

CAEN Presentation

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CAEN  **Electronic Instrumentation**
Tools for Discovery





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Company Overview

Milestones 1979-2022



1979
CAEN established in Viareggio by a group of senior engineers from INFN

1986

First High Voltage Power Supply System (400.000 HV channels delivered worldwide in 30 years)



1994
CAEN Microelectronics spin-off

1997

UNI EN ISO 9001 quality certification



1996
CAEN Aerospace spin-off

1998

Started electronic design for LHC/CERN experiments (1998-2016: 8.500 electronic devices 250.000 boards/sub-boards)



2003
CAEN RFID (Radiofrequency Automatic Identification) spin-off

2006

CAEN GmbH a CAEN branch company in Germany



2010
CAEN ELS (Accelerator Electronic Instrumentation) spin-off



2012
CAEN qS (Cyber Security) spin-off



2016
CAEN Sys (Systems and Spectroscopy Solutions) spin-off

2019



Network of Companies

Founded in 1979, CAEN SpA (Costruzioni Apparecchiature Elettroniche Nucleare) is an important industrial spin-off of the INFN.

Core business: Electronic Instrumentation for physics experiments (world leader)

CAEN incubated and launched:

- > CAEN Nuclear (1979)
- > Aurelia Microelectronics (1994, *Sold in 2010*),
- > CAEN Aerospace (1996, *Sold in 2010*),
- > RFID (2003),
- > CAENels (2010),
- > CAENqS (2012),
- > CAEN SyS (started in 2016)



Total Employees: 150 and growing

CAEN SyS
Systems and Spectroscopy Solutions

CAENqS
build security awareness

CAENels
Gear For Science

CAENRFID
THE ART OF IDENTIFICATION

Worldwide presence

Worldwide sales network offices in Italy, Germany, USA,
Distributors in more than 30 countries.

Portfolio: > 5000 customers

Customers Include all world leading research centres as:

Europe: CERN, INFN, CEA, CNRS; GSI, ESO, ISIS,
Ganil, PSI, ...

USA: FNAL, SLAC, Los Alamos, BNL, Jlab, ...

Asia: J-Park, KEK, Riken, IHEP, TIFR, ...

Africa: iThemba Labs, ...

And private companies:

GE, Siemens, SAIC, L3, Raytheon, Lockheed...

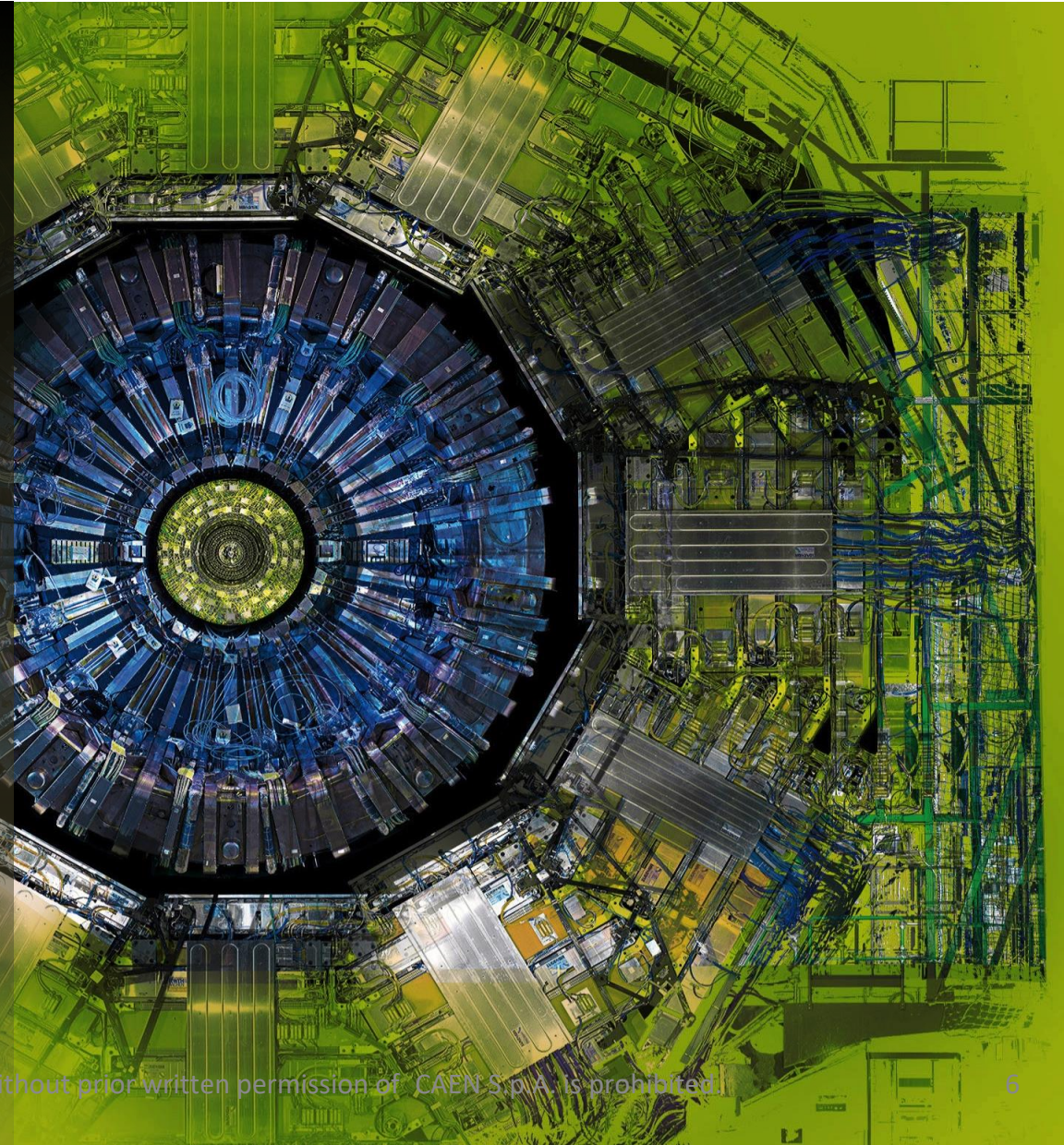


Market

For more than 40 years CAEN has been providing Scientists and Engineers with the most advanced electronic instrumentation for any particle or radiation detectors

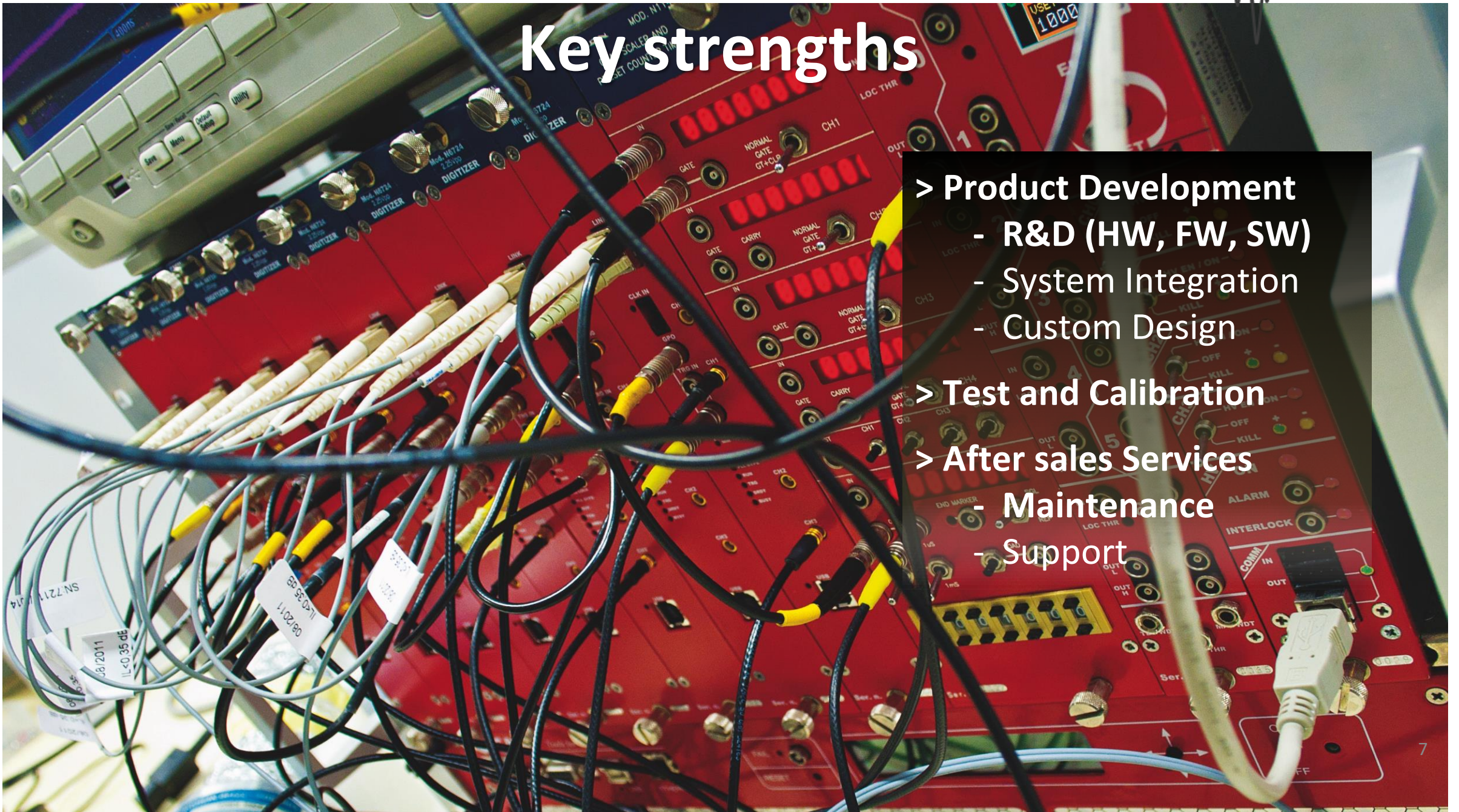
Strong of an extremely close collaboration with the world major research laboratories CAEN is proud to produce the best tools for:

- > High Energy Physics
- > Astrophysics
- > Neutrino Physics
- > Dark Matter Investigation
- > Nuclear Physics
- > Material Science
- > Medical Applications
- > Homeland Security
- > Industrial Applications



Key strengths

- > **Product Development**
 - R&D (HW, FW, SW)
 - System Integration
 - Custom Design
- > **Test and Calibration**
- > **After sales Services**
 - Maintenance
 - Support



Power Supplies Expertise

High Voltage & Low Voltage Power Supplies for Particle Physics Experiments and Laboratories providing:

- Integration: Multi-Channel CAEN Systems (up to 768 HV ch/system)
- Granularity: NIM, VME Modules, Rack-Mount And Desktop Devices (from 1 ch to 8 ch/module)
- Custom: Stand-alone Power Supplies
- HV Components: PCB mountable HV DC-DC converters
- Hostile Area developments for LHC

Pulse Processing Expertise

Signal Conditioning, Read-out Electronics - interface between the experiment and the scientist: from detector signals to visualization of data!

- Waveform Digitizers & Digital Pulse Processing
- FPGA algorithms for the Digital Pulse Processing
- Analog Pulse Processing
- Programmable Trigger module
- Multichannel Analyzer
- Preamplifiers
- Custom project

