

the arabian sun

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we must not become complacent in controlling COVID-19.

Do Your Part by
Wearing a Mask in Public

**maintain physical distancing
of 2 meters at all times**



world's first blue ammonia shipment

opens new route to a sustainable future

Dhahran — Aramco and the Institute of Energy Economics, Japan, in partnership with SABIC, have successfully demonstrated the production and shipment of blue ammonia from Saudi Arabia to Japan with support from the Japanese Ministry of Economy, Trade, and Industry.

Forty tons of high-grade blue ammonia have already been dispatched to Japan for use in zero-carbon power generation.

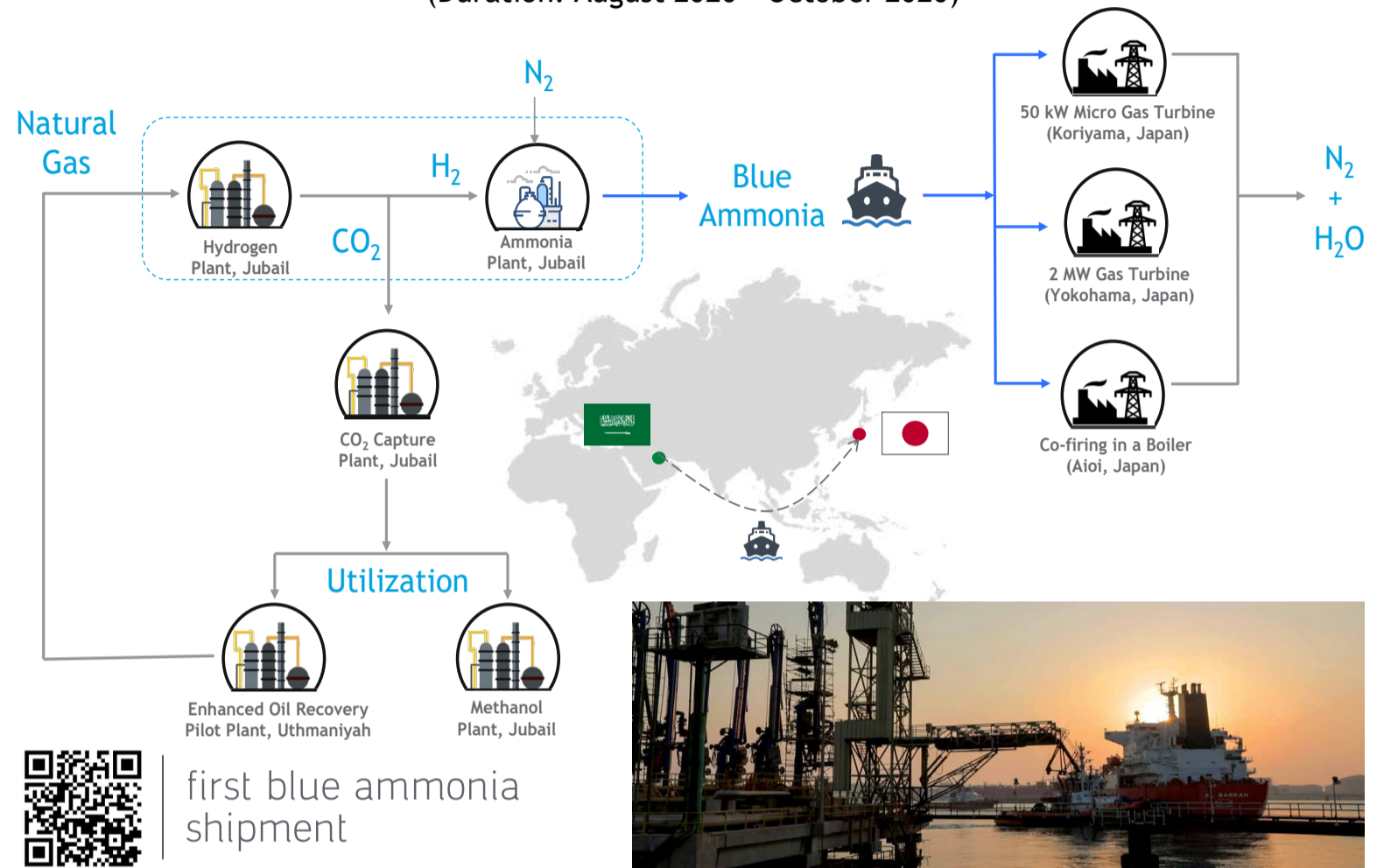
The announcement comes amid growing appreciation of the role hydrogen will play in the global energy system. Ammonia, a compound consisting of three parts hydrogen and one part nitrogen, can contribute to addressing the challenge of meeting the world's growing energy needs in a reliable, affordable, and sustainable manner.

The Saudi-Japan blue ammonia supply network demonstration spanned the full value chain — from the conversion of hydrocarbons to hydrogen and then to ammonia, as well as the capture of associated carbon dioxide (CO₂) emissions.

It overcame challenges associated with the shipping of blue ammonia to Japan for use in power plants, with 30 tons of CO₂ captured during the process designated for use in methanol production at SABIC's Ibn-Sina facility, and another 20 tons of captured CO₂ being used for enhanced oil recovery at Aramco's Uthmaniyah field.

This milestone highlights one of several pathways within the concept of a global circular carbon economy, a framework in which CO₂ emissions are reduced, removed, recycled, and reused, as opposed to being released into the atmosphere.

Conceptual Flow Diagram of “Blue Ammonia” Supply Chain Demonstration
(Duration: August 2020 - October 2020)



Aramco and the Institute of Energy Economics, Japan, in partnership with SABIC, have successfully demonstrated the production and shipment of blue ammonia from Saudi Arabia to Japan. Forty tons of high-grade blue ammonia have already been dispatched to Japan for use in zero-carbon power generation.

your voice



By Alan Breacher
Dhahran

Alan.Breacher@aramco.com

demonstrating resilience in the face of unexpected challenges

I was a little skeptical when one of my colleagues suggested I participate in the Formula 1 (F1) Aramco Employee League 2020. My son and I had watched the Bahrain Grand Prix two years ago, my first live F1 race experience, where I quickly realized that watching an F1 race remotely, through TV or the internet, does not do justice to the polished, aerodynamic beauty of the cars; the deep, rumbling sound of the turbo-hybrid power units; the packed crowds of cheering F1 fans; and the sheer excitement of taking in the racing action trackside. I wasn't sure a “fantasy league” could add to such experiences.

The 2020 F1 racing season has been severely impacted by the COVID-19 pandemic. Some 13 of the originally scheduled races have been canceled, including iconic races in Monaco and at the Interlagos circuit in Sao Paulo, Brazil. We will also have to wait until next season to see the “lights go out” for the first time in Vietnam at F1's

newest circuit in Hanoi. For a while, after the season opener in Melbourne, Australia, was canceled at the last minute, it even seemed like there might not be a 2020 season at all.

I found this incredibly disappointing because 2020 is Aramco's inaugural season as an F1 global partner, and I had been anticipating all the positive energy our company would gain from its new partnership with what many people regard as the pinnacle of motorsport. But during this season, perhaps above all others, F1 has proven its ability to remain agile and capable of adapting to change in the face of unexpected challenges. F1's management worked on reconfiguring the F1 race calendar, eventually scheduling 17 races, with the final races of the season set to run in Bahrain and Abu Dhabi.

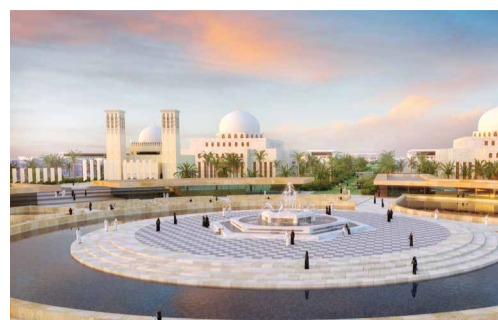
We should also not forget that early in the pandemic, F1's Project Pitlane marshaled the engineering efforts of some teams toward designing and manufacturing ventilators at a time

when many hospitals desperately needed more of them.

The employee league enables participants to create as many as three “dream teams,” each consisting of five drivers and one constructor (racing team). As the race season progresses, the monetary value of the drivers and teams, within the league, may go up or down depending on their performance. I have kept this in mind while refining the composition of my teams, keeping within the required budget, in the hope of boosting their point tally.

Half of the 2020 season's races have already been completed. This is far enough into the season for me to realize the F1 Aramco Employee League has not only added an extra dimension to my enjoyment of F1 racing, but more importantly, it has also helped highlight the resilience needed to produce the cutting-edge technologies that will bring benefits to people around the world.

Your Voice reflects the thoughts and opinions of the writer, and not necessarily those of the publication.



spark earns LEED certification

King Salman Energy Park (SPARK) has become the first industrial city in the world to receive Silver Level accreditation for Leadership in Energy and Environmental Design (LEED), an internationally recognized green building certification system that verifies that buildings are designed to improve performance across key sustainability metrics such as energy savings, water efficiency, carbon dioxide emissions reduction, improved indoor environmental quality, stewardship of resources, and sensitivity to their impact.

“SPARK is distinguishing itself as a leading global energy, industrial, and technology hub, cementing Saudi Arabia’s position as a progressive innovator in these fields on the international stage,” said SPARK president and CEO Saif S. Al Qahtani. “The certification reaffirms our commitment to reducing the city’s carbon footprint. LEED communities are in high global demand, as they offer better rates of profitability, productivity, and quality of workplace. Our goal is to create an ecosystem for energy-related companies to grow with minimum environmental impact, and we encourage our industrial cities to follow our lead.”

commitment toward sustainability

This certification recognizes SPARK’s commitment toward sustainability that will ensure a high quality of life for those working and living in the city, as well as minimal impact on neighboring communities. The designation also helps confirm SPARK’s position as an attractive location for small- and medium-size enterprises to locate.

LEED certification is the leading global rating system for evaluating sustainability and quality of life. The evaluation includes economic, environmental, and social metrics in eight areas, including:

- Integrative process
- Natural system and ecology
- Transportation and land use
- Water efficiency
- Energy and greenhouse gas emissions
- Material and resources
- Quality of life and innovation
- Regional priority.

green concrete for concrete results

In the first application in the Middle East and Africa for bridge deck concrete reinforcement, SPARK’s Project Management Team collaborated with Aramco’s Consulting Services Department (CSD), completing the installation of nonmetallic rebar in the Qurayyah Road south entrance bridge. This initiative forms a part of the compa-



ny’s vision to promote the use of nonmetals, improve sustainability, and lower its carbon footprint, all while aligning applicable design guidelines.

Additionally, the SPARK project team used the same technology in various infrastructure wet system manholes, chambers, and catch basins where corrosion, weight, cost-effectiveness, and durability outweighed traditional reinforced concrete applications.

Also, the SPARK project initiated the use of “Green Concrete” — concrete that uses waste material for at least one of its main components to reduce negative environmental impacts associated with the manufacturing of cement and concrete.

SPARK used locally produced Podzolic Concrete, in which up to 15% of the concrete mix will be replaced with a byproduct from asphalt batch plants. By using typically wasted byproducts, it also resulted in less waste dumped in landfills, fewer natural resources depleted by the cement producing process, less energy used in the process, and less carbon dioxide emitted — all resulting in economic and environmental gain.

a first using ConXtech in the Kingdom

The first use of ConXtech steel for an office building was piloted at SPARK and spearheaded by the project team and in collaboration with CSD. The deployment

of ConXtech technology for the Administration Office Building will result in efficient and precise structural steel fabrication, simplified steel design, improved site safety, easy future expansion, and an approximately 50% reduction in the time it will take to erect the steel.

While ConXtech has been used in residential and commercial buildings in North America, SPARK’s Administration Office Building will be the first in Saudi Arabia. In line with the company’s vision, this multilevel building is designed to international standards along with the structural steel design and advocates for the expanded use of ConXtech on company projects.

integrated power automation system

Incorporating upstream and downstream monitoring and the control localized at SPARK Power Control Center, the system will be utilizing the latest smart Ring Main Units and package substations and will be combining Fault Detection, Isolation and Restoration (FDIR) schemes with a Supervisory Control and Data Acquisition system that incorporates a wide range of software that will provide real-time control and monitoring solutions, providing robust control and readiness for operations.

state-of-the-art digital infrastructure

The first in the Kingdom for an industrial city, the SPARK project team will set up state-of-the-art digital infrastructure creating competitive opportunities for a service provider to deploy advance communication and solutions to meet industrial needs; a concept first implemented in-Kingdom, where SPARK will benefit from cost saving and revenue sharing from its own digital infrastructure where service providers operate, maintain, and sell in-

formation and communication technology services to tenants. This will allow tenants to benefit from tailor-made industrial services solutions leading to increased online connectivity and productivity.

about SPARK

SPARK is a fully integrated industrial city under development. Spanning an area of 50 km², it is being developed with a vision to become the leading gateway to the regional energy sector, offering a complete spectrum of services to support business growth in the Kingdom.

SPARK offers infrastructure with international specifications for global investors in the crude oil and gas industry and refining, petrochemical industries, electric power, and water production and treatment. SPARK will be comprised of five focal areas.

- **Upstream:** Exploration and production of hydrocarbon resources
- **Downstream:** Refining crude oil, processing of gas/minerals, byproducts distribution
- **Petrochemicals:** Production of chemicals from petroleum and natural gas
- **Conventional power:** Generation, transmission, and distribution of electrical energy
- **Water and wastewater:** Production of potable water and treatment of wastewater.

Execution is planned over three phases. SPARK has completed 60% of its first phase, which consists of infrastructure, roads, utilities, and real estate assets established across 14 km². Phase 1 is set to be completed in 2021. This is in addition to a dedicated 3 km² logistics zone and dry port.

The city has already attracted a large number of tenants and investors, exceeding the plan for its initial land/facility offering by over 15%, and accelerating future development.



SPARK
earns LEED
Silver Level





honing our brightest people's skills

Aramco recognized for developing technical experts

Dhahran — Aramco has been awarded the 2020 People Management Award in the category of Best Learning and Development Program for its Technical Services' Advanced Professional Development Program (APDP) as part of the Chartered Institute of Personnel and Development's (CIPD) annual People Management Awards.

CIPD's annual People Management Awards are among the most prestigious awards in these fields, showcasing excellence in more than 15 categories and honoring an array of initiatives from apprenticeship development to diversity programs.

developing expertise

Aramco's APDP, which earned top honors in the Learning and Development Program category, strives to develop technical subject matter experts in critical strategic, leadership, and technical domain-specific skills. It prepares senior technical professionals to lead complex interventions on corporate issues such as environmental sustainability, cybersecurity, corrosion, and operations challenges, as well as to respond effectively to urgent technical challenges.

Ahmad A. Al-Sa'adi, senior vice president of Technical Services and the APDP Board chairman, said the program plays a crucial role in helping us respond to a rapidly

“We are growing in chemicals, green energy, nonmetallic applications, and many other cutting-edge fields.”

— Ahmad A. Al-Sa'adi

changing business environment.

“We are growing in chemicals, green energy, nonmetallic applications, and many other cutting-edge fields,” Al-Sa'adi said. “APDP enables us to become a powerhouse capable of leading an organization into a fast-moving, digitally transformed business landscape. A few years ago, we anticipated the need to rapidly build core technical competencies that are now a backbone of the services we provide across Aramco.”

“We must continuously reevaluate our technical skills inventory to identify the gaps between what's needed and what we

have,” Al-Sa'adi added. “A program like APDP allows us to see how strong we are technically and where the gaps are. Gaps will always be there, because new technologies will keep emerging. The measure of how good we are will not be whether we are successful in diminishing the gap. Success will be measured in terms of how adaptable we are to changes in the business environment, and how quickly we reskill, upskill, and deploy employees throughout the company. The resulting agility and adaptability will become the key enabler to business success.”

a complement to other efforts

The APDP complements and continues the Specialist Development Program (SDP) career development path. While the SDP provides a road map for early career professionals to attain specialization, the APDP provides a road map for technical specialists to attain the strategic mindset and skillset of a principal professional, the pinnacle job role for senior technical specialists. APDP participants are required to actively contribute to professional societies and technical conferences, publish articles in technical papers, and earn patents for technologies that address the company's technical challenges. The program also develops a senior

professional's toolkit in executive communication, team leadership, crisis management, and systems thinking.

The APDP Board plays an important governance role in the program and is responsible for reviewing participant progress, validating technical contributions, and approving graduate applications.

Fahad A. Aldossary, division head of the Technical Services Professional Academy (TSPA) and administrator of the Professional Development Program, said, “TSPA is proud to work with our business partners throughout the company to ensure this program remains impactful, relevant, and rewarding for our senior technical professionals. This program better positions them to deliver on the company and country's strategic vision. It's a true win-win.”

Abdullah M. Rumaih, a principal professional in the Consulting Services Department, said, “Participation in the APDP has made me keenly aware of what it means to be a strategic leader and the accountability associated with these roles. I deeply appreciate the investment the company has made in my development, and I am committed to making sure this investment pays off. Our goal as participants in the APDP is to build a stronger, more robust Aramco, for our country and for our children.”

website wins: company's digital face earns MENA recognition

by Eamonn Houston

Dhahran — Aramco's corporate website (www.aramco.com) has scooped two coveted gold awards at the internationally recognized Middle East and North Africa Digital Awards (MDA).

The company website won top honors in two categories, Best Web Platform and Best Use of Digital in the Oil and Gas Sector.

The MDA follows international standards in judging and award processes to ensure that only top-of-the-class digital platforms are recognized.

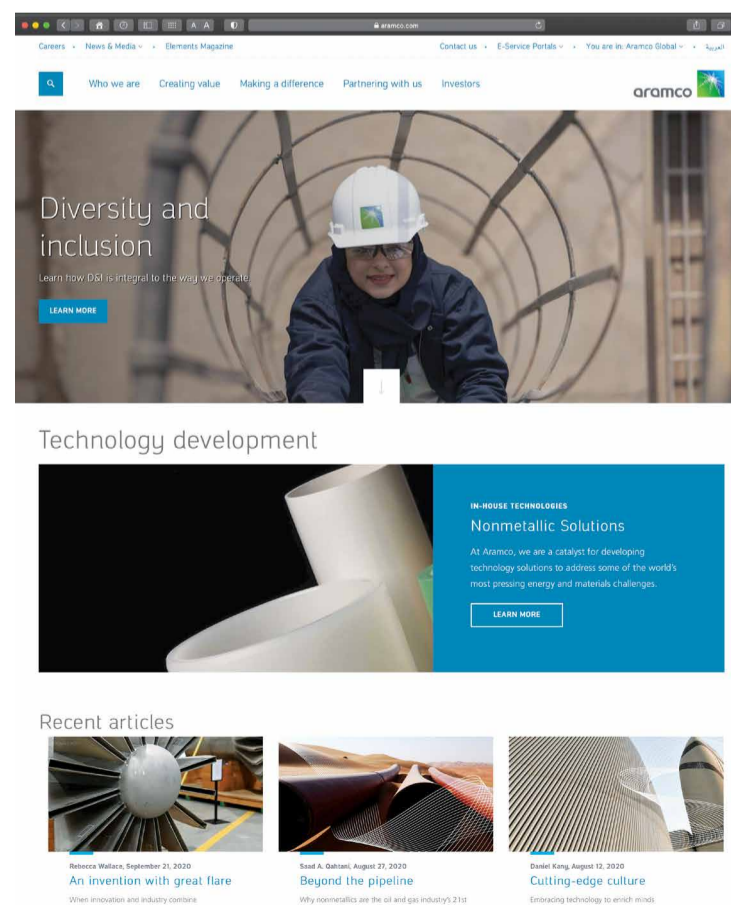
This year's panel of judges included representatives from leading global companies: Snap, UAE; Mediacom, U.K.; the Walt Disney Company, USA; Eventbrite, U.K.; Nestle, Spain; Estee Lauder Companies, Middle East; and others.

Sara A. Tamimi, director of the company's Digital Communications Division, applauded the

teamwork involved.

“These awards are validation of the team's efforts and the clear evolution of the corporate website over the last two years. The corporate website is a very dynamic and powerful communication medium that is continuously evolving and improving to address the needs of our users and the business, while remaining at the forefront of new technology.”

Web Group supervisor, Imad Abdul Samad, said: “Over the past couple of years, we have made several significant enhancements to the website that include enhanced usability, centralized asset management, and optimized responsive design. One major enhancement last year was extending the web platform used for the corporate website to all our affiliate country sites, thereby unifying the user experience, the branding and the messaging, globally.”



“The corporate website is a very dynamic and powerful communication medium that is continuously evolving and improving to address the needs of our users and the business.”

— Sara A. Tamimi



Aramco and F1: innovating engines of the future

by Scott Baldauf

Dhahran — Aramco and Formula 1 (F1) are both at the pinnacle of their industries. One is the world's most valuable energy and petrochemical company, and the other is the world's fastest and most exciting sport.

But the two have more in common than you might think.

Both are at the forefront of vehicle innovation with a shared commitment to making the internal combustion engine (ICE) more energy efficient, exploring opportunities to enhance vehicle efficiency and to realize carbon dioxide (CO₂) reduction benefits, both in the sport and across the global transport sector. The outcome of this research could have a dramatic effect on the cars that we drive in the future, thereby reducing emissions and pollutants while enhancing safety and efficiency, as well as improving overall driving experience.

You may not immediately think of F1 racing when you drive to and from work every day, but F1 advancements have directly benefited the wider automotive industry in a number of ways, including aerodynamic innovations, safety developments, and energy recovery systems. Also, composite materials from F1 have been adopted by the automobile and other industries.

Tweaking fuels and engines

Now, think of the range of technologies being explored by our network of research and development labs around the world. Many of these technologies are available today, or in the very near future, including gasoline compression ignition (GCI), turbulent jet ignition, opposed piston engine, and mobile carbon capture. Working with original engine manufacturers, Aramco's researchers are working to deliver up to 50% of CO₂ avoidance.

For example, GCI technology optimizes both the fuel and the engine as a system, achieving a 17% reduction in CO₂ compared to the best of today's gasoline spark ignition engines. A vehicle with GCI technology only produces 84 grams of CO₂ per kilometer, well below the European Union's target for 2020 of 95 grams.

Research into more efficient solutions is both good for business, and good for the environment. The global economy is forecast to double in size by 2050, while approximately 2 billion more people will need access to affordable energy. Today, electric vehicles (EV) account for less than 2% of the 1.2 billion vehicle fleet around the world. Even if the EV sector of the market continues growing at the current pace, they will only account for 10% of market share. Projections show that by 2040, ICEs will remain the major driver for the transportation sector, accounting for more than 85% of the global market.

What this means is that our collective



Aligning Aramco with a sport such as F1 is more than just a high-profile place to put our company logo. Rather, it gives the company a global stage to present our commitment and forays into innovation in the transport industry, making a stronger case that the internal combustion engines and petroleum-based fuels are here to stay, and will be key to the world's transportation needs for decades to come.

Research into more efficient solutions is both good for business, and good for the environment. The global economy is forecast to double in size by 2050, while approximately 2 billion more people will need access to affordable energy.

future will require innovation on all fronts. Electrification is part of the solution for the transportation sector, but the ICE industry will also have to play a role. If we are serious about making significant reductions in carbon emissions, we must rethink the engine that most of the world will continue to use for some time.

All that cutting-edge research doesn't just stay in laboratories. It trickles into every aspect of our daily lives. In a real sense, today's latest auto engine research is similar to the space-age research of the late 20th century. Consider just a few products that came from the space race — infrared thermometers, artificial limbs, wireless headsets, LED lighting, portable cordless vacu-

ums, freeze-dried foods, memory foam, and scratch-resistant eyeglass lenses, to name a few.

rethinking the engine

Like Aramco, F1 drives continuous innovation to make the ICE — the world's leading engine for transport — more efficient.

Today's F1 V-6 turbo-hybrid power unit is a marvel of automotive engineering. Powerful enough for drivers to accelerate from zero to 100 km per hour (kph) in 2.6 seconds, with top speeds of 360 kph, the F1 engine has also been tweaked to make it more efficient, resulting in lowered emissions. Compared with the V-8 used by F1 teams up to 2013, today's V-6 has gained 20% more power while reducing CO₂ emissions by 26%, with thermal efficiencies and energy recovery of over 50%.

And F1 is not stopping there, as it has announced its first ever sustainability strategy, including the intention to take emissions reduction to the next level in future engine designs, delivering not only net-zero carbon race cars but also a net-zero carbon sport by 2030.

research partnership

With their new partnership, Aramco and F1 are looking to leverage new technologies to significantly improve performance and reduce overall transport-based greenhouse gas emissions.

Ahmad O. Al-Khowaiter, Aramco's chief technology officer, told CNBC recently that the company is collaborating with auto manufacturers to develop fuels that are optimal for their GCI systems, while also



We are working hard with automakers and with partners to bring some of these advanced technologies into the average car.

— Ahmad O. Al-Khowaiter

researching ways to make gasoline spark ignition engines as efficient as diesel, but without the emissions challenges of diesel.

"We are really excited about this partnership with F1 because it opens up a whole new range of technologies," Al-Khowaiter said.

Aramco and F1 plan to explore opportunities to cooperate on vehicle efficiency and to realize carbon reduction benefits both in the sport and across the global transport sector. Both Aramco and F1 see opportunities in enhanced engine efficiency, optimized low carbon fuels, emissions reduction, along with lightweight and carbon management solutions.

"We have been working on bringing the ICE (forward), bringing that efficiency, doubling that efficiency, or improving that efficiency dramatically," Al-Khowaiter said. "So we are working hard with automakers and with partners to bring some of these advanced technologies into the average car."

Aligning Aramco with a sport such as F1, therefore, is more than just a high-profile place to put our company logo. Rather, it gives the company a global stage to present our commitment and forays into innovation in the transport industry, making a stronger case that the ICE and petroleum-based fuels are here to stay, and will be key to the world's transportation needs for decades to come. It also allows us to show that we are serious about the sustainability of the automotive industry when it comes to challenges such as climate change, and that Aramco plays a leading role in finding the solutions that reduce emissions and that can be deployed at scale.

So remember that when you watch your next exciting F1 Grand Prix. There is much more to the sport of auto racing than a machine that goes vroom. Moreover, the research that made those powerful, energy efficient engines possible could dramatically improve the quality of life of global citizens for generations to come.



Aramco celebrates

Ithra launches Kingdom of Cultures for National Day, Communities light up

Dhahran — The King Abdulaziz Center for World Culture (Ithra) was a gift to the Saudi people in honor of Aramco's 75th anniversary. So, it's no surprise that Ithra would rise to the occasion for the 90th Saudi National Day.

And Community Services ensured the National Day theme was reflected across all company areas with buildings elaborately decorated.

As the Kingdom's leading incubator for creativity and innovation, it is also no surprise that Ithra found new ways to celebrate Saudi Arabia in a time of safety and physical distancing.

Ithra's campus was abuzz with action, activity, and music over the long weekend with festivities, including exhibitions, a scavenger hunt, storytelling, Saudi cuisine and food trucks, workshops, poetry, music,



dance, and folk performances.

Highlights included:

- A performance in Ithra's Theater by Al Farabi band, accompanied by Abeer Ba-

lubaid on piano and singer Ameen Farsi.

- A performance by Saudi poet Abdulatif Almubarak, accompanied by a group of musicians.
- An Energy Exhibit hosted competition featuring new games as well as old favorites such as bingo and others that were invented here centuries ago.
- A pair of new exhibitions, one that

took a close look at the famously decorated doors of Najd, and the other, Kingdom of Cultures, which will remain open to the end of the year. It takes visitors throughout Saudi Arabia's gorgeous and varied landscapes to meet its diverse people and experience its rich tapestry-like cultural legacy through stories, costumes, objects, and even the first interactive augmented reality experience in the Kingdom.

outreach projects

Ithra's National Day outreach projects were designed for long lasting impact. They included creating a mural at al-Hasa, one of the largest oases in the world, and adding a bright new arts and music space at the artfully spruced up Central Vegetable Market in Al-Ulaya, al-Khobar.

To celebrate Saudi cuisine, Ithra invited the Riyadh-based Takya to open a fine dining pop-up restaurant featuring Saudi fusion cuisine, featuring highlights from around the Kingdom.

For information, visit www.ithra.com.



Something old, and something new, and a celebration marking the Kingdom's ninth decade of existence were all part of events hosted by the King Abdulaziz Center for World Culture. Whether it was the Kingdom of Cultures exhibit above, which offered an interactive experience for visitors, or traditional performances, or any of the other many activities featured, Ithra had it all over the National Day holiday weekend.

introducing 'The Market'



Ithra's "The Market" project is a permanent installation that features spaces for art, fine craft, music, and public seating that have been artfully painted with upbeat designs. Ithra's National Day festivities at The Market featured live music, art, and light installations and were attended by 13,000 people including above, Aramco president and CEO Amin Nasser. (Photos: Ding/MPD)



Aramco citizenship efforts help build up Jazan farmers

a cup of coffee for the Kingdom

Today, the rich aroma of coffee fills a countless number of places in the world, and a countless number of people awake each day to that smell of fresh-made coffee.

Many crave it for the energy it provides, providing the get-up-and-go that puts us into motion no matter where

we are and what time it is. Even along endless desert roadways, you often find someone parked on the side of the road simply enjoying a cup of coffee, putting their long exhausting journey and dreariness of the road behind them.



by Mohammad Adarbeh and Hamid Al-Attas

Jazan — Aramco is rarely the first word that pops into people’s minds when it comes to coffee, but in the Kingdom’s west, the company has been helping coffee farmers improve the quality of their products and increasing the region’s share.

Through an initiative by the company’s Citizenship Division, Aramco has helped Jazan coffee farmers increase profits by training them how to use advanced irrigation technologies that has conserved about 80% of their total water consumption.

Also, the company has provided the farmers throughout the Province the tools and training needed to improve their crops, helping them bring a better product to market.

efforts recognized

Earlier this year, Aramco highlighted these efforts at the seventh Coffee Festival held in the Al Dayer Province under the theme of “A Warm Cup of Coffee for

a Warm Welcome.” Here, HRH Prince Mohammad bin Nasser bin Abdulaziz Al Saud, governor of the Jazan Province, commended the company’s efforts, sponsorship of the festival, and endeavors to materially support the coffee farmers.

For his part, Sulaiman A. Al-Jared, manager of Government Affairs, Western Province, emphasized Aramco’s societal role in supporting people with unique professions and skills, and equipping them with the knowledge, experience, and tools they need to become effective contributors to the development of the Kingdom and diversifying its sources of income.

Approximately 150 farmers, which account for 90% of the beneficiaries of the initiative, participated in the festival.

Why coffee beans?

There is no place in the Kingdom better suited for cultivating coffee than Jazan — and it’s not all about the environment (though it is ideal). Local expertise in growing this strategic product is significantly high in the region.

In fact, the coffee you were sipping on this morning could be a Saudi product — about a 2.5% chance. Still, the Kingdom imports 97.5% of its annual coffee consumption. Therefore, supporting coffee farmers in Jazan, which produces only 400 out of the 81,000 tons of coffee consumed by citizens and residents of the Kingdom, will create a significant number of new jobs and have a positive economic impact on the local community.

Accordingly, Aramco has encouraged farmers and provided them with the required training and financial support to improve this dynamic field and increase the region’s share in the Saudi coffee market.

What have we done for farmers?

Before starting any citizenship program in the Kingdom, Aramco evaluates the capabilities within local communities and cooperates with the concerned agencies in the region to achieve the best results. We have long been a sponsor of initiatives that make a difference in people’s lives, provided that

the beneficiaries are willing to develop themselves and continue to improve their skills.

Since the program started in 2016, more than 1,000 farmers have received our support, and of those, 750 received full support. This includes the reclamation of their lands, installation of new irrigation systems, and providing proper training for farmers.

The project also looks to provide the required training and tools for agriculture and irrigation to enable farmers to increase coffee production and have a sustainable source of income.

In 2019, Aramco expanded the scope of the program to cover a number of governorates in Jazan, striving to plant 133,500 trees and support 750 farmers in Jazan Province by the end of the first quarter of 2020.

As it continues its efforts to achieve a more sustainable and profitable agricultural environment in Jazan, the company is studying all the necessary steps to market the farmers’ products and help them improve their agricultural capabilities.

Beans supported by this project scored higher than 80 points on a 100-point scale in multiple tests conducted by third parties. This has qualified them to be graded as “specialty coffee beans” by the Specialty Coffee Association of America (SCAA).

inspiring young people worldwide

OurEcho Challenge turns environmental ideas into reality

by Susan V. Gonzalez

Washington, D.C. — Middle school students across the U.S. are taking a closer look at environmental challenges and protecting native plants and animals in their communities through EarthEcho International's OurEcho Challenge. The inaugural competition was made possible by Aramco.

Students focused on local ecosystems and proposed solutions to help preserve, protect, or repair those natural resources.

Ten finalist teams from seven states made it to the global nonprofit's fifth Annual Youth Leadership Summit, held virtually on Aug. 6-8, for final judging to compete for three grants between \$2,000 and \$10,000 to turn their ideas into reality.

"The OurEcho Challenge inspires and empowers a new generation of young leaders," said Philippe Cousteau Jr., founder of EarthEcho International. "It turns a student's passion for science, discovery, and love of nature into action, supporting the diverse native species and habitats existing in their own communities."

sharing our culture of environmental excellence

Aramco's culture of environmental excellence and support for biodiversity with wildlife sanctuaries, coral reefs, mangrove trees, and other native species coexisting alongside operating areas has earned it a reputation for prioritizing the importance of ecological habitats. The company's Biodiversity Initiative is a pillar of our corporate citizenship efforts.

Participating as a competition judge was Ronald Loughland, environmental consultant in Aramco's Environmental Protection organization, who was impressed with ideas



Above, the first-place team, Team Crayfish, works to remove an invasive species of crayfish from a local creek. From left are Cheng Ning, Pasha Heydari, and Benjamin Rassibi.

directly related to restoration and the technology applications.

"When judging the entries, I looked for an understanding of the issues and the team's ability to come up with really practical solutions that could be implemented," Loughland said. "It's nice to see young people thinking out-of-the-box."

With team names such as "Super Plants," "Aquabotics," or "Swamp Stompers," creativity was apparent. Proposals addressed "supercharging" roots to help sequester carbon dioxide to combat climate change or designing autonomous robots to collect pond debris or propagating native plants to replace invasive species threatening a critical local bog habitat.

Kasey Gaylord-Opalewski, program man-

ager for OurEcho Challenge, said despite not being able to hold the Youth Leadership Summit in-person this year, 500 participants from 44 countries and territories preregistered to take part online.

three teams earn top recognition

Judges selected these three teams, including:

*** First place:** Team Crayfish from Medea Creek Middle School, Oak Park, California, receiving a \$10,000 grant to continue their work creating sustainable fishing practices to remove an invasive crayfish species.

*** Second place:** Team Super Plants from Proof School, San Francisco, California, receiving a \$5,000 grant to create community gardens filled with plants to sequester car-

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It's nice to see young people thinking out-of-the-box when it comes to the environment.

— Ronald Loughland

bon dioxide to combat climate change.

*** Third place:** Team Aquabotics from Bednarcik Junior High School, Aurora, Illinois, receiving a \$2,000 grant to continue design of a robot to locate and collect debris in a local pond. Ultimately, a network of autonomous, self-sustaining robots to keep water systems and oceans clean is envisioned.

Loughland said Aramco's Environmental Protection has been involved in similar programs in countries where we operate; working closely with colleagues to ensure biodiversity conservation is placed at the top of the agenda for any project.

Having a chance to participate in a project such as this was fun and furthers awareness for environmental stewardship.

young professionals engage, see promising future despite tumultuous times

Dhahran — Restrictions may have pushed more business into the virtual realm, but it hasn't reduced the need to maintain an increased engagement, especially among young professionals.

With this in mind, Petroleum Engineering and Development (PE&D) recently conducted a virtual Professional Development Program (PDP) forum with more than 150 PDPs being joined by members of management. The forum gave the PDPs a chance to ask questions and gather advice about their development journey in the company.

advice from leaders and experts

PE&D then-vice president Nasir K. Al Naimi opened the forum by highlighting some of the essential behavior traits that PDPs should aspire to in their pursuit of professional growth and a successful career.

"I want you to feel empowered, invigorated, excited and proud," Al Naimi said. "But make no mistake, delivering your future will take hard work, discipline, resilience, patience, life-long learning, and a relentless focus on results."

In another session, Maiss Al Hammad, a certified career counselor from the Management and Professional Development Department, spoke about the career development tools and services PDPs could take advantage of, such as the My Career website, Mentoring Center of Excellence, and Harvard ManageMentor.

The final segment of the forum was a panel discussion involving PE&D management and participants, which allowed for direct dialogue between PDPs and management.



Anwar Alghamdi

Mohammed Alshuaibi

Ameerah Bokhari

young professionals positive

Results from confidential surveys of some 170 PDPs in 2018 and 2019 showed that most young professionals say they have seen positive progress in engagement and empowerment during their time so far at Aramco. The survey, which was designed to measure the quality of PE&D programming in relation to PDP engagement, was further echoed by some of those participating in the event.

"The event helped me better understand where I fit in the big picture and how my efforts contribute to the overall success of the company," said PDP Anwar Alghamdi.

Another PDP, Mohammed Alshuaibi, said the fact that Aramco continues to conduct such events in such trying times shows that they continue to exceed expectations throughout the industry. "I see Aramco at the top of the oil and gas industry," Alshuaibi said, pointing through the

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The event helped me better understand where I fit in the big picture and how my efforts contribute to the overall success of the company.

— Anwar Alghamdi

company's ability to push through the ongoing pandemic. "This shows the resilience and dedication of its employees, and I am proud to be a part of that."

Ameerah Bokhari said she appreciates Aramco's investment into her career not only as a young professional, but also as a young woman working in the industry.

"I am proud to be part of this great organization that is pioneering diversity inclusion and woman empowerment Kingdomwide," Bokhari said. "It is committed to invest and create promising opportunities for women in different fields. I look forward to the upcoming opportunities and challenges that I would be tasked to partake in, where I see myself among the company's female leaders."

well-being

caring for your health and wellness

what you need to know about breast cancer and how to prevent it

Breast cancer starts when cells begin to grow out of control, usually forming a tumor that can be seen on an X-ray (mammogram) or felt as a physical lump. Most often found in women — it is the most prevalent form of cancer diagnosed in women Kingdomwide — breast cancer can be diagnosed in men as well.

Its signs and symptoms include:

- A lump or swelling in the breast
- Redness or flaky skin on the breast
- Irritation or dimpling of breast skin.

how to reduce your risk

1. Maintain a healthy weight

The overweight and obese have a higher breast cancer risk, especially after menopause, when most of women's estrogen comes from fat tissue. This leads to higher estrogen levels, which can cause breast cancer.

2. Follow a healthy eating plan

Consume five servings of vegetables and two servings of fruit daily, and eat lean protein sources while avoiding processed foods, replacing animal fats with polyunsaturated fats.

Because Vitamin D deficiency increases breast cancer risk, consume low fat dairy products that are fortified with Vitamin D. Other sources of Vitamin D include egg yolk, salmon, and fortified cereals. Direct exposure (not blocked) to sunlight for 15 minutes a day is also encouraged to meet Vitamin D requirements.

Limit burned and charcoal-grilled foods, as well as intake of canned or processed meat, sausages, and pickled and smoked foods. Also limit sugar and refined carbohydrates (such as sweets and sweetened drinks), as well as fats (butter, ghee, fatty meat, full cream dairy products, and fried foods). Steam, bake, or grill foods.

3. Exercise regularly

Inactivity increases your cancer risk. Each week, strive for 150 minutes of moderate exercise (50% to 70% of your maximum heart rate), or 75 minutes of vigorous exercise (70% to 85% of your maximum heart rate).

4. Pregnancy

Having children later in life or not at all may increase your breast cancer risk, as estrogen levels are lower during pregnancy. Women who have a full-term pregnancy before 20 have a lower risk of breast cancer than women who have not had children or who give birth to their first child after 35.

5. Breastfeeding

Women who breastfeed have a lower risk of breast cancer than women who have had children but did not breastfeed.

6. Medications/hormone replacement

Using hormone therapy after menopause can increase your risk of breast cancer. Talk to your health care provider about non-hormonal options to treat menopausal symptoms.

7. Birth control

Some studies show a link between breast cancer and hormonal contraceptives — typically those that are estrogen-based. Talk to your physician about the side effects and risks associated with the use of hormonal contraceptives.

8. Avoid smoking

Smoking has been linked to many forms of cancer. Quitting smoking may help reduce your susceptibility to cancer.

keeping a close eye out

Diligence can be your best defense against complications from breast cancer. Every month — at least 10 days after your monthly period — you are encouraged to perform a physical self-examination for any unusual changes. The Breast Cancer Awareness Handbook can guide you on how to complete a physical self-exam.

For women at increased breast cancer risk who wish to avoid medicines or surgery, some doctors recommend close ob-

servation. This might include:

- More frequent doctor visits (such as every six to 12 months) for breast exams and ongoing risk assessment
- Starting breast cancer screening with yearly mammograms at an earlier age
- Possibly adding another screening test, such as breast MRI.

Women 40 and older are encouraged to schedule a yearly mammogram, which is a low-dose X-ray that can help detect breast cancer and often identify abnormal areas in the breast.

For women at a high risk for breast cancer, a screening MRI is recommended along with a yearly mammogram.

know yourself

Know what is normal for yourself. Don't be shy to take the initiative in getting to know your body intimately, as you'll know more quickly when things aren't normal.

A lot of information on the internet about breast cancer is wrong and misleading. Visit JHAH.com's breast cancer service page where you can also find the JHAH Breast Cancer Awareness Handbook.

common myths

There are a number of myths about breast cancer. Remember:

- Underwire bras do not cause or increase the risk of breast cancer
- Mammograms do not cause or increase the risk of breast cancer
- Breast implants do not increase the risk of breast cancer. However, women with breast implants are in a higher risk category because mammograms can't be performed as easily on them.

JHAH support

JHAH has a breast cancer survivorship group.

Due to COVID-19, physical meetings have been limited. However, virtual support groups will be made available.

Please contact the Oncology Institute regarding upcoming survivor meetings.

For more information about breast cancer oncology services, visit JHAH.com > specialty care > oncology blood disorders > breast cancer.



maskne

top tips in fighting mask-related acne

Maskne is a recently created term used to refer to skin acne or breakouts that are caused by wearing a face mask.

Face masks are important in reducing the spread of COVID-19, but they can agitate skin and cause rashes, breakouts, itching, and discomfort.

Follow these tips from JHAH consultant dermatologist Dr. Najla Al-Dawsar, to protect your skin from the effects of face masks.

- Before you wear a face mask, clean your face with a gentle fragrance-free cleanser
 - Apply sunscreen in the morning before wearing your face mask, or apply a fragrance-free moisturizer if you're going out at night
 - At bedtime, apply a face moisturizer to keep your skin hydrated and healthy for the next day
 - Protect your lips by applying a lip balm that contains Petroleum jelly like Vaseline
 - If you are using a cloth face mask, choose a fabric that is soft on your skin like cotton
 - Let your face breath for 15 minutes every four hours without a face mask once you are at home or alone in a people-free space
 - Wash your cloth mask after every use and dispose of a disposable mask after one trip use.
- If you have any skin disorders, continue the treatment recommended by your family physician or dermatologist in addition to the above tips.

healthy recipe: Spinach Cranberry Salad

Ingredients:

- 6 cups spinach
- ½ cup pomegranate vinaigrette
- ½ cup dried cranberries
- 1 cup blueberries
- ½ cup pomegranate seeds
- ½ cup chopped carrots
- ½ cup dried cranberries
- ½ cup pomegranate vinaigrette
- ¼ cup walnuts (toasted)

Preparation:

Start by placing the spinach in a bowl

and then tossing it with a pomegranate vinaigrette. Then, add in walnuts, carrots, pomegranate seeds, blueberries, and cranberries.



Become a patient at Johns Hopkins Aramco Healthcare (JHAH)

Eligible Saudi Aramco employees and their dependents are invited to register for health care at JHAH. For more information on how to change your registration, contact your local HR Service Center or visit HR Online, or scan the QR code below for detailed instructions.



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‘Safe at JHAH’ welcoming you back

As services begin to reopen at Johns Hopkins Aramco Healthcare (JHAH), it's important you know how your experience will be affected when visiting JHAH health centers. The "Safe at JHAH" webpage is meant to help prepare patients for their next visit.

A number of steps have been taken to ensure patient and visitor safety, including:

Preventive screening: JHAH screens all staff, patients, and visitors at our entrances

Cleaning: JHAH cleans often and rigorously in areas that are heavily visited and used

Physical distancing: JHAH guides patients and visitors, offering visual cues to keep everyone at a safe physical distance throughout its health centers

Protective equipment: JHAH staff members wear protective equipment, and requires patients and visitors to wear a mask. Hand sanitizing stations are installed throughout its health centers.

Video and telephone visits: JHAH offers MyChart Video and Telephone Visits for patients from the comfort of their homes.

Preparing for a visit: Protect yourself and others by washing your hands, wearing your mask, and watching your distance. Check yourself for COVID-19 symptoms, and adhere to our COVID-19 special precautionary guidelines. Plan to

arrive no more than 15 minutes before your scheduled visit. Should you arrive early, please wait in your vehicle or in an alternative waiting area.

We are limiting the number of visitors and escorts to one per patient, with all

visitors needing prior approval. However, for the safety of everyone, we advise patients to only bring an escort if needed. Read about visitors and escorts at jhah.com/safe-at-jhah before planning a visit.



Safe at JHAH

CAUTIOUSLY, WE RETURN

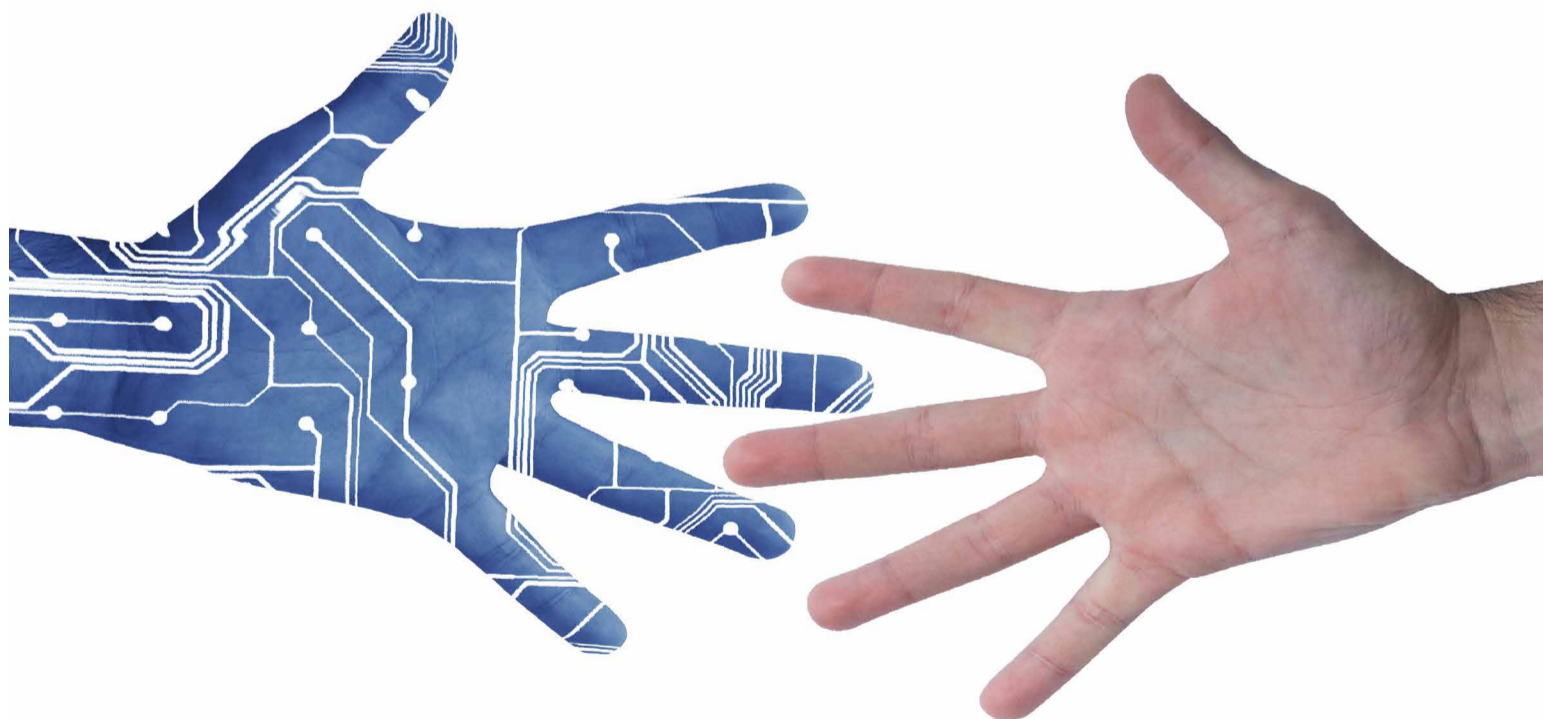
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advancing the ‘Future of Work’

software bots bring timesaving benefits to employees, company



Dhahran — In its continuing efforts to further empower people while decreasing routine and repetitive tasks, Aramco has found Robotic Process Automation (RPA) as a viable alternative.

The new technology uses robotic software applications to complete high volume, rules-based tasks as leaders look to optimize costs, minimize errors, and free up human talent for more creative and value added jobs.

a new bot in town

One such use for this technology is in Aramco's Salary Administration Unit (SAU) in Personnel. SAU is responsible for vetting and endorsing 3,800 permanent and temporary assignments each month, and while some of these are simple tasks, they still require lots of time from employees.

Enter the company's first software bot for HR. Developed to drive efficiency by the Human Resources Systems Support

Department (HRSSD) and Personnel, the RPA exists entirely within the systems here at Aramco.

After six months of hard work and multiple workshops to develop a comprehensive set of rules, the RPA bot was deployed successfully to SAU systems. The results have been promising. The bot has been able to process 21% of all temporary and permanent assignment requests in record time, clocking in at an average of 20 seconds per transaction,

compared to the average of five to 10 minutes per transaction when humans do the work.

The bot's success will not only relieve SAU employees from a number of mundane tasks, but it will also provide greater opportunity to afford these professionals more interesting work. Also, clients will also see a significant improvement in processing time for many requests without sacrificing quality.

the future is now

As a significant part of the HR Digital Transformation Program, the RPA bot marks the first step in a long list of potential use cases for this technology.

Noting that the technology represents a step forward, acting HRSSD director Hasan Al Ghabari said, "Allowing our teams to automate the more menial tasks in their jobs will free them up to deliver real value to our customers. Even more than that, we can devote further attention to our greatest asset — our people."

Personnel director Mohammed A. Al-Shoshan added: "Moving forward with new technologies like RPA is part of the evolution of HR in our business. As HR moves from service provider to business driver, it is imperative that we have the processes in place to provide an even higher level of personal service to our employees, while giving them a seamless digital experience."

For HR's RPA champion Faisal Alotaibi, the value of the bot is notable. "Having a digital workforce such as RPA to execute repetitive and tedious tasks will foster human creativity and innovation in the workplace," Alotaibi said.

converting challenges into opportunities

by Mughees M. Athar

Dhahran — With lots of free time on my hands, I decided to do something that will help me learn something useful and achieve my dream of becoming an architect.

To make the journey smooth, I tapped into the experience of my father, who is a civil engineer. With his advice, I began researching popular tools among architects, narrowing down the list to my final selection — 3-D Studio Max.

And then I buckled up for a deep dive.

I began by downloading the software, playing around and messing with objects and options, eventually beginning to do 3-D modeling. I then turned to a popular YouTuber (Esmael Alhroub) to watch some of his project videos. It helped me better understand concepts frequently used in the program and the task, and I was able to finish over a dozen projects.

I also learned that if you don't understand the tools and use them properly, you can ruin your project.

COVID-19 disruption not only has affected the global economy, it has impacted communities and families, from the heads of households to the youngest children.

With a decidedly unusual summer break this year (with pandemic restrictions on physical distancing and global travel in place), Mughees M. Athar decided to take the challenges it presented and turn it into an opportunity.

from YouTube to real life

After following several videos, I discussed with my father on how to get more formal and advanced training. He helped me find a tutor in the Kingdom who was willing to help me improve by providing advice via Zoom. Soon after, I began working on more complex projects such as interiors of bedrooms, living rooms, and bigger models.

Then I learned how to render, eventually learning enough skills to apply to a basement project in Canada, a renovation project

in Pakistan, and multiple demo projects.

This really boosted my confidence, and with advice from my father, I began to share my newly learned skills and interest with other members of our community in Dhahran through a course. I created a brochure featuring the content of the course, and when I mentioned this to some friends, some showed interest in trying it.

Meanwhile, my father shared my efforts on social media, and soon 11 students — including some older than me — enrolled

in the training. Conducted over Zoom, the course had a few hiccups such as inefficient internet connection and difficulty in downloading software, but overall, it went well. Not only that, I also learned some life-long skills, such as patience, confidence, and much more.

challenge into opportunity

The situation, which was challenging to begin with, also provided the opportunity for me to try something new and learn not just a new skill, but also about myself.

I learned how tough it is to start something you haven't done before, as well as how to 3-D model, and render, and so many more skills that will give me a step up in preparing for future technologies such as engineering, robotics, and much more.

My experience also helped me understand how to better manage my time, and that when you have an opportunity to learn something new, you should take it. It can open up a new path of discovery and help you engage in ways you may never have thought of.



photographic memory

By the time of this 1955 photo, Dhahran had grown from a remote wildcat camp into a bustling community of largely expatriate workers and their families. The Family Issue Store was a cash-only affair and was stocked with a variety of American and European products that the workers of 20 years earlier could only dream about. Here, Mrs. Jack Campbell, a Dhahran resident, checks out her groceries in a setting that is reminiscent of where she might have done her shopping in the United States. (Photo by E. E. Seal)



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the arabian sun



turning green ideas into reality

Aramco's efforts to promote sustainability and protection of the environment goes global with its support of the OurEco Challenge competition.

see page 8

big fun with mini-golf competition in Abqaiq

by Paul Stent

Abqaiq — Employees and dependents from throughout the community had the opportunity to participate in a unique and exciting putting challenge organized by Abqaiq golf consultant Paul Stent. The four-day challenge was open to all members of the community.

To facilitate the competition, the putting area at the driving range was transformed with a fun, new layout that featured a number of challenging obstacles to negotiate. The goal of the challenge was to complete the nine holes with the fewest number of strokes while having the most fun trying.

Harder than it looked, the challenge called out some of the best players in the Southern Area, who now realize they need more practice with a putter, said Stent.

Stent thanked all the participants, with the winners in three different categories receiving special prizes.

Among the winners were Derrick Smith in the men's division; Ida Aritonang in the women's division; and Calvin Manalu, Kaan Russel, and Marco Mata in the juniors division."



Employees and dependents in Abqaiq recently had an opportunity to try out the community's new putt-putt course. Set up by Paul Stent, a number of players in the Southern Area competed in a four-day challenge that was open to all, with winners being Derrick Smith, Ida Airtonang, Calvin Manalu, Kaan Russel, and Marco Mata. The course challenges are multifold with difficult angles, strategically placed bumpers, and even an enormous frog to mark the completion.



Supertrees of Singapore

Furqan A. Qidwai was on vacation in Singapore when he captured this image of the Supertree Grove at the Gardens by the Bay. The 18 tree-like structures dominate the garden's landscape, with heights that range between 25 meters and 50 meters. The Supertrees are home to a variety of ferns, vines, orchids, and other plants, and are fitted with environmental technologies that mimic the ecological function of trees. Qidwai used his Canon EOS 2000D DSLR camera to take the photograph. He lives and works in Dhahran as a 3-D animation and graphic artist in the Media Production Department, and has been with the company seven years.