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SandRose

Magazine



2019
Young
Professionals



Kingdom of Saudi Arabia Section

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Message from the Editor-in-Chief

As a young professional myself, I humbly share the same passions with most professional youth: the passion to continuously improve and meaningfully contribute to our communities. Thankfully, with platforms such as the Young Professional Technical Symposium (YPTS), young professionals are given platforms to unleash their full potentials by offering them opportunities to widen their networks and build on their impressive intelligence, both emotional and intellectual. The YPTS also allows young professionals to give back to their communities by empowering them to seamlessly switch from being the “mentees” to becoming full-fledged “mentors” for the upcoming generations of young professionals. All of the aforementioned was successfully encompassed in the 2019 YPTS, a successful initiative that would not have been a reality without the passionate young individuals in the YPTS committee.

The 2019 YPTS was entirely designed around “Empowering Young Professionals, and Connecting Future Leaders,” a theme believed to deepen audience understanding of the significance of the oil and gas sector in shaping future of the energy industry, as well as highlight the necessary skills for the professional youth to achieve a promising future.

In its first day, the 2019 YPTS accommodated three panel discussions with the intent to guide youth on what it takes to build the bright future that many envision for themselves. Topics that were discussed ranged from “Critical Skills for a Promising Future” to “Women Involvement in the Oil and Gas Industry”.

The second day of the 2019 YPTS was dedicated to mentorship with the theme of “Empowering Young Professionals, Connecting Future Leaders”. YPTS collaborated with Student Outreach to



Salma Al-Hashimi
Editor-in-Chief

connect them with other college students within their region, mentoring them on how to transition from academia to being an impactful part of the work force. Giving young professionals the opportunity to mentor the next generations of professionals gave them a platform to give back to their communities, as well as empower them to take charge; this sentiment was echoed in Dr. Abdulaziz Al-Kaabi’s keynote speech—the Dean of College of Petroleum and Geoscience in the King Fahad University of Petroleum and Minerals.

Ideally, the 2019 YPTS edition was strategically meant to guide young professionals towards their bright futures as potential leaders in the oil and gas industry. Consequently, this year’s edition saw the YPTS committee reach new milestones through various exciting initiatives, including a new SPE-YP award to young professionals from the oil and gas industry, and presentation contests aimed to develop their communication skills. Indeed, proper recognition is the best way to reward young and upcoming leaders, and showcase how much the industry is proud of the efforts they demonstrate towards supporting it. Therefore, gratitude goes out to all the stakeholders for their engagement, hard work and well-deserved recognition.

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Message from the Chairman

The theme of this edition is dedicated for the Young Professionals Technical Symposium, which was renewed this year as a key source for knowledge and development, manifested through technical and non-technical programs, including two pre-event workshops, the “Digital Technology Primer” and “Disruptive Technologies through the 4th Industrial Revolution”, as well as the main event of YPTS.

The Young Professionals Technical Symposium (YPTS), is a lighthouse for shaping future leadership and embracing talents. Ever since the section was formed in 1959, the aim of this section continues in its mission to gather, publish, and exchange knowledge concerning oil and gas disciplines and related technologies for the public benefit, and to provide opportunities for professionals to network and enhance their technical and professional competences.

Almost a decade ago, the YPTS was formed as an initiative focusing on the development of young talents and promoting their leadership skills through vast programs that entails technical series, well-being events and leadership workshops. The 2019 YPTS was entirely designed by our youth to provide a platform for this year’s chosen theme: “Empowering Young Professionals, and Connecting Future Leaders”; a theme believed to reflect the young professionals’ desire and ambition to exceed the status quo, and seize opportunities to thrive as professionals.

Through focusing on expanding the technical strength and development of our youth, the 2019 YPTS provided a unique opportunity for participants to experience our industry’s vision of empowering the youth through an engaging program, which included two keynote speeches delivered by a stellar array of leaders from our industry, and four plenary sessions.



Dr. Bander Al-Ghamdi
Chairman, SPE-KSA Section

YPTS is all about seizing opportunities and providing a platform for the youth to display skills, leaderships and knowledge. Our programs were aimed at demonstrating the significance of our industry in the integrated future of the energy sector, highlighting the critical skills young professionals would need for a promising future, and emphasizing on the vast opportunities of development and engagement for our youth.

For the first time, the 2019 YPTS introduced three prestigious Young Professional awards. The awards recognized the outstanding efforts in the upstream oil and gas industry for promoting knowledge sharing, nurturing leadership skills, and giving back to their community. The awards targeted YPs who have demonstrated exceptional performance in their careers, and encompassed a winner in three categories: Emerging YP, High Achieving YP, and YP Excellence Award. Rewarding our professionals is one of the core values of what SPE-KSA Section stands for to show how much we are proud of the dedicated efforts of our people in support of our industry.

Finally, I would like to deeply thank our sponsors for being our success partners throughout the years, our industry leaders, and the organizing committee for inspiring a role model for engagement, hard work and volunteerism.

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February Technical Dinner Meeting



Christophe de Mahieu
 Director & Partner, Head of MENA Energy & Natural Resources Practice in Bain & Company



For its February Technical Dinner Meeting, SPE-KSA hosted Christophe de Mahieu, Director & Partner, Head of MENA Energy & Natural Resources Practice in Bain & Company. De Mahieu provided an interesting and unique take on the difference between electric vehicles (EVs) and internal combustion engine vehicles (ICEVs) in a presentation titled “Future of global car mix and impact on oil – myths and realities”. He began by stating that the demand on oil, especially in the field of transportation, continues to increase, with road transportation representing 40% of global demand. He then goes on to further explain some of the factors that drive uncertainty in the future of oil demand for road transportation. Those factors are: EV penetration, fuel economy, Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) and biofuel. Of the above, the main focus of his presentation was the myths and realities of EVs and ICEVs. The first myth is that EV carbon footprint

is significantly lower than ICEVs. The reality is that, when coal/oil are used in power generation, EVs generate similar or higher CO2 than ICEVs. Second, EV total cost of ownership is lower than ICEVs. The reality is that, when we adjust for subsidies, we get a clearer view of the real picture. Subsidies become a major financial burden as EV sales scale up, and some governments already started to phase them out. If and when subsidies are removed, the cost actually becomes much higher. Third, consumers are willing to pay more for “cleaner” vehicles. The reality is, though, in several countries such as Denmark, USA (Georgia, specifically) and France, consumers refuse to pay for the transition to EVs. Fourth, EVs will dominate car sales in the near future. The reality is that majority of investments continue in ICEVs, and EV’s shares will remain small compared to ICEV in the mid- term. As a

matter of fact, EVs are expected to have 5-7% share of sales in 2025. De Mahieu ended his presentation by stating that oil demand for road transportation is expected to be above current demand by 2040. Thus, a focus on enhancing combustion engine efficiency is crucial, and it is an initiative that Saudi Aramco has already began working on. Dr. Mohammed Al-Qahtani, Senior Vice President of Upstream in Saudi Aramco and Honorary Chairman of the Board of Directors of SPE-KSA, and Mr. Nasir AlNaimi, Vice President of PE&D in Saudi Aramco and Chairman of the Board of Directors of SPE-KSA, presented the speaker with a recognition trophy as a token of appreciation for his valuable participation in this event. Attendance was around 450 individuals ranging from various management positions, engineers and young professionals.







January Distinguished Lecturer Program



Silviu Livescu
 Chief Scientist in the Global Coiled Tubing Research and Engineering Center of BHGE in Calgary

The SPE-KSA 2018-2019 term held its second Distinguished Lecturer Meeting on January 15, 2019, hosting Silviu Livescu, a Chief Scientist in the Global Coiled Tubing Research and Engineering Center of BHGE in Calgary, Canada. Mr. Livescu delivered an informative lecture about the coiled tubing telemetry as a state-of-the-art technology. Mr. Livescu began the session by giving a brief overview of the history and evolution of coiled tubing. For more than 50 years, coiled tubing has been a fundamental intervention technology. It enables continuous well intervention and control based on available downhole parameters during a conventional coiled tubing operation. Nevertheless, these

parameters are measured at the surface giving rise to uncertainties about the downhole conditions, which may impact the progress and outcome of the operation. To minimize the uncertainty, enhance safety and efficiency and reduce the operational time and cost, coiled tubing telemetry has been developed to acquire and interpret downhole measurements in real time. Coiled tubing telemetry consists of downhole tools with sensors and electronics, data transmission media, such as optical fiber, wire or both, and surface hardware and software to provide real-time monitoring of single-point data including,

but not limited to, pressure, temperature, depth correlation and tool force and torque. This technology has proven successful for a wide range of applications, such as cleanouts, gas lifting, stimulation, milling, logging operations and camera services. Mr. Livescu then presented case studies of successful applications of the coiled tubing telemetry. He ended the session by sharing potential improvements in the technology over the next five years to further enhance the decision-making process during coiled tubing operations and to reduce the associated cost. The session was well attended by subject matter experts and young professionals.



March Distinguished Lecturer Program



Holger Thern
Technical Lead for NMR Research at BHGE



The Distinguished Lecturers Program hosted Holger Thern at Kempinski Al Othman Hotel Al Khobar on March 12th with the attendance of 120 individuals. The lecture revolved around NMR logging and covered a timespan of approximately 20 years, from the early concepts for nuclear magnetic resonance (NMR) logging while drilling (LWD) tools to their current application in the petroleum industry. After briefly introducing the NMR measurement and reviewing the historic evolution of the technology, the presentation focused on case histories that illustrate both the benefits but also limitations of today's NMR LWD technology. NMR logging measurements capture rock

and fluid properties. Best known is the lithology-independent total porosity that complements or replaces porosity data from radioactive logging services. A unique NMR feature is the separation of bound and movable fluids. The NMR T2 distribution is used for estimating rock properties such as permeability, pore sizes, and shale content. Furthermore, NMR can yield an estimate of the saturation and the viscosity of the hydrocarbon within the sensitive volume of the tool. A variety of NMR-only and integrated approaches (including core and surface logging data) were developed and introduced over the past years. Reservoir

characterization applications while or shortly after drilling are available for various fluid types (e.g., gas and heavy oil reservoirs) as well as for various rock types (e.g., complex mineralogy). Promising fields for extended usage of NMR LWD include full petrophysical evaluation without radioactive sources and field development decisions based on real-time NMR data. The main goal of the presentation was to communicate the manifold contributions of NMR LWD to reservoir characterization and its capability to support drilling and completion decisions in the early drilling process.



2019 Young Professionals

Inspiring speakers and panelists, informative workshops, challenging competitions and awards, along with a beautiful photo gallery, these together created the 2019 Young Professionals Technical Symposium (YPTS). The two-day event hosted a total of 600 attendees and kicked off on February 19th under the theme of “Empowering Young Professionals, Connecting Future Leaders”.

The Young Professionals committee of the Society of Petroleum Engineers – Kingdom of Saudi Arabia section holds yearlong events that cater to developing young professionals in the industry through enhancing their

knowledge and broadening their networks. YPTS is the committee’s main event and serves as the richest hub for knowledge sharing and connections. Its uniqueness is found in the fact that it’s “By the youth, for the youth” as the symposium is entirely organized by young professionals, making it all the more special and impressive.

The YPTS organizing committee reached new milestones this year with new and exciting initiatives. This year, YPTS inaugurated a new SPE-YP award dedicated to young professionals from the Oil & Gas Industry, ages 35 and below, who have

demonstrated exceptional technical and non-technical performance in their careers. This initiative was led by Dr. Sunil Kokal along with 4 judges. Under the category of “The Emerging Young Professional”, the award was given to Ms. Sarah Al-Amer from Saudi Aramco. Second, “The High Achieving Young Professional” award was presented to Mr. Abdulhadi Al-Qarah from Schlumberger. Finally, the “Young Professional Excellence” award was given to Mr. Mohammed Kurdi from Saudi Aramco.

Also, the YPTS committee also organized the presentation contest, with 60 abstracts submitted from

Saudi Aramco, several service companies and KFUPM. The top 11 were presented to a technical committee comprised of 7 judges. The judges were led by Dr. Faisal Enezi, supervisor of Gas Petrophysics Unit. The winners of the contest were Muhanned Al Abdullatif from EXPEC ARC, Saudi Aramco, Mohammed Al-Hamdan from Schlumberger and Nouf Al Jabri from EXPEC ARC, Saudi Aramco.

SPE-KSA YP Awards and Presentation Contest winners were recognized on the first day of the symposium.



The symposium was inaugurated with words of inspiration, dedication and encouragement from Ms. Suha Kayum, SPE-KSA Young Professionals Chairperson.

Following the opening remarks, the audience enjoyed keynote speeches and panel sessions featuring prominent leaders and pioneers from the Oil & Gas Industry. The main objective of these sessions was to deepen the audience's understanding of the significance of our industry in the integrated future of the energy sector, and to highlight the critical skills that the youth would need for a promising future.

The keynote speakers on the first day were Mr. Ziad Al-Murshed, Vice President of Downstream Growth and Integration and Mr. Ghassan Mirdad, President of Schlumberger Eastern Middle East.

Speeches were then followed by three panels. The first panel

discussion encompassed the theme of "Empowering Young Professionals, Connecting Future Leaders". It hosted Dr. Ali Dogru, Saudi Aramco Fellow, Mr. Craig Smith, CEO of Dhahran Techno Valley, and Mr. Colin Sloman, Director of Management and Professional Development Department at Saudi Aramco. This session was moderated by Mr. Mohammed Alnahas, YPTS organizing committee member.

The second panel discussion discussed "Critical Skills for a Promising Future" and hosted Ms. Khulood Al Ruwaih, Human Resource Director at Baker Hughes, Ms. Mae Al Mozaini, Manager of Regulatory Affairs at Saudi Aramco, Mr. Salam Salamy, Senior Petroleum Engineering Consultant at Saudi Aramco and was moderated by Mr. Nassir Abalkhail, YPTS organizing committee member.

The third panel discussion fell under the umbrella of "Women

Involvement in the Oil & Gas Industry" and demonstrated real examples of efforts put forth to empower Saudi female engineers, as two of our panelists recently completed their one-year assignments in Udhailiyah. This discussion hosted Reem Al-Ghanim, Organization Performance Specialist at Saudi Aramco, Ricardo Santos, Human Resources Director at Schlumberger Saudi Arabia & Bahrain, Ms. Walaa Almukhtar, Petroleum Engineer at Saudi Aramco, Ms. Fatima Al Kiyadi, Petroleum Engineer at Saudi Aramco and was moderated by Mr. Akram Barghouti, YPTS organizing committee member.

The second day, themed around the younger generation and titled "Connecting Future Leaders", was equally filled with energy, enthusiasm and a thirst for knowledge and communication. In collaboration with Student Outreach, YPTS connected

future leaders by extending their reach to college students from around the region, providing them with a golden networking opportunity.

The keynote speech was given by Dr. Abdulaziz Al-Kaabi, Dean of College of Petroleum & Geoscience in the King Fahad University of Petroleum and Minerals (KFUPM). Dr. Al-Kaabi shared his words of inspiration with the audience and focused on empowering Young Professionals with emphasis on the role of mentoring. He also commended the SPE-KSA on launching the E-mentorship program.

During the day, a panel discussion was conducted. The panel discussion, titled "Transitioning from Academia to Industry", focused on overcoming the hurdles and challenges that face young professionals in the industry. The panelists included Mr. Ahmed Althukair, Saudi Aramco Production Engineer, Mr. Abdulaziz Al Sulaim,



Saudi Aramco Reservoir Engineer, Ms. Dalia Almuslem, Saudi Aramco Renewable Engineer, and Mr. Ali Al Naji, Schlumberger Drilling Engineer. The panelists emphasized on the available resources that can help new professionals in their careers, and shared multiple personal stories. The moderator, Mr. Abdulaziz Albassam, SPE Planning and Coordination Chairperson, led the discussion into three main frames, which he named: The Introductory Stage, The Adaptation Stage, and The Progression Stage. In each stage, the panelists shared great insights on how to best overcome the challenges and how to excel in the industry.

This was followed by two speeches by Reem Alsadoun and Mohammed Kurdi, who earned first place in the SPE International Student Paper Contest for best research in the Oil and Gas Industry

in the Undergraduate and Master's divisions, respectively. The two Saudi Aramco employees won first place among 14 regional winners at the SPE ATC&E in Dallas after winning the regional contest at the 2017 SPE Asia Pacific Conference. Both Reem and Mohammed shared their fruitful experience with the audience and then answered multiple questions, in which they highlighted how to best excel in international venues.

The 2019 YPTS concluded with the kickoff of the SPE-KSA E-mentorship online service, the first of its kind in the Kingdom. The program aims to connect mentors and mentees from the Oil and Gas Industry. E-mentorship program gives SPE members a way to contribute to the E&P industry by sharing industry insights and practical career advice with young professionals, or by helping university students with

academic and career direction. Young professionals also have the unique opportunity to serve as mentors to students. Communication is eased through email, Skype, LinkedIn or other social media.

Next, Mr. Abdullah Jabr gave his opening remarks on behalf of the Student Outreach committee. The event continued with three speeches from e-mentorship ambassadors. Mr. Ali Hijles, Mr. Suliman Azzouni and Mr. Hasan Ismail addressed the audience with a mix of personal success stories relating to mentoring and studies done on the subject. Their speeches were very encouraging to both perspective mentors and mentees to participate in the new SPE-KSA E-mentorship program. Finally the event ended with a fruitful, open discussion between mentors and mentees.

Besides the two-day symposium, this year's YPTS included technical and non-technical programs, including two pre-event workshops, the "Digital Technology Primer" and "Disruptive Technologies Through the 4th Industrial Revolution" which had a total of 60 attendees from Saudi Aramco and service companies.

The 2019 YPTS was an ignition source for producing the unimaginable for the future leaders of the industry. The symposium was an optimum venue for knowledge sharing, networking, communicating, and enhancing technical and non-technical skills among Young Professionals. The YPTS is an annual event organized by the Young Professionals, and this year in collaboration with Student Outreach committee of SPE-KSA, has been continually growing and becoming more inclusive of Young Professionals and College Students alike.



Presentation Contest

YPTS







upstream hackathon 2018



Number of Attendees
240

Inspiration, innovation and collaboration: all words used to describe the “Upstream Hackathon” held in Saudi Aramco’s EXPEC auditorium. Companies in the magnitude of Saudi Aramco tend to prioritize business over innovation, but Saudi Aramco is known for tenaciously melding business and innovation in a unique approach to solve the company’s ongoing challenges, and that was evidently highlighted in the “Upstream Hackathon”.

The Hackathon successfully created a culture of innovation by presenting 15 technical challenges, where participants were empowered to tackle these challenges in the innovative direction they saw fit. This sentiment was echoed in the opening

remarks of EXPEC Advanced Research Center (ARC) Manager Ali A. Meshari, who encouraged participants to utilize the opportunity to refine their ideas past the conclusion of the event. He also offered a helping hand in nurturing ideas with business potential--“We will be going to help you if it is patentable to file a patent. These ideas will also go through the same process as in EXPEC ARC if they are worth developing.” The Manager’s declaration most certainly fueled the participants’ fiery passion.

In this era of technology boom, the theme of the “Upstream Hackathon” was the 4th Industrial Revolution. The 107 young participants were tasked to



develop solutions to technical challenges through the lenses of artificial intelligence, virtual reality and robotics. The technical challenges were presented on stage by Upstream Subject Matter Experts (SMEs) who elaborated on the current challenges facing Upstream operations, and how the participants can effectively create solutions. The technical challenges ranged from innovative methods for oil discovery, to successfully predicting the need of replacing intelligent field equipment. After the challenges were presented to the audience, the SMEs were available in the venue to ensure participants were well-supported and guided in their quest to develop a viable solution. The Hackathon ran for two days, and on the final day, teams had to present their solutions to a committee of industry experts. Each team presented a unique approach on the challenge given to them, as some opted to develop an algorithm capable of detecting trends within a sea of data to predict outcomes, while others honed on automating repair processes to limit the need for human involvement.

In the end, the goal of the Upstream Hackathon was not to simply generate



solutions to ongoing company challenges; the event had a greater purpose: it aimed to empower youth to take charge, lead and tackle challenges, challenges that could not have been solved without the dynamic teamwork each team exhibited. Consequently, some participants sharpened their skill set, while others gained brand new ones--“Hacking the challenge and winning the first place at the 2018 Upstream Hackathon was a great bonus to winning new friends and learning new things. In my opinion, the real hack was not in hacking the challenge, it was in hacking the right team that combined the knowledge capabilities, work ethics and most importantly passion,” said Musab Al-Modrra of Exploration Resources Assessment Department. Judging by the participants’ reactions, expect an increased jolt of passion within Upstream’s youth.

Written by: Khalid E. Albutairi
Engineer

Balance Team

Breathing for a Mindful Life

January 31, 2019

Mariam Assadeq
Certified Yoga Teacher



Number of Attendees

60

On Thursday, January 31, 2019 the YP Balance Team hosted Mariam Assadeq, a certified yoga teacher with 300 hours of training. Mariam started the talk by introducing key concepts about mindfulness and how to cultivate it. The topics covered during the talk were: mental hygiene, science of yoga and meditation, how to avoid extreme stress, and a meditation exercise. She then introduced the concept of mental hygiene. “The mind is the window through which we see and experience the outside world”, she added. If the window is kept clean, you will be able to see through it better; therefore, you need to keep your mind tidy and sharp. Therefore, one has to maintain healthy mental hygiene because: “Thoughts lead to feelings, feelings lead to actions, and actions lead to results.” Mariam then added that being mindful could help us avoid extreme stress. Mindfulness is about living in the present moment. Prior to conducting

the meditation session, Mariam opened the floor for Q&A.

- What is the best time to practice meditation? She noted that the best time to meditate is early in the morning; however, anytime throughout the day would do.
- How long should we meditate to experience the benefits? Mariam said that great results have been shown for those who exercise meditation routinely, 20-30 minutes daily.
- Are there any mobile applications that help you exercise meditations? Yes, there are a few that I know of, which are: “Head Space”, “Insight Time”, and “Calm”

Afterwards, the audience participated in a meditation exercise. The exercise helped participants relax by counting their inhales and exhales and focusing on their breathing.

Written by: **Ahmed Ayesh**
Petroleum Engineer

Inspirational Leaders

Becoming Anti-fragile by Going Beyond Resilience

February 6, 2019

Dr. Zeid Al-Ghareeb
Petroleum Engineering Specialist



Number of Attendees

80

The YP Inspirational Leaders team intrigued us once again by its new term’s event by hosting Dr. Zied Al-Ghareeb. Zied started his fruitful journey with Saudi Aramco in 2005, where he held various engineering roles in multiple disciplines. He then added to his accomplishments by holding the position of 2017/2018 Chairman of the SPE-Saudi Arabia Section. Zied is currently leading the gas stimulation group responsible for conducting integrated reservoir studies, as well as guiding major operational and reservoir management decision.

Dr. Al-Ghareeb started his inspirational talk by sharing some personal experiences on how he developed his affirmative and progressive career with over 80 attendees who were excited and motivated for the journey of this session. He explained the concept of anti-fragility and he fortified the audience to be surrounded by some stressors that helps to be anti-fragile in the

lifelong career.

Dr. Al-Ghareeb underlined ten factor elements he believes to be the fundamentals for a successful and developed career. The first and most important element is “Positive Peer Pressure”, where he encouraged for genuine competition and collaboration. He then emphasized on building credibility that can be grown with horizontal knowledge. Dr. Al-Ghareeb also touched on the notion of “Via Negativa” where adding to your life by subtracting. “Sometimes subtracting negative things will lead to positive results” said Zied.

At the end of the session, Dr. Al-Ghareeb opened the floor for a Q&A session with the audience and it was very interactive. He then ended the discussion with two main messages: First, always introduce yourself to frequent stressors as this will help you to be Anti-fragile. Finally, develop strength after every experience.

Written by: **Asma Al-Ahmadi**
Petroleum Engineer

The Engineers Week Activity in Jubail Industrial City



As part of the Ambassador Lecturer initiative, SPE-KSA Student Outreach (SO) team have sponsored and participated in the International Engineers Week event that was organized by Royal Commission in Jubail targeting children to increase their awareness of the engineering role in our lives through engaging workshops. The event lasted for seven days and had more than 10,000 visitors from different age ranges.



SPE-KSA Student Outreach (SO) team not only sponsored the event but also had their own booth with volunteering engineers who had the chance to engage with children and give them an overview of the role of a petroleum engineer in our lives. The engineers organized small activities where children had to color and solve simple puzzles related to petroleum engineering disciplines. Upon the completion of the activity, the child will be handed a petroleum engineering coupon that they've successfully participated in the petroleum engineering workshop. Once a child collects four coupons from different engineering sections, it can be replaced with a motivational certificate with the child name on it. The children were so engaged with the SPE-KSA booth activities that resulted in valuable discussions that was well-received by the children, or our future engineers, so to speak.



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Zac Reyna



Schlumberger



Ziad Jeha,
Schlumberger President, Saudi Arabia and Bahrain

As appeared in Oil & Gas News publication, March 2019.

Schlumberger focuses on delivery of integrated services

Schlumberger, the world's largest oilfield services company, has over the course of last year, successfully mobilized 25 land rigs to fulfil the well requirements of Saudi Aramco in multiple oil and gas fields.

"This was a worldwide record mobilization where successful deployment of rigs, technology and equipment were achieved in less than seven months. Today, with 25 operating lump-sum turn-key (LSTK) rigs, Schlumberger has demonstrated how integration leads to improved efficiency, reliability and economical gains to our customers, which contributes to improving the total cost of ownership," says Ziad Jeha, Schlumberger president for Saudi Arabia and Bahrain.

Pointing out that in early 2018, Schlumberger was awarded the largest land rig integrated LSTK contract with Saudi Aramco, Jeha says that aside from the LSTK contract, Saudi Aramco awarded Schlumberger a

three-year integrated production services contract for the provision of well stimulation and testing services for a conventional gas field in the South Area. The contract will include deployment of the BroadBand Sequence fracturing and OpenPath stimulation services.

Back in 2017, Schlumberger successfully completed an offshore integrated drilling contract for Bapco Exploration Division in the Kingdom of Bahrain, Jeha says in an interview with OGN.

The contract entailed drilling and fracturing offshore wells using new technologies for the first time in the reservoirs.

This work resulted in Bapco Exploration Division announcing the oil offshore discovery that holds an estimated 81.5 billion barrels of oil and 390 billion cubic meters of associated gas in place, he says.

Excerpts from the interview:

What is Schlumberger's current presence in Saudi Arabia?

Schlumberger has been operating in Saudi Arabia since the first wireline logging job took place in 1941. Today, the company supplies the most comprehensive range of oil and

gas services in the region, from exploration through production, and integrated pore-to-pipeline solutions that optimize hydrocarbon recovery to deliver reservoir performance. In Saudi Arabia, Schlumberger operates four oilfield services bases and facilities, two manufacturing plants and two centers: the Dhahran Carbonate Research Centre (SDCR), located in the eastern province of the Kingdom, and the Middle East Centre of Reliability and Efficiency (CRE) in Dammam. Also, Schlumberger is in the process of building the first and the largest land rig manufacturing facility in King Salman Energy City.

As the first research center established in the Dhahran Techno Valley, the SDCR continues to demonstrate leadership in its two core domains: geology and rock physics and production completion and recovery. Tasked with tackling local industry challenges through the development of customizable solutions, the center plays a central role in the collaboration of major clients in the Middle East with Schlumberger operations, product lines and technology centers worldwide.

Being the largest state-of-the-art Schlumberger facility in the region, the CRE provides technology maintenance and refurbishing as well as drill bit manufacturing. The center brings together teams of technology manufacturing and sustaining experts under the same roof to further enhance service delivery to regional customers.

Operational efficiency has always been imperative to oil and gas producers. What are key factors contributing to higher efficiency and how does Schlumberger address them?

Increased levels of integration enable operators to increase efficiency and optimize production while reducing cost per barrel. That is why Schlumberger focuses on the delivery of new technologies and business models that involve greater integration and collaboration with the industry key players. As our customers seek new ways of working,

the adoption rate for integrated services is increasing.

It is not unusual for a number of Schlumberger business lines to be present at an operation, and there are benefits to operators from a high degree of integration and project management of their scope.

For one, this enables the acceleration of technology development and adoption by allowing the service company to select which technologies to use in wellbore when executing lump-sum turnkey (LSTK) contracts. Not only do these contracts align cost and risk on new technology deployment, they also bring significant business value to the operators. For example, in at least three projects in the Middle East, this model has achieved over 40 per cent reduction in drilling costs.

Could you update us on recent LSTK contracts and other ongoing projects in the region?

In early 2018, Schlumberger was awarded the largest land rig integrated lump-sum turn-key (LSTK) contract with Saudi Aramco. Over the course of the past year, we have successfully mobilized 25 land rigs to fulfill the well requirements of Saudi Aramco in multiple oil and gas fields. This was a worldwide record mobilization where successful deployment of rigs, technology and equipment were achieved in less than seven months. Today, with 25 operating LSTK rigs, Schlumberger has demonstrated how integration leads to improved efficiency, reliability and economical gains to our customers, which contributes to improving the total cost of ownership. Aside from the LSTK contract, Saudi Aramco awarded Schlumberger a three-year integrated production services contract for the provision of well stimulation and testing services for a conventional gas field in the South Area. The contract will include deployment of the BroadBand Sequence fracturing

and OpenPath stimulation services. Finally, in 2017, Schlumberger successfully completed an offshore integrated drilling contract for Bapco Exploration Division in the Kingdom of Bahrain. The contract entailed drilling and fracturing offshore wells using new technologies for the first time in the reservoirs. This work resulted in Bapco Exploration Division announcing the oil offshore discovery that holds an estimated 81.5 billion barrels of oil and 390 billion cubic metres of associated gas in place.

You mentioned the importance of deploying new technologies in the wellbore. What new technologies from Schlumberger were recently introduced to the local oil and gas industry?

One of the key advantages that Schlumberger continues to offer is the service industry's longest and most comprehensive commitment to technology and innovation. This unique benefit has always motivated our customers to request the deployment of innovative solutions for the first time in this region.

In the reservoir evaluation domain, the QuantaGeo photorealistic reservoir geology service was successfully deployed in Saudi Arabia delivering highly detailed, core-like images that visually represent formation geology and provide nearly total circumferential coverage in 8-in boreholes. Another indispensable reservoir characterization technology that provides critical data for making changes in drilling and completion designs is the ThruBit through-the-bit logging services. These services make it possible to log geometrically complicated wells with greater reliability, at reduced risk, and in less time than alternative conveyance techniques.

Finally, our customers use the Muzic wireless telemetry technology as the industry's fastest, most advanced system for achieving real-time bidirectional communication between surface and downhole. Using

this technology enables real-time decision making during drillstem tests while improving the overall efficiency of testing operations.

What are the latest advances in drilling and production?

In the drilling domain, we have been successfully using the GeoSphere reservoir mapping-while-drilling service which has provided Saudi Aramco with a necessary depth of investigation for maximising reservoir exposure and refining field development plans. This current technology has now expanded to the GeoSphere 475 service that enables identifying the reservoir while geosteering slimhole operations within the target zone.

The RHELIANT thermally stable, flat-rheology drilling fluid system from M-I SWACO, a Schlumberger company, is used to improve wellbore stability, which translates into faster drilled sections. On the drill bits' side, the new AxeBlade ridged diamond element bit has instantaneously improved ROP across multiple Saudi Aramco fields. As for the gains in production, Schlumberger has been using 15,000-psi-rated completions equipment proven to meet customers' production needs in deep reservoirs known for hostile downhole conditions.

Schlumberger has been staying at the forefront of digital evolution in the drilling sector. Can you comment on the latest developments?

Schlumberger introduced the DrillPlan coherent well construction planning solution as the first cloud-native application in the DELFI cognitive E&P environment. The new solution provides a new way of working to deliver higher-quality drilling programs faster through the automation of repetitive tasks and validation of end-to-end workflows to ensure that the entire plan is coherent. Deploying the DrillPlan solution on Saudi

Aramco LSTK wells would reduce decision-making time and improve reliability while promoting collaboration between all stakeholders.

As part of Saudi Aramco's In-Kingdom Total Value Add (IKTVA) plan, what targets have been achieved so far?

In 2017, Schlumberger signed a memorandum of understanding with Saudi Aramco to develop an IKTVA roadmap in alignment with the Kingdom's economic vision for 2030. Since then Schlumberger has been awarded the Best Overall IKTVA Excellence Award for three years in a row, from 2016 to 2018.

The Schlumberger IKTVA roadmap capitalizes on value creation that is at the core of this program. This translates into cascading the IKTVA culture to local suppliers and working with international vendors to bring their businesses into the kingdom. By recruiting and training over 700 Saudi nationals in 2018, Schlumberger has proudly achieved a historical talent development milestone in just one year. It gives me pride to emphasize that every year since the inception of the IKTVA program, Schlumberger has exceeded the targets established by Saudi Aramco.

OpenPath Reach

Extended-contact stimulation service

- Increase production in carbonate wells with deep-penetrating, engineered acid stimulation.
- Reduce environmental footprint and minimize risk of emulsions during production by using single-phase fluid.
- Improve logistics with simplified fluid system.

slb.com/openpath

Schlumberger

Our Role in Global Sustainable Development



Mohammed Alnahas,
Petroleum Engineer at Saudi Aramco

For the last half century, the world's nations have been scrambling to find an effective and applicable strategy towards global sustainability. One of the most notable efforts was in the 1992 Earth Summit in Rio de Janeiro, where world leaders agreed on fighting Earth's destabilizing threats. Two decades later, the world assembled again in what is known as the "Rio +20 Summit" to review the progress made and plan for the future. The results were miserable; the efforts were rated on scorecards by United Nations experts and the world scored an F in every major goal that was set in 1992. So what do we do now? We're wasting time we cannot afford, our planet is getting more vulnerable by the day, and doing "business as usual" will only make our situation worse. Here is where the Sustainable Development Goals (SDGs) were born. The SDGs combine goals of economic growth, social inclusion, and environmental

preservation through 17 goals that are back-casted and road-mapped to be completed by 2030. Luckily for us in the Kingdom, we have our own national Vision 2030, which aligns perfectly with most of the SDGs. This gives us a great opportunity to become international leaders and role models of endogenous sustainable development. The 17 SDGs are designed to be interconnected; since investing in one goal would have positive impacts on others. For example, SDG 7, which is to "ensure access to affordable, reliable, sustainable and modern energy for all", is directly related to SDG 8, which focuses on "promoting sustained, inclusive and sustainable economic growth". SDG 8 itself is related to a number of other goals, and so forth. By adopting the SDGs, we would take a major step towards global sustainability and prosperity. This highlights a major and critical factor in adopting the SDGs. We cannot adopt a partial

strategy towards them or else we would be following our own failing footsteps that we adopted in 1992. The concept of sustainability is inclusive and holistic, and therefore our strategies should adopt integration instead of segregation.

Out of the 17 SDGs, we – as the Upstream industry – are better associated with the seventh goal and its interconnections. As Petroleum Engineers in the Kingdom, we are committed to provide the world with sustainable and reliable energy. Apart from our extraordinarily low numbers of greenhouse gas emissions compared to other international oil companies, we are heavily investing in renewable energy programs, energy efficiency research, and carbon capture and storage pilots to strengthen our position as the world's leader in the quality and quantity of energy supply. We already have projects that are up and running in renewable energy, such as the wind power projects in Turaif and Huraymla and the solar power projects in Tabuk, KAUST, and KAPSARC. In addition, the Kingdom is focusing on optimizing its conventional energy use by establishing the Saudi Energy Efficiency Center (SEEC), which focuses on enhancing the energy efficiency of residential, industrial, and transport sectors.

As the leading energy industry, we should continue heavy investments in enhancing energy efficiency and decreasing our carbon footprint. One notable effort that shows the importance of collaboration between O&G companies is the Oil and Gas Climate Initiative (OGCI), which consists of 13 major International Oil Companies. The OGCI is already committed to \$1.3 billion dollars to be spent on research towards decreasing greenhouse gas emissions from the Oil & Gas industry. Now these plans seem

relieving to us in Saudi Arabia, but we share the planet with over 190 nations that need to be on the same page. The path towards global sustainable development will be challenging, especially with the rising world population and the rise of the middle class in emerging economies such as China and India. The new middle income population will demand – and rightfully so – more utilities, food, and energy to maintain their standard of living. It is up to us as a global community to collaborate towards enhancing our living standards without destroying our planet. There are no guarantees that these global efforts will succeed. After all, we have failed before in 1992. But there is always hope, especially with an increasingly attentive public, new technological breakthroughs, and global commitment to the cause.

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Who Makes Leaders?



Malik A. Arafat,
Academic Programs & Partnerships Dept.
Saudi Aramco

There is a long debate about whether leaders are born or made. In other words, is leadership a skill that can be acquired, or it is a result of individuals' genetic makeup? Different leadership schools propose diverse evidences and justifications to support their diligence in this regard. Leadership is also driven by context and culture meaning a leader might succeed in a particular context, but might not fit in other contexts.

Behavioral theories of leadership have a strong belief that people can learn how to become leaders. In other words, leadership ability can be learned and is not inherent. This brings up the question of: who makes leaders? I once had the opportunity at a conference in the U.S. to attend an exciting speech by the

44th President of the United States, Barack Obama. One thing that Former President Obama highlighted during his speech is that leaders make leaders. This contradicts the thinking of many people that leaders are apprehensive of making leaders. There might be some reservations in certain cases, but it makes no sense to consider it as a principle or rule.

Even if some individuals naturally show certain leadership qualities, people don't simply become leaders overnight. "Leadership is a marathon, not a sprint," said Gordon Tredgold. It requires patience to practice and sharpen the required capabilities to become a great leader. Leadership candidates must be developed through ongoing specialized learning

and training programs to be able to prove the required skills. In general, people, including leaders, develop through teaching, observing, and practicing (learning by experience).

Frequently, leadership candidates are excited about being the boss who oversees others, and to certain extent, can make some decisions unilaterally. The first principle that leaders should teach leadership candidates is to understand and differentiate between managing and leading. In an easy way, managers are mostly task-focused, and intend to have people work for them by leveraging on their position and level of authority. On the other hand, leaders are more creative, motivating and inspiring, and demonstrating

characters characteristics that make people follow them.

Leaders should educate leadership candidates to understand the current company business, goals, mission and vision where the company is headed, and how leaders can contribute in achieving those goals. Having a comprehensive knowledge of the business will help leadership candidates to make proper decisions. In addition, it will help them to determine the required resources, including, people and skills, to make things happen.

Leadership candidates look into their leaders as role models. They observe their behaviors and actions, and listen seriously to their advice. In addition, they might copy or apply their superiors' leadership styles and act similarly. Leaders have to behave in a proper way to convey valuable messages and useful lessons. In other words, for leaders to be a good example, they should demonstrate integrity (walk the talk) as a significant trait and value. In addition to other ethical and professional relevance skills such as being a good communicator, and creative, taking the initiative and have having a positive attitude are equally as important.

Practice (on-the-job development) has been proven as an effective and efficient approach to develop a variety of skills, as well as helping individuals to learn

faster and better. Introducing leadership candidates to a new experiences, situations, cultures, or people helps to add new facets that enable them to analyze situations, use different leadership approaches, and make proper decisions. Engaging young professionals requires assigning them a higher level of responsibility, rotating them into various departments or job functions, giving them the opportunity to act alone, and making them accountable for their decisions and actions.

Engaging doesn't mean young leaders have to be left in the dark, but to give them adequate instructions, coaching, and guidance. In addition, sharing instructive constructive feedback will help them to improve their leadership capabilities and establish a close and trusting relationship, which in return promotes a two-way communication that is inspiring and motivating, as the seasoned leader is the first to know about any progress the candidate accomplishes.

Part of the engagement is to invite young leaders to attend discussions and meetings. This will help them to learn from different experiences, gain

better understanding of how things work and how decisions are made, and to present themselves and connect (network) with other leaders. As Warren Buffett said, one of the most successful investors and the third-wealthiest person in the world in 2014, said, "It is better to hang out with people better than you. Pick out associates whose behavior is better than yours and you'll drift in that direction."

Leaders are a key pillar in making and developing leaders by selecting the right leadership potential candidates, providing enough education, training, empowerment and coaching, sharing constructive feedback, listening to proposals and encouraging, inspiring inspiration, and ensuring smooth knowledge transfer. It is a big responsibility on leaders' shoulders to translate business vision into reality and ensure the next generation's readiness to take over the leadership role. Leadership is about influencing and making impact. As Donald McGannon said, "Leadership is an action, not a position."



Al-Ahsa Trip

January, 2019



On January 25, 2019, a total of 20 SPE members with their families visited Al-Ahsa, one of the world’s largest natural agricultural oasis, with over 3 million palm trees and many hot and cold springs. It was a one-day trip to discover the heritage of the most respected and important cultural city that have always been the center of attraction by the tourists.

The trip covered the following places:

- The famous Um Saba’a Spring: the springs have been attracting visitors from various regions for tourism and medical treatment.

- The historical Jawatha mosque: the earliest mosque built in east Arabia and the second ever in the world. It is where the second Friday congregation prayer in Islam was offered.
- The Handmade Pottery Factory: one of the oldest pottery centers in Saudi Arabia. The factory started over 150 years ago.
- Al-Koot Heritage Hotel
- Ibrahim Palace: a 500 years old history that can’t be missed! It was built during the early days of the Ottoman rule and it is one of the prominent historical palaces and the most important effects

of Al Ahsa.

- Mountain of Al-Qarah: one of the most famous natural attractions in Al-Ahsa and have become a tourist favourite as well as a popular place for nearby locals to spend their evenings.
- Al-Qaysariyah traditional market: the oldest market in the Arabian Gulf, with a history dating back nearly six centuries.
- Al-Ahsa Dates Market

It was just the kind of memorable and unique experience, not forgetting the typical and traditional “Hasawi” food!



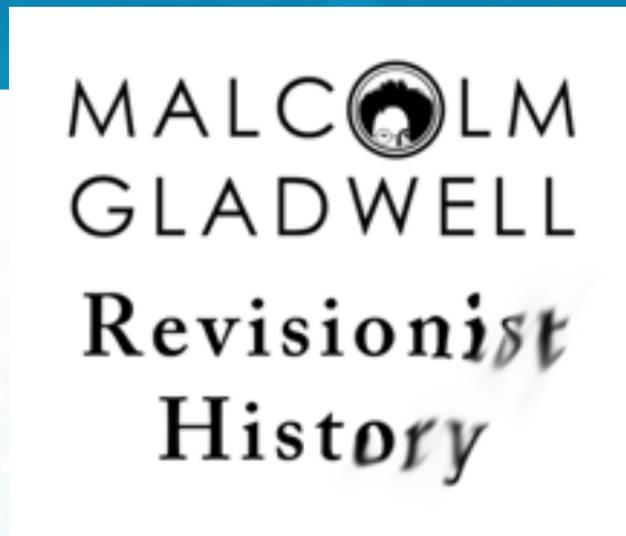
Recommendations

1 Podcast

Revisionist History: “Sometimes the past deserves a second chance.” - Malcom Gladwell

From the author of the bestselling books *The Tipping Point*, *Blink* and *Outliers*, comes the podcast *Revisionist History*, where Gladwell revisits forgotten or misunderstood events from the past and offers alternative interpretations which history missed. In his podcast, he attempts to uncover mass delusions and find larger ideas that explain various phenomena. With three seasons aired, each episode re-examines different events and topics ranging from war and famine to music and French fries.

Through these historical events, Gladwell explores various themes and adds a fresh viewpoint to an array of subjects such as the nature of human memory, moral licensing, human biases and wildly accepted medical facts. Just as we did from his books, expect to learn a new idea from each episode!



2 Book/audiobook

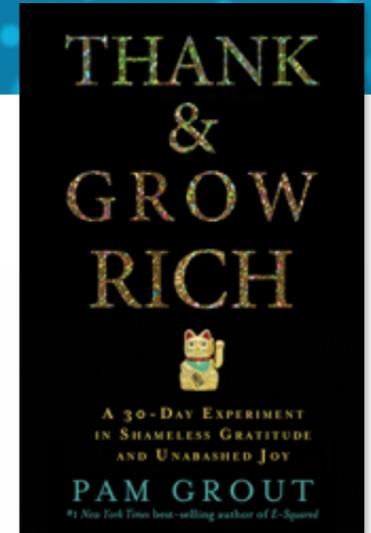
Thank and Grow Rich: A -30Day Experiment in Shameless Gratitude and Unabashed Joy

By Pam Grout

A funny and light-hearted book on the power of gratitude in everyday life, from the bestselling author of *E-Squared*. The title is a play on Napoleon Hill’s bestseller *Think and Grow Rich*, except this author argues that being in a grateful state of mind can create greater riches and bring more joy in one’s life.

The book offers recommendations to help shift one’s focus from what is missing or going wrong to what is going right and appreciating the small things around us every day. She shares personal stories of practicing what she dubs the “extreme sport of gratitude”, from zealously counting ones’ blessings to even giving thanks to what is seemingly not going well.

The author highlights the benefits of such activities, and shares studies which link a person’s state of mind (mood) with their mental capacity, and therefore their success. She demonstrated that by sharing countless examples from CEOs to composers and movie directors and attributes their success to their positive mind-set and gratitude.



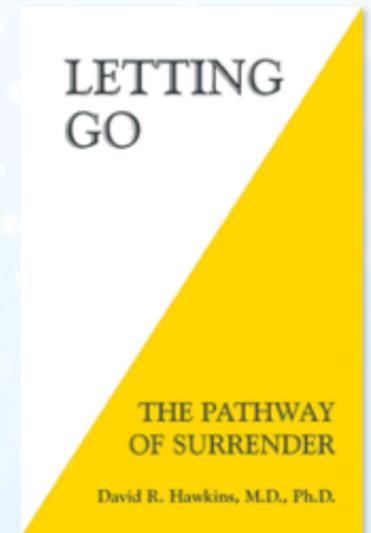
3 Book

Letting Go by Dr. David R. Hawkins

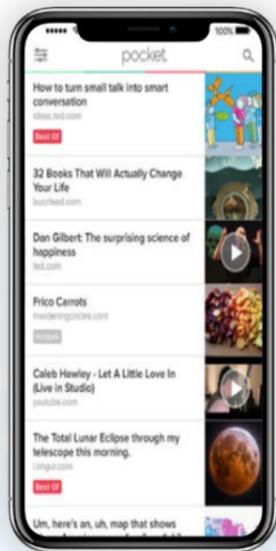
A classic for self-development, this book offers the reader an understanding of the human mind and consciousness and offers a simple yet effective method to release blockages and unlock one’s innate capacity for success, health and happiness.

This book can help with an array of matters, from fear of public speaking to handling internal and external stresses. It also sheds light on the link between an individual’s level of consciousness and human behaviour. The author, Dr. Hawkins, builds on his previous work in his book *Power vs. Force* on the Scale of Human Consciousness, which he established through decades of practice and scientific studies.

It is a transformational and insightful read, with an empowering technique. This book can be beneficial for personal growth and achieving personal and professional goals, or if you are simply curious about human behaviour.



Useful Apps

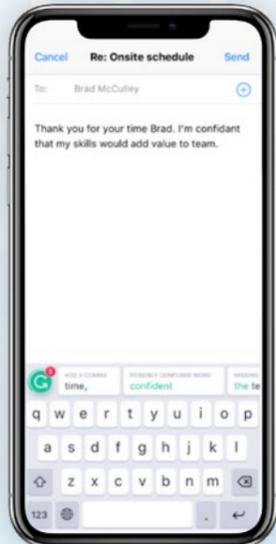


Pocket

This app allows you to capture the content that comes at you all day long, and curate your own space filled with only the topics you care about.

Features:

- Save from anywhere: save the latest news, magazine articles, stories, and more.
- Listen to articles: this feature turns any news story, article, or blog post into a hands-free, eyes-free learning experience.
- Read everywhere: Pocket makes the most of your time by getting you straight to the news feeds.
- Discover more of what you love

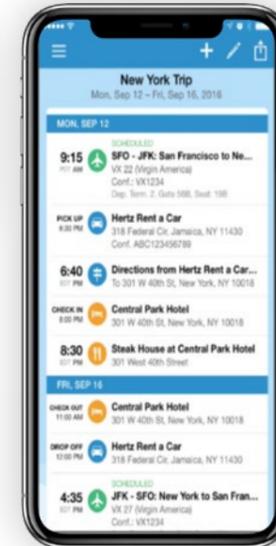


Grammarly

Grammarly is the personal editor you can take with you wherever you go. It helps you type with ease in any app with hundred of checks and features and seamless integration.

Features:

- Sophisticated grammar checker.
- Contextual spelling checker.
- Keyboard integrates smoothly with all apps.
- Helps you spot auto-correct fails before you hit send.



TripIt

An easier trip, every time. TripIt is not your average travel app. Imagine checking one place for everything and knowing about things before they happen.

Features:

- Handle the booking: You can manage it all.
- Access and share plans instantly: Get to the important details instantly
- Send real-time alerts and reminders (Premium)

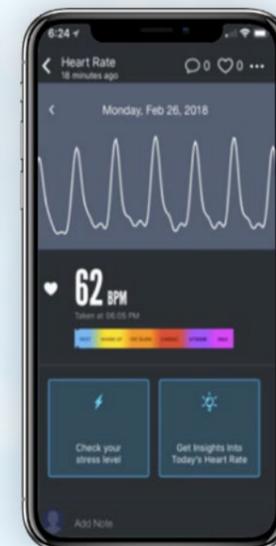


Moment

Moment enables you to use your phone in a healthy way, giving you back time for the parts of life that matter most. By understanding your device usage, you can learn to manage the time you spend on it.

Features:

- Train to use your phone less, if that's your goal
- Learn how to modify your behaviour in small ways to reduce your phone usage
- Log how many times you pick up your phone each day
- Break down each day to see when you are on your device and what apps you are using



Instant Heart Rate: HR Monitor

Use your camera's flash to see how healthy you are. This app detects color change in your finger tip each time your heart beats and uses advanced algorithm to show you your heart rate.

Features:

- Heart rate measurement
- Pulse waveform graphs
- StandUp test for fatigue and fitness testing

