



WE TRANSFORM THEORY INTO PRACTICE



Visit our web for further information: www.edibon.com



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- General new EDIBON Structure
- EDIBON Lines of Business

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- ARISE - Augmented Reality Instructional System by EDIBON

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- All possible configurations

ABOUT EDIBON

- Who we are
- General new EDIBON Structure
- EDIBON Lines of Business

Welcome to Our Company

EDIBON is a company specialized in the design and manufacturing of pilot plants and equipment for **research** or **technical training** in the field of engineering.

With the **most advanced technology, innovative and optimized techniques** EDIBON is considered one of the leading companies in this sector worldwide.

Accumulating **over 45 years of experience** and backed by recommendations from clients and awards.



ABOUT EDIBON

EDIBON is a worldwide benchmark company, with 45 years of experience in teaching and research equipment for engineering and technical education

+ MISSION

Create the best product with the latest technology available in the market.

+ VISSION

Consolidate the company's leadership worldwide.

+ VALUES

Creation of a culture of responsibility, respect, equality, perseverance, and environmental protection.

www.edibon.com



Our facilities



New and advanced 40.000 m² factory to design, innovate, manufacture and perform quality control procedure.



R+D+i
department



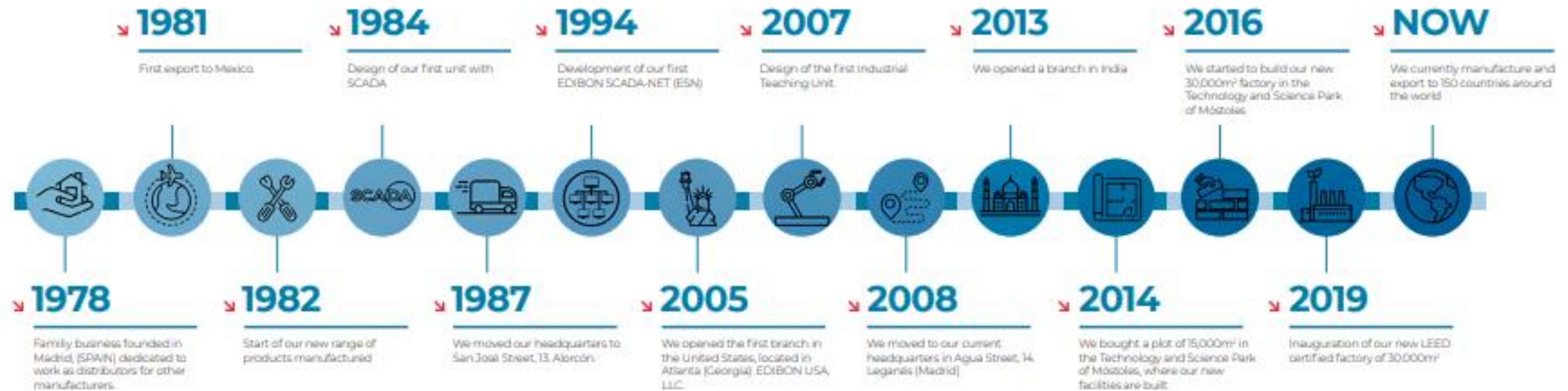
3.000 m²
manufacturing
plant



Quality Control



OUR HISTORY



Main customers

- Universities
- Community & Technical Institutions
- Research Institutions and Organizations
- Present in more than 145 countries



.....The EDIBON history speaks for itself

 **Orders done by EDIBON:**

6514 (as of today)

 **Installations and start-ups carried out on clients:**

845

 **Total number of different clients:**

2780

 **% of total equipment destined abroad:**

89%





**EDIBON is a
worldwide
benchmark
company**

From any corner of the world,
we're ready to install,
supply, and assist you
in finding financing.

Ask us, we have personnel with
extensive experience!

- Afghanistan
- Albania
- Algeria
- Angola
- Argentina
- Australia
- Austria
- Armenia
- Azerbaijan
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Bhutan
- Bolivia
- Botswana
- Brazil
- Brunei
- Bulgaria
- Burkina Faso
- Cambodia
- Cameroon
- Canada
- Chile
- China
- Colombia
- Costa Rica
- Croatia
- Cyprus
- Dominica
- Dominican Rep.
- Ecuador
- Egypt
- El Salvador
- Estonia
- Ethiopia
- Finland
- France
- Georgia
- Germany
- Ghana
- Greece
- Guatemala
- Guinea Ec.
- India
- Indonesia
- Lebanon
- Libya
- Italy
- Irak
- Ireland
- Ivory Coast
- Jordan
- Kazakhstan
- Kuwait
- Kyrgyzstan
- Latvia
- Lithuania
- Malaysia
- Mauricio
- Mauritania
- Mexico
- Mongolia
- Morocco
- Mozambique
- Myanmar
- Netherlands
- New Zealand
- Nicaragua
- Nigeria
- Oman
- Pakistan
- Palestine
- Panama
- Paraguay
- Peru
- Philippines
- Poland
- Portugal
- Qatar
- Romania
- Russia
- Saudi Arabia
- San Cristobal & N
- Serbia
- Singapore
- Slovakia
- South Africa
- South Korea
- Spain
- Sri Lanka
- Sudan
- Suriname
- Switzerland
- Syria
- Tajikistan
- Taiwan
- Thailand
- Trinidad & Tobago
- Tunisia
- Turkey
- Turkmenistan
- UAE
- Uganda
- Ukraine
- UK
- Uruguay
- USA
- Uzbekistan
- Venezuela
- Vietnam
- Yemen
- Zambia



www.edibon.com



OUR SERVICES

EQUIPMENT DESIGN

MANUFACTURING

QUALITY CONTROL

INSTALLATION AND TRAINING

AFTER SALES SERVICES

Due to our **100% Own Design**, we are continuously improving and designing new units

Full **in house production** in Madrid (Spain) for all our equipment, interfaces and software packages.

Very **strict Quality Control** for all our equipment, interfaces, components and software packages.

EDIBON engineers and/or our representatives' skilled engineers may always perform a Commissioning and Training for our equipment.

Five-year Warranty.
Quick response.

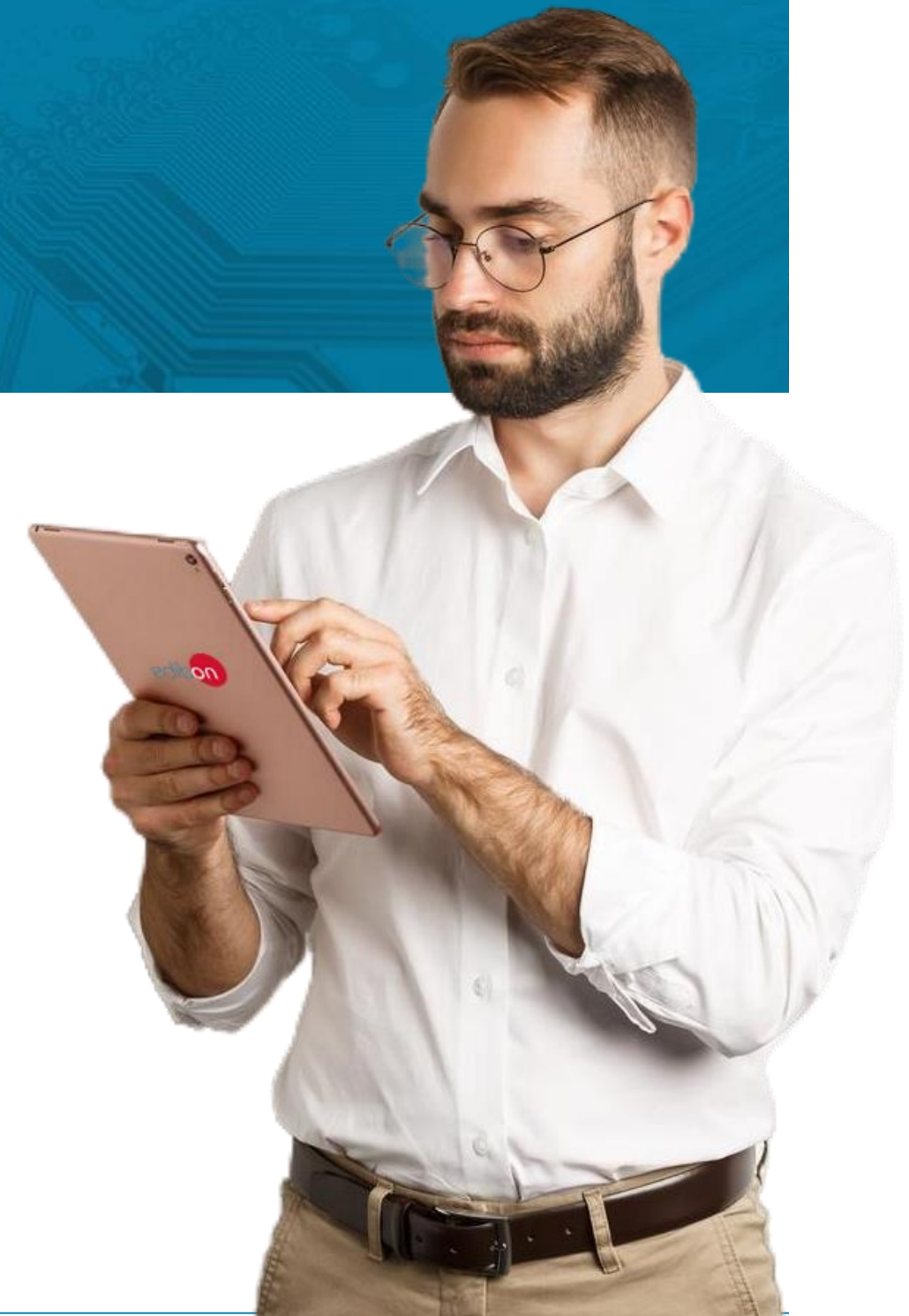
Immediate Remote Assistance for SCADA equipment.
15-years spare parts supply



QUALITY

We seek solutions tailored to the specific needs of each project and ensure the **highest quality in our products**.

For this reason, we strive to meet and exceed **external quality standards and guarantees** through audits that help us continuously improve and achieve **excellence in the service we provide**.



WARRANTIES :



Over the past 5 years, our commitment to quality and technical support has been evident in our average incident resolution time.

We are proud to note that this time has consistently remained below industry expectations, demonstrating our dedication to providing fast and effective solutions to our clients.

>30 days: **2,3%**

15-30 days: **13,2%**

<15 days: **84,5%**

✦ We manufacture more than
16,000 products

✦ To cover
14 technical
areas:

- 1. PHYSICS
- 2. ELECTRONICS
- 3. COMMUNICATIONS
- 4. ELECTRICITY
- 5. ENERGY
- 6. MECHATRONICS, AUTOMATION & COMPUMECHATRONICS
- 7. MECHANICS
- 8. FLUID MECHANICS
- 9. THERMODYNAMICS & THERMOTECHNICS
- 10. PROCESS CONTROL
- 11. CHEMICAL ENGINEERING
- 12. FOOD & WATER TECHNOLOGIES
- 13. ENVIROMENT
- 14. BIOMEDICAL ENGINEERING

- LABORATORY ACCESSORIES
- CUSTOMIZED PILOT PLANTS

INDUSTRIAL



PLC

Industrial Process Control



FSS

Faults Simulation System



ECR

Industrial System with NI CompactRIO



PLCHMI

IIoT local/RC Monitoring w/HMI

EDUCATIONAL



ICAI

Interactive Computer Aided Instruction Software System



EMSK

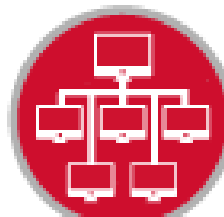
EDIBON Development KIT for Circuits Simulation, Powered by NI LabVIEW™



ARISE

Augmented Reality Instructional System by EDIBON

MULTIPOST



ESN

EDIBON Scada-Net



ECL

EDIBON Cloud Learning

ADVANCED RESEARCH



ELK

Software Development KIT, Powered by NI LabVIEW™

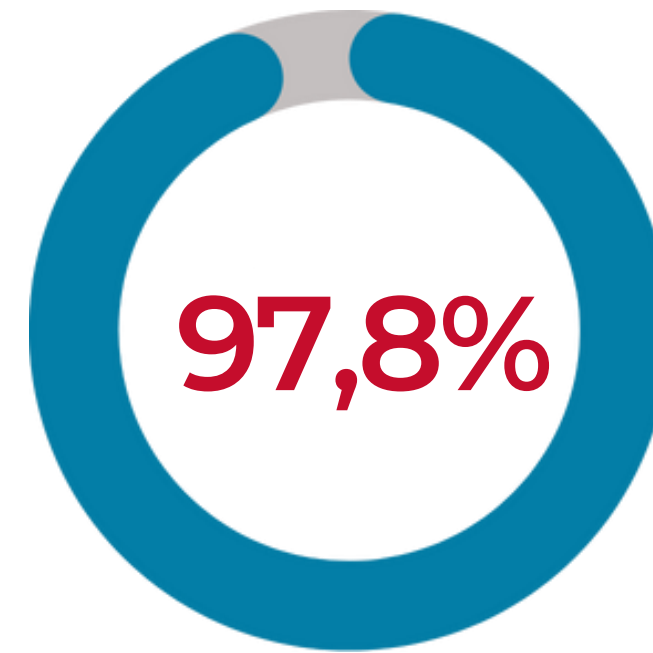


EMAK

EDIBON Matlab kit

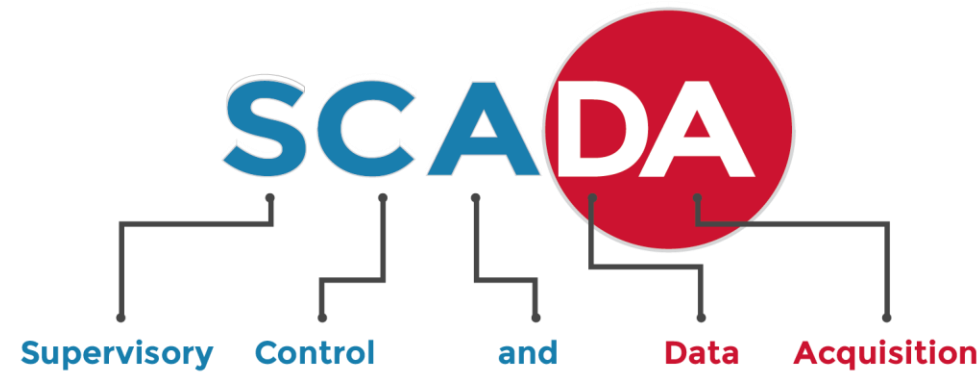


OPINIONS



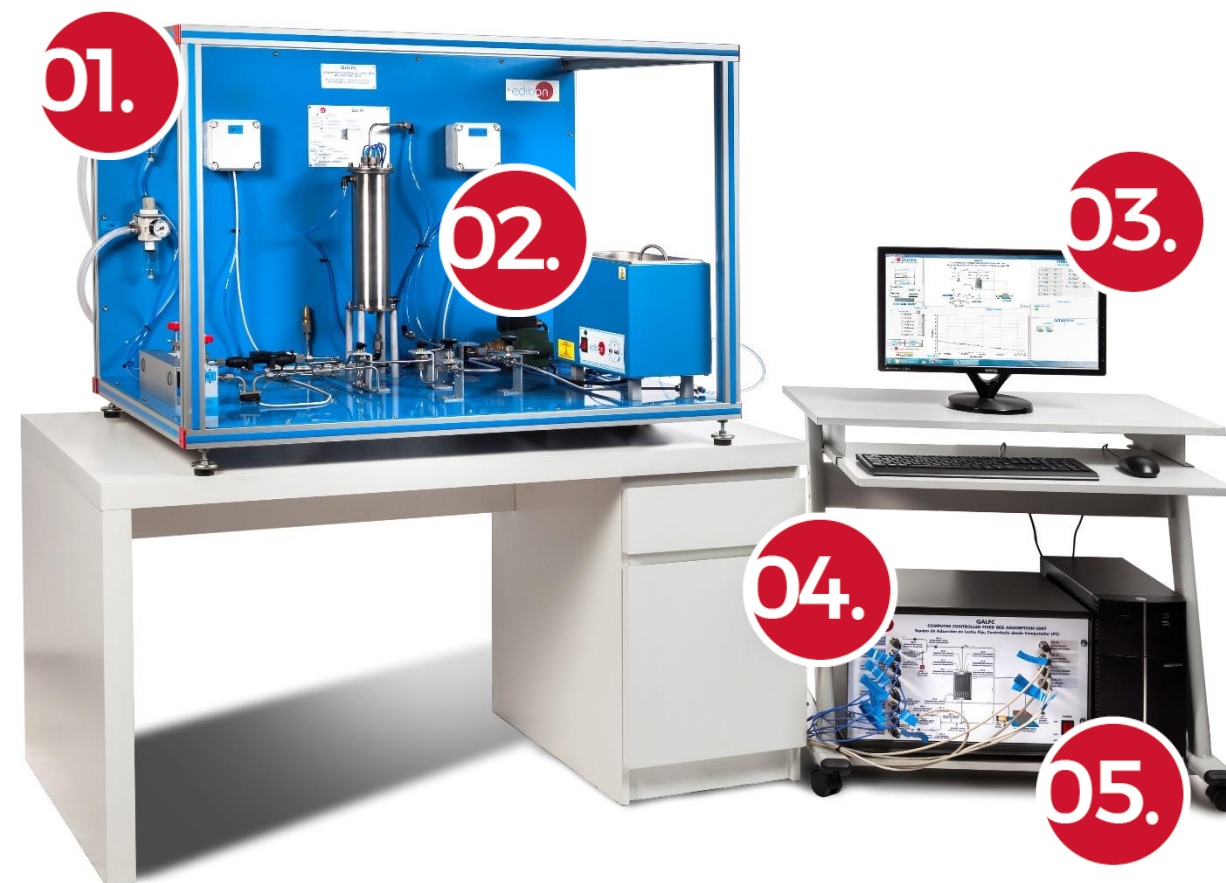
of our clients **would buy or work with us again**

The average score that clients give us is 9.4 in terms of satisfaction with the entire process, from the moment a firm offer is started until it is received or installed.



EDIBON is pioneer designing «**OPEN SCADA**» for most industrial process applications.

The «**OPEN SCADA**» allows students to easily understand industrial processes.



1

UNIT

Lab scale equipment simulating industrial capabilities, processes and procedures with proper safety features

2

SENSORS AND ACTUATORS

Normally available in the market. However, in some occasions are designed by our engineering staff.

3

SOFTWARE

- Supervisory Software
- Control Software
- Data Acquisition Software
- Data Management Software
- Available in Different Languages

4

INTERFACE CONTROL

Controllers designed by our engineers, allowing us to open and modify the system

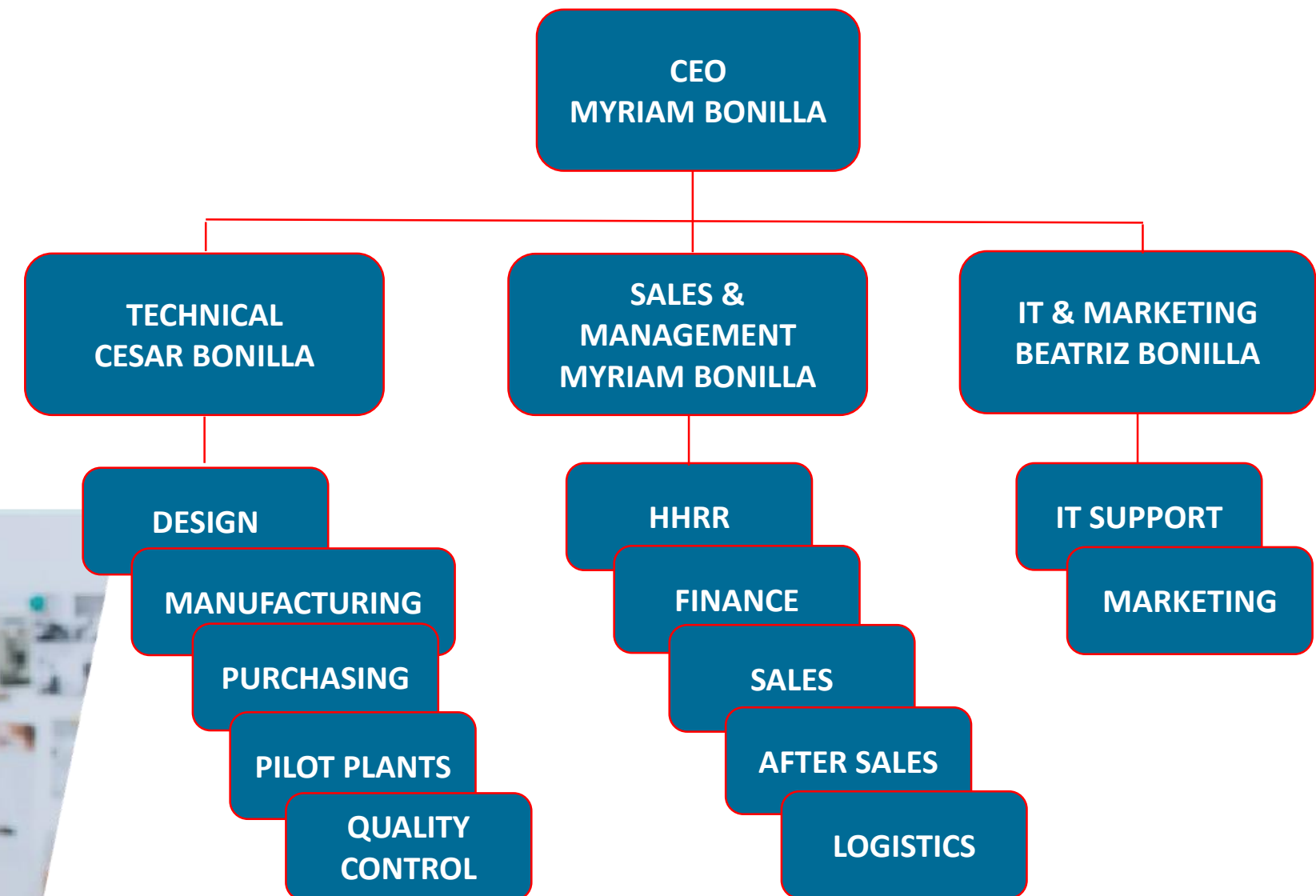
5

DAB AND PC

The supplied DAB (USB or PCIe) can be used in any other customer application






GENERAL STRUCTURE



SALES DEVELOPMENT AREA MANAGERS



 **ANA SANSEGUNDO**
 asansegundo@edibon.com
 Latin America Sales Manager






 **CARLOS LLERAS**
 clleras@edibon.com
 USA & Canada Sales Manager






 **FERNANDO MARTINEZ**
 fmartinez@edibon.com
 Europe Sales Manager






 **JUNCAL CASTAÑO**
 jcastano@edibon.com
 Asia Sales Manager






 **FRANCISCO BALDO**
 fbaldo@edibon.com
 Lusophone Countries Sales Manager



 **SAYED MOUSSA**
 smoussa@edibon.com
 Anglophone African Countries Sales Manager



 **HIND JADID**
 hjadid@edibon.com
 North Africa & Middle East Sales Manager



9 LINES OF BUSINESS



Day by day

Thousands of EDIBON units have been supplied to more than 145 countries



Custom-made units and Pilots Plants

Using EDIBON units for teachers researchers, workers and students



EDIBON Cloud Learning (ECL)

Technical Distance Learning connecting students and EDIBON units located in different places



Contractor for the construction of technical buildings

Design of buildings with LEED certification for engineering companies and Technical/Vocational Centers



Courses

Using EDIBON units for Teachers, Students and Researchers



Technical Education Consultancy

Assistance, Assessment and support for Technical Projects



Projects

We are working with hundred of Multilateral and Bilateral projects



Complete Laboratories

Complete custom-built design of any technical laboratory



Technical Education Turnkey Projects (TKP)

Thousands of EDIBON units have been supplied to more than 150 countries



IMPACTFUL PROJECTS

- New equipment & technologies
- Pilot Plants
- MOF4AIR Video

New equipment & Technologies

- **Research, Development and Innovation** to achieve excellence in education, with advanced sustainable solutions and at an efficient cost.
- EDIBON offers the **most advanced technology** in technical and research equipment worldwide.

Workstation Applications with PLC (examples):

- AE-PLC-APS. Piece Feeder Workstation
- AE-PLC-CTCC. CC Conveyor Belt Workstation
- AE-PLC-ALV. Vertical Storage Workstation
- AE-PLC-SPO. Positioning Workstation
- AE-PLC-SLB. Ball Selection Workstation
- AE-PLC-MR1. Rotary Table Workstation 1

We are focused on developing products and services tailored to our customers' needs, while also committed to advancing technology and optimizing our resources.

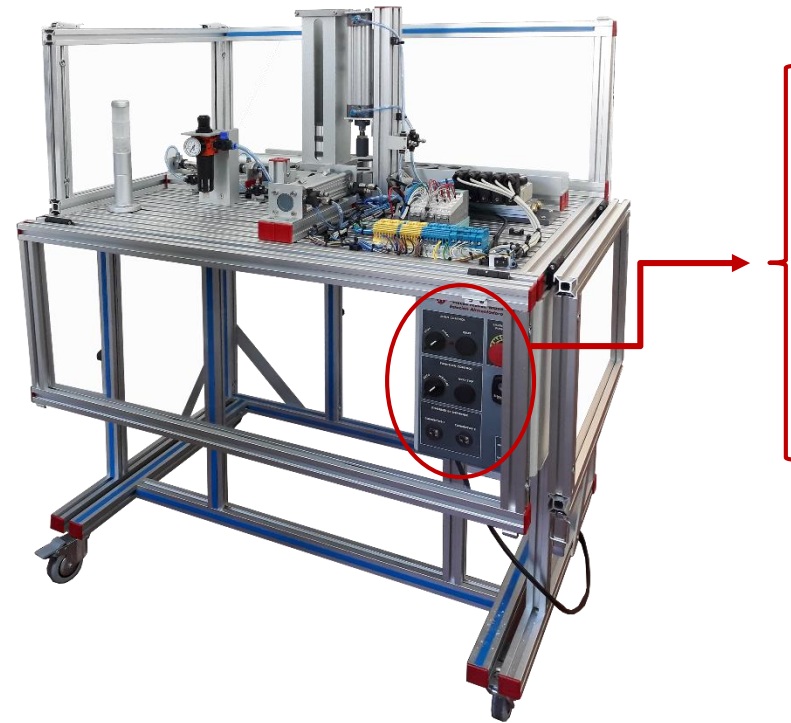


AE-PLC-APS | Piece Feeder Workstation

This equipment allows to learn basic concepts about pneumatic and electro-pneumatic technologies. Its role is to supply parts and check that they are valid. The piece is moved to the exit area if it is approved or discarded if it is not.

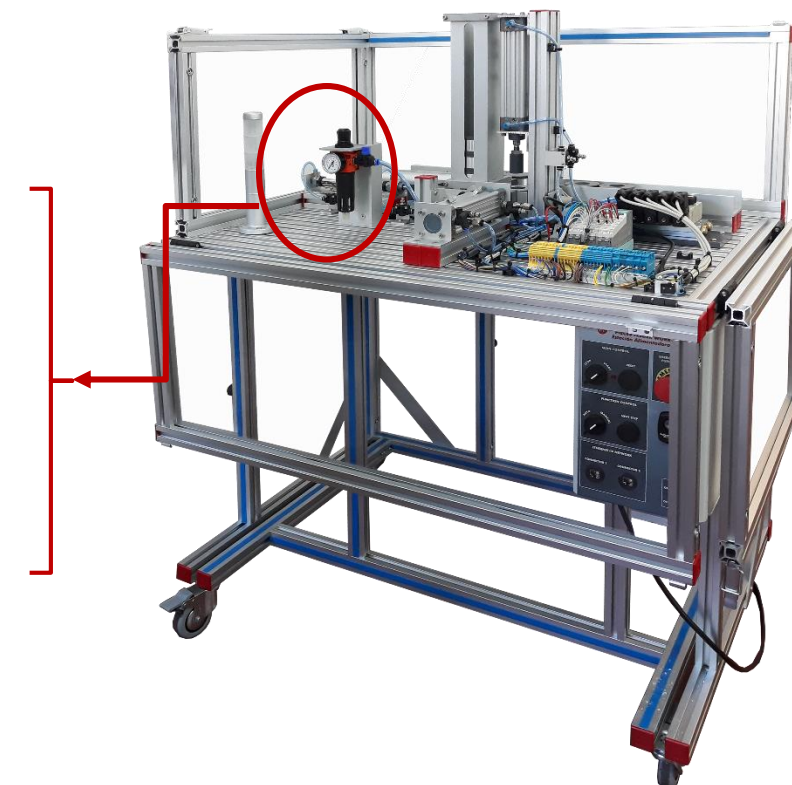


AE-PLC-APS | Piece Feeder Workstation



Control panel: contains all the buttons and switches to work with the equipment. It also includes a differential magneto-thermal protection inside the box to be able to safely work with the equipment.

Electro-pneumatic sensors and actuators: This part contains all the sensors, pneumatic actuators, electro-pneumatic actuators and the Ethernet/IP remote input and output signal necessary to carry out automatic control of the equipment.



PILOT PLANTS

EDIBON's Pilot Plants is focused on the development of products and services tailored to the needs of customers, and committed to improving technology and optimizing our resources.

General information:

- Main purpose
- Key features
- Benefits





Supplied to:

Copperbelt University **[ZAMBIA]**

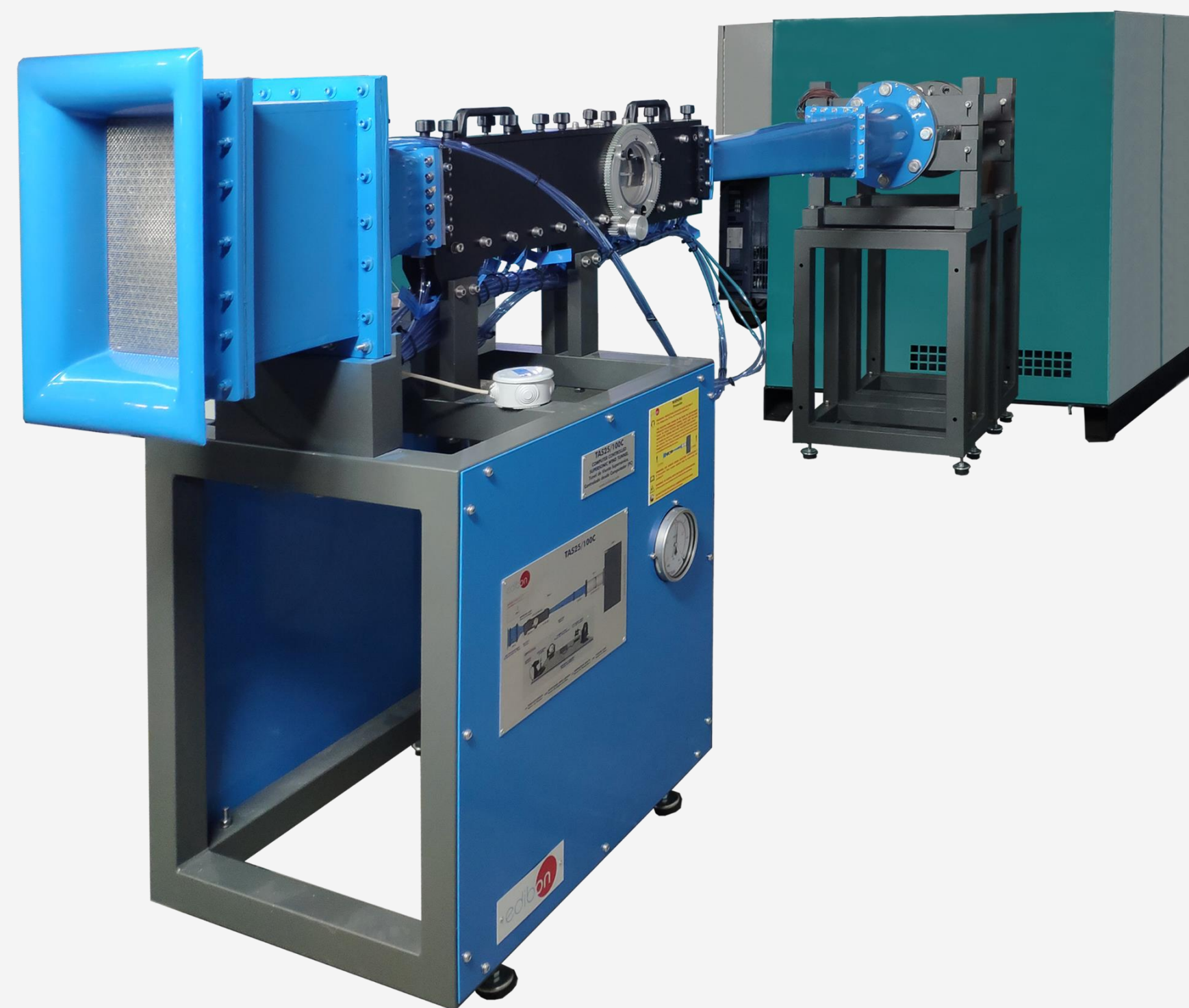
Key Features:

- There are **three different upper profiles** for the working section to generate velocities up to twice the speed of sound (**Mach 2**).
- The optional Schlieren system allows for direct observation and photography of the supersonic flow and shock waves formed around the aerodynamic models, enabling more precise results.

Dimensions (m): 5 x 2,5 x 1,5



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TAS25/100C. Computer Controlled Supersonic Wind Tunnel with SCADA



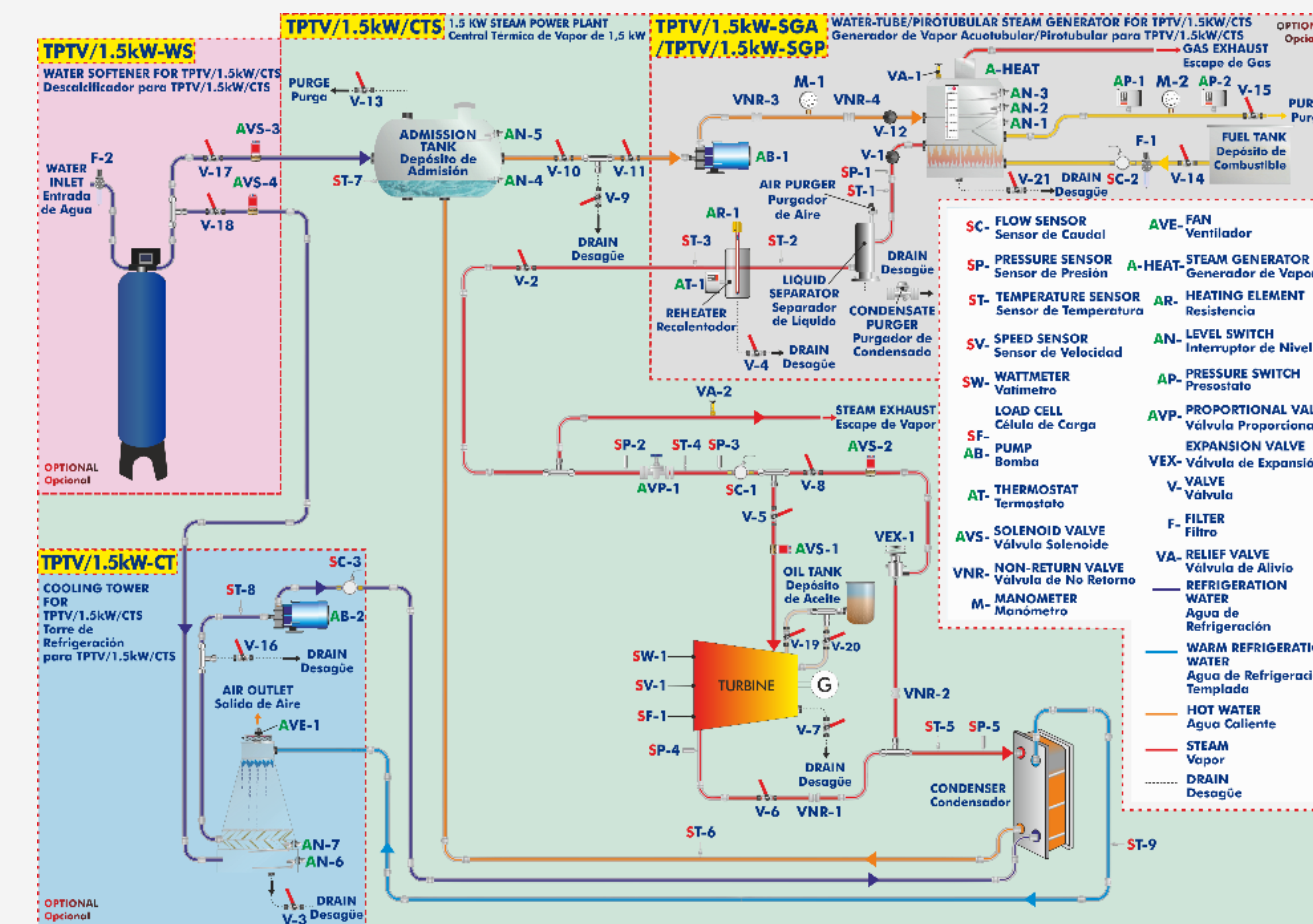
Supplied to:

University of Punjab [PAKISTAN]

Key Features:

- Converts thermal energy into mechanical energy and then into electrical energy.
- An optical Schlieren system allows researchers to directly observe and photograph the supersonic flow and shock fronts formed around the aerodynamic models, thus enabling a greater number of experiments.

Dimensions (m): 5 x 1,5 x 2,5



TPTV/1.5kW/CTS. Computer Controlled and Touch Screen 20kW Steam Power Plant



www.edibon.com



We have opted for an efficient design that allows each pilot plant to be housed in a container.

This way, we have simplified the process of transportation and installation, ensuring a **plug-and play experience**, even in complex projects, for seamless integration into your operation.

01.

Pickup from our facilities.

02.

Shipping to port.

03.

Arrival of the container at the final facility.

04.

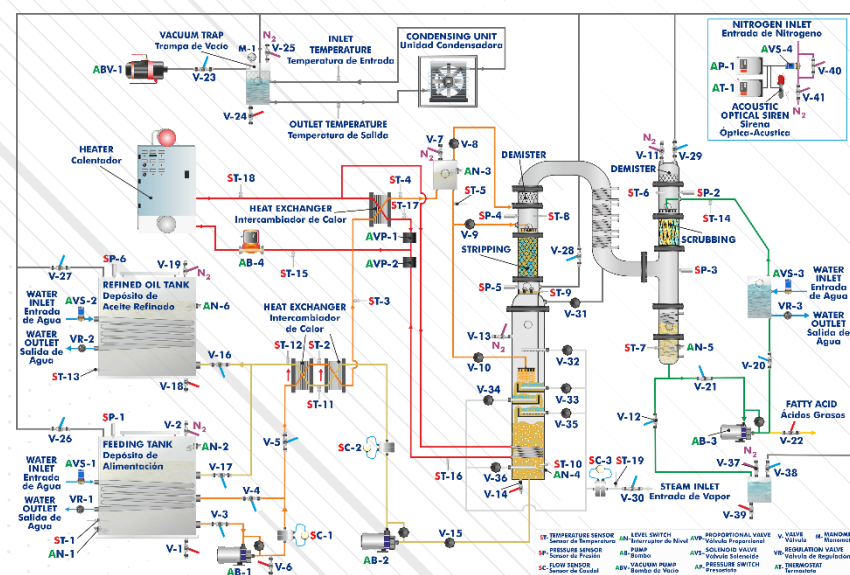
Connection and final installation.

Supplied to:

Instituto de la Grasa de Sevilla, CSIC **[SPAIN]**

BENEFITS:

- Enables researchers to remove fatty acids from oil.
- Column with structured filling and trays capable of perform a vacuum and high temperature distillation with steam.



Dimensions (m): 7 x 1,5 x 4



AEDC/A. Advanced Computer Controlled Deodorizing Unit



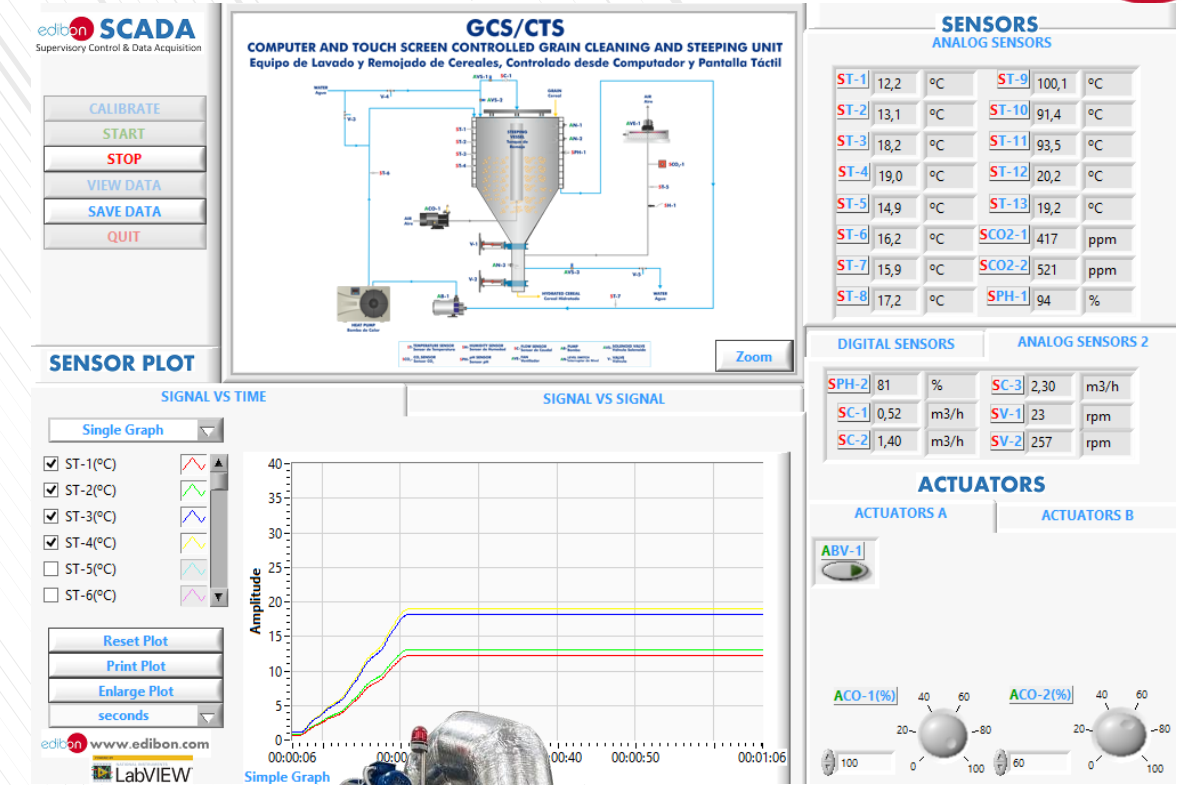
www.edibon.com

Supplied to:

Agriculture and Food Development Authority **[IRELAND]**

BENEFITS:

- Researchers can reproduce the malting process in a huge variety of conditions.
- Local producers can now test their products.



Dimensions (m): 13 x 3 x 2

CE00/MA. Pilot Plant for Cereal Malting



Supplied to:

The City University of New York **[USA]**

BENEFITS:

- Hydrological studies of specific locations, achieved by replicating them on the equipment. Effects on the terrain from localized storms, for example.
- Research or studies on sediment transport. Implications on the terrain due to installed infrastructures, such as bridges and dams.
- Investigation of contaminant transport, such as pesticides.

RESEARCH
UNITS,
MODULAR
AND
EXPANDABLE



Dimensions (m): 13 x 2 x 3

ESHHC(4x2m). Computer Controlled Hydrologic Systems, Rain Simulator
and Irrigation Systems Unit (4x2 m)



Supplied to:

University Teknologi Mara **[MALAYSIA]**

BENEFITS:

- Researchers can replicate 486 of the most important control variables that make the APS12 an innovative system capable of interacting with the user thanks to state-of-the-art devices included.
- The APS12 is capable of displaying any electrical phenomenon present in real power systems, such as short circuits, overcurrents, overvoltages, over frequencies, reverse power, generator out of control, blackout, etc.
- It simulates the conditions of:
 - Generation system.
 - Transmission / Distribution system.
 - Load system.

Dimensions (m): 14 x 3 x 2,5



www.edibon.com



APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)



Supplied to:

Technical University of Denmark **[DENMARK]**

BENEFITS:

- Available to carry out several different solid-liquid extraction experiments.
- Researchers can now work at high pressure and temperature conditions [up to 80°C].
- Solvents used: base, acid, organic.

Dimensions (m): 2 x 1,5 x 3

SLE00. Computer Controlled and Touch Screen Solid-Liquid Extraction Pilot



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Supplied to:

Jouf University **[SAUDI ARABIA]**

BENEFITS:

- Real-world testing using scale models of ships and floating artifacts. This facilitates the examination of buoyancy and behavior in both calm and wavy waters.
- Testing and modeling various types of structures for the containment or redirection of water currents, such as dams, bridges, and culverts.
- Conducting research on water-induced soil erosion and sediment transport.





CREATING THE FUTURE TOGETHER: EDIBON ANNUAL SEMINAR 2024



TECHNICAL news

- ECL - EDIBON Cloud Learning
- ARISE - Augmented Reality Instructional System by EDIBON





ECL

- Solution **designed to control technology** based labs remotely.
- Cloud Computing provides information, shared resources, storage and software services supported by a network (usually Internet).

Main Advantages:

- Reliability
- Security and Privacy Flexibility
- Cost Reduction & Time Saving



EDIBON Cloud Learning is a **cloud platform** to help new generations to access the latest technology during the learning process via the Internet.

Technical Remote Learning enables students in any city in the world to run the EDIBON equipment located in Madrid and perform all the practical exercises.

LABORATORY
LOCATED IN
ONE LOCATION

STUDENTS
LOCATED AT
ANOTHER
LOCATION

STUDENTS
CAN REMOTELY
CONTROL THE
LABORATORY
FROM HOME

EDIBON Cloud Learning is divided in two platforms:

USERS ONLINE PLATFORM



ADMINISTRATORS have full control over their laboratories thanks to the powerful class-administrator tool.



USERS can learn interactively in a flexible environment as if they were in the laboratory, accessing through the remote app for working with EDIBON units. Several users can work with one unit or one user with several units.

REMOTE APP PLATFORM

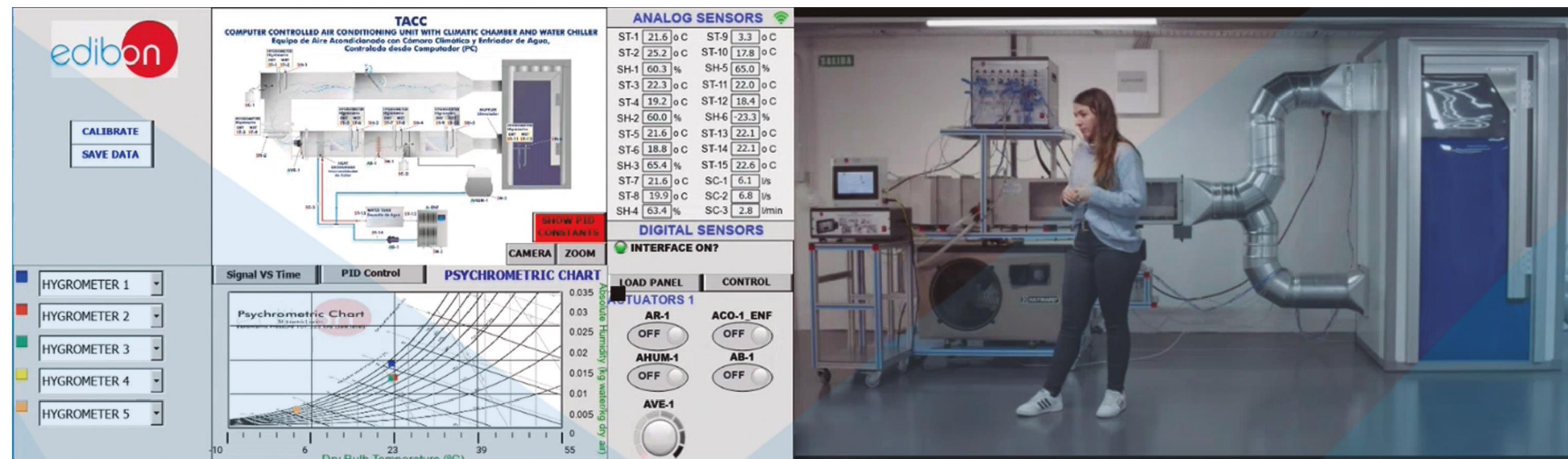
Users can control EDIBON units & EDIBON SCADA software as if they were in the laboratory.

Budgeting for ECL

1. EQUIPMENT	LABORATORY 1 (Define practices and equipment)	
	LABORATORY 2 (Define practices and equipment)	
	LABORATORY 3 (Define practices and equipment)	
	LABORATORY 4 (Define practices and equipment)	
	LABORATORY 5 (Define practices and equipment)	
2. PLATFORMS	ONLINE SGA (LMS) PLATFORM (YEAR)	
	CONTROL-STREAMING PLATFORM (YEAR)	
3. LABORATORIES, MANAGEMENT AND MAINTENANCE	Equipment in EDIBON. Maintenance and tune-up.	
4. THEORETICAL CONTENT AND DIGITALIZATION	Theoretical Content and Digitization	
5. PRACTICAL TRAINING	Laboratory/streaming sessions. Videos. Tutors	
6. THEORETICAL TRAINING	Tutors (1 Tutor per 100 students). Forum management. Resolution of doubts.	
	TOTAL:	
	TOTAL (VAT included):	



Let´s see a **DEMO!**





ARISE

- **Definition:** Augmented reality (AR) is a technology that overlays digital information such as images, videos, or 3D models onto the real world, enhancing the user's perception of reality.
- **Purpose:** Augmented reality (AR) aims to provide an enriched user experience by blending digital content with the physical environment in real-time.



How Augmented Reality (AR) Works?

■ Sensors:

- Cameras
- GPS
- Gyroscopes

■ Display:

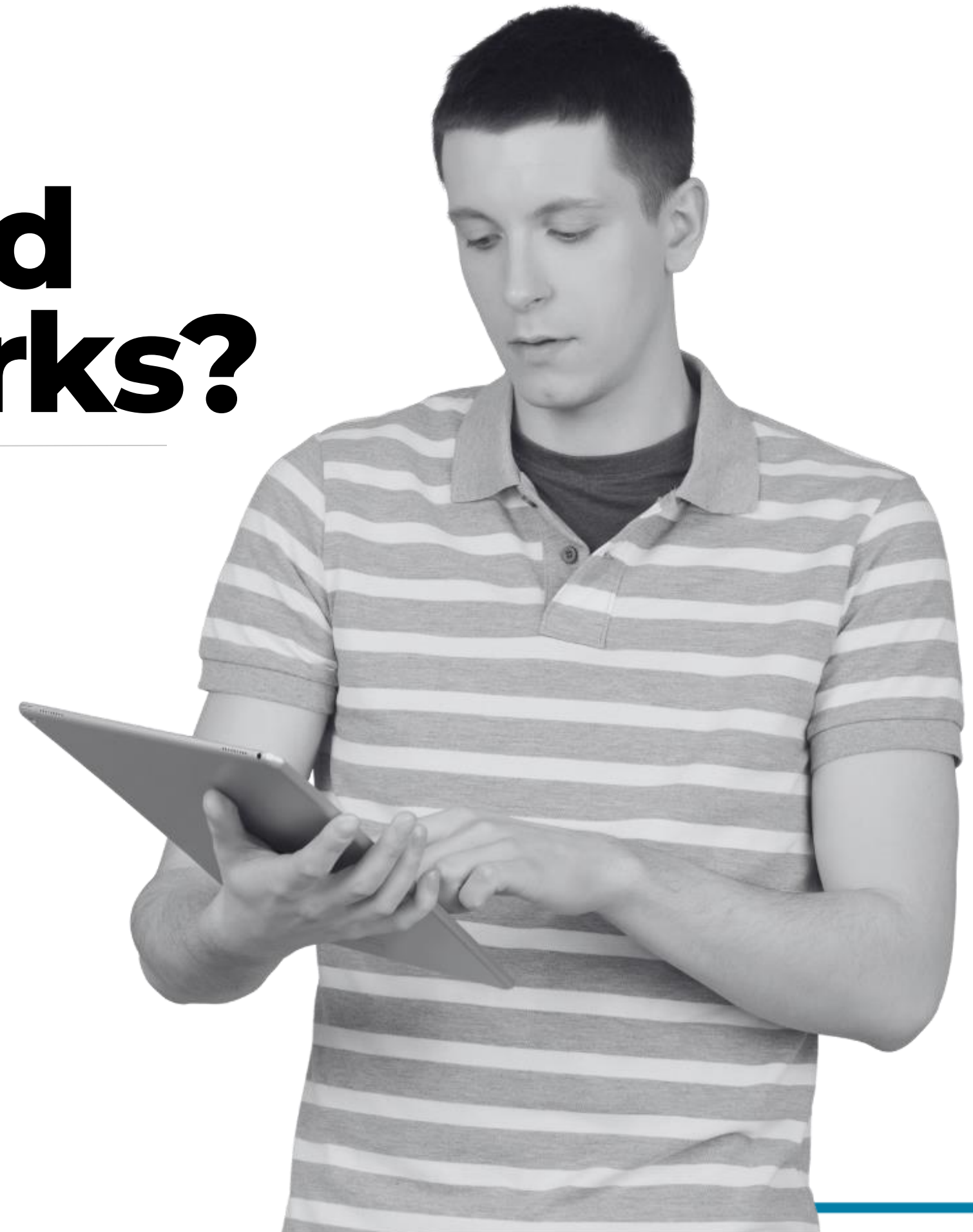
- Screen
- AR Goggles
- Content

■ Computer Vision:

- Algorithms
- Surfaces
- Objects
- Markers

■ Interaction:

- Elements
- Voice Commands
- Touch Inputs



Augmented Reality Virtual Reality

Augmented Reality (AR) differs from **Virtual Reality (VR)** in the sense that part of the surrounding environment is 'real' and adds layers of virtual objects to the real environment.

On the other hand, in **Virtual Reality (VR)**, the surrounding environment is completely virtual and computer generated.



Bridging the **GAP** between Virtual and Real Worlds

■ Entertainment:
Gaming
Immersive storytelling
Interactive experiences

■ Retail:
Virtual try-on for clothes
Visualization of furniture in home settings
Product demos

■ Education:
Interactive learning
Virtual tours
Historical reconstructions

■ Healthcare:
Surgical planning
Medical training simulations
Patient education.

Steps to access ARISE

01. Request access to the machines available with Augmented Reality.
02. Scan the QR code.
03. With the provided username and password, you can log in and access unlimitedly all our experiences conducted with EDIBON unit.

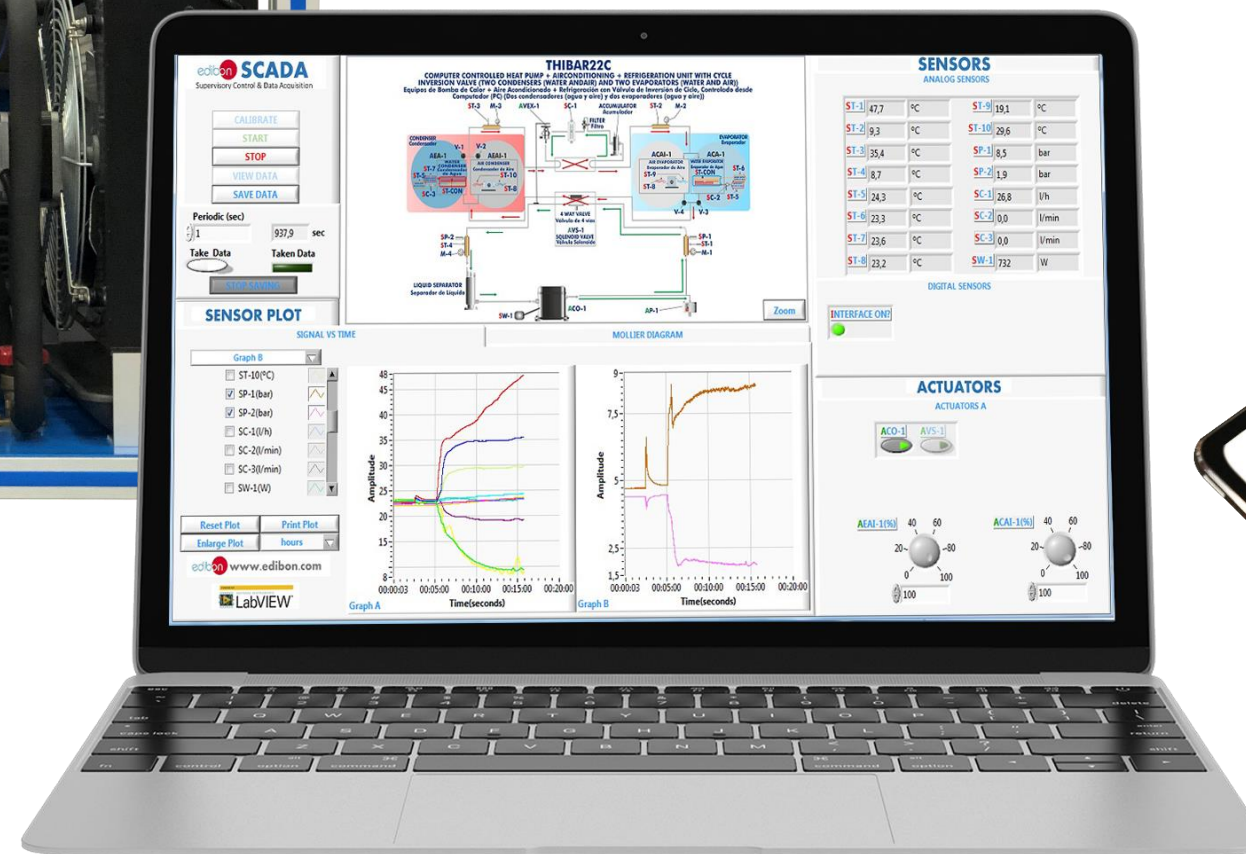
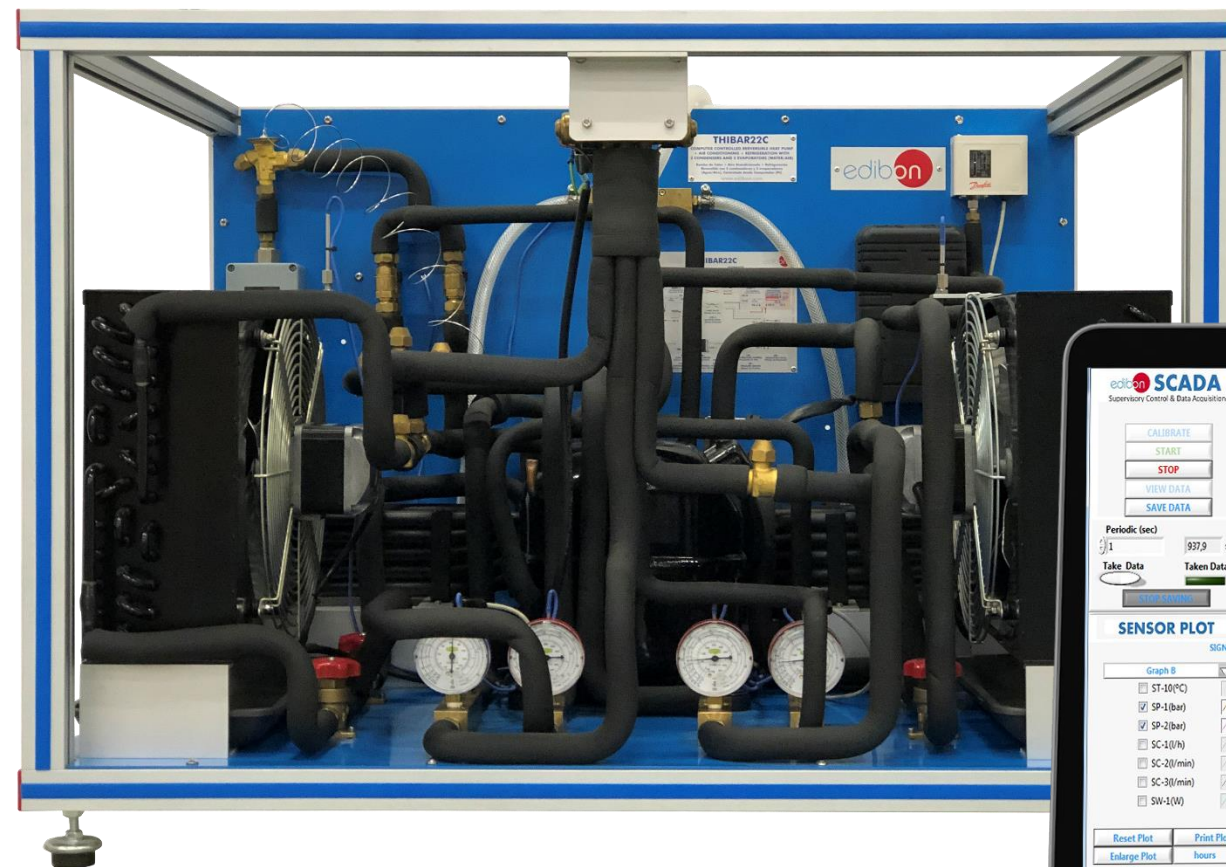
QR to be scanned with:

- Cell pone
- iPad
- Tablet



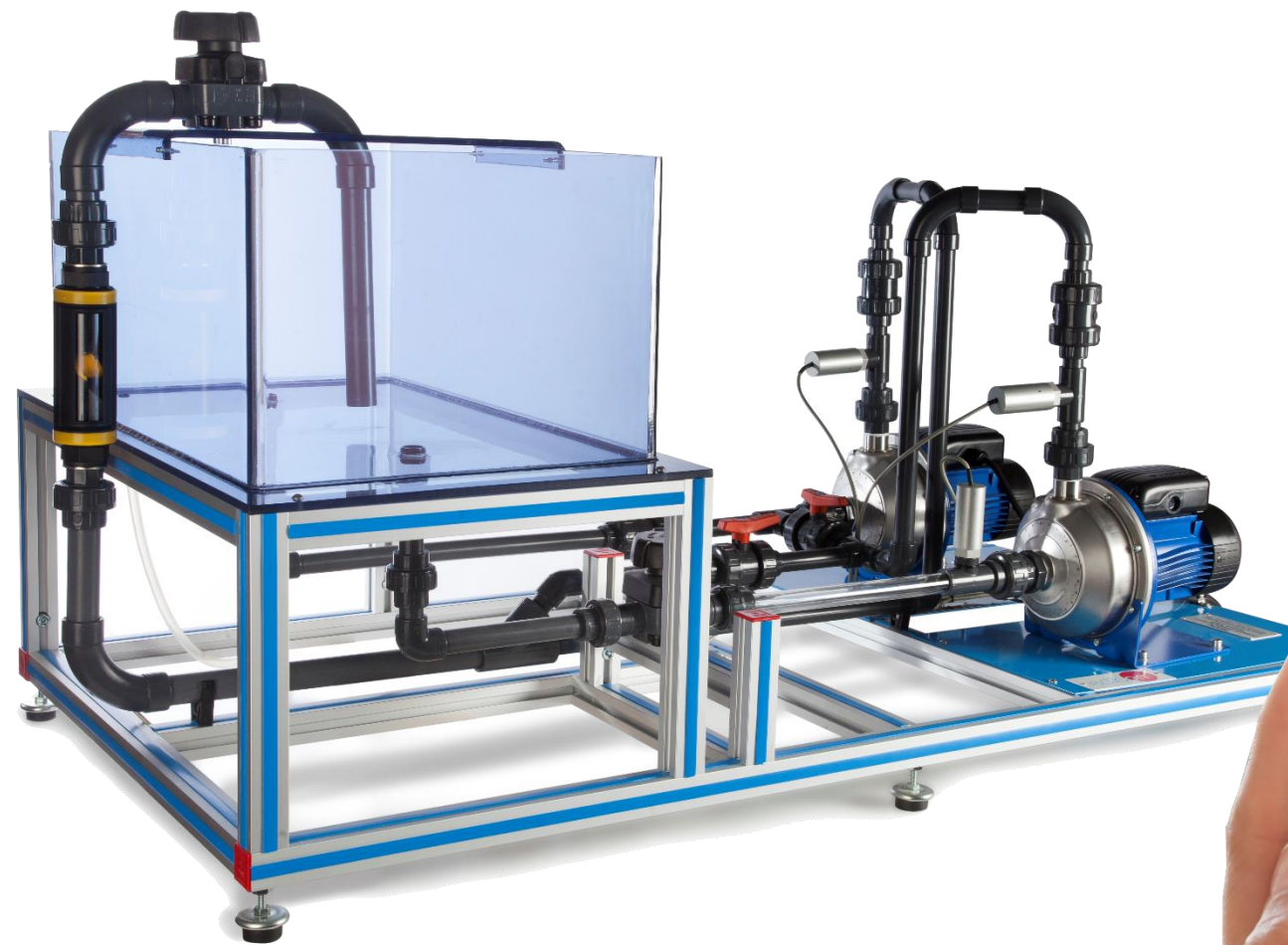
THIBAR22C

Computer Controlled Rerversible Heat Pump + Air Conditioning + Refrigeration with 2 Condensers and 2 Evaporators (Water/Air)



PBSPC

Computer Controlled Series/Parallel Pump Bench





SALES news

- Customer related information
- New Commercial Strategies
- Targets to Increase Sales



CUSTOMER RELATED INFORMATION

- Is it a budgetary quote?
- Is the budget available for the purchase? If so, approx. amount?
- Purchase to be made this year or next year?
- Who are our competitors?
- Does your customer know our requirement?
- Possibility to speak with customer when quote is presented
- Other information that you consider of our interest.



EDIBON webinars

Main Purpose:

- Reaching as many customers/people as we can.
- Engaging lab technicians as well.
- You and staff MUST attend it!
- Much time and efforts are spent



Future EDIBON Webinars

June:

SMART Grids for Utilities

July:

Programmable Logic Controller – PLC

September:

Combustion Turbines (Sep24)

October:

Wind Turbines

November:

Recycling



Social Networks

Main Purpose:

- Easy-to-access tool.
- Get connected to all our social media.
- Feed your customer with information.
- Engage your customers all the time.
- EDIBON has huge Marketing tools.



https://www.instagram.com/edibon_research/



<https://www.linkedin.com/company/edibon/>



https://twitter.com/Edibon_Intl



<https://www.facebook.com/Edibon.International/>



<https://www.youtube.com/user/EDIBONinternational>



<https://whatsapp.com/channel/0029VaDneK88kyPL4TJHZ1Q>

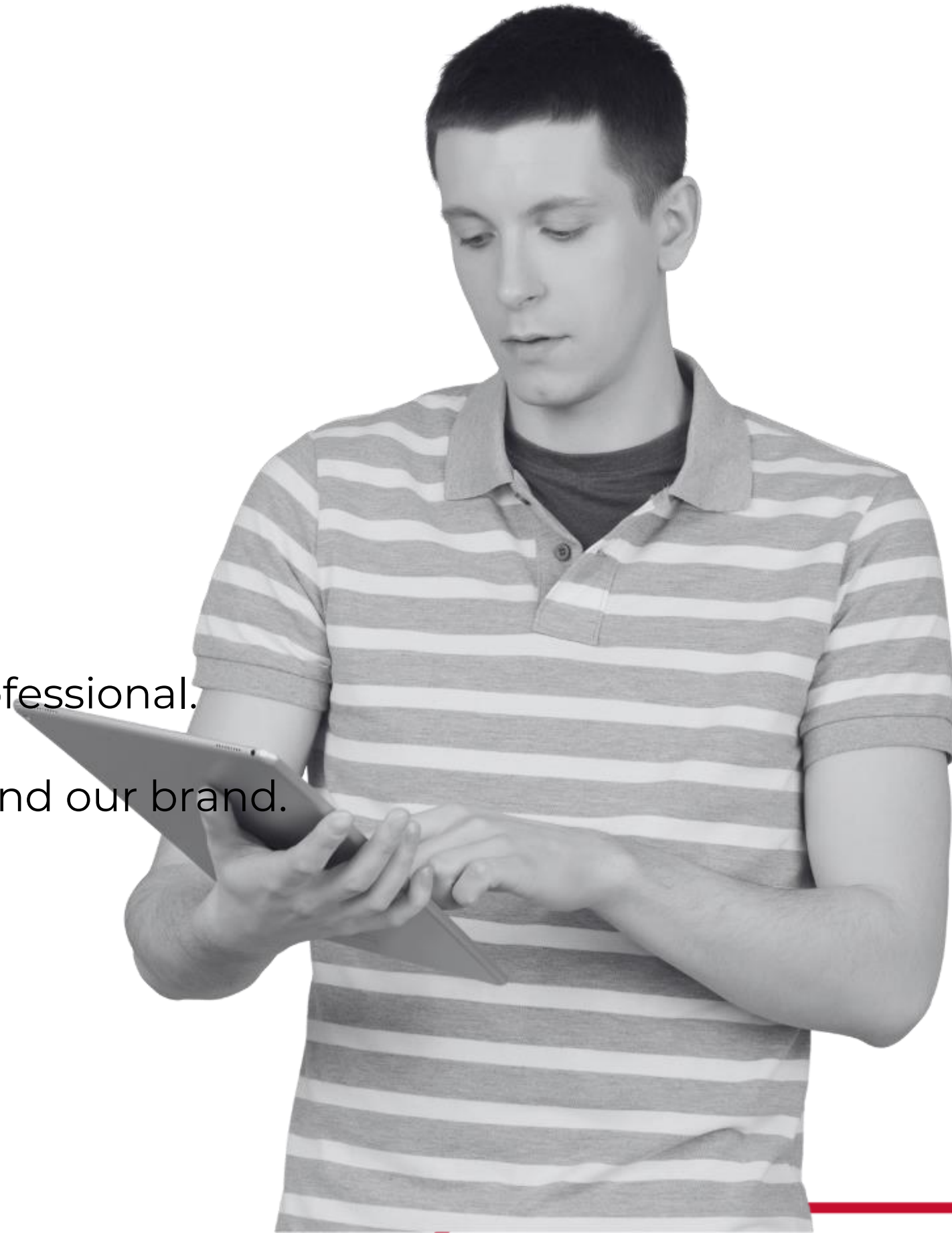


<https://t.me/+LLPJVFKvTqkwNmY0>



EDIBON'S Presence in Exhibitions and Shows

- Map all relevant technical exhibitions in your country.
- If interesting, attend it. Your next customer may be there.
- Electronic devices can make your booth more interactive and professional.
- Make sure your next potential customer finds/reaches both you and our brand.



Next Exhibitions

- 29-31 May 2024

ELEARNING AFRICA 2024 Education: 17th Edition

Kigali (Rwanda)

- 23-26 June 2024

ASEE 2024: American Society for Engineering Education

Portland, OR (USA)

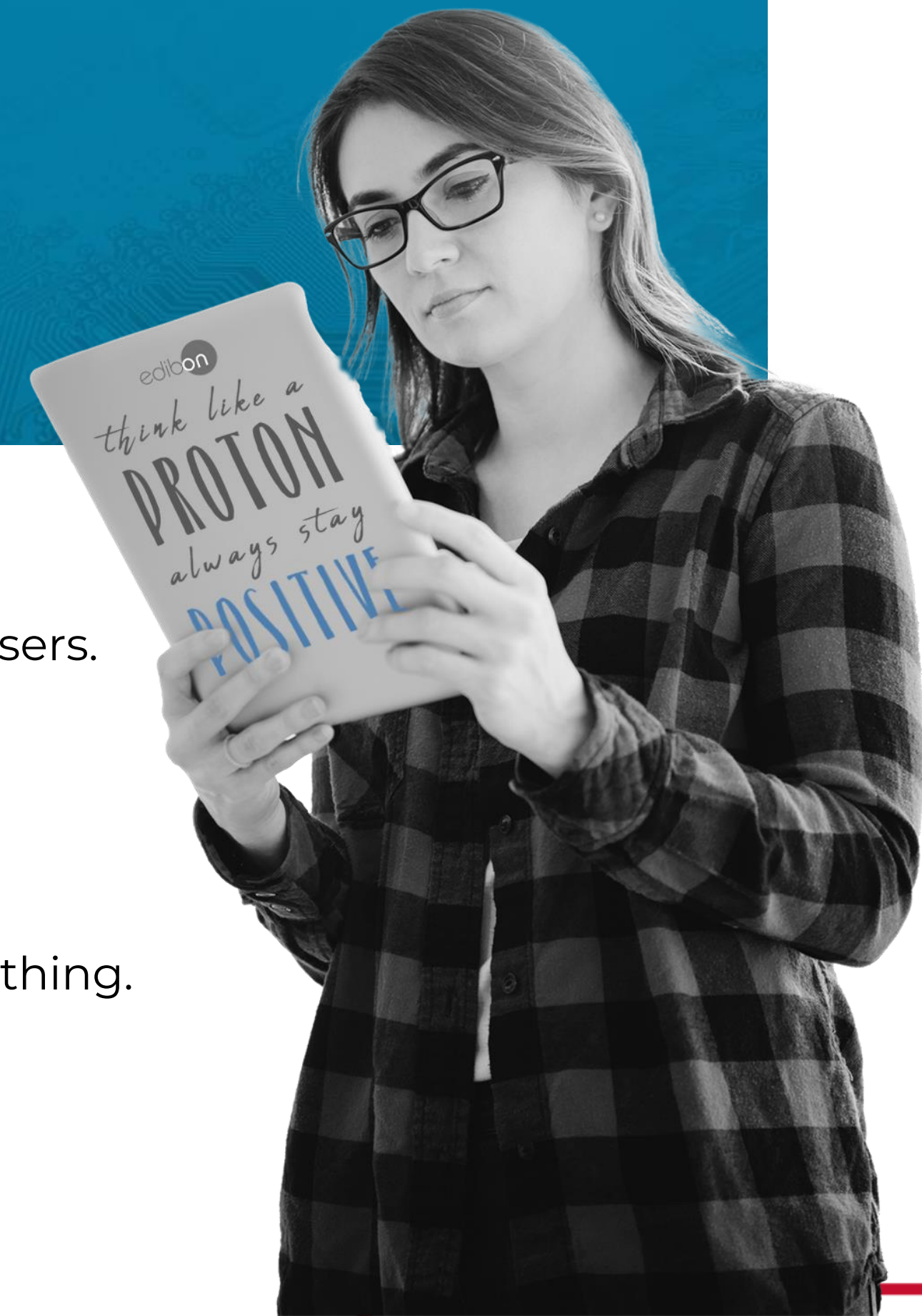
- 04-06 December 2024

ACTE's CareerTech Vision 2024

San Antonio, TX (USA)



Virtual Meetings



- We are always glad to perform specific video conferences with end users.
- The more information about the opportunity you have, the better.
- Gather and filter all relevant strategic information for the VC/VC.
- Customers tend to give preference to those who assist them in everything.

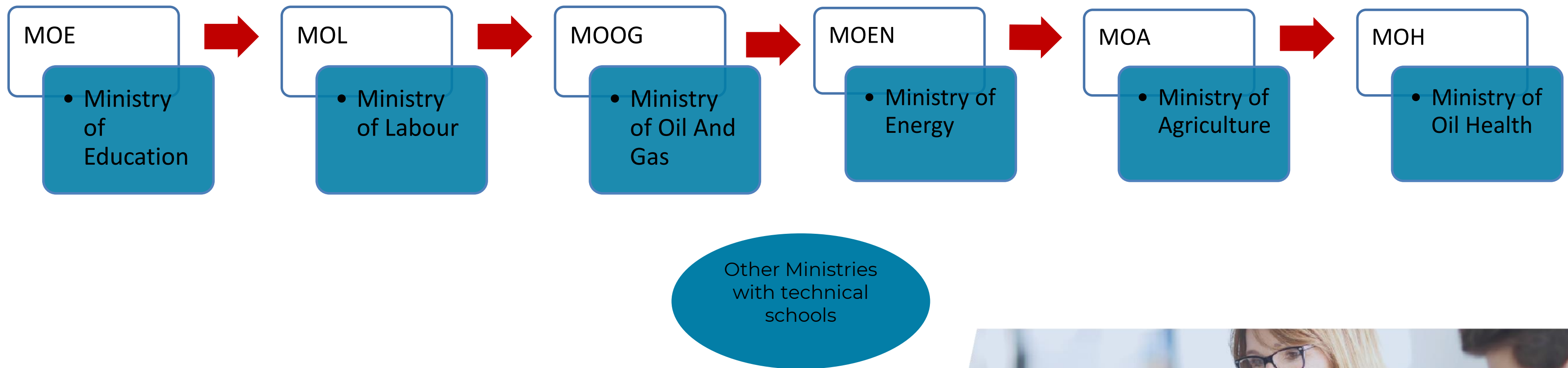




TARGETS TO **INCREASE SALES**

- Actual sales situation in your area
- Identifying needs
- Actual current events affecting sales
- Bilateral and Multilateral Projects

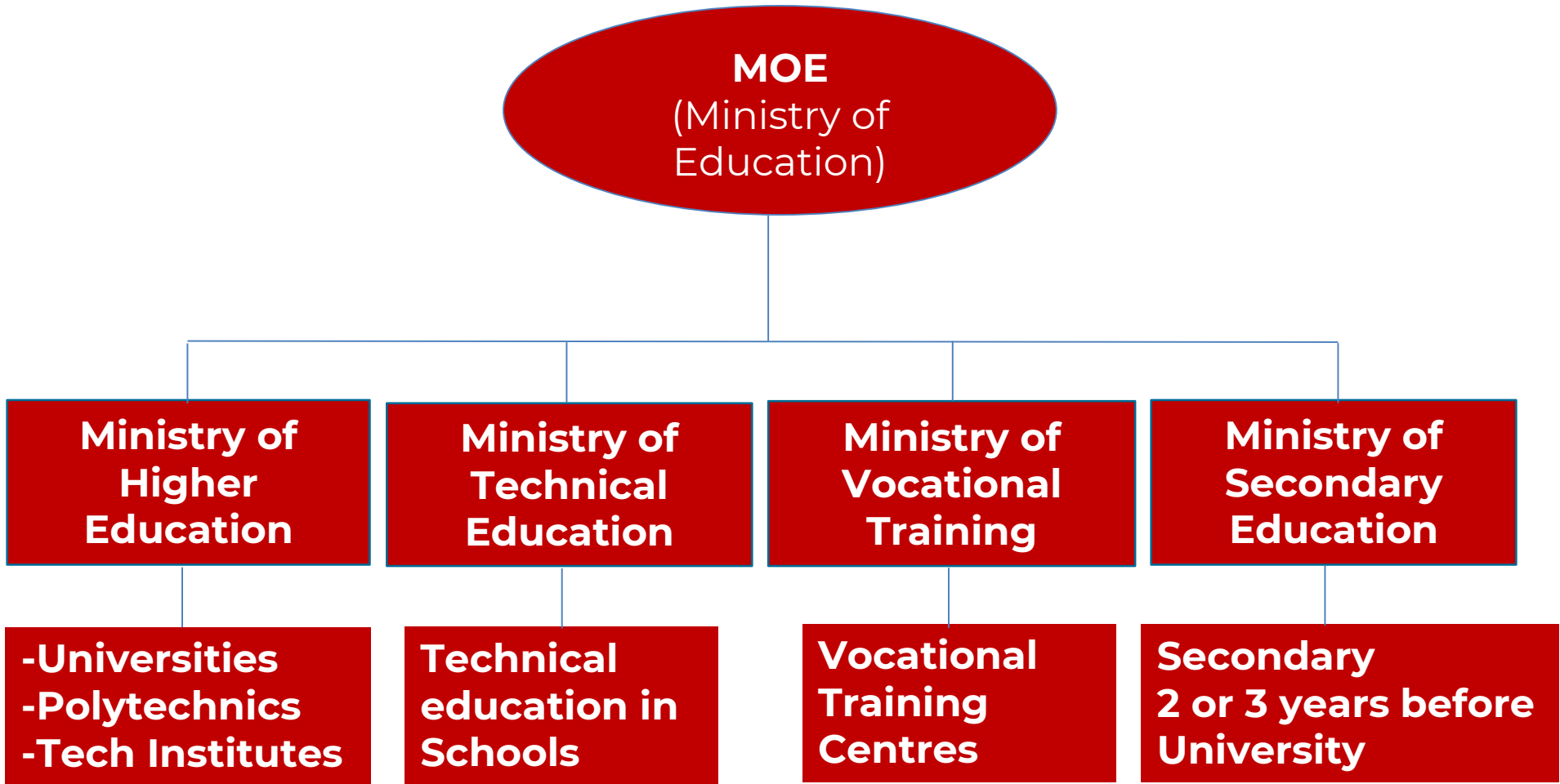
Actual Sales Situation in Your Area



Note: In some countries MOE included HE, TE and Vocational Training.
In some countries MOE is divided in three Ministries or separate (3 ministers)
In some countries, Vocational Training is under Ministry of Labour.



Identifying the NEEDS



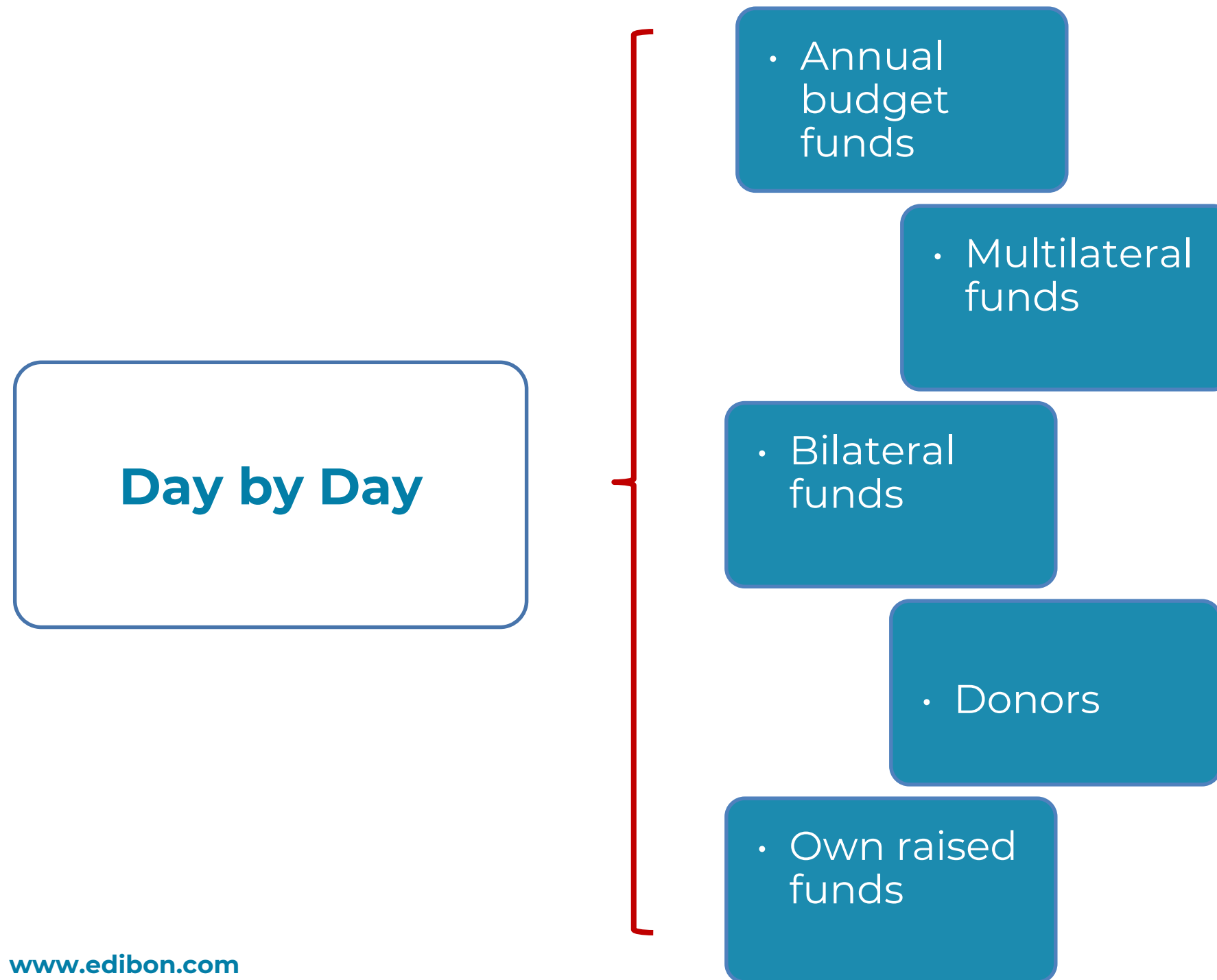
Note: In some countries, there is only one Ministry with 4 Deputy Ministers.

ACTUAL GLOBAL EVENTS AFFECTING SALES

- Wars
- Political restriction
- Geographical issues
- Lack government fundings
- Terrorism



Bilateral and Multilateral Projects



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Bilateral and Multilateral Projects

MULTILATERAL BANKS & INSTITUTIONS



BIILATERAL ORGANIZATIONS



Main multilateral institutions:

- World Bank (WB)
- European Union (EU)
- Asian Development Bank (ADB)
- African Development Bank (AFDB)
- Inter-American Development Bank (IDB)

Other multilateral institutions:

- Islamic Development Bank
- UNOPS
- UNESCO
- UNIDO
- Caribbean Development Bank (CDB)
- OFID-OPEC Fund for International Development, etc.

Main bilateral organizations:

- “Debt Swap” – Spain
- KOICA – South Korea
- JICA – Japan
- USAID – USA

Other bilateral organizations:

- DFID – UK
- GIZ – Germany
- AFC – France
- CIDA – Canada
- Others

AFTER-SALES Services

- FAQs
- Technical Support

AFTER SALES SERVICE

- Warranty Related Issues
- Troubleshooting by Videocall & Remote Control
- Onsite Repairs
- Spare Parts Quotations
- Spare Parts Installation Assistance
- Onsite/Online Training
- Technical Support



FREQUENTLY ASKED QUESTIONS



- **After-Sales / Technical Support**

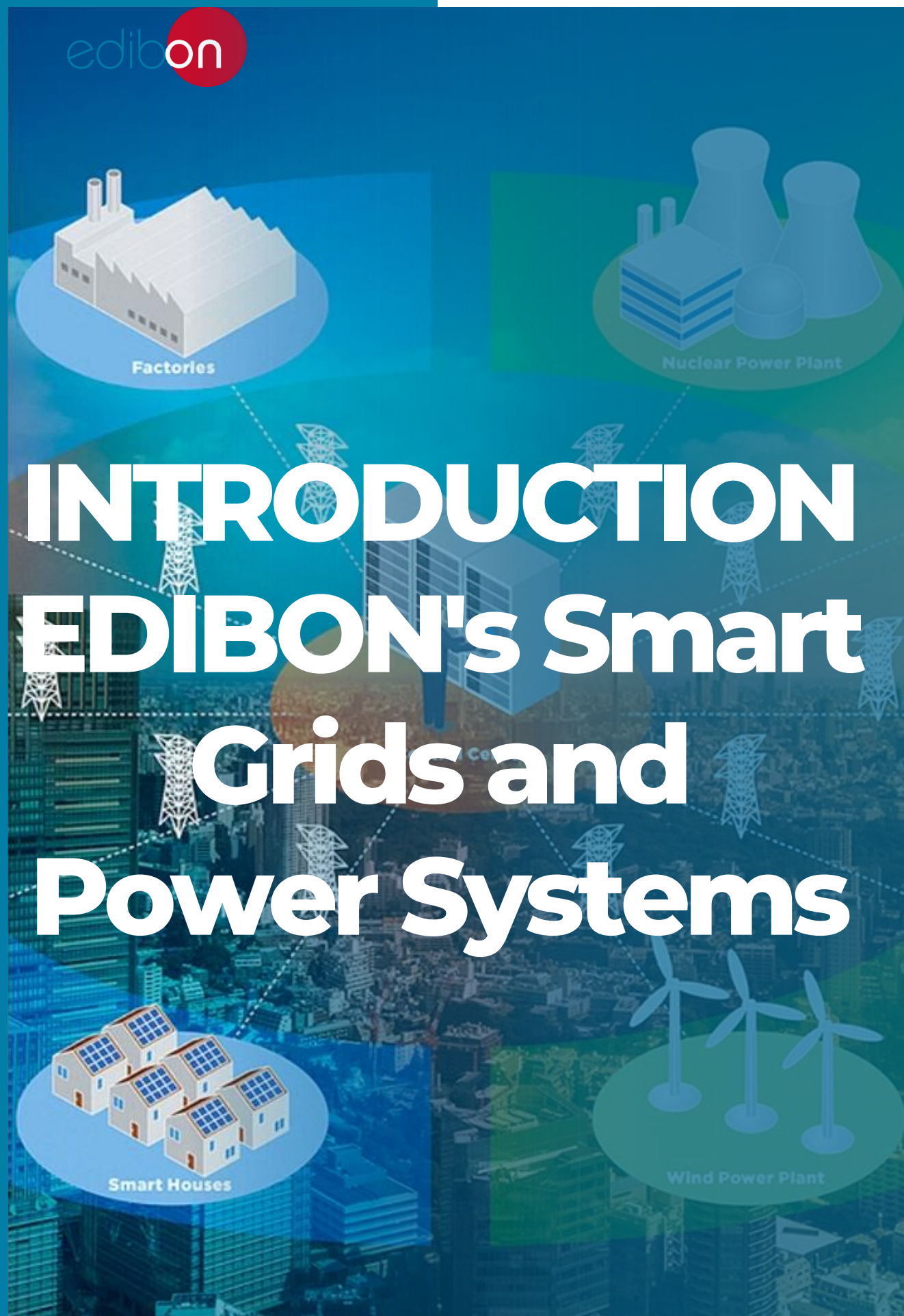
- Warranty Terms
- Insite Training
- Online Training
- Update/Upgrade User's Manuals
- Process to Report Malfunctions
- Troubleshoot Units Remotely

- **Website**

- Unit presentation videos
- Increase Pics (Photos) of Units

EDIBON Smart Grids and Power Systems

- How to offer a Smart Grid Trainer.
- All possible configurations.



INTRODUCTION EDIBON's Smart Grids and Power Systems

As electric power systems continue to expand, there's a growing need for sophisticated devices to ensure safe and efficient management. In today's landscape, real-time monitoring of electrical parameters such as voltage, current, and power levels is indispensable. That's why **EDIBON has developed** a range of wired and modular equipment tailored to the needs of students and researchers in the field.

Our lineup solutions **APS12, AEL-MPSS, AEL-TI, and AEL-BSGC** offer **real-time monitoring**, providing students and researchers with essential insights into grid operations.

Each solution is designed to meet different study needs within the electrical power system grids domain.

Different Systems for Different Uses

APS12
series

AEL-MPSS

AEL-TI

AEL-BSGC

AEL-FUSG



Internally wired

12 kW Capacity

Covering (GEN , TR & DS)

Mostly For Utilities

Modular type

Manual Wiring for Education

5 kW Capacity

Covering (GEN , TR & DS)

Mostly For Universities

Similar to the AEL-MPSS

More economical version

1 kW Capacity

Mostly for Transmission Lines

Closed Smart Grid solution

Modular type

1 kW capacity

Covering (GEN , TR & DS)

Simple & Quick Solution

For Undefined Customer Needs

Final User Smart Grid

- Smart Meter Trainer

- Smart Energy Trainer

- Net Metering Trainer

- Smart Grid Loads



What is APS12?

APS12 is one of the most advanced and complete wired power systems in the market it is a true power system with Capacity of **12KW** , with more than **486** control variables.

APS12 is capable of reproducing any **electric** and **mechanical** phenomena that occurs in industrial power systems.

Dimensions (m): 14 x 3 x 2,5

www.edibon.com



Complete Wired
Solution



Useful for Utilities
and Electrical &
Energy Research
Center

APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)

CONTROL BENCH:

ELECTRICAL CONTROL BENCH

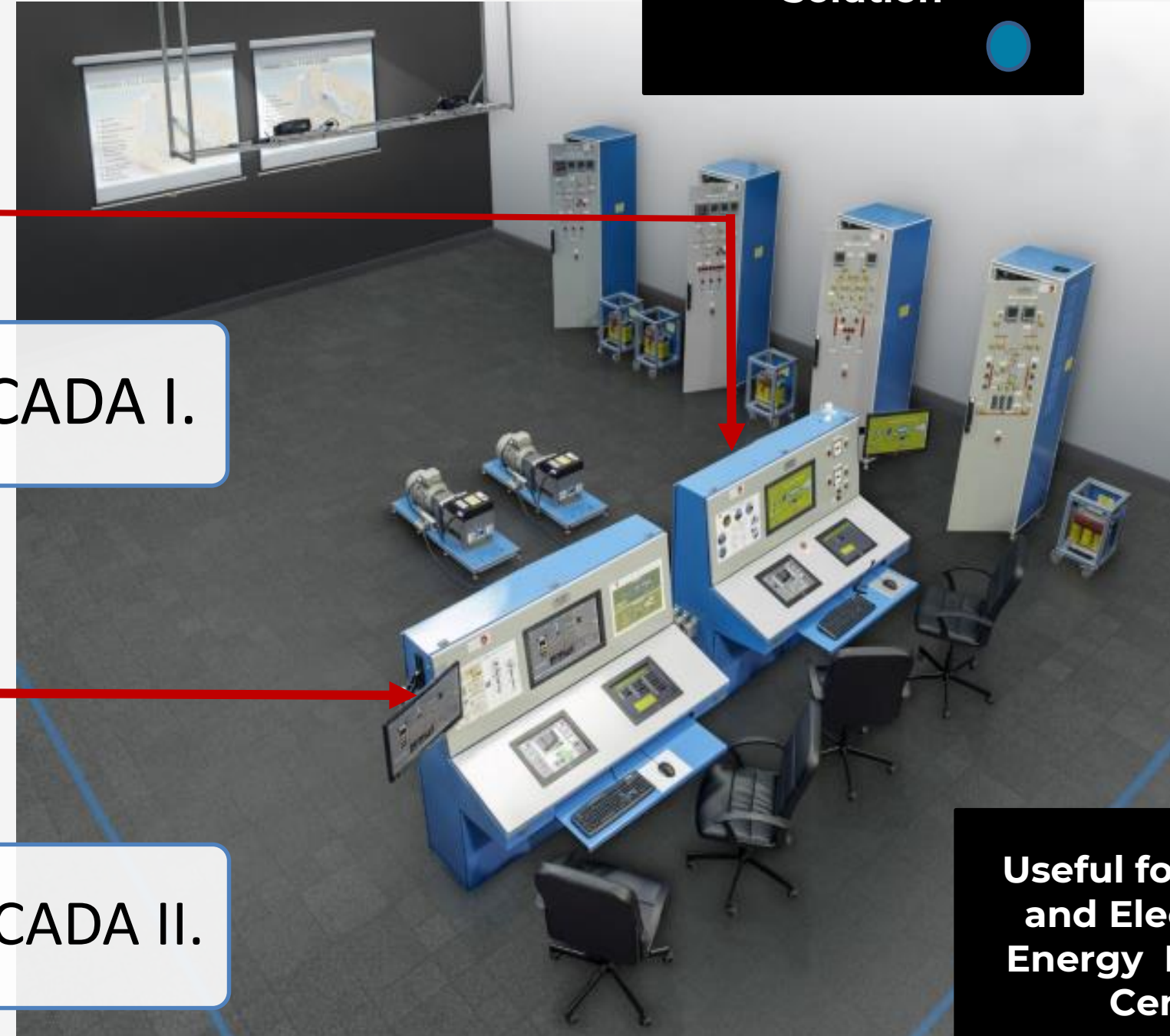
HUB I. Electrical Power System with SCADA I.

MECHANICAL CONTROL BENCH

HUB II. Power Plant Energy System with SCADA II.

Complete Wired
Solution

Useful for Utilities
and Electrical &
Energy Research
Center



Dimensions (m): 14 x 3 x 2,5

APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)



GENERATION:

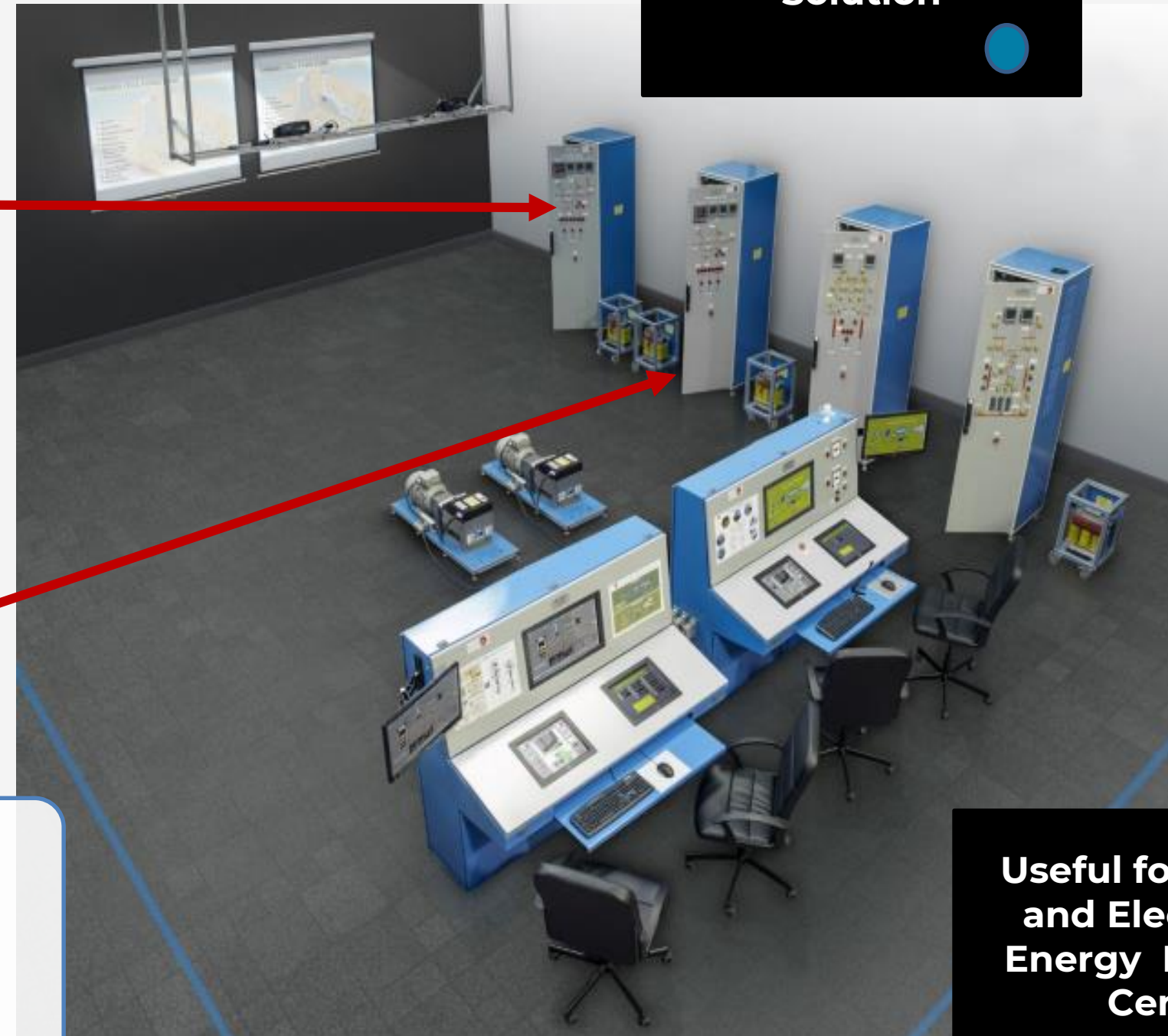
G1

Generator 1 with Complete Cabinet, including AVR (Automatic Voltage Regulator), with synchronization System.

G2

Generator 2 with Complete Cabinet, including AVR (Automatic Voltage Regulator) with synchronization System.

Dimensions (m): 14 x 3 x 2,5



**Complete Wired
Solution**

**Useful for Utilities
and Electrical &
Energy Research
Center**

APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)



TRANSFORMATION:

T-GR1

Grid Transformer without voltage regulation

T-GR2

Grid Transformer with TAP CHANGER with voltage regulation

T-G1

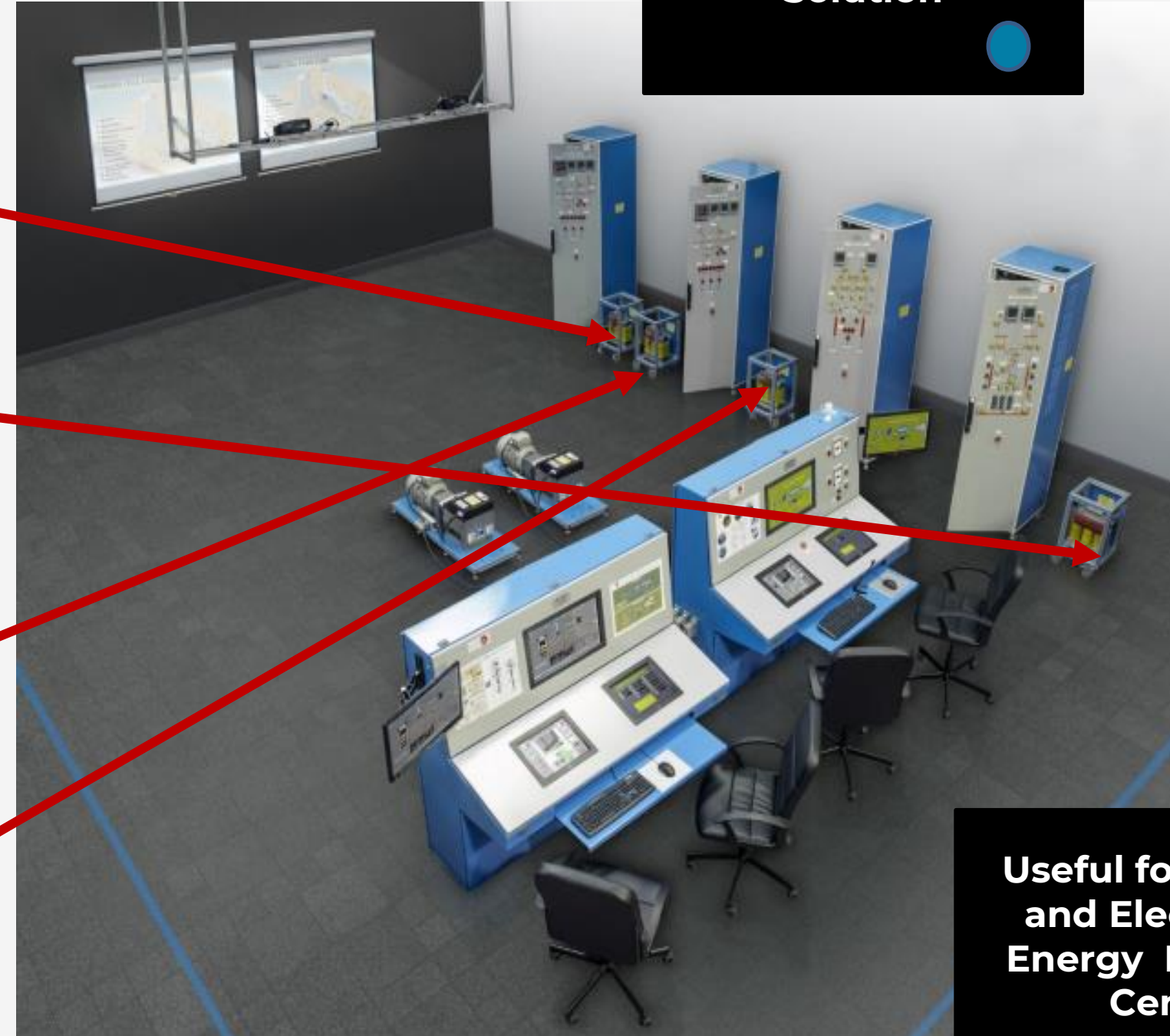
Generator Group Transformer I

T-G2

Generator Group Transformer II

Dimensions (m): 14 x 3 x 2,5

Complete Wired Solution



Useful for Utilities and Electrical & Energy Research Center

APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)



TRANSMISSION:

LTS1

Line I and II cabinet with transmission substation with protection relays system.

Complete Wired
Solution



Useful for Utilities
and Electrical &
Energy Research
Center

Dimensions (m): 14 x 3 x 2,5

APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)



DISTRIBUTION & CONSUMPTION:

DSL1

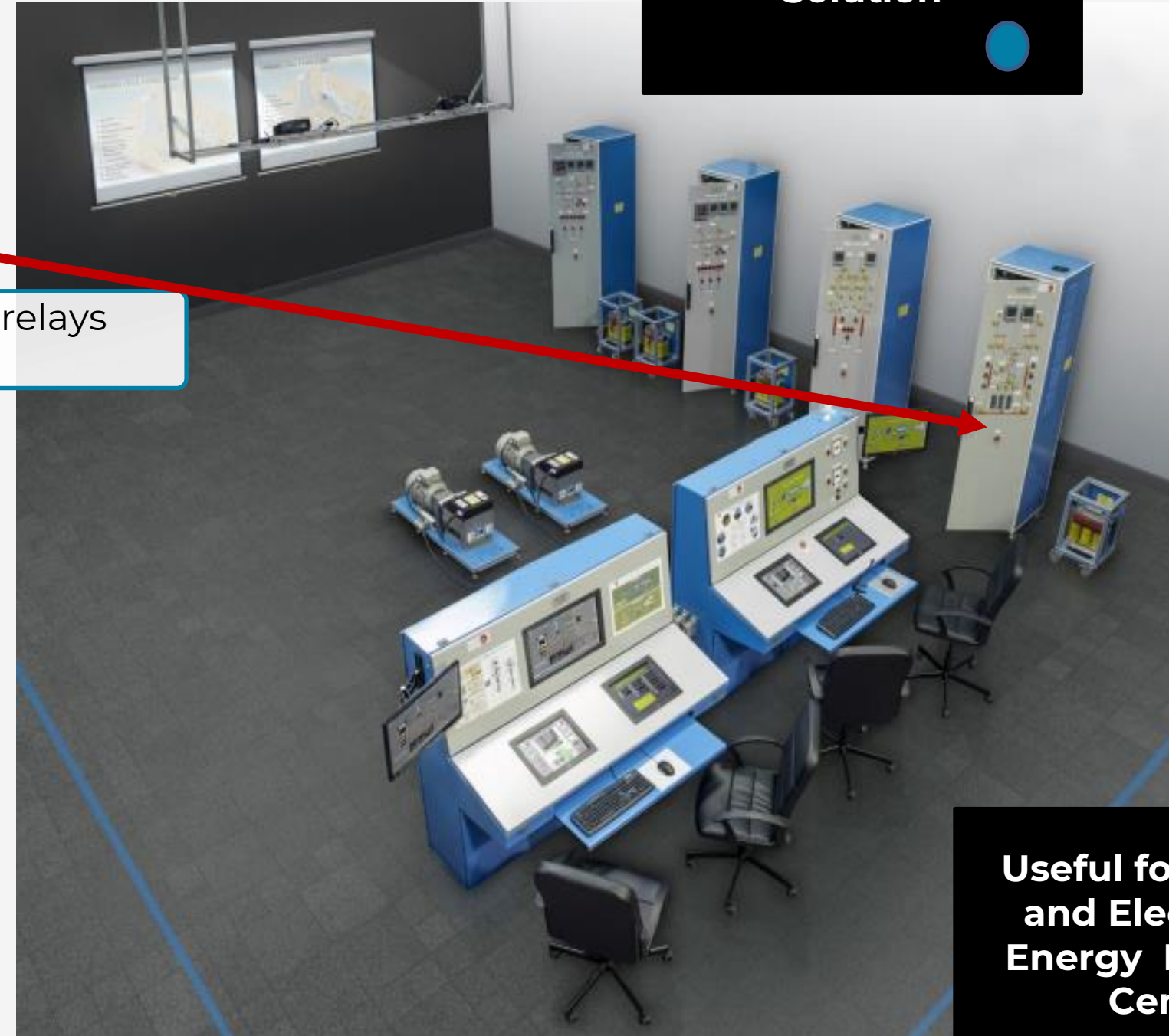
Distribution Substation I, loads and network equivalents with protection relays system.

SGDL1

Smart Grid Distributed Loads I

Dimensions (m): 14 x 3 x 2,5

Complete Wired
Solution



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and Electrical &
Energy Research
Center

APS12. Mechanical, Electrical and Smart Grid Power Systems (Utilities)



Some control variables used with the **APS12** Advanced Smart Grid Power System



Generation system

Over 200 variables to precisely control and monitor a sophisticated power generation system



Transmission/Distribution system

111 variables to analyze grid conditions, energy losses, and advanced protection systems



Load system

158 variables to ensure grid reliability, power quality, and smart grid integration

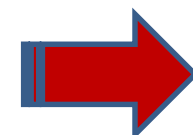
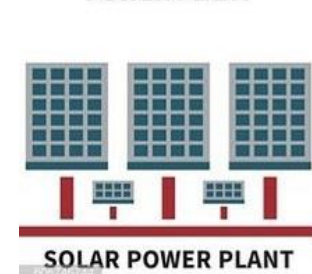
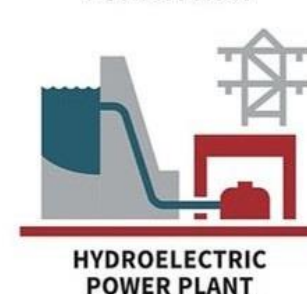
APS12 KEY FEATURES

- SCADA system
- SCADA-NET
- Smart grids
- National grid
- Black out and recovery energy system
- Power
 - generation
 - transmission
 - distribution
 - consumption
- Protection systems



Power Plants SIMULATION

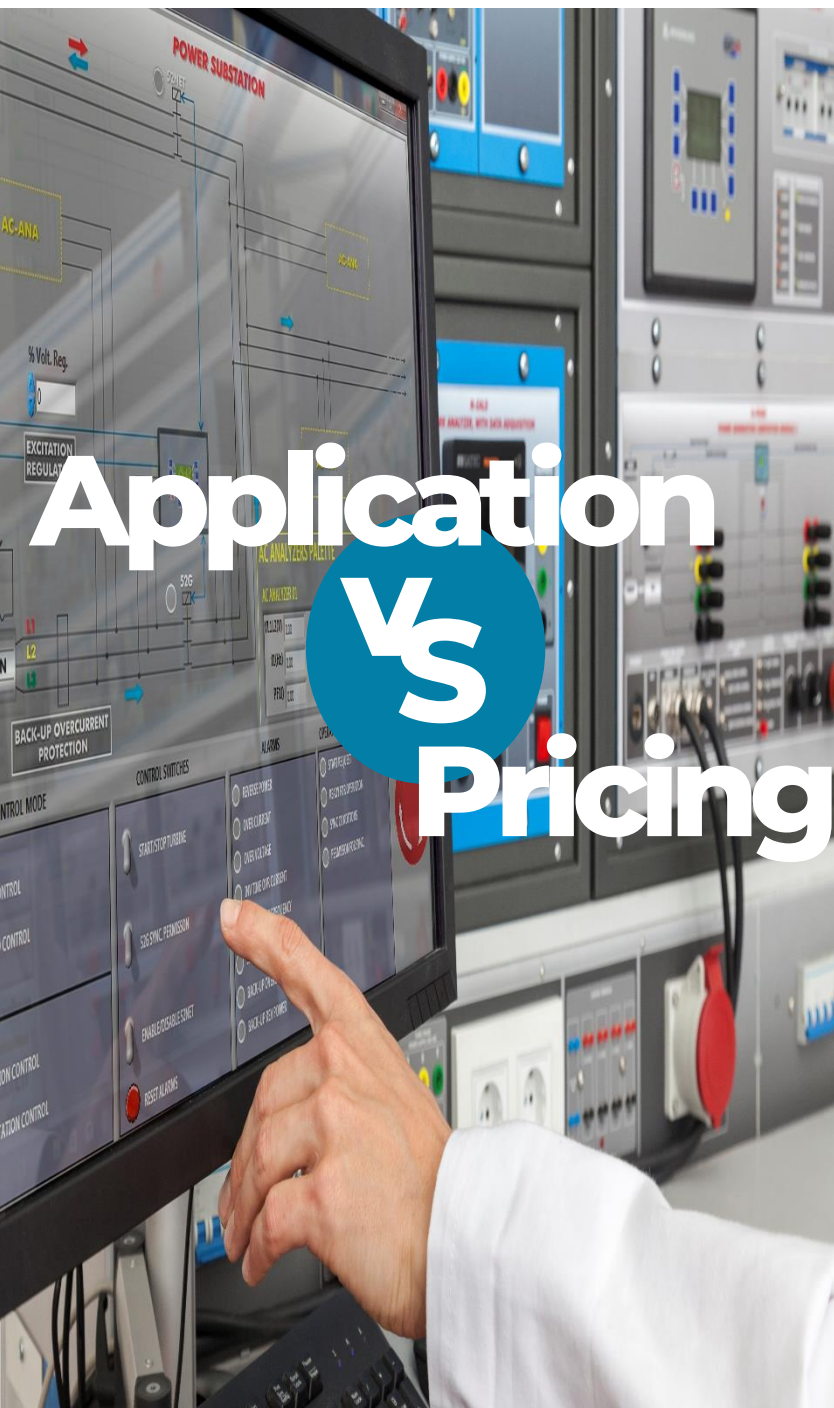
Combined Cycle Power Plant	PPE/CC
Nuclear Power Plant	PPE/NU
Diesel Fuel Power Plant	PPE/FD
Fossil Fuel (coals) Power Plant	PPE/FF
Gas Power Plant	PPE/GA
Hydroelectric Power Plant	PPE/HY
Wind Powered Power Plant	PPE/WP
Photovoltaic Power Plan	PPE/FV
Heliothermic Power Plant	PPE/HE
Biomass Power Plan	PPE/BM
Fuel Cells Power Plant	PPE/FC
Geothermal Power Plant	PPE/GT



Other power plants available upon request



Complete AEL-MPSS configurations



+ AEL-MPSS-01C

TOPICS COVERAGED:

Power generation
Power transmission
Power distribution and consumption
High voltage protection relays
Renewable Energies
Diesel Generator

+ AEL-MPSS-02C

TOPICS COVERAGED:

- Power generation
- Power transmission
- Power distribution and consumption
- High voltage protection relays
- Renewable Energies

+ AEL-MPSS-03C

TOPICS COVERAGED:

- Power generation
- Power transmission
- Power distribution and consumption
- High voltage protection relays

+ AEL-MPSS-04C

TOPICS COVERAGED:

- Power generation
- Power transmission
- Power distribution and consumption



Custom Solutions for Specific Applications

AEL-MPSS/G



Power generation.

Modular Smart Grid Power **Generation** Application, 5kW

AEL-MPSS/T



Power transmission.

Modular Smart Grid Power **Transmission** Application, 5kW

AEL-MPSS/DL



Power distribution and consumption.

Modular Smart Grid Power **Distribution and Loads** Application, 5kW





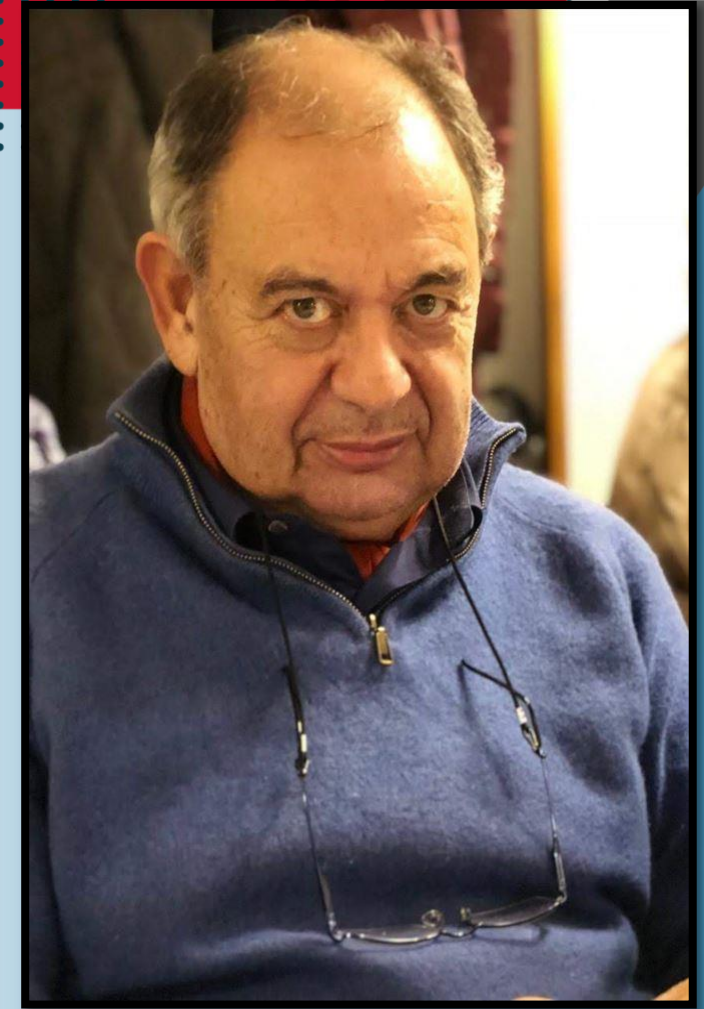
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Thank you.



In memoriam

**Thank you for
coming.**

