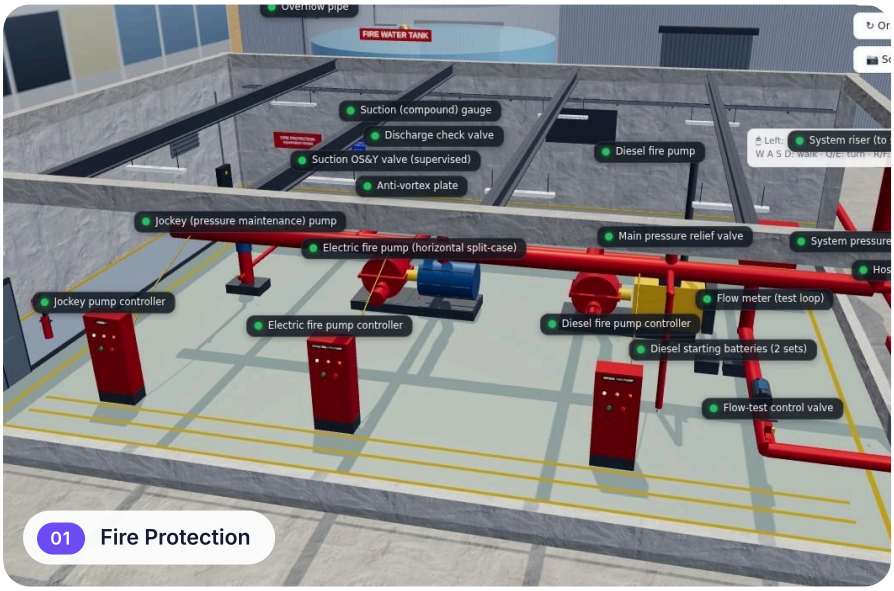
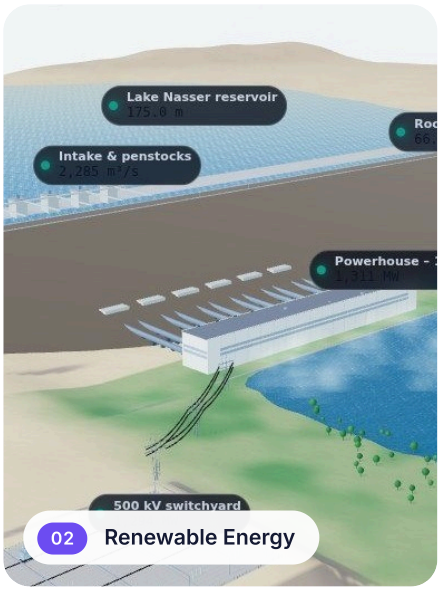
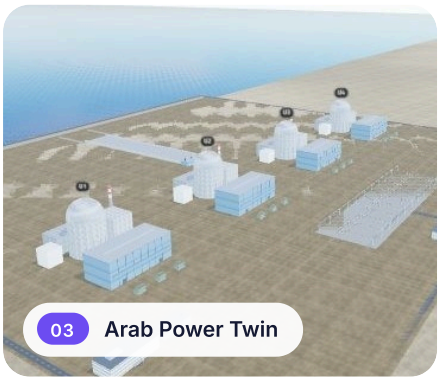
INTERACTIVE 3D SIMULATORS

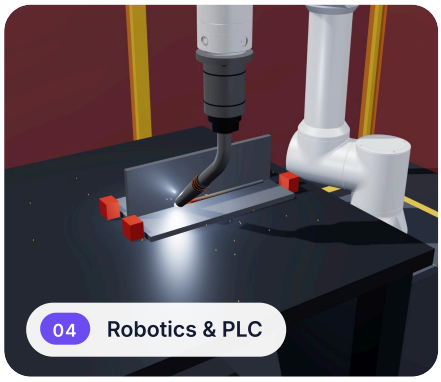
Digital Twin Solutions

Live 3D replicas of real systems for engineering education, training and industry. Run them, break them and learn from them, with zero risk.











5	2	620+	14
Digital twins	Languages, Arabic & English	Real power plants modelled	Day free trial

What is a digital twin?

A live virtual copy of a real system.

It can be a building, a power plant or a production line. A digital twin combines an accurate 3D model with a physics engine. Every pump, turbine and robot joint moves and reports real values second by second. Because it behaves like the original, you can run it, change it and even break it, with zero risk and zero cost.



Real system

Data & physics

Insight & skills



Digital twin

How it works

1

Model

The real site is built in 3D from its real design data.

2

Simulate

A physics engine calculates flows, pressures, power and motion live.

3

Interact

Change parameters, inject faults or speed up time.

4

Learn

Every action becomes scores, reports and certificates.

Why it matters

Zero risk
Practise failures that can never be staged on a live system

Lower cost
A full lab on every PC, with no equipment or site visits

Faster learning
See cause and effect instead of imagining it

Measurable skills
Every exercise and exam is scored and recorded



01

Fire Protection Digital Twin

Design, simulate, train and certify, all in one interactive 3D model.

Real buildings with every fire system modelled: sprinklers, fire pumps, smart fire alarm and special hazards. Start a fire, watch every system respond, then train and test on the same model.

5	9	10	130+
Real reference facilities	Live fire scenarios	3D training scenes	Exam-style questions

Live fire simulation
Sprinklers, pumps and water supply respond second by second.

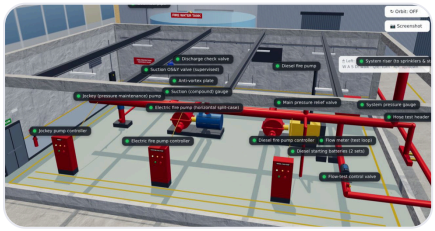
Fault injection
Close a valve, cut the power or drain the tank.

Engineering dashboard
Heat release, pressures, pump curve and tank level, live.

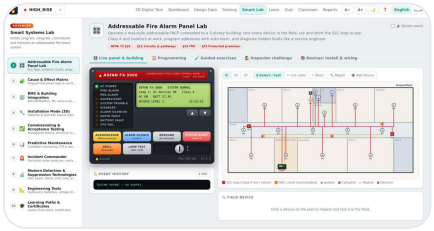
3D hands-on training
Pump room, valves, extinguishers and FM-200, scored.

Smart fire-alarm lab
10 modules: panel, cause & effect, BMS, commissioning.

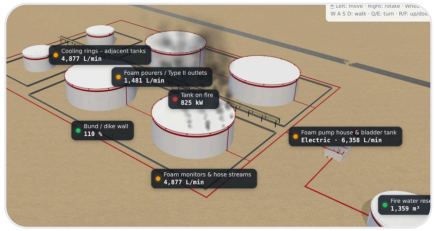
Exams & certificates
14 lessons and NFPA-based exams with a verifiable certificate.



3D fire pump room



Addressable fire-alarm lab



Crude oil tank farm



02

Advanced Renewable Energy Digital Twin

Seven real renewable plants, running live in 3D.

Each plant is a 3D model of a real site on real terrain. Every value is calculated live from weather, sun, wind, water and fuel, and responds the moment you change a parameter.

7	7	3,600×	5
Energy technologies	Real reference plants	Faster than real time	One-click scenarios

Geothermal	Biomass	Waste-to-Energy	Hydropower	Green Hydrogen	Wind	Solar
303 MW	**2,580 MW**	**200 MW**	**2,100 MW**	**2.2 GW**	**400 MW**	**1,177 MWp**
Hellisheiði, Iceland	Drax, UK	Warsan, Dubai	Aswan High Dam	NEOM, KSA	Dumat Al Jandal	Noor Abu Dhabi

Real weather
Day, night and seasons on real terrain.

Change & analyse
Drought, heatwave, storm, outage.

Plant builder
Build and run your own plant.

Learn & report
Courses, quizzes, CSV export.



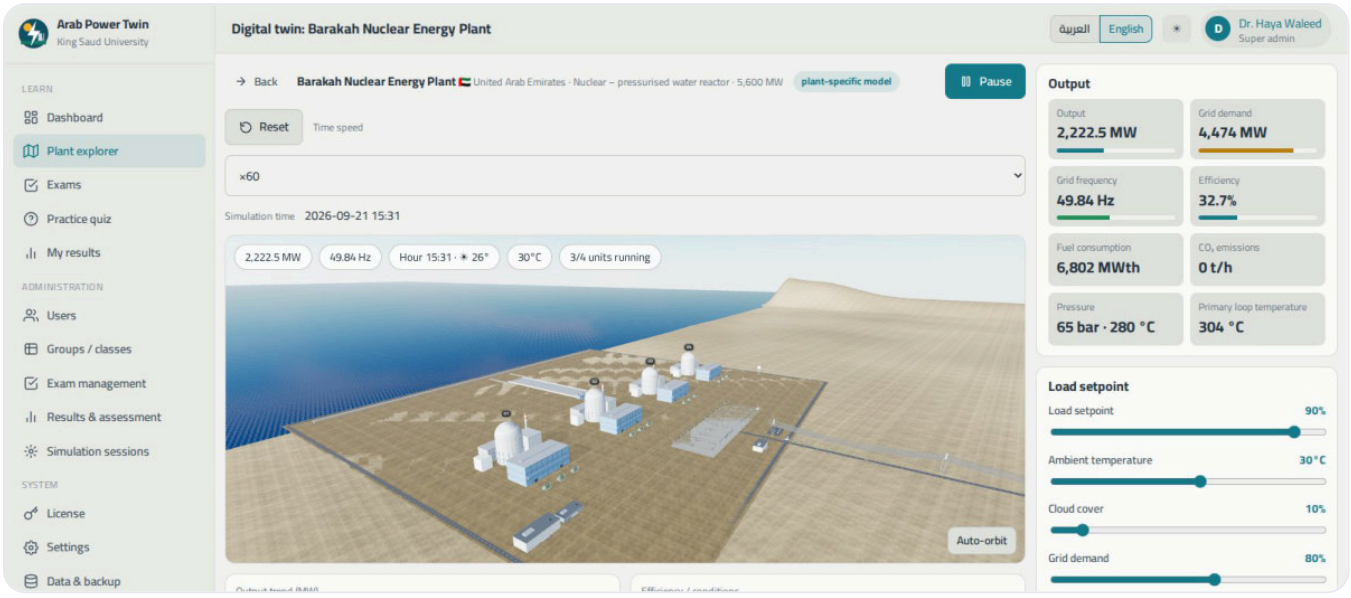
Aswan High Dam



NEOM green hydrogen



Noor Abu Dhabi solar



03

Arab Power Twin

Every power plant in the Arab world, as a live digital twin.

A real database of more than 620 plants across the 22 Arab League countries, from gas and nuclear to solar and wind. Open any plant, run it in 3D, and test students with exams built from real plant data.

620+	22	362 GW	16
Real power plants	Arab countries	Recorded capacity	Technologies simulated

Interactive map
Filter by country, source, technology and status.

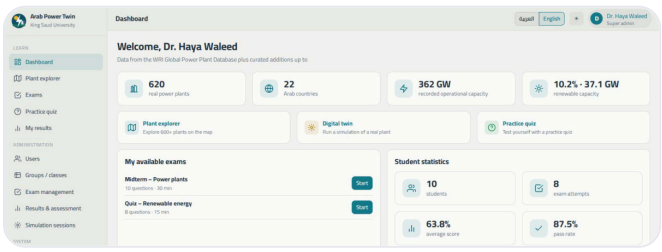
Live 3D plant
Output, efficiency, fuel, CO_2 and grid frequency.

Training scenarios
Unit trip, 48 °C heat wave, dust storm, demand surge.

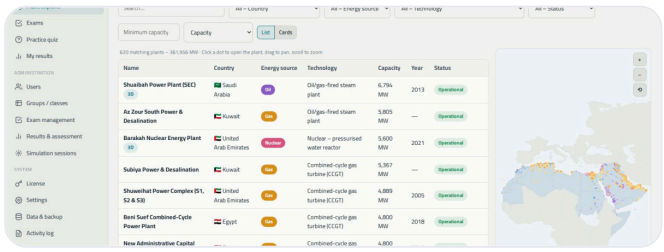
Exams from real data
Timed exams and practice quizzes for every plant.

Results & reports
Statistics and student reports in PDF and CSV.

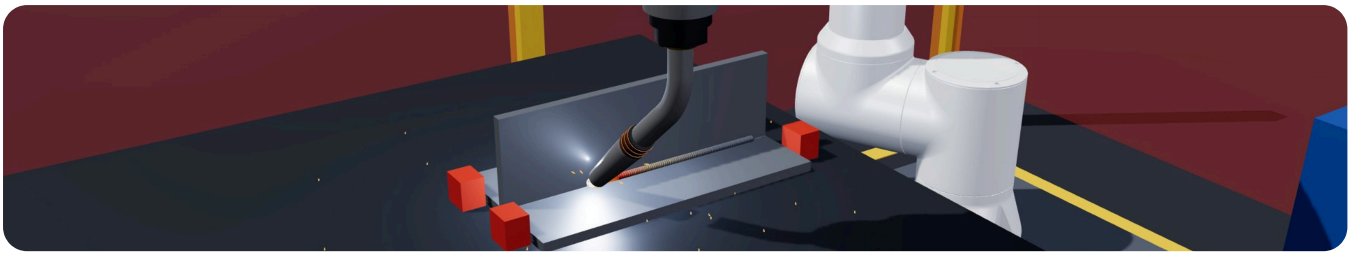
Ready for university labs
Admin, instructor and student roles on shared data.



Dashboard



Plant explorer & map



04

Robot Arm Digital Twin & PLC Studio

Two separate applications. One complete robot cell.

Commission the robot cell before the robot arrives. Use each application on its own, or run them together: a 6-axis arm in ready-made work cells with a PLC wired to its I/O, all on one Windows PC.

APPLICATION 01

Robot Arm Digital Twin

Program, test and prove a real 6-axis robot in four ready-made work cells.

- **The real robot:** Fairino FR5 V6 with jog, drag-teach and inverse kinematics
- **Real programming:** Lua 5.4 code or a graphical, pendant-style editor
- **Real physics:** parts fall, stack and ride the belts
- **Safety on every move:** a move that would crash is refused

APPLICATION 02

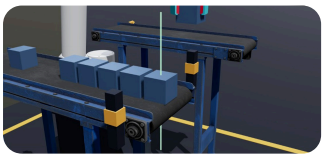
PLC Studio

Write and test the PLC logic that drives the cell, wired to the robot's I/O.

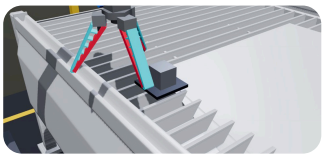
- **Five brand notations:** Siemens, Schneider Electric, Mitsubishi Electric, Rockwell and Omron
- **True-to-life controllers:** live input and output status on every channel
- **Train without risk:** the cell resets in one click

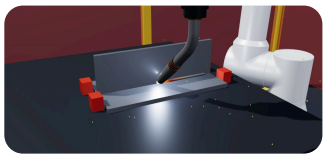
2	6	4	5	0
Separate applications	Robot axes	Ready work cells	PLC brand notations	Hardware needed

FOUR READY WORK CELLS — Application 01


Production line

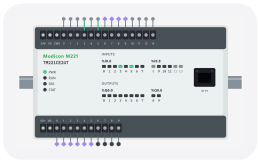

Palletizing

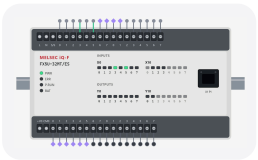

Machine tending


Welding

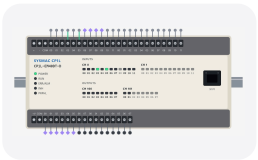
FIVE PLC BRAND STYLES — Application 02


Siemens
SIMATIC S7-1200


Schneider Electric
Modicon M221

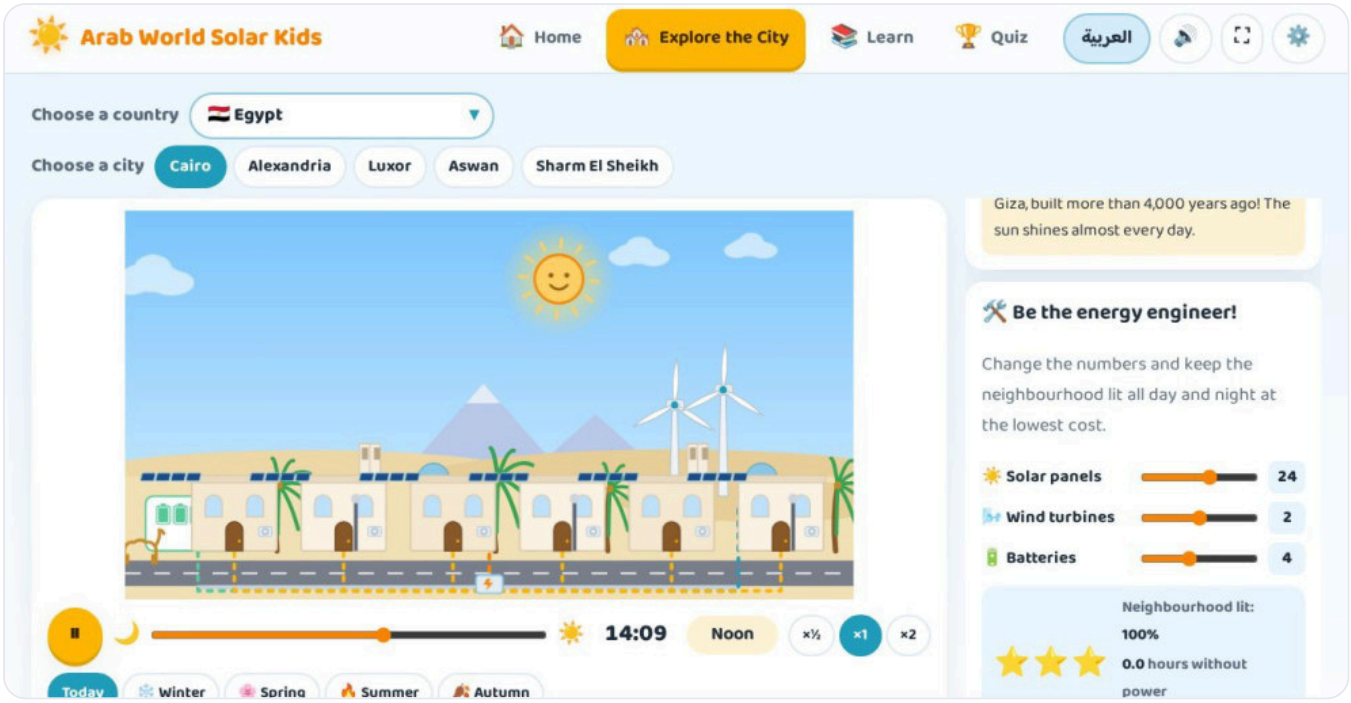

Mitsubishi Electric
MELSEC iQ-F


Rockwell
MicroLogix 1100


Omron
SYSMAC CP1L

Also available in Virtual Reality

Step inside the robot cell with a VR headset and see the robot working at full scale.



05

Arab World Solar Kids

Children become the energy engineers of an Arab city.

Solar panels, wind turbines and batteries come to life in cities across the Arab world, changing with location, time and season. Children design a system that keeps every home lit at the lowest cost.

22	84	6–12	2
Arab countries	Cities to explore	Age range	Languages, Arabic & English

Be the energy engineer

Solar panels	0 – 40	Power reliability	hours lit
Wind turbines	0 – 4	Total cost	coins
Batteries	0 – 10	Neighbourhood	★★★

Interactive lessons

Quiz & certificate

Guide Nasouh / Jack

Teacher dashboard

Included with every ASFAN digital twin

Arabic & English
Full right-to-left interface

Runs offline
Windows 10 / 11, no server

Lessons & quizzes
Built into every product

Instructor tools
Classes, results, exams

Reports
PDF and data export

Free trial
Try it before you buy

ASFAN

Book a live demo or request a free trial.

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info@asfanco.com

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WEB
www.asfanco.com

Educational simulators. Values are model estimates based on published data. Plant and brand names are used for identification only. Screens shown are from the actual software. © 2026 ASFAN International Trading Company.