



... riding the wave

Kyma: a success story of
technology transfer and strategic
partnership

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Kyma essentials

Kyma is the only industrial company worldwide whose unique business is the realization of Insertion Devices for Light Sources

Kyma is a true INDUSTRIAL company, but with the knowledge available on IDs at major SCIENTIFIC Institutions



- ◆ **A full range of IDs**
 - ◆ *Pure Permanent Magnet IDs*
 - ◆ LPU, LHU, Apple-II, Apple-III, Delta, Compact
 - ◆ *Elliptically Polarizing Undulators (world record!)*
 - ◆ *Hybrid Undulators and Wigglers*
 - ◆ *In-vacuum Undulators and Wigglers*
- ◆ **Additional products**
 - ◆ *Mechanical support structures*
 - ◆ *Magnet Structures*
 - ◆ *Top quality permanent magnet blocks*
 - ◆ *Benches for magnet measurements*
- ◆ **Services**
 - ◆ *Design studies and consultancy*
 - ◆ *Design and simulation of magnetic structures*
 - ◆ *Design of mechanical structures and components*
 - ◆ *Magnetic measurements and characterization*
 - ◆ *Refurbishment of obsolete IDs*

**Much more
and much less
than just IDs**

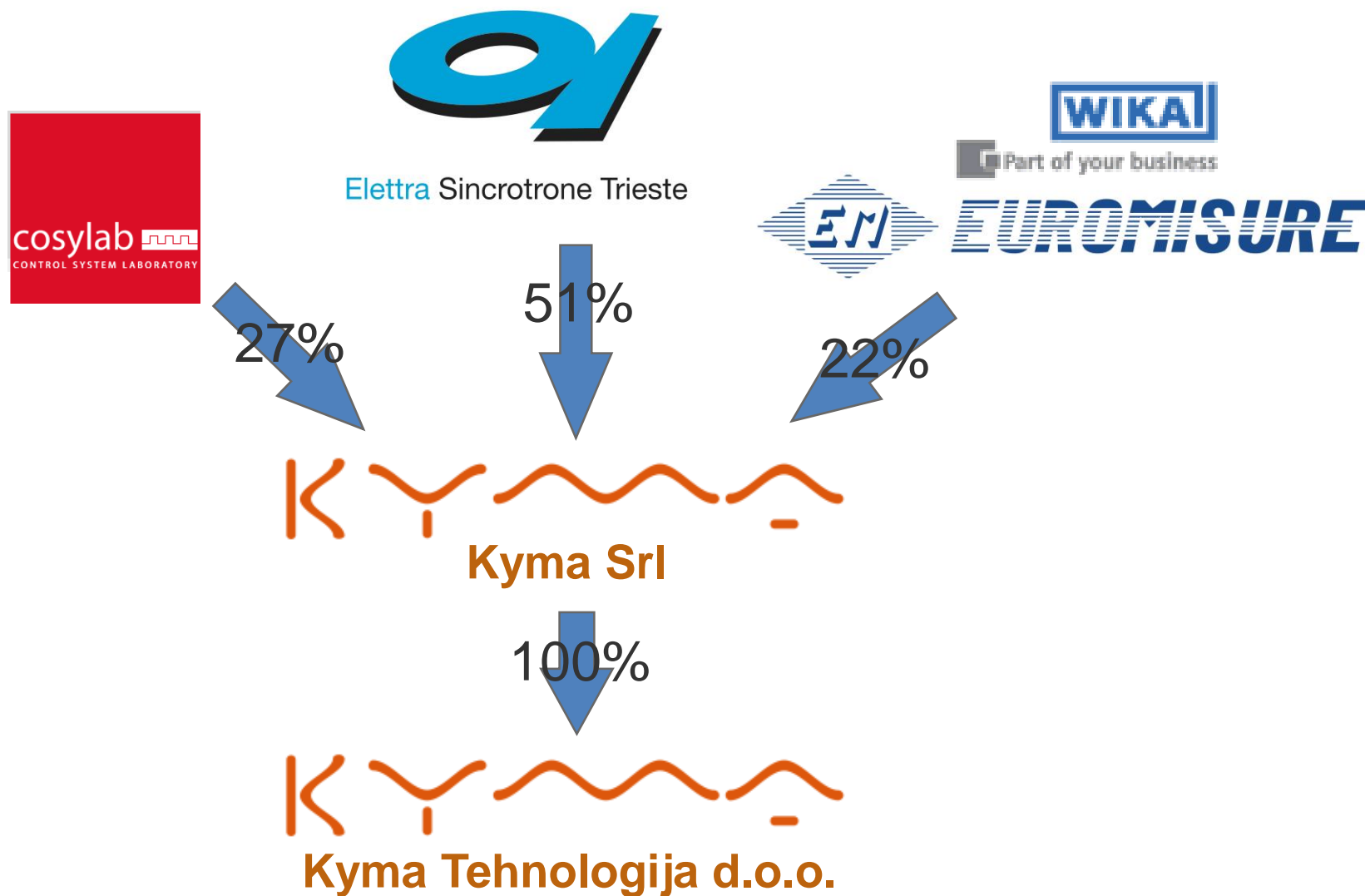


A peculiar approach

- ◆ **Kyma Srl was established by Elettra Sincrotrone Trieste through an open European tender issued by the end of 2006 with the purpose to find potential suppliers/partners for realizing the undulators for the FERMI@Elettra project**
 - ◆ Potential partners were required to set up a new company to that purpose, together with Elettra
 - ◆ Elettra had to hold 51% of the shares of the NewCo
 - ◆ Industrial partners participated to initial capital with liquid capital
- ◆ **Elettra contributed transferring to the NewCo its know-how on undulators – intangible asset**

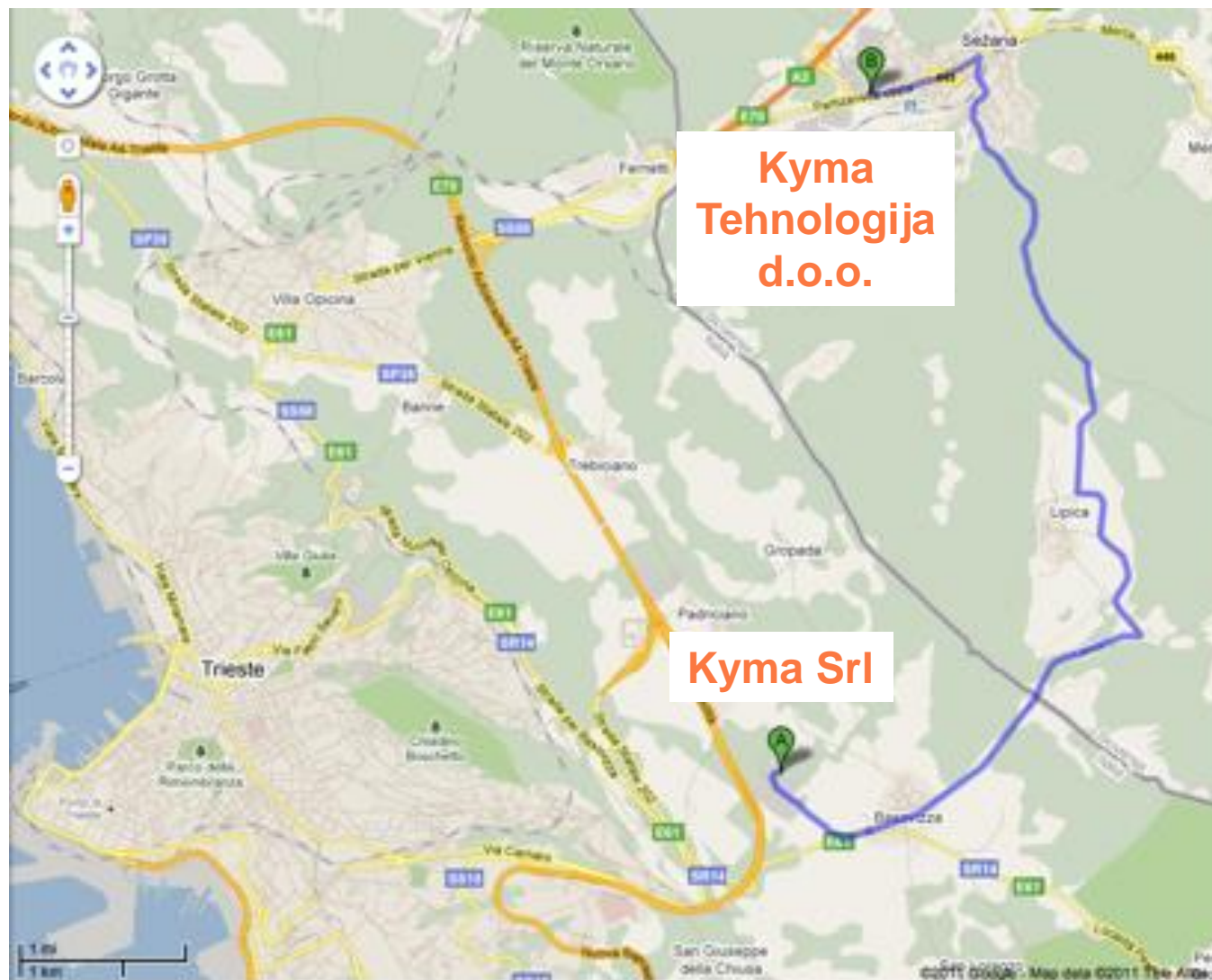


The company and the Partners





Kyma & Kyma Tehnologija locations





The Sežana Lab



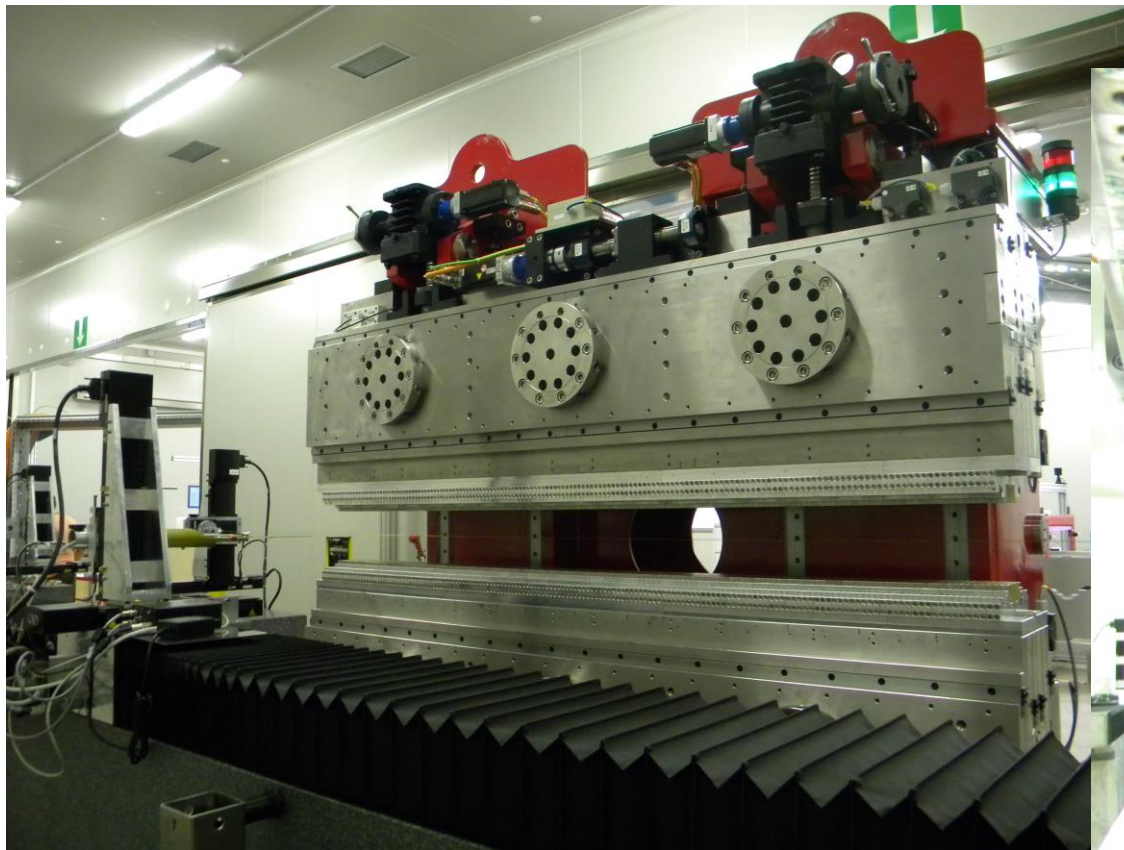


Kyma ID summary table

ID type	Short name	# of units	Status
Laser Heater Undulators	LHU	1	Operation
		1	Commissioning
Linearly Polarizing Undulators	LPU	9	Operation
Elliptically Polarizing Undulators – Apple-II	EPU	24	Operation
		1	Commissioning
		3	Realization
Short-Period Linearly Polarizing Undulator	SP-LPU	1	Operation
In-Vacuum Undulator (with BASC)	IVU	1	Operation
In-Vacuum Hybrid Undulators (with RI)		2	Realization
Hybrid Wiggler	HW	1	Operation
Permanent Magnet Phase Shifters (30 @ Kyma / 30 @ BASC)	PMPS	60	Delivered
Variable-Phase Compact Undulators	CCU	2	Operation
		2	Realization

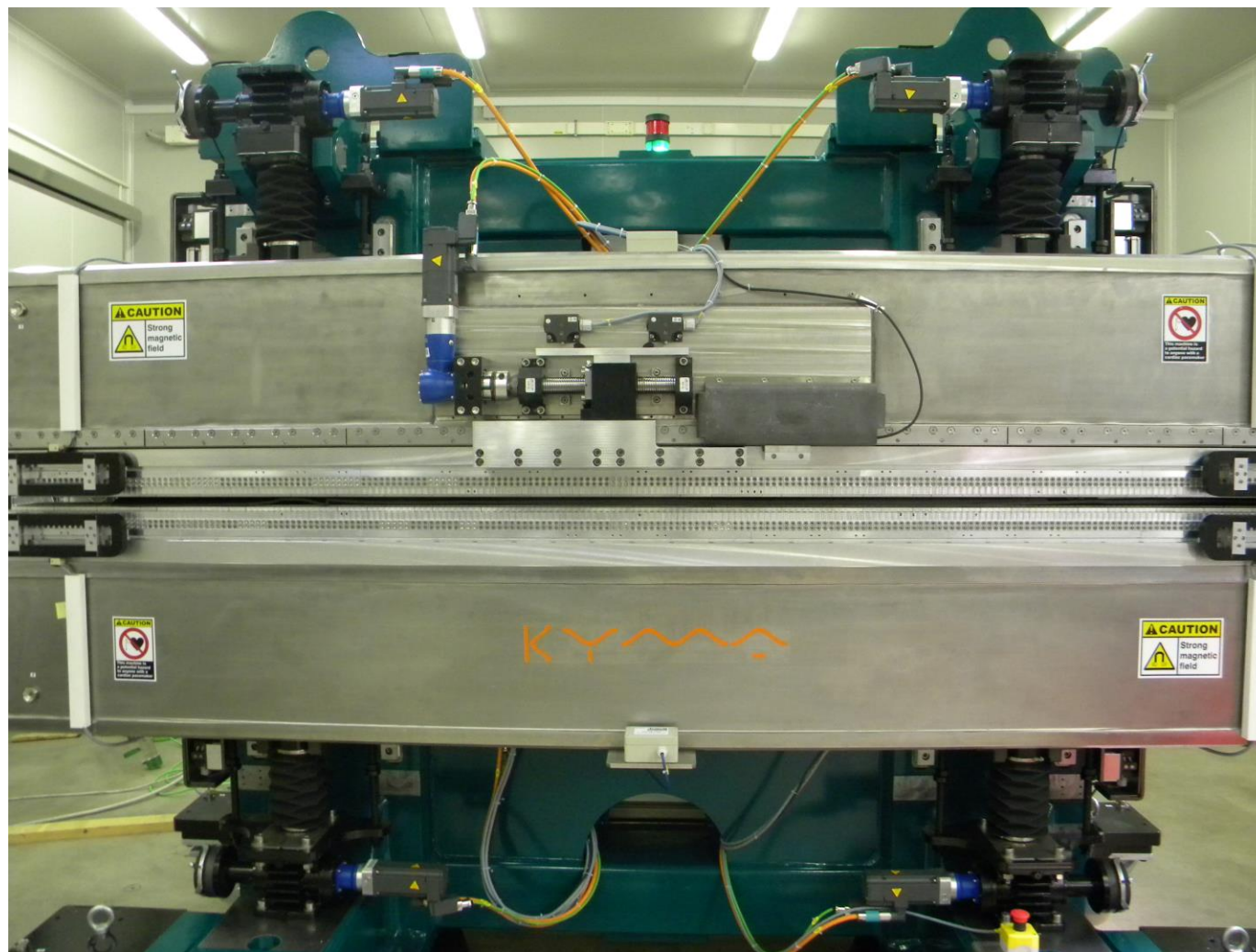


EPU@ NSLS-II – Brookhaven National Lab.





EPU_MPI @ PLS-II - Pohang Accelerator Lab.

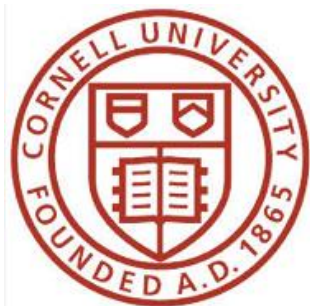




A worldwide network of cooperation on IDs



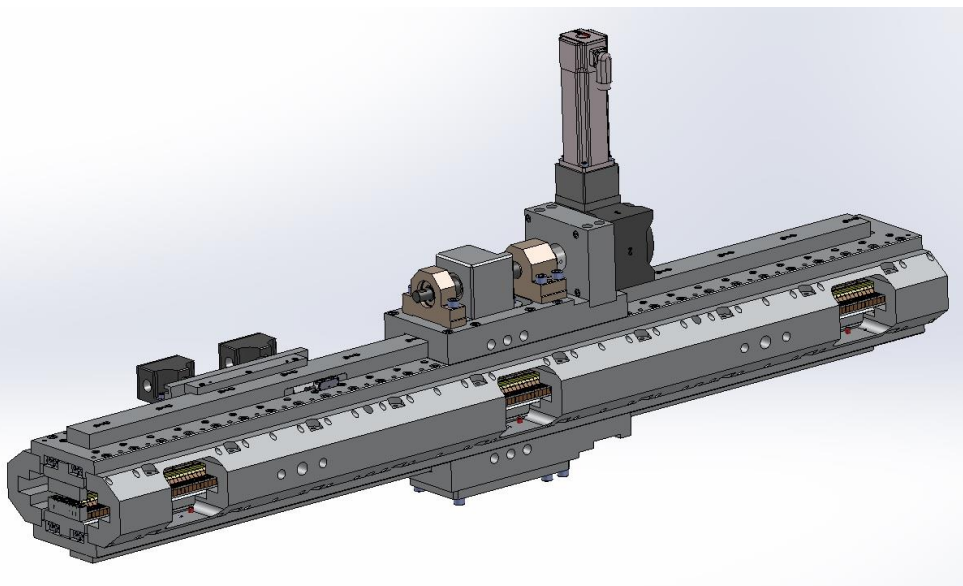
Elettra Sincrotrone Trieste



*Looking for more partnerships
and collaborations ...*



Fixed-gap, variable-phase, CCU



CCUs in operation @ CHESS



Some keys for further discussions

- ✓ Partners fully committed to the development of the business (not on short-term profit)
- ✓ Operative partnerships (scientific & industrial)
- ✓ Full Customer-oriented approach
- ✓ Extreme focus on project and process management
- ✓ Clear positioning at the invention/innovation boundary
- ✓ Very close relationship both with the pure industrial and pure research environments
- ✓ Continual improvement of products and processes



**Thank you
for your attention**

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