indicators, and dashboards to provide insight into the operational effectiveness of the SOC.

PKF's Key Differentiators

- A flexible, remotely managed service as well as an on-site delivery model.
- Broad experience with use cases and specific monitoring tools across a range of industries.

Resilience

We combine proven proactive and reactive incident management processes and technologies to rapidly adapt and respond to cyber disruption whether from internal or external forces.

Cyber Incident Response

Challenges

Cyberthreats are constantly evolving and increasing in volume, intensity, and complexity. Cyber crisis management has therefore become a major focus of the management and the board.

How PKF can help

We provide organizations with a set of operational and strategic cyber capabilities in a single comprehensive solution, from preparation to 24/7 real-time implementation and response.

Key Solutions

Cyber Crisis Management
Advise | Implement | Manage

Assists your executive leadership to improve their strategic crisis management decision-making capabilities, helping them respond effectively to a large-scale crisis event and emerge stronger.

Cyber Incident Response
Advise | Implement | Manage

Enabling clients to respond effectively and decisively to a cybersecurity incident.

Resilience and Recovery
Advise

Provides support in enacting your contingency plans and returning technical operations to a normal state after a cyberattack or other disruption..

PKF's Key Differentiators

- Our experience in incident and crisis management minimizes the time and resources needed to resolve an emergency.

- Our understanding of business and risk allows us to respond to incidents from both a technical and a strategic perspective.

Cyber Reincarnation

Challenges

Organizations are not prepared to counter cyber crime unless they have been tested thoroughly prior to a cyber attack. An incident and crisis management response framework is not enough.

How PKF can help

Our Cyber Reincarnation portfolio of solutions creates an environment for client teams to simulate incidents and crises, allowing them to develop coordinated responses and identify areas that need improvement in order to prepare for a real-world threat.

Key Solutions

Cyber Workshops
Advise

Increases awareness and supports the development of cyber crisis management plans, procedures, roles, and responsibilities.

Cyber Table-Tops
Advise

Guides teams in reviewing plans and processes. Provides guidance to the teams to practice their roles and responsibilities.

Cyber Simulations
Advise | Implement | Manage

Rehearses or stress-tests existing plans and procedures against complex and multi-faceted cyber incidents or crises.

PKF's Key Differentiators

- We use scenario-specific subject matter experts.
- We use innovative simulation and wargaming techniques to engage and challenge senior participants and get them thinking about '*what keeps them up at night*'.

About PKF

PKF Antares

Our firm is a boutique consulting firm with branches in Toronto, Calgary and Red Deer that is a part of a large global network of firms known as PKF International.

What differentiates PKF?

Global standards

PKF firms believe in creating a culture where client service comes first and are committed to delivering cost-effective solutions while adhering to global quality standards.

A personal approach

What truly sets us apart is the emphasis we place on listening to your unique circumstances. You get direct access to the decision-makers in our firm, and together we carve out the solutions you need, now.

A Values-based approach

Our values reflect who we are and what we stand for. Our five core values are:

PASSION

We have an appetite for progress. We strive to exceed your expectations and provide opportunities to our people to grow personally and professionally.

TEAMWORK

We are advisors without borders. Member firms are independently owned and managed, but strong personal relationships allow us to work seamlessly. We treat our fellow members' clients as if they were our own.

CLARITY

We initiate clear and direct action and believe in being always transparent.
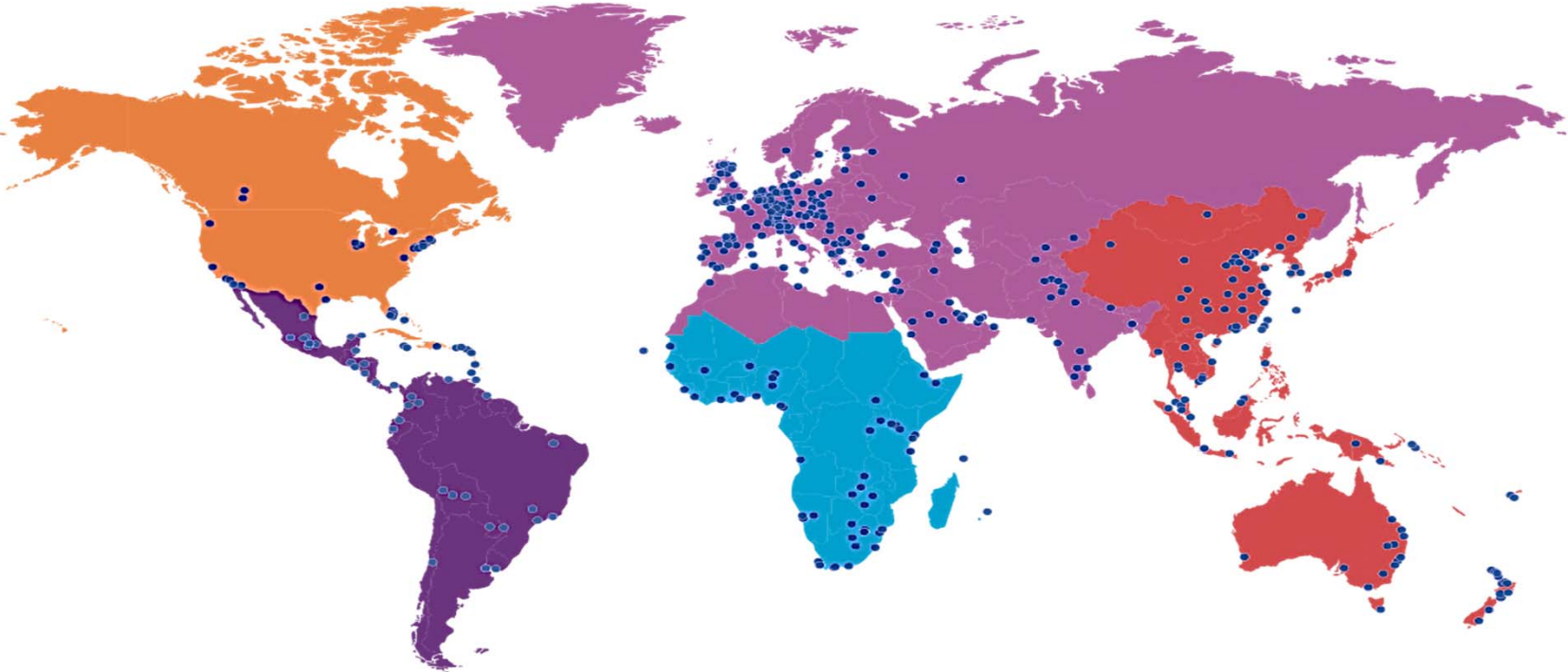
QUALITY

We apply the highest standards of quality to our work. We are all-party to the PKF Commitment.

INTEGRITY

We have shared standards and a mutual respect for entrepreneurs and influential leads, which extends our voice and reach. There is a strong sense of support and encouragement to make things happen together.

Global PKF family

Member firms generate **1.4** billion in aggregate fee income

20,000 professionals across the globe

Over **220** firms

Over **480** offices worldwide

Operational in **150** countries

Ranks **15**th international accountancy network

Reach out

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