

VII. APPENDICES

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APPENDIX A

THE MANAGEMENT INFORMATION SYSTEM AND PMU'S INFORMATION TECHNOLOGY GOALS

Using this document: The information in this Appendix is intended for distribution to prospective vendors as background for understanding the environment in which the university Management Information System (MIS) will be used.

Summary of content: Appendix A describes how the university MIS will allow the university to meet its Information Technology goals. The university MIS will be mission-critical for the university.

THE MANAGEMENT INFORMATION SYSTEM AND PMU'S IT GOALS

A. VISION

Prince Mohammad Bin Fahd University (PMU) will be renowned for the pervasive, ubiquitous use of state-of-the-art information technologies that enable the PMU's learning-centered environment. The PMU will be synonymous with and identified as the leading IT-based institution in the international region.

The university's Management Information System (MIS) will be a critical component of the IT infrastructure that will allow PMU to achieve this IT vision. PMU's customers – its students – will directly interact with the MIS through self-service functions such as registration capabilities in the Student Information System. PMU's faculty and staff also will use self-service functions through the Human Resources and Finance systems.

This vision is supported by underlying values and principles:

- The MIS will serve the mission of the university.
- To the extent possible, IT will preserve Saudi values.
- The university MIS will be convenient, high-quality, and user-friendly.
- The university MIS will not consume an inappropriate portion of the PMU's budget.

The ultimate goal of the university's vision for its MIS technology is to make it possible for the PMU to create a state-of-the-art administrative and academic IT infrastructure that will provide the highest quality of services to students, faculty, and staff.

B. GOALS

The PMU will direct its efforts toward a number of targeted goals, each of which will bring the university closer to achieving its mission and realizing its vision.

- Respect and advance Saudi cultural values in a changing learning environment.
- Provide students with the superior technology infrastructure that will equip them with the technology skills to function in the current and emerging working environments.
- Provide faculty with the superior technology infrastructure that enables them to excel in the delivery of effective instruction.

- Provide administrators with a cost effective, flexible, reliable, and secure IT environment that meets the business needs of the university.
- Provide technology tools to facilitate effective student support services.
- Provide an IT governance structure that includes university faculty, students, and staff as well as industry in a collaborative environment.

Regardless of whether they are directed toward administrators, faculty, students, or the university community as a whole, each of these goals contains elements that will assist students in developing designated competencies that will be characteristic of PMU graduates:

- **Communication:** the ability to communicate effectively in both English and Arabic in professional and social situations.
- **Technological Competence:** the ability to use modern technologies to acquire information, communicate, solve problems, and produce intended results.
- **Critical Thinking and Problem Solving:** the ability to reason logically and creatively to make informed and responsible decisions and achieve intended goals.
- **Professional Competence:** the ability to perform professional responsibilities effectively in both local and international contexts.
- **Teamwork:** the ability to work effectively with others to accomplish tasks and achieve group goals.
- **Leadership:** the ability to be informed, effective, and responsible leaders in family, community, and the Kingdom.

The university MIS will be a vital part of the IT infrastructure that allows the PMU to meet these goals.

C. STRATEGIES

For each of its broad IT goals, the university will accomplish a number of strategies by deploying a state-of-the-art university MIS.

GOAL 1: Respect and advance Saudi cultural values in a changing learning environment.

Core values of the Saudi culture, built around Islamic traditions and beliefs, will be respected in the design and deployment of the PMU's university MIS. Separation of the genders will be facilitated by the university MIS since students, faculty, and staff will be able to perform self-service functions without personal interaction. The university MIS will support both English and Arabic languages.

Strategies for achieving Goal 1:

1. Gender separation – *Utilize information technology to support gender separation.*
2. Islamic and local cultural values – *Support bilingual language needs as appropriate.*

GOAL 2: Provide students with a superior technology infrastructure that will equip them with the technology skills to function in current and emerging work environments.

The university MIS will be integrated with the PMU learning environment. The university community will have anytime, anywhere access to the university MIS, which will be Web-based with secure remote access.

Strategies for achieving Goal 2:

3. Infrastructure – *Provide ubiquitous wired and wireless access to the university MIS*
4. Software – *Integrate the university MIS with the learning environment including the course management system.*
5. Software – *Provide current releases of the university MIS to ensure that the university community receives state-of-the-art services.*
6. Software – *Provide a Web-based environment that enables authorization and authentication services and that provides access to the university MIS.*
7. Support – *Provide frequent training on the use of the university MIS.*
8. Support – *Provide helpdesk services that allow efficient self-help as well as access to live assistance for customers of the MIS.*
9. Security – *Provide the necessary secure connections to access the university MIS remotely.*

GOAL 3: Provide faculty with the superior technology infrastructure that enables them to excel in the delivery of effective instruction.

The core infrastructure of the PMU will be designed in a fashion that allows the technology to support the instructional applications and information resources required by faculty. The university MIS will facilitate the use of the IT infrastructure by faculty to provide services to students.

Strategies for achieving Goal 3:

10. Software – *Allow faculty to provide high-quality academic advising services to students.*
11. Software – *Provide a Web-based environment that enables authorization and authentication services and provides access to indicated administrative systems, faculty service, the library, and the CMS via the university MIS portal.*

GOAL 4: Provide administrators with a cost effective, flexible, reliable, and secure IT environment that meets the business needs of the university.

The PMU core infrastructure will be designed in a fashion that allows the technology to support the applications required by faculty, staff, and students for the near future, in spite of unavoidable uncertainties. These uncertainties lie in not knowing which applications will be needed, how much bandwidth and computing power will be required, and how rapidly advances in technology will create obsolescence. The following strategies will result in the cost-effectiveness, flexibility, reliability, and security that the PMU requires:

Strategies for achieving Goal 4:

12. Cost-Effectiveness – *Take advantage of economies of scale via standardization of hardware, software, and infrastructure components of the university information system.*
13. Cost-Effectiveness – *Leverage site licenses where applicable. For example, database license.*
14. Cost-Effectiveness – *Centralize support where possible through central information systems that are a common platform university-wide..*
15. Cost-Effectiveness – *Leverage vendor agreements to realize savings on hardware cost.*
16. Cost-Effectiveness – *Provide reporting tools for effective executive management decisions.*
17. Cost-Effectiveness – *Facilitate relations with local industry that may assist in the deployment and support of the university MIS.*
18. Flexibility – *Use open source and/or open standards as appropriate.*

19. Reliability – *Provide redundancy for critical infrastructure and hardware components of the university MIS.*
20. Reliability – *Invest in comprehensive, premium service level agreements to support the university MIS.*
21. Reliability – *Provide data protection strategies including backup and recovery methods, mirroring, offsite data storage, and physical security to ensure a highly reliable the university MIS.*

GOAL 5: Provide technology tools to facilitate effective student support services.

Information technology can serve both to improve the efficiency of the PMU's student services through such means as self-service via Web interfaces and to create an environment in which students learn about the PMU, develop an affinity with university values, and communicate with support staff.

Strategies for achieving Goal 5:

22. Student Support – *Create effective Web strategies, including the uses of MIS recruitment capabilities, to communicate and market the university to both internal and external audiences.*
23. Student Support – *Provide high quality services to students using the university MIS.*
24. Student Support – *Collaborate with other departments to deliver their student support services online, including academic advising, registration, degree audit, class schedules, campus calendar, housing information, online payments, bookstore, etc.*

GOAL 6: Provide an IT governance structure that includes university faculty, students, and staff, as well as industry in a collaborative environment.

Information technology at the PMU will be designed to serve the needs of faculty, students, and staff. Without effective communications with those constituencies, IT cannot know the needs of each group. Also, it is important that each of these various groups feels able to meaningfully participate in decision-making about the strategies and goals of IT on campus.

Strategies for achieving Goal 6:

25. Governance – *Create university MIS governance councils with membership from all major constituencies on campus.*

26. Governance – *Create a set of operating policies for the management and use of the university MIS*

27. Organizational Structure – *Create a centralized structure headed by the CIO who will oversee the university MIS team*

28. Staffing – *Create a recruitment and retention strategy that attracts highly qualified employees to the university MIS team.*

29. Staffing – *Create a high level of training for both the university MIS team and the university community that are customers of the university MIS.*

APPENDIX B
OVERVIEW: PRINCE MOHAMMAD BIN FAHD
UNIVERSITY

Using this document: The information in this Appendix is intended for distribution to prospective vendors as background for understanding the environment in which the library information system will be used.

Summary of Content: Appendix B describes the defining characteristics of Prince Mohammad Bin Fahd University, as described in the reports *Defining Characteristics and Critical Path* and *Undergraduate Core Curriculum Design*.

OVERVIEW: PRINCE MOHAMMAD BIN FAHD UNIVERSITY

VISION AND MISSION

The continuing rapid development of Saudi Arabia and the growth of various new sectors of the Kingdom's economy calls for the substantial number of graduates capable of leadership in diverse fields of business, engineering, information technology, culture, education, community development and public administration. New universities will be among the potential contributors to ensuring that the Kingdom has the necessary manpower with the appropriate competencies (skills, knowledge, attitude), technical knowledge and foresight to rise to the challenges ahead.

The initiative to establish the University has been taken by a group of renowned individuals under the auspices of HRH Prince Mohammad Bin Fahd Bin Abdulaziz.

The proposed commencement of the first year of operation is September 2006.

A. VISION

The vision of the founders for the university is to be a unique and distinguished higher education institution that participates in:

- Preparing future leaders in various fields of human knowledge and its application.
- Enriching and developing intelligence.
- Exploring innovative methodologies and technologies to achieve its objectives.
- Breaking the barrier between academic and business society.

B. MISSION

The university mission is to achieve the following objectives:

- Contribute to advancement of human intelligence and promulgation and development of knowledge.
- Prepare specialized candidates in various fields of human knowledge through utilizing modern technologies in the education process.
- Transform the graduate to play a pioneering and leading role in the community, enabling him or her to take responsibilities and contribute to solving problems through innovative thinking, collective work, reflection and self-development.
- Link academic programs and specializations with actual requirements of the surrounding work environment. This is undertaken by maintaining effective participation and cooperation between the University and local business firms.

- Guide research activities to create solutions for persistent problems in surrounding communities, through applied research and technical consultation. The importance of performing basic scientific research for enriching human intelligence should not be neglected.
- Provide community service through continuous training and education.

DEFINING CHARACTERISTICS

A. LOCATION AND ORGANIZATION

- **Location:** The new private university will be located in the vicinity of Al-Khobar area in the Eastern Province of the Kingdom of Saudi Arabia (KSA). The area of the Dammam-Dhahran-Al-Khobar triangle has undergone a dramatic transformation in recent years, developing into a booming industrial region. The intended university location is just 100 Km away from the Jubail Industrial City, which is one of the two new industrial cities recently built in the Kingdom.
- **Legal Status:** The PMU will be a private university licensed by the Ministry of Higher Education and subject to the regulations of the Ministry that pertain to privately operated post-secondary educational institutions in the KSA.
- **Financial Status:** The land for the PMU has been donated by HRH Prince Mohammad, and the facility costs and initial operating capital will be provided by a group of private investors. The operating costs of the university will be supported by tuition charged to the students and by revenues generated by commercially operated services such as continuing education and research and development on the campus.
- **Institutional Governance:** The PMU will be governed by a Board of Trustees and a University Council according to the regulations of the Ministry of Higher Education regarding the governance of private post-secondary institutions.

B. STUDENTS

- **Source of Students:** The PMU will admit students according to the Saudi Arabian governing rules and regulations of higher education without regard to nationality, geographical origin, or religion who can meet the competitive admission standards and pay the required fees. Most students will be secondary school graduates from the Eastern Province of the KSA studying for the first university degree.
- **Student Genders:** The PMU will admit both male and female students; however, the campus will be divided into areas that will maintain gender separation.

- Admission Standards: The PMU will maintain highly competitive admissions standards as measured by an admissions examination and an interview.
- Size and Composition of Student Body: The PMU will have a maximum total enrollment of 5,550 students with 1,110 in a non-credit, preparation year program and 4,440 enrolled in four-year degree programs

C. LEARNING DISTINCTIONS

Graduate Competency Profile: The PMU is committed to preparing high quality graduates for employment in high demand fields in the Eastern Province. Recognizing that success in the world depends not only on knowledge of a specific academic discipline, but also on a broader set of skills and abilities, the PMU has designated six learning outcomes that each graduate must master. The six PMU learning outcomes are:

- Communication.
- Technological Competence
- Critical Thinking and Problem Solving
- Professional Competence
- Teamwork
- Leadership

Information Technology Emphasis: A distinctive characteristic of the PMU will be its emphasis on the utilization of information technology resources throughout the institution, in all academic programs and courses, and in the management of the PMU. The library information system will play a significant role in creating the university's technology environment.

D. ACADEMIC DEGREE PROGRAMS

- Academic Program Structure: The structure of PMU academic programs will follow the North American model that utilizes a common academic core curriculum that forms a common basis for all degree programs, and individual degree majors that provide the academic specialization and the name of the degree awarded.
- Language of Instruction: English will be the language of instruction in all degree programs and courses except those devoted to the study of the Arabic Language and Islamic Studies.
- Preparation Year Program: In order to meet the high admissions standards for the degree programs, the PMU will offer a one-year, non-credit year of study for students who need additional preparation in the English language, mathematics, and learning skills.

- Undergraduate Degree Programs: The initial academic degree programs to be offered to male and/or female students by the PMU will be organized into three colleges as demonstrated by the following table:

Organization Unit / Degree Program		Male Enrollment	Female Enrollment
Preparation Year		600	510
College of Engineering			
	B.S. in Electrical Engineering	320	
	B.S. in Mechanical Engineering	320	
	B.S. in Civic Engineering	280	
	B.S. in Interior Design		380
	Engineering Sub-Total	920	380
College of Information Technology			
	B.S. in Information Technology	320	320
	B.S. in Computer Science	320	240
	B.S. in Computer Engineering	120	120
	Information Technology Sub-Total	760	680
College of Business Administration			
	B.S. in Accounting	160	200
	B.S. in Business Administration	240	260
	B.S. in Finance	160	220
	B.S. in Management Information Systems	160	300
	Executive Masters in Business Administration	*	*
	Business Administration Sub-Total	720	980
PMU Total		3,000	2,550

- Graduate Degree Program: The initial graduate program to be offered by PMU to both male and female students will be an Executive Masters in Business Administration. This degree will be offered on a part-time basis.

**The Executive MBA is a part-time program open to both males and females. Enrollment estimates are not included in the planned campus size.*

- **Learning Modes:** Consistent with the commitment to developing student learning outcomes and competencies, the PMU will emphasize “student oriented” teaching and learning methodologies throughout all academic programs.
- **Learning Resources Center:** The PMU Learning Resources Center will encompass more than a traditional library. Consistent with the emphasis on information technology, the PMU LRC will offer extensive access to electronic based resources. In support of student independent learning strategies, the facility will also provide spaces for students to collaborate in teams on group projects, or to meet with faculty and staff for tutorials and/or small group activities.
- **Professional Development Center:** The PMU will include a center for the training and support of faculty and professional staff such as librarians in their efforts to incorporate the latest teaching technologies into the curriculum and their programs.

E. RESEARCH AND COMMUNITY SERVICE

- **Instruction and Research Emphasis:** The initial focus of the PMU will be placed on the development of high quality instructional programs. However, the academic programs plans also will emphasize maintaining excellence as a teaching institution along with a strong program of research and service activities.
- **Continuing Education:** PMU incorporates into its purpose an extension and public service component to provide life-long learning opportunities such as continuing education, extension education, outreach or public and community service programs.
- **Center for Research Development and Continuing Education:** The PMU will staff a center for the purpose of supporting research and services activities, and for the delivery of instructional services to clients and learners off-campus.

APPENDIX C – MIS STAFF ORGANIZATION CHART

Using this document: The information in this Appendix is intended for use in the hiring process for staff members in the Management Information System (MIS) group.

Summary of content: This appendix contains an organizational chart that graphically illustrates the structure and reporting chain of the MIS group within the university's IT organization.

MIS Organizational Chart

