



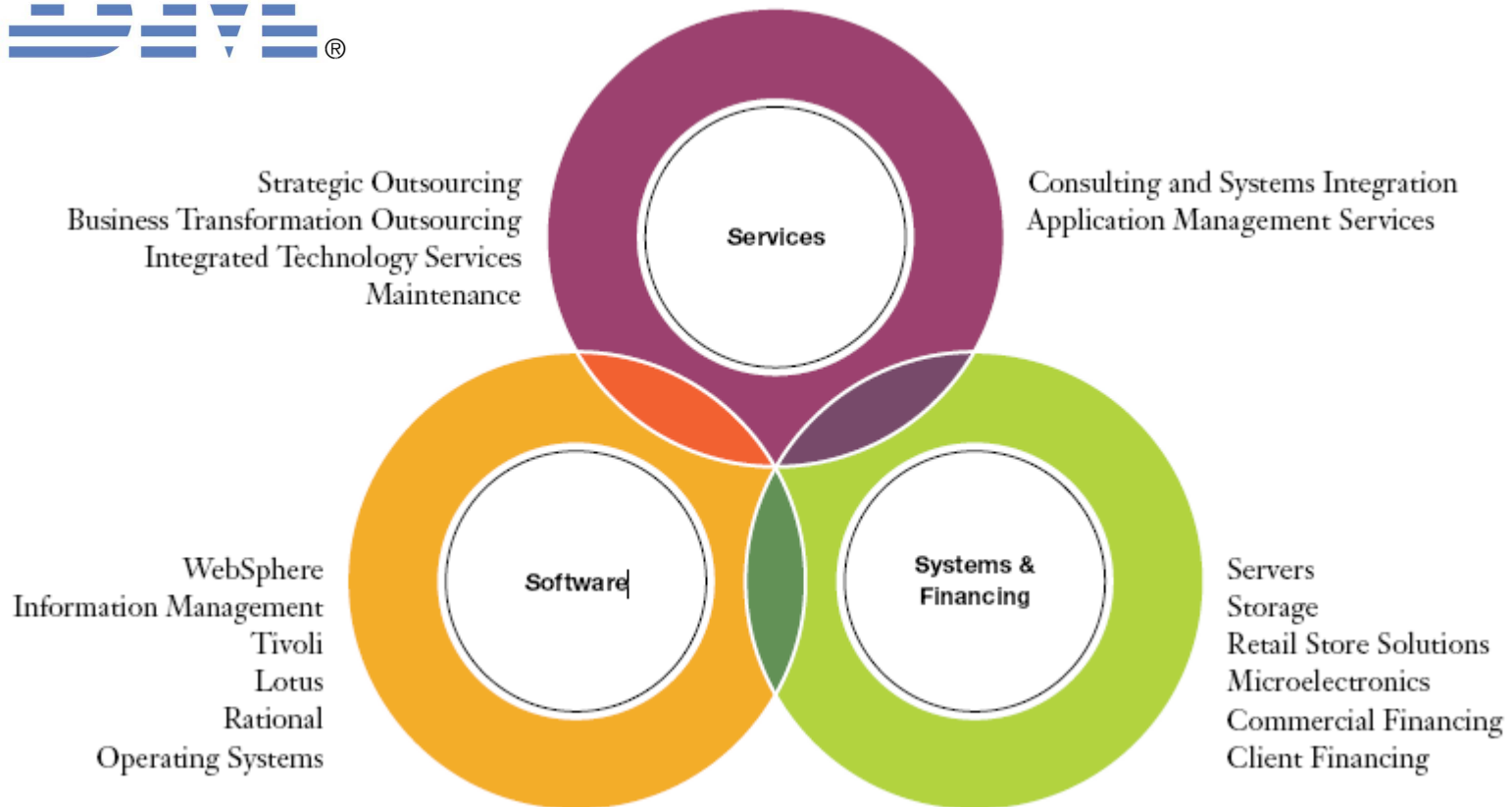
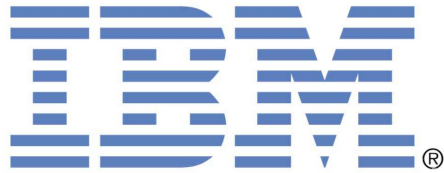
IBM Technology & Intellectual Property

IBM Open Innovation

Tom Reeves
Vice President, Intellectual Property

February, 2012

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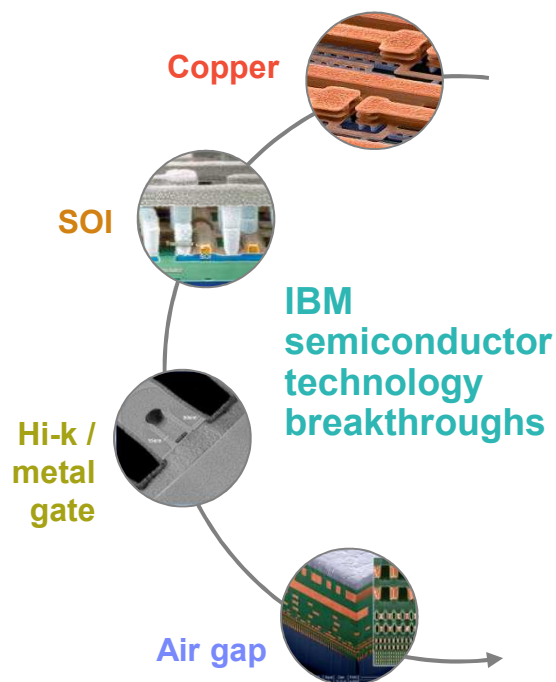


IBM's Strategy: *focus on open technologies and high-value solutions, deliver integration and innovation to clients, and become the premier globally integrated enterprise.*

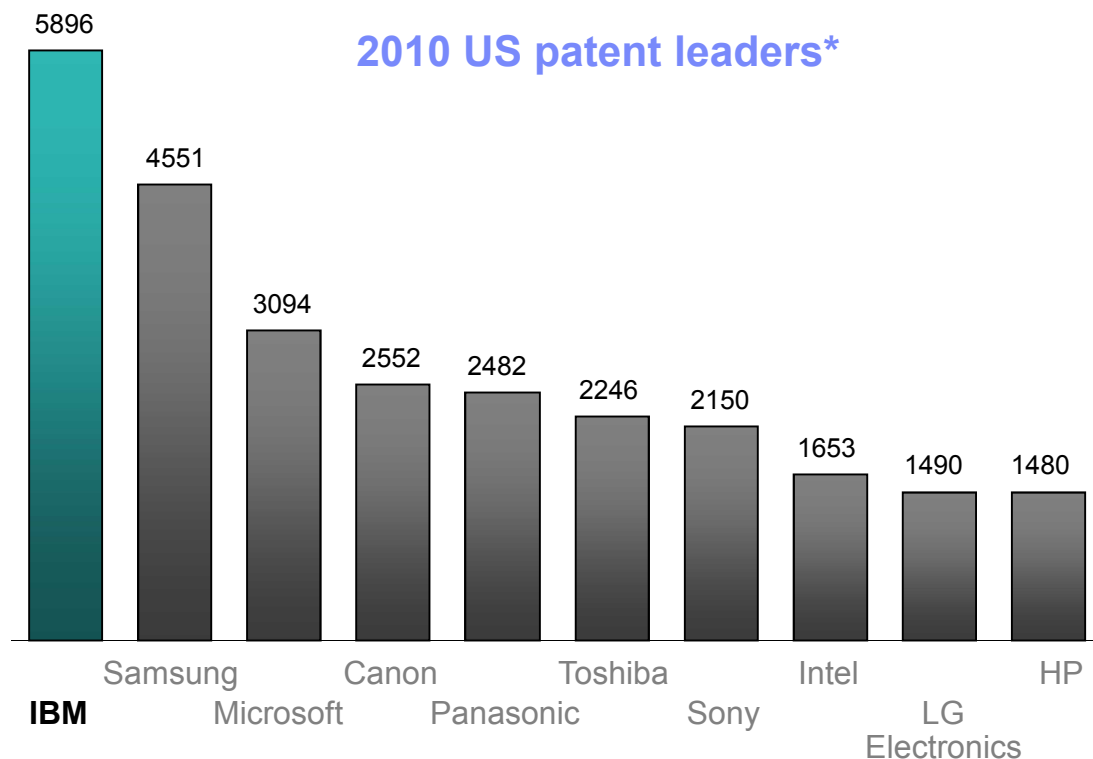
Ongoing commitment to innovation

Innovation is no accident

- IBM annually invests ~\$6 billion in R&D
- In 2010, IBM was once again awarded more U.S. patents than any other company (the 18th consecutive year)
- IBM Research and Microelectronic Division semiconductor technology patents play a key part in IBM's patent portfolio



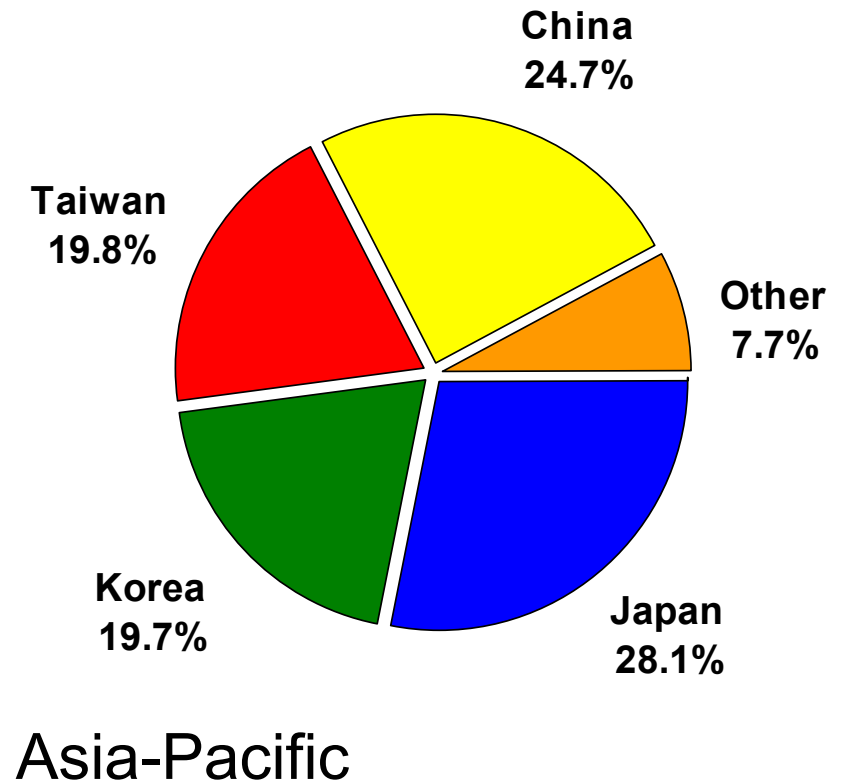
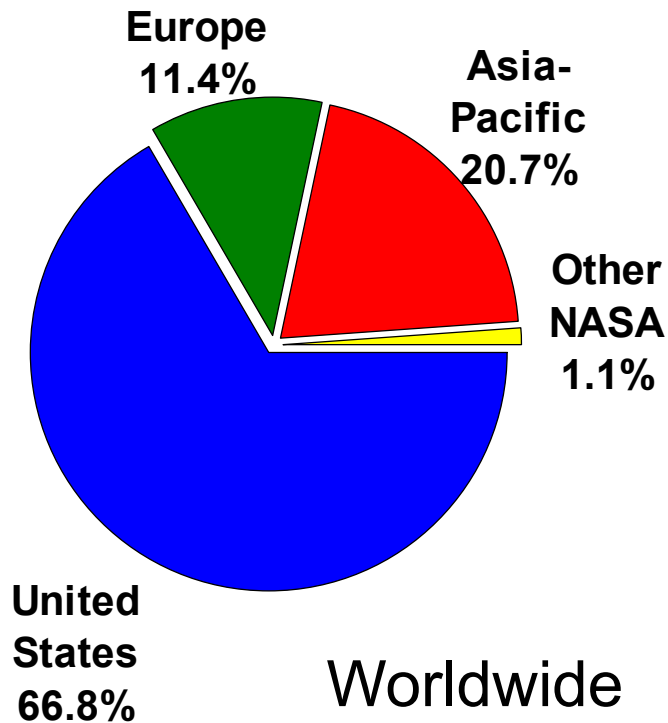
2010 US patent leaders*



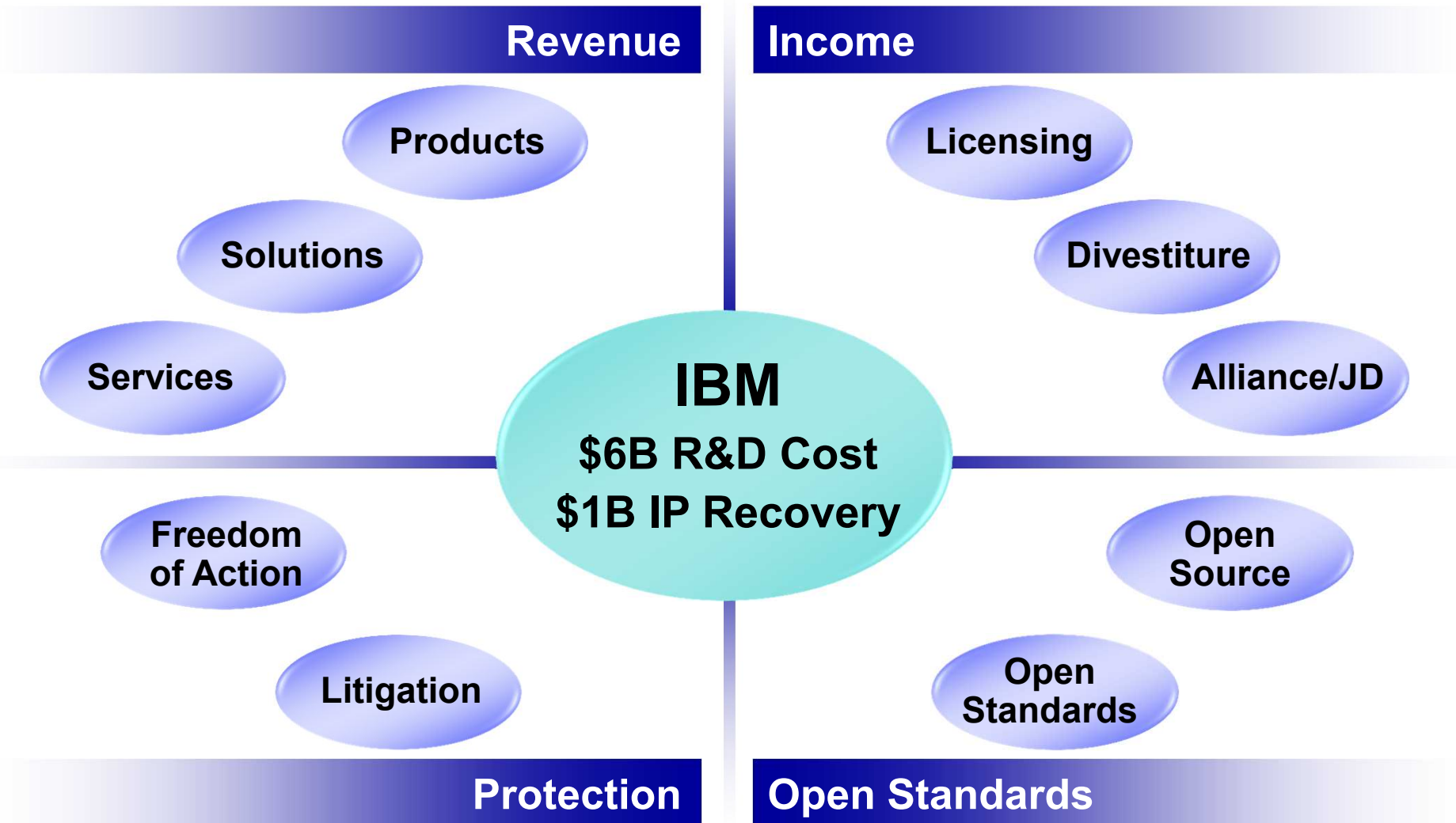
*IFI CLAIMS Patent Services January 2011

IBM Worldwide Active Patent Distribution

Out of Approximately
44,000 Active Patents Worldwide



IP for Business Value



IBM has led the formation of the largest S/C Process Platform

Exploratory Research

Stage -3
10 years +

Research Alliance

Stage -2
5-10 years

Development Alliance

Stage -1
0-5 years

Manufacturing Alliance

Stage 0
Now



Nanoscale Exploratory Technology Laboratory

IBM and ETH Zurich, a premiere European science and engineering university, announced the formation of a partnership in the field of nanotechnology.
Total investment: 90M \$
Opened in 2011

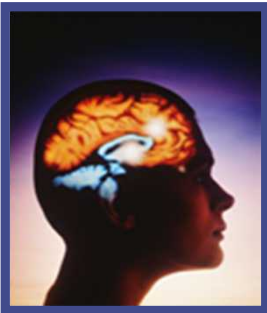


IBM Research Worldwide – over 3,000 professionals



Diversity of Disciplines at IBM Research

Behavioral Sciences



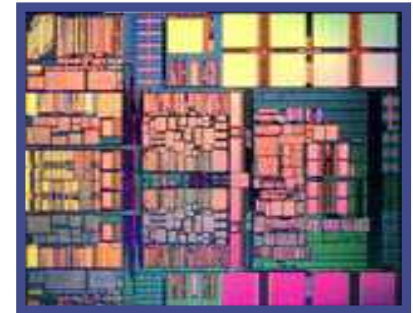
Chemistry



Computer Science



Electrical Engineering



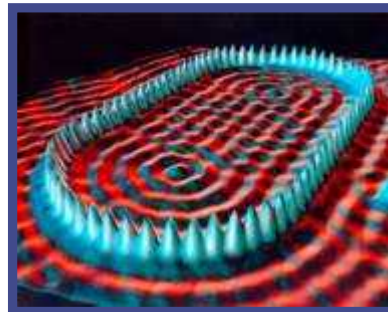
Materials Science



Mathematical Sciences



Physics



Service Science, Management & Engineering



IBM Research Partnership Agreements in the Middle East



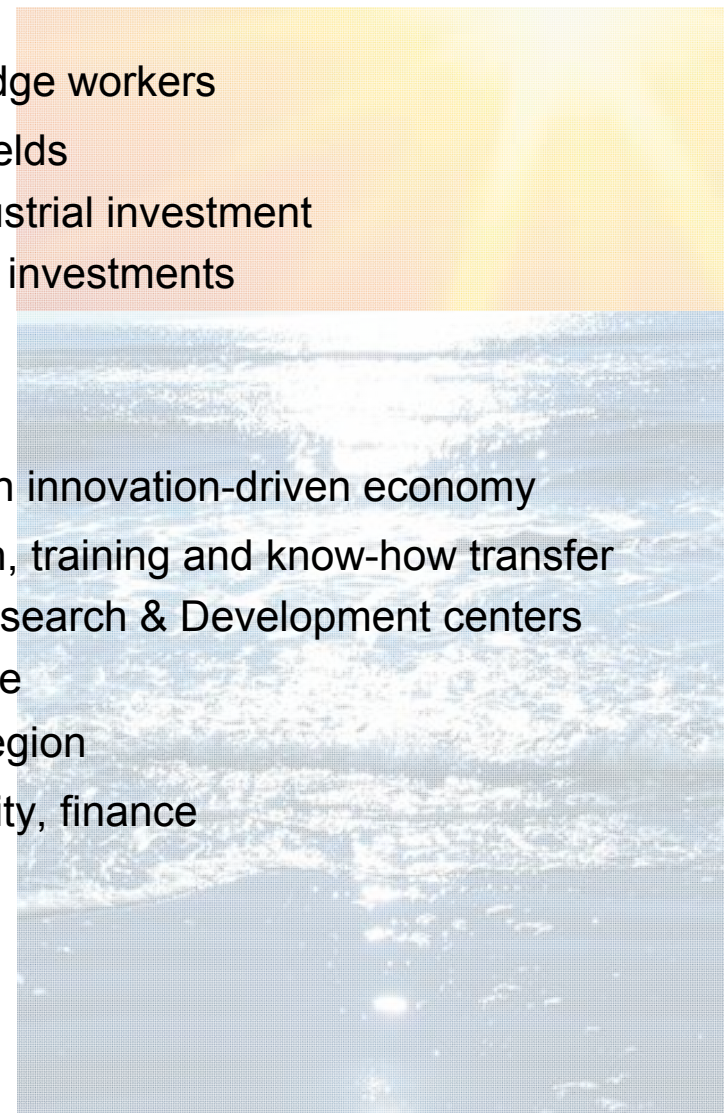
Overview of Open Innovation in the Middle East

■ Key Drivers

- Build a knowledge-based economy & develop knowledge workers
 - Develop local capacity in scientific and technical fields
 - Attract top talents and promote government & industrial investment
 - Pursue commercialization opportunity arising from investments

■ What Can IBM offer?

- Enable governments to undertake initiatives to build an innovation-driven economy
 - Develop local human capital through joint research, training and know-how transfer
 - Assist governments and universities in building Research & Development centers
 - Generate IP jointly through IBM's innovation culture
- Joint development projects on areas strategic to the region
 - water, energy, sustainability, healthcare, oil, security, finance



Government of Arab Republic of Egypt

- **Cairo center for nanotechnology R&D**
- **Cooperation between Egyptian and international scientific teams**
- **Introduce Services Science, Management and Engineering (SSME) into Egyptian National Curriculum**



“The set-up of the nanotechnology center and the introduction of SSME by Egypt and IBM are key to the implementation of Egypt's science and technology strategy that will lead to the development of a knowledge economy.”

– Dr. Hany Helal, Minister of Higher Education and State Minister of Scientific Research

King Abdullah Univ. of Science & Technology

- **International, graduate-level research university**
- **Dedicated to inspiring a new age of scientific achievement**
- **Four strategic research thrusts**
 - Resources, energy and environment
 - Biosciences and bioengineering
 - Materials science and engineering
 - Applied mathematics and computational Science



KAUST/IBM Center for Deep Comp. Research

- **Establish in Saudi Arabia a significant team of scientists to work on the most complex, high-performance computing system in the region**
- **Shaheen: ranked #14 WW, #1 in Middle East/Africa in terms of super computing power**
 - Serve University's scientific researchers across dozens of disciplines
 - Advance new innovations in computational sciences
 - Contribute to the further development of a knowledge-based society in Saudi Arabia



King Abdulaziz City for Science & Technology

- **Nanotechnology Center of Excellence**
- **Address scientific, economic challenges and evolve research strategy**
- **Joint technology development agreement**
 - Solar power
 - Water desalination
 - Recyclable materials



مدينة الملك عبدالعزيز للعلوم والتقنية
King Abdulaziz City For Science and Technology



