

2022/23 Semester 2

IS3103 Information Systems Leadership and Communication

Lecture 2

The Role of CIO and Leadership Communication Styles

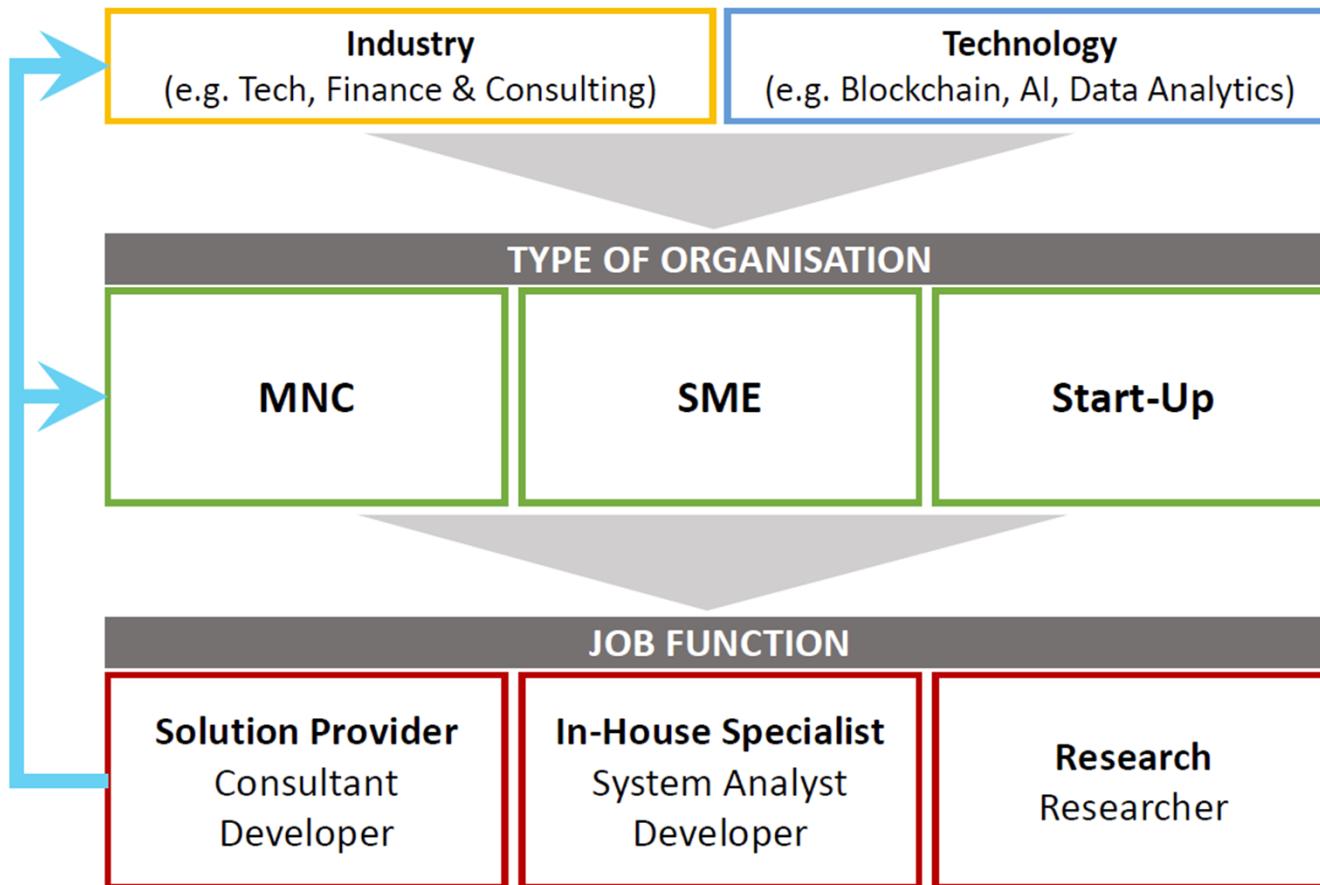
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Department of Information Systems & Analytics
NUS School of Computing



Career Journey - Start with the End in Mind



Be more than ready. Be future-ready.

Scope of IS Leaders (Top C-Suite IT Executives)

- ▶ IT Product/Service Vendors and Solution Providers
 - ▶ Chief Executive Officer (CEO)
 - ▶ Chief Technology Officer (CTO)
- ▶ **User Organizations (MNC, Government, SME, Non-profit)**
 - ▶ Chief Information Officer (CIO)
 - ▶ Chief Data Officer (CDO) / Chief AI Officer (CAIO)
 - ▶ Chief Information Security Officer (CISO)
 - ▶ Chief Digital Officer (CDO)
 - ▶ Chief Technology Officer (CTO) ?
 - may be at the same level as CIO in some organizations
- ▶ Do vendor organizations also have the user organizations' IS leadership roles?



CTO vs. CIO

("The CTO focuses on the top line, and the CIO focuses on the bottom line")

▶ Chief Technology Officer

- ▶ Serves as the company's top technology architect
- ▶ Runs the organization's engineering group
- ▶ Uses technology to enhance the company's product offerings
- ▶ Focuses on external customers (buyers)
- ▶ Collaborates and manages vendors that supply solutions to enhance the company's product(s)
- ▶ Aligns the company's product architecture with business priorities
- ▶ Develops strategies to increase the company's top line (revenue)
- ▶ Has to be a creative and innovative technologist to be successful



▶ Chief Information Officer

- ▶ Serves as the company's top technology infrastructure manager
- ▶ Runs the organization's internal IT operations
- ▶ Works to streamline business processes with technology
- ▶ Focuses on internal customers (users and business units)
- ▶ Collaborates and manages vendors that supply infrastructure solutions
- ▶ Aligns the company's IT infrastructure with business priorities
- ▶ Developers strategies to increase the company's bottom line (profitability)
- ▶ Has to be a skilled and organized manager to be successful

CHIEF INFORMATION OFFICER

Job Description

The Chief Information Officer leads the IT function and provides strategic directions, solutions and policies to support business goals. He/She develops the information strategy and services to meet business requirements including training and upgrading of systems and/or technology knowledge and skills of all staff to improve productivity through information systems. He directs and promotes governance policies and standards in relation to security, quality, risk and project management. He leads important innovation initiatives and has ultimate accountability for the function. He provides the highest level of advice and recommendations to the heads of organisations or business units. He has the ability to leverage on new and innovative technology to develop strategic directions for the IT functions alignment with the organisation objectives.

He is able to propose solutions and influence key stakeholders to drive commitment for initiatives across the organisation.

Critical Work Functions
and Key Tasks

[View details](#)

Click on any of the Skills and Competencies to view a detailed description

Technical Skills & Competencies	Proficiency Level	Generic Skills & Competencies (Top 5)	Proficiency Level
Budgeting	6	Organisational Design	6
Business Continuity	6	Partnership Management	6
Business Risk Management	6	People and Performance Management	5
Business Performance Management	5	Performance Management	6
Cyber and Data Breach Incident Management	6	Stakeholder Management	6
Cyber Risk Management	6	Strategy Planning	5
Disaster Recovery Management	6	Sustainability Management	5
Enterprise Architecture	6		
Infrastructure Design	6		
Infrastructure Strategy	6		
IT Governance	6		
IT Standards	6		
IT Strategy	6		
Learning and Development	6		
Networking	5		
Organisational Analysis	6		

CHIEF TECHNOLOGY OFFICER

Job Description

The Chief Technology Officer oversees all technical aspects of the organisation and partners with key stakeholders within the business to evaluate new IT opportunities and use them as an enabler for growth. He/She approves the deployment of new technologies to enhance or develop new services and products offerings. He devises and implements long-term strategies focused on both current and new technology that can help an organisation go to market more effectively and in turn increase revenue through technological enhancements.

He is an inspiring leader with a futuristic mind-set with an ability to drive innovative enhancements in the organisation. He is able to foresee connections across diverse areas and influence key stakeholder decisions.

Critical Work Functions and Key Tasks

[View details](#)

Click on any of the Skills and Competencies to view a detailed description

Technical Skills & Competencies	Proficiency Level	Generic Skills & Competencies (Top 5)	Proficiency Level
Budgeting	6	Product Management	6
Business Agility	6	Quality Standards	6
Business Continuity	6	Solution Architecture	6
Business Risk Management	6	Software Design	6
Change Management	6	Stakeholder Management	6
Emerging Technology Synthesis	6	Strategy Planning	6
Enterprise Architecture	6	Sustainability Management	6
IT Strategy	6	System Integration	6
Learning and Development	6		
Networking	5		
Organisational Analysis	6	Leadership	Advanced
Organisational Design	6	Developing People	Advanced
Partnership Management	6	Service Orientation	Advanced
People and Performance Management	5	Transdisciplinary Thinking	Advanced
Performance Management	6	Communication	Advanced
Portfolio Management	6		

IS Leadership at Starbucks



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Gerri Martin-Flickinger

executive vice president, chief technology officer

Gerri Martin-Flickinger is Starbucks executive vice president and chief technology officer. She is responsible for technology strategies and teams that enable the company to connect with customers worldwide.

Gerri joined Starbucks in 2015, and has led the technology organization through significant transformation while developing and enabling industry-leading innovations including mobile order and pay, voice ordering and social gifting. Under her leadership, Starbucks Technology

here the cto aim is just to connect with customers globally so these kinds of tech driven delivering innovative, cloud-based and digital solutions that empower partners and delight customers globally.

Prior to Starbucks, Gerri served as Chief Information Officer at Adobe, where she played a key role enabling Adobe's transformation to a cloud-based business. Before Adobe, she was CIO at VeriSign, Network Associates, Inc., and McAfee Associates, Inc. She began her career at Chevron Corporation, where she held several senior systems roles.

How Starbucks uses Data?

- Targeting customers with personalized promotions and offers
- Insight-driven product development, including across channels
- Sophisticated real estate planning
- Dynamic menu creation and adjustments
- Optimized machine maintenance

cto can make use of data to better connect with the user or some





Chris Fallon

senior vice president, Business Technology

Chris Fallon is senior vice president for Starbucks Business Technology, managing and providing strategic direction for the technology supporting Channel Development, Global Supply Chain, Store Development and Finance & Accounting and Evolution Fresh. He also oversees Enterprise QA for Starbucks Technology.

 [DOWNLOAD IMAGE](#)

this is much closer to CIO r

Chris began his career at Starbucks in 2007 as a director of Global Technology, Distribution, Logistics and Planning Systems. In December 2013, he was promoted to the role of vice president responsible for the strategic roadmap and delivery of technology to the global supply chain organization. Shortly thereafter his responsibilities were expanded to include the technology for finance and accounting, store development and Evolution Fresh.





Wouleta Ayele

senior vice president, Starbucks Technology Services

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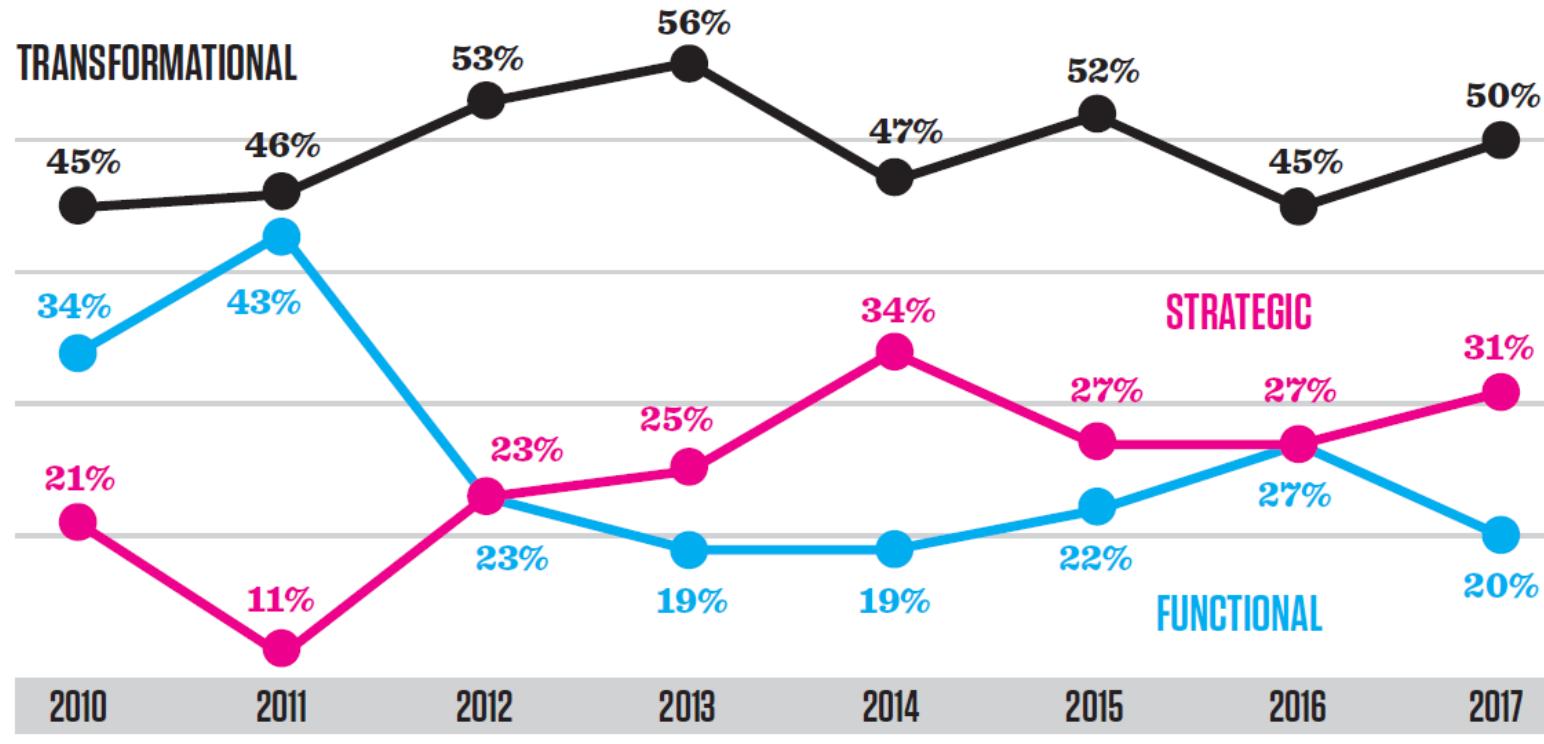
Wouleta Ayele is senior vice president for Starbucks Technology Services. She is responsible for the technology pillars that enable Starbucks brand-differentiating capabilities and platforms including, Business Intelligence and Data Services, Enterprise Architecture, Emerging Technologies, Data Center and Cloud Enablement, Global Network, Technology Operations, and Starbucks Technology Governance & Compliance.

Wouleta joined Starbucks in 2005 as director, Retail Technology, managing Point of Sale, Starbucks Card, and other core technology areas. In 2008, she was integral in the launch of Starbucks first loyalty program by establishing Starbucks Customer Relationship Management (CRM) technology competency. In 2013, Wouleta was promoted to vice president, Loyalty & CRM Technology, where her responsibilities expanded to include customer and partner contact

Changing Role of the CIO

CIOs INCREASINGLY SPENDING TIME ON STRATEGIC ACTIVITIES

Which of the following activities best characterize your focus and how you spend your time in your current role?



Changing Role of the CIO

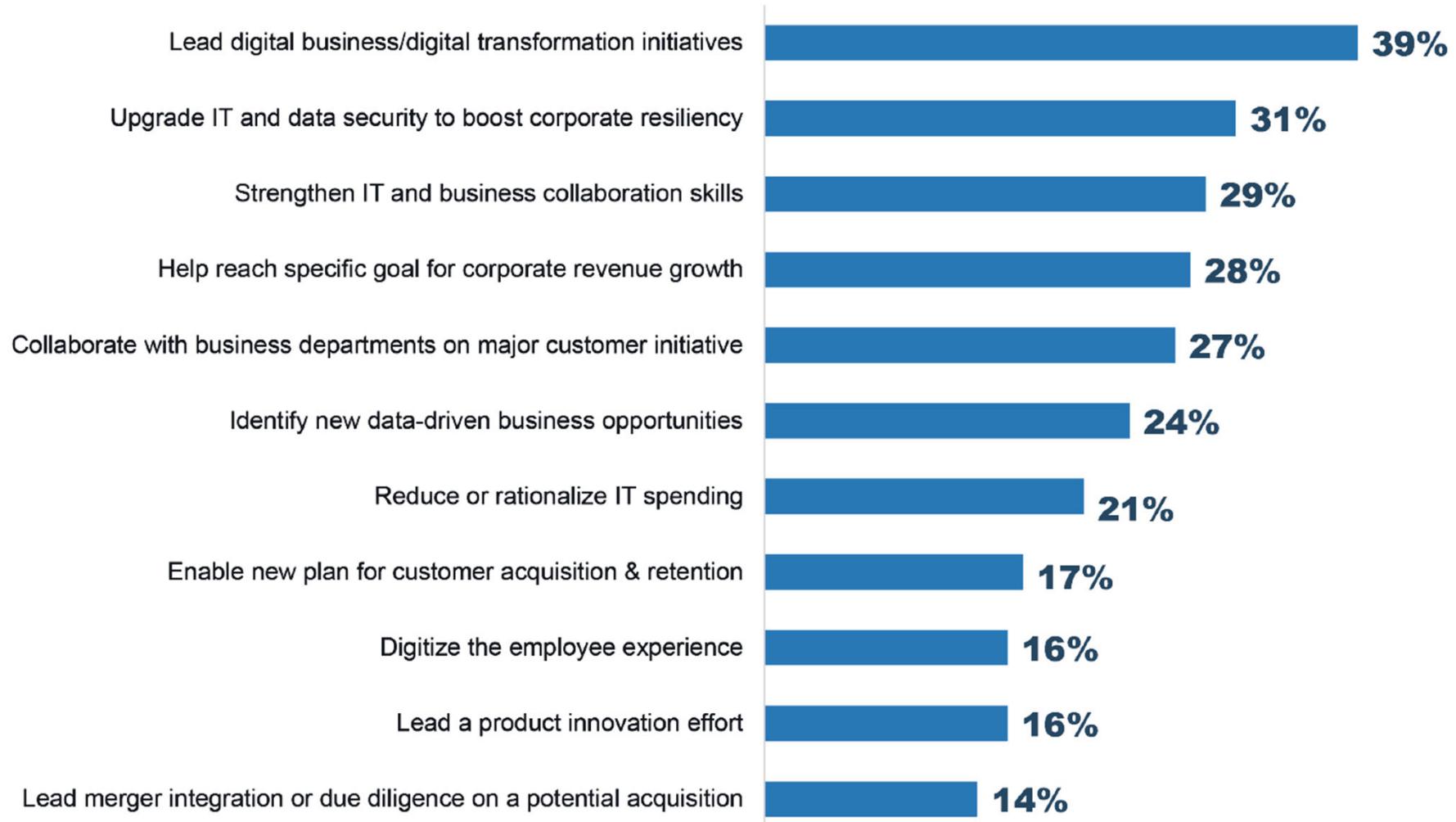
- ▶ CIO today are expected to take on a bimodal role
 - ▶ Excel in their traditional functional IS responsibilities
 - ▶ Lead transformational digital initiatives (i.e., subsuming some functions of CTO)
- ▶ Need to strike balance between business innovation and operational excellence





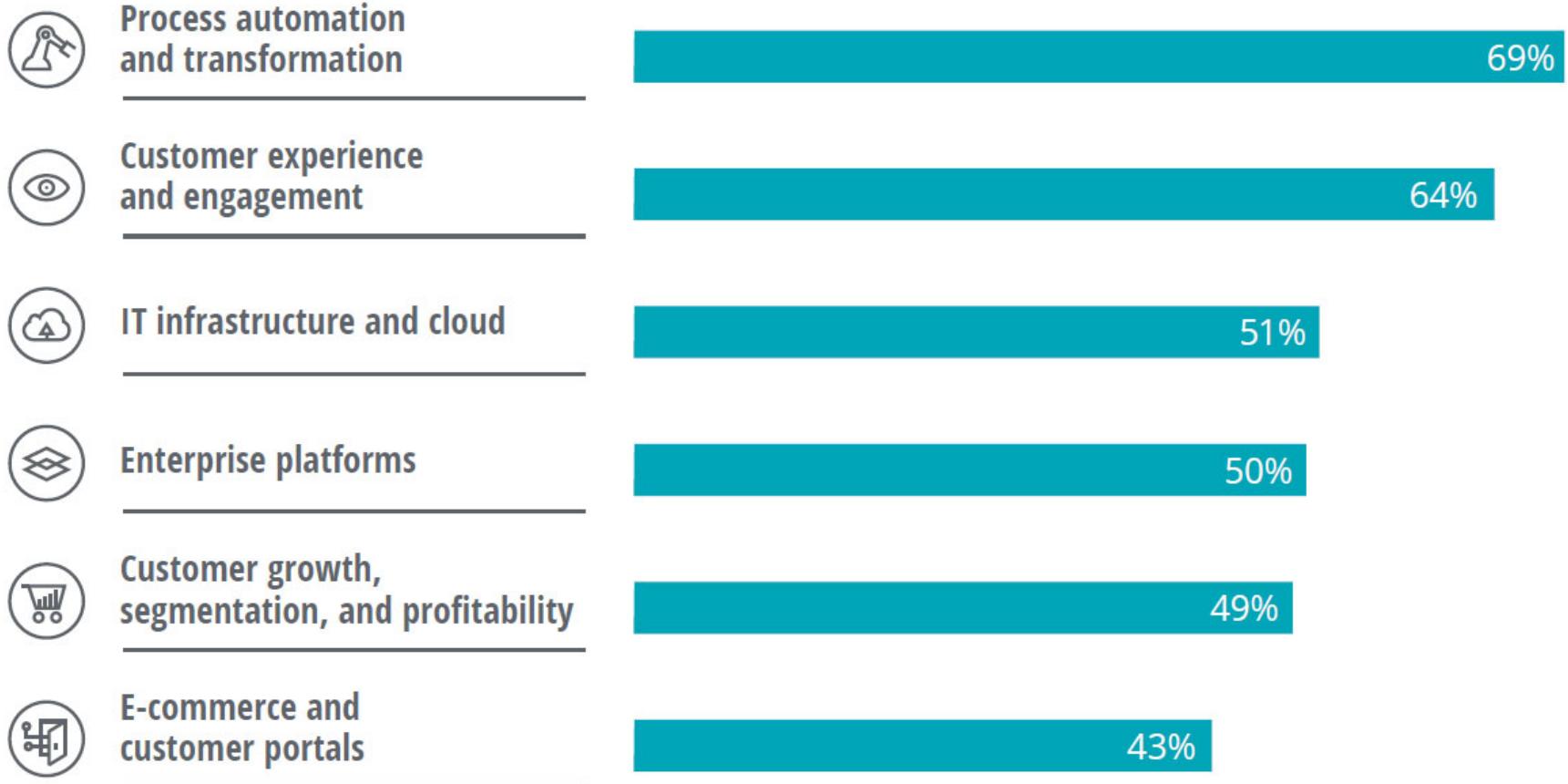
For
Project

CEO'S TOP PRIORITIES FOR THE CIO



The scope and span of digital varies across enterprises, but process transformation and customer experience drive digital focus

What are the primary focus areas of digital within your organization? (Please rank your top five.)





For
Project

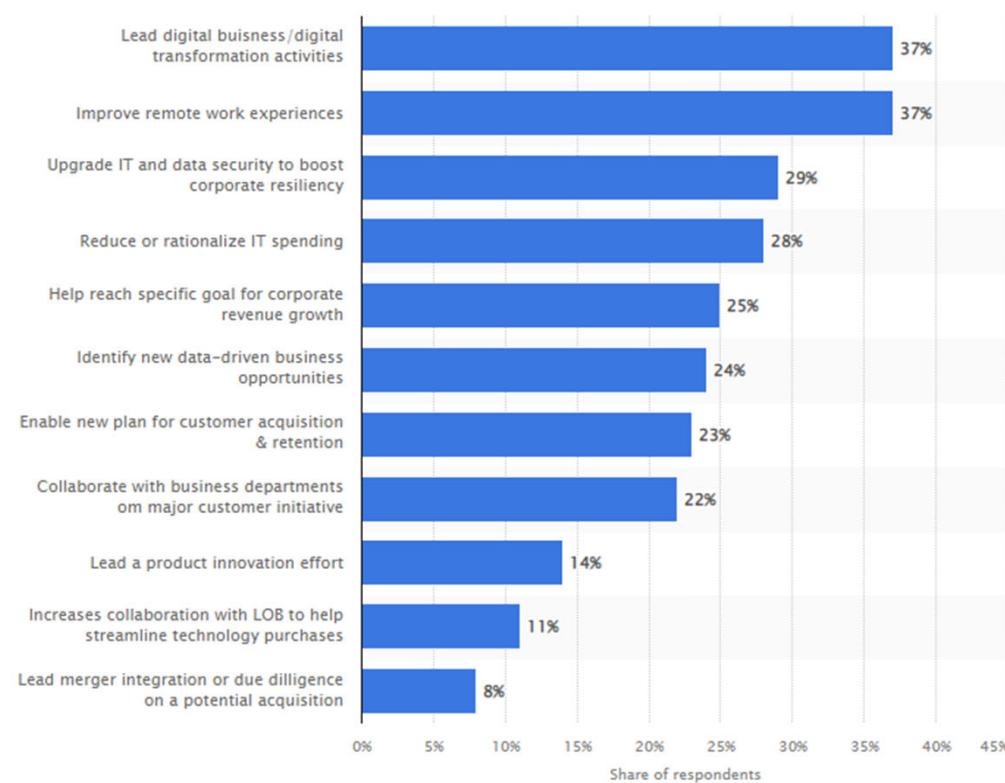
Key Business Objectives of IT Function

	2013	2014	2015	2016	2017	2018	Change 2017 - 18
Improving business processes	60%	60%	58%	57%	59%	62%	5%
Delivering consistent & stable IT performance to the business	70%	59%	57%	52%	63%	62%	-2%
Increasing operational efficiencies	68%	63%	61%	58%	62%	62%	0%
Saving costs	71%	57%	54%	50%	54%	55%	2%
Enhancing the customer experience							55%
Developing innovative new products and services	51%	41%	41%	42%	51%	53%	4%
Improving cyber security					41%	40%	49%
Delivering business intelligence/analytics	48%	41%	47%	46%	46%	48%	4%
Improving efficiencies through automation							45%
Managing operational risk and compliance	41%	40%	39%	36%	34%	38%	12%
Driving revenue growth	42%	45%	42%	40%	40%	38%	-5%
Better engagement with customers/prospects	33%	36%	38%	38%	31%	32%	3%
Dealing with regulations							31%
Improving efficiencies through technology estate simplification							29%
Improving time to market	31%	29%	30%	26%	23%	24%	4%
Improving the success rate of projects	36%	30%	29%	26%	23%	23%	0%
Improving insights & decision making through AI							23%
Outperforming competitors with new business models	26%	23%	24%	24%	22%	21%	-5%
Enabling mobile commerce	33%	24%	22%	19%	19%	19%	0%

Figure 5. What are the key business issues that your board is looking for IT to address?

CEOs' top priorities for CIOs to preserve business amid COVID-19 2020

Given the current state of the business what are the CEO's top three priorities for you to help business preserve through the current disruption?



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Effectiveness of CIO Role

- ▶ Defined as “the assessed performance of the CIO in the context of specific roles, behaviors, and responsibilities that are regarded as salient in firms”
- ▶ Understanding of CIO effectiveness need to consider the organizational roles in which the CIO can operate
 - ▶ Role ambiguity is a potential reason why CIOs underperform in their job





For
Project

Six CIO Roles

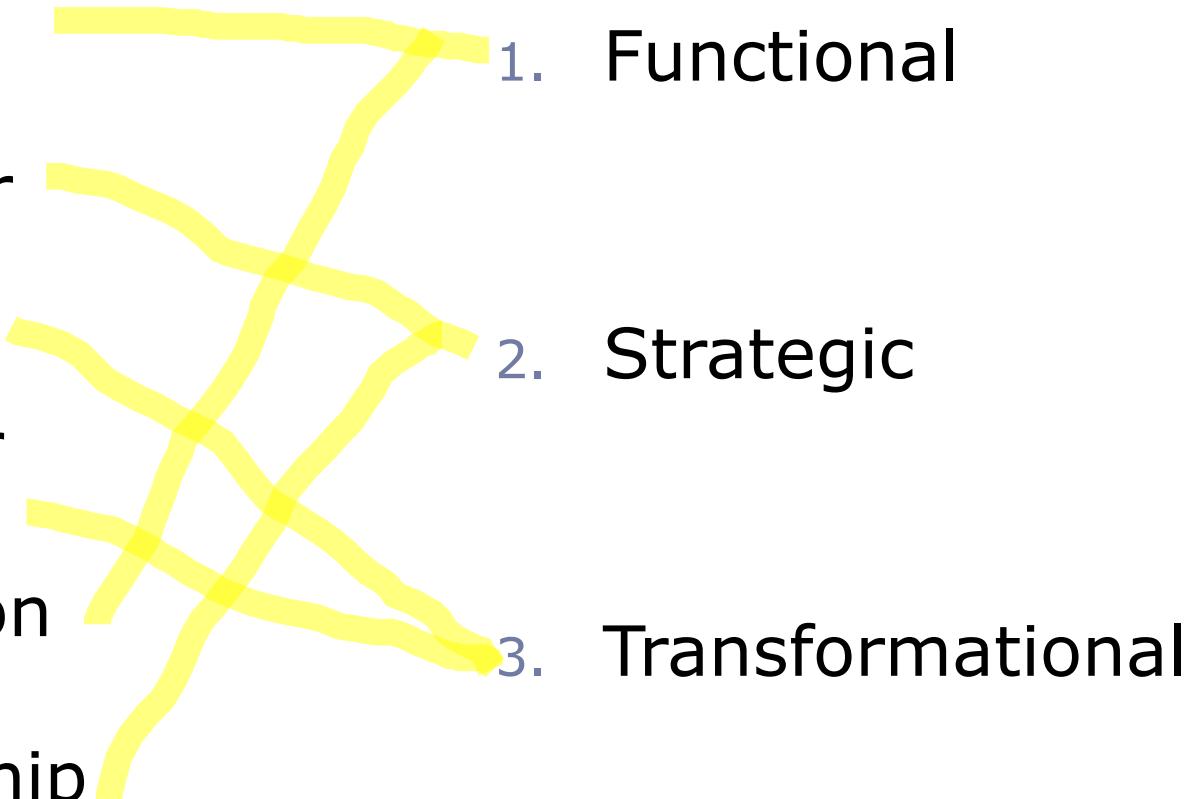
CIO role	Definition of the role	Responsibilities of the role
Technology provider	The technology provider is an operation and technology focused CIO whose primary function is to provide cost-effective IT solutions	<ul style="list-style-type: none">• Providing users with adequate IT tools to do their job• Establishing electronic linkages throughout the firm• Cutting costs through leveraged existing IT infrastructure• Maintaining service levels of existing IT systems• Developing new systems on time and budget• Establishing a responsive IT department• Gaining user satisfaction with IT processes
Strategic supporter	The strategic supporter is a mediating CIO who interacts with managers outside the own IT domain in order to align IT with the business	<ul style="list-style-type: none">• Aligning investments in IT with strategic business priorities• Understanding the strategy and needs of the business• Envisioning and designing technical solutions to business problems• Reacting promptly to changes in business strategy or processes• Concentrating the IT development effort• Maintaining relationships with the business units• Preparing the IT infrastructure for the future needs
Business thinker	The business thinker is a visionary CIO who educates the TMT members and key decision-makers about the potential of IT to transform business processes	<ul style="list-style-type: none">• Recognizing new emerging technologies and arguing their significance to the business• Transforming existing processes and management models through IT• Educating the TMT about the business capabilities of IT• Creating pilot projects to demonstrate the potential of IT• Looking for opportunities to implement new IT• Maintaining existing IT performance levels

Six CIO Roles

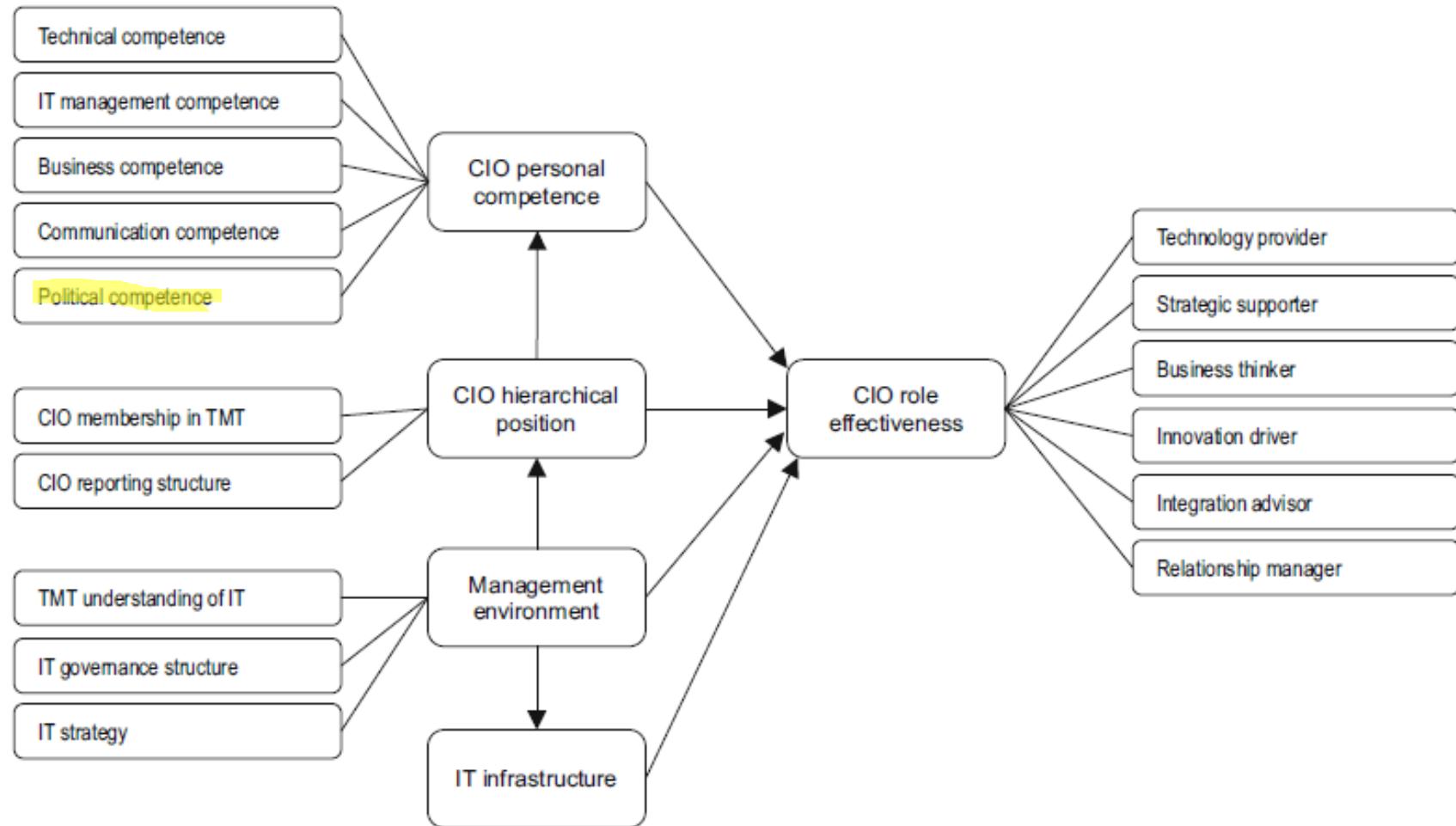
CIO role	Definition of the role	Responsibilities of the role
Innovator driver	The innovation driver is a strategically orientated CIO who uses IT as an integral factor for organizational growth and innovation	<ul style="list-style-type: none">• Gaining competitive differentiation through IT innovations• Delivering valuable technical opportunities for business success• Allocating human, financial, and information resources for strategic IT initiatives• Promoting a shared and challenging IT vision within the TMT• Motivating employees to experiment with new technologies
Integration advisor	The integration advisor is a coordinating CIO who provides leadership in seeking integration opportunities and standardizing the IT infrastructure	<ul style="list-style-type: none">• Leveraging IT assets by maintaining existing IT infrastructure• Managing migration of IT innovation into business processes• Empowering and enabling the business with IT capabilities• Persuading managers of the necessity of adopting technical standards• Analyzing the external environment to keep up with technical changes• Providing valuable information for decision-making (big data issues)
Relationship manager	The relationship manager is a bridge-building CIO who communicates with the external environment in order to meet a distinct set of IT requirements	<ul style="list-style-type: none">• Exchanging information with suppliers, customers, buyers, and market analysts• Selecting a sourcing strategy to meet business needs and technological issues• Coordinating the organizational IT requirements• Setting technical standards and policies• Scanning the developing IT services market• Developing an agile IT infrastructure• Guaranteeing security and privacy

(Broadly) Classify the 6 CIO roles into 3 CIO activity types

1. Technology Provider
2. Strategic Supporter
3. Business Thinker
4. Innovator Driver
5. Integration Advisor
6. Relationship Manager



Model of CIO Role Effectiveness



Antecedents of CIO Roles (Score H, M, L)

	Technology Provider	Strategic Supporter	Business Thinker	Innovation Driver	Integration Advisor	Relationship Manager
Technical Competence						
IT Management Competence						
Business Competence						
Communication Competence		H	H			H
Political Competence			H			
CIO Membership in TMT	HML					
CIO Reporting Structure						
TMT Understanding of IT						
IT Governance Structure						
IT Strategy						

Measuring CIO Role Effectiveness

CIO role	Major expectations associated with the role	Performance metrics (examples)
Technology provider	<ul style="list-style-type: none">• Users possess adequate IT tools to do their job• Electronic linkages are established throughout the firm• IT costs are reduced through existing infrastructure• New IT systems are developed on time and within budget• Users are satisfied with the IT processes	<ul style="list-style-type: none">• Cost control• Efficiency of the IT systems• Service availability of the IT systems• On-time project delivery
Strategic supporter	<ul style="list-style-type: none">• Investments in IT are aligned with strategic business priorities• Technical solutions to important business problems are designed• Changes in business strategy or processes are immediately addressed by the IT• The IT infrastructure supports future business needs	<ul style="list-style-type: none">• IT-business alignment maturity• IT contribution to the business
Business thinker	<ul style="list-style-type: none">• Emerging technologies are considered for the business• Business processes and management models are enabled through IT• The TMT understands the capabilities and value of IT• Pilot projects demonstrate the potential of IT• Existing IT performance levels are maintained	<ul style="list-style-type: none">• Accomplishing defined service levels• Number of business process improvements• Number of pilot projects

Measuring CIO Role Effectiveness

CIO role	Major expectations associated with the role	Performance metrics (examples)
Innovator driver	<ul style="list-style-type: none">• Competitive differentiation is achieved through IT innovations• Valuable technical opportunities are delivered for business success• Human, financial, and information resources are allocated for strategic IT initiatives• Employees experiment with new technologies	<ul style="list-style-type: none">• Value of developed innovations• Requests for additional services
Integration advisor	<ul style="list-style-type: none">• IT assets are leveraged by maintaining existing IT infrastructure• IT innovations are migrated into business processes• The business is empowered with IT capabilities• IT infrastructure meets important technical standards• Valuable information for decision-making is provided	<ul style="list-style-type: none">• Return-on-investment from IT spending• Stability of IT infrastructure• Degree of IT standardization
Relationship manager	<ul style="list-style-type: none">• Frequent contact with suppliers, customers, buyers, and market analysts• Sourcing strategy meets business objectives and technological needs• Organizational IT requirements are coordinated• Technical standards and policies are defined• Security and privacy is ensured	<ul style="list-style-type: none">• IT service availability• Customer and user satisfaction with IT• Technology responsiveness

Leadership and Followership Communication Styles

- ▶ Leadership communication style is a relatively enduring set of communicative behaviors in which a leader engages when interacting with followers
 - ▶ The communication style a leader selects contributes to the success or failure of any attempt to exert influence
- ▶ Followers, like leaders, need to understand their communication styles to carry out their roles successfully



Two Primary Models of Leadership Communications

- ▶ **Model 1**
 - ▶ Authoritarian leadership communication
 - ▶ Democratic leadership communication
 - ▶ Laissez-faire ("*leh say fair*") leadership communication
- ▶ **Model 2**
 - ▶ Task leadership communication
 - ▶ Interpersonal leadership communication



Authoritarian, Democratic, and Laissez-faire Leadership

▶ Authoritarian leader

- ▶ maintains strict control over followers by directly regulating policy, procedures, and behavior
- ▶ creates distance between themselves and their followers as a means of emphasizing role distinctions
- ▶ believes that followers would not function effectively without direct supervision
- ▶ feels that people left to complete work on their own will be unproductive

no trust



Authoritarian, Democratic, and Laissez-faire Leadership

▶ Democratic leader

- ▶ engages in supportive communication that facilitates interaction between leaders and followers
- ▶ encourages follower involvement and participation in the determination of goals and procedures
- ▶ assumes that followers are capable of making informed decisions
- ▶ does not feel intimidated by the suggestions provided by followers but believes that the contributions of others improve the overall quality of decision making



Authoritarian, Democratic, and Laissez-faire Leadership

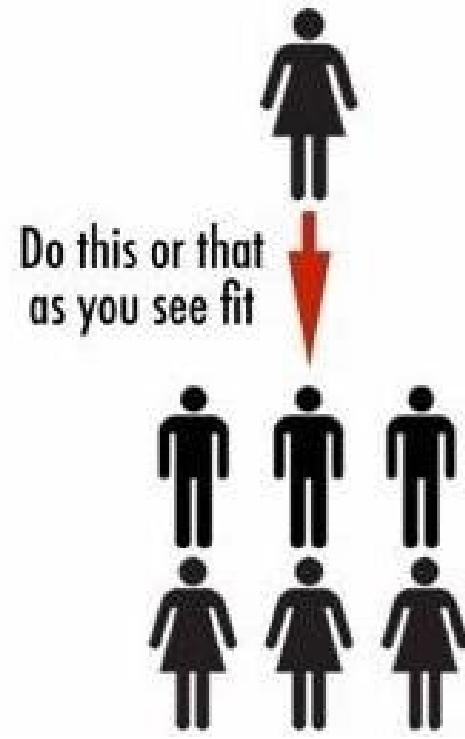
- ▶ Laissez-faire leader ("leave them alone")
 - ▶ a form of leader communication that has been called non-leadership by some
 - ▶ An ineffective version of this leadership communication style
 - ▶ abdication of responsibility on the part of the leader
 - ▶ leaders withdraw from followers and offer little guidance or support
 - ▶ productivity, cohesiveness, and satisfaction often suffer
 - ▶ A more positive form of the laissez-faire leadership communication style
 - ▶ affords followers a high degree of autonomy and self-rule while, at the same time, offering guidance and support when asked
 - ▶ provides *guided freedom* and does not directly participate in decision making unless requested to do so by followers or if such intervention is deemed necessary to facilitate task completion



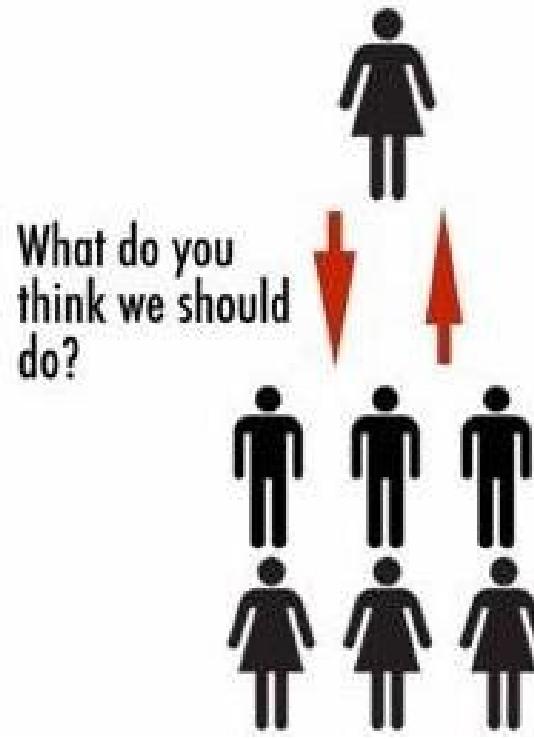
Autocratic



Laissez-faire



Democratic



Communication and Leadership Style

Table 2.1 Styles of Leadership Communication

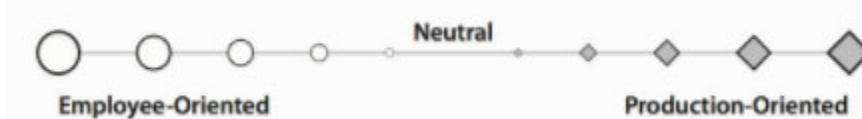
Democratic	Authoritarian	Laissez-Faire
Involves followers in setting goals	Sets goals individually	Allows followers free rein to set their own goals
Engages in two-way, open communication	Engages primarily in one-way, downward communication	Engages in noncommittal, superficial communication
Facilitates discussion with followers	Controls discussion with followers	Avoids discussion with followers
Solicits input regarding determination of policy and procedures	Sets policy and procedures unilaterally	Allows followers to set policy and procedures
Focuses interaction	Dominates interaction	Avoids interaction
Provides suggestions and alternatives for the completion of tasks	Personally directs the completion of tasks	Provides suggestions and alternatives for the completion of tasks only when asked to do so by followers
Provides frequent positive feedback	Provides infrequent positive feedback	Provides infrequent feedback of any kind
Rewards good work and uses punishment only as a last resort	Rewards obedience and punishes mistakes	Avoids offering rewards or punishments
Exhibits effective listening skills	Exhibits poor listening skills	May exhibit either poor or effective listening skills
Mediates conflict for group gain	Uses conflict for personal gain	Avoids conflict

Effects of Leadership Communication Styles

Box 2.1 Research Highlight		The Effects of Authoritarian, Democratic, and Laissez-Faire Leadership Communication Styles
Authoritarian Leadership	Democratic Leadership	Laissez-Faire Leadership
Increases productivity when the leader is present ⁶	Lowers turnover and absenteeism rates ⁷	Decreases innovation when leaders abdicate, but increases innovation when leaders provide guidance as requested ⁸
Produces more accurate solutions when leader is knowledgeable ⁹	Increases follower satisfaction ¹⁰	Decreases follower motivation and satisfaction when leaders abdicate ¹¹
Is more positively accepted in larger groups ¹²	Increases follower participation ¹³	Results in feelings of isolation and a decrease in participation when leaders abdicate ¹⁴
Enhances performance on simple tasks and decreases performance on complex tasks ¹⁵	Increases follower commitment to decisions ¹⁶	Decreases quality and quantity of output when leaders abdicate ¹⁷
Increases aggression levels among followers ¹⁸	Increases innovation ¹⁹	Increases productivity and satisfaction for highly motivated experts ²⁰
Increases turnover rates ²¹	Increases a follower's perceived responsibility to a group or organization ²²	Increases stress and conflicts when leaders abdicate ²³

Task and Interpersonal Leadership

- ▶ Leadership is about *work* that needs to be done and the *people* who do the work
- ▶ Task-oriented communication
 - ▶ production oriented, initiating structure, Theory X management, concern for production
- ▶ Interpersonal-oriented communication
 - ▶ employee oriented, consideration, Theory Y management, concern for people



The Michigan Leadership Studies



Task and Interpersonal Leadership

Table 2.2 Leadership Communication Distinctions

Task Orientation	Interpersonal Orientation
Disseminates information	Solicits opinions
Ignores the positions, ideas, and feelings of others	Recognizes the positions, ideas, and feelings of others
Engages in rigid, stylized communication	Engages in flexible, open communication
Interrupts others	Listens carefully to others
Makes demands	Makes requests
Focuses on facts, data, and information as they relate to tasks	Focuses on feelings, emotions, and attitudes as they relate to personal needs
Emphasizes productivity through the acquisition of technical skills	Emphasizes productivity through the acquisition of personal skills
Most often communicates in writing	Most often communicates orally
Maintains a "closed door" policy	Maintains an "open door" policy



Follower Communication Styles (2 Main Typologies)

▶ Engaged Followers

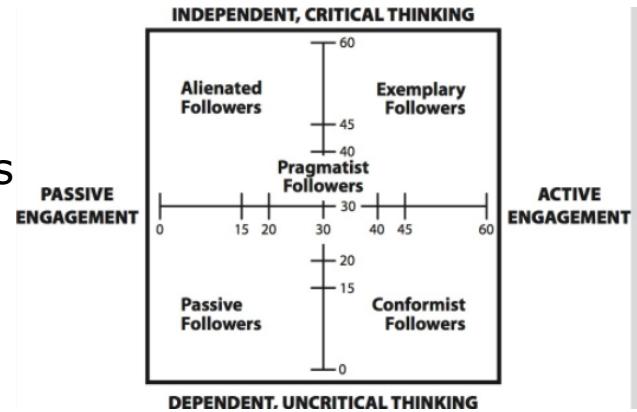
1. *Isolates* are the least engaged followers
 1. they barely qualify as followers because they don't care about their leaders or communicate with them
2. *Bystanders* observe what is going on but do not actively participate
3. *Participants* are moderately engaged with their leaders and organizations, offering support or opposition
4. *Activists* are motivated by strong feelings about their leaders
 - ▶ energetic and highly engaged, working to serve or to undermine their leaders
5. *Diehards* are totally committed to or opposed to their leaders
 - ▶ willing to die in order to support them or to perish in an attempt to remove them from their positions of power



Follower Communication Styles

► Exemplary Followership

- ▶ Followers differ on two dimensions — independent/critical thinking and active engagement
- 1. *Alienated followers* are highly independent thinkers who put most of their energies into fighting rather than serving their organizations because they've become disillusioned with their leaders or feel unappreciated
- 2. *Conformists* are committed to organizational goals but express few thoughts of their own
 - These followers ("yes men/women") may hold back their ideas out of fear or deference to authority
- 3. *Pragmatists* are moderately independent and engaged
- 4. *Passive followers* demonstrate little original thought or commitment
 - Rely heavily on the leader's direction and meet only minimal expectations
- 5. *Exemplary followers* rate highly as both critical thinkers and active participants, contributing innovative ideas and going beyond what is required



Supernova Minicase Discussion

- ▶ What problems can you identify at SuperNova Microcomputer?
- ▶ Which leadership(s) would be most effective in working with the product development team? Why?
- ▶ How would you suggest a leader might get the product development team back on schedule? What policy and/or personnel changes would you recommend?
- ▶ How might leaders at SuperNova Microcomputer assure their employees that problems like this can be avoided in the future?



Key Takeaways for Lecture 2

- ▶ What is the scope of IS leadership?
- ▶ What are the key differences between CIO and CTO?
- ▶ What are the possible roles of CIO and how have they changed in recent years?
- ▶ What can you learn about leadership communication styles from the Supernova case?
- ▶ What are your preferred leadership/follower communication styles?
 - ▶ What are the two main models of leadership communication styles?
 - ▶ What are the two main typologies of follower communication styles?
 - ▶ *HOW CAN YOU APPLY THESE IMMEDIATELY?*

