



Crowe Horwath®

Crowe Risk Consulting Services

**Specifically Engineered for
High-Tech Companies**

Technology companies face an array of risks, many of which are unique to the high-tech sector. Crowe Horwath offers comprehensive, customized risk management services that are specifically engineered for high-tech companies and delivered by experienced industry professionals.

The Technology Sector's Unique Risk Profile

Technology companies differ from other businesses in many ways, particularly in their approach and exposure to certain categories of risk. Compared to their counterparts in traditional industries, high-tech companies are often characterized by several distinctive factors including:

- **Appetite for risk.** Most high-tech companies recognize risk as an essential – and sometimes even desirable – aspect of business. They approach risk from an engineering perspective that seeks to adapt and mitigate risk rather than avoiding it.
- **High-velocity workflows.** Technology companies are legendary for their rapid research, development, production, and delivery cycles. This speed has a direct effect on risk exposures.
- **Commitment to research.** Compared to more conventional businesses, high-tech companies make significantly higher investments in R&D. Budgets equivalent to 5 percent, 10 percent, or even 20 percent of revenues are not unusual.

- **Demand for talent.** Technology leaders consistently seek new ways to attract and retain talented workers, managers, and executives. This highly competitive environment also affects how companies approach risk.
- **Creative destruction.** Technology companies do not hesitate to cannibalize their own product lines, engineering new solutions and applications that quickly drive their own existing products into obsolescence.

Crowe has developed a consulting approach that recognizes these attributes and offers an array of specialized risk management services and solutions that directly address the inherent challenges these characteristics present.



Exclusive Crowe Research: The Risks Facing Technology Companies Today

As part of their commitment to serving the technology sector, Crowe professionals continually study the major risk factors facing the industry. Most recently, Crowe analysts identified the risk factors that were mentioned in the Management Discussion and Analysis sections of the 20 largest publicly traded U.S. high-tech companies' Securities and Exchange Commission Form 10-K filings. The companies examined represented four major subsectors: hardware, software, Internet hosting, and semiconductors.

These references were documented and weighted in order to identify the most significant risks the industry must address – as ranked by the industry's leaders themselves and shown in Exhibit 1.

In analyzing the findings, these risks are organized into two levels of priority:

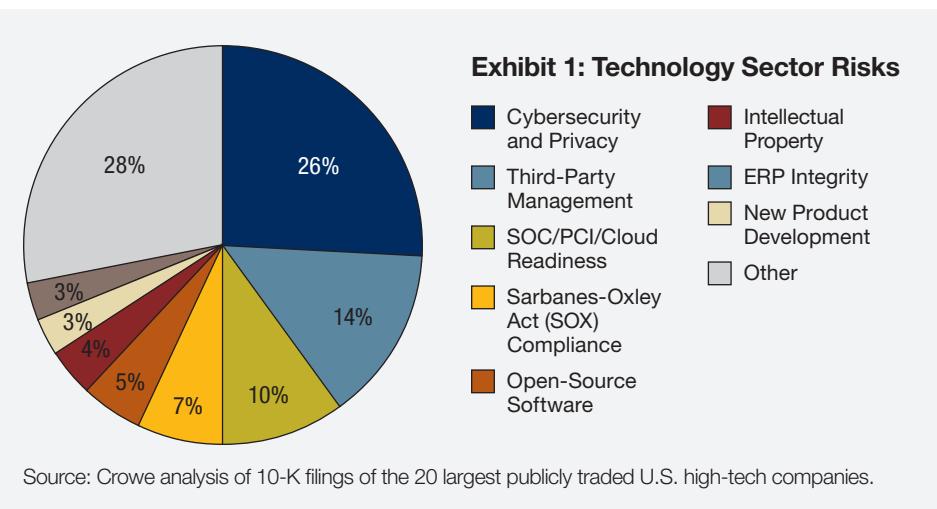
1. Major Risks

- **IT system risks:** With the integration of complex systems housing highly sensitive data, IT risks are of growing concern.
- **Cybersecurity risks:** The growth of cybercrime, data privacy, and the theft of sensitive data have been elevated major concerns.
- **SOC/PCI/cloud risks:** Compliance with Service Organization Controls (SOC) reports and payment card industry (PCI) standards becomes increasingly important with the integration of cloud technology.

2. Emerging Risks

- **Third-party risks:** Outsourcing of enterprise technology requires firm control of vendor-management risks.
- **Open-source software risks:** Although it can be highly advantageous in the enterprise IT environment, open-source software requires specialized risk management.
- **New product development risks:** A special concern in the technology industry, the security and reliability of new products directly impacts both earnings and reputation.

Research of this nature not only helps Crowe risk consulting professionals stay abreast of current industry issues, it also offers valuable insights to Crowe clients and industry leaders.



Crowe Risk Consulting Services: Focused and Specialized

The Crowe dedicated technology sector risk consulting group is focused on helping high-tech businesses apply sound risk management practices in a way that not only identifies and mitigates risk but also helps to build long-term enterprise value. By putting together the right team for each specific engagement, and by drawing on experienced professionals' strengths and specialized skills, Crowe helps clients in a broad array of high-tech industry sectors, including:

- Semiconductor
- Computer hardware
- Software
- Internet hosting

Working within these major subsectors, Crowe risk teams help clients build on the Crowe Sustainable Risk Management Framework (as shown in Exhibit 2) to address specific needs across all three recognized categories of risk:

■ Business Risk

- Internal audit
- Capital audit
- Royalty assessments
- Board adviser
- Sustainable Accounting Standards Board consulting
- Consolidated risk profiles
- Risk mitigation leveraging analytics
- Regulatory compliance services
- Enterprise risk management

■ Technology Risk

- IT general controls
- COSO assessment
- Cybersecurity consulting
- Supplier/third-party risk management
- SDLC review
- New product development risk assessment
- Open-source software risk assessment
- SOC/PCI/cloud readiness assessment
- ERP integrity evaluation
- Sarbanes-Oxley consulting
- Intellectual property protection

■ Regulatory Compliance

- Independent review organization services
- Ethics and compliance audits and monitoring
- Regulatory compliance services

Exhibit 2: The Crowe Sustainable Risk Management Framework



Gartner 2015 Magic Quadrant

Crowe Horwath Global Risk Consulting has once again been named a “Challenger” by Gartner, Inc., in the “Magic Quadrant for Global Risk Management Consulting Services,” by Jacqueline Heng and John A. Wheeler.

The full report can be accessed at www.crowehorwath.com/gartner.

Culture of Innovation

As part of an international global accounting network with a presence in more than 120 countries, the Crowe approach is focused on understanding how best to accomplish results in every type of corporate culture and environment. One key to this effort is a relentless commitment to innovation that manifests itself in several notable attributes:

- **Crowe “Triple Threat” Strategy** – The Crowe strategy combines technical knowledge, industry expertise, and applied technology to deliver customized solutions to meet clients’ needs.
- **Technology-Based Approach** – Crowe employs a growing suite of in-house developed applications, all of which originated as responses to individual client needs.
- **Security and Privacy Laboratories** – The Crowe R&D investment in this area has yielded valuable results to clients, developing tools and building an environment in which to conduct industry-leading internal and external penetration testing.

Source: Gartner Magic Quadrant for Global Risk Management Consulting Services November 5, 2015, Jacqueline Heng, John A. Wheeler

Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

All statements in this report attributable to Gartner represent Crowe Horwath Global Risk Consulting's interpretation of data, research opinion or viewpoints published as part of a syndicated subscription service by Gartner, Inc., and have not been reviewed by Gartner. Each Gartner publication speaks as of its original publication date (and not as of the date of this [presentation/report]). The opinions expressed in Gartner publications are not representations of fact, and are subject to change without notice.



Contact Information

Ray Cheung is a Director at Crowe Horwath LLP and can be reached at +1 415 230 4971 or ray.cheung@crowehorwath.com.

Matt Bowser is a Principal at Crowe Horwath LLP and can be reached at +1 317 208 2432 or matthew.bowser@crowehorwath.com.

About Us

Crowe Horwath LLP (www.crowehorwath.com) is one of the largest public accounting, consulting, and technology firms in the United States. Under its core purpose of “Building Value with Values,”[®] Crowe uses its deep industry expertise to provide audit services to public and private entities while also helping clients reach their goals with tax, advisory, risk and performance services. With offices coast to coast and 3,000 personnel, Crowe is recognized by many organizations as one of the country’s best places to work. Crowe serves clients worldwide as an independent member of Crowe Horwath International, one of the largest global accounting networks in the world. The network consists of more than 200 independent accounting and advisory services firms in more than 120 countries around the world.

www.crowehorwath.com

MOHAWK windpower 

When printed by Crowe Horwath LLP, this piece is printed on Mohawk Color Copy Premium, which is manufactured entirely with Green-e[®] certified wind-generated electricity.