

FOTON, s.r.o.

company presentation

Jaroslav Moravec

Salamanca, October 2, 2014

FOTON, s.r.o.

- founded 2000
- Czech private company (Ltd.)
- development and manufacturing of special electronic devices

Contact :

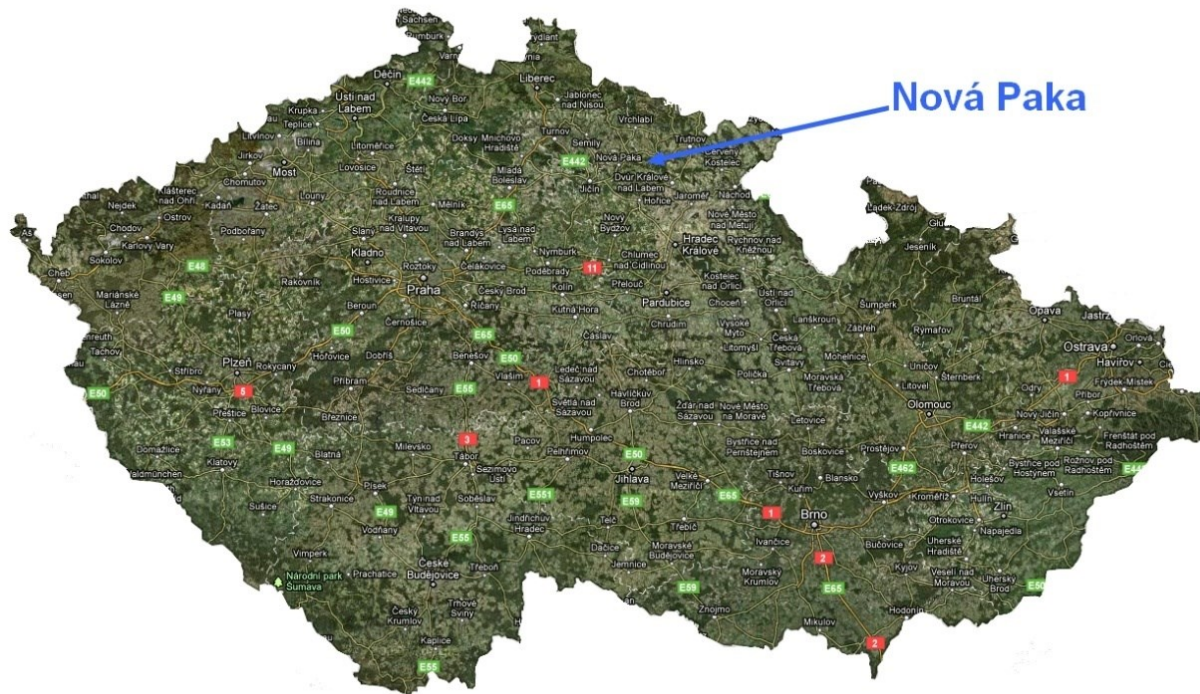
**Těšínská 1361
509 01 Nová Paka, CZ**

Tel: (+420) 493 720 451

Fax: (+420) 493 720 454

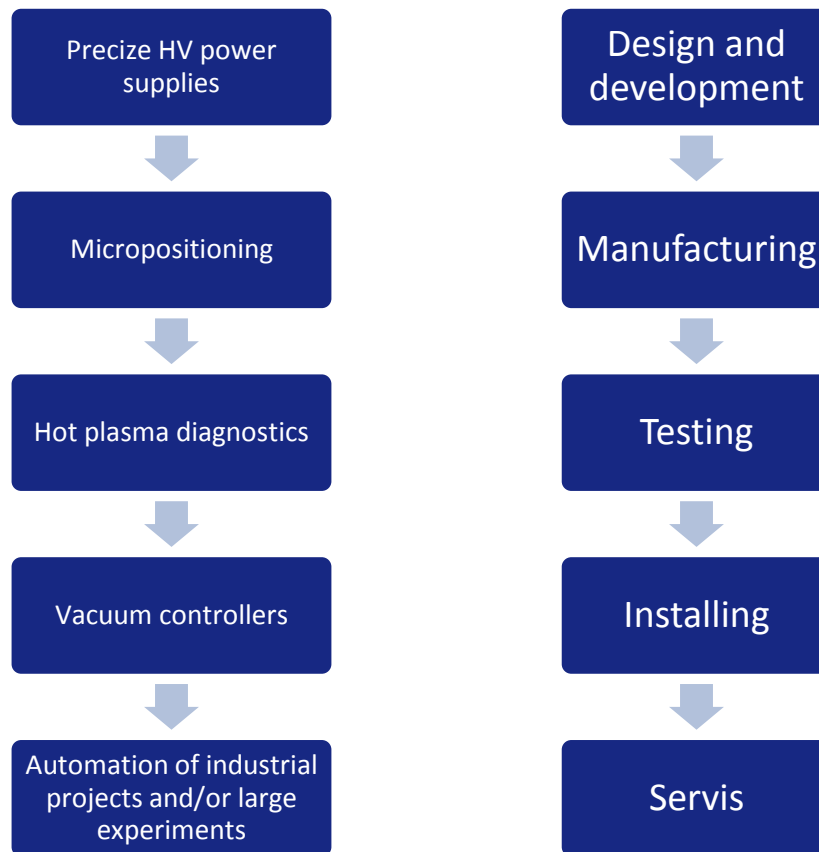
E-mail: info@fotons.cz

<http://www.fotons.cz>



Foton, s.r.o.

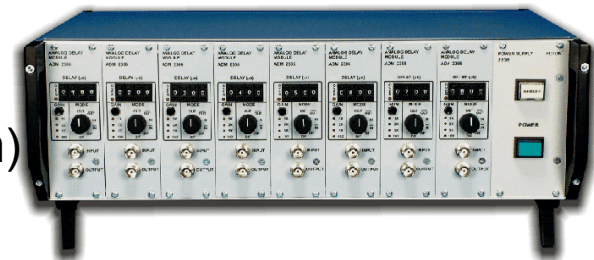
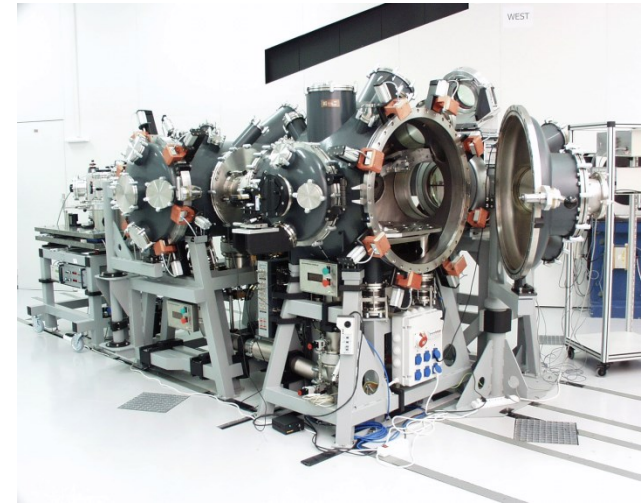
- Founded 2000
- SME
- PIC (FP7) : 968991880
- Special innovative firm
- R & D



“Starting from the system design through to delivery of the manufactured device ...”

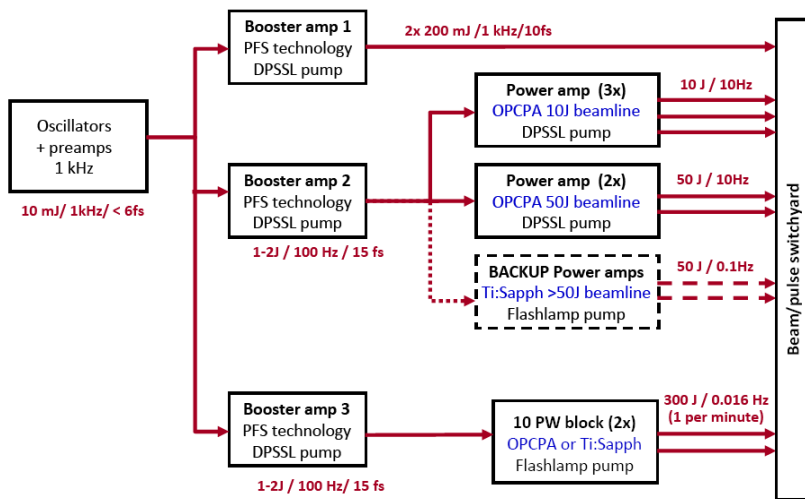
FOTON, s.r.o. – short history (overview)

- 2000 Foton founded, equipment for PALS
- 2001 X-ray laser experiment, industrial appl.
- 2002 first diagnostics for tokamaks
HV novel design
Multidrive16
first export abroad (E)
-
- 2007 Škoda Auto a.s.
- 2008 JINR, Dubna, RF
- 2010 ELI – vacuum systems
- 2011 LA3NET (Liverpool)
- 2013 OPTO-X (optical power distribution system)



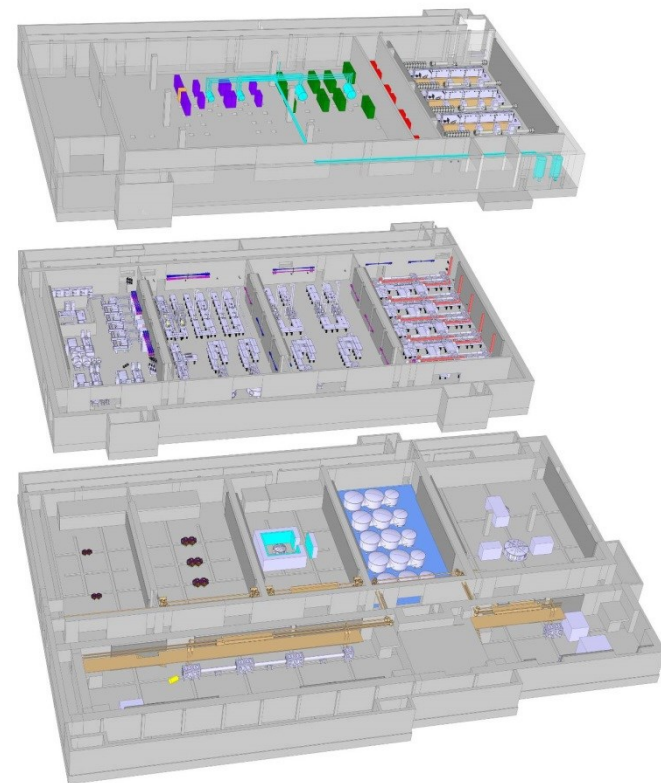
ELI / CZ /

Laser system



Experimental areas

- Applications (molecular, biomedical & material sciences)
- XUV / X-ray generation
- Plasma physics Lab. astrophysics
- High-intensity & exotic physics
- Electron acceleration
- Proton acceleration



Projects:



The exploitation of **LA**sers for **Ap**plications at **Acc**elerator facilities for ion beam generation, acceleration and diagnostics is the goal of the new **NET**work (LA³NET) within the FP7 Marie Curie ITN scheme, coordinated by the University of Liverpool.

In this frame, research centers, universities, and industry partners from across Europe will develop beyond-state-of-the-art techniques and technologies through a joint inter-sectorial training program for early stage researchers within a unique European partnership.

Full Network Partners



Associated Partners



10W fully isolated transmission system with data and power optical links (TA01010522)

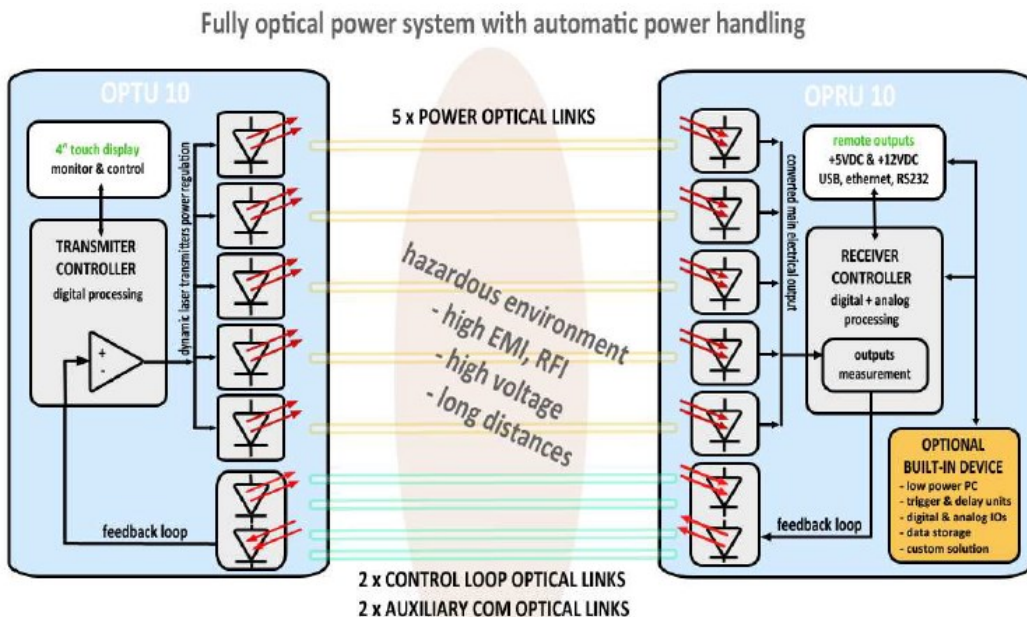
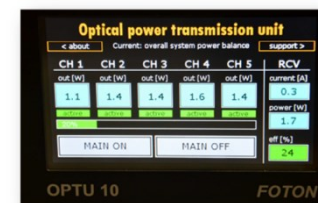


Fig.4 OPTU10 - optical transmitting unit



Fig.6 OPRU10 - optical receiving unit

High efficiency (40%)
Up to 10W of output electric power



Foton – exhibitions, shows, presentations

- SPIE (Optics + Optoelectronics)
- SPPT
- TWEPP
- ASPERA



Product overview :

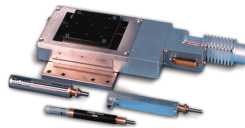
More than **120** prototypes during **14** years

nA-100s A
uW-kW

uV-10s kV
UV-IR



High voltage supplies



Micropositioning



Optoelectronics



High temperature
plasma diagnostics



Special systems



Vacuum controllers



Current and voltage
supplies and generators



Industrial control
systems

High voltage supplies

Low – medium power, voltage till 20kV (60kV)



HVS 04



HV 8002



HVG 2000



HV 5000+

Micropositioning

System Multidrive16+

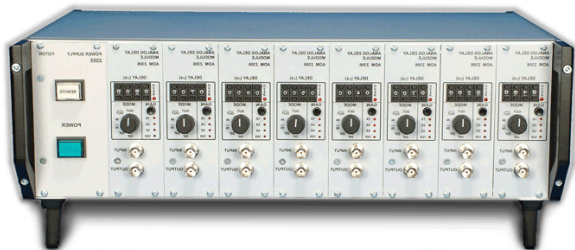


Multidrive 16+



High temperature plasma diagnostics

Signal handling and convertors, generators and controllers for experiments



DLS 08

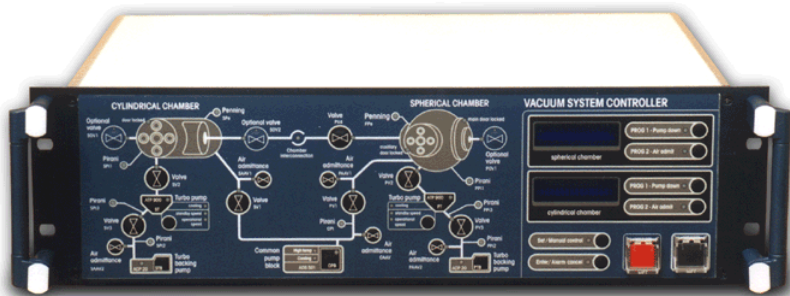


HPD 4.1



Vacuum control systems

Reliable controllers
for high/ultra vacuum equipments



VCU 2000



ASU 2009

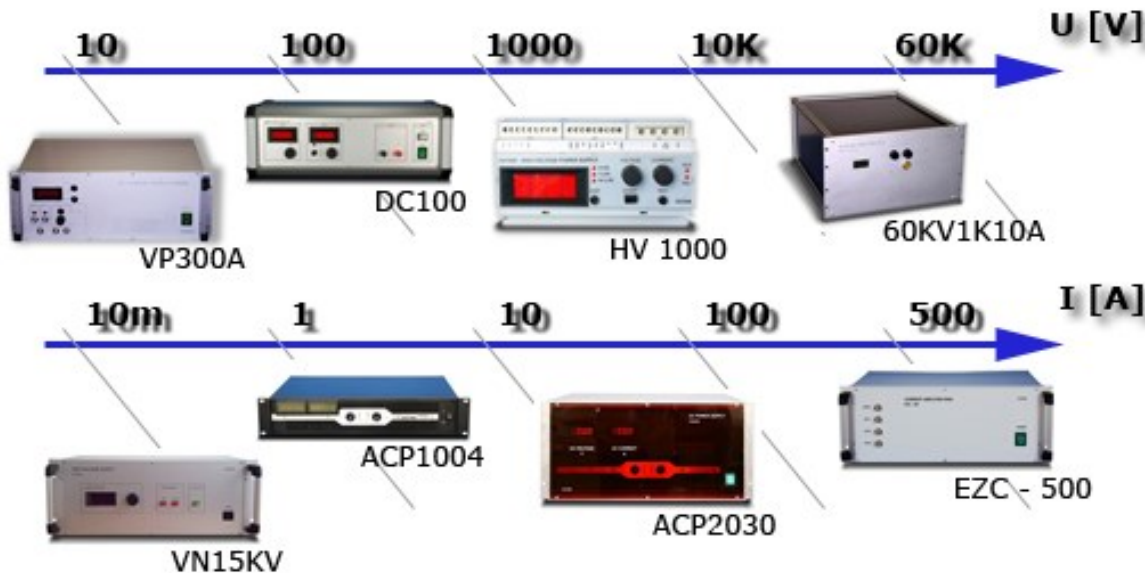
Voltage and current power supplies

DC – AC – waveform – programmable

Up to 500 A, peak power up to 40 kW

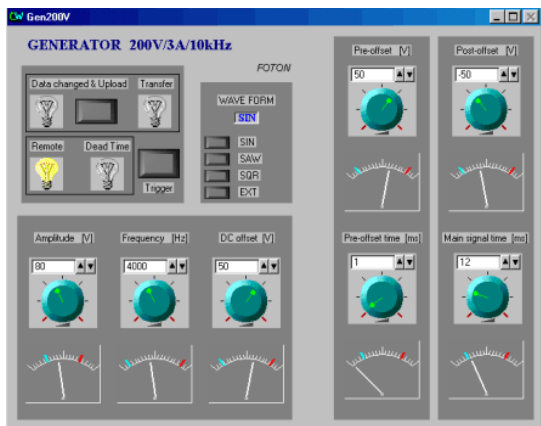


Galva 2001

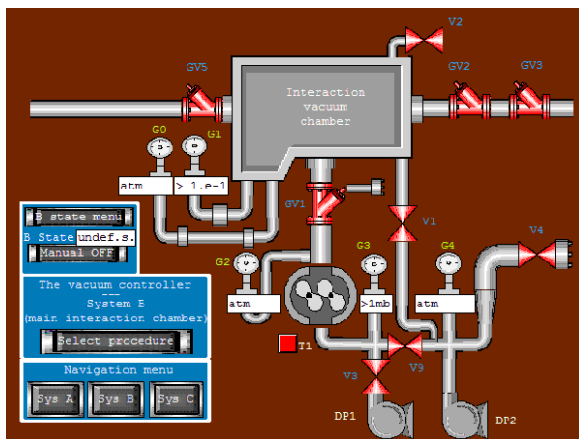


Software

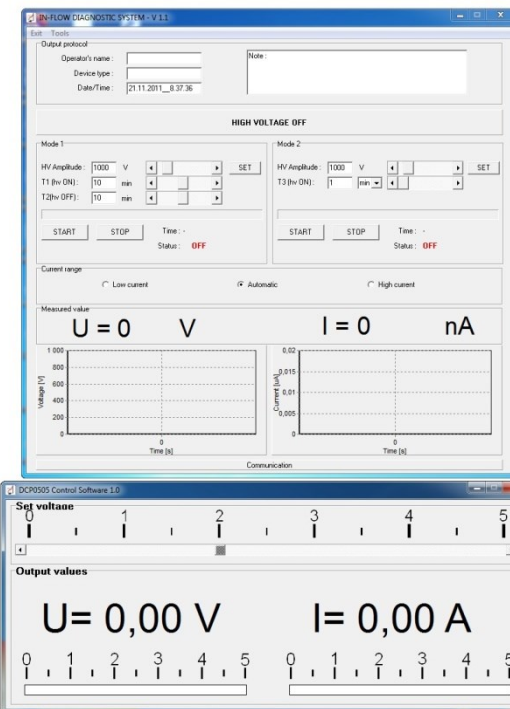
User-friendly interface, high reliability



PC SW for voltage generator



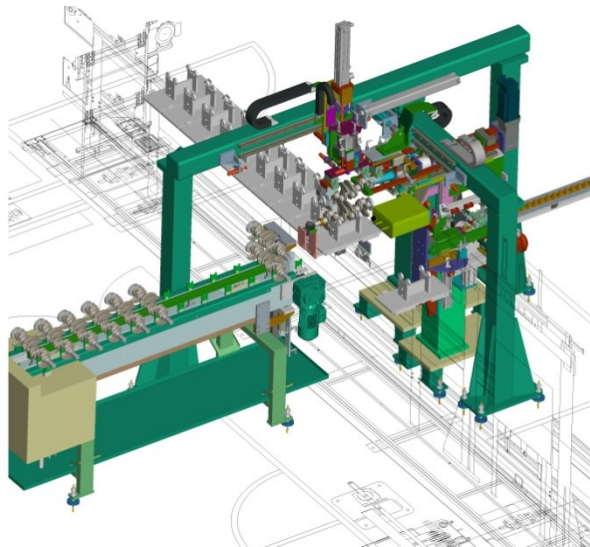
Software for HMI of vacuum system



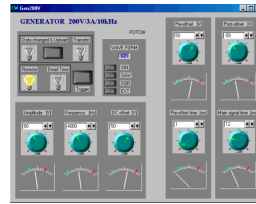
PC SW for HV power supply

Control & automation

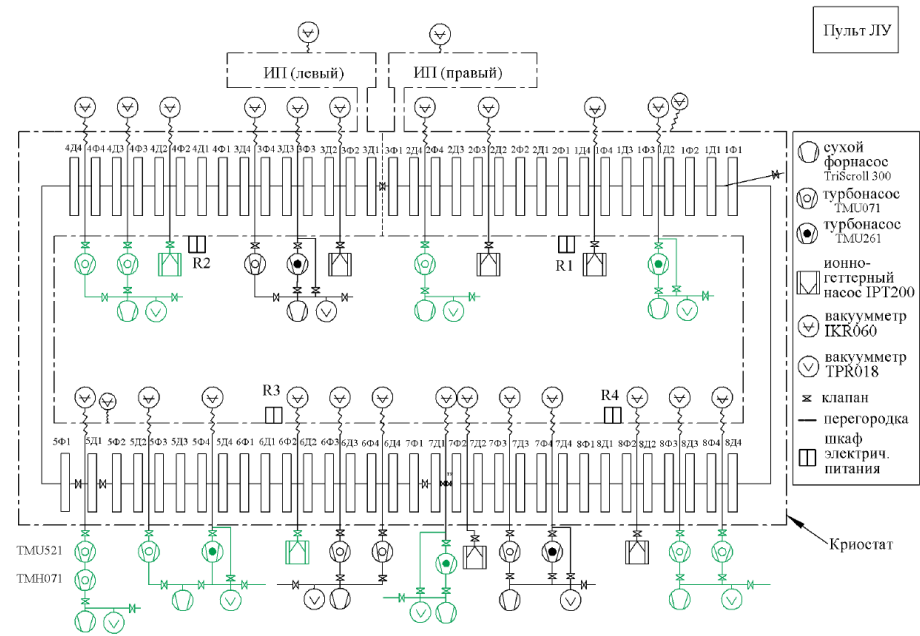
Industrial projects :



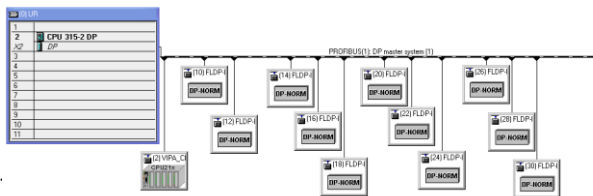
Pressing machine



Large experiments :



Particle accelerator – nuclotron
(JINR)



Last projects



NPA detection unit

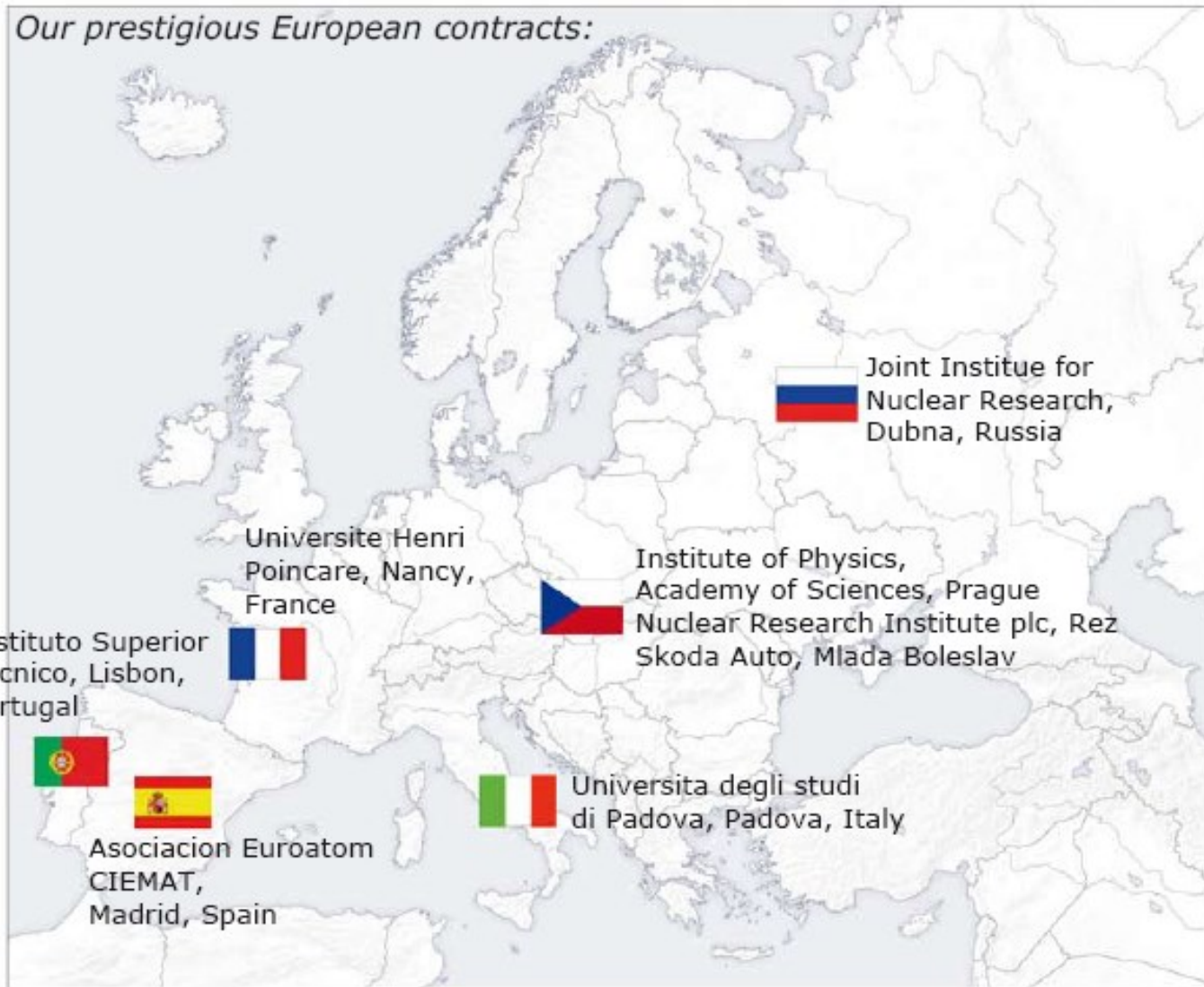


Piezodriver
for adaptive optics



PV10 – low temperature plasma generator

Our prestigious European contracts:



Have you troubles ? Are you looking for the solution ?

DO NOT HESITATE TO CONTACT FOTON !

You know WHAT, but you do not know HOW ?

You know WHAT, you know HOW, you have not manpower ?

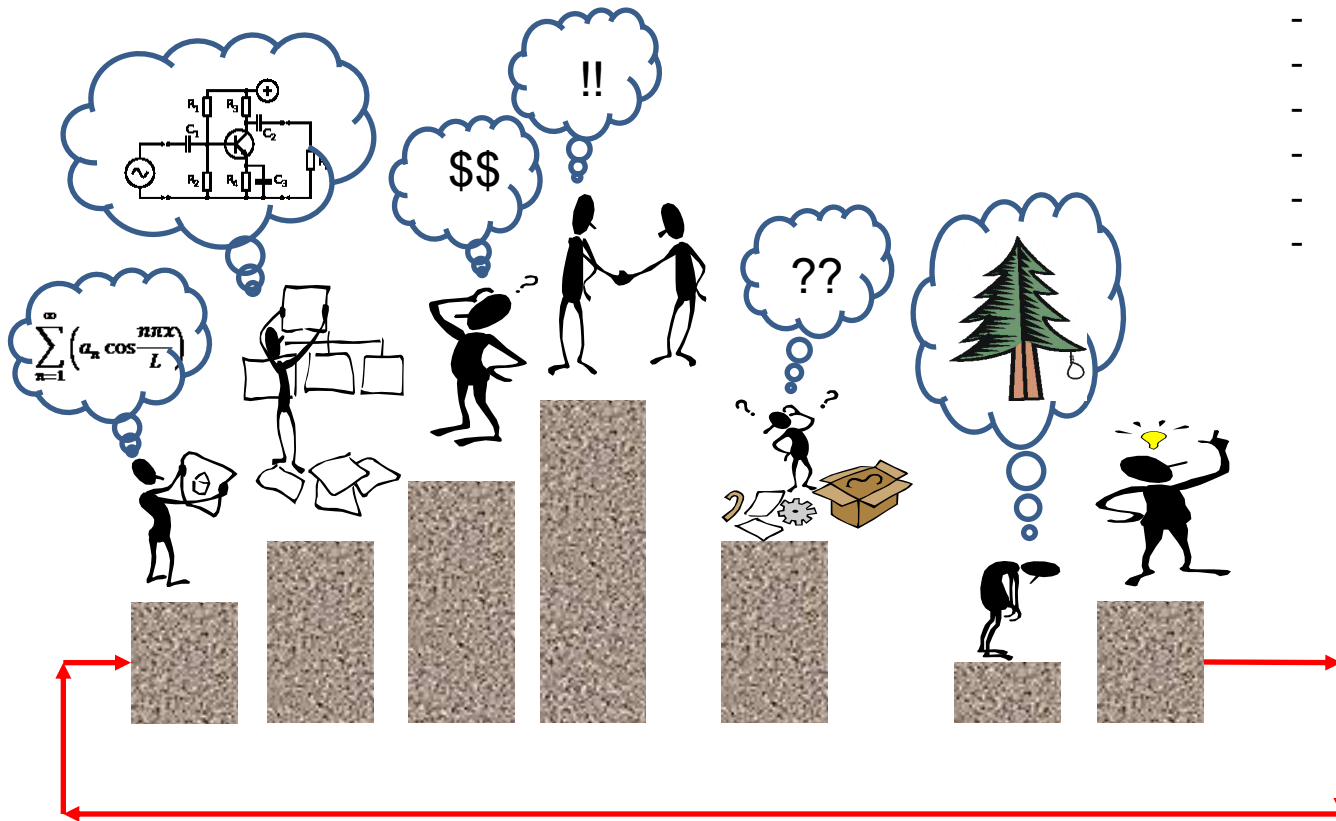
Some remarks and comments to private commercial R&D career

Jaroslav Moravec
2000 - 2014

R&D private SME and its customers

- 1-man companies and small SME Small budgets
- Small and medium companies Typically best customers
- Large companies Slow progress, tenders, paper work
- Academic world and universities Limited budgets, high level of requirements, conservative, good behaviour

Example of typical business workflow:



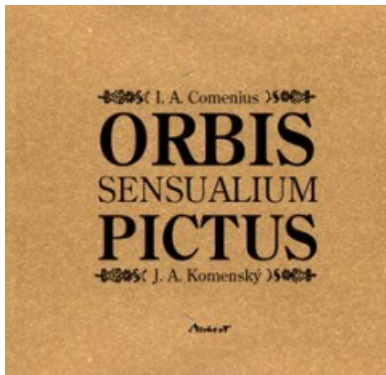
- Technical tasks and problems
- Financing
- Employee and HR
- Marketing & advertisement
- Legal problems
- Inspections
- Etc.

Advantages and disadvantages of private R&D business :

- Freedom
- Challenges
- Various tech designs
- Salary (*)
- Management of life
- New people, new applications
- New experiences
- Adrenaline

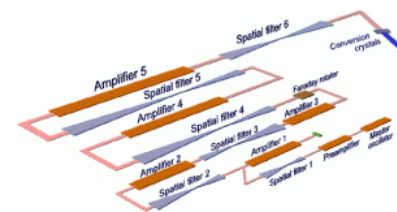
- Stressfull
- A lot of paper work
- Financial instabilities
- Interaction with employee
- Interaction with authorities
- Inspection, penalties
- Legal news
- Marketing and interaction with customers





The Visible World in Pictures

„Boy, start to learn to be wise !“



Jan Ámos Komenský Iohannes Amos Comenius

1592 – 1670

- Bishop of Unity of Brethren
- Teacher, educator, writer
- Father of modern Education (Didactica Magna)
- Translated into more than 200 languages, still published

