

# SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE



The Princess Nourah bint Abdulrahman University (PNU) aligned its strategy, internal policies and governance to embrace and implement the SDGs and already is contributing with Industry, Innovation and Infrastructure.

Investment in infrastructure and innovation are crucial drivers of economic growth and development. With over half the world population now living in cities, mass transport and renewable energy are becoming ever more important, as are the growth of new industries and information and communication technologies.

Technological progress is also key to finding lasting solutions to both economic and environmental challenges, such as providing new jobs and promoting energy efficiency. Promoting sustainable industries, and investing in scientific research and innovation, are all important ways to facilitate sustainable development.

The Kingdom of Saudi Arabia has witnessed remarkable progress in the pursuit of its Vision 2030 goals, which include a number of initiatives related to the maintenance and operation of various infrastructure projects in partnership with the private sector, and strengthening the Kingdom's connection to population centers and commercial and industrial value chains by increasing the performance of the logistics sector and increasing competitiveness and quality overall.

Saudi Arabia's initiatives for industry, innovation and infrastructure:

- Budget allocation of more than 54 billion Saudi Riyals for 2018.
- Construction of roads totaling more than 14,000 km.
- The Public Transport Project in Riyadh has a maximum capacity of 5.4 million passengers per day.
- Investment of more than SAR 400 billion in transport infrastructure over the last 10 years.
- Spending more than SAR 500 million on scientific research.



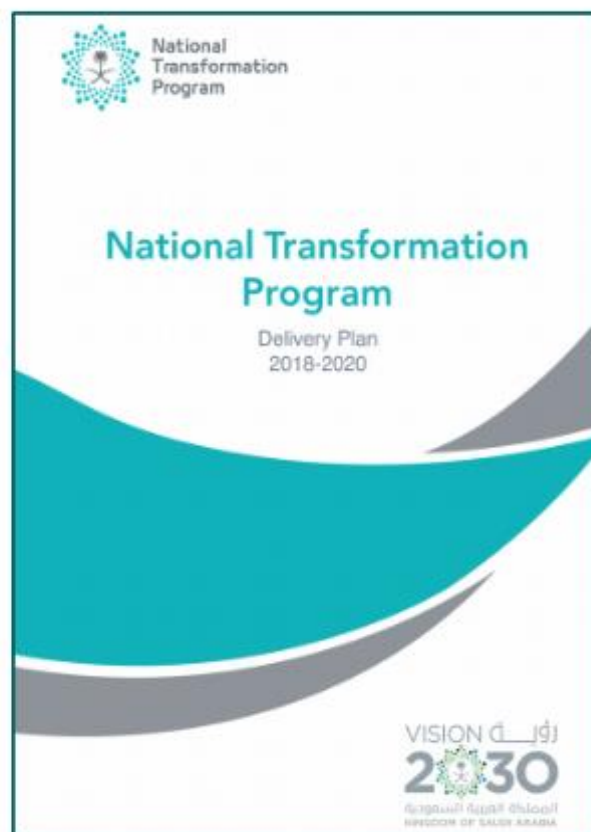
Saudi Vision 2030

Saudi Arabia is keen on developing and upgrading its infrastructure and transportation system, with over USD 14.4 billion (SAR 54 billion) allocated for this purpose in the 2018 state budget. Significant attention is also given to physical and digital infrastructure, along with support for promising industries, regional and international connectivity and support of innovation, research and technology. Some strategic objectives of Vision 2030 are broadly consistent with SDG 9.

The National Transformation Program (NTP) includes several initiatives related to the operation and maintenance of infrastructure projects in partnership with the private sector. NTP initiatives also seek to strengthen the Kingdom's international connectivity and trade and industrial value chains by improving the performance of the logistical services sector, along with improved private sector competitiveness.

[The National Transformation Program \(NTP\)](#) aims at Achieving Governmental Operational Excellence, Improving Economic Enablers, and Enhancing Living Standards through:

- Accelerating the implementation of primary and digital infrastructure projects.
- Engaging stakeholders in identifying challenges, co-creating solutions, and contributing to the implementation of the program's initiatives.



National Transformation Program

In this sense, Princess Nora bint Abdul Rahman University in Riyadh are the first university projects to apply sustainability systems in Saudi Arabia. The main objective in developing those university structures is to enhance and develop quality facilities for higher-education capacity with minimal energy consumption and usage of natural resources to achieve sustainable design premises. In order to maintain the environmental design approach, selected sustainable design criteria related environment and architecture design have been applied.

The hub and architectural design methodology of the university is fully consistent with standards of sustainable buildings and also compatible with climatic conditions and geographical location.) five key areas for energy conservation were foci of the design of university buildings:

- A sustainable site, with minimal negative impact on the environment
- Water efficiency
- Energy
- Materials and resources
- Indoor environment quality

Thus, local materials have been used to cover the faoades, which were designed with a shading device, inspired by Arabic rawashen or mashrabiah, and integrated with high-efficiency glass windows for solar control in the building, resulting in 3.5% energy savings, as illustrated in figure 3.

Annual solar panels system output for sport and recreation buildings is illustrated in figure 4 with the annual energy demand.

Figure 5 shows the details of the energy efficient faoade which provides over 19% energy reduction. The shading system was designed to protect buildings from direct solar gain. High performance, Low-E Insulating Glass covers the internal facade. GFRC shading with a traditional architecture style also increases visual privacy for female building occupants. A 13% reduction in the total heat gain of buildings envelope for the academic buildings in Princess Nora University has been achieved.



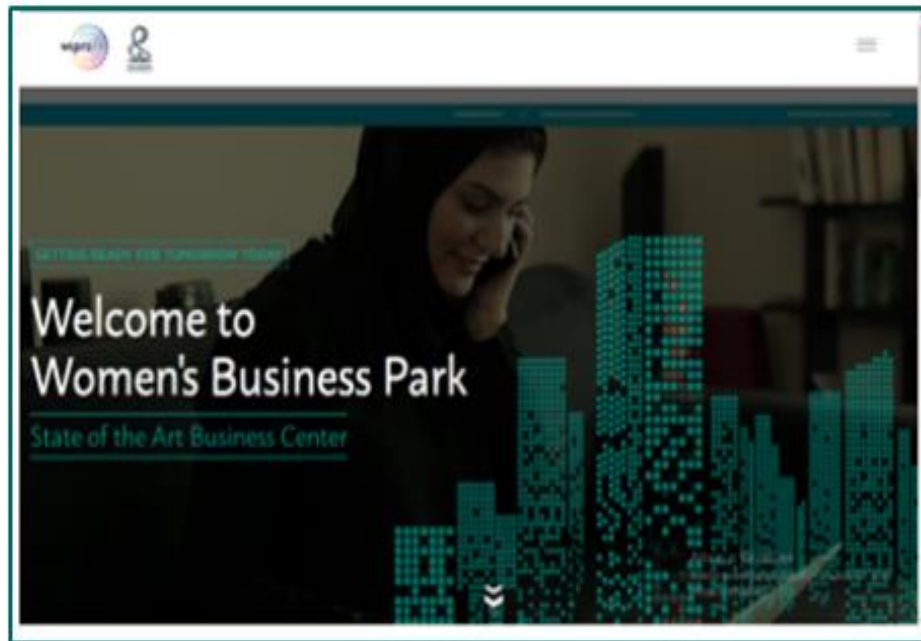
Sustainability guidelines in University Buildings in The KSA

On the other hand, from 2016 the Saudi Arabian Oil Company (Saudi Aramco), Princess Nourah University (PNU) and Wipro Arabia Limited, a subsidiary of Wipro Limited, a leading information technology, consulting and business process services company, inaugurated the Kingdom of Saudi Arabia’s first all-women business & technology park.

With a vision to advance the knowledge economy and bridge the gap between academia and industry, Wipro Arabia Limited a subsidiary of Wipro Limited, a leading information technology, consulting and business process Services Company and Princess Nourah University (PNU), the largest women’s university in the world got into a joint venture to establish Saudi’s first all-women business & technology park.

The vision of the women business park is advance the knowledge economy and bridge academia and industry in the Kingdom of Saudi Arabia by creating a pioneering business centre that delivers comprehensive service, provides sustained and meaningful

employment to Saudi Arabian women in a supportive environment, and services as a showcase for the region.



Womens Business Park

It is worth noting that the services offered by Women Business Park are all aimed at contributing to the development of the industry, infrastructure and also involving innovation in these, such as established in the SDG 9. Among the services offered are highlights:

- Engineering Services
- As-Built | Technical Publication | Engineering Change Management | product Design | Engineering Info Management
- Business Process Services Customer Experience | Finance & Accounting | Human Resource | Supply Chain Mangement
- IT Services  
Remote Application Support | Application Development | Managed Infra Support | Global Command Center | Testing
- Domain Services  
Oil & Gas | Engineering & Contruction | Utilities | Healthcare

| Telecommunication | Banking, Finance & Insurance |  
Manufacturing | Retail

Digital Services

Data & Analytics | Technologies & Platforms | Web & E-commerce  
| Media & advertising | Innovation Lab



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## PNU Activities

- [The Center for Business Development and Support invited you to attend the distance courses entitled " World Business Leadership Week".](#)



World Business Leadership Week

- [The Center for Support and Business Development invited to a training workshop entitled "Social Entrepreneurship".](#)



يسر مركز دعم وتطوير الأعمال بجامعة الباحة بتمويل من جامعة الملك سعود دعوتكم لحضور ورشة عمل بعنوان:

## ريادة الأعمال الاجتماعية

**لقدّمها: د. غادة العرفي**  
 خبيرة في الريادة والعمل  
 قائمة على الخبرة في ريادة الأعمال الاجتماعية من كلية  
 إدارة الأعمال في لندن

**مخارج الورشة :**

- مفهوم الريادة الاجتماعية
- مهارات الريادة الاجتماعي
- نموذج عمل الريادة الاجتماعية

التاريخ : ٢٠١٨/١٠/١٩ الموافق ١٩/١٠/٢٠١٨ م  
 المدة: ٥ ساعات  
 الوقت: من ٧ إلى ٩ م  
 شهادة حضور

لتسجيل

pnu.edu.sa

Social Entrepreneurship

- The Faculty of Health Sciences and Rehabilitation invited to an Entrepreneurship course



## هل نودى أن تكوني رائدة أعمال ؟

يسر كلية الصحة وعلوم التأهيل  
 ممثلة في قسم علوم الصحة  
 دعوتكم لحضور  
**دورة في ريادة الأعمال**  
 تقدمها الاستاذة : أ. هند قاسم  
 رابط التسجيل على حساب الكلية في تويتر وموقع الجامعة  
 هناك شهادات حضور

١٠ أكتوبر ٢٠١٨ م

كلية الصحة وعلوم  
 التأهيل. (0.402)

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Entrepreneurship course



- Interactive electronic course entitled "Basics of Entrepreneurship", has the purpose of providing students with the knowledge and skills necessary to transform ideas and innovations into applied projects.



Basics of Entrepreneurship

- Entrepreneurship workshop.



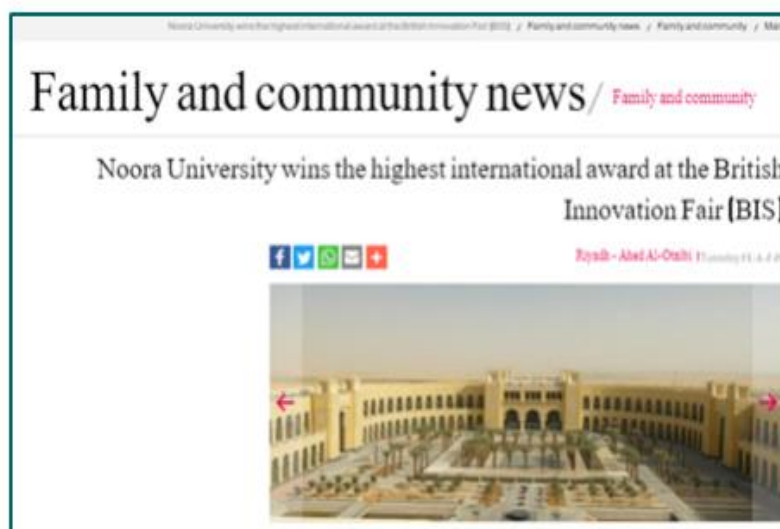
Entrepreneurship workshop

- The Dean of Scientific Research invited a round table entitled: "Know the procedures for registering inventions and how to transform research into innovation."



Know the procedures for registering inventions and how to transform research into innovation

- PNU wins the highest international award at the British Innovation Fair (BIS).



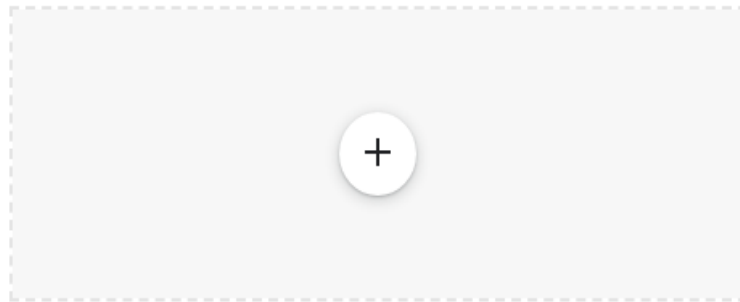
British Innovation Fair (BIS)

- The Faculty of Health and Qualification Sciences held a contest on the best innovation.



The best innovation

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