



BRUNS

Sheikh Abdullah Al Salem Cultural Center

The Sheikh Abdullah Al Salem Cultural Complex is a 13 hectare site in the Al-Sha'ab area on the Western shore. It will house four world-class Museums, a Fine Art's Centre, a theatre and two Information Centres, with the facilities being linked by a central covered 'street' allowing visitors and residents to pass through the site from the city to the seashore of the Arabian Gulf. The museums will cover Natural History, Science, Space, Islam and Fine Arts. With a total exhibit area of approximately 22,000m² it makes the project the largest single-delivery museum project in the World at the current time.

Bruns was appointed by Beck Interiors Ltd (responsible for the overall project management) in 2014 to develop, produce and install the Robot Gallery for currently world's largest cultural project at the moment – the Sheikh Abdullah Al Salem Cultural Centre. Using our wealth of experience in museums, science and attractions development, the Bruns team has curated a modern, unique and immersive series of Robot interactives.



Authority

Alghanim International
PO Box 2118
Safat 13022
State of Kuwait

Location

Kuwait City

Surface area

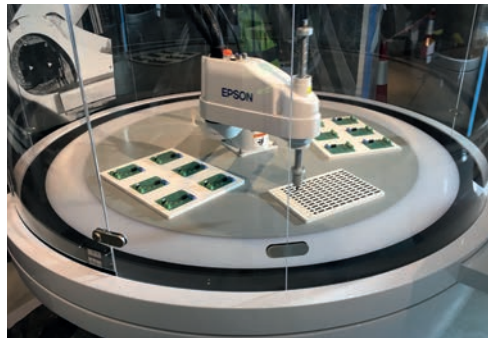
1350 m²

Number of exhibits

15

- Scara robot plinth:

Robot arms are fundamental to industrial production across many industries and can carry out activities more quickly and more accurately than humans. A real robot arm displayed on a plinth. The robot is programmed to carry out a task – installing electronic components on pcb's.



- Scara robot interactive:

Robot arms are very accurate and fast but must first be programmed by humans. An interactive exhibit where visitors programme a robot arm using a simple, intuitive touch screen interface. Task is to move a ball from one place to another using the smallest number of instructions.



- Water tank:

A water-filled tank with two submersible robots and a landscape for the robots to explore a part of a shipwreck. The robots can be operated via a joystick and an up-down shifter. A screen above each joystick and shifter shows the view from the submersibles camera. The screens gives visitors a robots-eye view through their robot's on-board camera.



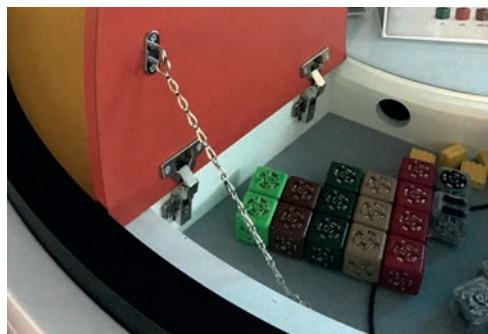
- Rescue robots:

Three areas are placed in a plinth to test three different kind of terrain robots. All three areas contain the different terrain sorts so they can all be experienced. The robots are colour coded so the control unit (joystick) is visually matching the robot that belong together.



- Flying robots:

Different 'cubelets' will become a full functioning robot presenting different tasks divided in three groups: sense, think and act. 'Sense' are sensors which sense the environment. The data is sent to the 'think' cubes where they gets formed before it is sent to the output block 'act'. In a workshop visitors can play with the cubelets and build their own robot.



Destination

Museum

Type of exhibition

Permanent

Project director

John Bootsman

Design

Cultural Innovations

William Morris Way

SW6 2UZ London

England

Start

October 2016

Delivery

January 2018

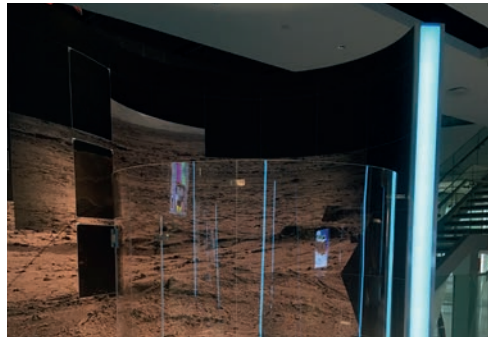
• Swarm Robot:

Autonomous robots, communicating with each other, are able to self-organise like insects with some amazing applications for the future. Visitors can select on a touchscreen which swarming behaviours they would like to see from the robots. Once chosen, the behaviour is being uploaded to the robots and they will start performing their task.



• Ground mapping interactive:

Robots are used to explore perilous environments. An interactive virtual game is projected on a horizontal surface and a big angled screen in the front. Visitors must control a robot which has ground penetrating radar to find all the crevasses so a convoy following on behind can take a safe route across the ice sheet.



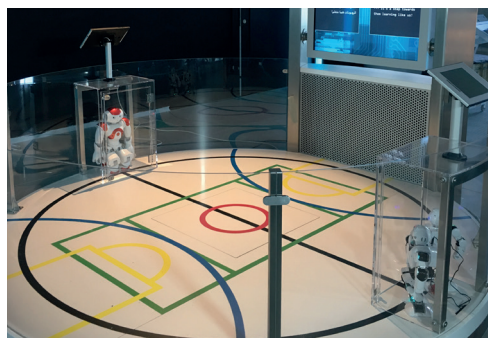
• Robosally:

Robots can enable humans to operate remotely, more safely and precisely on skilled tasks. A Kraft Telerobotics arm is placed on a plinth to let the visitors experience how to operate a robotic arm. The visitor has the challenge to pick up a ball and navigate the ball in one of the three holes. The higher the hole, the bigger the challenge.



• Android locomotion:

Many challenges on robotics remain of getting robots to do things which we find easy, such as playing football. In this exhibit the staff will demonstrate two different humanoid robots. At first sight they'll look alike. But when they are switched on and start to interact you'll see the differences.



• Commercial robot:

Scientists and engineers are developing a variety of robots that are designed to elicit and promote particular psychological responses in humans. This exhibit contains a secure case for small emotional robots. A small demo area allows gallery staff to demonstrate the robots at set times of day.

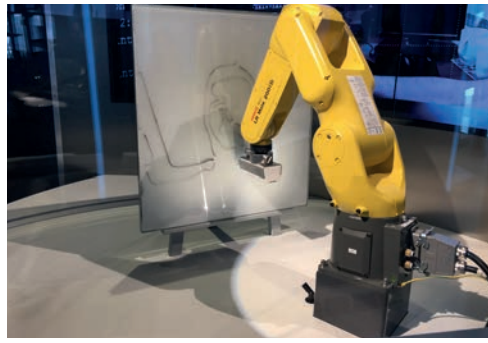


Different type of robots

- Scara robot plinth
- Scara robot Interactive
- Water tank
- Rescue robots
- Flying robots
- Swarm robots
- Frontier robot
- Ground mapping interactive
- Robosally
- Android Locomotion
- Commercial robots
- Robot portraits
- Robot prosthetics
- Robot faces
- Learning robot

- Robot Portrait:

Robot perception continues to be an important area of research and a robots representation of what it sees raises the question of if they perceive as humans do. This exhibit has a small robot shielded behind a screen that will 'look' at the visitor and draws their portrait. The portraits drawn on a whiteboard and is displayed behind the robot.



- Robot faces:

Some scientist and engineers have been striving to make robots that look, move and respond as nearly like humans as possible. This exhibit contains a robot Humanoid. The robot has a detailed humanoid face which can recognize several objects and tells what they are and gives some facts about the objects.



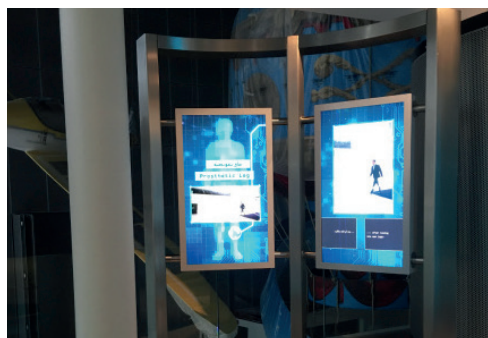
- Learning robot:

Rather than trying to program 'intelligence' into robots, they are programmed with the ability to learn from experience, just like humans. A maze learning 'mouse' robot on a led-light maze. Visitors change the maze layout and the mouse explores to find a way from A to B, then explores further to find the fastest route from A to B.



- Robot prosthetics:

Increasingly sophisticated robotic prosthetics and implants along with biomimetic approaches to robotics show a tendency of convergence between humans and robots.



- Frontier robot:

Specialized robots have been developed to explore inhospitable environments. Static model of ExoMars planetary exploration rover placed on a plinth.

