Saudi Aramco is helping to transition the Kingdom from a resource-based economy to a knowledge-based economy by helping to develop the next generation of highly skilled workers and intellectually curious citizens. The Kingdom’s young demographic adds urgency to our knowledge-economy transition. Saudi Aramco sees a need to embed the critical STEM (science, technology, engineering and math) disciplines while augmenting them with soft skills like creativity and teamwork. Those skill sets will continue to be essential as we look to the next 80 years, which is why Saudi Aramco is investing significantly in training and development initiatives, complemented by cultural initiatives, to help build the Kingdom’s knowledge base for the future.
Saudi Aramco’s legacy of investing in education began in 1940, when Saudi Aramco opened its first school for Saudis. In recent decades, Saudi Arabia has heavily supported improving the educational infrastructure and creating opportunities for higher education. Saudi Aramco dedicates significant resources and project management capacity toward developing an array of programs and institutions aimed at advancing national educational ambitions.

Building a knowledge-based economy begins with supporting education. In 2013, Saudi Aramco continued its long history of supporting education, from childhood education through advanced degrees, particularly in the STEM disciplines.

At the national level, Saudi Aramco is cooperating with the Ministry of Education to boost the quality of education in the Kingdom. In 2013, we signed a memorandum of understanding—the first of its kind between Saudi Aramco and the Ministry—that paves the way for a range of inspiring company initiatives. One example, launched after the agreement, is Saudi Aramco’s Basic Teaching Skills in Math, Science and English Language for Intermediate Teachers Program, which is being delivered in cooperation with the Ministry and The Education Experts Company. It began with a “Connecting Curriculum with Reality” program, which trained 150 math, science and English language teachers over 10 weeks in the Eastern Province. Program modules included philosophy, science and technology curriculum, student-based learning and life-long continued learning.

Saudi Aramco also continued to collaborate with the Ministry of Education and Siemens, Saudi Aramco launched the Siemens Science Discovery Initiative in 2009 to promote science education by sending “discovery kits” to kindergarten and first-grade classrooms in public schools and training teachers on how to use the kits in lessons. The discovery kits include 22 scientific experiments on energy, electricity, environment and health. In 2013, the initiative was expanded to the Western Province where a total of 1,100 discovery kits were delivered to the Ministry of Education, impacting 16,500 children, while 606 teachers...
SAUDI ARABIA IS LIVING OFF THE WEALTH OF ITS RICH LAND — A LAND RICH IN NATURAL RESOURCES FOR SURE, BUT SOME WOULD SAY EVEN RICHER IN HERITAGE, HISTORY AND CULTURE. SAUDI ARABIA’S FUTURE WEALTH MUST BE BASED ON THE IDEAS, TALENTS AND CREATIVITY OF ITS PEOPLE. THE FUTURE ENERGY OF SAUDI ARABIA WILL BE CREATED THROUGH THE CULTIVATION OF A LOVE OF THE ARTS, CULTURE, READING AND EXPOSURE TO THE WONDERS OF THE WORLD, BOTH INSIDE AND OUTSIDE THE KINGDOM.

—FUAD F. AL-THERMAN, DIRECTOR OF THE KING ABDULLAH CENTER FOR WORLD CULTURE.

Volunteer opportunities

2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1,000</td>
</tr>
<tr>
<td>2011</td>
<td>2,000</td>
</tr>
</tbody>
</table>
aimed at transforming Saudi society into a knowledge society. A key attraction this year was the contemporary mobile art exhibit “Pure Colors” from France’s famed Centre Pompidou. For the first time in the Kingdom, 20 modern art masterpieces were displayed, including original works by renowned artists such as Pablo Picasso, Olafur Eliasson and Yves Klein, and brought to life through interactive, volunteer-led small group tours catering to children and adults. Also in 2013, the Live Performance Tent hosted approximately 70 shows, among which was the debut of “1002 Nights,” a collaborative production between the King Abdulaziz Center for World Culture, the Saudi Culture and Arts Society of Dhahran and the National Youth Theatre of Britain. In total, there were more than 362,600 visitors to the program, which could not have taken place without the efforts of 500 volunteers. These volunteers devoted more than 100,000 service hours to the program, representing more than half of the operational capacity needed to bring iThra Knowledge Program to reality.

In addition to leveraging our size and reach to bring cultural events to the Kingdom, Saudi Aramco is using the skills and expertise of its staff to prepare Saudi youth for the knowledge economy. Saudi Aramco’s iExcel programs, designed to improve cognitive skills, build character and hone creative skills, are delivered by specialists and trainers from the company’s Training and Development organization, and draw upon lessons learned by the business in building capabilities over our 80-year history. iExcel consists of three main programs:

- **iExcel “Atamayyaz,” conducted in collaboration with the Ministry of Education at 17 Saudi Aramco-built public schools in the Eastern Province. The program covers a range of topics such as safety, character-building, health, art, English language, recycling and environmental protection. In 2013, more than 3,400 male and female high school students participated in the program.**

- **iExcel “Gifted” program, held in collaboration with King Abdulaziz and His Companions Foundation for Giftedness and Creativity (Mawhiba). The month-long program focuses on maximizing the intellectual capabilities of high-performing students in STEM disciplines, harnessing their abilities to serve community needs, and opening doors for them to explore various academic fields. In 2013, 94 male and 75 female students from public high schools participated.**

- **iExcel Summer A program, offered at Saudi Aramco’s Industrial Training Centers, aims to provide 15–18-year-olds with important life skills. In 2013, around 2,000 high school students participated. Preparing individuals for tomorrow’s jobs, by itself, is insufficient. The proper infrastructure must also exist for those young people to be able to apply their ideas and skills to meet the immense opportunities presented by the knowledge economy. Saudi Aramco took significant steps in 2013 to create new alliances and further develop existing ones that will help move the company and the Kingdom toward becoming a leader in innovation, research and development (R&D), and the application of new technologies and solutions that will be at the heart of a globally competitive and sustainable economy.**

**THE ULTIMATE GOAL OF THE PROGRAM IS TO PROVIDE MALE AND FEMALE PARTICIPANTS WITH THE SKILLS OF A KNOWLEDGE RESEARCHER WHO KEEPS UP WITH THE LATEST DEVELOPMENTS, AS WELL AS TO PREPARE THEM TO MEET THE CHALLENGES AND HAVE THE ABILITY TO DEAL WITH ALL CHANGES UNDER VARIOUS CONDITIONS TO ACHIEVE SCIENTIFIC AND PERSONAL SUCCESS. — OHOUD AL-MULHIM, DEPUTY HEAD OF THE iEXCEL GIRLS PROGRAM**

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**Championing Research and Development**

Saudi Aramco is a strategic partner of KFUPM’s Dhahran Techno Valley (DTV), located adjacent to our headquarters in Dhahran. DTV is creating an R&D hub in Dhahran to bridge the gap between academia and the energy sector. With major companies including Schlumberger, Halliburton, Baker Hughes and Honeywell currently operating in DTV, it is quickly becoming one of the Middle East’s most influential industrial technology nuclei. In 2013, DTV’s Science Park added General Electric to this impressive list. GE established an Innovation Center as a base to work with partners to create local solutions to the Kingdom’s national priorities, such as energy efficiency and sustainable and affordable health care. To access best-in-class talent and strengthen collaboration in addressing technical challenges, Saudi Aramco, through its affiliates, has been establishing international research centers in strategic locations around the world, including Delft in the Netherlands, Aberdeen, Scotland, and Paris in Europe; Cambridge, Houston and Detroit in the U.S.; and Beijing in Asia. All becoming fully operational by 2014, these centers follow the first research center established at King Abdullah University of Science and Technology, which was tasked with undertaking projects relating to robotics, fuel, technology, chemicals, membranes and advanced materials.

**Fostering Innovation at Saudi Aramco**

Within Saudi Aramco, we continue to strengthen and sustain a robust, creative and innovative organizational culture. Our state-of-the-art Idea Management System is paramount to administering our innovation portfolio. The system enables high-quality ideas, improves idea tracking and reporting, and provides the platform for innovation campaigns. In 2013, the system captured 6,201 ideas submitted by 3,563 employees. A total of 522 ideas were approved and 228 were fully implemented to achieve operational improvements and significant cost savings.

We also carried out 30 innovation workshops in Dhahran and all major Saudi Aramco facilities. Overall, 13,000 employees participated in the workshops, which consisted of an introduction and techniques for idea generation, followed by interactive exercises to stimulate innovative thinking, and concluded with a description of the corporate Idea Management System. The aim of these workshops is to increase user contributions toward the corporate innovation system both in quality and
NOW THE CENTER LAYING THE GROUNDWORK FOR ITS AMBITIOUS MISSION THROUGH MAJOR PUBLIC OUTREACH INITIATIVES, INNOVATIVE PILOT PROGRAMS AND A VARIETY OF EVENTS AND ACTIVITIES RELATED TO THE ARTS AND SCIENCES. THE CENTER’S AWARD-WINNING ITHRA YOUTH ENRICHMENT PROGRAMS AND ENTREPRENEURIAL KEYSTONE ENSURANCE ARE ALREADY CAPTURING THE IMAGINATION OF YOUNG SAUDIS, INSPIRING A RENEWED LOVE OF READING AND KNOWLEDGE, AND UPHOLDING THE PROMISE OF A NEW CULTURAL VITALITY IN THE KINGDOM.

CONSTRUCTION AND DESIGN

BUILDING THE COMPLEX, MULTI-LAYERED STRUCTURE CONTINUED IN 2013. CONSTRUCTION OF THE 91-METER TALL STRUCTURE REACHED 47 PERCENT COMPLETION, AND IS EXPECTED TO BE FINISHED IN 2015. WHEN COMPLETED, THE INSTITUTION WILL COVER 80,000 SQUARE METERS, WITH ENOUGH INTERIOR SPACE TO COVER 10 SOCCER FIELDS.

ARCHIVES


EXHIBITS

EXTENSIVE USE OF CUTTING-EDGE TECHNOLOGY TO ENGAGE VISITORS, ENHANCE LEARNING EXPERIENCES AND INTEGRATE CULTURAL PROGRAMMING IS ONE OF THE CENTER’S DESIGNED POINTS OF DISTINCTION. TO MEET THIS MAJOR GOAL, THE CENTER IS WORKING WITH A LEADING MULTI-MEDIA TECHNOLOGY CREATORS TO DEVELOP INTERACTIVE TECHNOLOGIES AND EXPERIENCES ACROSS 11 APPLICATIONS AND MULTIPLE CENTER COMPONENTS.

A PAIR OF SIMILAR PROJECTS PROGRESSED IN 2013. AFTER COMPLETION OF THEIR DETAILED DESIGN, FABRICATION OF THE ENERGY SCIENCE CENTER AND PRINCE SALMAN SCIENCE OASIS ALSO BEGAN IN 2013, AND WERE 30 AND 60 PERCENT COMPLETED RESPECTIVELY BY THE END OF THE YEAR. BOTH EXHIBITS WILL BE COMPLETE IN 2014 AND WILL, AMONG OTHER THINGS, PROMOTE AND EXPLORE A WIDE RANGE OF SAUDI ARAMCO AND WIDER SAUDI ENERGY INITIATIVES FROM THE DEVELOPMENT OF ALTERNATIVE SOLAR, WIND AND GEOTHERMAL TECHNOLOGIES TO PROJECTS AIMED AT MAXIMIZING HYDROCARBON EXTRACTION; THE DEVELOPMENT OF LOWER ENERGY USE TRANSPORTATION; ENERGY CONSERVATION IN BUILDINGS—AND INITIATIVES TO PROTECT THE KINGDOM’S FRAGILE LAND AND MARINE ECOSYSTEMS.


EVENTS


THE CREATIVITY FORUM WILL BE AN ANNUAL EVENT AND WILL CONTINUE TO EXPLOR E ISSUES RELATED TO CREATIVITY, INNOVATION, CULTURAL EXPRESSION, ARCHITECTURE AND DESIGN, AS WELL AS THE POSITIVE IMPACT OF THE CREATIVE INDUSTRIES.

GROUNDBREAKING ECO-FRIENDLY PATENT FILED BY ARAMCO EMPLOYEE

SAUDI ARAMCO WAS AWARDED 57 PATENTS BY THE UNITED STATES PATENT & TRADEMARK OFFICE IN 2013. ONE OF THOSE PATENTS, FILED BY TAWFEEK A. MOLLAH, USES ONE OF SAUDI ARABIA’S MOST ABUNDANT NATURAL RESOURCES—SUNLIGHT—TO RECHARGE ONE OF ITS MOST PRECIOUS NATURAL RESOURCES: FRESH WATER. THE PATENT CONCEPT USES A SPECIAL LENS TO FOCUS THE SUN’S ENERGY ONTO A PIPE FILLED WITH SEA WATER. THE TEMPERATURE AT THE FOCAL POINT REACHES ROUGHLY 1100°C, CAUSING THE SEA WATER INSIDE THE PIPE TO EVAPORATE AND FORM SUPERHEATED STEAM. THE STEAM IS THEN DIRECTED VIA A SMALL PIPE TO THE COLLECTION RESERVOIR BELOW SEA LEVEL, WHERE IT CONDENSES TO PRODUCE DISTILLED WATER.

THE DEVICE RUNS AUTOMATICALLY, REQUIRES NO ELECTRICITY AND CREATES NO EMISSIONS. ESTIMATES SUGGEST THE ECO-FRIENDLY DISTILLED WATER GENERATOR CAN PRODUCE 82 LITERS PER HOUR, WHICH IS EQUIVALENT TO ROUGHLY 30 PERCENT OF DAILY PER CAPITA WATER CONSUMPTION IN SAUDI ARABIA.

The Center also played host to the Global Knowledge Society Forum in partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the King Abdulaziz City for Science and Technology. The two-day forum explored the theme “Building Knowledge Societies for Sustainable Human Development.” It aimed to catalyze the development of a knowledge ecosystem in the Kingdom by bringing together prominent Saudi and international speakers from a wide spectrum of disciplines to build a common understanding of the elements critical to a knowledge society framework. Participants discussed global sustainable human development, regional Arabic knowledge content and the opportunities and challenges associated with developing a knowledge economy.