

**project: syntropy (Germany / Sweden / Shanghai-Singapore-Taiwan)** creates AV technologies and solutions for professional simulation- and training environments, interactive, immersive media based attractions, xD dome theatres, planetariums as well as multimedia experiences. Many years of development and over one 150 projects world-wide have resulted in highly scalable turnkey media based attractions.

## Project

### Media Based Attractions for VIRTUALITY Science Centre Riyadh, Saudi Arabia

#### Customer

Native Solutions (AL ASILA Co.) for the Information Technology Communications Complex (ITCC) in Riyadh, Saudi Arabia.

#### Project

Five main attractions for the VIRTUALITY science centre in Riyadh:

1. the DOME - a 16m fulldome Planetarium with high-resolution 3D-Stereo projection and with 3D sound;
2. a four-sided 3D-Stereo CAVE including a content authoring solution;
3. an interactive projected floor and realtime 3D contents;
4. a 360° cinema called VIRTUALITY core theatre;
5. a gigantic moebius-shaped multitouch-exhibit with a seamless organic multitouch interface, called "Info-Ribbon".

#### Project Description

project: syntropy was commissioned by AL ASILA Co. for delivery of the most prominent and spectacular Media Based Attractions of the VIRTUALITY science centre in the Information Technology Communications Complex (ITCC) in Riyadh, Saudi Arabia:

##### The DOME

A 16m tilted 3D-Stereo fulldome system featuring 24-channel WUXGA projection, Infitec 3D, Iosono 3D audio system, media servers, lighting, show control, domeprojection.com ProjectionTools autocalibration and planetarium shows.

##### Multitouch-Exhibit "Info-Ribbon"

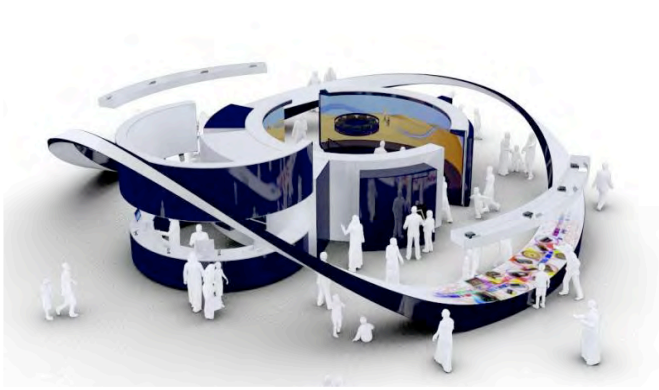
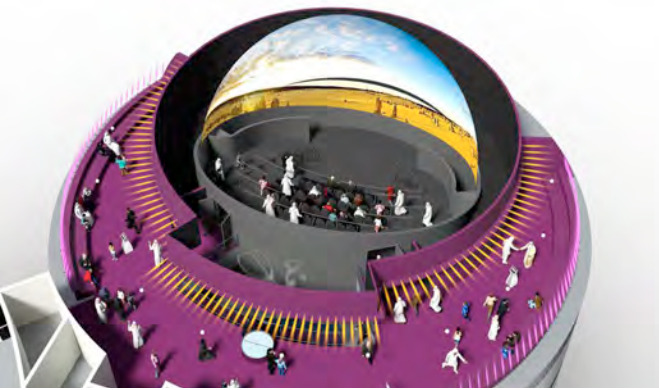
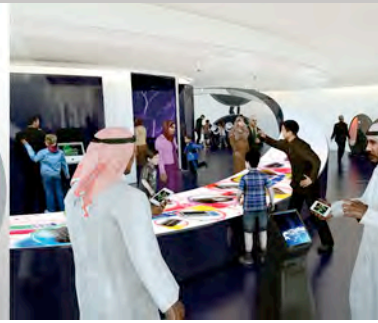
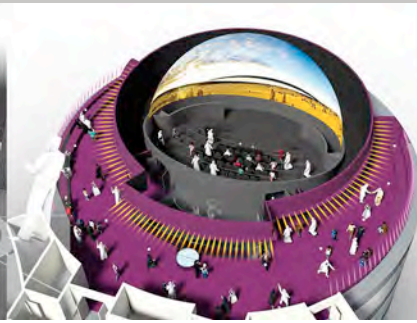
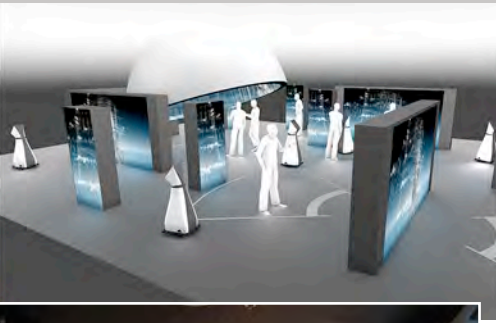
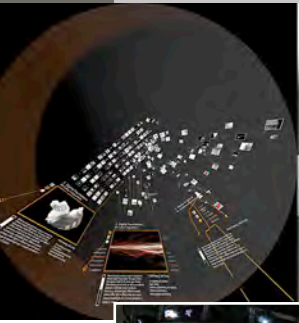
A large seamless moebius-shaped multitouch surface featuring 8-channel WUXGA projection, multitouch interaction based on sensors plus a dedicated camera-based multitouch detection. We also programmed an organic seamless graphical multi-user interface, which moves along the whole surface.



Leading Provider of Next Generation Media Based Attraction

**project: syntropy GmbH**  
D-39112 Magdeburg/Germany, Klausenerstrasse 47  
T: +49 (0) 391 63 60 66-44 | Fax: +49 (0) 391 63 60 66-45  
M: syntropians@project-syntropy.de <http://www.project-syntropy.de>

project:syntropy



### CAVE

A four-sided CAVE of the size of 2.1 x 2.8m with 8-channel 3D-Stereo projection, optical tracking, render nodes and uni-view software for content production.

### Interactive floor

An interactive floor with 4-channel WUXGA projection, our dedicated camera-based tracking solution and an interactive application with realtime 3D content.

### VIRTUALITY Core Theatre

A 360° projection featuring 9-channel WUXGA projection, 5.1 audio, a playout and content authoring solution and domeprojection.com ProjectionTools autocalibration.

### About the ITCC

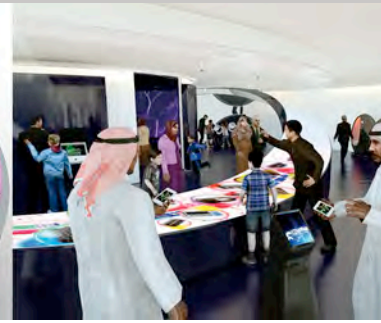
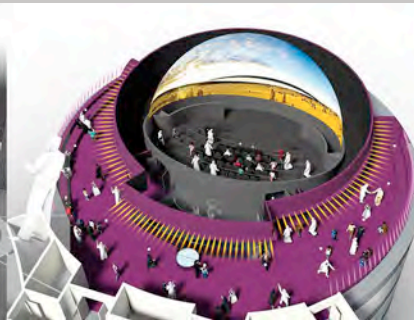
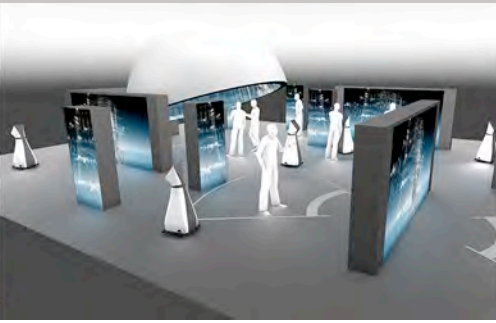
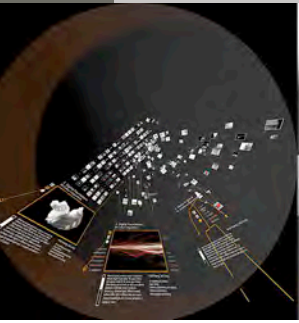
The four-floor VIRTUALITY science centre, owned by Saudi Pension Funds, is located in Riyadh's SR6.5bn (US\$1.7bn, EUR1.6bn, £1.1bn) cyber city development, the Information Technology Communications Complex (ITCC). It is the intention of the owners to tempt the world's leading tech enterprises to the ITCC, and make it the hub for the country's IT and communications industry. The 80-hectare (198-acre) ITCC, in the Nakheel district of the Saudi capital, will boast four 20-storey towers – designed by Marks Barfield Architects – a business oasis, research buildings, a library, a mosque, a sports club and public parks. The ITCC is being developed by Ra'idah Investment Company.

### About the VIRTUALITY science centre

The VIRTUALITY science centre in Riyadh, Saudi Arabia, tells the story of information technology and communications through interactive, media-based attractions. It features robots, simulators, a 4D full-dome with 3D sound, a 360° film theatre and many digital and non-digital interactive science centre exhibits.

**The ground floor** is where visitors arrive, Here, visitors get tickets, information and can buy merchandise or have a snack at the calligraphy cafe, where one can practice the art of calligraphy on touch tables. Autonomous robots are welcoming guests, assist them or guide them through the exhibition. Visitors are equipped with a personal app for smartphone / tablet, which will guide them through the science centre and enhance the interactivity between them and the exhibits.

**The first floor** is themed "The Art of Information" and is the stage for the pre show: it features the immersive virtuality "core theatre" explaining the historic context of information and communication as well as the large multitouch "info



ribbon" with a dynamic organic interface, which installations we have both developed and delivered for the science centre. Many other exhibits like sense spheres for tasting, smelling and touching, pepper's ghost installations, communication devices and mind capsules as stimulating immersive spaces add to the experience on this floor.

**The second floor** is themed "Body Talks" and filled with a lot of interactive gaming stations to train the body and mind. There are also lots of simulators which e.g. allow to experience free flight similar to paragliding, driving a formula one car and a walking wheel.

**The third floor** is called "Data Cloud". Here visitors experience alternative forms of visualization of information through immersive CAVEs as well as many mechanical and cybernetic installations and interactive furniture. On this floor we have delivered the four-sided 3D CAVE and the interactive floor installation.

**On the fourth and top floor** of the science centre the main attraction - the DOME - is located: the DOME show gives an outlook into the future of information and the world of the data cloud. The fulldome, which has been delivered by us, features not only 3D-stereo projection, true 3D audio sound but also 4D seats for practical effects and several planetarium shows. On this floor the visitors can also relax in an ambient light and sound atmosphere and meet again the robots from the first floor to wrap up the experience.



## Turnkey Visual Solutions for Simulation, Training and Media Based Attractions

project: syntropy offers turnkey projection solutions, tailor-made systems and full-service throughout the entire project.

- CONSULTING
- CONCEPT AND DESIGN
  - creative
  - interactive
  - media
  - engineering
  - application
- DEVELOPMENT
- ENGINEERING
- CONSTRUCTION AND INSTALLATION
- AFTER SALES SERVICES
  - training
  - maintenance and support
  - tailored service-level-agreements (SLA)
  - spareparts supply
- MEDIA BASED ATTRACTIONS
  - XD FLYING THEATRES - XD 360° & 720° ATTRACTION DOME
  - CINEMAS & GLOBES - INTERACTIVE VISITOR ATTRACTIONS
  - MOTION THEATRES - DARK RIDES - PLANETARIUMS -
  - MEDIA FACADES - IMMERSIVE TUNNELS & IMMERSIVE ENVIRONMENTS - PROJECTION MAPPING - GUN SYSTEMS
- SYNTOUCH MULTITOUCH MULTIUSER & RADAR
- MIXED REALITY ENVIRONMENTS & TRACKING TECHNOLOGY DEVELOPMENT
- VISUAL SOLUTIONS FOR SIMULATION & TRAINING
  - FMS FULL-MISSION-SIMULATORS - FFS FULL-FLIGHT-SIMULATORS - CT COCKPIT SIMULATORS - HELICOPTER SIMULATORS - TARGET SIMULATION - JFST TRAINERS
  - JTAC TRAINERS - ATM TOWER SIMULATORS - DRIVING SIMULATORS - SHIPS BRIDGE SIMULATORS - INDUSTRIAL SIMULATORS - RESEARCH SIMULATORS - CAVES

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 T: +49 (0) 391 63 60 66-44 | Fax: +49 (0) 391 63 60 66-45  
 M: syntropians@project-syntropy.de <http://www.project-syntropy.de>

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