SWIMMING WITH SHARKS

IDC Analyze the Future

Your Evaluation of Security Maturity and Best Practice against peer organizations

INTRODUCTION

Running your enterprise in the 21st century is akin to swimming with sharks. The danger is clear: threat actors are becoming more potent, more organized and more collaborative by the day. Yet you need to swim in the ocean of Digital Transformation, which is becoming a mission critical concern for today's CEO. However, it also means swimming deeper into the shark infested waters.

Digital transformation technologies – big data/analytics, cloud computing, mobility and social business – take corporate applications and data outside the safety of perimeter controls at the endpoint and the network. This represents a loss of visibility and control for security professionals. Not only are you swimming through murky waters, but the door to that shark-proof cage that used to protect you has swung open!

Avoiding digital transformation is not an option. One need only consider the fate of enterprises such as Blockbusters and Borders that have failed to adapt to the new reality to understand the implications. Instead, a step change in both technological approach and strategic mindset are required. This report aims to uncover best practice exhibited by your peers with the most mature approach towards security. In order to swim with the sharks, and maybe even bite back, a new outlook is required.

USING THIS REPORT

This report aims to provide you with insights into the characteristics and progression of maturity in security. It identifies examples of best practice that you can aspire to in order to improve your security maturity. It also highlights innovation accelerators that have a particularly strong impact on boosting maturity levels. Finally, it offers recommendations for how you can improve your position in comparison with your peers. These insights emerge from a survey of 500 senior security decision-makers based in France, Germany, Italy, Spain and the UK.

YOUR PEERS' MATURITY PROFILE

Based on our survey of 500 senior security decision-makers, IDC has broken the market down into five categories of maturity. From low to high, these are:

ad-hoc
opportunistic
repeatable
managed
optimized.

Enterprises are typically distributed into a classic 'bell curve' as shown in figure 1:

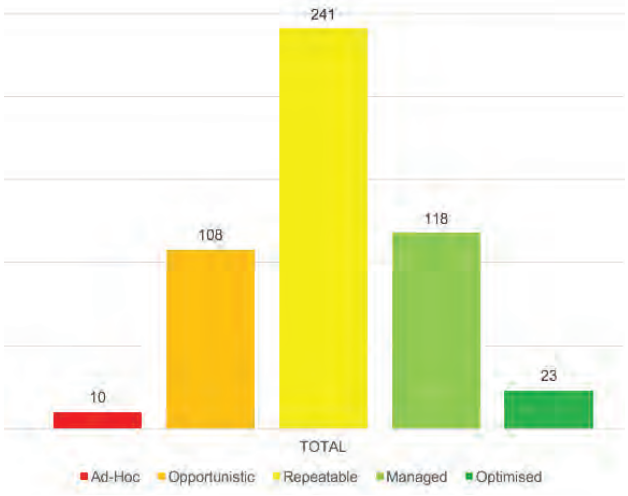


Figure 1

Source: IDC, 2016

There are very few of your peer organizations at the low end in their approach towards security, and also few at the top end. Instead, the majority of peer enterprises sit somewhere in the middle. If you aim to swim with sharks without getting bitten, you should aspire beyond parity of your peers and embrace best practice. The next section of this report gives indication of what best practice in security looks like.

SECURITY BEST PRACTICE

Traditionally, security technology has aimed to protect enterprises from known threats. By gathering devices, applications and data behind the safety net of the firewall, perimeter controls at the device and network levels could keep those known threats at bay. However, such preventative security models are being rendered insufficient as a stand-alone approach by two trends:

- Digital transformation is taking corporate applications and data beyond the perimeter, and outside the visibility and control of in-house security teams.
- The sheer scale of threats is unprecedented. The number of new malware variants emerging on a daily basis is over a million. It is simply impossible to generate signatures at a rapid enough pace to maintain traditional defenses that aim to block new threats.

Quite clearly, new approaches are required that will help enterprises to identify and respond to unknown threats as well as blocking out known threats. Security must become proactive, seeking potential indicators of compromise to remediate rather than waiting for an attack to become evident. However, this requires a mental leap in security strategy. An analysis of what is considered to be limiting security effectiveness across the maturity levels is enlightening, as shown in figure 2 below:

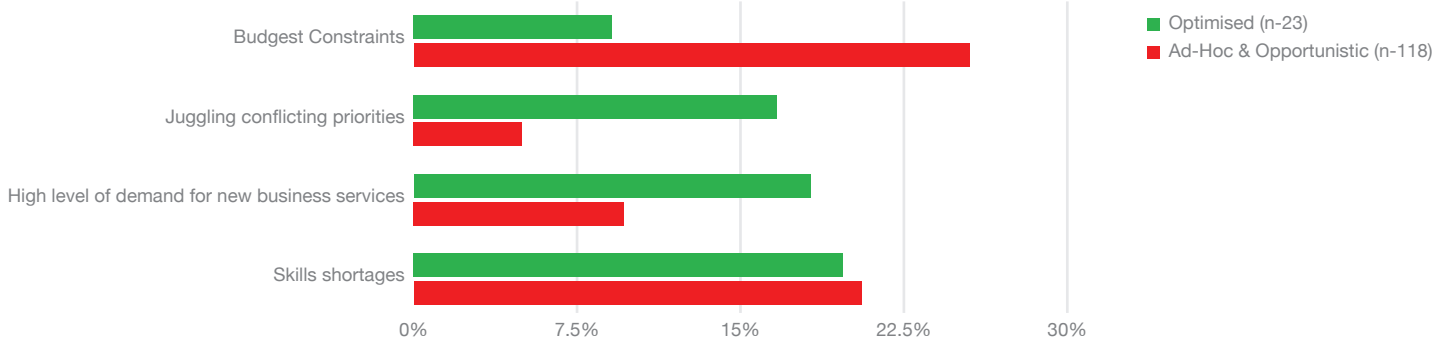


Figure 2

Source: IDC, 2016

There are certain common themes that apply across all maturity levels. Specifically, cost and skills availability are the primary limitations. This is no surprise given the global skills shortage that endures within the security market. However, it is the degree to which further concerns are considered where an insight into best practice emerges.

For lower level maturities, cost pressures and skills shortages are the overwhelming concerns. But at more mature levels, there is a greater balance between these areas and areas such as the management of conflicting priorities and supporting demand for new business services. This highlights a key step change in mentality: best practice in security is to consider the needs of the business.

Once this mental leap has been made, enterprises must consider what this means in terms of practical security approaches. In particular, the progression away from reactive security models towards proactive security is required. In fact, as shown in figure 3 below, there are two clear trends across maturity techniques. The more mature an enterprise is, the less likely it is to not be using proactive security techniques, and more likely to either be planning or already using them.

Proactive Security Adoption by Maturity Level

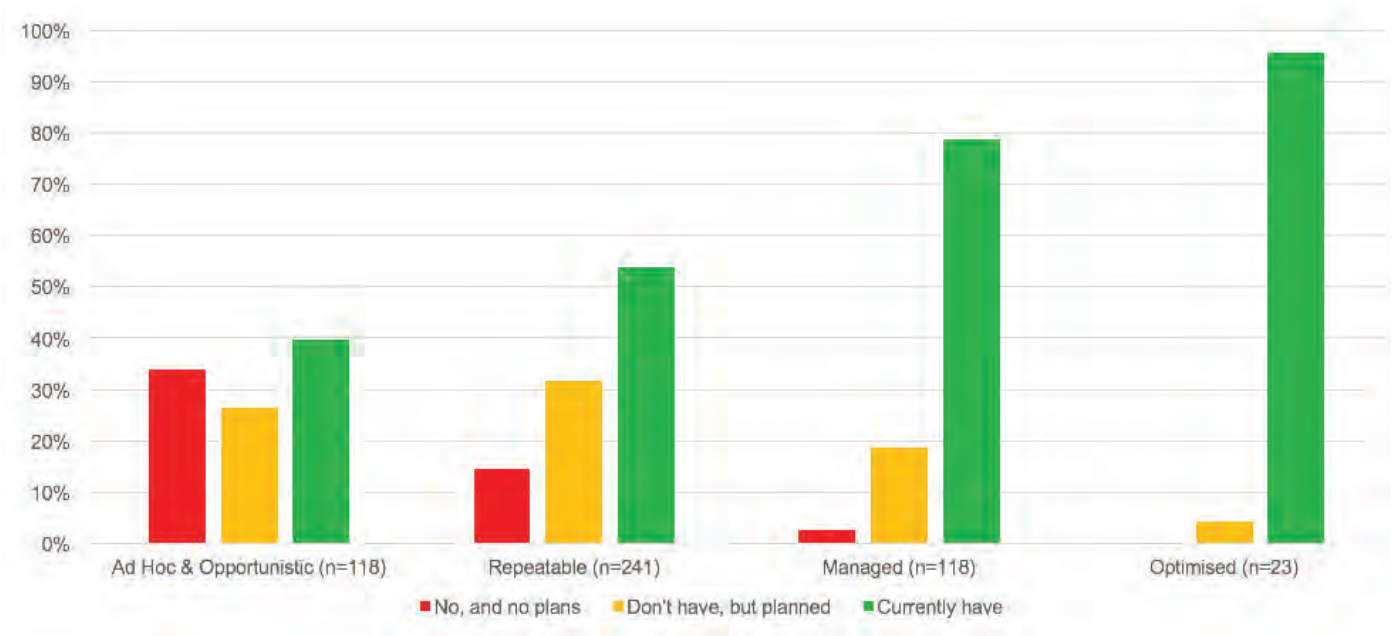


Figure 3

Source: IDC, 2016

According to our survey, key security technologies that enterprises can adopt in order to facilitate these more proactive approaches include threat intelligence, artificial intelligence and heuristic analysis of user behavior. As with proactive technologies, the more mature an enterprise's security approach is, the more likely it is to make use of solutions such as AI and heuristics.

Although proactive security approaches represent an opportunity to move up the security maturity scale, they also bring their own challenges. For example, proactive techniques require the gathering and monitoring of operational and behavioral logs on a far larger scale. Given the pressures on both financial resources that security teams are facing, a grown up discussion of techniques to help lighten the load on internal resources is required. Best practice indicates that there are two potential outlets.

OUTSOURCING

Although enterprise security is tough, the over-riding tendency is to keep control of it internally. There are a number of motivating factors here. For starters, security is viewed as a mission-critical activity and any externalization threatens to reduce the visibility and control that in-house teams hold over their security posture. Managed security services providers (MSSPs) have made great promises in the past, but the reality has not always lived up to that promise. Finally, turning to third parties may even be seen as an admission of failure by in-house teams, acknowledging that cannot do the job alone.

However, in a connected world, no single enterprise stands alone and immune to the threat. This is especially the case when European enterprises possess limited security resources, and where third parties are increasingly well-positioned to provide support thanks to, for example: global scale, industrialized delivery models, better access to skilled personnel, etc. Therefore, for those who aspire to best practice in security, MSS is an important consideration.

Although MSS can be a crutch for enterprises to ease pressures on internal resources, it cannot become the only answer. IDC's research indicates that, rather than wall-to-wall outsourcing, best practice is to find a balance between in-house delivery and MSS that meets both the business goals and the risk appetite of the enterprise. The retention of in—house capability within security operations is important to understand the strategic impact of business decisions on security – and vice-versa. With security increasingly driven on a risk-management basis and as an organization-wide concern, this is a vital characteristic of best practice for business management, let alone security practice.

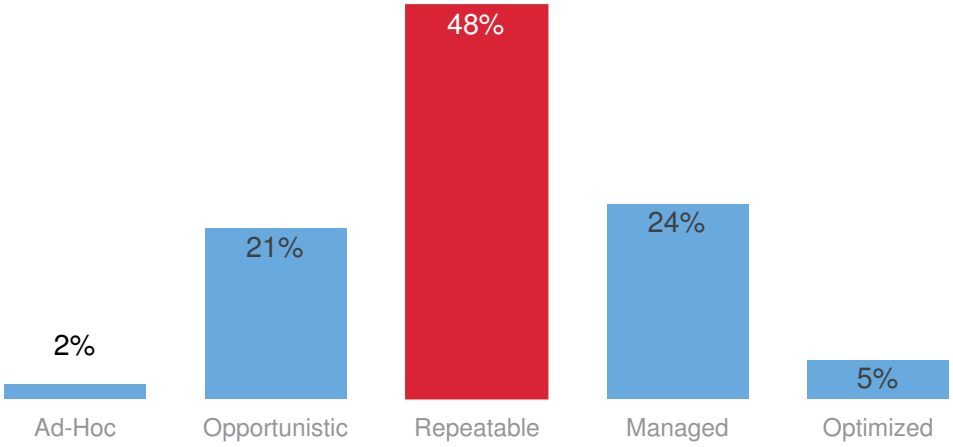
AUTOMATION

Alongside MSS, another key lever for enterprises to pull in the face of pressure on resources and the imbalance between digital transformation and the evolving threat landscape is automation. Automation allows the management and even delivery of security operations to be handled through technology products. The involvement of in-house personnel helps to retain visibility and control over security.

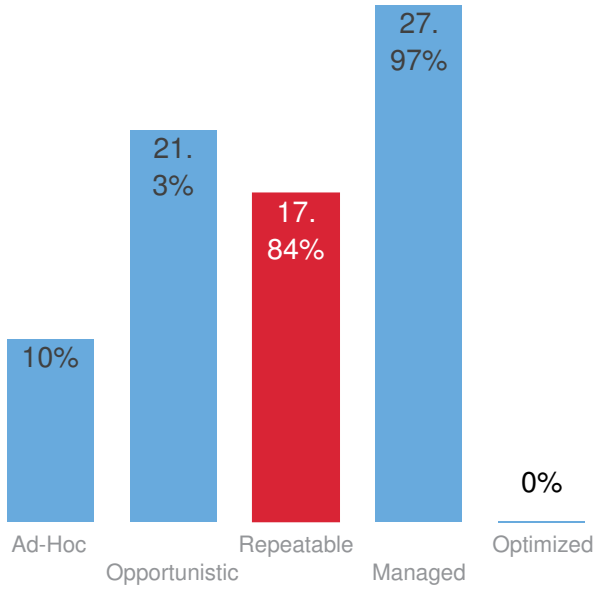
This will have ramifications for the emergence of AI and cognitive computing within security, which aim to further release pressure on resources by pushing decision-making to machines. However, it is clear that best practice (at least for the time being) will be to retain a degree of human oversight to ensure the smooth running of the machines, or to take the most critical decisions out of robotic hands.

CUSTOM REPORT SUMMARY AND OVERALL PERFORMANCE RANKING

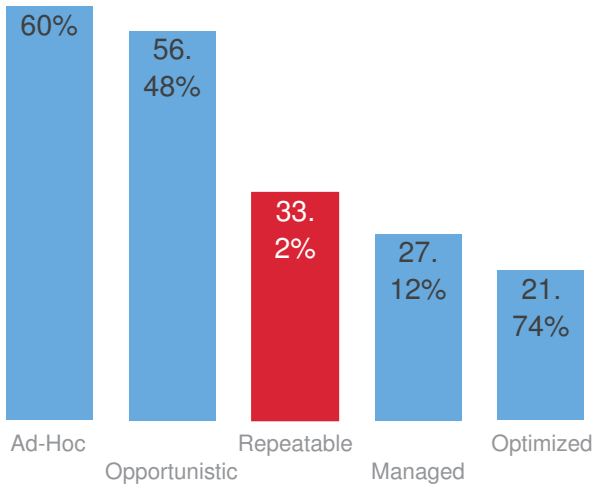
How you compare overall

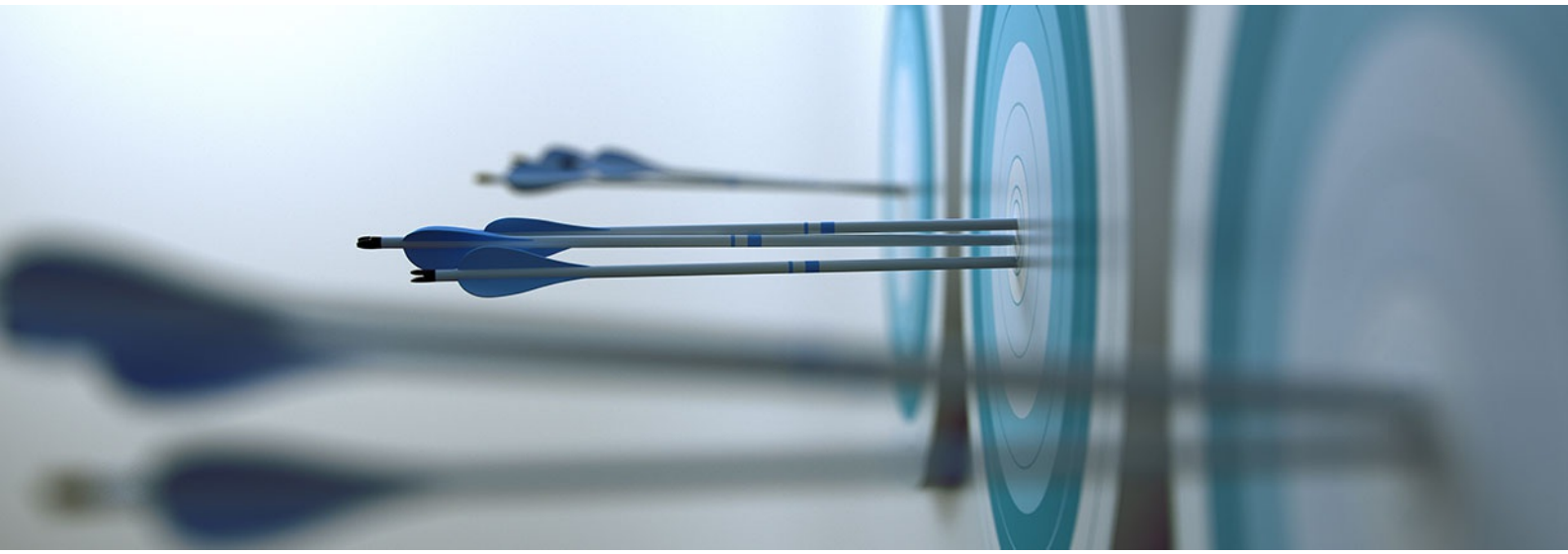


Your comparison to others in your country



Your comparison to companies of similar size





PERFORMANCE RANKING BY CATEGORY

Cyber Risk Management and the Business

Ranking: **REPEATABLE**

Warning! You are behind in this core area of Cyber Risk management, and need to urgently improve matters to reduce your exposure to cyber threats and potential fines or loss of reputation.

Cyber Risk Management Operations and Defence

Ranking: **REPEATABLE**

Job well done! You are performing in-line in this area of Cyber Risk management, but should still look to new approaches to help you improve your overall Cyber Risk readiness.

Cyber Risk Management Breach Detection and Remediation

Ranking: **REPEATABLE**

Top job! You are ahead of your peers when it comes to managing Cyber Risk in conjunction with the business. You are performing very well in this area of Cyber Risk management but should not become complacent and continually reassess what you do.

CYBER RISK MANAGEMENT AND THE BUSINESS PERFORMANCE RANKING BY QUESTION

We're now going to look at how you performed in three key areas of Cyber Risk Readiness. In each case, we'll look at how you compared to others in the same readiness ranking of **Repeatable** as yourself. To do this, we look at whether you are behind, in-line or ahead of your peers.

If you are in-line, you are broadly comparable to most companies at your level of readiness. If you are ahead, you are doing well in this area and should be looking at other areas to improve to get a balanced approach. If you are behind, you need to focus attention and investment in this area to bring your Cyber Risk Readiness in to line.

If you achieve a rating of in-line or ahead in all sections, you are ready to be moving up a readiness level in short order."

Q1: ¿Cuál suele ser la opinión de la alta dirección de la empresa acerca del papel de las TI? Elija una

A: **Un facilitador de la eficiencia empresarial**

When compared with the next level, **Managed** you would be positioned as Al mismo nivel

idcs-cyber-risk-assessment.questions.q1.Al mismo nivel

Q2: Cuando se trata de solicitudes empresariales de aplicaciones o servicios nuevos o mejorados, ¿qué afirmación refleja mejor las capacidades de su departamento de TI? Elija una

A: **En general no tenemos problemas con las solicitudes relativas a aplicaciones o servicios existentes, pero las solicitudes de servicios nuevos o mejorados nos plantean problemas.**

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q2.Al mismo nivel

Q3: ¿Qué afirmación describe mejor su actitud frente al riesgo a nivel empresarial? Elija una

A: **Tenemos tendencia a evitar riesgos, pero corremos algunos riesgos si hay una justificación muy buena.**

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q3.Rezagado

Q4: ¿Cuál de las siguientes opciones tienen ya implantadas para proteger su empresa si se produce un incidente? (1-Lo tenemos actualmente, 2-No lo tenemos, pero está previsto implantarlo, 3-No, y no prevemos implantarlo)

A:

- Una evaluación formal de riesgos
  No lo tenemos, pero está previsto implantarlo
- Detección proactiva
  No lo tenemos, pero está previsto implantarlo
- Plan de respuesta
  Lo tenemos actualmente
- Plan de comunicaciones internas
  Lo tenemos actualmente
- Plan de comunicaciones externas y relaciones públicas
  Lo tenemos actualmente
- Plan de notificación de fallos de seguridad
  Lo tenemos actualmente
- Plan de medidas correctivas de fallos de seguridad
  Lo tenemos actualmente
- Seguro de riesgos informáticos
  Lo tenemos actualmente

When compared with the next level, **stage4** you would be positioned as **Ahead**

You are forward thinking in how you manage the risk of security breaches and plan your responses in the event of a breach. However, as a next step, consider how cyber risk insurance can be harnessed not only to mitigate the potential costs of a breach, but also as a driver for excellence - and thus it becomes a potential source of competitive advantage in how customer data is handled.

Q5: ¿Qué afirmación describe mejor cómo se maneja en su empresa la gestión de riesgos informáticos? Elija una

A: No tiene un responsable específico.

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q5.Rezagado

Q6: ¿Con cuál de las siguientes opciones cuentan ustedes como parte de su marco de trabajo en la gestión de riesgos informáticos? (Seleccione todas las que correspondan) [Sí/No]

A:

- CEO (Director Ejecutivo)
  No
- CFO (Responsable de finanzas)
  No
- COO (Responsable de operaciones)
  No
- Miembro no ejecutivo de nivel de la junta centrado en riesgos/cumplimiento de la normativa/seguridad
  Si
- Miembro ejecutivo de nivel de la junta centrado en riesgos/cumplimiento de la normativa/seguridad
  Si
- Cargo específico de riesgos/cumplimiento de la normativa/seguridad (que no es miembro de la junta directiva)
  Si

When compared with the next level, **stage4** you would be positioned as **Behind**

Best practice in Cyber Risk management involves broad CxO engagement as well as having focused Risk and Compliance officers. Consider ways to bring more involvement and responsibility from the business, particularly with compliance experts and involving the operations leaders. Make effective use of third parties to gauge best practice.

Q7: ¿En qué etapa, por lo general, participa TI en los proyectos e iniciativas empresariales? Seleccione solo una

A: Desde el comienzo de la planificación

When compared with the next level, **Managed** you would be positioned as Adelantado

idcs-cyber-risk-assessment.questions.q7.Adelantado

Q8: ¿Cómo describiría el nivel de inversión de su organización en seguridad de TI? Seleccione solo una

A: Ajustado, apenas cubre las operaciones esenciales

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q8.Rezagado

CYBER RISK MANAGEMENT OPERATIONS AND DEFENCE PERFORMANCE RANKING BY QUESTION

We're now going to look at how you performed in three key areas of Cyber Risk Readiness. In each case, we'll look at how you compared to others in the same readiness ranking of **Repeatable** as yourself. To do this, we look at whether you are behind, in-line or ahead of your peers.

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If you achieve a rating of in-line or ahead in all sections, you are ready to be moving up a readiness level in short order."

Q9: ¿En qué medida tienen ustedes implantadas las siguientes opciones para gestionar la seguridad física de sus TI? (1-Nada en absoluto, 5-Muy extensamente)

A:

- Investigación de los antecedentes del personal de seguridad
  5
- Citas concertadas previamente
  5
- Verificación de la identidad
  1
- Controles de entrada y de salida
  1
- Autenticación biométrica
  1
- Supervisión por circuito cerrado de televisión
  1
- Acompañamiento (el personal y los visitantes deben trabajar en parejas o ir acompañados)
  1
- Cambio de autorización, aprobación y registro
  1

When compared with the next level, **stage4** you would be positioned as **Behind**

Consider making more extensive use of these techniques, as well as some of the next-phase techniques (e.g. security staff screening, man-shadowing).

Q10: ¿Cuál de las siguientes opciones describe mejor su adopción y aplicación de buenas prácticas de seguridad de las TI? Elija una

A: No lo hacemos.

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q10.Rezagado

Q11: ¿En qué medida están ustedes preparados para los siguientes aspectos de la evaluación y aplicación en su organización del cumplimiento de la norma GDPR (Reglamento General sobre la Protección de Datos)? (1-No estamos preparados, 5-Estamos muy bien preparados)

A:

- Conocimiento de las obligaciones
  3
- Evaluación de las capacidades y carencias
  1
- Planificación de la implantación
  1
- Ejecución de la implantación
  1
- Mejora continua/buenas prácticas más allá de la propia GDPR (más allá de la normativa)
  5
- Comprensión de la mitigación de las sanciones basada en la detección/correción tempranas
  5

When compared with the next level, **stage4** you would be positioned as **Behind**

In order to move up the maturity scale, develop an understanding of the obligations that GDPR brings, plan for implementation of those responsibilities and then execute on that plan.

Q12: ¿Tienden ustedes a invertir tácticamente (productos puntuales/según necesidades) o estratégicamente (como parte de un plan) en productos o soluciones de seguridad de TI? Elija una

A: **En general compramos tácticamente a medida que surgen problemas, pero hacemos algunas compras estratégicas.**

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q12.Rezagado

Q13: ¿Con qué frecuencia informan ustedes a la empresa sobre el estado de la seguridad de las TI? Elija una

A: **Trimestralmente**

When compared with the next level, **Managed** you would be positioned as Al mismo nivel

idcs-cyber-risk-assessment.questions.q13.Al mismo nivel

Q14: ¿Cuál es su principal medio para gestionar su infraestructura de seguridad de las TI? Elija solo una

A: **Utilizamos principalmente herramientas especializadas de gestión de la seguridad.**

When compared with the next level, **Managed** you would be positioned as Al mismo nivel

idcs-cyber-risk-assessment.questions.q14.Al mismo nivel

Q15: "¿En qué medida han adoptado ustedes la automatización en su gestión de la seguridad de las TI? Elija solo una

A: **Automatización en todos los ámbitos**

When compared with the next level, **Managed** you would be positioned as Adelantado

idcs-cyber-risk-assessment.questions.q15.Adelantado

Q16: Cuando se trata de su uso de la automatización, ¿cómo piensan cambiar el uso que hacen de la misma?

A: **Dejarla igual**

When compared with the next level, **Managed** you would be positioned as Al mismo nivel

idcs-cyber-risk-assessment.questions.q16.Al mismo nivel

Q17: ¿Utilizan ustedes las siguientes opciones con respecto a la seguridad de las TI – defensa? Sí/No

A:

- NGFW (cortafuegos de próxima generación)
  No
- IPS/IDS (detección de intrusiones/protección contra intrusiones)
  No
- Administración de vulnerabilidades
  No
- Micro segmentación (separación y aislamiento detallados del tráfico entre servidores o dominios específicos)
  No
- Gestión unificada de la seguridad (intercambio de datos e información entre dispositivos y herramientas),
  No
- Servicio profesional de seguridad de terceros (pre-venta/diseño/implantación)
  No

When compared with the next level, **stage4** you would be positioned as **Behind**

The most advanced at Cyber RIsk Mangement make extensive use of a range of security products that are available to offer protection across the corporate network. Working with third party professional security services specialists to help you design and implement appropriate approaches can also but time to implementation and boost capabilities.

Q25: **¿Qué enunciado describe mejor la extensión de su uso de proveedores de servicios gestionados de seguridad? Seleccione solo una**

A: **Los utilizamos de una manera limitada, pero preferimos hacer las cosas internamente.**

When compared with the next level, **Managed** you would be positioned as Rezagado

idcs-cyber-risk-assessment.questions.q25.Rezagado

CYBER RISK MANAGEMENT BREACH DETECTION AND REMEDIATION PERFORMANCE RANKING BY QUESTION

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If you achieve a rating of in-line or ahead in all sections, you are ready to be moving up a readiness level in short order."

Q18: **¿Utilizan ustedes las siguientes opciones con respecto a la seguridad de las TI – detección de fallos en la seguridad? Sí/No**

A:

- Servicios de inteligencia de amenazas
  No
- Análisis en tiempo real
  No
- Protección avanzada contra amenazas/entorno controlado
  No
- IA/heurística
  No
- Escaneo de malware
  No

When compared with the next level, **stage4** you would be positioned as **Behind**

idcs-cyber-risk-assessment.questions.q18.Rezagado

Q19: **"¿Utilizan ustedes las siguientes opciones con respecto a la seguridad de las TI – respuesta a fallos de seguridad? Sí/No**

A:

- Honeypot (sistema de señuelos) / Recogida de inteligencia
  Si
- Monitor de procesos de registro y análisis
  Si
- Recuperación de fallos/recuperación del sistema
  Si
- Equipos tigre/adelante (Tiger/go)
  Si
- Socio externo de respuesta a incidentes
  Si

When compared with the next level, **stage4** you would be positioned as **Ahead**

idcs-cyber-risk-assessment.questions.q19.Rezagado

Q20: **"¿Utilizan ustedes las siguientes opciones con respecto a la seguridad de TI – medidas correctivas de fallos en la seguridad? (Sí/No)**

A:

- Corrección automatizada (basada en el aprendizaje automático)
  Si
- Actualizaciones de la política
  Si
- Política de recuperación ante desastres
  Si
- Proveedores externos de recuperación ante desastres
  Si
- Evaluaciones de compromiso
  Si

When compared with the next level, **stage4** you would be positioned as **Ahead**

idcs-cyber-risk-assessment.questions.q20.Rezagado

Q21: ¿Han realizado las siguientes acciones respecto a su comprensión de su perfil de riesgo informático? Sí/No?

A:

- Han evaluado el riesgo de sufrir un fallo de seguridad informática
  Si
- Comprenden la escala potencial de la exposición
  Si
- Han realizado una evaluación de datos de los datos críticos
  Si
- Comprenden la postura de la cadena ampliada de suministro o socios
  Si
- Han desarrollado un plan de respuesta ante fallos en la seguridad
  Si

When compared with the next level, **stage4** you would be positioned as **Ahead**
idcs-cyber-risk-assessment.questions.q21.Rezagado

Q23: ¿Con qué frecuencia ponen a prueba sus capacidades de defensa de la seguridad de TI mediante la verificación por parte de terceros? Seleccione solo una

A: **Cada 6 meses**

When compared with the next level, **Managed** you would be positioned as Rezagado
idcs-cyber-risk-assessment.questions.q23.Al mismo nivel

Q24: ¿Con qué frecuencia ponen a prueba sus planes de respuesta a incidentes de fallos de seguridad informática? Seleccione solo una

A: **Nunca**

When compared with the next level, **Managed** you would be positioned as Rezagado
idcs-cyber-risk-assessment.questions.q24.Rezagado

TOLERANCE FOR CHANGE

A final factor to consider in understanding how well firms embrace the need to swim with sharks is their ability to cope with IT change. As outlined earlier in this report, best practice approaches towards cybersecurity represent a deviation from standard behavior that has evolved over a period of decades. In order to enact changes in mentality and philosophy towards security, the ability to embrace change in the underpinning IT is an important enabling factor.

A key example here is digital transformation, which is one of the key reasons why enterprises are being forced to swim in these shark-infested waters in the first place. Standard practice among security professionals may be to seek to block the adoption of technologies such as social business, mobility big data/analytics and cloud. Their adoption represents an exposure to risk. However, this is not the mature approach; instead of blocking digital transformation, the enlightened enterprise must seek to empower users, providing them with the tools to adopt digital transformation securely.

As demonstrated in figure 4 below, the more mature an organization is as defined by this study's framework, the more comfortable they are in coping with IT change. At the low end of the scale, the least mature enterprises tend to struggle with any IT change, or least they struggle when asked to enact anything other than basic changes to applications and services. However, as we move up the maturity framework, it becomes more likely that an enterprise will describe itself as being able to cope with these changes, or even 'very good' at delivery of them.

These findings show that, in today's security environment, one of the keys to being a successful, dynamic enterprise is to take a mature approach towards security and is able to harness (rather than fear) IT change. The door swings both ways, with one theme being a reflection of the other. The ability to make IT changes requires affirm grasp of the security implications. At the same time, in order to adopt a mature stance towards security, an ability to enact the required changes to IT is critical.

Capability for Coping with Change by Cyber Risk Maturity Levels

Q2. When it comes to business requests for new or enhanced applications or services, which statement best reflects your IT department`s capabilities?

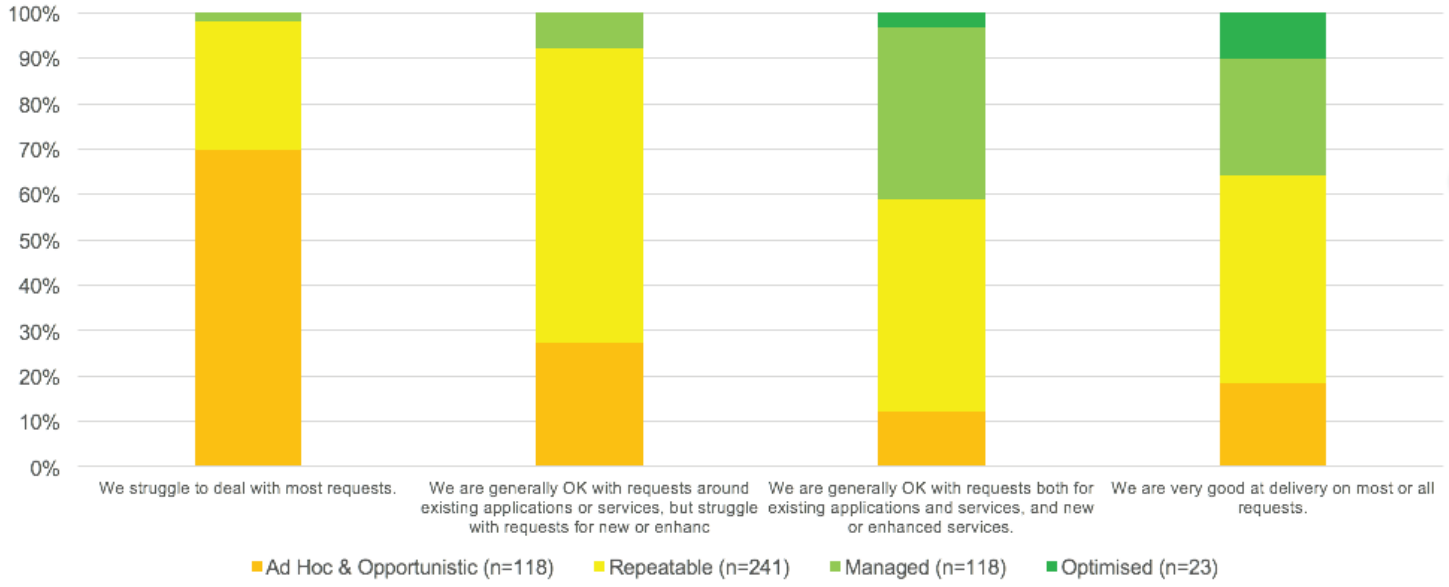

Figure 4 *Source: IDC, 2016*

10 RECOMMENDATIONS FOR YOUR ORGANIZATION

Here are ten recommendations that provide a framework for your enterprise to improve its level of maturity in security:

- **Compare your position with your immediate peers in terms of industry, size and geography.**
- **Establish your appetite for maturity and where you aspire to be.**
- **Establish the gaps in your current security approach compared to your aspirational state.**
- **Consider making use of third party security specialists to help design and implement the changes required to reach your goal.**
- **Identify the security processes and activities that are critical compared with those that are low value and repetitive.**
- **Consider where lower-value or routine and repetitive activities can be automated to reduce pressure on limited or high cost human resources**
- **Consider where outcomes could be improved by working with MSSPs. Lower-value activities may be a good place to start, taking advantage of global and industrialized delivery models.**

However, as MSSP becomes business as usual, consider where specialist capabilities are available that may boost the desired outcomes, which may include cost as well as quality.
Take a risk-based approach towards security that encompasses the whole of the enterprise, All users are a potential ‘insider threat’, so security culture and strategy must be holistic.
Embed security representatives within new business initiatives from the start. Ensuring that new initiatives are ‘secure by design’ will make life easier further down the line.