



Elettra Sincrotrone Trieste

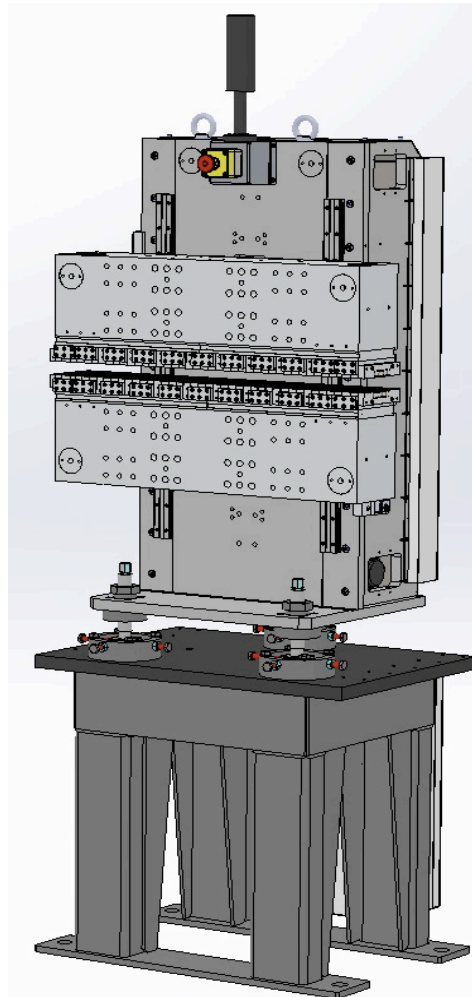
... riding the wave

Providing the Laser Heater Undulator for XFEL

Lund, January 14th, 2014

Mauro Zambelli

The Undulator for the Laser Heater @ EXFEL



Kyma essentials

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

- ◆ **Full specialization**
 - ◆ *Full specialization on IDs of all personnel*
 - ◆ *Integration of top level scientific and industrial competences*
- ◆ **Complete “vertical” business**
 - ◆ *In-house design, manufacturing, assembling and characterization of any part and component of Insertion Devices*
 - ◆ *Supply of any ID-related product and service*
- ◆ **Scientific backup by Elettra - Sincrotrone Trieste**
 - ◆ *25 years of experience in IDs design and operation*
 - ◆ *Capability to design and simulate any insertion device structure*

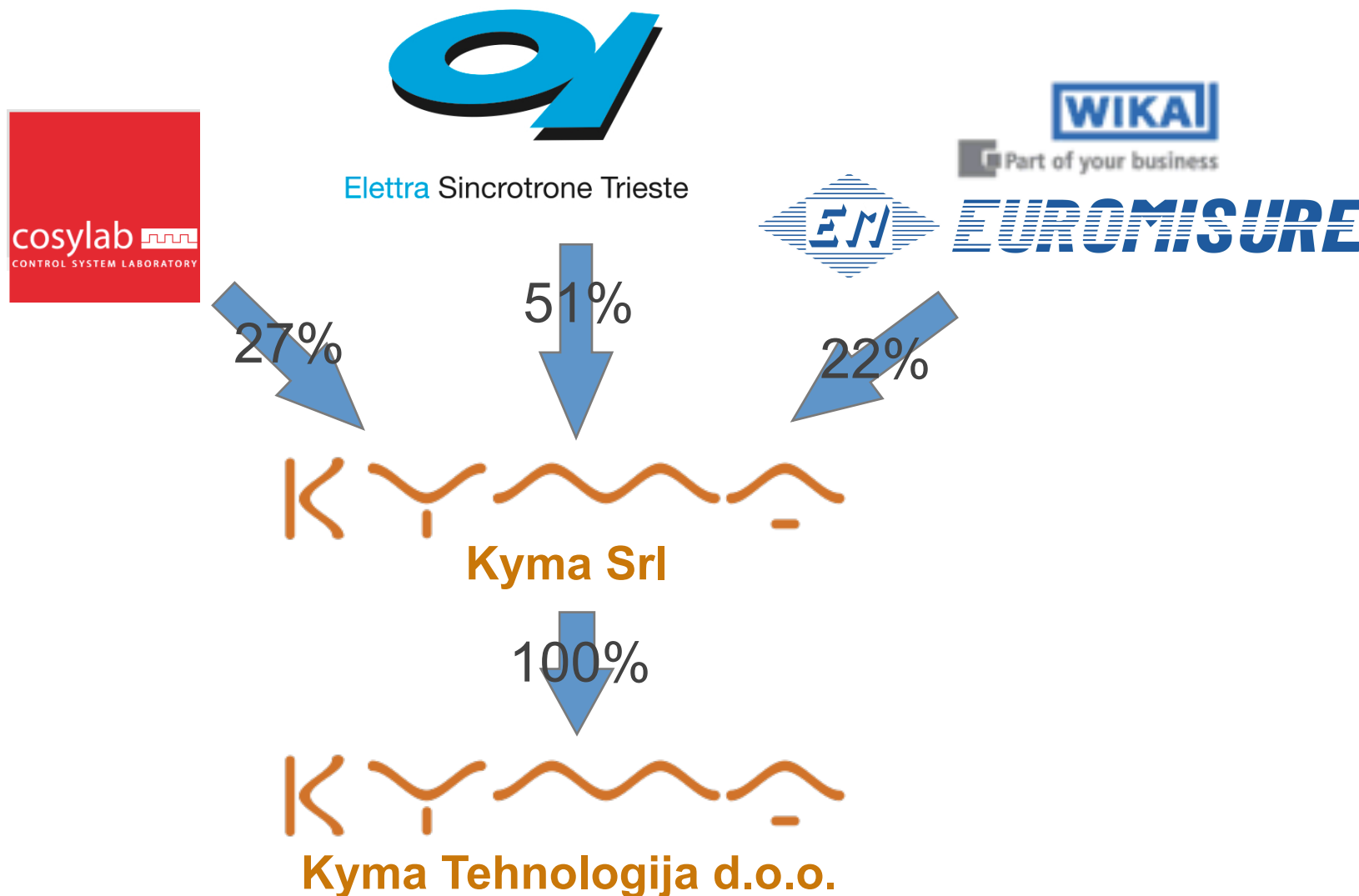


The offer

- ◆ **A full range of IDs**
 - ◆ *Pure Permanent Magnet IDs*
 - ◆ LPU, LHU, Apple-II, Apple-III, Delta
 - ◆ *Elliptically Polarizing Undulators*
 - ◆ *Hybrid Undulators and Wigglers*
 - ◆ *In-vacuum Undulators*
- ◆ **Additional products**
 - ◆ *Mechanical support 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*



The company and the Partners



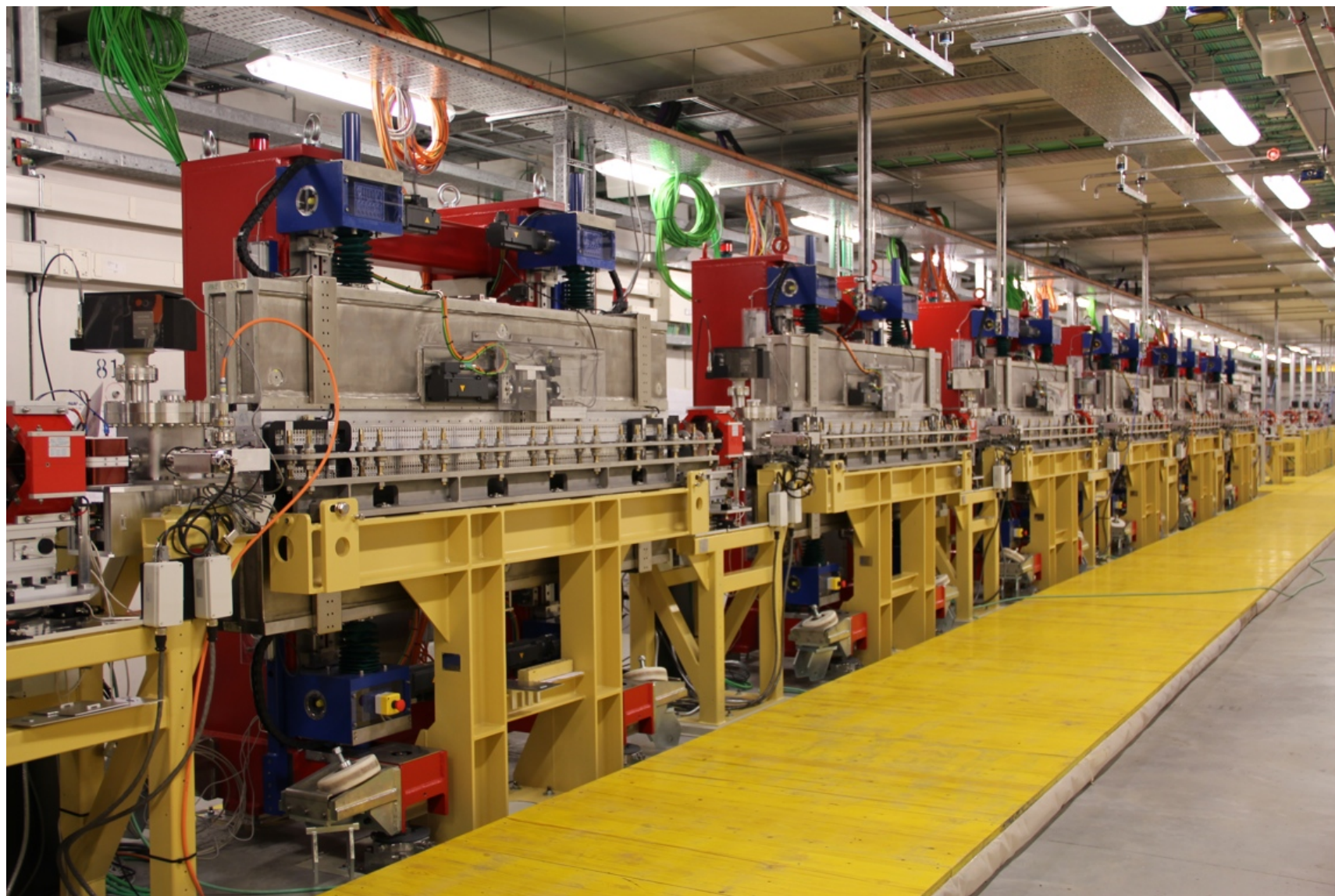


Kyma @ Elettra – Sincrotrone Trieste





FEL-1 EPU's at FERMI@Elettra



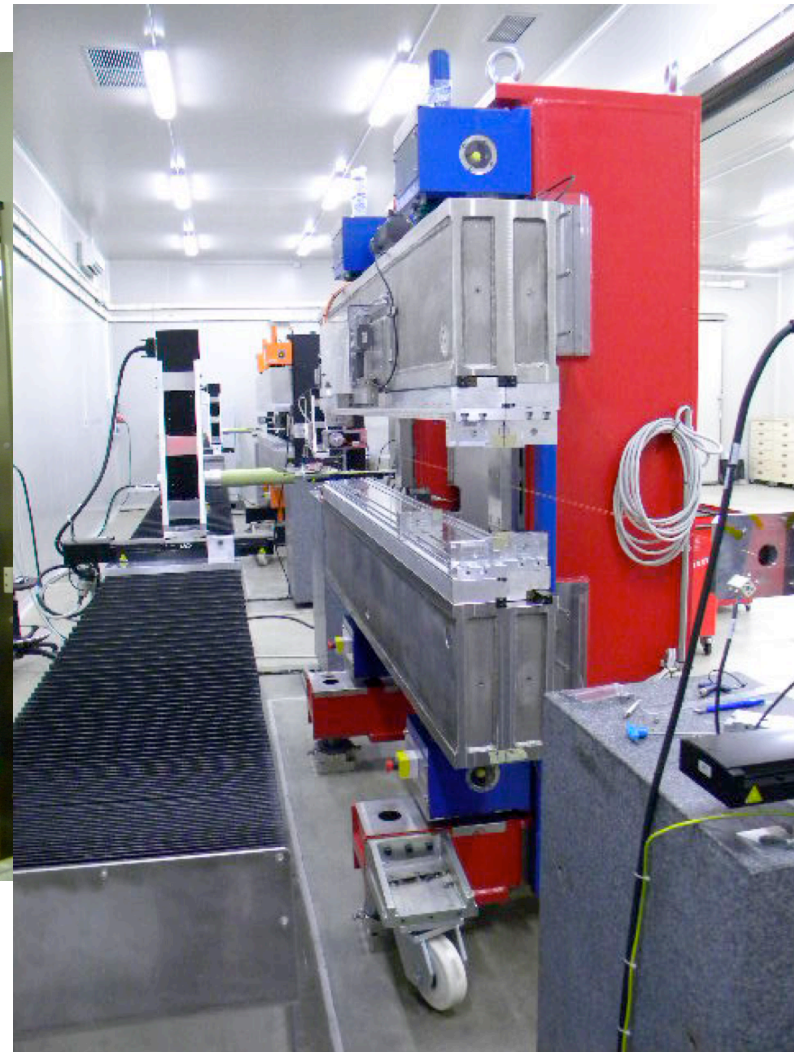


Kyma Tehnologija d.o.o. @ Sežana





The magnetic lab @ Kyma Tehnologija





Kyma @ Euromisure



The ID Mechanical Lab

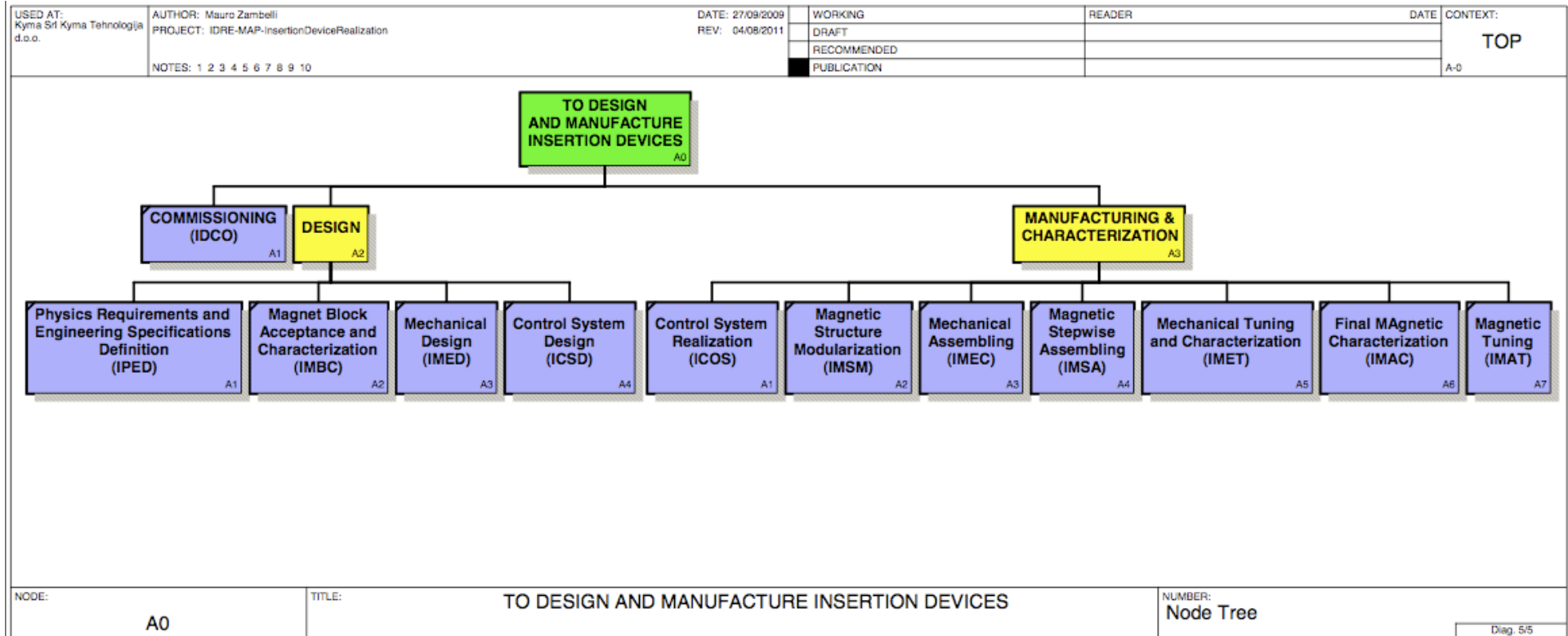


Kyma as a distributed (“virtual”) organization

- ◆ A distributed organization is made up by a network of interacting processes, rather than being characterized by a physical site where dedicated equipment and people gather
- ◆ Kyma’s organization is based on a sophisticated level of Process and Project Management
 - ◆ *Central management*
 - ◆ *Distributed operations*

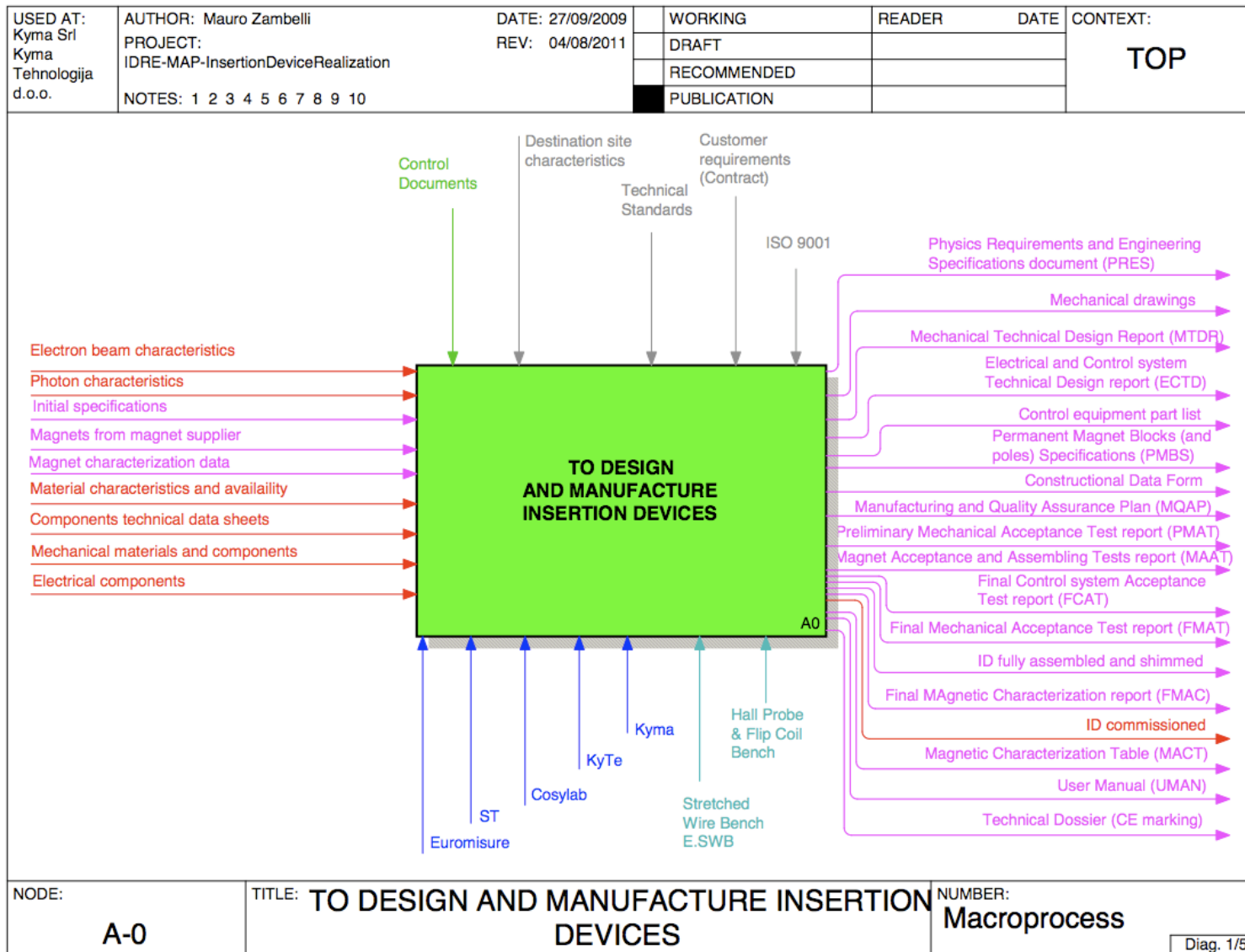


Process Management



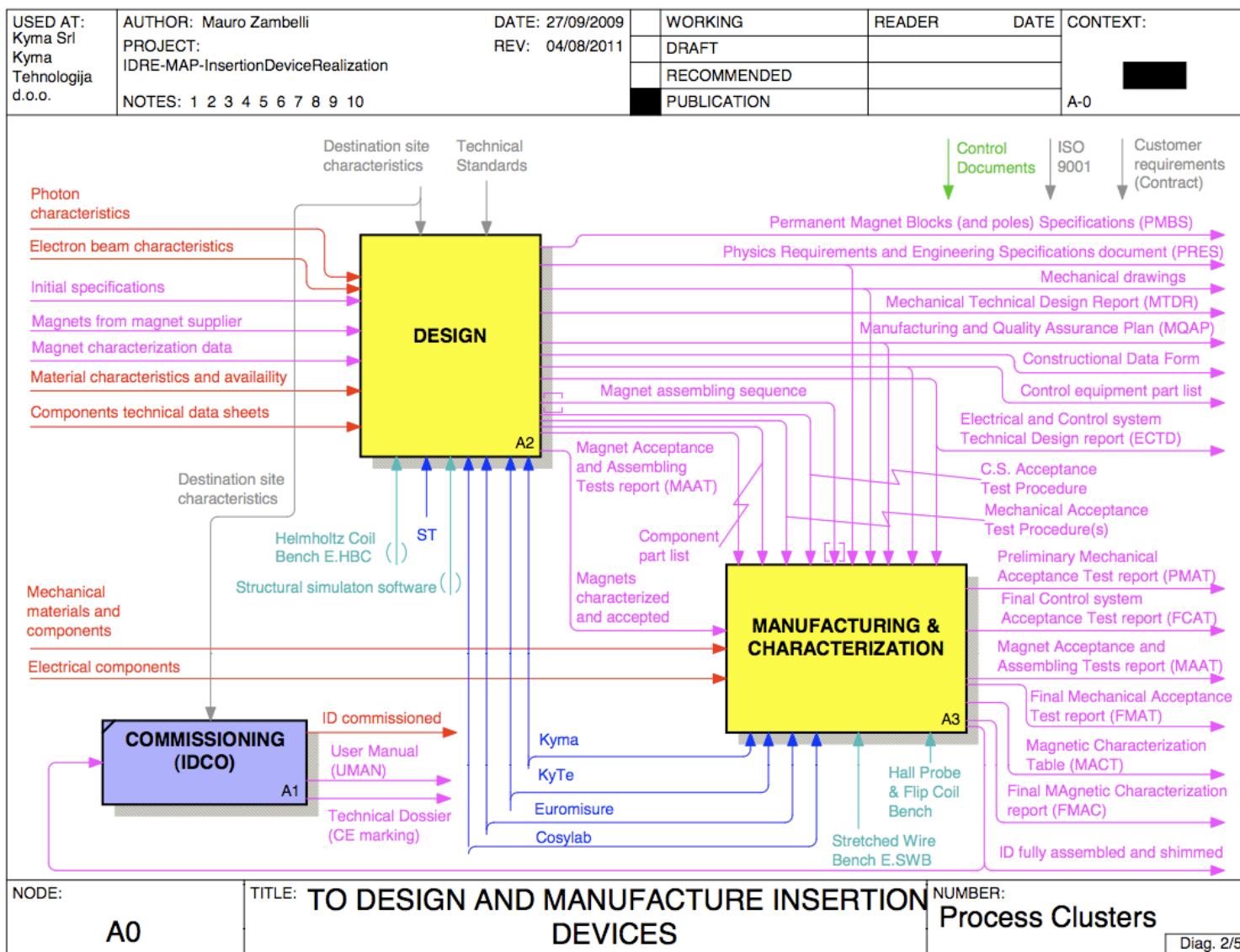


Process representation (IDEF 0)





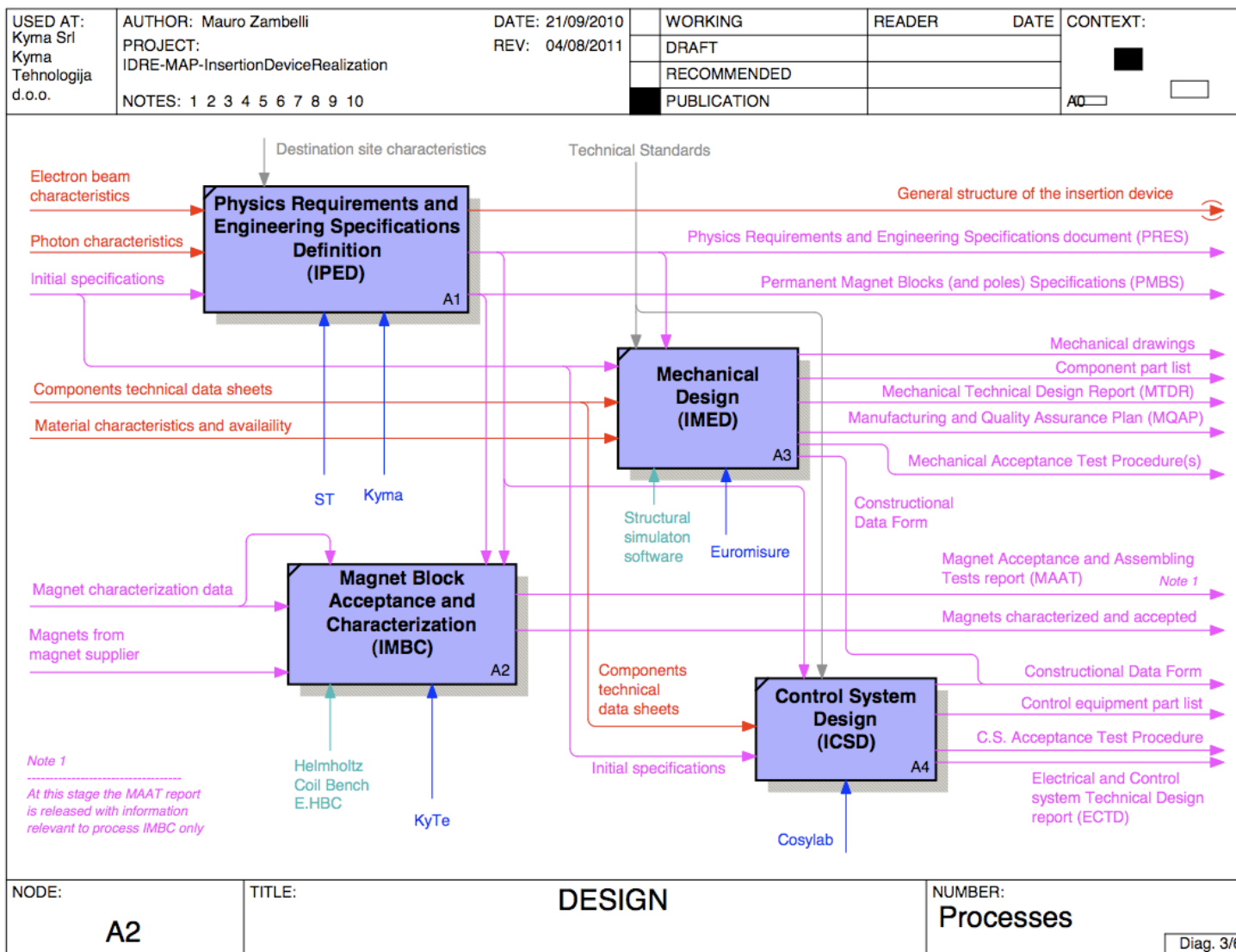
ID realization processes



NODE: **A0** TITLE: **TO DESIGN AND MANUFACTURE INSERTION DEVICES** NUMBER: **Process Clusters** Diag. 2/5

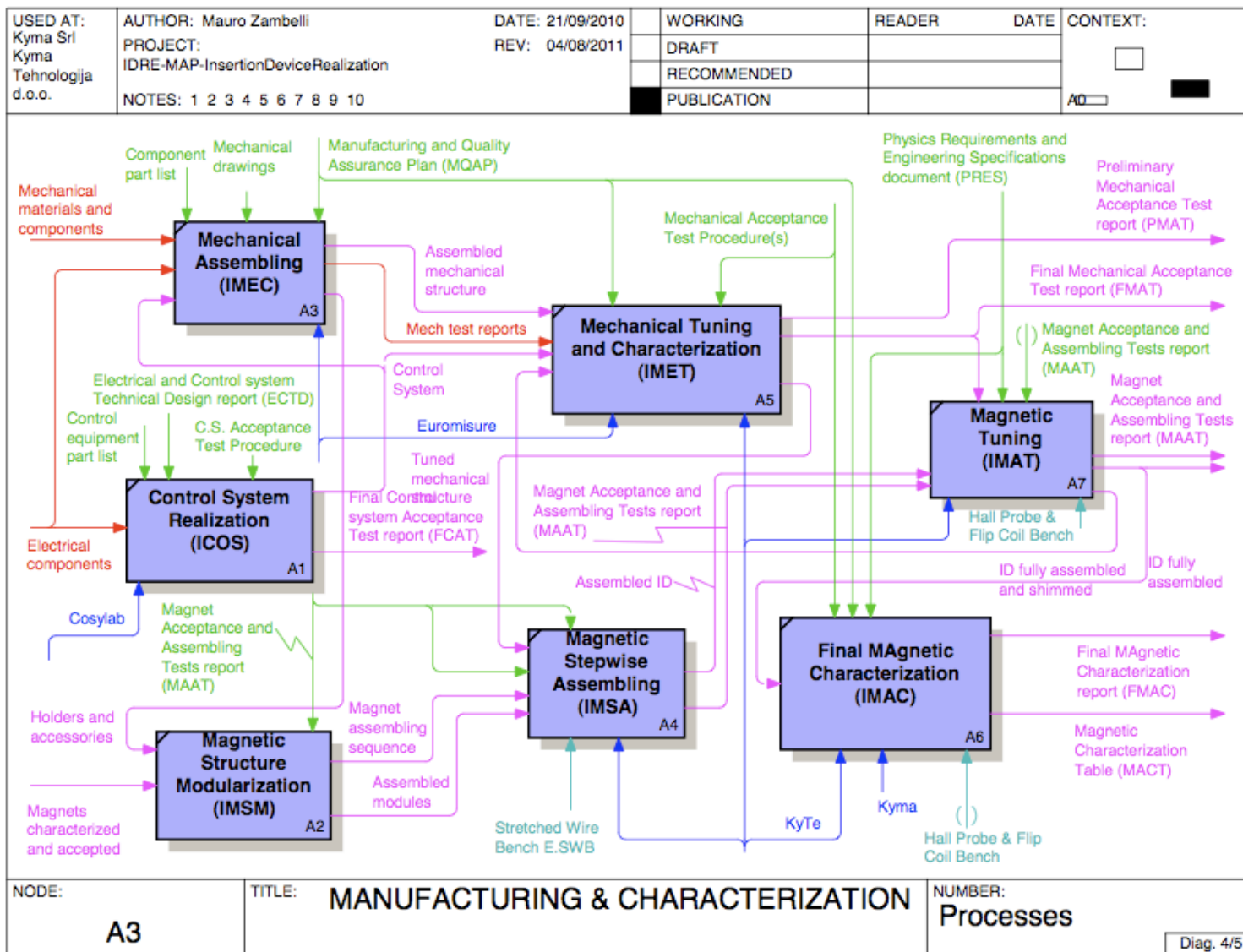


ID realization processes - Design





ID realization processes - Manufacturing



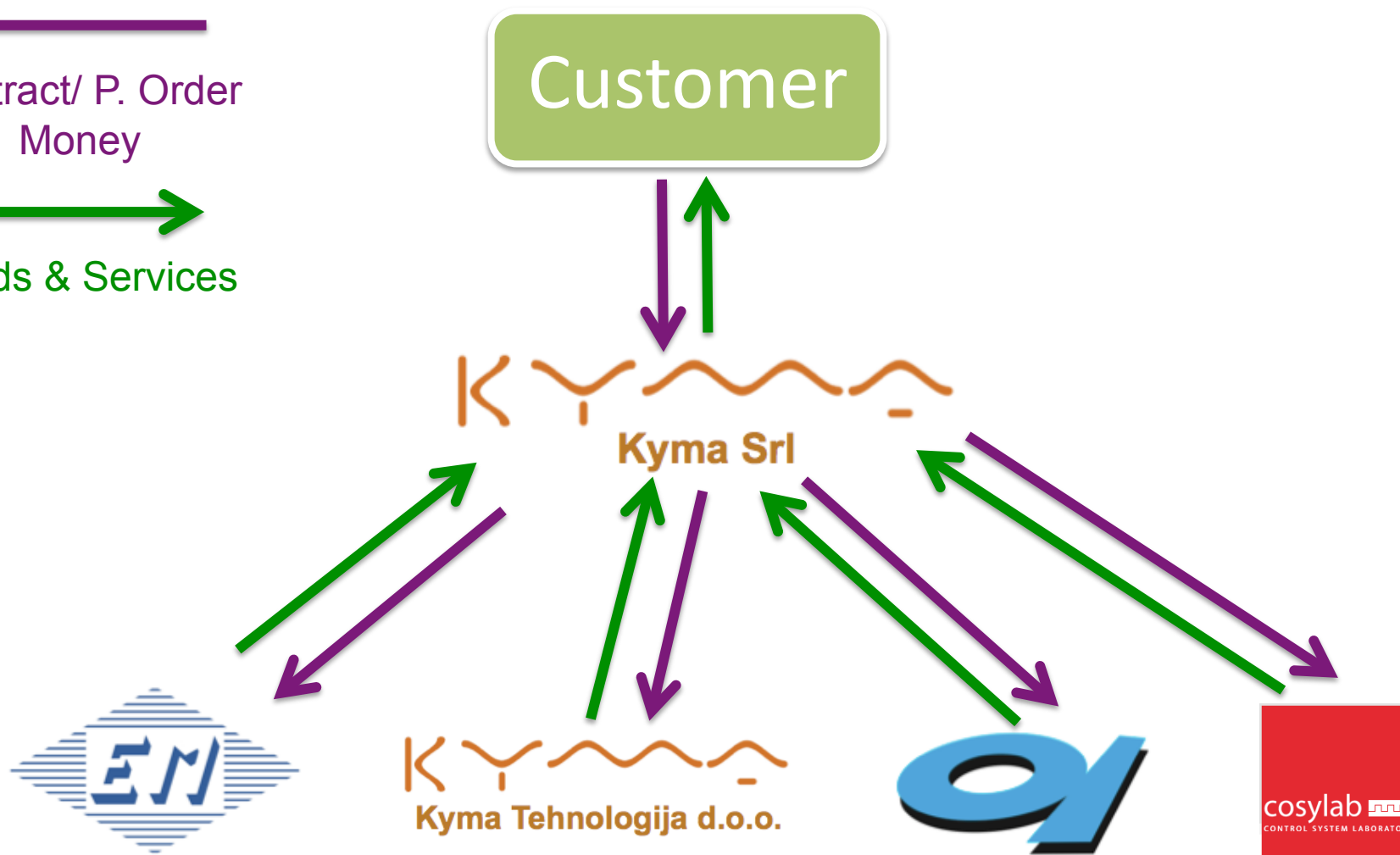
The administrative (formal) organization



Contract/ P. Order
Money

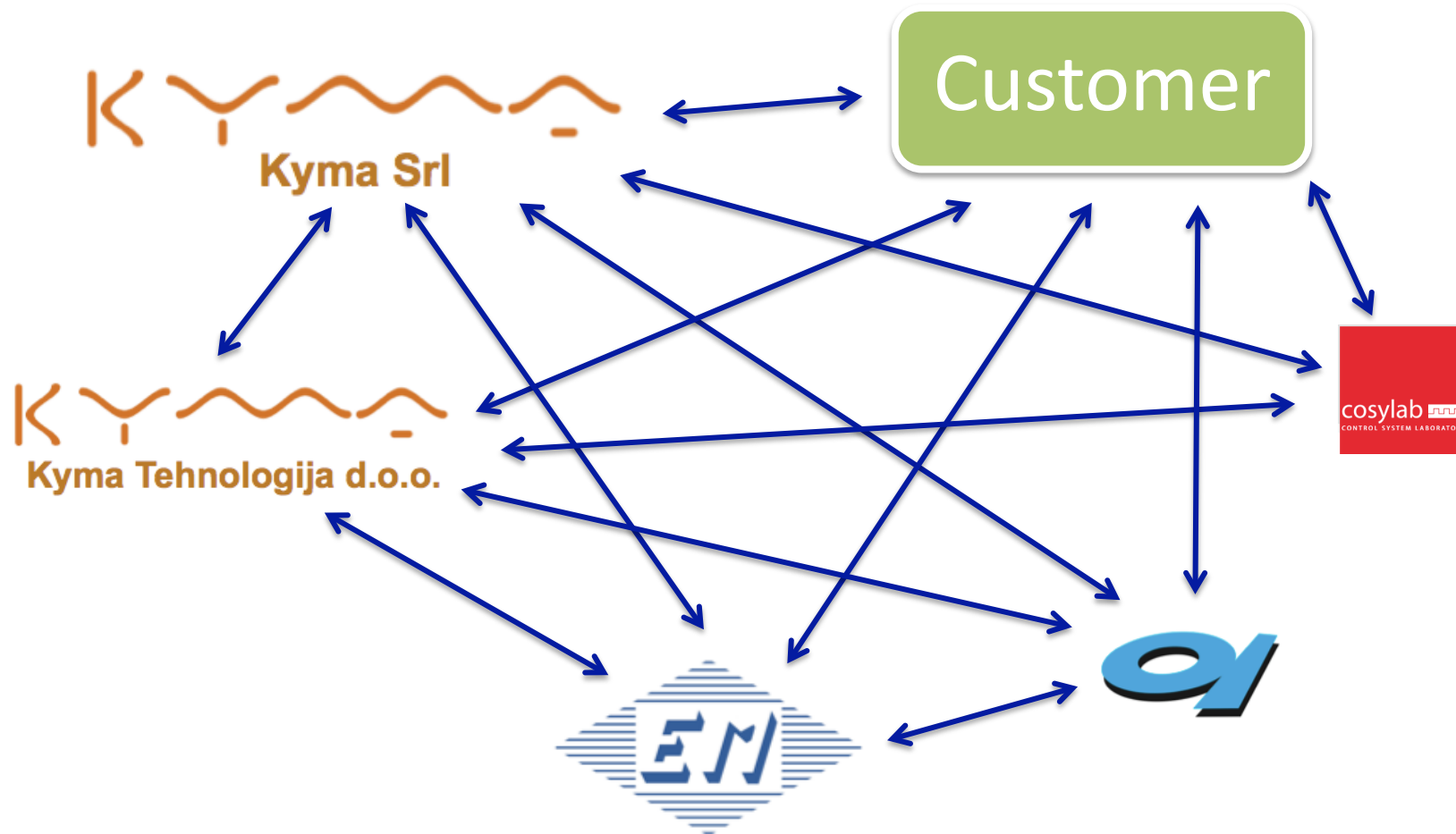


Goods & Services



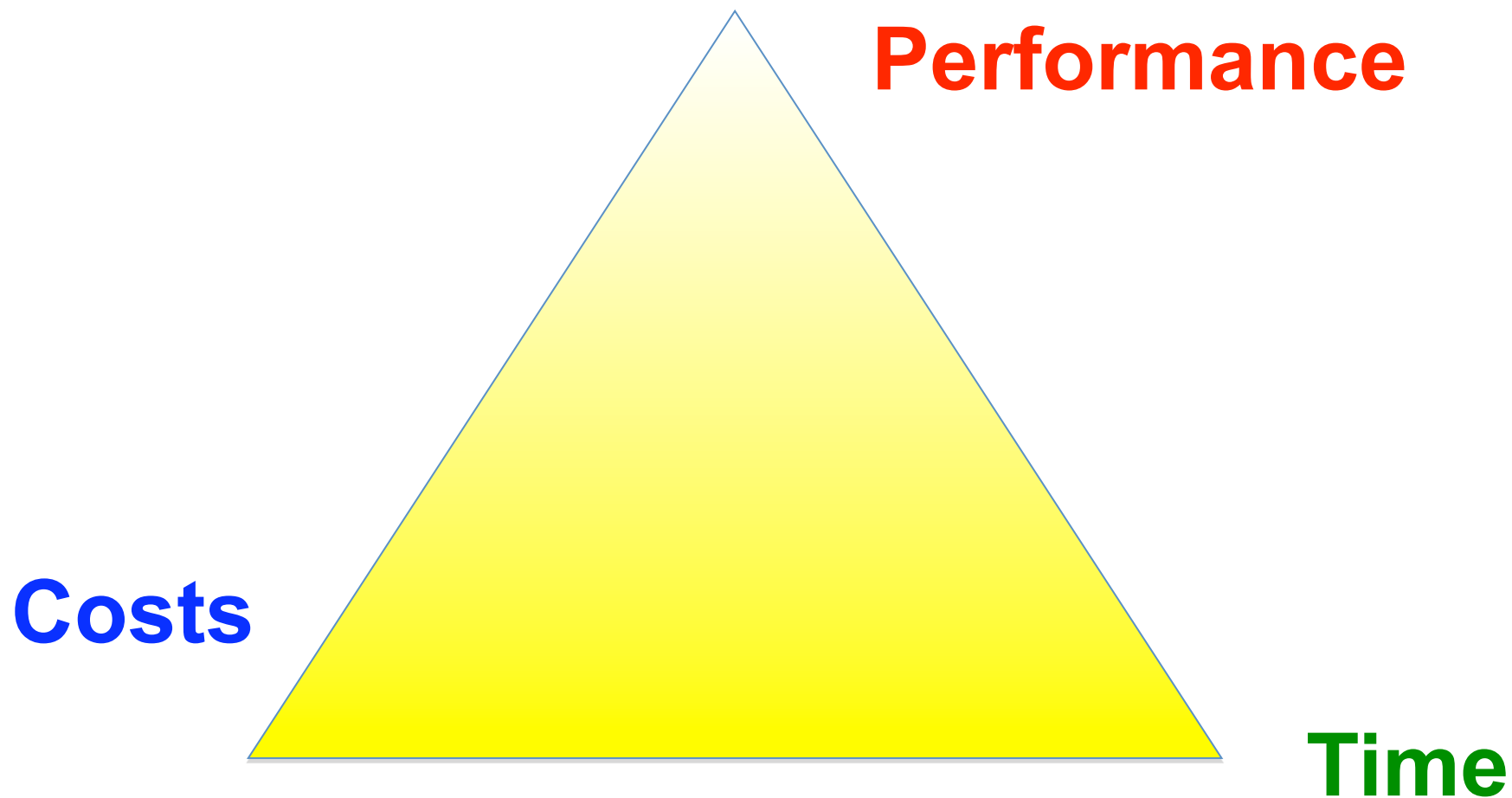


The operative organization



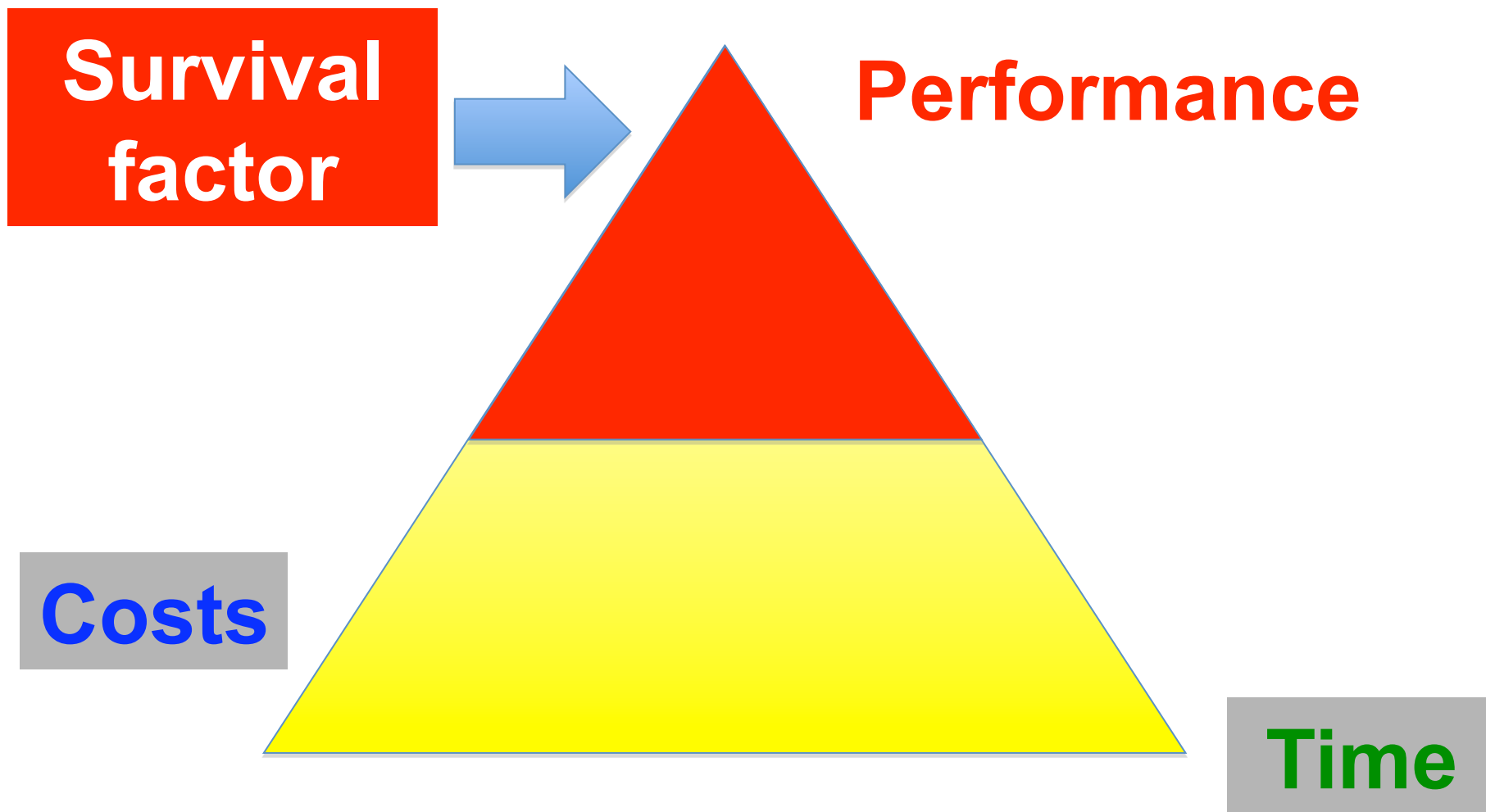


Project Management

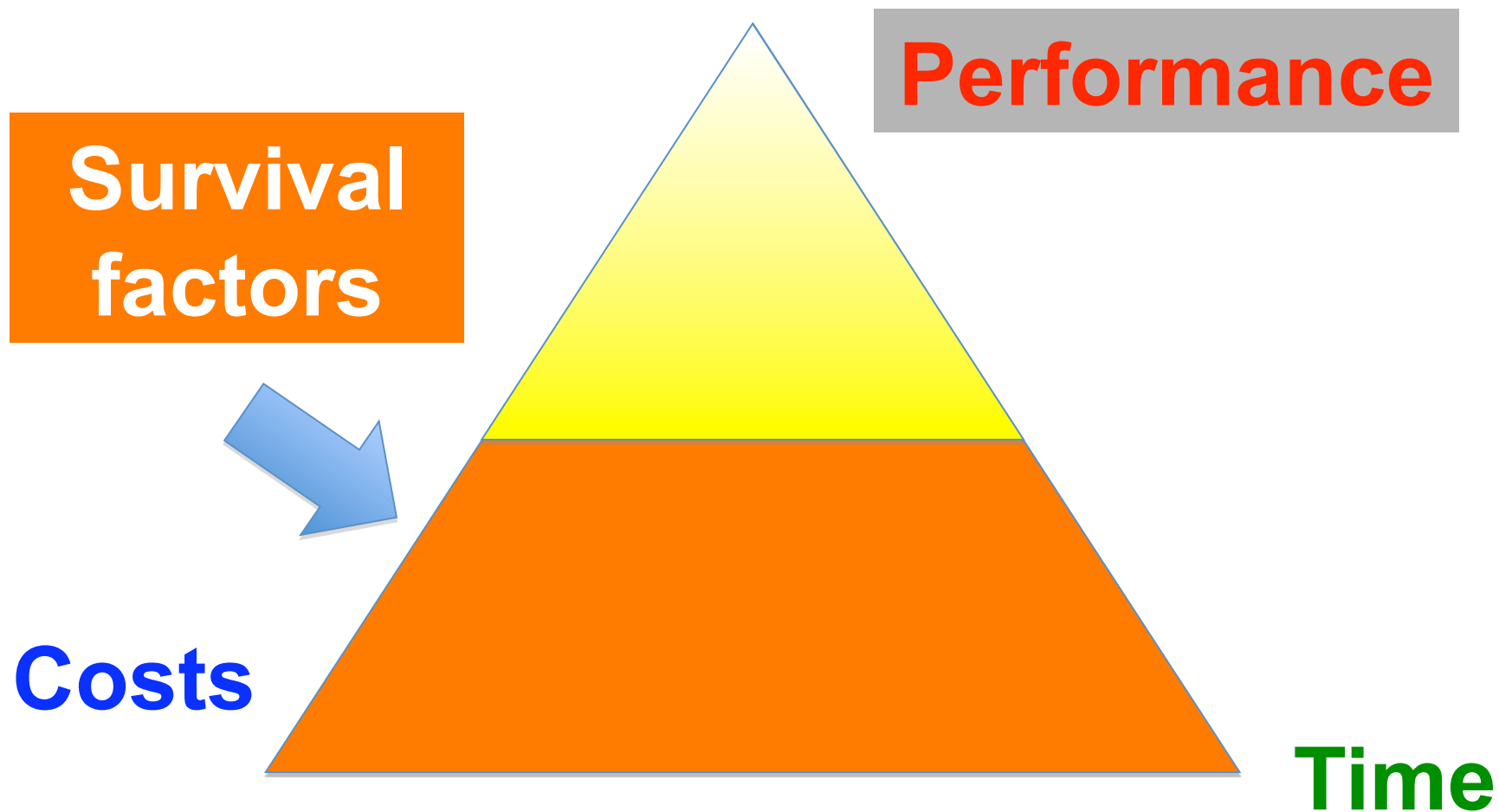




Project Management @ Research Institution



Project Management @ Kyma





The actual challenge

To put together the Scientific and the Industrial worlds in a win-win approach

- ◆ To fulfill all the technical requirements and to reach the satisfaction of any expectation of the actual Buyer and the Final User, providing state-of-the-art devices
- ◆ To achieve an appropriate profit on each project, granting the long term equilibrium and progressive development of the company business

Key roles @ Kyma - PCO

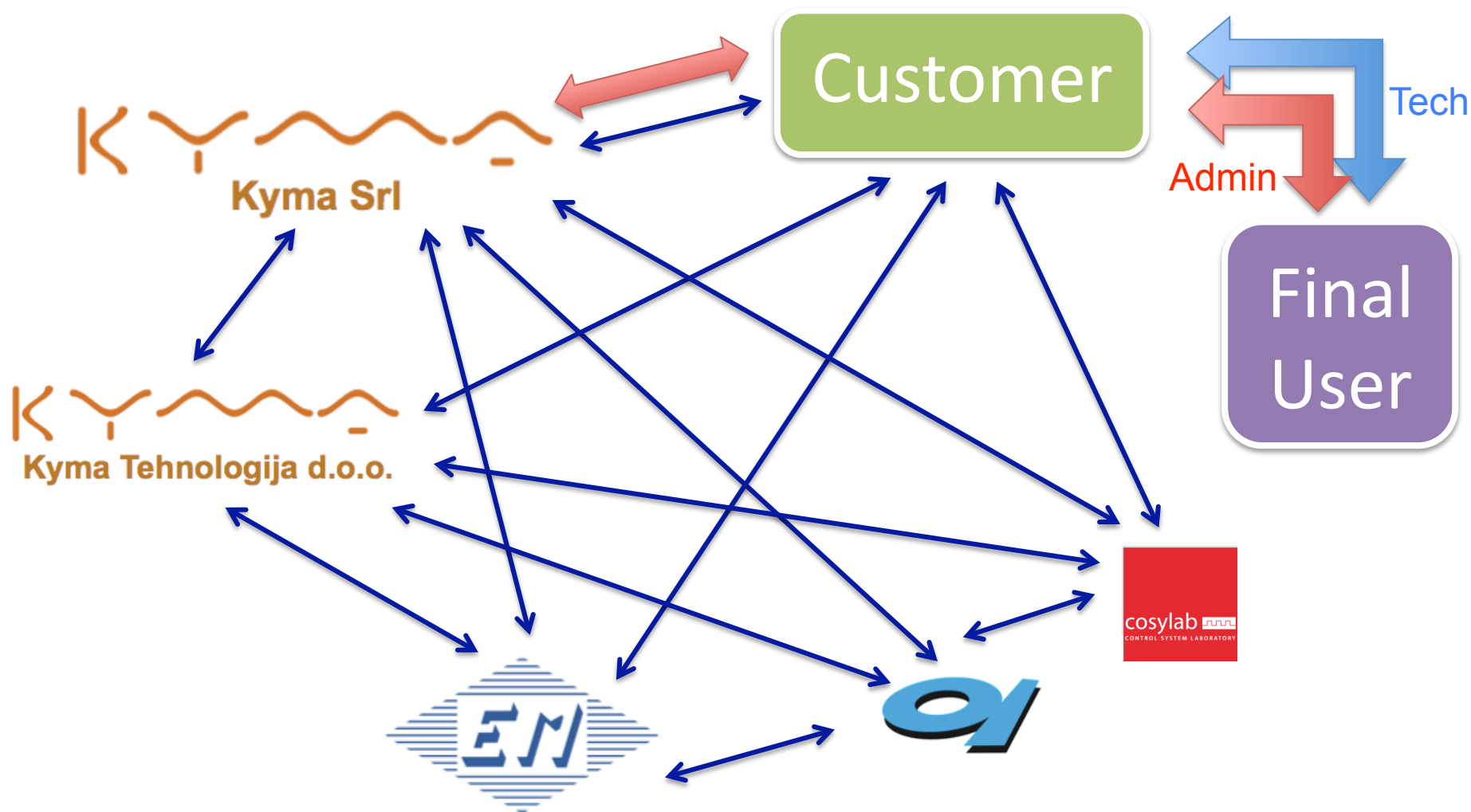
- ◆ **Project Manager**
 - ◆ *Customer relationship management*
 - ◆ *Time, cost, risk management*
 - ◆ *Contract administration*
 - ◆ *Project reviews management*
 - ◆ *Management of changes*
 - ◆ *Project documents issue*
 - ◆ *Shipment and delivery*
 - ◆ *After sale assistance*

Key roles @ Kyma - PTL

- ◆ **Project Technical Leader**
 - ◆ *Technical proposal*
 - ◆ *Technical risk assessment*
 - ◆ *Coordination of technical activities*
 - ◆ *Technical communication with the Customer*
 - ◆ *Exchange of technical information and data*
 - ◆ *Preparation of technical documents*
 - ◆ *Management of PDR, FDR, PAT, FAT, SAT*
 - ◆ *Assistance for installation and commissioning*

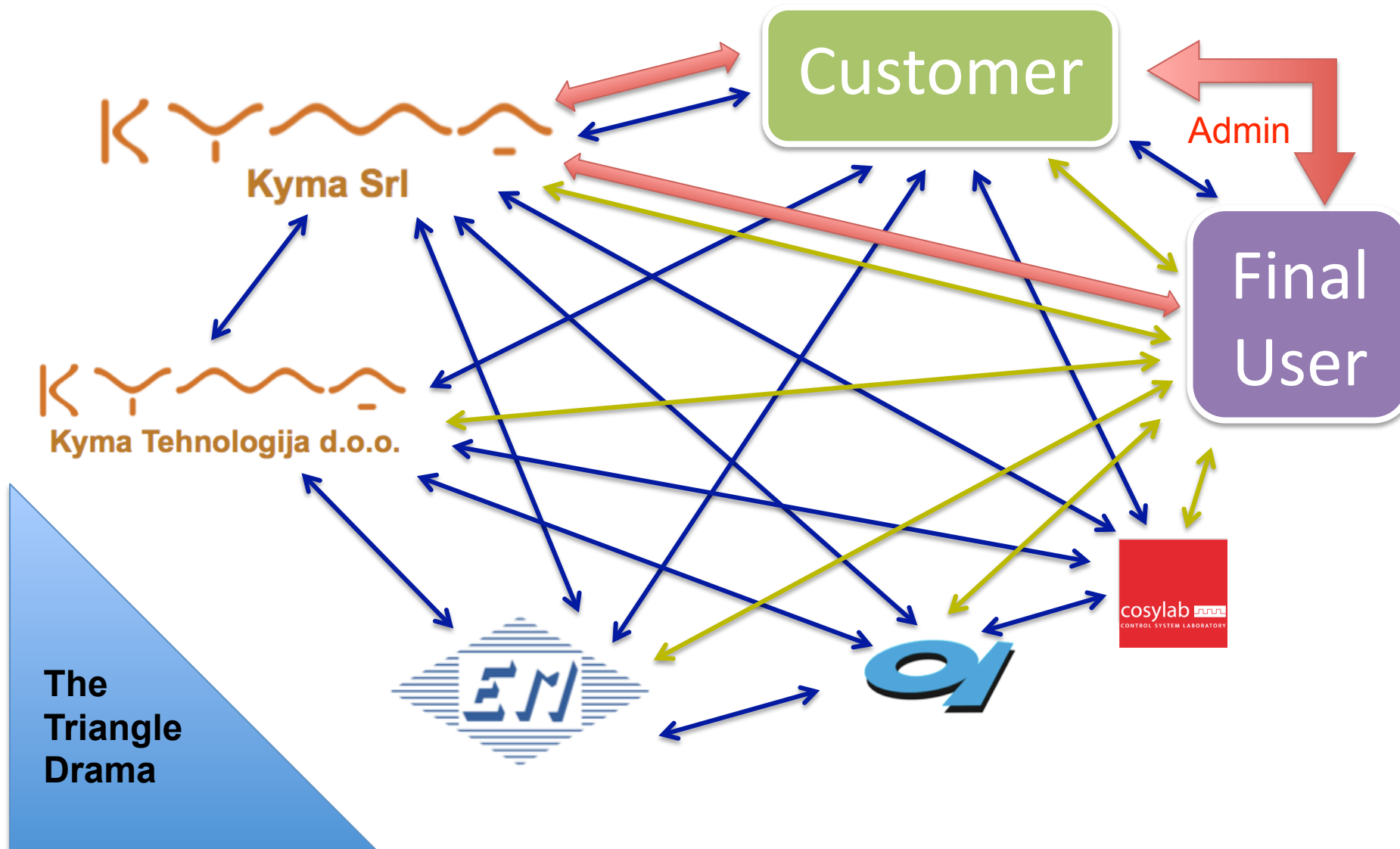


The case of In-Kind Contribution - 1





The case of In-Kind Contribution - 2



Conclusions

- ◆ **In-Kind Contributions can represent an important business opportunity for industrial suppliers**
- ◆ **but ...**
 - ◆ *The relevant activities have to be carefully organized and scheduled*
 - ◆ *A very clear understanding of the roles of the different partners involved is needed*
 - ◆ *A high level of Process & Project Management is required*



Elettra Sincrotrone Trieste

**Thank you
for your kind attention !**

mauro.zambelli@kyma-undulators.eu