Global IT Trends Summary

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Since starting surveying CIOs on an annual basis in the 1980s, most of the top IT management concerns that CIOs had to address have changed considerably. Many of the top concerns of previous years are no longer in the top ten, and new concerns have emerged as essential. Very few concerns remained relatively constant. To obtain the current years ranking, respondents were asked to identify their top concerns. The 2018 top 10 management concerns are listed in Table 1, along with comparative rankings showing trends since 2005. You will note that security/privacy was ranked the top IT management concern in 2017-18; it was ranked 2nd in 2016 and 2015, 6th in 2014, etc.

Table 1: Top IT Management Concerns Rankings, 2005-2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Security/Privacy	1	1	2	2	6	9	8	7	9	9	8	6	3	2
Alignment of IT & Business	2	2	1	1	1	1	2	1	3	2	1	2	1	1
Data Analytics/Data Management	3	6												
Innovative use of IT	4	7	3	4	10									
IT Agility	5	9	5	11	24									
Compliance and Regulation	6	3	15											
Digital Transformation	7	10												
Business Agility	8	8	4	5	2	2	3	2	2	3	13	17	7	
IT Cost Reduction/Control	9	5	6	9	16	5	5	10	8	5	7	4		
Business Cost Reduction/Control	10	4	5	5	4	3	1	4	1	1	7	4		

Table 1 shows that indeed the top IT management concerns continue to change dramatically even in recent years. One exception is the *Alignment of IT and the Business* concern, which remains a top concern for CIOs (persistently ranked either 1st or 2nd). Data/Analysis/Data Management has joined Security as the only technology in the top 3.

In addition to identifying the top management concerns, as in previous surveys, respondents were also asked to rank the importance of their IT investments by selecting their top technology investments from a list of 38 IT technologies. IT technologies have fueled, and will continue to fuel, the development of new products and services for all organizations. The list of choices in the survey continues to evolve from the authors' research and experience as well as technologies added by survey participants. Table 2 lists the top 10 IT investment rankings since 2005. You will note that Analytics/BI/Data Mining/Big Data and Security/Cybersecurity are ranked the top two IT investment in 2017-18; with anaylytics ranked first or seconf since 2007.. As expected, the top technologies have varied greatly over the years, and recent developments in cloud technologies, security, and analytics caused IT executives to rethink their technology priorities.

The research shows that data and security remains a top management concern and a top IT investment. Nevertheless, when looking at the big picture and the trends of IT investments over time, CIOs need to be mindful that the technology will keep on changing and evolving in the future. The buzzwords of the day, like Big Data, Cloud Computing or Cybersecurity will most likely be replaced by different ones (e.g., Robotics Process Automation, Blockchain) in a few years' time. Therefore, IT leaders do not need to be experts in the technology,

but be somewhat conversed in how technology can be leveraged to provide demonstrable business value. Furthermore, IT leaders need to focus on achieving the goals and objectives of the organization as a whole, in light of its vision, and not just focus on the available technology. IT leaders, as strategic leaders, should consider the overall benefits of the organization, lead valuable IT initiatives, continuously improve information systems quality, and develop and utilize information resources to enhance the business value of IS.

Table 2: Top IT Investments, 2007-2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Analytics/BI/Data Mining/Big Data	1	2	1	1	1	1	1	1	1	1	2	2
Security/Cybersecurity	2	1	3	7	8	16	15	28	7	11	8	
Cloud Computing (SaaS, PaaS, IaaS)	3	4	4	4	4	2	2	3	5	17		
Application/Software Development/Maint	4	3	2	3	2	5	4					
Enterprise Resource Planning	5	5	6	2	3	4	3	3	3	3	14	6
Customer Relationship Management (CRM)	6	6	5	5	6	3	5	5	9	13		
Data Center/Infrastructure	7	7	7	6	3							
Networks/Communications	8	8	8	10	11	10	8	11	9	10	11	
Legacy Apps: Replacing/Replatforming	9	9	10	9	15	16						
Legacy Apps: (Maintain/Update/Consolidate)	10	10	9	11	10	11	16					

Successful IT leaders need to concentrate not on *what* technology is available, but *how* the technology can be leveraged to produce demonstrable value to the business. IT leaders should not become simply a technology or a *service provider* for the business, but an *innovator* - the leader who introduces new ways to apply the technology for the business. This emphasizes the importance of creating alignment between IT and the business, as well as with external customers/clients. Consequently, IT leaders today need to be both open and agile: be open to technological innovation and also be able to direct the organization towards change quickly. Successful IT professionals possess more than mere technical skills. Having the appropriate balance of technical, business management, leadership, business, industry, and interpersonal skills is essential.

At the same time, given the digital transformation, where every organization is becoming an IT organization, non-IT executive must also be cognizant of the important changes underway that are being enabled and driven by IT. How these emerging technologies can be leveraged in the organization, the important roles that non-IT executives must play to ensure successful deployment to maintain competitive advantage and leadership are fundamental in today's changing world.

IT is a vital part of the 21st century organization's strategy. IT is more important today with the digital transformation than ever. Changes in technology and how they are applied by the business are shaping the future of IT and the business. Organizations must recognize that competitive advantage is driven and facilitated by IT. That requires the role of IT leadership and the IT organization to transform. A harmonious IT-business relationship is fundamental. As new organizational positions directly related to technology (the CTO), data (the CDO) and security (CISO) emerge, the role of the CIO, their responsibilities, the IT organizational structure and governance, and even the CIO's reporting supervisor will probably be very different in the next few years from what we see today. With top management concerns focusing on IT-business alignment, business and IT cost reduction, innovative use of IT and agility, it is those organizations and individuals who are best prepared that will thrive in the coming years.