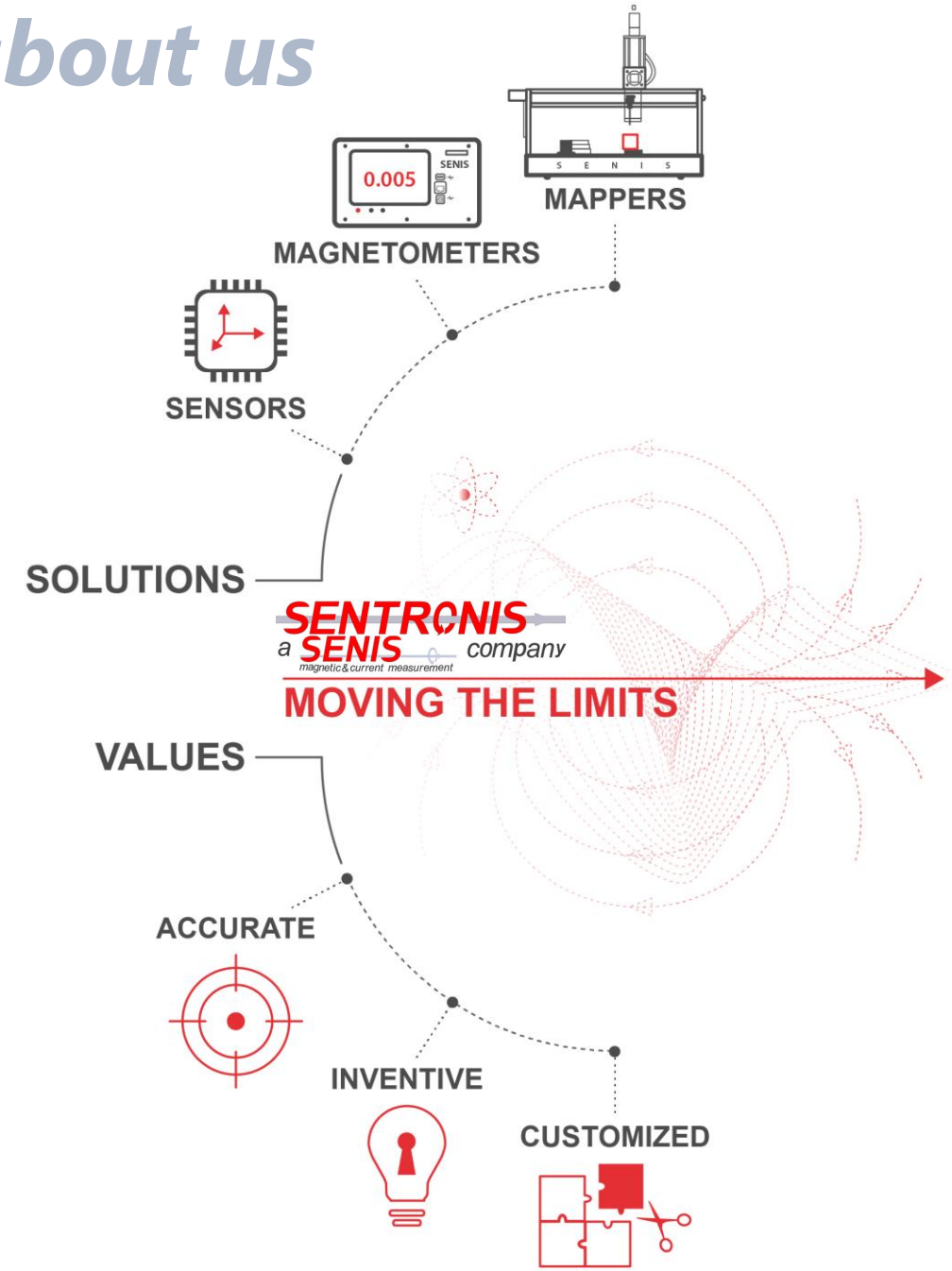
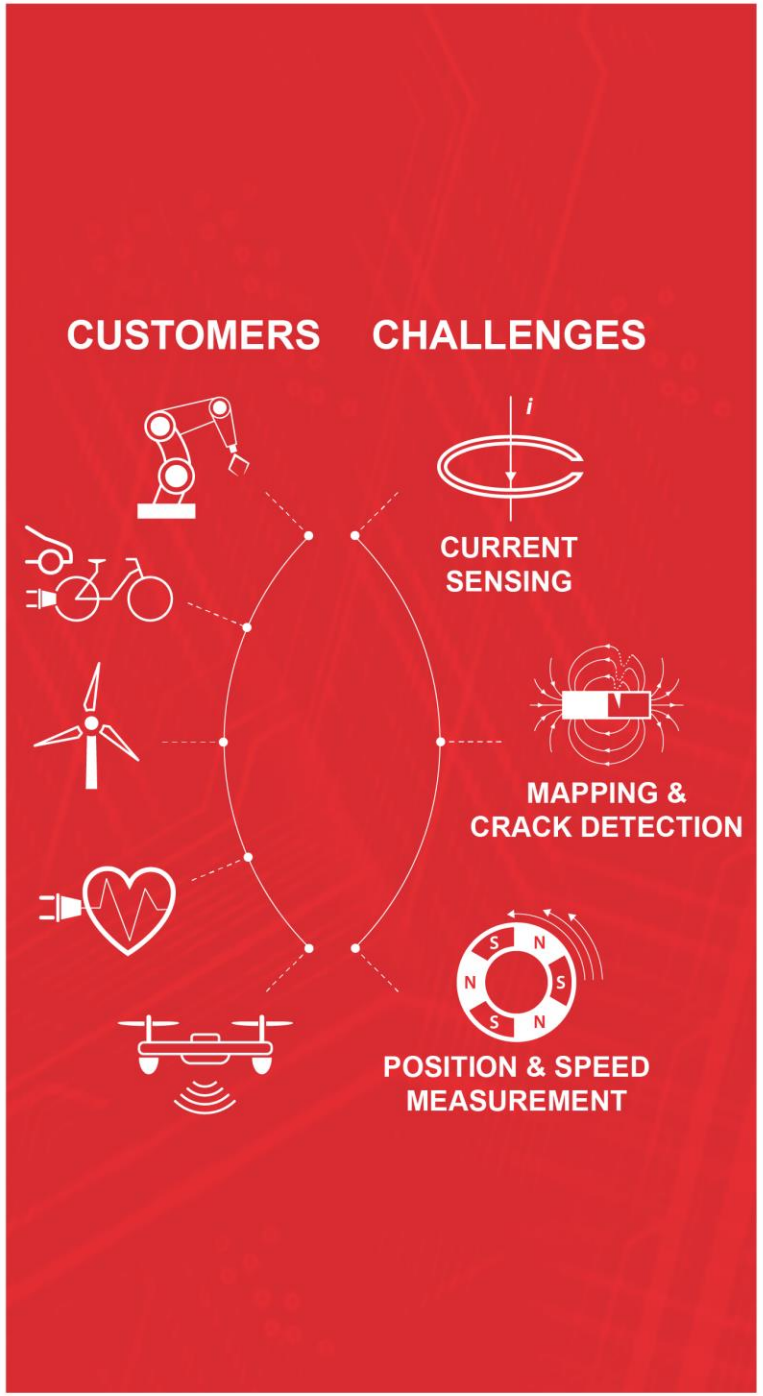
All about us


0.005
SENIS
MAPPERS
MAGNETOMETERS
SENSORS
SOLUTIONS
SENTRONIS
a SENIS company
magnetic & current measurement
MOVING THE LIMITS
VALUES
ACCURATE
INVENTIVE
CUSTOMIZED


CUSTOMERS
CHALLENGES
i
CURRENT SENSING
MAPPING & CRACK DETECTION
S N N S S N
POSITION & SPEED MEASUREMENT

WP number	WP8		Lead beneficiary				INFN	
WP title	JRA2 - Superconducting magnet design							
Participant nr.	9	4	3	5	16	12	13	17
Participant	INFN	CERN	CEA	CIEMAT	UU	PSI	SEEIST	Wigner RCP
Person months	32	4	20	22	8	2	8	12
Start Month	1		End month				36	

Objectives

The objective of WP8 is to perform a first technical and financial assessment of various magnet designs for a novel type of carbon ion synchrotron and gantry complex. This includes a preliminary engineering design for the new concept accelerator magnets (mainly dipoles with combined function) and an innovative gantry magnet. The WP8 will eventually manufacture and test a small size demonstrator magnet that will give important feedback, useful for accelerator as well as a gantry final magnet design. A novel compact zero field superconducting magnetic channel for extraction from the synchrotron will also be designed and tested.

WP8 / Task 8.4: Construction of a small size magnet demonstrator for accelerator and gantry (CIEMAT, INFN, SEEIIST [SENTRONIS], CEA, CERN, UU, Wigner RCP)

SEEIIST [SENTRONIS] will prepare the magnetic measurement system for warm measurements and will carry out the field quality assessment, both at CIEMAT and at CERN (and/or UU).

Where we start: 3-axis Hall

Technology of choice in industry and R&D Labs

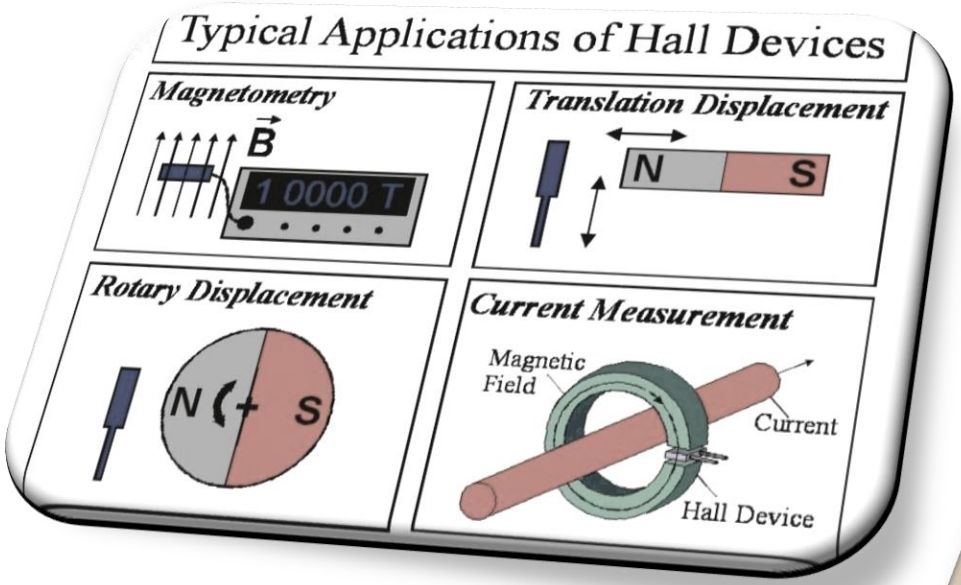
No other local 3D measurement available

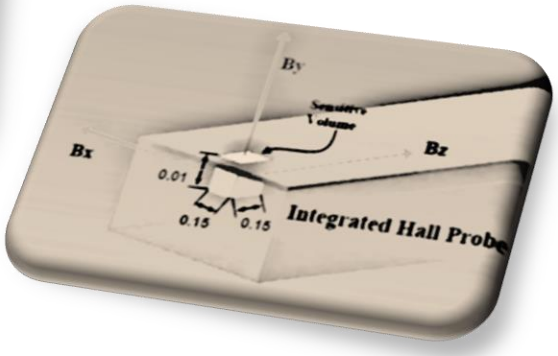
The innovative solution: All-in-one integration on Silicon-chips

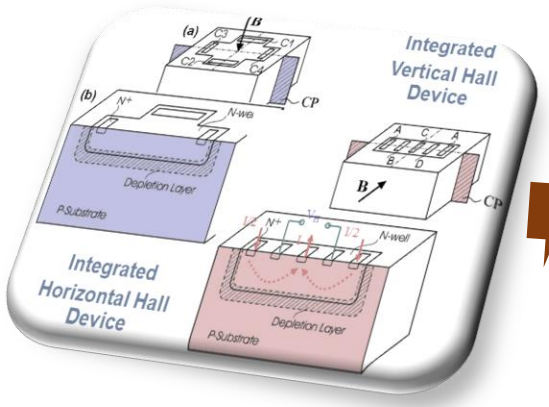
Robust, compact and tiny

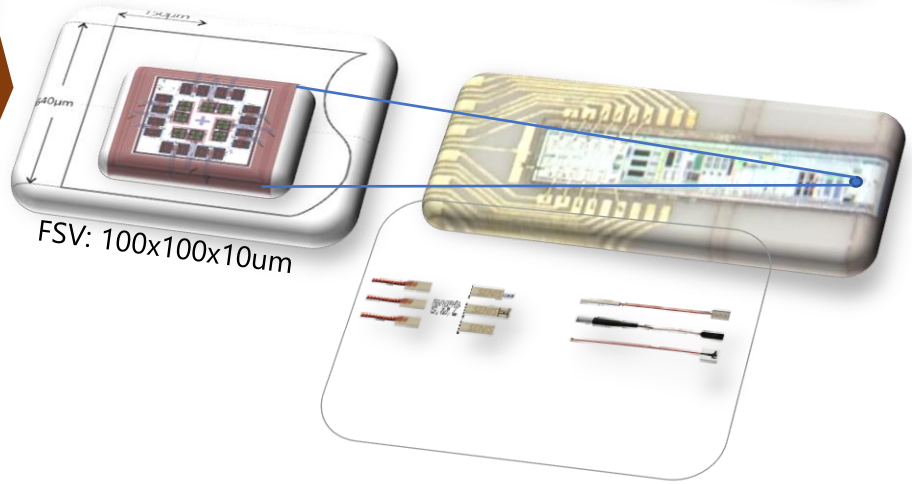
Accurate and stable

Measuring the same point in all directions









- Transducers & Teslameters
- Current sensors
- Angle sensors
- Handheld devices
- Mappers
- Helmholtz & Ref. magnets

Professional sensing & measurement

Customer driven solutions

- Industrial & consumer
- Magnets & testing
- Research
- and many more..

We create customers' benefits

Its all about you...

GE Measurement & Control
Continental
maxon
ABB
BOSCH 博世 科技成就生活之美
MEVION medical systems
Infineon
TOYOTA
SKF
SIEMENS
iba
AAC TECHNOLOGIES
Sinlion Battery Tech
Valeo
LG Innotek
HARTING
HONDA
FAULHABER
JOHNSON ELECTRIC
BRUKER
Logitech
AEROJET ROCKETDYNE
TE connectivity
SCHAEFFLER
BOMATEC
ARNOLD MAGNETIC TECHNOLOG
LABORATORIO ELETTROFISICO
宁波韵升 NINGBO YUNSHENG
NINGBO CHINA 宁波科宁达工业有限公司 NINGBO KONIT & NIHON MAGNETIC MATERLALS INC.
PI
JL MAG HIGH END MAGNETICS
Quadrant Solutions at the forefront of magnetic solutions
CANMAG
MAX BAERMANN GMBH Kunststoffgebundene Dauermagnete
BROOKHAVEN NATIONAL LABORATORY
mPulse Magnetisiertechnologie
DESY
CERN
SLAC NATIONAL ACCELERATOR LABORATORY
European XFEL
PEKING UNIVERSITY
OAK RIDGE National Laboratory
PAL POHANG ACCELERATOR LABORATORY
PAUL SCHERRER INSTITUT PSI
cea GRENOBLE
JASRI
ETH zürich
NIST National Institute of Standards and Technology U.S. Department of Commerce
iter china eu india japan korea russia usa
EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE
iba Proton Therapy
WIGNER
Ciemat

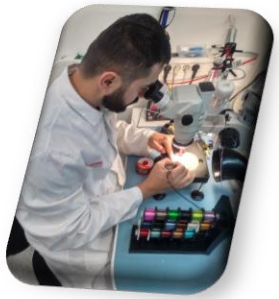
Accredited calibration lab:
ISO 17025

Quality system: ISO 9001

Business continuity:
ISO 22301

Our quality & infrastructure

Our capabilities





MOVING THE LIMITS
IN PRECISE MAGNETOMETRY

UNIQUE VALUES


Highest accuracy:
> 100ppm


3-axis Hall probes:
8.0x4.0x0.9mm


High measurement
range: 100mT to 20T


Highest magnetic
resolution: 1µT


Field sensitive spot:
100x100x10µm

We set highlight

- *Resolution*
  - ✓ *Standard Transducer: 10µT*
  - ✓ *Low-noise Teslameter: 1µT*
  - ✓ *NanoTeslameter: 600pT*
  - ✓ *3DHALL Sensor: 1µT*
  - ✓ *Angle Sensor: 0.08°*
  - ✓ *Clamp-On MicroAmme 1µA DC*
- *Accuracy*
  - ✓ *Transducer & Teslameter: 0.1%*
  - ✓ *Low-noise Teslameter: 0.01%*
  - ✓ *Mapper: 0.1% / 1%*
  - ✓ *Clamp-On Current Sensor: 0.1%*
- *Range*
  - ✓ *Transducer & Teslameter : 20T*
  - ✓ *Calibrated: 9T*
  - ✓ *3DHALL Sensor: 4T*
- *F-Bandwidth*
  - ✓ *Transducers: 75kHz*
  - ✓ *Teslameters : 5kHz*
  - ✓ *AC Transducer: 200kHz*
  - ✓ *3DHALL Sensor: 300kHz*
  - ✓ *Current Sensor: 1MHz*

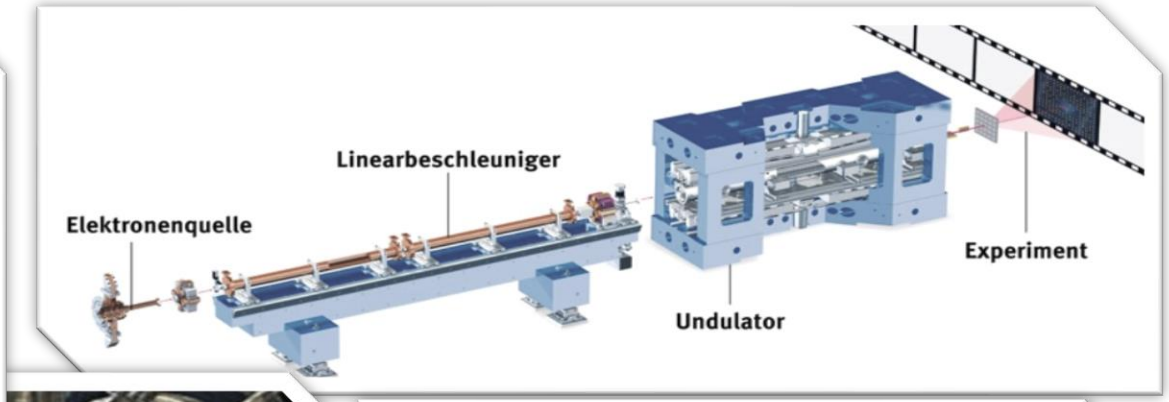
Free electron lasers:
Lowest noise

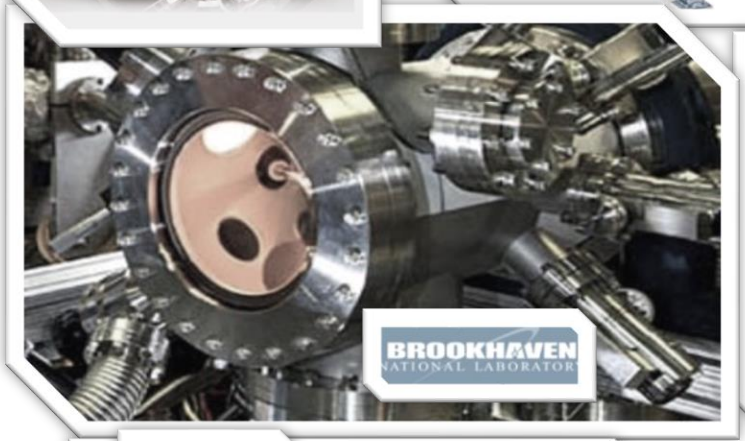
Local measurement,
accurate positioning

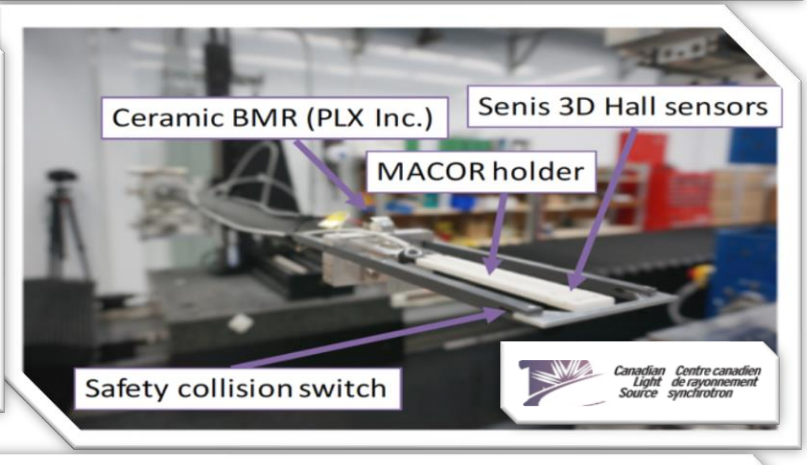
Proton therapy:
Radiation hard sensors

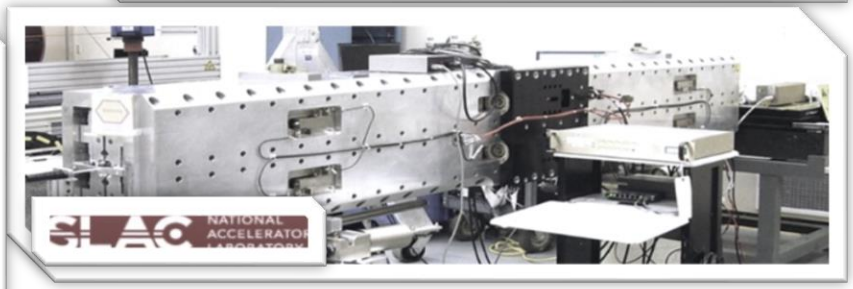
Technology meets health

From research to application









Highly accurate field & position measurement

Lowest noise

Position error:< ± 100µm

Leica & SENIS: Working on ITER

Together we perform