MBA Research & Curriculum Center

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Colorado Observations and Recommendations

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# Project Overview

The Colorado Community College System partnered with MBA Research, Inc. to convene three paneIs of 42 business executives to discuss their current and emerging workplace needs and the impact on 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, August 18, 2015, through Thursday, August 20, 2015, in Denver Colorado. The clusters and pathways represented were: **Marketing** (Marketing Communications, Marketing Management, Marketing Research, and Professional Sales); **Business Management and Administration** (General Management, Human Resources Management, and Operations Management); and **Finance** (Accounting, Banking Services, Corporate Finance, Insurance, and Securities and Investments).

During these three days, each panel of business executives provided its 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 Colorado Community College System 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. Panelists overwhelmingly indicated that the decline of soft skills in the workplace is a major concern, especially for new employees. Hard skills needed to make companies successful change and evolve rapidly, and while basic soft skills remain the same, they fall by the wayside in the educational process.

Panelists were quick to emphasize that a customer is no longer defined only as a consumer of goods generated by a business, but more of a stakeholder, along with company employees, board members, partners, or any member of the community who might influence the company brand. According to panelists, employees need to be able to understand that the “ball is always in their court” and that they have the power to affect company success by the way they interact with, talk to, empathize with, and respond to internal and external customers.

Studies show that employers place a high value on cultural alignment in the workplace, but they feel these traits are fleeting in the millennial workforce. The friction between generations continues as employers scramble to figure out how to build soft skills with new employees while managing tensions between younger and older members of the workforce.

The call to action in this area by panelists is for employees at every level to remain flexible and open to different communication styles, the development of their own skill sets, and the ability to change directions quickly, when necessary, to meet the demands of the moment. Employees need to understand their role in an organization but be willing to expand the boundaries of that role when necessary.

1. Panelists expressed a high level of concern about data security and confidentiality along with a potential for over-dependence on tools that take us away from face-to-face transactions with stakeholders. Many companies are implementing “face-first” policies to encourage employees to avoid sending emails when in-person communication is a possibility.

Technology has helped provide a pathway for a global marketplace and rapid communi-cation, but panelists were concerned that it doesn’t take into consideration the security of information. While businesses are increasingly relying on data of all types to guide decisions, they are increasing their vulnerability for potential data breaches. When data are breached, businesses can face millions of dollars in costs for damage control and the retrieval of information. Companies can also experience major losses to their brand reputations and a loss of stakeholder confidence when these breaches occur.

1. In spite of concerns about data security, the executives indicated that keeping up with the latest innovations in technology is a priority. Panelists conveyed the importance of understanding the latest impacts of technology on all aspects of the marketplace. Everyone in a business environment should possess some expertise in this area to help determine what tools can be useful in creating and maintaining a thriving and competitive organization. New technology should be evaluated regularly, and businesses should have the ability to quickly embrace those aspects of technology which can help them keep their competitive edge.
2. Customers are changing the way business is done. They are looking for convenience, speed, and efficiency in their transactions; and they want a variety of platforms from which to interact. High-quality and sustainable products, value, and well stocked venues are also high on the list of demands. Customers are realizing their online voices command attention, and they are maximizing opportunities to share their opinions about companies and their brands. Many customers value long-term relationships with businesses and are willing to take the time to research and evaluate brands before they choose to establish a relationship. Businesses that seek customer feedback, watch online social media sites, and make decisions based on customer data are in the best position for success.
3. Panelists placed a high premium on professional development throughout the span of one’s career. They suggested that it’s too easy for employees, especially the younger generations, to focus only on the job in front of them without considering the long-term implications of a narrowed focus. Some companies still provide professional-development opportunities, but employees increasingly need to take control of their own professional growth by searching for, and seizing opportunities that will strengthen their portfolio. Executives emphasized the importance of having a “hunger” for life-long learning in the workplace today.
4. As millennials find their professional footing, employers are faced with addressing their sometimes heightened expectations about pay, benefits, and advancement upon entering the workforce. Employers are balancing efforts to keep younger workers productive, happy, and engaged while helping them realize that many benefits are based on hard work and meaningful contributions, rather than entitlement.
5. This sense of entitlement is also a part of what may be helping fuel generational differences in the workplace identified by panelists. Seasoned workers often view younger employees as over-reliant on technology and expecting the pay and benefits that long-time employees have worked years to obtain. Younger workers view older workers as road-blocks in their pathway to success at times, and feel there is an unwillingness to change. Panelists indicated they are struggling with how to reconcile these differences.

1. The workplace is being redefined and increasingly exists without walls. Globalization and technology both play a role in this evolution. As technology helps us connect to one another, or a company network 24/7, our ties to a physical location diminish in many instances. While this lends itself to a certain amount of flexibility and creativity, it can also result in increased working hours and a lack of initiative to maintain a work/life balance. Company leaders are working to maximize the use of technology in concert with helping employees remember the value of face-to-face conversations. The redefinition of the workplace also opens the door for the need for employees to be somewhat self-reliant when it comes to managing their technology devices. While there is still obviously a need for IT professionals in the technology domain, individual workers need to understand their own personal devices enough to troubleshoot in the face of functional difficulties.
2. Increased collaboration and teamwork are high priorities in the workforce today and are especially important in terms of globalization. A project team may consist of several people in the same department in one location, or of a group of individuals from several different continents and company branches. As a part of their soft-skills set, individuals need to come to work ready to share ideas, learn from one another, and join forces to complete projects. They need to understand and embrace different communication styles based on age or cultural differences. They also need to be able to collaborate with others throughout the organizational hierarchy and various domains. These types of partnerships allow those with differing viewpoints and areas of expertise to team up which helps ensure that all angles of a problem are considered.
3. Businesses are challenged with increasing governmental regulations. While regulations are designed to protect consumers, employees, and the environment, they place a growing burden on business and industry to understand their impact and then to comply with them. Small businesses with limited resources especially struggle to devote the time and money necessary to understanding local, county, state, and federal regulations and requirements. Globalization adds to the compliance maze as many companies are juggling numerous regulations on the local, national, and international levels.
4. Ethics is a driving concern in the workplace today. As the pace of business increases, so does the pressure to succeed, and the tendency to overlook ethical practices and guidelines as the quest for success increases. Panelists sharing their concerns in this area discussed examples of ethical compromises in their own industries. A common theme was the need to help employees understand their obligation to adhere to ethical guidelines and to be able to think critically and outside the box in doing so. A frequent observation was that ethical dilemmas cannot always be considered in black and white. One must enter a “gray zone” to consider all the possibilities pertaining to ethics.

Accountability is a key part of ethics as identified by the panelists. Individual employees should be ready to be accountable for their own role, and they also need to understand company-wide implications of their own and others’ actions. Visibility, transparency, initiative, self-reflection, and cultural sensitivity were all identified by the panelists as significant to a strong ethical foundation in the workplace. Many of the ethical characteristics or traits identified by the executives mirrored the principles of the Daniels’ Fund.

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. Panel participants were open and candid enough with group facilitators in sharing personal stories of ethics violations in the workplace. They cited instances of falsified résumés, inflated customer/client lists, and pay inequities. In the university sector, a participant had encountered inflation of expected income for graduates in some degree areas with hopes of increasing enrollment in those programs.

With increased workplace diversity, misalignments of ethical understanding are 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.

1. The ability to analyze data and apply them are crucial skills in business today. While not everyone needs to be an expert in this area, individuals in the field of business need to have a handle on the basics of data analytics. Panelists emphasized the need for employees at every level to possess a healthy sense of curiosity and the ability to tell the story behind the numbers. Individuals also need to understand the origins of the data and assess its reliability.

Because of the accelerated pace in business today, it is no longer feasible for companies to leave data analytics in the hands of a few. They must provide tools to allow employees to easily analyze numbers, and at times, make rapid-fire decisions based on the information gained from analysis. Employees must enter the work world with the skills to think both qualitatively and quantitatively, and be ready to dig deep into the numbers to understand their implications for business.

# Recommendations

1. 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. Help teachers identify how to fold an emphasis on 21st Century Skills into every aspect of teaching.
2. Provide and sponsor opportunities for, and encourage teachers to develop long-term partnerships within the business community so that they and their students can learn from real-life, authentic business-case scenarios. For instance, in a trusted partnership with a business, students and teachers could:
	* Identify stakeholders
	* Explore the use of technology and data security
	* Get insights on the use of soft skills and collaborative techniques in the workplace
	* Examine ethical dilemmas and get real feedback on potential solutions
	* Broaden their understanding of the complexities of customer relationships
	* Develop insight into how businesses respond to governmental regulations
	* Gain a realistic understanding of expectations in the workplace
	* Acquire an understanding of what drives their partner’s customer service

While these relationships would ideally be long-term for teachers, they can capitalize on them to foster shorter-term, mentoring relationships for students.

1. Provide teachers with professional development in the area of technology applications, tools, innovations, and data security. The opportunities should help teachers understand the complexities businesses are facing in this area and give them a solid foundation for continuing their learning independently since change occurs so rapidly in this zone. The goal is not for teachers and students to know everything about technology, but for them to know where to go and how to continue the learning process related to technology on a continuous basis.
2. Arrange to provide teachers with resources and support to gain access to technology in their classrooms ensuring that both teachers and students have the opportunity to enhance their skills in this area. Teachers can develop technology portfolios as they implement various tools and programs in the classroom.
3. Provide opportunities for teachers to learn about teams, collaborative working environments, and project management for implementation into their own classrooms. This would include developing an understanding of conflicts around generational and cultural differences; strengths and weaknesses; team dissention; and project direction. Like 21st Century Skills, teamwork and collaboration should become part of the fabric of the classroom since future success for students in the workplace will hinge on these skills.
4. Provide training to teachers that will enrich their understanding of corporate ethics. Work with teachers to address ways to tie education on ethical attributes and problem solving around ethical dilemmas in the classroom curriculum. Help teachers identify ways to make connections for students that illustrate how ethics in the classroom can mirror ethics in the workplace. For instance: Accountability to peers on a group project in the classroom would be similar to the types of accountability called for when working as a team in the workplace.
5. Offer teachers opportunities to hear firsthand what customers want from businesses and to learn about the ways businesses are streamlining services for customers, especially from a technology standpoint. Offering teachers professional development in the customer- service area or exposure to customer feedback panels can help them understand the complexities behind customer satisfaction.
6. Provide professional-development activities for teachers to understand key concepts behind Big Data including how information is gathered, processed, analyzed, disseminated, and used for decision-making purposes in companies. It will be helpful for teachers to be able to make the connections between how Big Data is used in education versus business scenarios.
7. Sponsor activities at the state level that provide teachers with opportunities to discuss regulatory requirements for businesses with their state representatives. Teachers should be encouraged to develop relationships with their local legislators as one way of better understanding the reasoning behind regulatory requirements and the process by which those requirements are vetted, developed, and enacted into law. Teachers should also be encouraged to discuss regulations with their business partners so that they get a wide range of perspectives.

# Appendix A—Top 10 Trends Identified by Colorado 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](http://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 Colorado businesses are:

1. Decline in relationship building skills, customer-service orientation, and soft skills
2. Data security and confidentiality
3. Keeping up to date with technology changes
4. Changing role of customers in buying/sales cycle
5. Personal responsibility and ownership of professional development
6. Unrealistic/unstainable expectations about pay/benefits
7. Redefinition of workplace/hours
8. Generational differences of employees
9. Increased need for collaboration and teamwork
10. Governmental expansion/required compliance resources

A listing and synopsis of the trends for all clusters and pathways are on the next several 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.

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 | Customers’ self-service orientation  |
| T5  | Expectation of personalization and customization of products and services |
| T6 | Intellectual property protection and data security |
| T7 | Data security and confidentiality |
| T8 | Over-dependence on technology |
| T9 | Pace of technological change and keeping up to date  |
| T10 | Use of Microsoft Office software as a core competence for business employees at all levels |
| T11 | Cloud computing |
| T12 | Analytics/big data |
| T13 | Changing role of customers in buying/sales cycle |
| T13 | Changing role of customers in buying/sales cycle |
| **Cultural** | C1 | Global workforce 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  |
|  | C7 | Generational differences of employees |
| C8 | Increased need for flexibility/agility |
| C9 | Increased need for collaboration and teamwork |
| **Environmental** | E1 | Sustainability (green initiatives, energy sources/cost, waste reduction/ management) |
| E2 | Healthy living initiatives | E3 | Increased environmental government regulation/pursuit of new energy sources |
| E3 | Increased environmental government regulation/pursuit of new energy sources | E4 | Workplace safety  |
| E4 | Workplace safety  | E5 | Weather related volatility |
| E5 | Weather-related volatility | E6 | Waste reduction management |
| E6 | Waste-reduction management | GP1 | Immigration reform |
| **Regulatory/Legal** | RL1 | Governmental expansion and impact on required compliance resources | GP2 | Volatile, polarized political environment |
| RL2 | Healthcare reform | GP3 | National security concerns |
| RL3 | Increased collection of sensitive data | RL1 | Governmental expansion and impact on required compliance resources |
| RL4 | Unfunded entitlement programs  | RL2 | Healthcare reform |
| RL5 | Increased litigation (consumers, employees, shareholders) and governmental actions | RL3 | Increased collection of sensitive data |
| **Ethics/Governance** | EG1 | Impact of societal values on decisions (appeasement) | RL4 | Unfunded entitlement programs  |
| EG2 | Increased exposure to loss by a single act by a single employee/vendor  | RL5 | Increased litigation (consumers, employees, shareholders) and governmental actions |
| EG3 | Increased scrutiny of employee actions  | EG1 | Impact of societal values on decisions (appeasement) |
| EG4 | Increased focus on accountability | EG2 | Increased exposure to loss by a single act by a single employee/vendor  |

| **Marketing** | **BMA** | **Finance** |
| --- | --- | --- |
| **Trends** | Marketing Communications | Marketing Management | Marketing Research | Professional Sales | **Subtotals** | **Trends** | General Management | Human Resource Management | Operations Management | **Subtotals** | **Trends** | Accounting | Banking Services | Corporate Finance | Insurance | Securities & Investments | **Subtotals** | **Totals** |
| T1 |  | X | X |  | 2 | T1 |  |  |  |  | T1 |  |  |  |  |  |  | 2 |
| T2 | X | X | X | X | 4 | T2 |  | X |  | 1 | T2 |  |  |  |  |  |  | 5 |
| T3 |  | X |  |  | 1 | T3 |  |  |  |  | T3 |  |  |  |  |  |  | 1 |
| T4 |  | X | X |  | 2 | T4 |  |  |  |  | T4 |  | X |  | X | X | 3 | 5 |
| T5 |  | X |  |  | 1 | T5 |  |  |  |  | T5 | X |  | X |  |  | 2 | 3 |
| T6 |  | X |  |  | 1 | T6 |  |  |  |  | T6 |  |  |  |  |  |  | 1 |
| T7 | X | X | X | X | 4 | T7 | X | X |  | 2 | T7 |  | X |  | X | X | 3 | 9 |
| T8 |  | X |  |  | 1 | T8 |  |  |  |  | T8 |  | X |  | X | X | 3 | 4 |
| T9 | X | X | X | X | 4 | T9 | X | X | X | 3 | T9 | X |  | X |  |  | 2 | 9 |
| T10 |  | X |  |  | 1 | T10 | X |  |  | 1 | T10 |  |  | X |  |  | 1 | 3 |
| T11 |  | X |  |  | 1 | T11 |  |  |  |  | T11 |  |  |  |  |  |  | 1 |
| T12 |  | X | X |  | 2 | T12 | X |  | X | 2 | T12 | X |  |  |  |  | 1 | 5 |
| T13 | X | X | X | X | 4 | T13 | X |  | X | 2 | T13 |  | X |  | X | X | 3 | 9 |
| C1 |  | X | X |  | 2 | C1 | X |  |  | 1 | C1 |  |  |  |  |  |  | 3 |
| C2 | X | X |  | X | 3 | C2 | X | X |  | 2 | C2 | X |  | X |  |  | 2 | 7 |
| C3 |  | X |  |  | 1 | C3 |  |  | X | 1 | C3 | X | X |  | X | X | 4 | 6 |
| C4 | X | X | X | X | 4 | C4 | X | X |  | 2 | C4 | X | X | X | X | X | 5 | 11 |
| C5 | X |  |  | X | 2 | C5 |  | X |  | 1 | C5 |  |  |  |  |  |  | 3 |
| C6 |  | X |  |  | 1 | C6 |  | X | X | 2 | C6 |  | X |  | X | X | 3 | 6 |
| C7 |  | X |  |  | 1 | C7 |  | X |  | 1 | C7 |  | X | X | X | X | 4 | 6 |
| C8 |  | X |  |  | 1 | C8 | X |  |  | 1 | C8 | X |  | X |  |  | 2 | 4 |
| C9 | X | X |  |  | 2 | C9 | X |  | X | 2 | C9 | X |  | X |  |  | 2 | 6 |
| E1 | X |  |  | X | 2 | E1 |  |  |  |  | E1 |  |  |  |  |  |  | 2 |
| E2 |  | X |  |  | 1 | E2 |  |  |  |  | E2 |  |  |  |  |  |  | 1 |
| E3 |  |  |  |  |  | E3 |  |  |  |  | E3 |  |  |  |  |  |  |  |
| E4 |  |  |  |  |  | E4 |  |  |  |  | E4 |  |  |  |  |  |  |  |
| E5 |  |  |  |  |  | E5 |  |  |  |  | E5 |  |  |  |  |  |  |  |
| E6 |  |  |  |  |  | E6 |  |  |  |  | E6 |  |  |  |  |  |  |  |

| **Marketing** | **BMA** | **Finance**  |
| --- | --- | --- |
| **Trends** | Marketing Communications | Marketing Management | Marketing Research | Professional Sales | **Subtotals** | **Trends** | General Management | Human Resource Management | Operations Management | **Subtotals** | **Trends** | Accounting | Banking Services | Corporate Finance | Insurance | Securities & Investments | **Subtotals** | **Totals** |
| GP1 |  | X |  |  | 1 | GP1 |  |  |  |  | GP1 |  |  |  |  |  |  | 1 |
| GP2 |  | X |  |  | 1 | GP2 |  |  |  |  | GP2 |  |  |  |  |  |  | 1 |
| GP3 |  | X |  |  | 1 | GP3 |  |  |  |  | GP3 |  |  |  |  |  |  | 1 |
| RL1 |  | X |  |  | 1 | RL1 | X |  |  | 1 | RL1 |  | X | X | X | X | 4 | 6 |
| RL2 |  | X |  |  | 1 | RL2 |  |  |  |  | RL2 |  |  |  |  |  |  |  |
| RL3 |  | X |  |  | 1 | RL3 |  |  |  |  | RL3 |  |  |  |  |  |  |  |
| RL4 |  |  |  |  |  | RL4 |  |  |  |  | RL4 |  |  |  |  |  |  |  |
| RL5 |  | X |  |  | 1 | RL5 |  |  |  |  | RL5 |  | X |  | X | X | 3 | 4 |
| EG1 |  | X |  |  | 1 | EG1 |  |  |  |  | EG1 |  |  |  |  |  |  | 1 |
| EG2 | X | X |  | X | 3 | EG2 |  |  |  |  | EG2 |  |  |  |  |  |  | 3 |
| EG3 |  |  |  |  |  | EG3 |  |  |  |  | EG3 |  |  |  |  |  |  |  |
| EG4 | X | X |  | X | 3 | EG4 | X |  |  | 1 | EG4 | X |  |  |  |  | 1 | 5 |

Black X’s = Trends identified as impacting the pathway

Red X’s = Trends identified by pathway table as top trends having the most impact

Red subtotal = Identified consistently as top trend for the cluster if identified by a pathway

Insufficient pathway participation in the following clusters resulting in duplicated pathway results:

Marketing: Professional Sales grouped with Marketing Communications

 Finance: Banking, Insurance and Securities and Investments grouped together

# 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** | Awareness of ~~Understand:~~ ~~sources of law in the U.S~~., intellectual property protection methods, legal issues affecting business, ~~nature of internal and foreign law~~, impact of legal systems on settling ~~international business disputes~~, basic torts related to business, nature of contracts, nature of legal procedure~~, debtor-creditor relationships~~, human resource laws and regulations, workplace regulations (ADA, OSHA, etc.), forms of business ownership, commerce laws and regulation (import/export, trade, anti-trust, customs), ~~nature of tax regulations on business~~ (move this to economics) strategies for legal/government compliance, copyrights, trademarks, special regulations, vendor qualifications, American Society for the International Association for Testing and Materials (ASTM), international relations non-disclosure agreements, consumer protection, risk levels depending on source of law or country, understand reasoning behind why business laws exist, reasons why data security laws exist, legal implications of how we do business, data privacy laws, basics of “Do Not Call” list, manage legal resources, ethics, legal relationship of employee and employer, employment laws, 1099 vs. W2, basic business skills |
| **Discussion Points** | **Where do employees go to ask questions/find answers about business law? How do they know what to ask? Is this too much information? Will the information be retained? Why teach OSHA regulations, many of the items are too specific for jus an overview of business law** |
| **Communication Skills** | Read to apply information to a task, use active listening skills, follow and give oral directions, asking relevant questions, interpret nonverbal cues~~, provide legitimate responses to inquiries~~, use communication styles appropriate to audience, defend ideas objectively, participate in and group discussions, make ~~oral~~ presentations, use note-taking strategies, organize information, select and use graphic aids and create graphic presentations, write professional correspondence and reports, adapt correspondence to audience, use data visualization techniques, write proposals, understand the impact of a person’s social media brand on organizations, distinguish between the use of social media for business vs. personal purposes, choose and use appropriate workplace communication channels, participate in problem-solving groups, ~~conduct~~ facilitate and lead meetings, process constructive feedback, telephone and video conferencing communication skills, different styles of communication for different groups, how to have “crucial conversations”, non-violent communication, writing proposals, process maps and how to best to communicate the information, communicate through cultural differences, research and sourcing skills, give and receive constructive criticism, understand rules of the Federal Trade Commission as they relate to communication, email etiquette, conflict management |
| **Discussion Points**  | **Ethics should be covered in every category as it relates to that section, social media use is more of a legal issue than a communication issue, language needs more consistency.** |
| **Customer Relations** | Foster positive relationships with customers, adapt communication to cultural and social differences of clients, build and maintain relationships, resolve conflicts with/for customers, reinforce company’s image, ~~identify company’s brand promise~~, ~~understand the nature of customer relationship management~~, ethics, ~~understand use of technology in customer relationship management,~~ understanding the life-cycle of a customer from cradle to grave, distinguish between the needs of different customers, prospecting, conduct SWOT analysis, evaluate customer research, secondary data mining, due diligence research, foster positive customer relations for brand and company loyalty, differentiate between customer/consumer/shopper, selling and negotiation, joint business planning, conflict resolution, identify positive and negative customer relationships, understand client services |
| **Discussion Points** | **Some customers are more technology savvy than others. Customers should include all stakeholders.** |
| **Economics** | Fundamental economic concepts (resources, supply/demand, prices, scarcity, opportunity cost), role of business in society, types of business activities and business models, factors affecting business environment, ways businesses adapt to today’s markets, types of economic systems, profit, risk, competition, impact of government on business activities, the role of productivity, understand economic indicators (inflation, GDP, unemployment, interest rates), nature of business cycles, impact of global trade/globalization, ~~market-entry strategies for international business~~, address and respond to economic conditions, personal finances, global financial perspective, inter-brands, basic principles of tangible and intangible business valuation, nature of tax regulations (moved from Business Law), accountability to stakeholders, Porter’s Five Forces Model, utilize SWOT analysis, understand the economic life-cycle, understand margins, understand some CFO terminology, understand overhead, be able to balance a check-book, labor, understand liquidity and cash flow |
| **Discussion Points** | **Some of these skills are very advanced, high level theory skills may not be actionable items that an employee could use, understanding is not a skill set**  |
| **Emotional Intelligence** | Develop self-awareness, assessing strengths/weaknesses, develop personality traits needed for career advancement, apply ethical characteristics, exhibit techniques to manage emotional reactions to people and situations, identify with others, respect others’ privacy, exhibit cultural sensitivity, leverage personality types, adapt management style to others’ personality types, solicit feedback, “sell ideas to others, demonstrate negotiation skills, offer constructive criticism, use conflict-resolution skills, understand nature of office politics, nature of stress management, participate as a team member, consensus-building skills, motivate team members, nature of leadership, demonstrate adaptability, coach others, act as a role model, determine personal vision, treat others fairly, maintain collaborative partnerships, interpret and adapt to business’s culture, leverage business relationships, recognize different skill sets, collaborate, recognize one’s own blind spots, learn from one’s own and other’s failures, identify one’s own strengths and weaknesses, psychometrics, take responsibility for actions, listen actively, be open to alternative thoughts and ideas, integrate technology appropriately to enhance not minimize communication, assess different learning styles, be proactive, change management, assessment testing, understand social cues |
| **Discussion Points**  | **Create awareness that technology needs to be society-serving not self-serving. Emotional intelligence is the single most important skill area for employees. The human element should always be at play in an increasingly technological world. Empathy and reality testing are parts of emotional intelligence. How do we teach failure?** |
| **Entrepreneurship** | Understand the concept of entrepreneurship, ethics, determine opportunities, determine feasibility, develop new-business concept and plan, determine needed resources, start the new business, ~~understand the need for~~ continuation planning, develop exit strategies, psychometrics, assess the market, brand development, secure financing, develop strategic resources, self-reflect on passions and what difference exercising them can make in the world, SWOT, use diligence, adhere to timelines, forecast profits and losses, structure business for success, assess risks, understand accountability and relationship to other businesses, understand challenges and barriers, calculate margins, market research, effectively “selling” of idea (pitching), network to learn successful traits of existing business  |
| **Discussion Points** | **Where is the market gap? Important to develop ideas and get capital.** **Students need more speakers and education on this topic. What personality characteristics indicate an entrepreneur? Entrepreneurs must recognize that they “own” or are responsible for their jobs/processes.** Shark Tank is a good resource for entrepreneurs**.** |
| **Fundamentals of Financial Analysis** | Fundamental principles of money, concept of time value of money, ~~using personal~~ financial literacy skills, nature of insurance, nature of accounting, ethics and legal considerations in accounting and finance, nature of cash flow and income statements, nature of balance sheets, role of finance, nature of business credit, sources of ~~financial assistance~~ capital, develop budgets, nature of cost/benefit analysis, calculate financial ratios, interpret financial statements, company-wide financial focus rather than just one’s own area or specialty, identify financial trends, utilize business math skills, financial forecasting, profit and loss, international financial issues, private equity and business design, ROI, funding sources, business structure, Excel skills, numbers-based decisions, personal financial planning, payroll, analyze operational results in relation to budget/industry, interpret and understand legal documents, understand the story behind the numbers, understand, analyze and interpret financial sheets, cost/benefit analysis |
| **Human Resource Management** | Nature of human resource management, ethics, understand use of technology, ~~delegate, manage cross-functional teams~~, staff a business unit, maintain employee records, orient new employees, recognize/reward employees, train staff, assess employee performance, resolve staff issues, understand the nature of remedial action, dismiss/fire employee, human resource laws and regulations, workplace regulations (ADA, OSHA, etc.), physical security, staff motivations, recruiting, retraining, discretion, assess and address cultural impacts, Title IX training, documentation, understand sexual harassment, apply ethics in the human resource domain, blended approaches to adult learning, understand employee incentives, understand behavioral styles, talent acquisition and management, identifying gaps in skills, state and federal human resource laws, understand HR perspectives and loyalties, HR laws and compliance, emerging HR trends, employee benefits |
| **Information Management** | Use information literacy skills, nature of information management, ethical and legal considerations, use information technology and basic computer applications (e.g~~., word processing~~, spreadsheets, database, calendars, email~~, groupware~~), maintain business records, ~~acquire information to guide decision-making (trends, internal records, environmental scans, statistical findings, research findings)~~, principles of data analysis, access information in a database system, nature of data mining, ethics in data mining, demonstrate data mining techniques, interpret data mining findings, address BYOD, privacy statements, the cloud, data accessibility issues, CRM, security, understand larger technology picture, outcomes of document development, secondary data sourcing, MS office skills, demonstrate data mining techniques |
| **Discussion Points** | **Skills in this area need to be tied to the Financial Analysis section. Need to fully understand the impact and emerging impact of cloud technology.** |
| **Marketing** | Role of marketing, nature of marketing functions, factors influencing customer behavior, actions employees can take to achieve company’s desired results, connections between company actions and results (influencing buyer behavior, gaining market share), Reputation management and impact of company actions on customer relationships, demand generation, cloud computing and data, use tools for internal collaboration, ROI/ROE/ROMI, ecommerce, B2B and B2C, Path to Purchase , trade and consumer marketing, revenue responsibility, impact of technology on marketing, marketing for a successful digital strategy, innovate using existing technology, how to market off-the-shelf technology, understand strategic role of marketing in company growth, understand market share, marketing research, marketing analytics, licensing, product management  |
| **Discussion Points** | **Add a sales category.** |
| **Operations** | Understand operation’s role and function, ethics, understanding use of technology, use project management skills, implement purchasing activities, understand production’s role and function, implement quality-control processes, implement expense-control strategies, understand the concept of supply chain, adhere to general health and safety regulations, implement safety and security procedures, protect data security, comply with property and equipment use policies, supply chain and compliance regulations, import/export issues, demand planning, international operational issues, capacity planning, data-mining and analysis, organizational design process, operational impact of actions, process management, project management, process management, implement purchasing activities, comply with property and equipment usage policies |
| **Professional Development** | Personal goal setting and follow-up; balance personal and professional responsibilities;, adhere to company protocols and rules of conduct, ~~follow chain of command~~, understand culture of decision making within an organization, achieve organizational goals, establish performance standards to meet organizational goals, understand need for innovation skills, make decisions, solve problems, use time-management skills, career-planning skills, job-seeking skills, nature of employment opportunities, career-advancement activities, networking, use diplomacy, develop mentoring relationships, collaborate with other professionals, self-reflect, develop professional passions, teamwork, process feedback, develop shared goals, understand company hierarchy, understand value of career coaching and pathways, understand the value of stackable credentials, develop résumés and portfolios, effectively “manage up” |
| **Strategic Management** | Recognize management’s role and contribution, managerial ethics, ~~nature of balanced scorecards~~, develop company mission, goals, and objectives; identify and benchmark key performance indicators, develop action plans, develop business plans, apply metrics to measure organizational success, analyze operating results in relation to budget/industry, identify potential business threats and opportunities, nature of risk management, nature of speculative risk, develop company culture, work with board of directors, strategic innovation, market overview, gap analysis, Blue Ocean strategy (exploring uncontested marketplaces), look at big picture, understand company values, vision and responsibility, develop HR resources plan, global strategy, analyze exit plan options, advise and articulate benefits to new employees, how to get teams on board with planning, how to lead and follow, develop short and long-term business plans |
| **Discussion Points** | **Concern that emphasis might be too much on strategic management and not enough on operations, may want to pull out strategic management and planning.** |
| **Additional Categories:**  | Sales management, product or service management, marketing management, financial management, organizational management, general business management (e.g., customer support issues, business support issues, team progress evaluation, coaching and mentoring teams, workload analysis, webinars and virtual meetings, KPI management)  |

# Appendix C—Cluster-level Key Points

## Marketing

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| **Skill Area** | **Brief Description** |
| **Channel Management** | Understand channels of distribution, understand the nature of channel management, understand the relationship between customer service and channel management, , understand the use of technology, understand legal and ethical considerations, coordinate channel management with other marketing activities, understand the nature of channel-member relationships, understand the nature of affinity partner relationship, understand channel strategies, select channels of distribution, evaluate channel members, assess the impact of push and pull strategies on channel management, understand relationships between direct and channel, understand problems between customers, direct sales, and channel, business strategy, develop relationships with corporate partners, develop strategic alliances, practice data management, analyze the revenue flow through various channels, evaluate the ROI for financial and non-financial decisions (e.g., goodwill) |
| **Marketing Research****(Marketing Information Management)** | Understand the need for marketing data; understand types of data used in marketing, understand nature of marketing-information management, understand use of technology in marketing research, understand ethics and legal considerations, understand the nature of marketing research, understand the nature of the marketing research problem/issue; understand methods used to design marketing-research studies (descriptive, exploratory, and causal);understand options used to obtain marketing research data (primary and secondary); understand nature of sampling plans; understand data-collection methods (observations, ~~mail,~~ diaries, ~~phone,~~ Internet, interviews,); understand characteristics of effective data-collection; understand techniques for processing data; monitoring “buzz;” understand descriptive statistics; assess marketing research briefs; identify sources of error (response/ nonresponse, interviewer, sample design); evaluate questionnaire design (types of questions, wording, routing, sequencing, length, layout); assess appropriateness of marketing research for the problem/issue, understand when to use qualitative versus quantitative analysis, understand bias in research, use evolving research methodologies, transform research outcomes into insights, understand conversion rate optimization including beta testing and multi-variance testing, create “calls of action” based on research, utilize social listening (e.g., blogs, chats, social site reviews), understand statistical research, geocaching, passive metering |
| **Discussion Points** | **How do businesses identify and make decisions?**  |
| **Market Planning** | Understand the concept of marketing strategies, identify considerations in implementing global marketing strategies, understand the concepts of market and market identification, identify market segments, develop customer profiles, select target market, understand nature of marketing planning and marketing plans, understand role of situation analysis, conduct market analysis, conduct SWOT analysis, assess global trends and opportunities, conduct competitive analysis, forecast sales, set marketing goals and objectives, select marketing metrics, set marketing budget, develop marketing plan, understand measures used to control marketing planning, understand strategies to link performance measures to financial outcomes, translate performance measures into financial outcomes, monitor marketing plan, assess cost-effectiveness of measurement tools, ~~conduct marketing audits~~), 360 degree marketing plans, market monitoring, using metrics, retrospective reports, ROA, operate on most current data, ROI vs. performance to financial, utilize newer media platforms, measure “buzz” on social media sites, evaluate listening channels, implement global marketing |
| **Pricing** | Understand role of pricing in marketing, understand factors to consider when pricing, understand use of technology, understand legal and ethical considerations, understand the cost of doing business, calculate margins and net gross margins, price parity, value vs. cost pricing, RFID, PLUs, POS, understand the basics of revenue management |
| **Product/Service Management** | Understand product/service management’s role, understand product life cycles, understand use of technology, understand legal and ethical considerations, generate product ideas, determine idea’s feasibility, adjust idea to create functional product, create ongoing-opportunity recognition processes, understand grades/standards, understand consumer protection, evaluate customer experience, plan product-mix, understand product bundling, identify service standards, understand nature of corporate and product/service brands, identify customer touch points, position products/services, build brand, understand role of customer voice in branding, understand role of customer service in positioning, understand unique selling proposition, assess the competition, competitive analysis and pricing, understand difference between features and benefits, brand licensing, articulate customer benefits, brand management in different disciplines vs. product lines, manage and understand brand architecture platform, product-development cycle, understanding the cascade effect as it relates to brand/product adoption |
| **Professional Development** | Understand the need for professional and ethical standards in marketing, understand employment opportunities in marketing, understand emerging roles, understand value and commit to being a life-long learner |
| **Discussion Points** | **How to acquire these skills? Many marketers are self-taught. Companies are not keeping pace with clients. Many companies are not investing in their marketing departments.** |
| **Promotion** | Understand role and types of promotion, understand elements of promotional mix, understand legal and ethical considerations, understand use of technology, understand types of advertising media, understand nature of word-of-mouth, understand direct marketing, understand channels used in sales promotion, understand channels used in public relations, understand components of advertisements, understand importance of coordinating advertisement’s elements, understand types of public relations activities, social media, mobility/technology, lead generation, public relations, understand the four basic building blocks as a foundation to promotion, user technology identification (platforms), introduction of Federal Trade Commission guidelines |
| **Discussion Points** | **The level of buyer sophistication is changing which is changing the nature of sales.** |
| **Additional Categories** | **Brand Management**: Managing the brand as a strategic asset of the business, setting brand standards to create value, internal marketing, brand identity, living the brand, the voice, the promise, understanding what the brand stands for, attributes association, brand architecture decisions, reversing negative brand attributes and impressions, managing the total customer experience with the brand. **Customer Engagement:** Customer steps, understand customer mindset, buyer’s journey, product and service personalization. **Social Media:** Combine Promotion and Selling categories. |

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

## Business Management and Administration

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| **Skill Area** | **Brief Description** |
| **Business Law** | Understand factors affecting settlement of legal matters, under the litigation process, understand arbitration/mediation, arbitration clauses in contracts, contract negotiation |
| **Communication Skills** | Write analytical reports and research reports, writing skills, competency in written communication |
| **Emotional Intelligence** | Use ethics in staff supervision, listening skills, demonstrate empathy |
| **Financial Analysis** | Interpret cash-flow statements, monitor business’s profitability, budgeting, cash-flow, profit and loss |
| **Information Management** | Use project-management software, adhere to data change best practices, optimize data resources, use best practices for data security and back-up, analyze data, graph data, data storage |
| **Knowledge Management** | Understand nature of knowledge management, how it’s facilitated by technology, and legal and ethical considerations, identify techniques that can be used to capture and transfer knowledge in an organization, apply knowledge management processes, improve processes for capturing tribal knowledge, knowledge of production and how to produce, sales knowledge |
| **Operations** | Understand legal considerations in operations, comply with strategies to protect customer data and digital assets, understand types of purchase orders and inventory, understand the nature of business analysis, understand factors influencing business process design, understand causes of business process changes, understand impact of supply chain on business performance, understand impact of technology on supply chain management, understand supply chain networks, understand global supply chain issues, understand the nature of supply chain management, organize and prioritize work, coordinate work with that of team members, monitor and ensure completion of delegated tasks, streamline work processes, maintain vendor/supplier relationships, negotiate terms with vendors, understand how to make adjustments while work is in progress |
| **Professional Development** | Understand employment opportunities in business management and administration, participate in productive mentoring relationships, understand how to leverage all aspects of employee compensation/incentives/benefits, encourage staff and peer professional development and advancement, be able to sell a business as well as a product |
| **Project Management** | Use project-management processes/methodology such as initiating projects, preparing work breakdown structures, executing and controlling projects, managing the project team and schedule, and closing projects;risk assessment; problem solving; resource allocation; time management; knowledge of overhead costs; risks of introducing a new product |
| **Quality Management** | Understand the nature of quality management and its frameworks (e.g., Six Sigma, ITIL, CMMI), understand the need for continuous improvement, benchmarking, internal audits |
| **Risk Management** | Ethics and legal considerations, use of technology, international considerations, identify and assess business risks, risk mitigation |
| **Strategic Management** | Understand managerial planning, organizing, staffing, directing, and controlling; understand factors influencing management; set departmental/company policies; show effects of departmental strategy on departmental goals/objectives; understanding the nature of change management and its lifecycle; understand relationship among innovation, learning, and change; goal setting |
| **Discussion Points** | **Strategic Management can be very different based on the size of the organization.** |
| **New Categories** | **Employee Management. Would include: Leadership, employee conflicts, performance reviews, coaching, performance reviews, action plans, scheduling, workload analysis and balancing, employee action plans** |

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

## Finance

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| **Skill Area** | **Brief Description** |
| **Business Law** | Understand legal considerations in the finance industry, understand effect of tax laws and regulations on financial transactions, understand the nature of compliance, understand the use of technology in compliance, develop policies/procedures to comply with regulatory requirements and self-regulatory guidelines, recognize the need for policies and procedures to comply with laws, understand local, county, state, national applicable laws; identify different regulatory agencies;understand the entity for legal tax structure |
| **Customer Relations** | Understand responsibilities in providing client services, use CRM technology, evaluate customer need vs. cost |
| **Discussion Points** | **Suggestion to combine Customer Relations section with Professional Development or Information Management and combine with a new area which would be Office Technology Training.** |
| **Financial Analysis** | Understand the need to save and invest, understand role of financial institutions, understand types of financial markets, understand nature of convergence/consolidation in the finance industry, understand relationship between economic conditions and financial markets, understand nature and scope of financial globalization, understand sources of securities information, interpret securities tables, understand nature of changes in equity statements , calculate the time value of money, understand types of financial statement analysis, spot problems with financial statements, understand valuation models used in finance, understand a business’s financial needs at different stages of its development, understand factors to consider in choosing between debt and equity capital, understand the significance of a firm’s capital structure, understand managerial accounting fundamentals (e.g., scope of costs, marginal analysis, variance analysis, cost accounting budgets, cost allocation), role of private equity and venture capital, understand nature of convergence/consolidation in the finance industry, understand how to tell the “story” behind the numbers, how to communicate undesirable or unexpected financial information |
| **Financial-information Management** | Understand the nature of financial-information management, understand role of ethics, understand role of technology, demonstrate budgeting applications, demonstrate financial analysis applications, understand techniques used to analyze customer’s financial information, understand non-traditional uses for financial information (e.g., lean, sustainability reporting, activity-based costing, Six Sigma), techniques used to analyze customer financial information |
| **Discussion Points** | **Suggestion to combine with Financial Analysis.** |
| **Information Management** | Demonstrate advanced database applications, research new tools and determine applicability |
| **Discussion Points** | **Too sophisticated for someone who is not an IT professional? Is the intent to control or understand the data?** |
| **Professional Development** | Understand employment opportunities in the finance industry, understand opportunities for building professional relationships in finance, understand the importance of corporate governance, ascertain employees’ role in achieving governance objectives, identify factors that impact governance structures, understand components of a well-governed company, understand impact of governance processes on decision-making and management functions |
| **Discussion Points** | **How can we help students and young professionals understand that salary is not the only thing of value in a workplace?** |
| **Risk Management** | Understand ethics and legal considerations, understand use of technology, understand the nature of risk control, understand importance of auditing risk control, understand risk control systems, understand nature of enterprise risk management, understand the relationship between risk and business objectives, identify business risks, understand ways to assess risk, develop and evaluate risk- management program, identify types of risks (reputational, competition, compliance, etc.), understand technology and security risks as they relate to financial data, understand risk of over-promising vs. under-delivering |

# Appendix D—Pathway-level Key Points

## Marketing: Marketing Communications

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| **Skill Area** | **Brief Description** |
| **Business Law** | Contract exclusivity, digital marketing regulations |
| **Communication Skills** | Make client presentations; create and maintain day-to-day content on social platforms; develop crisis management plan; write white papers, pitch/sales letters, new-business pitches, and management reports; develop communications plan; conduct creative briefings; conduct marketing communication planning meetings |
| **Customer Relations** | Use social media to enhance customer post-sales experience, pre and post sales experience, multi-channel |
| **Discussion Points** | **Don’t assume everything is social media driven at this point. Direct mail and trade shows are still factors.** |
| **Emotional Intelligence** | Apply ethics in marketing communications, gain client commitment, obtain buy-in to strategic thinking, maintain composure when receiving/delivering bad news, resolve workflow problems, manage crisis in client relationships, determine and respond appropriately to personality types, foster client-agency relationships, build rapport with suppliers |
| **Financial Analysis** | Verify bill accuracy, estimate project costs, set/track promotional budget, control marketing communications budget |
| **Human Resource Management** | Act as a liaison, motivate members of agency team, encourage innovation, how to structure organization chart  |
| **Information Management****Data Management****Or****Data Governance**  | Understand current marketing communications trends/issues, identify social-media trends, compare SMS with MMS capabilities, understand considerations in using mobile technology for marketing communications activities, maintain and mine marketing communications databases, use analytical tracking tools, understand how to incorporate video into marketing communications, evaluate impact of mobile-device capabilities on social-media effectiveness |
| **Marketing** | Differentiate between service and product marketing, understand relationship between promotion and marketing, investor relations |
| **Market Planning** | Identify ways to segment markets for marketing communication, understand nature of target marketing in marketing communications, use digital tools to aid in market segmentation, evaluate market opportunities |
| **Discussion Points** | **Use data from across the skill areas to get proper and informed decisions. Data are inputs and outputs.** |
| **Marketing Research****(Marketing Information Management)** | Analyze media research tools, select appropriate research techniques, design qualitative research studies, develop screener for qualitative research study, develop discussion guide for qualitative research study, determine sample for qualitative study, gather brand information, conduct pre-campaign testing, track promotional activities’ performance, monitor competitors’ promotions, monitor daily social-media analytics, monitor online brand and reputation, track trends, analyze customer behavior, use sampling in multichannel marketing, conduct marketing communications idea-generation session, moderate research groups, interpret qualitative research findings |
| **Discussion Points** | **Monitoring is different than social listening.** |
| **Operations** | Maintain data security, identify strategies to protect digital assets and customer data, develop schedule for marketing communications assignment, develop action plan to carry out marketing communications assignment, evaluate vendors’ services, negotiate terms with vendors, monitor marketing communications materials’ production, manage a client’s budget |
| **Pricing** | Understand marketing communications’ pricing practices, understand pricing models, understand considerations in website pricing, set pricing objectives, calculate break-even point, negotiate charges with vendors, set and adjust prices |
| **Product/Service Management** | Understand marketing communications services, generate and screen marketing communications ideas, develop creative concept, identify marketing communications product extensions, identify positioning activities in social media, establish credibility with Internet users, understand equity positioning, balance standardization and personalization of service, identify techniques to evaluate product-mix effectiveness, modify product mix |
| **Professional Development** | Understand traits important for marketing communications success, understand marketing-communications employment opportunities, understand factors affecting industry’s growth and development, understand economic and social effects of marketing communications, analyze careers in the industry, conduct self-assessment of marketing communications skills set, understand professional certifications in the industry, understand services of professional organizations in the industry |
| **Promotion** | Understand considerations in global promotion, understand marketing communications development process, use word-of-mouth strategies, understand role of customer voice, use product placement to build brand, understand the use of direct marketing, understand use of storytelling, develop and repurpose marketing communications content, understand design principles, check ad proofs, evaluate storyboards and advertisements, understand use of website presence in product promotion, manage media planning, develop media plan, leverage media buys, use publicity, cultivate media relationships, use public relations activities, employ sales promotion activities, develop marketing/creative briefs, work with advertising agency, plan marketing communications, implement and monitor promotional activities, monitor user-generated content (UGC), evaluate results of promotional efforts |
| **Selling** | Acquire knowledge of clients’ products/brands, pitch marketing communications idea to client, present ad campaign to client, provide service after the sale |
| **Additional Categories** | Analyst |

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

## Marketing: Marketing Management

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| **Skill Area** | **Brief Description** |
| **Channel Management** | Establish distribution points, develop performance standards for suppliers, develop new channels for products/services, develop collaborative relationships with channel members, develop channel-management strategies, monitor distributors’ performance standards, evaluate buyer-seller relationships, assess distribution channels, conduct total cost analysis of channel |
| **Emotional Intelligence** | Understand impact of business customs and practices on global trade, understand nature of business customs and practices in each region of the world (e.g., Latin America, Western Europe, Eastern Europe, Pacific Rim, Middle East, North America, South Asia, Northern Africa), sensitivity to global and cultural differences, understand how brands translate globally |
| **Financial Analysis** | Understand financial implications of product cannibalization, understand product-line profitability, allocate and control marketing budgets, measure cost-effectiveness of marketing expenditures, determine and report marketing return on investment (ROMI) |
| **Human Resource Management** | Determine internal/external resource requirements and responsibilities for projects, staff key marketing positions, ensure staff understanding of responsibilities and authority levels, supervise marketing staff, determine training course adequacy, assess staff’s ability to react to market developments, understand KPI metrics for employees, identify and support internal brand advocate, ensure that marketing is aligned with ethics and principles of the organization |
| **Information Management** | Use software to automate services, use analytical tracking tools, use Marketing Operations Management software, analyze impact of technology on marketing, use analytical software (SPSS, SAS, Excel, etc.), utilize project management tools, base designs on current data and functionality which would also include the flow of management, understand latest technology in use by customers, understand the target audience, identity scope, consider future analysis, exercise sensitivity to potential bias  |
| **Marketing Research****(Marketing Information Management)** | Assess marketing-information needs, identify issues and trends in marketing-information management systems, develop marketing-information management system, write marketing research briefs, identify industry/economic trends that will impact business activities, analyze market needs and opportunities, anticipate market changes, determine market position, collect product quality data, track channel management cost data, obtain and track information on domestic and foreign suppliers/manufacturers, display data in chart/graphs/tables provide sales analysis reports, prepare and use presentation software for report support, prepare written reports for decision-making, interpret analytical patterns to predict/analyze consumer behavior, determine price sensitivity, measure brand equity and value, measure customer loyalty, predict brand and market share, conduct needs gap analysis, evaluate competitive products, conduct product/brand situation analysis, identify new-product opportunities, determine needed product adaptations, test product concepts, design and conduct product tests, evaluate potential growth of niche opportunities, conduct service-quality studies, prepare trend analyses, measure media audience, leverage data to recommend personalized/relevant campaigns, leverage data to support real-time customization of customer interactions, evaluate promotional activity, evaluate quality of marketing research studies, evaluate appropriateness of research design for research purpose, assess satisfaction with contracted research firms, understand evolving methods of market research (e.g., ethnography, social media platforms, etc.), ability to transform information into action  |
| **Market Planning** | Align sales and marketing plans, evaluate market opportunities, understand data as input and output |
| **Operations** | Determine sources of relevant, new marketing data; evaluate options to purchase/sell marketing data; develop processes to acquire marketing data; purchase data & services; maintain data security; develop strategies to protect digital data; cleanse data; apply marketing analytics, identify data needs; create dashboards to monitor marketing performance; coordinate activities with those of other departments; manage cross-functional projects; assign work to external partners; develop operational plan of marketing activities/initiatives; document & improve marketing processes; define uniform marketing process; manage system for housing marketing assets (marketing collateral, promotional items, graphics, letterhead, logos, etc.); standardize/ automate marketing workflows; develop marketing campaign workflows; track invoices; track & adjust marketing budget in response to new market opportunities |
| **Pricing** | Determine product costs, calculate break-even, establish pricing objectives, select pricing policies, determine discounts and allowances for base-price adjustments, determine terms of trading, set prices, adjust prices to maximize profitability, ensure price fairness, assess changes in price structure, analyze price variances, evaluate pricing decisions |
| **Product/Service Management** | Determine impact of product standards’ issues associated with global business, understand new-product-development processes, determine product-development objectives, evaluate and process innovations, analyze product needs and opportunities, adapt product range to needs of target market segments, develop product search methods, determine product priorities, monitor market innovations, create a product/brand plan, plan/manage product/brand lifecycle, develop new-product launch plan, coordinate product launches, evaluate alternative marketing techniques and procedures for achieving product-development objectives, evaluate product mix, assess product development activities and product/service launches, measure brand performance, conduct product/brand audit, assess product packaging requirements, evaluate graphic design on packages, evaluate adequacy of product packaging, conduct reviews of product packaging, develop positioning concept for a new product idea, communicate product/service’s core values, develop strategies to protect brand’s reputation, define brand strategy, align branding strategies to ensure consistent end-to-end communications and actions, use co-branding strategies, leverage product/service’s competitive advantage, determine brand identity, design brand experience, determine need to rebrand |
| **Professional Development** | Assess services of professional marketing organizations, use professional development opportunities, employ career-advancement strategies, understand career opportunities in marketing management |
| **Promotion** | Understand design principles to communicate needs to designers, participate in community outreach activities, develop promotional plans (advertising, sales promotion, public relations/publicity), create written briefs for outside agency/consultant, assess relationship with outside agency/consultant, evaluate long-term and short-term results of promotional efforts, content marketing strategy, programming management, social-media relationship management (engagement), digital and mobile engagement |
| **Selling** | Understand sales staff’s induction program, conduct knowledge gap analysis of sales staff, analyze sales staff activity and results, monitor sales management’s ability to conduct customer service operations, assess sales staff’s compensation package, support sales operations |
| **Strategic Management** | Align marketing activities with business objectives, provide input into strategic planning, conduct gap analysis to determine organization’s marketing capabilities, develop departmental structure, determine strategic marketing planning structure, show effect of marketing strategy on marketing goals/objectives, monitor achievement of marketing objectives, set marketing policies, establish marketing cost-control system, select and apply metrics for measuring success, design marketing performance measurement system, modify marketing strategies based on performance results |

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

## Marketing: Marketing Research

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| --- | --- |
| **Skill Area** | **Brief Description** |
| **Information Management** | Assess impact of technology on marketing research, use analytical tracking tools, determine types of technology needed by company/agency for marketing research, identify emerging customer trends through social networks, use analytical software (SPSS, SAS, Excel, etc.), understand unmet information data needs, understand different types of qualitative data |
| **Marketing Research****(Marketing Information Management)** | Information Needs AssessmentAssess marketing-information needs, identify issues and trends in marketing research, develop marketing-information management systemBusiness Data MonitoringObtain and analyze information in customer databases, maintain information on marketing partners’ activities (vendors, others in supply/distribution channels, etc.), identify challenges with the use of unstructured data, obtain marketing information from publications and online sources, conduct sentiment analysis, collect product quality data (customer complaints, returns, quality control, etc.), data mine clickstream data using web analytics, track environmental changes impacting business, monitor and mine sales data, identify transactional data through electronic means (bar coding, optical scanners, automatic replenishment systems, EDI, etc.), monitor competitors’ activities, develop insights using trends in other industries, track brand health, measure market size and composition, monitor inventory data, track cost dataProblem Identification and Research ApproachUnderstand nature of actionable research, compare business objectives with expected use of marketing research outcomes, identify marketing-research problem/issue, translate problem into research objectives, evaluate relationship between research purpose and the marketing-research objectives, estimate value of research information, determine level and depth of information needed for decision-making, select research method (exploratory, descriptive, or causal), determine research approach (observation, survey, experiment, quantitative or qualitative, social listening vs. focus groupsSamplingUnderstand sampling design process and sample sources, select sample sources, understand sampling issues with international projects, understand sampling techniques for probability and non-probability samples, understand statistical concepts associated with sampling, understand techniques and issues associated with Internet sampling, minimize threats to validity, determine how to improve response rates, select methods to compensate for non-response, select sampling technique, design sample for qualitative marketing-research study, develop sampling plans, execute sampling process Data Collection and Processing Select data-collection methods (observation, mail, phone, Internet, discussion groups, interviews, etc.), select measurement scales (nominal, ordinal, interval, ratio), plan research study, write research proposal, select rating scale, determine questions to ask, create simple questionnaire, test questionnaire, prepare diaries, develop discussion guide, develop screener, control sources of error and bias in data-collection instrument, apply/conduct selected data-collection methods, edit/clean data, code research data, apply methods to treat missing data, conduct error detection/edit routines, transcribe conversations/interviews, tabulate data, create data matrix, select and use appropriate data support systems, analyze narrative text (sorting, classifying/ categorizing, etc.), understand conversion ratesData Analysis and Interpretation Set confidence levels; test for relationships, associations, and significant differences; use statistical inferences; identify types of modeling techniques; apply mathematical modeling techniques; interpret descriptive statistics; interpret correlations; determine issues associated with interpretation of internal research data; translate findings into actionable business recommendationsReportingDisplay data in charts/graphs/tables, write executive summaries, prepare and use presentation software to support reports, present findings orally, prepare written reports for decision-making, post results electronicallyPractical ApplicationsInterpret analytical patterns to predict/analyze consumer behavior (demand patterns, product usage, purchasing behavior, customer satisfaction, etc.), determine price sensitivity and optimal prices, conduct product analysis, identify new-product opportunities, test product concepts, pre-test promotional campaigns, measure media audience and response rates, conduct advertising tracking studies, assess quality of marketing-research activities to determine needed improvementsEvaluationAssess quality of marketing-research activities to determine needed improvements, compare marketing research proposals to select agency providing most value, determine level of commentary/analysis the agency will provide on the findings |
| **Operations** | Purchase information services, understand security considerations in marketing research, maintain security of marketing data, develop strategies to protect digital data, risk management, understand client’s objective, understand financial implications of operational changes |
| **Professional Development** | Understand career opportunities in marketing research, understand role and responsibilities of marketing researchers, determine professional certification requirements in marketing research, assess the services of professional organizations in marketing research |
| **Strategic Management** | Provide input into strategic planning |
| **Additional Categories** | Digital marketing |

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

## Marketing: Professional Selling

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| --- | --- |
| **Skill Area** | **Brief Description** |
| **Customer Relations** | Use social media to enhance customers’ post-sales experience |
| **Marketing Research****(Marketing Information Management)** | Analyze market information, understand use of target marketing in professional sales |
| **Professional Development** | Understand the nature of professional sales, understand employment opportunities in professional sales, understand economic/social effects of professional sales, identify professional certification requirements for sales professionals, assess services of professional organizations in selling |
| **Selling** | Sales FundamentalsUnderstand the impact of sales and buying cycles, understand impact of digital communication on selling, differentiate between consumer and organizational buying behavior, identify emerging sales trendsPre-sales ActivitiesUnderstand use of marketing-research information, prospect for clients, conduct preliminary client qualification, conduct pre-visit research, determine sales strategies, book appointments, prepare sales presentation, prepare/assemble sales materialsSales Processes and TechniquesBuild rapport and credibility with prospect, respond appropriately to personality types, determine buying motives, facilitate buying decisions, question/probe to acquire understanding, assess prospect’s needs, propose solutions, demonstrate product solutions, convert objections into selling points, close the sale, negotiate sale terms, oversee fulfillment/completion of sale, sell to individuals/groupsProcess Sale and Providing Sales Support and Follow-UpCalculate charges, process special orders, process telephone orders, process sales documentation, write and present product/service proposal, plan follow-up strategies, prepare sales reports, provide post-sales service, gather customer/client feedback, conduct self-assessment of sales performance, plan follow-up strategies, provide post-sales service, gather and analyze client feedback to improve performance, maintain ongoing relationship with clientPlanning Sales Activities Plan strategies for meeting sales quotas, develop strategies to win back former customers, develop a sales-call pattern, establish sales terms, identify and manage key accounts, design/implement key account planStaffing the Sales ForceDetermine structure of sales department/unit, determine sales force size, recruit/hire sales people, establish sales territoriesGuiding the Sales ForceUnderstand nature of sales management, adapt leadership style for sales person, identify sales-training needs, conduct sales training, determine strategies to motivate sales staff, conduct field accompaniments, conduct sales meetingsControlling Sales ActivitiesSet sales quotas, analyze sales reports, monitor sales performance, manage sales person’s underperformance, design incentive programs for sales staff, control sales plans |

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

## Business Management: General Management

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| --- | --- |
| **Skill Area** | **Brief Description** |
| **Business Law** | Understand nature of contract suspensions and terminations, issue service/product contracts, follow domestic and foreign laws governing business expansion, understand regulations restricting customer trade, comply with export licensing regulations, obtain releases and clearances to export products, understand legal recourse in resolving global business disputes, understand the nature of a compliance program, develop policies/procedures to comply with regulatory requirements and self-regulatory guidelines, develop a compliance program, mediate disputes, negotiate settlement of legal and regulatory matters |
| **Communication Skills** | Repurpose content for social media , develop and implement communications plans, develop crisis management plan |
| **Customer Relations** | Develop social media strategies for customer service, determine customer acquisition and retention strategies |
| **Emotional Intelligence** | Understand nature of managerial ethics, understand impact of business customs and practices on global trade, understand nature of business customs and practices in each region of the world (e.g., Latin America, South America, Africa, Pacific Rim, Middle East, South Asia, Western Europe, Eastern Europe) |
| **Financial Analysis** | Understand nature of managerial accounting, understand scope of costs in managerial accounting, understand marginal analysis techniques, understand role of managerial accounting techniques, understand use of variance analysis, assess accounting risks, assess fraud risks |
| **Human Resources Management** | Understand nature of human resources planning, determine staff turnover causes, assist with leadership development, facilitate career development planning, participate in succession planning, manage employee turnover, foster employee engagement and commitment, mentor an employee, understand labor-relations issues, understand issues associated with workplace diversity |
| **Knowledge Management** | Identify ways to use crowdsourcing |
| **Operations** | Understand the nature of facilities management, design sustainability strategies, ~~real-estate master plan~~, identify factors contributing to operational risk, understand nature of operational risk management, assess legal risks, evaluate speculative business risks, assess business’s potential to expand into new markets |
| **Professional Development** | Understand continuing education courses/programs to enhance management skills, understand certifications for management professionals, identify professional association opportunities for management professionals, understand factors to consider in developing managerial code of ethics, use an established professional code of ethics |
| **Quality Management** | Understand product standards’ issues with global business, develop plan/program for quality achievement, develop continuous-improvement strategies |

|  |  |
| --- | --- |
| **Risk Management** | Understand nature of global risk, understand types of indicators used to manage business risk, assess enterprise risk, select risk-management strategies, develop and evaluate risk-management plan, leverage appropriate resources to manage risk, identify primary risks, utilize third-party assessment resources when appropriate |
| **Strategic Management** | Understand the nature of global management, understand management and motivation theories and their applications, understand expectation-setting processes, understand the nature of corporate social responsibility, monitor compliance and measure impact of social responsibility, develop social responsibility policies and strategy, understand strategic planning process, identify and set benchmarks for KPIs, develop strategies for achieving company vision, determine alternative action when goals are not being met, evaluate opportunities for company changes, develop processes to improve business results, analyze exit plan options, develop company vision, determine business’s overall global strategy, develop company’s management plan, understand organizational structures for managing foreign business activities, develop human resources organizational plan, develop organizational strategy for foreign businesses, understand the importance of the coordinating/controlling role in business, evaluate individual department’s contribution to organizational effectiveness, apply benchmarking techniques, interpret internal information for strategic planning, assess company’s strategic-planning processes, understand relationship between organizational change and organizational development, understand strategies and approaches for leading change, assess change readiness, develop change management strategy and programs, develop HR resources plan, analyze exit plan options, global emphasis |
| **New Categories** | Sales management, product or service management, marketing management, financial management, organizational management  |
| **Discussion Points** | **Use “set” and “monitor” throughout the document rather than “understand.** |

**The General Management panel proposed an entire revision of the content of the General Management Pathway level skills. The following skill areas and descriptions were suggested:**

**Product Service Management**

**Products:** Product planning/pricing, product management/merger and acquisition positioning, design/packaging, bill of materials, cost of goods sold, branding/packaging, supply chain/suppliers/channel distribution, logistics/delivery, customer support/customer departure repair, training/configuration

**Services:** Service definition, pricing/delivery models, full service versus third party, online provisioning/pricing, customer support/training, customer testimonials, new service aggregation

**Sales**

Set sales strategy, set sales goals, actively monitor sales people and pipeline, monitor and react to competitors for pricing/offerings/approaches, coordinate sales strategy and actions with product/service management functions/marketing/financial functions, align sales with broad organizational goals and culture, reward and recognize successful sales people

**Financial**

Develop and monitor financials, profit and loss, ability to redirect funds, profit and loss and income statements to remain positive, ability to report results accurately and effectively, develop and monitor internal controls to safeguard funds, analyze trends and adjust priorities accordingly

**Organizational Management**

Organizational development, communication, career development, compensation, benefits, incentives, legal, people development, mentoring, coaching, training, hiring, employee communication, performance evaluation, employee rewards and recognition, labor relations, cultural management

**Marketing Management**

Set portfolio vision for company that will drive portfolio and merger/acquisition strategy, oversee development of portfolio strategy that meets long and short-term revenue and market-share requirements, ensure a balanced pipeline of innovation for short and long-term needs and brand health, develop an insight-based learning organization with an acceptable an measure risk

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

## Business Management: Human Resources Management

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| --- | --- |
| **Skill Area** | **Brief Description** |
| **Business Law** | Understand unfair labor practices, comply with compensation and benefit laws, determine HRM’s legal responsibility in maintaining labor relations, participate in collective-bargaining process, understanding labor laws |
| **Communication Skills** | ~~Repurpose content for social media~~; maintain confidentiality in dealing with personnel; understand elements of HRM’s communications program; communicate human resource strategies, plans, and policies to the workforce, how to handle conflict, compliance record-keeping, communicate corporate strategies |
| **Emotional Intelligence** | Negotiate benefit plan administration and improvements with carriers  |
| **Financial Analysis** | Prepare and maintain HR development budget, conduct cost-benefit analysis of HR development program, determine HR’s liabilities |
| **Human Resources Management** | Understand HRM functions, understand factors impacting HRM, understand factors to consider when hiring different categories of staff, understand planning techniques used in hiring, evaluate alternative staffing methods, develop/tailor job application forms/blanks, develop job descriptions and profiles, assess availability of qualified applicants, classify jobs, establish salary ranges, choose employment tests, establish employee-selection procedures, develop strategies to market organization to potential employees, write and post job announcements, develop a staffing plan, implement talent acquisition activities, evaluate effectiveness of recruitment sources, use staffing metrics to assess effectiveness of hiring decisions, develop employee retention management plan, conduct onboarding activities, determine employee-development needs, perform talent-development activities, assist with establishment of work rules, implement informal performance appraisals, assist supervisors with performance appraisal tools, manage employee turnover, identify and implement HR best practices, develop written performance management system, establish performance improvement plan, develop employee handbook, develop HRM policy/procedure manual, evaluate impact of leadership development and effectiveness of new-employee orientations, assess training’s effectiveness, assess HR development program effectiveness, conduct HR audit, build and assess employer-employee relationships, understand and resolve staff issues/problems (e.g., labor-relations, organizational change, workplace diversity, out-placement and layoffs), understand and administer total reward strategies, design total rewards strategies, develop and assess company’s health and safety programs, understand the nature of organizational development, apply organizational-development theories, leverage workplace diversity and inclusion to achieve organizational objectives, evaluate HRM’s contribution to organizational effectiveness, handle HR requirements for merger/ acquisition, utilize effective interdepartmental communication techniques |
| **Information Management** | Maintain HR documentation/records (e.g., employment eligibility, immigration records, worker’s compensation claims, OSHA, new-hire reporting), build chain of evidence to demonstrate HRM value, understand HRM trends, determine turnover and its causes, identify and report factors negatively impacting productivity, use HRIS, institute policies/procedures to protect HR information privacy, use LMS, mine LMS data |
| **Knowledge Management** | Understand ways to use crowdsourcing |
| **Operations** | Understand and troubleshoot health and safety issues, investigate accidents, identify workplace violence conditions, monitor drug and alcohol testing programs, protect business security when terminating employees, implement workplace injury/occupational illness procedures, ensure workplace health and safety laws and regulations compliance, facilitate workplace investigation procedures, develop and analyze HR programs that promote individuals’ physical and mental wellbeing |
| **Professional Development** | Understand career opportunities in HRM, understand HRM certifications, identify continuing education course for HRM skills, identify professional HRM associations, maintain professional communications |
| **Strategic Management** | Understand HRM’s role in strategic planning, understand impact of organizational factors on HRM strategies, develop organizational change-management program, facilitate activities to enable strategic management process implementation, evaluate HRM’s contribution to organizational effectiveness, apply environmental scanning techniques to assess strategic-planning processes, apply result of environmental scan to business goals/objectives, evaluate organizational change-management program, align workforce strategies with organization’s objectives |

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

## Business Management: Operations Management

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| --- | --- |
| **Skill Area** | **Brief Description** |
| **Business Law** | Understand the nature of contract suspensions and terminations, issue product/service contracts, understand regulations affecting vendor/supplier bidding process, understand nature of compliance program, develop policies/procedures to comply with regulatory requirements and self-regulatory guidelines, contract evaluation |
| **Communication Skills** | Repurpose content for social media, present results effectively, crisis communication |
| **Customer Relations** | Understand relationship between customer service and sales, process customer orders and returns, use social media to enhance customer post-sales experiences |
| **Emotional Intelligence** | Understand impact of business customs and practices on global trade, understand nature of business customs and practices in each region of the world (e.g., Latin America, South America, Africa, Pacific Rim, Middle East, South Asia, Western Europe, Eastern Europe), lead dispersed teams |
| **Financial Analysis** | Understand nature of managerial cost accounting, understand scope of costs in managerial accounting, understand marginal analysis techniques, understand role of managerial accounting techniques, understand use of variance analysis in accounting, understand the purpose and components of internal accounting controls, maintain internal accounting controls, understand the relationship between operations management and accounting, understand the nature of cost-accounting decision-making, understand the nature of and perform job costing, conduct cost/benefit analysis on planned acquisitions, assess accounting and fraud risk, create and maintain a budget, perform cost-benefit analysis |
| **Information Management** | Use analytical software, understand impact of technology on order processing, understand the nature of UPC barcoding, understand the nature of RFID tags, GIS and related technologies, encoding and encryption, enterprise resource planning |
| **Innovation Management** | Understand nature of product development, understand relationship between innovation and product development, understand ways to align product-development plans with business strategy, understand methods for recognizing innovation opportunities, understand impact of product life cycle on operating decisions, understand use of technology in product-development management, ethics, identify innovation opportunities, determine feasibility of innovation, develop proof of concept, identify champion to push innovation through to fruition, create environment to foster ongoing innovation, manage innovation strategies and processes, innovation in OPS process, vertical understanding of lifecycle, participate in product development and provide inputs for making new products (e.g., platform approaches, reduction of number of parts, ease of manufacturing) |
| **Knowledge Management** | Identify ways to use crowdsourcing; develop knowledge management processes; develop and assess knowledge management strategies; understand relationship among KM, innovation, and talent development; understand nature of records management; understand role of organizational culture in KM implementation; assess KM strategies |
| **Operations** | Business AnalysisUnderstand connection between business analysis and business process management, understand types of business analysis requirementsProperty and Equipment MaintenanceIdentify routine activities to maintain facilities and equipment, conduct safety inspections, monitor and evaluate maintenance program, plan and improve maintenance program~~Purchasing~~ Set-up and Operate Purchasing SystemsCoordinate corporate purchasing activities, develop purchasing guidelines, understand role of solicitations used in purchasing, understand impact of vendor competition on purchasing, understand nature of purchasing methods, understand business objectives/strategies influencing purchasing, understand relationship between purchasing and operations management activities, understand organizational requirements for purchase authorizations, understand priority procedures for purchases, understand budgetary procedures for purchase activityWork CapacityUnderstand nature of capacity planning, understand factors impacting demand, understand types of capacity planning, plan work capacityInventory Management Understand strategies to minimize costs for maintaining inventory, understand types of inventory systems and types of unit inventory control systems, determine inventory shrinkage, maintain and develop inventory-control systemsProduction PlanningUnderstand factors impacting development of master production schedule, create mater production schedule, evaluate effectiveness/efficiency of production schedule, develop operational contingency plansSupply Chain Management ActivitiesUnderstand nature of order cycle time, understand nature of inter-organizational supply chains, understand relationship between supply chain management and operations management, understand supply-chain management strategies, use supply chain measures to evaluate goal achievement, evaluate risk factors and trends affecting supply chain systems, identify supply-chain process improvement opportunities, evaluate supplier performance and compliance, implement supply chain management strategiesOrder FulfillmentUnderstand relationship between customer service and distribution, use an information system for order fulfillment, fulfill orders, analyze capabilities of electronic business systems for order fulfillment, assess order fulfillment processesReceiving and Stock HandlingUnderstand receiving process and associated stock-handling techniques, process incoming merchandise, resolve incoming-shipment problems, establish receiving schedules, attach source and anti-theft tags, maintain evidence of material sources, process returned/damaged product, transfer stock to/from branchesWarehousing and TransportationUnderstand storing considerations, understand nature of warehousing, store inventory, select appropriate storage equipment, plan storage space, understand shipping processes, identify factors considered when selecting best shipping method, understand transportation modes, understand scope of domestic and global transport systems, understand impact of transportation costs, understand trends in international distribution systems, understand nature of channel intermediaries for foreign markets, understand international transportation and delivery systems, develop transportation plans, assess transportation processes, understand nature of reverse logistics, understand impact of import/export requirements on supply chain, manage transportation plans, improve transportation processesFacilities MaintenanceUnderstand nature of facilities management, identify waste management and sustainability opportunities, design sustainability strategies, evaluate real-estate options, develop real-estate master plan, manage renovation projects, manage renovation projects, be able to analyze the effectiveness of business OPSOperational RisksIdentify factors contributing to operational risk, understand nature of operational risk managementBusiness ProcessesDocument and analyze business processes, identify business process problem/issue, define data needs and limitations, identify data acquisition strategies, plan requirements for data analysis, recommend business-process improvementsOperational ControlsUnderstand purpose of operational controls, determine components of operational control procedures, maintain operational controlsProduct PackagingAssess product packaging requirements, review product packaging to improve supply chain efficiency, align product packaging with organizational objectives |
| **Professional Development** | Understand career opportunities and certifications in operations and supply chain management, identify continuing education courses to enhance operations skills, identify professional association opportunities in supply chain management and operations management, use operations- and supply-chain management publications, succession planning, performance plans |
| **Quality Management** | Understand product standards’ issues with global business, understand implications in quality costs, analyze materials and products to achieve quality goals, test product/service quality, calculate quality costs, develop plan/program for quality achievement, determine reliability factors impacting product/service quality, develop continuous-improvement strategies |
| **Risk Management** | Identify operational risk factors with business contracts, develop monitoring programs for restrictive contract requirements, monitor breach of contract of non-performance related to terms and conditions, comply with contract termination provisions, develop plan to resolve breach of contract, manage risk (e.g., global, third-party, credit, enterprise) to protect business’s wellbeing, integrate risk management into business operations, coordinate and evaluate contingency planning |

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

## Finance: Accounting\*

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| --- | --- |
| **Skill Area** | **Brief Description** |
| **Business Law** | Understand financial disclosure regulations and policies, comply with financial reporting and internal control regulations, understand and comply with state regulation of accounting industry |
| **Financial Analysis** | Classify, record, and summarize data to produce financial information (nature of accounting cycle, types of business transactions and business documentation, effects of transactions on accounting equation, chart of accounts preparation, nature of special journals, journalize business transactions, post journal entries to general ledger accounts, prepare trail balance, journalize and post adjusting and closing entries, prepare post-closing balance, identify and correct accounting errors, prepare worksheets); maintain cash controls; perform accounts payable and accounts receivable functions; maintain inventory records, complete payroll procedures, understand long-term assets and methods used to value them; account for long-term assets and liabilities; account for long-term assets and liabilities; account for provisions; develop estimate of provisions; calculate business ratios to evaluate company performance; perform tax accounting functions to lessen clients’ tax burdens; perform accounting functions specific to a partnership and to a corporation; understand and use managerial accounting methods; produce financial reports; understand nature of annual reports; implement internal accounting controls; conduct audits and prepare auditing reports; prepare budget reports; measure cost-effectiveness of expenditures |
| **Information Management** | Use accounting applications and systems, understand nature of Extensible Business Reporting Language (XBRL), preserve automated accounting records; apply statistical data analysis methods, use data analysis software, interpret business data into information for decision-making |
| **Operations** | Understand connection of business analysis and business-process management, understand types of business analysis requirements, document and analyze business processes, define data needs and limitations, identify data acquisition strategies, recommend business-process improvements, interdepartmental deficiencies |
| **Professional Development** | Understand career opportunities in accounting, understand roles and responsibilities of accounting professionals, understand professional designations for accountants, understand services of professional organizations in accounting, understand nature of accounting standards, understand roles and responsibilities of accounting standards- setting bodies, compare GAAP and IFRS, understand levels and types of external financial reporting, understand nature of auditing/attestation standards, continuously revise and reflect upon goals for continuous improvement, understand to whom you are accountable |

\*Note: Pathways were not examined for the Finance Cluster. However, input was provided by the Accounting Panel

# Appendix E—Listing of Futuring Panel Participants by Cluster

**Panel Focus:** Marketing

**Panel Date:** August 18, 2015

|  |  |
| --- | --- |
| Debbie BalchPresident & Chief Executive OfficerElevated InsightsColorado Springs, Colorado | Leigh KahnPresidentKahn ResearchCastle Rock, Colorado |
| Chauncy BjorkVice President of Operations Discovery Research GroupFort Collins, Colorado | Shari MartinPartnerMartin and Associates, LLCColorado Springs, Colorado |
| Sarah BoatzOwnerS.A.R.A. Strategies, Inc.Colorado Springs, Colorado | Margo MaseOwnerOrb MarketingFort Collins, Colorado |
| Robin CaputoChief Marketing OfficerDatavailBroomfield, Colorado | Tammy MonteroPartner and ECollege LeaderThe Partnering GroupBerthoud, Colorado  |
| William CobbFounder and Managing DirectorTargeted Tactics, LLCFort Collings, Colorado | Pamela Norton-ShelpukPresidentActivate, IncDenver, Colorado  |
| Cheryl FarrManaging Director and Chief Brand OfficerSignal.csk Brand PartnersDenver, Colorado | Michael ParnessChief Marketing OfficerOutward HoundCentennial, Colorado |
| Ron Harman KingChief Executive OfficerVanguard Communications GroupDenver, Colorado  | Ryan ShieldsChief Executive Officer and FounderIndaba Group LLCDenver, Colorado |
| Chris HauckPresident of Sales and MarketingLynx Research ConsultingBoulder, Colorado  | Ken VeltenVice President Strategic AllianceBT ConferencingColorado Springs, Colorado |
| Carlos HidalgoChief Executive Officer and PrincipalANNUITASColorado Springs, Colorado | Jules VentreesVice PresidentNPWSteamboat Springs, Colorado |

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

**Panel Focus:** Business Management and Administration

**Panel Date:** August 19, 2015

|  |  |
| --- | --- |
| Kathryn AlbirghtSenior Vice PresidentUS BankDenver, Colorado | Josh ManierFund ManagerIsland View Private Loan Fund, LLPColorado Springs, Colorado |
| Brian AndrewsChief Financial OfficerNOW CFODenver, Colorado | Roger MathisSenior Vice President and ControllerMiller Global Properties, LLCHighlands Ranch, Colorado |
| Loretta BuckmanChief Financial OfficerMountainside Medical Colorado, LLCSuperior, Colorado | Mike SchmidtFounder & Chief Executive OfficerEnsemble Ventures, LLCColorado Springs, Colorado |
| Matt ColemanPresident/Colorado MarketHUB InternationalDenver, Colorado | Robert SchmidtVice PresidentWells FargoColorado Springs, Colorado |
| Chris DauesCertified Public AccountantRubinBrown, LLPDenver, Colorado | Peter ShepardChief Financial OfficerJCR CapitalDenver, Colorado |
| Michael LewisManaging Partner, DenverRubinBrown, LLPDenver, Colorado | Ryan ShirleyPartner-in-ChargeEideBaillyGreenwood Village, Colorado |
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Appendix E—Listing of Futuring Panel Participants by Cluster (cont’d)

**Panel Focus:** Finance

**Panel Date:** August 20, 2015

|  |  |
| --- | --- |
| Nancy BartleyChief Executive OfficerThe Boppy CompanyGolden, Colorado | Diana HutchinsonChief Operating OfficerTrebuchet GroupFort Collins, Colorado |
| Carrie BasseOwnerColorado Cardboard SolutionsColorado Springs, Colorado  | Mike JollyVice PresidentInternational BankTrinidad, Colorado |
| Mike BasseOwnerThe IPI Group, LLCColorado Springs, Colorado | Peter LynchVP Global Operations and TechnologyWestern UnionEnglewood, Colorado |
| Steven CohenChief Executive OfficerMeyvn GlobalDenver, Colorado | Jodie OlinFounder, Owner10 till 2Aurora, Colorado |
| David FisherPresident and Chief Executive OfficerNexus Retail, LLCCentennial, Colorado | Jeff SnyderPresidentJ.A. Snyder & Associates, Inc.Woodland Park, Colorado |
| Al HannaPresidentHanna and Associates, IncColorado Springs, Colorado |  |
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