

**DR. AYMEN A. KAYAL**  
**Operations and Technology Management**

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Seasoned professional with leadership experience in government, education, R&D, and industrial organizations. I possess strong abilities and skills that enable me to lead the operations and technology development in various industrial organizations to help them achieve higher levels of competitiveness.

**AREA OF EXPERTISE**

Management of Technology & Innovation \* Industrial & Technology Parks \* Industrialization Policy & Strategies \* Technology Transfer \* Management of R&D \* Patents and Intellectual Property Rights \* Operations/Production Management \* Process analyses and optimization \* Quality Control \* Supply Chain Management.

**EDUCATION**

- Doctorate of Science in Engineering Management (Specialization in Technology Management), School of Engineering, George Washington University, Washington DC, January 1997.
- Master of Industrial Engineering, College of Engineering, Lamar University, Beaumont TX, 1992.
- B.S. Industrial Engineering, College of Engineering, Lamar University, Beaumont TX., 1990.

**ACADEMIC WORK EXPERIENCE**

**Associate Professor. 10/2007 - current.**

*MANAGEMENT & MARKETING DEPARTMENT, COLLEGE OF INDUSTRIAL MANAGEMENT  
KING FAHD UNIVERSITY OF PETROLEUM & MINERALS (KFUPM), Dhahran, Saudi Arabia.*

As a faculty member in the College of Industrial Management, I teach courses in Supply Chain Management, and Operations Management at graduate and undergraduate levels.

**Assistant Professor. 5/5/1997 – 10/2007.**

*MANAGEMENT & MARKETING DEPARTMENT, COLLEGE OF INDUSTRIAL MANAGEMENT  
KING FAHD UNIVERSITY OF PETROLEUM & MINERALS (KFUPM), Dhahran, Saudi Arabia.*

As a faculty member in the College of Industrial Management, I taught courses in Statistics for Management, Materials Management, and Operations Management at undergraduate levels.

**PROFESSIONAL WORK EXPERIENCE**

**Chairman, Management & Marketing Department 10/2015 - Currently**

*COLLEGE OF INDUSTRIAL MANAGEMENT  
KING FAHD UNIVERSITY OF PETROLEUM & MINERALS (KFUPM), Dhahran, Saudi Arabia.*

**Assistant Dean. 9/2008- 10/2015.**

*COLLEGE OF INDUSTRIAL MANAGEMENT  
KING FAHD UNIVERSITY OF PETROLEUM & MINERALS (KFUPM), Dhahran, Saudi Arabia.*

In charge of Graduate Programs (MBA and Executive-MBA) in the college. Under my administration, the MBA and EMBA programs in my college were ranked #1 in both QS and Eduniversal rankings in the MENA and Eurasia regions.

**Deputy Director General for Technology Zones. 9/2003 – 8/2006.**

*SAUDI ORGANIZATION FOR INDUSTRIAL ESTATES & TECHNOLOGY ZONES (SOIETZ), Riyadh Saudi Arabia*  
SOIETZ is a Saudi Arabian authority charged with regulating the development and operation of industrial estates and technology zones in KSA. As a deputy director I was in charge of establishing technology zones in Saudi Arabia. I set strategic plans and conducted/commissioned all studies and work needed for the development and operation of

technology zones in KSA. During my work in SOIETZ I tendered and managed a first of a kind project for developing and operating a technology zone as a BOT project on government owned lands. Another major project I was heavily involved in was land rezoning and licensing of the first technology zone in Saudi Arabia to be developed by the Public Pension Agency in Riyadh. Furthermore, I facilitated the start of three technology incubators on SOIETZ' industrial estates in Jeddah, Riyadh, and Dammam, to be undertaken by the Chambers of Commerce in these cities. My work in SOIETZ gave me hands on experience in developing and evaluating: procedures, guidelines, RFPs, pre-qualification, and projects for industrial and technology parks. I was also heavily involved in the management of all SOIETZ projects.

### **Manager, Research & Innovation Support Office (RISO). 9/2002- 9/2003.**

*THE RESEARCH INSTITUTE (RI)*

*KING FAHD UNIVERSITY FOR PETROLEUM & MINERALS (KFUPM). Dhahran, Saudi Arabia.*

RISO is the central office that coordinates contract research between KFUPM research centers and all external clients. RISO is also in charge of processing KFUPM patent applications. My role in RISO was to make sure that all services are offered in an efficient and professional manner. During my work in RISO I was handling research results and contracts worth 50 Million SR with local and international organizations; I also processed many patent applications for KFUPM.

### **Research Engineer. 17/12/1991 - 5/5/1997**

*THE RESEARCH INSTITUTE*

*KING FAHD UNIVERSITY OF PETROLEUM & MINERALS (KFUPM), Dhahran, Saudi Arabia.*

During my employment in the Research Institute (RI) as a research engineer, I was sent to complete my masters and doctorate degrees in the USA. Between degrees, I was assigned small projects that involved analyzing and evaluating different projects that dealt with development and transfer of technologies from the various KFUPM divisions and colleges to the local industry. Furthermore, I was involved in the development of a new mechanism for handling projects in the Development and Manufacturing Center of the RI.

### **Head of Quality Control and Inspection. 11/90 - 11/91.**

*TEXAS THERMOWELL, INC., Silsbee, TX., USA.*

In Texas Thermowell I managed, evaluated, and trained inspectors in my division. Since joining the company, I worked closely with the production manager to improve the quality of the final products. As a result, we succeeded in reducing the number of defects from over 20% to less than 8% by implementing statistical quality control techniques.

### **Summer Engineer 1990.**

*MOBIL CHEMICAL CO. O/A PLANT, Beaumont, TX., USA.*

I received hands on training in the laboratory, production, safety, and maintenance departments. My major project in Mobil Chemical Company was in quality control. Using laboratory data from spreadsheets and a quality control software package, I statistically analyzed the percent purity of all the final products the plant produced. I then pointed out the quality problem areas and recommended solutions to the production manager.

### **Chairman, SSTDT Board of Directors. 2001-2009**

*Saudi Society for Technology Development & Transfer (SSTDT) Dhahran, Saudi Arabia ([www.sstdt.org.sa](http://www.sstdt.org.sa)).*

The Saudi Society for Technology Development & Transfer is a national professional society that was created to promote awareness and enhance professionalism in all matters related to technology development and technology transfer in the Kingdom of Saudi Arabia. I co-founded the society with a colleague from Saudi Aramco and it has grown ever since to become a 500 member strong national authority. As a chairman of this society I was directly involved in initiating and organizing many events such as:

- National Symposiums for Technology Development & Transfer (Dhahran, 2002) and (Riyadh, 2005).
- Technology Road Map Workshop: A Strategic Planning Tool for Industrial R&D (Jeddah, 2004).
- Patenting and Licensing Training Course (Riyadh, 2004).
- Developing National R&D Talents: Symposium and Training Course (Al-Khobar, 12/2007).

All of SSTDT events include world renowned organizations and experts such as: SRI International (USA), KOTEF (S. Korea), Prof., Heinz Goddar (Germany), Dr. Kari Sipila (Finland), IDA (Ireland), John Yang (Malaysia).

## PARTICIPATION IN NATIONAL COMMITTEES

- Member of working group in the Ministry of Planning for developing the National Strategy for Knowledge Based Society in KSA 2012-2013.
- Member of the Strategic Industries committee in the Chamber Of Commerce and Industry–Eastern Region, 2003.
- Member of one of the committees that formulated the National Science & Technology Policy of Saudi Arabia (a project entrusted to KACST), Riyadh, 2004.
- Member of a Committee which reviewed the bylaws of a newly proposed organization "National Science Foundation of Saudi Arabia", Riyadh, 2005-06.
- Member of a steering committee for the Industrial Strategy of Saudi Arabia, Riyadh 2006.
- Member of the Knowledge Based Industries Counsel at the General Investment Authority (SAGIA), Riyadh, 2005-06.
- Member of Al-Aghar Group Think Tank group (www.al-aghar.com) headed by Prince Faisal bin Abdullah Al-Saud, Minister of Education (at the time), which was developing a strategy for the Knowledge Based Economy in KSA, 2007-2009.

## TRAINING

- Trained on Research Management by SRI International, Khobar, 2007.
- Trained on conducting Technology Roadmaps by experts from Korea Industrial Technology Foundation in Jeddah 2003.
- Trained on conducting Competitive Technology Intelligence, Colorado, 2001.
- Trained on forming Technology Licensing Contracts, Amsterdam, 2000.
- Trained on the Classification System and searching methods, of the US patent & Trademark Office, as part of my PhD work, Washington DC.
- I worked on a research project for the National Technology Transfer Center (NTTC) with two other graduate students from the George Washington University during the Fall-1994 semester as part of my PhD work. The research team surveyed more than 300 scientists working for the Ballistic Missile Defense Organization. The team quantitatively evaluated the benefits that BMDO scientists gained from the **technology transfer mechanism** that the NTTC uses in helping them to spin-off promising government owned technologies that they have developed.

## PUBLICATIONS

### **In Refereed Journals:**

- *R&D Intensity: An Empirical Analysis of its Relation to the Structure of the Manufacturing Sector in OECD Countries*. International Journal of Technology Management & Sustainable Development. Vol 15.1. 2016.
- *National Innovation Systems: A Proposed Framework for Developing Countries*. International Journal of Entrepreneurship and Innovation Management. Vol. 8, No. 1, 2008.
- *A New Tool for Identifying Possible Licensees or Infringers of Patents*. Les Nouvelles Journal of The Licensing Executives Society. Volume XXXVI, June 2001.
- *Measuring the Pace of Technological Progress: Implications for Technology Forecasting*. Technological Forecasting and Social Change. 60, 1999.
- *An Empirical Evaluation of the Technology Cycle Time Indicator*. IEEE Transactions on Engineering Management. 46, 2, May 1999.

### **In Conferences:**

- *Analyses of the R&D Intensity Indicator and its Relation to the Industrial Structure of Countries*. The 22nd International Conference on Management of Technology, Porto Alegre, Brazil, 14th of April, 2013.
- *Science & Technology Parks: Objectives, Forms and Functions for the Kingdom of Saudi Arabia*. The International Congress of Institutions of Technological Research. The World Association of Institutions of Technological Research –WAITRO. Brazil, September 8, 2002.
- *Science and Technology Indicators: A Pilot Study for the Kingdom of Saudi Arabia*. Portland International Conference on Management of Engineering and Technology. USA. July 25, 1999.
- *Using a New Patent Based Technology Indicator to Measure the Pace of Technological Progress for Superconductor Technology*. Portland International Conference on Management of Engineering and Technology. USA. July 27, 1997.

## **COSULTATIONS**

I am active in research and consultations on technology management, techno-pole development and operation, patenting, and licensing. Below are some of the consulting projects I conducted.

- I was part of a team commissioned by the Eastern Province Governor to study the operations of King Fahd Causeway and King Fahd International Airport and then propose improvements that reduce waiting time and enhance speed of operations that directly affect travelers. 2013
- Conducted a short course "From Lab to Market" in WEP 2013, KAUST, 2013.
- Member of board and consultant for RPM Inc., a Saudi owned technology based company that is developing a new engine technology in Germany.
- Local Advisor for Arthur D. Little for a government project related to Industrial Cluster Strategy, Jan 2008.
- Consultant for Urban Development Company for Technopolis Projects in KSA, 2007.
- Technology consultant for the Saudi Public Pension Agency for their new Technopolis project "Information Technology & Communication Complex" that is being developed in Riyadh (www.itcc.com.sa/home.htm 2006/2007).
- I was part of an external expert team that developed the Patent and Licensing Policies and Guidelines for King Faisal Specialist Hospital & Research Institute in Riyadh in 2005.
- I was an integral part of the team that developed the Patent and Licensing Policies and Guidelines for KFUPM.
- Member of the KFUPM Science Park Committee from 1999-2003. I worked on the establishment of King Abdullah Science Park in KFUPM, as well as organizing an international workshop on Science & Technology Parks and Incubators in KFUPM during that period.
- I conducted a Patent Analysis consultation job for the R&D center of Nippon Oil Company in Japan during the summer of 1999.
- I conducted a short course titled "Patents and Intellectual Property Rights" SABIC, Riyadh in 1998.

## **FUNDED STUDIES**

- **"Effect and Role of Techno-poles on Sustainable Economic Development"**  
I was the project leader and main author for this study that was funded by the Riyadh Chamber of Commerce & Industry. The study used technology and competitiveness indicators from IMD and Georgia-Tech to compare the economic development, industrialization, and competitiveness of ten of the most innovative countries around the world. The study also investigated the role that techno-poles (technology parks and high-tech industrial parks) played in the development economic growth of these countries. The results of the study were presented in the Riyadh Economic Forum 2005.
- **"A Study of the Saudi Arabian Labor Market"**  
I was the Project Leader and main author for this Contract Research that was funded by the Riyadh Chamber of Commerce & Industry and conducted by KFUPM-RI. The study results were presented in the Riyadh Economic Forum 2003.
- **"Analyses of Liquid Crystal Film Patents of Nippon Oil Company"**  
I conducted a patent analyses study on "Liquid Crystal Film" technologies during a consultation job I performed for Nippon Oil Company in Japan during the summer of 1999.

## **AFFILIATIONS**

- Member of the Licensing Executives Society- Arab Countries.
- Member of the International Association for Management of Technology IAMOT.

## **HOBBIES**

Football \* Basketball \* Tennis \* Fishing

## **PERSONAL DATA**

Date of Birth - 1/25/1965.

Marital Status - Married; Four children.

Nationality – Saudi Arabian

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**REFERENCES AVAILABLE UPON REQUEST**