

Project Purpose

Prior to this project, a consistent narrative from various stakeholders indicated a gap between secondary career and technical education and the skillsets needed for successful postsecondary completion and meaningful employment. One identified barrier preventing enriched programming appeared to be the low engagement with business and industry. Oftentimes the advisory committees were found to be small scale and narrowly focused, or ineffective – neither of which was purposeful, but due to limited resources or lack of understanding of the committee’s advisory role. Even so, ineffective and unengaged advisory committees perpetuated dated programs and contributed to a disconnection between industry needs and educational offerings. This, in turn, led to a gap in knowledge and skill preparation, leaving students uninformed about the industry expectations and unprepared for post-secondary opportunities. Additionally, lack of effective professional development for secondary business and marketing teachers on industry trends prevented them from making purposeful changes to meet the needs of Iowa’s employers and students.

Through anecdotal data, multiple business and marketing programs across the state were in need of revitalization in order to provide meaningful education by including current critical concepts to meet the needs of employers. The awareness of these and other barriers for secondary business and marketing programs led the Iowa Department of Education (IDOE) to fund a statewide initiative involving trend research examining the needs of business and industry, which in turn would enhance curriculum development and better engage employers at the local level.

MBA Research was contracted to develop and organize three day-long focus group sessions, designed to engage the Iowa business community, executive or senior management levels, in a series of high-level focused discussions. The MBA professional staff facilitated discussions of trends and issues in the three career cluster areas (business, marketing, and finance) for the purpose of informing curriculum decisions for Iowa business and marketing education programs. What follows is MBA Research report, produced from the focus group and trend research study conducted during the month of June, 2015.

Iowa Observations and Recommendations

MBA Research & Curriculum Center
September 4, 2015

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

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Project Overview

The Iowa Department of Education partnered with MBA Research, Inc. to convene three panels of 47 business executives to discuss their current and emerging workplace needs and the impact on secondary career and technical education. The panels were organized by the three business-focused career clusters recognized at the national level: Business Management and Administration, Finance, and Marketing. The panels were held over a three-day period from Tuesday, June 16, 2015 through Thursday, June 18, 2015 in Des Moines. During these three days, each panel of business executives provided their perspective on:

- The trends shaping the workforce development needs in the three clusters and the skillsets needed to address those trends
- The general business skills needed to succeed in careers in the three clusters
- The technical skills needed in their specific clusters and pathways
- Ethical leadership in the workplace

The information collected through these discussions was analyzed and evaluated to determine actions that the Iowa Department of Education could undertake as it administers Career and Technical Education for the three clusters. This report summarizes key observations and recommendations, while the Appendices present specific feedback from the panelists.

Observations

1. All three clusters stressed that they exist in a data-driven environment. They have to quantify their business decisions so that they can explain why decisions were made and the decisions' outcomes. All employees are being held accountable for their contributions to overall business success.

Data analysis is critical in today's business environment. Businesses rely on it to target their financial decisions, product decisions, sales strategies, promotional communications, staffing decisions, and operational decisions. They want to laser-focus all work efforts to minimize waste. This data-reliance increases employee accountability for their decisions. One aspect of data reliance is the need for employees to understand and apply descriptive statistics.

Cloud computing enables businesses to warehouse mega-amounts of data. Often, these data are in unstructured formats coming from customer comments in social media or in comment sections on web pages. Cloud computing cuts data storage costs, thereby increasing the quantities of data businesses keep and have available to analyze. As one Iowa

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executive stated, “We have data . . . more data than we know what to do with. We need to have people who can tell us what data are important and what they mean.”

Several groups indicated they were unable to find new-hires in Iowa with the needed data-analysis skillsets and were being forced to hire internationally to acquire them. Employees need to know how to be able to determine what data are needed for specific situations. They need to be able to create, manipulate, mine, and interpret data. In addition, the business community stressed the need to act on the data.

2. The executives felt that there is an overall decline in new employees’ relationship-building skills with their colleagues, especially those of different generations, and with their external customers. Many expressed concerns about the over-reliance on email and other technologies to avoid face-to-face interactions. Employees need to understand appropriate use of technology in communicating and when face-to-face conversations are needed.

The need for social skills was highlighted in a recent article in the *Harvard Business Review* in which the results of a longitudinal study indicated that people with social skills earn more than those with limited social skills—even among those with high math skills.

3. Panelists indicated that millennials have a difficult time confronting others to have what they referred to as “hard” or “critical” conversations to discuss problems. Employees are needed who can give and receive constructive feedback. Improved written and oral skills are needed to address aspects of this issue.
4. The need for “all skills and knowledge” tied to collaboration and teamwork were emphasized due to businesses’ heavy reliance on cross-functional teams to work on projects. Project work is leading the charge to disrupt departmental silos, thereby growing the need for collaborative work.
5. Project work, itself, is evolving so that it becomes more agile to changes occurring in the dynamic business environment. Rather than having a project that assumes fixed time and cost, managers are recognizing the need to modify timelines and deliverables based on the company’s overall needs and priorities. In this way, projects maintain their relevance to companies. Agility across an entire organization is needed to keep pace with the velocity with which business is changing.
6. Businesses face many obstacles that can ultimately result in shuttering a business. Panelists addressed business risks due to a variety of causes, including those caused by:

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- Data piracy by computer hackers
 - Employee use/misuse of social media
 - Loss of intellectual property due to employees' leaving the company
 - Unethical actions of employees
 - Increasingly diverse workforce with values not matching those of the organization
7. The business environment is more dynamic now than at any time in history. Time-to-market has shortened, thereby necessitating the need for increased efficiencies and improved processes. Ongoing change necessitates employees' being adaptable and flexible. No longer does the IT department have a year to respond to needed modifications; they have to modify their traditional system of checks and balances to respond more efficiently to organizational demands. Employees need to understand the underpinnings of how systems work so that they can apply that understanding to new systems or processes, rather than marrying themselves to old ones.
 8. Across the three clusters, executives discussed issues associated with new-hires' unrealistic workplace expectations. This was addressed from a variety of angles: unrealistic starting pay, unrealistic speed of advancement in the company, unrealistic expectations as to the value of their initial workplace contributions. These unrealistic expectations were coupled with an unwillingness to "work their way up." Instead, young new hires expected to be in managerial positions within weeks of employment. When their expectations weren't met, young new hires left companies to find new places of employment that they felt would be able to meet their expectations.
 9. Mobile technology has impacted business operations and is expected to become the primary mode of customer interaction. Businesses need to ensure that their digital communications are responsive to mobile environments, rather than only being effectively viewed on desktop computers.

The business executives explained that due to mobile technology providing instant access to product and company information, competing on the basis of price will ultimately doom a business. Instead, the relationships businesses establish with their customers, product/service quality, and efficiency will determine business success. This presents a business dilemma since executives feel that there is a decline in relationship-building skills among young new-hires.

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10. The groups were sensitive to the use of the term “customer.” They indicated that generally when people refer to their “customers,” they are talking about external individuals. The executives wanted to ensure that the definition of customers be expanded to include internal customers, such as vendors, employees, contractors, and stockholders.
11. Improved business ethics are needed in the workplace. The executives discussed how unethical behavior poisons the work environment and gives employees the go-ahead to act unethically, especially when unethical behavior is exhibited by those at the top.

Many of the ethical characteristics or traits identified by the executives mirrored the principles of the Daniels’ Fund. They addressed integrity, trust, transparency, fairness, respect, viability, rule of the law, and accountability.

Reasons cited for unethical behavior addressed many of the to-be-expected causes: greed, career advancement, looking good in the eyes of management, pressure from above, power, ego, and ignorance. A few surprises surfaced. People behave unethically when they feel undervalued and want to prove their worth to management. They also act unethically when their understanding of ethical behavior is not in sync with that of the organization. With increased workplace diversity, this misalignment of ethical understanding is more prevalent than in the past since what is considered ethical in one culture is unethical in another. When individuals either do not experience consequences or do not know the consequences of unethical behavior, they are more likely to act unethically.

Recommendations

1. Provide professional development for teachers on data mining and analysis. This will improve their comfort level in developing students’ skillsets in these areas. Teachers may need training on software applications that can be used to mine and synthesize data. These skills should be developed in the context of the curriculum being taught, rather than as computer-applications type training.
2. Provide professional development for teachers focused on the application of 21st Century Skills—especially those involving collaboration and communication. During professional development, identify ways that teachers can increase those skills through their instructional strategies, career-tech student organization activities, and work-based learning.

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3. Conduct professional development for teachers in which they assess their curricula to identify opportunities for data mining and analysis and for use of 21st Century Skills. Help them to develop instructional activities requiring students to demonstrate those skills.
4. Promote business-related programs to stakeholders on the basis of the programs' developing data mining and analysis skills and 21st Century Skills. These are the skills most sought by business executives. Teachers should stress these skills when interacting with the business community so that the business community sees program value.
5. Provide professional development for teachers to encourage their use of authentic business cases that actively involve students in case solution, thereby increasing student engagement in learning. Help teachers understand where to locate authentic business cases tied to the curriculum, how to effectively implement them, and how to assess them.

Another aspect of the use of authentic business situations is the involvement of the local business community in classroom activities, as well as student involvement in community activities. These types of activities will help to provide students a more realistic understanding of business and its expectations, as well as giving them opportunities to develop portfolios that show their involvement in authentic business situations. It also gives the business community a realistic understanding of the business-related programs, students, and student capabilities.

6. Provide professional development for teachers to encourage the incorporation of business ethics situations in the classroom. Show teachers ways to address ethical issues tied to the curriculum. Provide teachers a solid understanding of competitive events related to business ethics, and encourage them to involve students in those events.
7. Identify and sponsor opportunities at the state level that will enable teachers to network with the business community. Encourage teachers to join and actively participate in professional organizations that would provide networking opportunities. The professional organizations should be aligned with what is taught in the classroom. This will also give teachers an opportunity to learn about industry trends and authentic business situations. It also helps teachers better understand the dynamics of the business environment, making them aware of the need for their ongoing professional development.
8. Provide professional development opportunities for teachers to understand the impact of social media and mobile technology on the business environment. Help them to understand how they can incorporate the technologies in the classroom.

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Appendix A—Top 10 Trends Identified by Iowa Panelists

The significance of the following trends varied by cluster; however, they are listed in highest to lowest order for the top 10 trends across the three clusters. Each month, one of these trends is discussed in MBA Research’s *Action Briefs* that are provided to member states on their State’s Connection page at www.mbaresearch.org. These short trends articles provide additional information as to how a trend is affecting the business workplace as well as classroom implications that can be addressed by teachers.

The top-10 trends identified as impacting Iowa businesses are:

1. Analytics/big data
2. Decline in relationship building skills, customer-service orientation, and soft skills
3. Increasing importance of soft-skill leadership, understanding and respecting authority structures, and holding people accountable
4. Unrealistic and non-sustainable expectations—pay benefits, and advancement creating salary/benefit issues that have to be managed
5. Pace of change and need to adapt
6. Use of basic software as a core competence (general computer literacy expected) coupled with cloud computing/high-tech production and resulting challenges in identifying talent
7. Mobile technology
8. Intellectual property protection and data security
9. Redefinition of the workplace/workplace hours driven by technology and virtualization of the workforce conflicting with a desire to increase collaboration
10. Governmental expansion and impact on required compliance resources

A synopsis of the trends for all clusters and pathways is on the next two pages. This data compilation indicates how the clusters and pathways varied on the emphasis placed on each trend. Red “X’s” identify each pathway’s top five trends.

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Appendix A—Trends (cont'd)

Trend Area	Identified Trend	
Technological	T1	Mobile technology
	T2	Social media
	T3	Access to information instantly and ability for inaccurate information to go viral
	T4	Self-service orientation coupled with expectation of full personalization and customization of services and amenities
	T5	Intellectual property protection and data security
	T6	Over-dependence on technology
	T7	Pace of change and need to adapt
	T8	Use of basic software as a core competence (generally computer literacy expected) coupled with cloud computing/high-tech production and resulting challenges in identifying talent
	T9	Analytics/big data
Cultural	C1	Expanding workplace and societal diversity
	C2	Professional development challenges
	C3	Unrealistic and non-sustainable expectations - pay, benefits, and advancement creating salary/benefit issues that have to be managed
	C4	Decline in relationship building skills, customer-service orientation, and soft skills
	C5	Ethical issues and challenges
	C6	Redefinition of the workplace/workplace hours driven by technology and virtualization of the workforce conflicting with a desire to increase collaboration
Environmental	E1	Sustainability (green initiatives, energy sources/cost, waste reduction/management)
	E2	Healthy living emphasis (food and fitness)

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Appendix A—Trends (cont'd)

Trend Area	Identified Trend	
	E3	Increased environmental government regulation/pursuit of new energy sources
	E4	Safety in the workplace
	E5	Epidemics and pandemics
	E6	Weather related volatility
Global/Political	GP1	Immigration reform
	GP2	Political environment (volatile, changing balance of power, activism and polarization, national security concerns)
Regulatory/Legal	RL1	Governmental expansion and impact on required compliance resources
	RL2	Information use, protection and retention. Collecting more sensitive data
	RL3	Unfunded entitlement programs
	RL4	Increase in litigation (consumers, employees, shareholders) and governmental actions
Ethics/Governance	EG1	Impact of societal values on decisions (appeasement)
	EG2	Increasing exposure to loss by a single act by a single employee/vendor and resulting increase in scrutiny of employee actions
	EG3	Increasing importance of soft-skill leadership, understanding and respecting authority structures, and holding people accountable

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Appendix A—Trends (cont'd)

Marketing							BMA						Finance									
Trends	Marketing Communications	Marketing Management	Marketing Research	Merchandising	Professional Sales	Subtotals	Trends	Administrative Services	Business Information Management	General Management	Human Resource Management	Operations Management	Subtotals	Trends	Accounting	Banking Services	Corporate Finance	Insurance	Securities & Investments	Subtotals	Totals	
T1	X		X		X	3	T1					X	1	T1	X	X	X	X	X	5	9	
T2					X	1	T2			X			1	T2	X		X			2	4	
T3							T3							T3	X	X	X	X		4	4	
T4							T4							T4		X		X	X	3	3	
T5		X		X		2	T5	X	X		X		3	T5	X		X			X	3	8
T6							T6		X	X		X	3	T6	X		X			X	3	6
T7		X	X	X		3	T7	X	X	X	X		4	T7	X		X			X	3	10
T8		X	X	X		3	T8	X		X	X	X	4	T8	X		X			X	3	10
T9	X	X	X	X	X	5	T9	X	X	X	X	X	5	T9	X	X	X	X	X	X	5	15
C1		X	X	X		3	C1							C1	X		X			2	5	
C2		X		X		2	C2		X	X			2	C2								4
C3	X	X	X	X	X	5	C3	X		X	X	X	4	C3	X		X				2	11
C4	X	X	X	X	X	5	C4	X		X	X	X	4	C4	X	X	X	X	X	X	5	14
C5							C5			X			1	C5	X		X			X	3	4
C6		X	X	X		3	C6	X		X	X		3	C6	X		X				2	8

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Appendix A—Trends (cont'd)

Marketing							BMA						Finance									
Trends	Marketing Communications	Marketing Management	Marketing Research	Merchandising	Professional Sales	Subtotals	Trends	Administrative Services	Business Information Management	General Management	Human Resource Management	Operations Management	Subtotals	Trends	Accounting	Banking Services	Corporate Finance	Insurance	Securities & Investments	Subtotals	Totals	
E1							E1			X		X	2	E1								
E2		X		X		2	E2			X			1	E2	X		X			2	5	
E3		X		X		2	E3							E3					X	1	3	
E4		X		X		2	E4	X			X	X	3	E4					X	1	6	
E5							E5							E5								
E6							E6							E6								
GP1					X	1	GP1							GP1								1
GP2		X		X		2	GP2	X	X	X	X	X	5	GP2								7
RL1		X		X		2	RL1		X			X	2	RL1	X	X	X	X		4	8	
RL2							RL2	X			X		2	RL2					X	1	3	
RL3							RL3							RL3								
RL4		X		X		2	RL4			X			1	RL4								3
EG1							EG1	X		X	X		3	EG1		X		X		2	5	
EG2					X	1	EG2		X				1	EG2					X	1	3	
EG3	X	X	X	X		4	EG3	X	X	X	X	X	5	EG3	X		X		X	3	12	

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Appendix B—Core/General Business Skills Shared By Marketing, Finance, and Business Management and Administration

Recommended deletions are identified as strikethroughs. Recommended additions are identified in red. Discussion Points have been inserted below each category/skill area.

Skill Area	Brief Description
Business Law/ Governance	Basic understanding of the forms of business ownership, the legal and regulatory environment in which businesses operate, nature of business ethics and social responsibility, difference between dynamics of legal and ethical issues and situations, types and impact of contracts, environmental law, commerce law, human resource law, tax law, information privacy, intellectual property, national organization flowchart, liabilities, accountability, how to work with a board of directors, work and function of nonprofits
Discussion Points	Category title of Business Governance does not align with description. Suggested changing category title to “Business and Government Relations” or “Business Governance/Compliance”
Communication Skills	Ability to interpret communications (verbal and written); apply active listening skills; follow directions; ask relevant questions; defend support ideas objectively; develop correspondence and reports; make oral presentations; participate in meetings; communicate with co-workers, supervisors, and employees using appropriate communication channels, determine/use appropriate communication channels (social media vs. one-to-one), communicate using all modern communication channels, give and receive constructive feedback, understand ramifications for posting company information/negative comments on social media, negotiate, external communications, communication etiquette—especially with mobile technology, understand how to communicate with international “customers,” virtual communication, cultural sensitivity when communicating, understand the importance of personalizing communications, read and control nonverbal communication, adapt communication style to audience, determine purpose of communication, seek to understand opposing perspectives, arbitrate and/or mediate, engage in storytelling, think critically, engage in constructive debate, understand opposing perspectives
Discussion Points	Higher levels of written and presentation skills needed, understanding cultural differences in communication and where to find out about international communication, getting people to think in context
Customer Relations	Respond appropriately to customers, resolve conflicts and handle difficult customers, anticipate customer needs, reinforce the company’s image and service culture, analyze and adjust to customer service standards, determine how to exceed manage customer expectations, importance of timely follow-

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Skill Area	Brief Description
	up, social responsibility/conflict resolution and retention, provide services to internal customers, adapt and change deliverables to meet customer expectations, gather ongoing and frequent feedback, engage in customer discovery, understand importance of customers, acknowledge customers, understand importance of customer feedback, understand internal and external customers, understand when conflicts should be passed on to management, respond situationally to customers, manage difficult conversations, anticipate customer needs. determine communication blockers in organizations, obtain customer commitment and buy-in, develop an influencing map, build trusting relationships
Discussion Points	Focus on how to best serve customers, change the category title as it does not include vendors or internal relations—consider using “stakeholder relations;” relocate “manage internal and external relationships” from “Emotional Intelligence” to “Stakeholder Relations,” lack of IA resources leading to international hiring
Economics	The role of productivity and costs/profits in business decision-making, the scope of business and its contribution to society, fundamental economic concepts (scarcity, supply, demand), impact of government activities (monetary policy, fiscal policy), economic indicators, impact of global trade/globalization, sourcing, forecast and plan for industry changes and impact on clients and business, economic systems, ROI, environmental awareness and how it impacts business and customer, understand trends
Discussion Points	Focus on economy—not society, need to address micro-economics.
Emotional Intelligence	Develop self-awareness, develop personality traits necessary for success, develop ethical characteristics, manage emotional reactions to people and situations, identify with others, demonstrate respect for cultural diversity others, use communication skills to foster trust and to influence others, manage and navigate stressful situations, implement teamwork, manage internal and external business relationships (relocated to “Communication Skills”), employ leadership skills, manage confrontation constructively, identify and manage personality traits/styles, understand what motivates people, accept constructive feedback, persuade others, trust and influence from a business perspective, be accountable, develop awareness of audience, determine personality types, develop cultural awareness and inclusion with boundaries, coach others, demonstrate active listening skills, use feedback mechanisms (review interaction with others), demonstrate integrity, demonstrate negotiation skills
Discussion Points	Emphasize connection between trust and influence, being a community leader and a business leader are closely related, make “Leadership Development” its own category, big difference between leadership and management, be cognizant of who “you” are talking to, Harvard study indicates that managing emotional reactions is the #1 most necessary skill.

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Skill Area	Brief Description
Entrepreneurship	Understand the concept of entrepreneurship and intrapreneurship , ethics, how a business works, skills needed for entrepreneurial success, business planning, identify opportunities (things people want) , sales skills, acceptance of risk vs. reward , innovative ideas , vision , characteristics/personality types needed to succeed , brand yourself and your business , develop entrepreneurial spirit , risk taking , funding business venture , pitch a business plan to potential investors , understand management risks and how to minimize them , understand the struggles and requirements of being entrepreneurial (including startup, personal, and capital investment) , how to learn from your mistakes
Discussion Points	Questioned need for section as it appears to be covered in other categories, time management, okay to fail, stress importance of resiliency, difference between creativity and innovation, questioned whether entrepreneurial skills are really the same as those needed to be a successful business employee and recommended teaching entrepreneurial students differently than regular business students
Financial Analysis	Fundamental principles of money, personal financial literacy, general business finance and accounting concepts (e.g. cash flow, business credit, types and purpose of financial information, nature/role of accounting and finance, budgeting, cost/benefit analysis), types of investment vehicles , general methods of valuation , translate data into visuals , financial decision-making in times of uncertainty , choose investments , understand differences among currencies , understand international practices , demonstrate budgeting and forecasting , make business decisions based on financial analysis , demonstrate how to effectively prioritize valuations and capital deployment , understand how financial statements interact with one another , understand how companies make decisions based on financial statements
Discussion Points	Want to change category title to “Financial Intelligence” or “Basic Finance”; need real-life applications of accounting; time value of money; how probability fits into financial analysis; personal financial literacy is very important; need to understand benefit analysis and how to prioritize and deploy capital
Human Resource Management	Facilitate the work of others, coordinate efforts of cross-functional teams, recruit and interview job candidates, orient and train employees, foster staff growth and development, resolve staff issues/problems, dismiss employees, identify and track employee satisfaction/feedback , Equal Opportunity , unions , conflict resolution , strategically align the work of others , assess and evaluate talent , coach employees , counsel employees , terminate employees , strategically align the work of others , onboard and train new staff , protect employees’ confidentiality , employee handbooks , understand types of employee leaves , maintain HR documentation , understand employee benefits and compensation , use dynamic resourcing (providing solutions with combinations of temporary workers, contractors, etc.) , engage talent , manage company culture , understand the use of incentives , recruit talent , identify and correct discrimination and sexual harassment issues , understand employment

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Skill Area	Brief Description
	law, understand labor loss, understand impact of outsourcing on business, use technology in HR, understand compliance and risk
Discussion Points	Change the category to “Employee Resource Management,” “Talent Management,” or “Talent Acquisition, Retention, and Development”; address fostering employee development; need to understand difference between exempt and nonexempt employees
Information Management	Information literacy skills, evaluate quality and source of information, use computer systems and basic applications (e.g., word processing, spreadsheets, database, calendars, email, groupware), use communication technology, maintain and manage business records, use communication technology (mobile, web, social), understand cyber and information/data security and risk, assess the quality of the information—beyond just that it came from a reliable source, integration of data, monitor data privacy, analytics, differentiate between public and private information, understand confidentiality, understand how to have a data conversation, importance of data quality and where to get data, understand what you want to do with the data; draw conclusions from survey results, interpret survey results to form action items, data analysis, understand how to report information and how it is connected to other information, apply information adaptability skills, understand the importance of data integrity and the use of data
Discussion Points	Change the category title to “Information/ Technology Management” or to “Information Technology.” Data security and integration of systems, how to interpret and analyze data to best capitalize on the information, data scientists are “farming” the data—we need to work on data interpretation and analysis.
Marketing	Role of marketing, marketing functions and related activities, customer behavior/motivations that influence buying behavior/decisions, creativity, brand development, branding, brand recognition, market research, strategy and integration of all areas together, measurement and reporting, role of marketing/public relations/advertising and related activities (replaces marketing functions and related activities), trust and influence others, community relations, 4 Ps, understand buyer and buying cycle, social media, consumer business trends, B2B not just B2C, understand current and future trends, understand customer behavior and communicate product or service value through data analysis, understand market trends, identify industry segments to target audience, customer data analysis, understand impact of social media, business development, sales, understand merchandising, understand market analysis, how to use and personalize data, how to target customers, understand relationship between psychology and marketing
Discussion Points	Need to expand this skill area, customer behavior/motivations that influence buying behavior/solutions are all encompassing

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Skill Area	Brief Description
Operations	Understand operation’s role and function, know and adhere to general health and safety regulations and standards, adhere to health and safety regulations, follow safety and sanitation procedures, identify and respond to workplace safety and security hazards, use safety equipment, exercise confidentiality, maintain property and equipment, conduct purchasing activities, understand the concept of production, understand quality control, use basic project management skills (i.e., what it is, developing a plan, monitoring, and evaluating), financial aspects of operations/production, process control, asset management, logistics, understand business processes, understand process improvement, understand work flow and its interdependence with business processes, pay bills, production planning, basics of supply chain, understand inventory management, understand internal controls, understand segregation of duties, understand the need for speed and fast decision-making in operations and impact on business
Discussion Points	Delete all content for this category—focus on executive level’s role in watching over day-to-day activities, reduce focus on safety and security,
Professional Development	Self-development skills; critical-thinking; time management; career-planning skills; job-seeking skills; employment opportunities in business; product knowledge; define career paths for employees; understand need for work/life balance; personal wellness; personal accountability; networking skills; develop a foundational understanding of personal career path and employment opportunities; recognize personal interests, strengths, and weaknesses; identify self-development opportunities; manage personal brand; manage own professional development
Discussion Points	Should leadership be addressed here rather than in “Emotional Intelligence”? Group viewed leadership-skills development as a form of professional development.
Strategic Management	Recognize management’s role and contribution to long-term business success, identify understand how businesses use key performance indicators and benchmarks, planning and controlling organization/department’s activities, data recording and analysis, understand difference between short-term and long-term planning, use data and insights, develop a strategic vision, market analysis, understand difference between strategic and tactical planning, sell vision
Discussion Points	Management is different from leadership. Questioned purpose of section.

Recommended categories to add to the Business Core/General Business skillset:

- Sales

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Appendix C—Cluster-level Key Points

Marketing

Skill Area	Brief Description
Channel Management	Defining channels, channel coordination and integration, channel/brand alignment, ethics, channel brand development, digital channels, partner management (other’s selling your product)
Discussion Points	Channel definitions vary by industry—add subcategories for industry specific channels
Marketing Research (Marketing Information Management)	Need for marketing data; types of data used in marketing; ethics; nature of marketing research and marketing research activities; knowledge of design, data-collection, data processing analytics; data-driven decision-making; generation of leads; competitive analysis; team collaboration
Discussion Points	Delete references to “Marketing-information Management” in the category title, business goals drive marketing goals, not necessary to address function-specific applications
Market Planning	Concept of market and market identification, use of marketing strategies, developing marketing strategies to guide tactics, selecting target markets, developing marketing plans, conducting market analysis, performing SWOT analysis market share, brand, price examination , forecasting sales, setting marketing goals, selecting metrics and budget, assessing marketing strategies to improve return on marketing investment (ROMI), measure and report integration, competitive intelligence, use of customer insights and where to go for that information
Discussion Points	Change category title to “Marketing Planning” or “Strategic Marketing/Business Planning.”
Pricing	Role of pricing in marketing product positioning , factors to consider when pricing, setting and adjusting prices, ethics, product financing, testing prices
Product/Service Management	Product/service management’s role; generating product ideas; applying quality assurances; using product-mix strategies; positioning products/services; nature of branding; customer voice; unique selling position; building brands; ethics; product path to purchase; product sourcing/supplier sourcing; understand relationship between price, brand, and value; product life cycle, review competitors’ products and services
Promotion	Role and types of promotion, promotional marketing communications mix, promotional channels, components of advertisements, types of public relations activities, ethics, creative development, content creation and business writing, review competitors’ promotions, types of advertising media
Discussion Points	Change title of category to “Marketing Communications” but have separate skill area that addresses “Promotion (BOGO).”
Selling	Role of selling, scope of selling function, acquiring product/service knowledge, the selling process, motivational theories that impact buying

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Skill Area	Brief Description
	behavior, ethics, product problem resolution, avenues for selling (e.g., email, mobile, Facebook), networking, sales collateral, product path to purchase, qualification of leads for determining customer repeat sales, inbound marketing, inbound marketing systems and sales, sales-process strategy, building relationships, communication styles
Discussion Points	Change category to "Sales" or "Relationship Development"

Recommended categories to add to the Marketing Cluster Core skillset:

- **Marketing Technology**
 1. Marketing automation
 2. Customer Relationship Management (CRM)
 3. Ethics
- **Brand Development/Management**
 1. Channel brand development
 2. Brand identification
 3. Brand story
 4. Brand value
 5. Brand standards
 6. Building brands
 7. Unique selling propositions
 8. Brand positioning
 9. Ethics
- **Merchandising**
 1. Point of sale
 2. Creative element
 3. Working with creatives
 4. Cooperative deals

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Appendix C—Cluster-level Key Points (cont'd)

Business Management and Administration

Skill Area	Brief Description
Business Governance	Introduction to the basics of litigation, arbitration/mediation, and dispute settlement processes, understanding the nature of unions
Discussion Points	Consider moving the content of this category under “Strategic Management”
Communication Skills	Writing analytical reports and research reports, facilitating dialogue, supporting ideas when communicating, influencing others, persuading others, delivering insights of a report
Emotional Intelligence	Using ethics in staff supervision; understand group dynamics; enabling others’ thinking, learning, and behavior; understanding impact of unethical behavior
Financial Analysis	Interpreting cash flow statements, Monitoring business’s profitability, budgeting and control, profit/loss accountability, analyzing of business cases
Discussion Points	Recommended relocating interpreting cash flow statements to General Management Pathway
Information Management	Project-management software, data change best practices, combining use of all analytical tools, use macros, understanding basics of algorithms, demonstrating intermediate to advanced computer applications
Discussion Points	Questioned why project-management software wasn’t in the “Project Management category. Need to think about artificial intelligence (AI).
Knowledge Management	Role of knowledge management, how it’s facilitated by technology, how it’s constrained by legal and ethical considerations, how certain techniques facilitate the capture and transfer of knowledge, and how to use knowledge-management resources
Discussion Points	Recommended combining this category with “Information Management”
Operations	Maintaining vendor/supplier relationships and negotiating terms, understanding the nature of business analysis, maintaining workflows, inventory control, supply chain, legal and ethical considerations, business analysis/process thinking, data privacy and protection, using key performance indicators, understanding value chain and value ecosystems
Project Management	Using project-management process/methodology such as initiating projects, preparing project plans, allocating resources, executing and controlling projects; managing the project team; closing projects; managing project budgets, reporting project status to all stakeholders; delegating to team members, creating project plan related to business’s maturity
Discussion Points	Recommended focusing on agile project management
Quality Management	The role and function of quality management and the nature of quality management frameworks (e.g., Six Sigma, ITIL, CMMI), understanding ISO, understanding foundation of quality management
Discussion Points	Questioned need for “Quality Management”
Risk Management	The scope of risk management, understanding types of business risks, ethics

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Skill Area	Brief Description
Strategic Management	Management theories/applications; developing strategy; defining vision; setting goals; change-management fundamentals; managerial considerations in planning/organizing/staffing/directing; executing and adapting plan to changes in conditions, initiating changes proactively
Discussion Points	Recommended addressing organizational structure and board responsibilities

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Appendix C—Cluster-level Key Points (cont'd)

Finance

Skill Area	Brief Description
Business Governance	Government regulation of the finance industry, the nature of compliance, corporate governance’s importance, factors influencing business governance, common elements of business governance, regulatory implications regarding business structure, nature of political advocacy (lobbying), understanding differences in taxes associated with business structure, understanding reporting from a governance viewpoint, understanding state requirements for incorporation, understanding tax issues, understanding personal liability requirements based on business structure, understanding the nature of regulatory audits
Customer Relations	Providing client services, CRM, understanding the use of technology in adapting to client’s needs, developing clients’ financial understanding, understanding fiduciary responsibilities to clients, understanding the importance of trade credit, defining who constitutes a client, understanding suitability issues between clients and product recommendations
Financial Analysis	Saving and investing, types of financial markets, role of financial institutions, sources of securities information, interpreting securities tables, sources/types and considerations in business financing, calculating the time value of money understanding the nature of strategic forecasting, types of financial statement analysis, analyzing financial statement data, spotting problems with financial statements, nature of financial globalization, nature of convergence/ consolidation in the industry, fundamentals of managerial accounting (e.g., nature of costs, marginal analysis, cost allocation), understanding valuation models concepts, understanding debt and equity capital, mitigating financial risks, cash vs. accrual accounting, supply chain associated with money, tax implications
Financial-information Management	Nature of the financial-information management function, ethics, using technology, demonstrating budgeting applications and financial analysis applications, analyzing customers’ financial information, non-traditional uses of financial information (e.g., sustainability reporting, lean, activity based costing, six sigma), using budgeting information, forecasting and projecting financial information, measuring ratios to make decisions, analyzing competitors’ financial information
Discussion Points	Recommended combining “Financial-information Management” with “Information Management”
Information Management	Using advanced database applications, analyzing data from applications to understand customers and financial outcomes
Professional Development	Understanding employment opportunities in the finance industry, building professional relationships in finance, creating personal development plan

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Skill Area	Brief Description
Discussion Points	Recommended working towards certifications and joining professional associations
Risk Management	Ethics, use of technology in the risk-management function, legal considerations, nature of risk control, importance of auditing risk control, risk control systems, nature of enterprise risk management, relationship between risk and business objectives, identifying business risks, ways to assess risk, developing and evaluating a risk management program, understanding the nature of statistics, identifying organizational risks, understanding ways to assess rewards, understanding controls needed for portfolio protection
Discussion Points	Recommended relocating the category to the Business Administration Core

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Appendix D—Pathway-level Key Points

Marketing: Marketing Communications

Skill Area	Brief Description
Business Governance	Contract exclusivity, digital marketing regulations, social-media policy, attribution
Communication Skills	Client presentations, day-to-day content on social platforms, white papers, pitch/sales letters, new-business pitches, management reports, communication plans, protecting brand viability, creative briefings, internal communications with team members
Customer Relations	Using social media to enhance customer post-sales experience, surveying customers, executing CRM strategies
Emotional Intelligence	Ethics, gaining commitment, obtaining buy-in, managing stressful situations, determining and responding appropriately to personality types, fostering client-agency relationships, building rapport with suppliers, building rapport with teammates, fostering personal and client relationships
Financial Analysis	Promotional budgets, project cost estimation, bill verification, tracking hours, projecting ROI analysis
Human Resource Management	Acting as a liaison, motivating members of agency team, promoting innovation, team building, professional development
Discussion Points	Recommended changing category title to “Employee Resource Management”
Marketing Research (Marketing Information Management)	Analyzing media research tools, selecting appropriate research techniques, designing qualitative research studies, collecting marketing information (e.g., brand data, performance of promotional activities, social-media analytics, customer behavior data), interpreting research findings, creating reports based on findings, conducting competitive research
Marketing	Promotion versus marketing, service marketing versus product marketing, integrated marketing, brand marketing
Market Planning	Segmenting markets, target marketing, evaluating market opportunities, identifying personas to understand customers
Information Management	Using tools including websites, mobile technology, audiovisual aids; analytical tracking; desktop- digital publishing ; video and multimedia applications; automating marketing processes; social media; direct mail
Discussion Points	Recommended changing category title to “Information/Technology Management”
Operations	Data security and protection, marketing schedules and action plans, vendor evaluation, production monitoring, expense-control, working with vendors, project management
Pricing	Pricing models, website pricing, pricing objectives, break-even point, pricing strategies, profitability maximization, role of pricing in product positioning, financing products

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Skill Area	Brief Description
Product/Service Management	Facilitating and generating marketing communication ideas, employing product-mix strategies, positioning products/services, evaluating effectiveness
Promotion	Using customer and word-of mouth strategies techniques , using product placement to build brand, direct marketing, content development, design principles, critiquing advertisements, website presence, media planning and placement, publicity and public relations, sales promotion, promotional mix and budget, advertising campaigns and budget, digital marketing campaigns and strategies, social networks, social chat moderation, monitoring and measuring promotional efforts, content marketing, optimizing search engine placement, developing mobile marketing strategies, rating collateral materials, participating in trade shows/events
Selling	Acquiring knowledge of products/brands, pitching ideas, presenting advertising campaigns, marketing justification, acquiring knowledge of competitors' products/services

Recommended category additions for the Marketing Communications pathway:

1. **Creative Development**
 - Copyrighting
 - Art direction
 - Proofreading
 - Video production
 - Photography supervision
 - File preparation
 - Creative concept
2. **Brand Development/Management**
 - Channel brand development
 - Brand identification
 - Brand story
 - Brand value
 - Brand standards
 - Building brands
 - Unique selling proposition
 - Brand positioning
 - Ethics

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Observations and Recommendations

Appendix D—Pathway-level Key Points (cont'd)

Marketing: Marketing Management

Skill Area	Brief Description
Channel Management	Developing and assessing channel-management strategies including establishing distribution points, developing performance standards for suppliers, developing collaborative relationships with channel members, evaluating buyer-seller relationships, and conducting cost analysis
Emotional Intelligence	Impact of business customs and practices on global trade; nature of business customs and practices in each region of the world (e.g., Latin America, Western Europe, Eastern Europe), leveraging generational differences
Financial Analysis	Concept of product cannibalization, product-line profitability, marketing budgets, marketing return on investment (ROMI)
Human Resource Management	Staffing marketing positions, supervising marketing staff, documenting employee performance and behavior, measuring team members' goal attainment
Information Management	Using software to automate services, using analytical tracking tools and software, creating and managing information-management policies
Marketing Research (Marketing Information Management)	Assessing marketing-information needs, using marketing-information management systems, writing marketing research briefs, analyzing market needs and opportunities, anticipating market changes, collecting product quality data, tracking information on domestic and foreign suppliers/manufacturers, interpreting analytical patterns, reporting findings, measuring marketing information (e.g., brand equity, brand value, customer loyalty product performance, media audience), leveraging data to recommend personalized/relevant campaigns, leveraging data to support real-time customization of customer interactions
Market Planning	Aligning sales and marketing plans
Operations	Determining sources of relevant, new marketing data; evaluating options to purchase/sell marketing data; acquiring marketing data; maintaining security of marketing data; protecting digital data; creating dashboards; managing cross-functional projects; documenting and improving marketing processes; standardizing/automating marketing workflows, managing expenses
Pricing	Product costs, break-even, pricing objectives, pricing policies, discounts and allowances, prices and profitability, price fairness, analysis of price variances
Product/Service Management	Product standards, product-development processes, product-mix strategies, brand lifecycle, new-product launches, product/brand audits, product packaging assessment, positioning products/service to acquire desired business image (e.g., positioning concept, competitive advantage, brand strategy)
Promotion	Design principles, community outreach, development of promotional plans, evaluation of long-term and short-term results of promotional efforts

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Skill Area	Brief Description
Selling	Guiding sales staff, influencing sales procedures/activities to improve return on investment (includes supporting sales operations), analyzing sales-staff activity and results
Strategic Management	Aligning marketing activities with business objectives, providing input into strategic planning, setting marketing policies, monitoring achievement of marketing objectives, selecting metrics for measuring success, designing a marketing performance measurement system, modifying marketing strategies

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Observations and Recommendations

Appendix D—Pathway-level Key Points (cont’d)

Marketing: Marketing Research

Skill Area	Brief Description
Marketing Research (Marketing Information Management)	<u>Information Gathering</u> Assessing marketing-information needs, monitoring/mining sales data, monitoring competitors’ activities, tracking brand health, measuring market size/composition, monitoring inventory data, tracking cost data, data mining clickstream data, monitoring customer feedback, analyzing past marketing-research data, analyzing secondary data to supplement or validate primary data
	<u>Problem Identification and Research Approach</u> Identifying the marketing-research problem/issue, determining level and depth of information needed for decision-making, selecting research methods, determining research approaches, determining who and how many respondents are needed to adequately represent the population’s views (i.e., sample design), determining how to obtain needed data, defining research objective and deliverables, identifying research users and involving them in the problem identification process, selecting appropriate research methodology and sampling goals, implementing project-management skills to manage research efforts
	<u>Data Collection and Analysis</u> Developing data-collection instruments, collecting marketing-research data, processing data to translate into useful insights/knowledge (e.g., edit/clean data, code research data, tabulate data, create data matrix), analyze narrative text), apply statistical methods (e.g., set confidence levels, test for relationships),
	<u>Data Analysis and Interpretation and Conclusions</u> Analyzing and using narrative text techniques , applying statistical methods (e.g., set confidence levels, test for relationships), interpreting analytical patterns (e.g., predict demand patterns, determine attitudes and behaviors toward products and brands, customer-satisfaction), interpret research data identifying key research findings, reporting findings (e.g., data charts/graphs, executive summaries, oral presentations), identifying information needs after research study, determining how research findings relate to the business problem, ensuring adherence to professional research standards
	<u>Practical Application</u>

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Skill Area	Brief Description
	<p>Apply marketing information in a variety of marketing disciplines (e.g., pricing/price sensitivity, product-service management/product testing, segmentation studies, promotions/media audience)</p> <p><u>Evaluation</u> Assessing quality and effectiveness of marketing-research activities, determining research's return on investment, relating research to approach and to the business problem</p>
Information Management	Using software to automate services, using analytical tracking tools and software
Operations	Maintaining security of marketing data, protecting digital data, understanding security consideration in marketing research, purchasing information services to support research activities
Strategic Management	Provide input into Making recommendations for strategic planning

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Observations and Recommendations

Appendix D—Pathway-level Key Points (cont’d)

Marketing: Merchandising

Skill Area	Brief Description
Economics	Effects of global trade on retailing, current retail trends
Human Resource Management	Conducting product “show and tell”, conducting contests to motivate employees, holding special events for employees
Information Management	Utilizing merchandising software, obtaining information from retail databases to aid in planning and control, maintaining purchase orders, maintaining order logs
Marketing Research (Marketing Information Management)	Determining price sensitivity, using marketing-information to drive merchandising activities (e.g., analyze information from suppliers, analyze competitors’ offerings and activities)
Marketing	Distinguishing between retailing and marketing, understanding the importance of merchandising to retailers
Market Planning	Profiling target customers, determining market needs, determining customer demand for merchandise
Operations	<p><u>Expense Controls</u> Policies/procedures for handling shoplifters, security measures to minimize inventory shrinkage, preparing cash drawers/banks, opening/closing registers/ terminals, inventory-control methods</p> <p><u>Inventory-related Processes</u> Distribution issues, order-fulfillment processes, receiving processes, stock-handling procedures (e.g., source and anti-theft tags, price marking, assigning codes, stock rotation, stock transfers, returned/damaged products), warehousing procedures, transportation processes, distribution activities and strategies</p>
Pricing	Determining optimal pricing (e.g., base price approaches, product costs, break-even, pricing strategies, seasonal pricing), assessing pricing strategies (e.g., price fairness, price variances)
Product/Service Management	Product standards, assortment-mix strategies, merchandise plans/budgets, buying activities, vendor selection and performance evaluation, product positioning, aligning and communicating sales and marketing plans based on business goals
Promotion	Proofing ads, planning special events, using visual-merchandising techniques, using/creating displays, managing promotional activities, managing and evaluating advertising

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Skill Area	Brief Description
Selling	<p><u>Sales Processes and Techniques</u> Using brand names in selling, establishing relationships with customers/clients, determining customer needs, recommending specific products, demonstrating goods/service, converting objections, closing the sales, suggestion selling, follow-up activities</p> <p><u>Sales-support Activities</u> Special orders, returns/exchanges, telephone orders, gift certificates, additional services (e.g., packaging/wrapping, delivery), payment processing</p> <p><u>Sales Supervision</u> Informing staff about incoming merchandise, monitoring on-floor selling activities, analyzing sales performance</p>

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Appendix D—Pathway-level Key Points (cont’d)

Marketing: Professional Selling

Skill Area	Brief Description
Customer Relations	Using social media to enhance customer post-sales experience, determining customer expectations pre-purchase, managing customer experience during purchase, establishing an ongoing connection with customers
Marketing Research (Marketing Information Management)	Analyzing marketing information, understand target marketing in professional selling, understanding components of marketing plans
Selling	<p><u>Sales Fundamentals</u> Sales and buying cycles, consumer versus organizational buying behavior, emerging trends</p> <p><u>Pre-sale Activities</u> Using marketing-research information, prospecting for customers using customer-acquisition techniques, qualifying customers/clients, pre-visit research, identifying sales strategies, booking appointments, preparing sales presentations, preparing/assembling sales materials</p> <p><u>Sales Processes and Techniques</u> Building rapport and credibility, responding to personality types, determining buying motives, facilitating buying decisions, questioning/probing to acquire understanding, assessing needs, proposing solutions, demonstrating solutions, converting objections, closing the sale, negotiating sale terms, selling to individuals/groups, identifying recurring or up-sale opportunities with customer base</p> <p><u>Processing Sale and Providing Sales Support and Follow-Up</u> Calculating charges, processing special orders, processing telephone orders, processing sales documentation, writing/presenting product/service proposal, planning follow-up strategies, prepare sales reports, providing post-sales service, gathering customer/client feedback, conducting self-assessment of sales performance, maintaining ongoing relationship, processing the sale to complete the exchange, processing online orders, writing performance proposal and presenting proposal</p> <p><u>Planning Sales Activities</u> Planning strategies for meeting sales quotas, developing strategies to win back former customers, developing a sales-call pattern, establishing sales terms, identifying and managing key accounts</p>

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Skill Area	Brief Description
	<u>Sales Supervision</u> Structuring sales/department unit, recruiting/hiring salespeople, establishing sales territories, guiding sales staff (e.g., identify sales-training needs, conduct sales training, conduct sales meetings, accompany on sales call), setting sales quotas, monitoring sales performance, managing underperformance, designing incentive programs

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Appendix D—Pathway-level Key Points (cont'd)

Business Management: Administrative Services

Skill Area	Brief Description
Communication Skills	Greeting/directing visitors, answering phones, communicating with staff,
Emotional Intelligence	Confidentiality, managing internal and external business relationships (e.g., contacting key clients/customers)
Financial Analysis	Tracking expenses, tracking client billing, performing payroll duties, maintaining cash controls
Human Resource Management	Facilitating others' work efforts, assisting with staff growth and development, administering employee benefits
Information Management	Using information technology tools including expense report tools, word-processing applications, presentation applications, database applications, spreadsheet applications, websites and web-search tools/engines, cyber-and video-conferencing, and imaging software; accounting software; calendars/schedules; productivity applications; maintaining appointment calendars; making travel arrangements; preparing itineraries; managing business records; preparing documents to communicate with internal/external clients
Operations	Organizing and tracking project resources, planning meetings, planning events, coordinating conferences, maintaining office supplies and equipment, utilizing office equipment, performing routine/daily office tasks, troubleshooting office equipment, maintaining facilities
Professional Development	Exhibiting a professional image, demonstrating effective organizational skills, confronting difficult situations, anticipating boss's needs

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Observations and Recommendations

Appendix D—Pathway-level Key Points (cont’d)

Business Management: Business Information Management

Skill Area	Brief Description
Financial Analysis	Purpose of internal accounting controls, understanding the purpose of external accounting controls, monitoring ROI
Information Management	Multimedia websites, data warehouses, data sets, database management systems, data mining techniques, mining unstructured data, creating directories, preserving/converting data, migrating data, cloud computing applications, version control, using computer systems and programming techniques in problem solving, nature of enterprise resource systems, management-information requirements, statistical data analysis, interpreting business data, using coding to aid in data interpretation, securely transmitting data, validating data, understanding data-joining techniques, distinguishing between appending and integrating data, implementing data-quality review process and procedures, testing data against logic, creating intuitive user interfaces
Knowledge Management	Data taxonomies, search design principles, content management structures, knowledge management systems and strategies
Discussion Points	Participants had difficult time discerning between knowledge management and information management.
Operations	Documenting and analyzing business processes, acquiring data, recommending process improvements
Professional Development	Roles and responsibilities of project managers and business analysts and other professions within business information management
Quality Management	Understanding quality costs and programs/plans for quality achievement, building and executing test plans/cases
Risk Management	Nature of enterprise risk management and credit risk management
Strategic Management	Coordination/alignment of information management and business management

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Observations and Recommendations

Appendix D—Pathway-level Key Points (cont’d)

Business Management: General Management

Skill Area	Brief Description
Business Governance	Nature of contract suspensions and terminations; Designing and issuing negotiating contracts; business expansion, contraction, and consolidation considerations; government/legal activities affecting global trade; purpose of compliance programs; dispute mediation and settlement process; dispute prevention and resolution; understanding efficacy of organization’s compliance program
Communication Skills	Repurposing content , managing communications to protect company’s and personal brand, communicating financial results
Discussion Points	Recommended renaming category “Communication Effectiveness”
Customer Relations	Social media strategies, customer acquisition and retention strategies
Emotional Intelligence	Managerial ethics, impact of business customs and practices on global trade, nature of business customs and practices in each region of the world (e.g., Latin America, Western Europe, Eastern Europe, Africa, Asia, India)
Financial Analysis	Nature of managerial accounting, marginal analysis, variance analysis, accounting risks, fraud risks, interpreting cash-flow statements, drawing conclusions from financial reports, understanding key ratios, communicating financial results—translate business performance to different audiences
Human Resource Management	Human-resource planning, staff turnover causes and management, talent-development, employee engagement and commitment, mentoring, workplace diversity, staff issues/problems, selecting company benefits, managing employee safety
Discussion Points	Recommended changing category title to “Talent Acquisition”
Knowledge Management	Crowdsourcing
Operations	Facilities management, sustainability, operational risk, legal risk
Professional Development	Developing and Utilizing a code of professional conduct and ethics
Quality Management	Product standards, quality programs, continuing-improvement, assessing efficacy of organization’s compliance program
Risk Management	Global risk, enterprise risk, key risk indicators, key performance indicators, risk-management strategies
Strategic Management	Management theories, motivation theories, expectation-setting, corporate social responsibility, strategic planning process, departmental planning, organizational structures, change-leadership strategies

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Appendix D—Pathway-level Key Points (cont’d)

Business Management: Human Resources Management

Skill Area	Brief Description
Business Governance	Unfair labor practices, compensation and benefit laws, labor relations, collective-bargaining process, creating employment policies
Communication Skills	Repurposing content for social media; confidentiality; considerations in communicating human-resource strategies, plans, and policies to the workforce; conducting effective investigations
Emotional Intelligence	Negotiating benefits , Maintaining objectivity
Financial Analysis	Human-resource development budget, cost/benefit analysis, human-resource costs
Human Resource Management	HR functions, factors impacting HR management, hiring considerations, talent acquisition activities (e.g., job applications/forms, job descriptions, assessment tests, hiring policies, background screening, interviews, job offers), onboarding/orientation, employee-development needs assessments, talent development activities, performance management, dealing with staff issues/problems, total-reward concepts and strategies, health and safety programs, organizational development, negotiating benefits
Knowledge Management	Crowdsourcing
Information Management	Processing HR documentation/records (e.g., verify employment eligibility, immigration records, new hire reporting), using HRIS, using LMS
Operations	Understanding and troubleshooting health and safety issues, accident investigation, workplace violence conditions, drug and alcohol testing programs, emergency response plans, incidence response plans, employee-assistance programs, security plans, business recovery plans, processing payroll, designing compensation and benefits programs
Professional Development	Certifications, career opportunities, professional associations
Strategic Management	HR role in strategic planning, HR role in organizational change, aligning workforce strategies with organization’s objectives

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Appendix D—Pathway-level Key Points (cont’d)

Business Management: Operations Management

Skill Area	Brief Description
Business Governance	Nature of contract suspensions and terminations, issuing contracts, bidding regulations, nature of compliance program
Communication Skills	Repurposing content of social media, technical communications, visual communications, communicating with different audiences
Customer Relations	Relationship between customer service and sales, processing customer orders and returns, using social media post-sales
Emotional Intelligence	Impact of business customs and practices on global trade, nature of business customs and practices in each region of the world (e.g., Latin America, Western Europe, Eastern Europe)
Financial Analysis	Nature of managerial accounting, marginal analysis, variance analysis, purpose of internal accounting controls, cost accounting methods and use in decision-making, accounting risks, fraud risks
Information Management	Analytical software, technology specific to operations (e.g., UPC, RFID), PLC (programmable logic control), robotics, enterprise resource planning systems, product management software
Innovation Management	Nature of product development, innovation and product development, recognizing opportunities for innovation, product life cycle considerations, use of technology, ethics, innovation process, developing innovation processes
Knowledge Management	Knowledge management strategies, records management/ retention
Operations	<p><u>Inventory Management</u> Purchasing activities, minimizing inventory costs, master production schedules, contingency plans, supply-chain management strategies and underlying concepts (e.g., order cycle time), inventory-control methods, determining source strategy (make vs. buy)</p> <p><u>Human Resource Management</u> Obtaining employee commitment, implementing and monitoring employee-engagement strategies</p> <p><u>Production and Distribution</u> Capacity planning, order-fulfillment processes, receiving processes, stock-handling procedures, warehousing procedures, transportation processes and strategies, facilities management, product packaging and supply chain/logistics, property and equipment maintenance</p> <p><u>General Operations</u></p>

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Skill Area	Brief Description
	Nature of business analysis, documenting and analyzing business processes, operational controls, contributors to operational risk, role of operational risk management, evaluating performance inefficiency,
Professional Development	Career opportunities in operations and supply chain, professional associations, publications, certifications (CIPM, Green Belt, CSCP [APICS], ASQ)
Quality Management	Product standards, quality and quality costs, quality programs, continuous-improvement strategies
Risk Management	Contract administration, nature of global risks, risk indicators, nature of enterprise risk management

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Appendix D—Pathway-level Key Points (cont'd)

Finance: Accounting

Skill Area	Brief Description
Business Governance	Financial disclosure regulations and policies, internal controls, state regulation of accounting industry, global regulations, covenant compliance, industry-specific governing bodies
Financial Analysis	Classifying, recording, and summarizing data; maintaining cash controls; performing accounts payable and account receivable functions; maintaining inventory, payroll, and long-term assets records; specialized accounting; calculating business ratios and evaluating company performance; performing tax accounting, partnership accounting, equity accounting; using managerial accounting; producing financial reports; implementing internal accounting controls; conducting audits; preparing budgets, nature of depreciation
Discussion Points	Accounting and Corporate Finance should be one skill area for Financial Analysis.
Information Management	Using accounting applications and systems, applying statistical data analysis, interpreting business data analytics
Operations	Documenting and analyzing business processes
Professional Development	Nature of accounting standards, accounting-standards setting bodies, auditing/attestation standards, GAAP/IFRS, careers in accounting, roles and responsibilities of accountants
Risk Management	Understanding contract terms and conditions, contract compliance documentation and monitoring, nature of risk measurement, financial risk management techniques, risk of derivatives, importance of risk-management integration

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Appendix D—Pathway-level Key Points (cont'd)

Finance: Banking Services

Skill Area	Brief Description
Business Governance	Federal regulation of lending and operations functions, responsibilities of regulatory agencies that oversee the banking industry, elements of a compliance program, nature of compliance audits
Customer Relations	Meeting and exceeding Understanding, assessing, and setting expectations; recommending banking solutions; assisting customers with specific bank transactions (e.g., opening an account); informing customers of financial services and requirements
Financial Analysis	Purpose of internal accounting controls, key ratios/terms in banking, key banking calculation, CAMELS rating system, investment portfolio management, product line profitability, capital levels, internal auditing of banks.
Information Management	Coin and currency equipment, ATMs, check-processing tools/technology, bank security tools/technology, credit-card security, digital banking and payment systems, digital wallets
Operations	Handling cash and checks safely/securely, crimes common to banks, business continuity concerns, daily banking activities, loan underwriting process, real-estate lending practices, trust activities, operational risk-management concerns
Professional Development	Knowledge of banking processes and services, knowledge of banking industry, types of banking institutions and their role in providing banking services
Risk Management	Concept of third-party risk management, credit risk management, interest rate risk, and liquidity risk, regulatory risk

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

Observations and Recommendations

Appendix D—Pathway-level Key Points (cont'd)

Finance: Corporate Finance

Skill Area	Brief Description
Business Governance	Internal controls, Securities and Exchange Commission, covenant compliance
Emotional Intelligence	Impact of business customs and practices on global trade, nature of business customs and practices in each region of the world (e.g., Latin America, Western Europe, Eastern Europe)
Financial Analysis	Nature of depreciations, cash flows, nature and cost of bonds, nature and cost of stocks, business ratios, financial statement analysis, understanding capital markets, payment and collection systems, short-term financial management (e.g., cash budgets, working capital, forecasts, variance), long-term financial management (e.g., loans, investments), capital budgeting, dividends, evaluating projects for funding purposes, business financing, financial improvement strategies, financial planning processes, fundamentals of managerial accounting, profit planning, international cash flow and liquidity issues, ownership transactions, understanding the impact of taxation on financial decisions
Information Management	Treasury systems, Enterprise Resource Planning (ERP)
Professional Development	Roles and responsibilities of financial management, risk management, and treasury personnel; roles and responsibilities of accounting-standard-setting bodies, GAAP/IFRS
Risk Management	Understanding contract terms and conditions, contract compliance documentation and monitoring, nature of risk measurement, financial risk-management techniques, risk of derivatives, importance of risk-management integration,

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

Observations and Recommendations

Appendix D—Pathway-level Key Points (cont’d)

Finance: Insurance

Skill Area	Brief Description
Business Governance	Federal and state regulation; health insurance requirements/restrictions; nature of insurance contracts; legal concepts (e.g., indemnity); elements of a compliance program; federal and state regulation in health, life, property, and casualty insurance; legal and tort reform
Customer Relations	Understanding technology’s impact on customer relations
Financial Analysis	Understanding loss ratio, understanding rule of the regulatory AMS and Moody grades, understanding financial stability of insurance companies
Information Management	Claim analytics, systems used in the underwriting process, use of databases, using technology associated with issuing and administering insurance policies, data-collection management integrity and analysis, understanding customer-facing website and entry into company applications, claims-management processes applications, systems used in underwriting claims, pricing, distribution management
Operations	Documentation that supports the underwriting process, claims processing, claims investigation, setting prices for insurance products, issuing and administering insurance policies, investigating claims, loss control and risk litigation, sales and brand recognition, reinsurance
Professional Development	Types of insurance (features/benefits), how insurance companies generate income, ethical issues, licensing and certification requirements
Discussion Points	Change category title to “Professional Education” or “Industry Acumen.”
Risk Analysis	Insurance underwriting process; credit-based insurance scores; role of actuarial science; understanding and identifying insurance, financial, strategic, and operational risks

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

Observations and Recommendations

Appendix D—Pathway-level Key Points (cont'd)

Finance: Securities and Investments

Skill Area	Brief Description
Business Governance	Laws and regulations, compliance programs, ethics, understanding fiduciary obligations , understanding trustee relationships
Communication Skills	Corresponding with customers, understand the concept of detrimental reliance
Customer Relations	Customer follow-up, customer education
Financial Analysis	Calculating stock-related values, calculating bond-related values, investment analysis, diversification strategies, calculating and interpreting financial ratios, real-estate investment values
Information Management	Technology used in securities and investment industry, using tools to monitor business data, using tools to interpret business data
Operations	Functions of operations department, buy/sell functions, commissions, customer accounts
Professional Development	Securities and investment products and benefits, key terms, nature of capital markets and trading, licensing and certification requirements
Risk Management	Role of operations and compliance in risk management, records retention, understanding legal pitfalls associated with securities and investments

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

Observations and Recommendations

Appendix E—Listing of Futuring Panel Participants by Cluster

Panel Focus: Marketing

Panel Date: June 16, 2015

Panel Location: Des Moines, Iowa

Jeff Beliveau Owner StateBook International Davenport, Iowa	Linda Kuster Director of Research Strategy Vernon Research Group Cedar Rapids, Iowa
David Chivers President and Publisher; Regional President Register Media; Gannett Des Moines, Iowa	Jenni Leff Director of Brand Management ICON Ag and Turf Lawton, Iowa
Mark Cohen President Colloquy Digital, LLC Fairfield, Iowa	Ryan McCullough District Manager Starbucks Coffee Company Ankeny, Iowa
Dannelle Dahlhauser Director of Marketing and Sales Support MH Equipment Company Des Moines, Iowa	Christy Ryken Project Manager Strategic Marketing Services Cedar Falls, Iowa
Tom Flynn President Lessing-Flynn Advertising Des Moines, Iowa	Al Tramotina Chief Marketing Officer Mittera Group Des Moines, Iowa
Suzanna Frank Vice President--Research and Metrics Lee Enterprises Davenport, Iowa	John Valline Owner Integrated Print Solutions Grimes, Iowa
Edward (Ted) Kempf Account Executive Microsoft Des Moines, Iowa	Wade, Vicki Director of Marketing The Vernon Company Newton, Iowa
Zak Kimble Director of Sales Marriott International; Coralville Marriott Hotels and Conference Center Coralville, Iowa	

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

Observations and Recommendations

Appendix E--Listing of Futuring Panel Participants by Cluster (cont'd)

Panel Focus: Business Management and Administration

Panel Date: June 17, 2015

Panel Location: Des Moines, Iowa

Jared Bazzell Director of Talent Acquisition Operations ERC Iowa City, Iowa	Dutch Koch President Koch Brothers Inc Des Moines, Iowa
Noah Carspecken Vice President of Operations Iowa Fire Control Fort Dodge, Iowa	Carrie Kompelien Vice President of Human Resources Affiliates Management Company Des Moines, Iowa
Leisa Fox Regional Vice President QPS Employment Group Des Moines, Iowa	Sheila Loveland Manager--Operations Performance Nestle Purina PetCare Davenport, Iowa
Bob Greco CEO, Owner; Managing Director Cogent Solutions: BKH LLC Fairfield, Iowa	Karen Miller Executive Vice President Manpower Des Moines, Iowa
Mary Greiner Associate VP--Talent Management The University of Iowa Foundation Iowa City, Iowa	Milt Milloy Managing Director Springboard Consulting and Capital West Des Moines, Iowa
Brent Hauser Senior Associate Director, Change Management Boehringer Ingelheim State Center, Iowa	Chase Petsche Program Business Systems Analyst Wellmark Blue Cross and Blue Shield Winterset, Iowa
Cathy Johnson Chief Administrative Officer World Trend Financial Cedar Rapids, Iowa	Lisa Thomlinson VP Business Intelligence, Agency Relations Wells Fargo Home Mortgage Des Moines, Iowa
Paul Kirpes President & Chief Executive Officer TPG Companies West Des Moines, Iowa	Andrew Walling Senior Business Analyst Principal Financial Group Urbandale, Iowa

Iowa Career Technical Education Futuring Panels

Business Management and Administration, Finance, and Marketing

Observations and Recommendations

Appendix E—Listing of Futuring Panel Participants by Cluster (cont'd)

Panel Focus: Finance

Panel Date: June 18, 2015

Panel Location: Des Moines, Iowa

<p>Monte Bullock Vice President, Director of Finance and Accounting Hertz Farm Management Nevada, Iowa</p>	<p>Janet Kubik Assistant Vice President Principal Financial Group Des Moines, Iowa</p>
<p>Kevin Chomiak Managing Director, Institutional and Wealth Management Services Bankers Trust Ankeny, Iowa</p>	<p>Natalie Mandemach Director of Accounting Farner-Bocken Company Carroll, Iowa</p>
<p>Jude Conway Executive Director Ag Ventures Alliance Mason City, Iowa</p>	<p>Brent Mardis Vice President, Chief Risk Officer Sammons Financial Group Waukee, Iowa</p>
<p>Tony Fenton Associate Vice President of Commercial Lines - Middle Market Field Underwriting Nationwide Insurance Clive, Iowa</p>	<p>David Rawson Chief Financial Officer Kuder, Inc. Adel, Iowa</p>
<p>Scott Frost Chief Lending Officer Collins Community Credit Union Cedar Rapids, Iowa</p>	<p>Donna Schindel Asst. Vice President--Small Commercial Underwriting Continental Western Group Urbandale, Iowa</p>
<p>Scott Hoekman Principal Next Level Ventures Des Moines, Iowa</p>	<p>Teri Sporer President Creative Risk Solutions West Des Moines, Iowa</p>
<p>Brian Jones Chief Operating Officer Iowa Corn Growers Association Grimes, Iowa</p>	<p>Denise Sturm Vice President of Finance and Administration Telligen West Des Moines, Iowa</p>
<p>Adam Knuzich Chief Financial Officer Hawkeye Pedershaab Mediapolis, Iowa</p>	<p>Steve Warneke Chief Financial Officer Warneke Consulting Group Readlyn, Iowa</p>