Using the Information Orientation Maturity Model to Increase the Effectiveness of the Core MBA IS Course

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Executive Summary

Although information systems are an integral part of every modern organization, IS faculty often struggle to show MBA students the value of the core IS course in the MBA curriculum. This is also evidenced by the fact that some business schools do not have an IS course in the core MBA curriculum. MBA courses often use case analyses to provide students opportunities to apply conceptual material. However, written business cases are necessarily simplifications of reality, and therefore lack the richness of live business situations. Projects that require students to engage in some activity with a live organization are another way to provide students the opportunity to apply newly-learned concepts.

This paper describes the use the Information Orientation (IO) Maturity Model as the basis of a MBA course-based project. The IO model explicitly draws the relationship between business performance and several information and technology management concepts. More importantly, the IO Model is accompanied by a specific method of gathering and analyzing data, and includes general recommendations on how to improve the "IO Maturity" of an organization. The IO model posits that the organization that demonstrates effective uses of information (information orientation behaviors and values - IBV), information management (information management practices – IBV), and management of its information technology (information technology practices – ITP) in combination affect organizational performance. Their research indicates that if an organization is "mature" (i.e., effective) in all three of these areas, the organization will experience superior business performance.

The IO model is particularly useful for the project we describe below because of its comprehensiveness in integrating what has heretofore been disparate streams of IT management research. The concepts of the model, coupled with the structure present in the data collection and analysis process, allow students to experience the dynamic environment of a live organization in a manner beneficial to both them and the organization. The students became much more knowledgeable about the IO model and developed a much stronger appreciation of the importance of information management and use. The students also had an opportunity to learn how information and information technology is used in organizations, while having a framework that helped them identify good and bad practices. Finally, the project provided useful insights for many of the participating organizations and helped management identify means of improving business performance. Anonymous student surveys and student

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reflection papers were used to gather information on the value of the project. Both the students and the cooperating organizations found the projects valuable. At the completion of the project, the students had a greater appreciation and understanding of the role of information and technology management in the success of an organization, and simultaneously benefited from observing the management issues in the organization. We plan to continue using this project and expand the use of the Information Orientation Maturity Model in the core MBA course.

Keywords: IT alignment, MBA core course, information culture

Introduction

When *Harvard Business Review* published Nicolas Carr's article, "IT Doesn't Matter," (2003) a debate was launched in which many gallons of ink and reams of paper were consumed. Our purpose here is not to rehash the debate, but to reference its passion in introducing the purpose of this paper. Despite extensive evidence suggesting the valuable contribution that IT can make to enterprise performance (Marchand, Kettinger, & Rollins, 2002; Weill & Ross, 2004) the relative value of information technology and the status of IT professionals in modern business remains contested (Kaarst-Brown, 2005) and the "ineffective business communication with IT" remains a the top inhibitor of effective IT and business alignment (Luftman, Kempaiah, & Nash, 2006, p. 81).

Although information systems are an integral part of every modern organization, IS faculty often struggle to show MBA students the value of the core IS course in the MBA curriculum. This is also evidenced by the fact that some business schools do not have an IS course in the core MBA curriculum. Also, although it was changed in an early revision, the first draft of the new AACSB accreditation standards did not include "information systems" or "information technology" as a core knowledge area for students (Hilton, 2003).

In addition to the probable existence of systemic issues within the business culture discussed by Kaarst-Brown (2005), we suggest that students and, perhaps, some appreciable portion of business school faculty perceive that "there is not much 'there' there" with respect to what is taught in the typical MBA core IT course. However, there has been an abundance of research examining IT management practices and contributions that has resulted in the development of a set of fairly consistent IT management prescriptions (Broadbent & Weill, 1997; Feeny & Willcocks, 1998; Rockart, 2004; Rockart, Earl, & Ross, 1996; Ross, Beath, & Goodhue, 1996; Weill, 2004; Weill & Ross, 2004; Wheeler, Marakas, & Brickely, 2002) published in top management journals and generally reflected in major IT management textbooks (Applegate, Austin, & McFarlan, 2003; Laudon & Laudon, 2003; Luftman, 2004; McNurlin & Sprague, 2004; Turban, McClean, & Wetherbe, 2004).

While these articles and textbooks contain explicit and quite useful IT management knowledge based on theoretical and empirical research, their content is most likely to be of use to experienced professionals possessing a wealth of practical experience. For inexperienced professionals and students, these publications may raise more questions than they answer. A commonly heard question is something to the effect that "If they know all this stuff, how come there are still so many problems [with IT management]?" The problem, as we see it, is that the textbooks very capably provide "know-what" but find it difficult to impossible to adequately convey "know-how." Students lacking a sound experiential framework have a difficult time comprehending the challenges presented in implementing these prescriptions in practice. The pedagogical challenge then, becomes one of providing students with an experiential learning opportunity where they can evaluate their new knowledge in a "real world" environment.

MBA courses often use case analyses to provide students opportunities to apply conceptual material. However, written business cases are necessarily simplifications of reality, and therefore lack

the richness of live business situations. Projects that require students to engage in some activity with a live organization are another way to provide students the opportunity to apply newly-learned concepts. However, live projects present significant risks, in that the students may struggle to successfully recognize and apply concepts if not provided a robust organizing structure to guide their actions.

This paper describes the initial use of the Information Orientation (IO) Maturity Model as the basis of a MBA course-based project intended to assist students to experientially investigate the relationship between business performance and several information and technology management concepts. The remainder of this paper provides a brief introduction to the Information Orientation (IO) Maturity Model (hereafter simply referred to as the IO Model, a description of the initial use of this project assignment in two sections of an MBA course taught by the first author, student feedback concerning the perceived value of the assignment, and a few concluding comments.

Information Orientation Maturity Model

The Information Orientation Maturity Model (IO Model) was developed by a team of researchers from the Institute of Management Development and was funded by Anderson Consulting. The IO model, while generally consistent with concepts and frameworks referenced in scholarly and prescriptive IT management literatures (Boynton, Jacobs, & Zmud, 1992; Broadbent & Weill, 1997; Brown, 1997; Brown & Magill, 1994; Ein-Dor & Segev, 1982; Feeny & Willcocks, 1998; King, 1983; King & Kraemer, 1985; Rockart et al., 1996; Ross et al., 1996; Sambamurthy & Zmud, 1999; Tavakolian, 1989; Weill & Ross, 2004; Zmud, 1984), the IO Model is notable in blending the research models and findings found in three disparate streams of IT research into a coherent, comprehensive and empirically validated model of IT management maturity.

As described by the authors of the IO Model, previous IT management work can be categorized as "under three broad schools of management thinking and practice: (1) the *Behavior and Control* School, (2) the *Information Management* School, and (3) the *Information Technology* or IT School" (Marchand, Kettinger, & Rollins, 2001, p. 4) As broadly conceptualized, the Information Management School emphasizes the explicit life-cycle management of information as organizational resource while the Behavior and Control School, in turn, emphasizes the importance of individual and organizational behaviors and values influencing the use of information within an organizational context. The IT School focuses primarily on the identification and evaluation of effective IT management practices related to the automation of organizational tasks and managerial decision-making while.

While recognizing the significant contributions made to the advancement of IT management thinking, the authors, however, concluded that "each school also demonstrates key weaknesses that make the understanding and integration of the three information capabilities difficult and their links to business performance elusive" (Marchand et al., 2001, p. 4). What makes the model uniquely valuable for application as a pedagogical tool is the linking of these three components together and the model's explicit recognition of their combined effect on business performance.

In essence, the IO model posits that the organization that demonstrates effective uses of information (information orientation behaviors and values - IBV), information management (information management practices – IMP), and management of its information technology (information technology practices – ITP) in combination affect organizational performance. Their research indicates that if an organization is "mature" (i.e., effective) in all three of these areas, the organization will experience superior business performance.

We have identified no specific criticisms of this model in the literature. However, we find that the IO model, as essentially all theoretical models do, represents an abstraction of very complex

organizational realities. Furthermore, is the IO model is stronger in generating "know-what" type knowledge rather than know how. That is, while the IO model provides a comprehensive set of IT and information practices that are associated with superior levels of firm performance, the model does not provide much insight into how managers might ameliorate organizational shortcomings. For example, the IO model does not suggest specific organizational structures or IT governance mechanisms that might be appropriate for overseeing the changes in organization behavior. Nonetheless, we find the IO model particularly useful for the project we describe below because of its comprehensiveness in integrating what has heretofore been disparate streams of IT management research. The following sections briefly describe the components of the IO model and the instrument developed by enterpriseIQ® to measure an organization's information orientation.

Information Behaviors and Values (IBV)

This component relates to an organization's culture with regards to information sharing and use. It includes such concepts as integrity, the use of formal information sources, the effective use of information to control the organization, and the degree of information transparency and sharing. For example, an organization would score high in this dimension if information is used to further organizational goals (rather than personal goals), is shared freely, and employees are encouraged to seek out new information.

Information Management Practices (IMP)

This component refers to an organization's ability to sense, collect, organize, process, and maintain information. For example, an organization that has mature practices in this area would have effective processes in place to gather information about markets, customers, suppliers, and competitors, and would be able to effectively process this information to make decisions.

Information Technology Practices (ITP)

This component refers to an organization's ability to manage the development and maintenance of business applications and IT infrastructure. It is in this area that "IT Management" topics typically fall, including not only the technical issues surrounding architectures and application deployment, but also strategic IS planning and project management.

The combination of these three components determines an organization's information orientation "maturity." Research indicates that the more mature an organization's information orientation, the better that organization performs. However, the model is built on the premise that these three components must all be working in concert to achieve high business performance. Weakness in one area cannot be compensated for by strength in the other areas.

The researchers developed an applied research instrument to test the IO Model and conducted an extensive study, gathering data from 1009 senior managers from 98 companies in 22 countries and 25 industries, validating key components of the model. For more detailed information, we recommend interested readers refer to the authors' more complete description of their model and research activities in the cited literature (Marchand, Kettinger, & Rollins, 2000; Marchand et al., 2001; Marchand et al., 2002).

Measuring Information Orientation Maturity

An organization's IO maturity is assessed by administering a proprietary survey to a cross section of business managers in the organization. The questionnaire asks managers their opinions of various components of the three IO factors (IBV, IMP, ITP). For example, managers are asked how well their organization collects information about customer demand and the organization's ability

to identify employees' information needs (IMP issues). In the area of IBV, managers are for example asked how well organizational members share information and if information about failures and mistakes is used constructively to improve performance. In the area of ITP, managers are asked such things as how well the organization uses IT to support information sharing and to improve the efficiency of business operations.

The analysis of the survey results in scores in each of the three dimensions, which can then be used as feedback to the organization to help identify areas of strengths and weaknesses (See IO Snapshot ™ in Appendix B).

One of the valuable characteristics of the IO model is that it provides business managers with a better understanding of why their investments in IT so often fall short of expectations. When the organization focuses primarily on IT practices, it ignores the equally important issues surrounding information behaviors and values (IBV) and information management practices (IMP). By explicitly expanding their perspective, the IO model helps business managers recognize that they, too, have a role in the effective use of information and information technology, and therefore, on business performance. The IO Model also includes prescriptions for improving an organization's maturity in each area. This helps management develop concrete action plans that will ultimately improve business performance.

Using IO Model in the MBA Core IS Course

As alluded to in the introduction, IS professors face a particular challenge in bringing important IT principles and prescriptions to life for our students. Many IT management prescriptions appear to reflect simple common-sense. Pfeffer and Sutton (2000, p. 54) in their insightful analysis of the apparent knowing-doing gap in modern businesses argue that too many managers, and here we include our students, tend to "confuse ease of understanding with ease of implementation." That is, prescriptions are often much easier to understand than to implement. They argue that real, tacit knowledge is best learned by doing.

Consistent with the conclusions of educational theorists ranging from Dewey (1938) to Kolb (1984) and beyond, Pfeffer and Sutton (2000) conclude that tacit knowledge associated with "know-how" is best learned by doing; "when just reading reports or seeing presentations, people don't learn about the subtle nuances of work methods – the failures, the tasks that were fun, the tasks which were boring, the people who were helpful, and the people who undermined the work" (p. 19).

We have begun to use the IO model explicitly in our core IS MBA course to help students understand the importance of information, and not just information technology, to the organization. Initially, this was done through a series of readings, lectures, and a written case. However, even though the case allowed students to apply the concepts of IO to a business situation, no classroom experience was capable of providing them with the experiential understanding of the concepts.

Consequently, we were looking for a way to get our students involved with applying these concepts in real organizations. Some of our students lack any significant professional work experience, and even some of the part time students (a majority in our program) have limited professional experience. All students benefit from learning more about "how things work" at other organizations. We soon recognized that our students could assist local firms in the application of the IO model. The result was a project that consisted of:

- Student teams introducing the IO concept to client organizations
- Gaining agreement from management to conduct an IO assessment
- Assisting in administration of the survey instrument used for assessment

- Analysis of the results
- Consultation with the client organization to find ways to increase IO maturity.

Conducting the Project

enterpriseIQ® is a consulting firm that conducts IO assessments for organizations. Trained consultants administer an online survey to a cross section of management personnel, analyze the results, develop an "IO Profile" for the firm, help the firm interpret the results, and then provide consulting services to raise the firm's level of IO maturity. Key to the success of this project was the cooperation of enterpriseIQ® which used its facilities to conduct an online survey using a pared-down version of their normal survey.

There were 39 students in two sections of the course. Students formed thirteen three-person groups. Each group worked with a separate organization. The project was broken into the following milestones/deliverables:

1. Find an organization that will provide you access to key management personnel
2. Gain agreement to conduct a survey, and submit names and contact information for individuals selected to complete the survey
3. Ensure individuals complete the survey
4. Draft of major discussion points/recommendations for the organization based on analysis of survey results
5. Conduct a meeting with organization to discuss results of the analysis
6. Report of discussion with organization and proposed action plan
7. Summary of lessons learned (by group) through this project

Milestone 1 – Finding an Organization

Most groups relied upon personal connections to find contacts in local organizations. In some cases, students chose one of the students' employers as the client organization. The organizations ranged greatly in size, structure, and purpose. The clients included such organizations as a multinational semiconductor manufacturer employing several thousand employees, a division of a large federal agency, several credit unions, a private university, a health clinic, and a high-end custom furniture manufacturer, to name a few. To gain cooperation, the students had to give a brief overview of the IO Maturity Model and its potential benefits to the client organization. In most cases, a senior-level manager became the champion for the project and helped gain cooperation in the rest of the organization.

Milestone 2 – Obtaining Contact Information for Survey Respondents

Our goal was not to conduct a full-scale IO maturity assessment for each client. Such an assessment would take the cooperation of dozens of managers. Instead, each organization was asked to identify 5-10 managers from various areas of the business. Because in larger organizations it is possible that IO maturity would vary among business units, the scope was narrowed to include just a single business unit for purposes of the project. It is preferable that respondents be at high enough level in the organization and have been members of the organization long enough that they have well-informed opinions on the topics in question. The questionnaire takes about 15-20 minutes to complete, so the client needed to provide strong support for the project. In larger organizations, this was usually done through an email or memo from the project champion expressing his or her support for the survey.

Milestone 3 – Ensuring Individuals Complete the Survey

Each respondent received an invitation to participate in the survey from enterpriseIQ®, and a reminder email was sent a few days later. However, in some cases, students needed to follow up with the respondent personally to ask them to complete the survey. Using this method, students were able to obtain 118 responses from 131 subjects across the 13 organizations, giving us a response rate of 90%.

Milestone 4 – Understand IO Assessment and Draft Recommendations

Once the IO Snapshot ™ results were returned from enterpriseIQ®, the students developed an understanding of the results so they could make recommendations to the organization (Appendix B contains sample output). This was a critical part of the project, as it was here that the students developed a much deeper understanding of the IO model. Because the students knew they were going to have to explain the issues to the client organization, they wanted to make sure they understood the concepts themselves. The students also had to understand how to improve the various issues related to IO in the context of the client organization. In some cases, students had preliminary meetings with management to explore what the results meant before they proceeded to their more formal meeting with client.

Milestone 5 – Meet with Client to Discuss Results and Recommendations

This milestone required the students to formally present the results of the analysis and their recommendations to client management. In some cases, the participants in this meeting included personnel who were not part of either the survey or other meetings with the students. This meant that the student teams had to develop a concise explanation of the IO Maturity Model before explaining their recommendations. Rather than simply presenting their findings, however, the student teams found themselves in a lively discussion with client management about both the results of the analysis and the recommendations. Many of the organizations found the IO model to be a great tool to spark discussion about organizational culture and processes related to information use and management. Students found their participation in these discussions was an excellent learning experience, as they developed a much better sense of how information can be effectively (or ineffectively) used in an organizational setting.

Milestone 6 – Summary of Meeting and Action Plan

After meeting with the client, the student teams wrote a short summary of the meeting, including proposed actions and questions yet to be answered. They delivered a very brief version to the client and a more detailed version to the course instructor.

Milestone 7 – Reflection on Lessons Learned

Individual students were asked to reflect on such things as how well the project helped them understand the role of information use in an organization, the perceived value to the client, and possible improvements to the structure of the project (See Appendix A for specific questions).

Emergent Issues and "Teaching Moments"

This project provided several unique opportunities to point out important issues that emerged as data was collected and analyzed. For example, the client organizations chose which employees would complete the surveys. This provided an opportunity for us to discuss several issues in class, including possible sample bias and the differing perspectives that organizational members

might have depending on their position in the firm. As the data was analyzed, the students recognized that diversity of responses was highly correlated with the heterogeneity of the respondents, which then led to a discussion of what might be the "true" information orientation of the firm.

A particularly interesting situation arose with one team that was working with a client firm that scored quite low on "Information Behaviors and Values." When the student team discussed the findings with the client, they discovered that the lack of information sharing may have been rooted in the way that employee evaluations were conducted. The organization had a policy of ranking all employees in a department and then eliminating the lowest-ranked 10% on an annual basis. This had a chilling effect on sharing any information that might be perceived as an admission of a mistake. Additionally, the competitive nature of the ranking system led employees to withhold information in the hopes of gaining personal advantage over co-workers. A very lively discussion of the unintended effects of this personnel policy occurred during class and it helped students understand how information use can be governed by factors completely unrelated to technology. "Teaching moments" such as this are able to emerge in real-world projects such as this in ways that cannot be reproduced through standard business case analyses.

Benefits of the Project

The net result was that the students became much more knowledgeable about the IO model and developed a much stronger appreciation of the importance of information management and use. The students also had an opportunity to learn how information and information technology is used in organizations, while having a framework that helped them identify good and bad practices. Finally, the project also provided useful insights for many of the participating organizations and helped management identify means of improving business performance.

Feedback on the project was gathered from the students in two ways: Through an anonymous survey and through a non-anonymous reflective narrative. Feedback through both methods was very positive.

Anonymous Responses

Thirty three out of 35 students in the class responded to the anonymous survey. Students were asked to choose a response on a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Table 1 is a summary of their responses:

Table 1: Student responses

Question	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Knowledge and use of the Information Orientation framework will help make me a better manager.	17 (53%)	15 (47%)	-	-	-
The Information Orientation project was a good way to learn more about the IO framework.	26 (81%)	6 (19%)	-	-	-
Overall, the project was a good learning experience for me.	21 (66%)	11 (34%)	-	-	-
The IO Project was valuable for the organization my group worked with.	12 (37%)	15 (47%)	3 (9%)	2 (6%)	

Students also made anonymous comments in the survey. The vast majority were very positive, although some felt that their client organization did not receive great benefits from the project. Some examples:

- It is a good project that allows for the real life implementation of concepts being learned in class.
- Very good way to learn about IO. I was pretty confused about IO until we got into the project.
- The IO project forced me to really study the IO framework and so that I could explain it to our company.
- I do feel the project was very useful in helping me learn how IO and how information can be used in a business to make it better. It will help me in the future.
- It really was a great way to ensure that we learned the IO framework. And the part that I valued the most was working with a REAL company, with REAL concerns and presenting to them. It is excellent practice and experience for the future! And because no one wants to look bad, it gets the best out of the students, I think.
- I enjoyed the IO project. It helped me understand how information flows through a company and the effect it can have on performance. I look at information systems in a new way.
- It was difficult to make suggestions to a company who is doing well.
- I think the key is finding an organization that will be able to use the information. Many organizations may be willing to participate but that does not mean that they will benefit from the experience.

Students also wrote a "reflection paper" on the project at the end of the term. Some example comments:

- A lot of times, different levels of an organization (different levels of hierarchy within the organization and individuals' different levels of IO understanding) have different impressions of how information is viewed, transferred, shared, interpreted, etc.
- Businesses really can benefit from increased transparency & sharing of information. Employees feel more valued and more "in the loop" when they have information. Businesses can run more efficiently when all people who need or would benefit from information can have it without major searches.
- …one thing that sticks in my mind that was a new realization based on learning about IO is that although companies spend huge amounts of money on IT, unless it is used properly and if it will not add value. Additionally, if it is implemented in a company that has a poor culture, full benefit cannot be attained.
- It is not technology, in and of itself, that provides value to a business, but rather the "use" of information derived through technology.
- I was pleasantly surprised to find that hardware, software and networks were only a part of managing IT. The IO framework helped me see the importance of culture, management practices and the actual IT.

Improvements and Future Plans

We are currently redesigning the core MBA IS course to place more emphasis on the Information Orientation Maturity Model. Based on the feedback from the students, the model helps them understand the linkages between many of the concepts typically taught in such a course: IT and business alignment, managing information as an organizational resource, and the effective management of IT processes. For the project, there are several additional improvements planned:

1) Criteria to select participating organizations. Some of the organizations that participated in the project did not put in adequate effort to receive benefit from the information provided during the course of the project. Feedback from the students suggests that one should:
   a) Pick an organization that is locally-based so that meetings with the organization can be done at a management level where corrective actions can be implemented. Local management needs to be able to make changes.
   b) Pick an organization that likely needs improvement in this area. One company involved in the project had recently won the Shingo Award for Manufacturing Excellence and was in the process of completing an application for the Baldridge Award. This organization had already thought through many of the information sharing issues raised by the IO model and did not find as much value in the project.
   c) Avoid not-for-profits until a different version of the survey is developed.
   d) Select an organization that is large enough to have IO issues, but is not so large that you don't have adequate access to executive management.
2) Clearly communicate with management in the organization so they formally commit to the project and understand the value of what they're getting.
3) Expand the number of meetings with the organization to better explain the output to the organization.

Conclusion

In summary, the first attempt at this project was quite successful. It helped the students understand the relationships among information management practices, IT practices, and the "culture" of information sharing and use in an organization. The project provided an excellent opportunity for MBA students to interact with practicing business managers, which was itself beneficial for many of the less-experienced students. In addition, the structure of the IO Maturity Model and the invaluable assistance provided by enterpriseIQ® allowed the students to provide valuable insights and advice to the client organizations. We plan to continue using this project and expand the use of the Information Orientation Maturity Model in the core MBA course.

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Appendix A: Information Orientation Project Student Reflection Questions

This is an individual assignment (you will each turn in a response).

Please take the time to thoughtfully compose your answers to the following questions. Please answer each question individually.

Personal Experiences with the IO Project

1. List, prioritize, and explain the things you learned from the IO project.
2. Did this project help you better understand the concepts of the IO framework? What other ways could you have gained this understanding that would have been more effective?
3. What was most the most challenging aspect of this project?
4. What was the most valuable aspect of this project?
5. What was the least valuable aspect of this project?
6. What advice would you give to students that are going to do a project like this in the future?
7. What training and education could have better prepared you to participate in this project?
8. How might this project be structured to make it more valuable to you and to the participating organization?
9. What is the maximum number of students that you think can work as part of a single team on a project like this and still have each individual get value out of it?

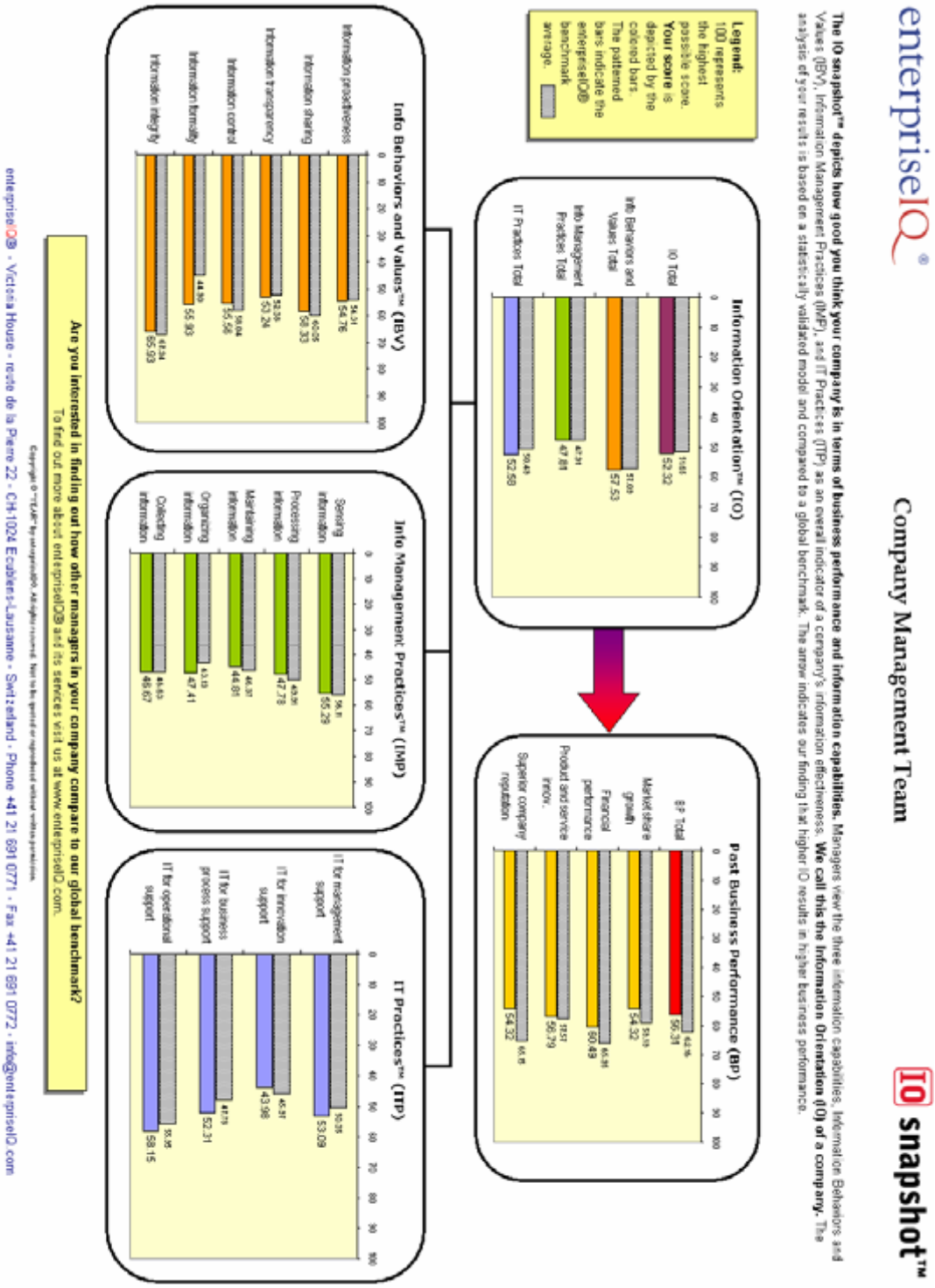
IO Framework

10. Should the IO concepts be emphasized more in this class?
11. Do you find the framework useful to helping understand the role of information and information management in an organization?
12. If there are parts of the IO framework that you don't feel you understand, what are they?

Value to the Organization

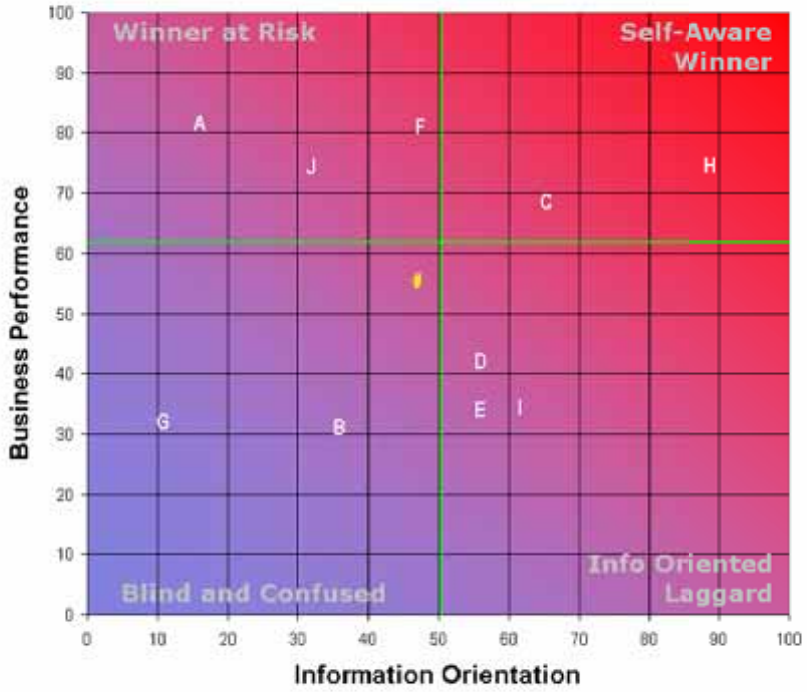
13. Overall, do you feel that the organization that you worked with found value in the project? If so, please try to articulate that value.
14. How relevant/valuable do you think the IO framework was for the organization? If it was not valuable, why not?

Appendix B: IO Snapshot Sample Results



IO benchmark plot™

Company Management Team relative to the enterpriseIQ benchmark



Self-Aware Winner
Practices Information Orientation to drive high performance

Winner at Risk
Delivers good performance now, but lower IO may prevent continued success

Info Oriented Laggard
Understands Information Orientation, but suffers fundamental weaknesses

Blind and Confused
Major business change required/needed

Median

0 and 100 represent the minimum and maximum values of the benchmark

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Biographies

Kregg Aytes has been a member of the Computer Information Systems faculty at Idaho State University since 1993. He completed his Ph.D. at the University of Arizona in that same year. Kregg teaches graduate and undergraduate courses in CIS, and has been department chair since 2000. He research interests include information security and collaborative technologies. He also has a strong love of teaching and is interested in the application of IS content and skills across the business school curriculum.

John C. Beachboard joined the Computer Information Systems faculty at Idaho State University in 2001. He completed the Ph.D. in Information Transfer and the M.S. in Information Resources Management at the School of Information Studies, Syracuse University. He holds an M.S. in Business Administration from Boston University and a B.S. in Public Administration from the University of Arizona. Dr. Beachboard has taught graduate courses in research methods, project management, and IT use in business, and undergraduate courses in IT management and systems architectures. He has held staff and management positions developing, implementing and operating information and telecommunications systems for the Department of Defense. He is keenly interested in the development, application and effectiveness of information technology management policies in the private and public sectors.