About

Piotr Goryl, Tango Steering Committee Meeting, ESRF/Zoom, 145-15.09.2021

We collaborate on software and control systems.

- www.s2innovation.com
- contact@s2innovation.com

Milestones

- S2Innovation has started in December 2017
  - Founded by:
    - Piotr Goryl, former Head of IT and Controls at NCPS SOLARIS, Krakow PL
    - Wojtek Soroka, former Administration and Procurement officer at NCPS SOLARIS
- In 2019, Investment from Cosylab d.d.
- From the beginning providing services for Tango Community

S2INNOVATION

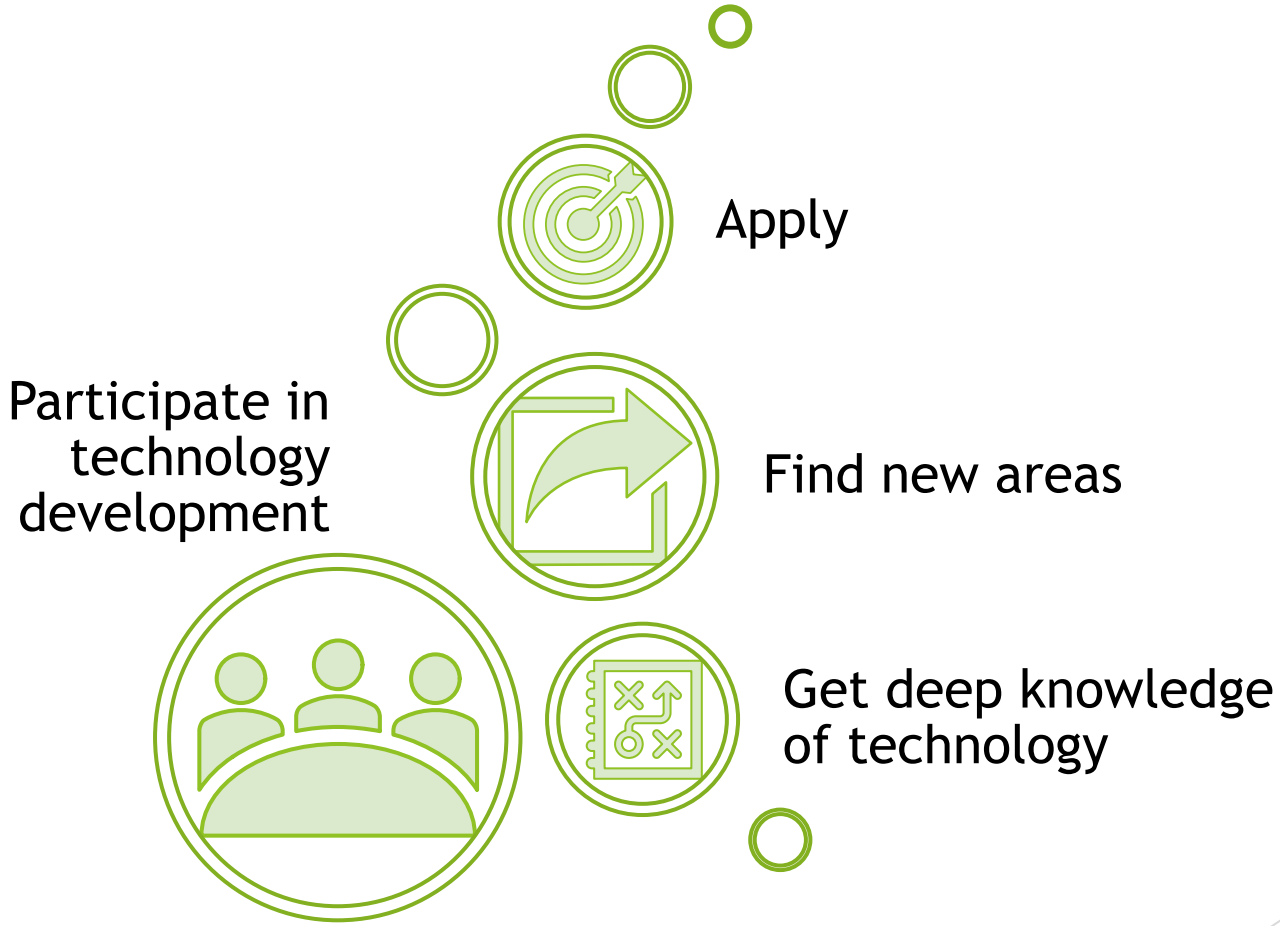
Mission and Vision

- S2Innovation delivers control systems software for innovative industry and Big Science laboratories. Our specialization is development of dedicated software for monitoring and control of research and industrial productions processes using both open-source and commercial toolkits.
- Our mission is to use knowledge and experience from scientific projects as a base for delivering increased efficiency to the industry, helping transformation to Industry 4.0+.

Knowledge and technology exchange shall bring profit to the whole community

S2INNOVATION

Strategy


Apply
Participate in technology development
Find new areas
Get deep knowledge of technology

The team

Additional support from

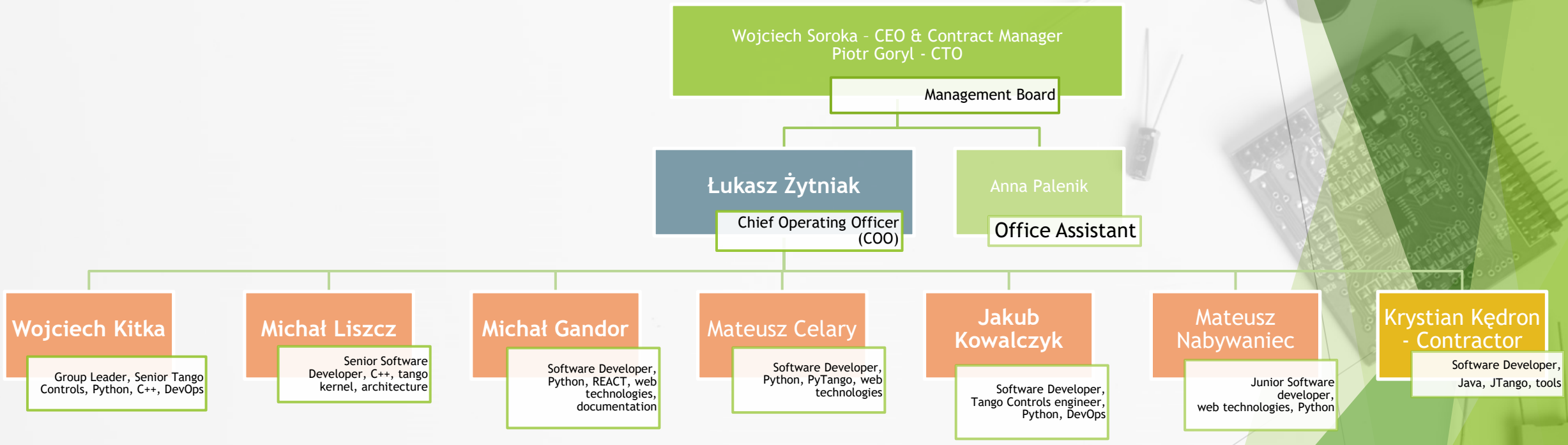
- Krystian Kędroń,
- Grzegorz Kowalski,
- Michał Fałowski,
- +3 students.

and growing…

Our expertise

- Control systems engineering:
  - For particle accelerators,
  - For large scale infrastructure,
  - For laboratories,
- Software development:
  - Python, C++, Java, .Net, HTML/JavaScript/CSS, Matlab,…
- PLC
- Computation,
- Documentation,
- DevOps,
- And many others …

S2Innovation organization for Tango Controls services



TangoBox

(ESRF/Tango Community orders, 2018 - 20)

- S2Innovation have prepared the latest TangoBox virtual machine
- TangoBox is a virtual machine image with a lot of Tango Controls tools preinstalled. It is available as a VirtaulBox image or on Amazon AWS. You may also download it from here.
- The sources are here: https://gitlab.com/tango-controls/tangobox

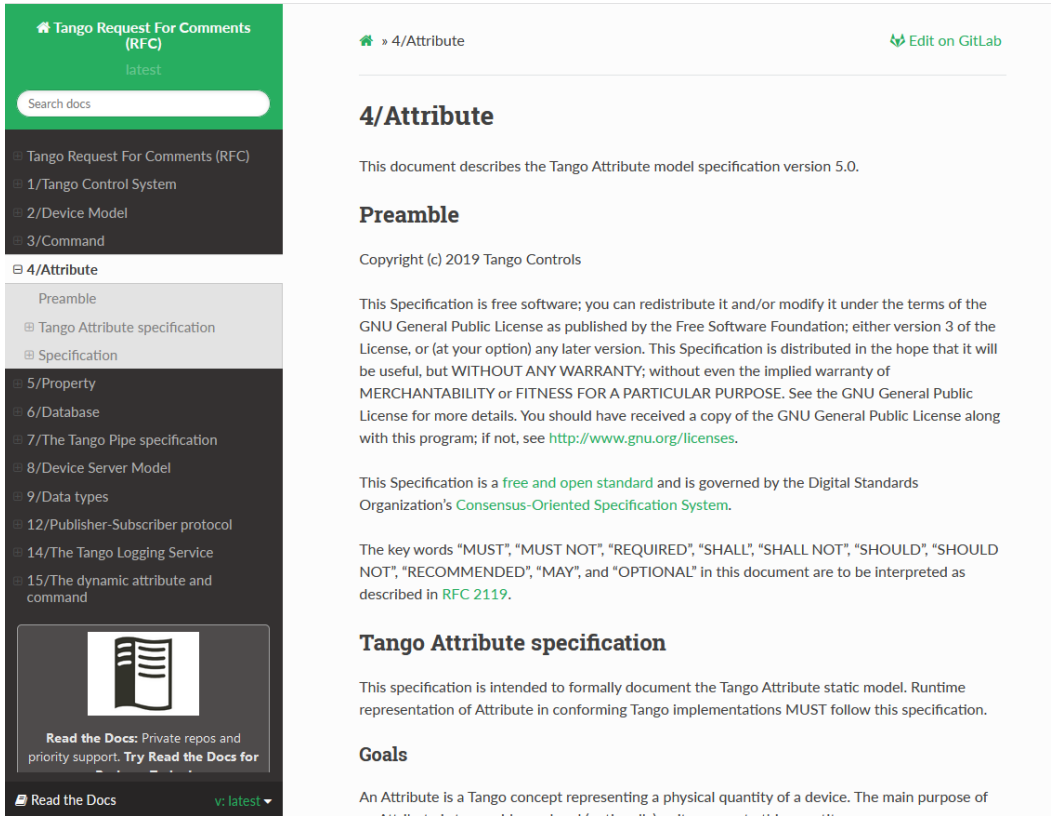
Tango Controls documented

(ESRF/Tango Community orders, 2018 -)

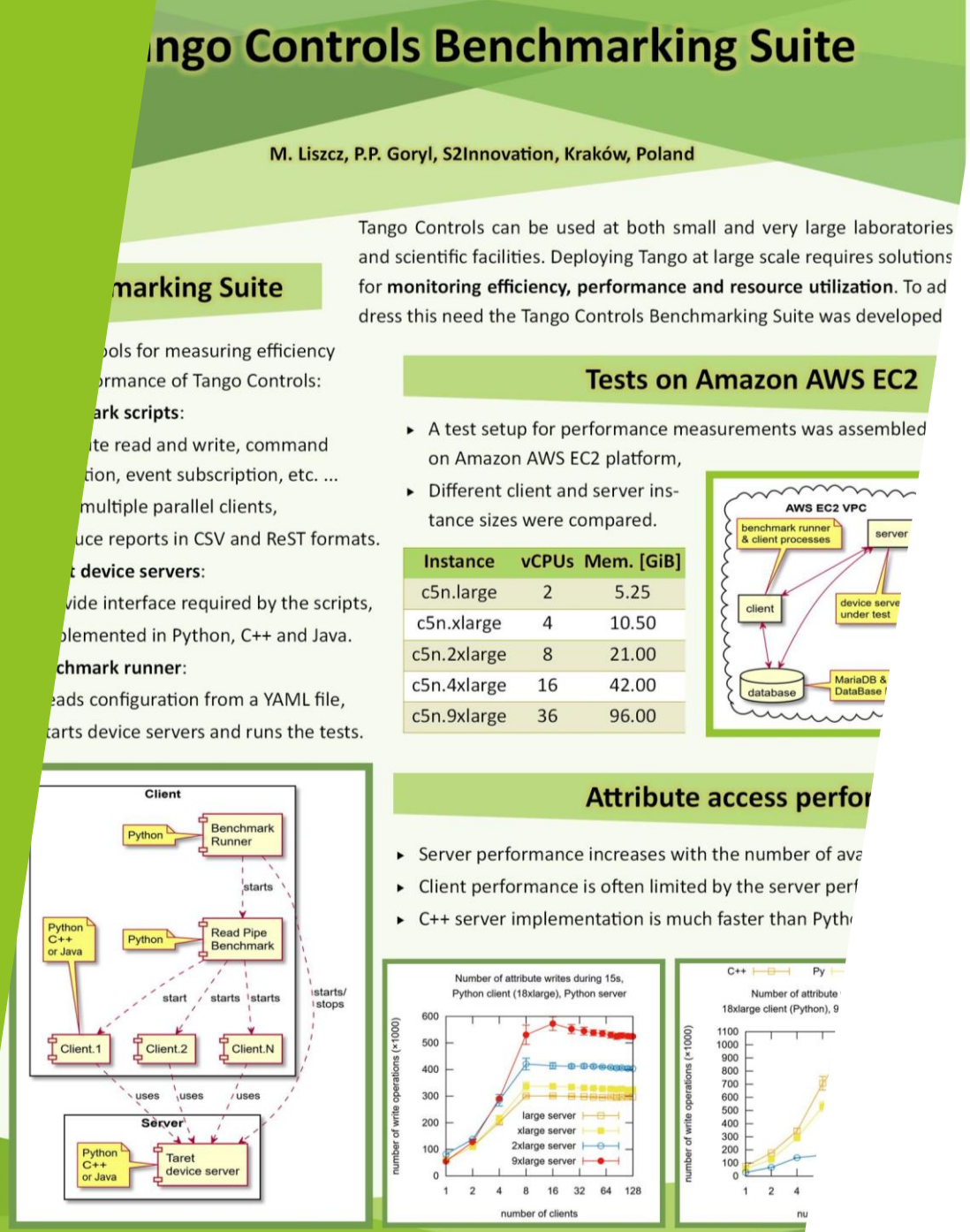
- S2Innovation participates in the Tango Controls documentation writing, shaping-out and maintenance
- Check it here: https://tango-controls.readthedocs.io
- The sources are here: https://gitlab.com/tango-controls/tango-doc

Tango Controls RFC

(ESRF/Tango Community orders, 2019 -)



- S2Innovation participates in specification of the Tango Controls protocol with:
  - Coordination and repository maintenance
  - Specification writing
  - Publishing
- It is available here:
  - HTML/PDF: https://tango-controls.readthedocs.io/projects/rfc/en/latest/index.html
  - Sources: https://gitlab.com/tango-controls/rfc



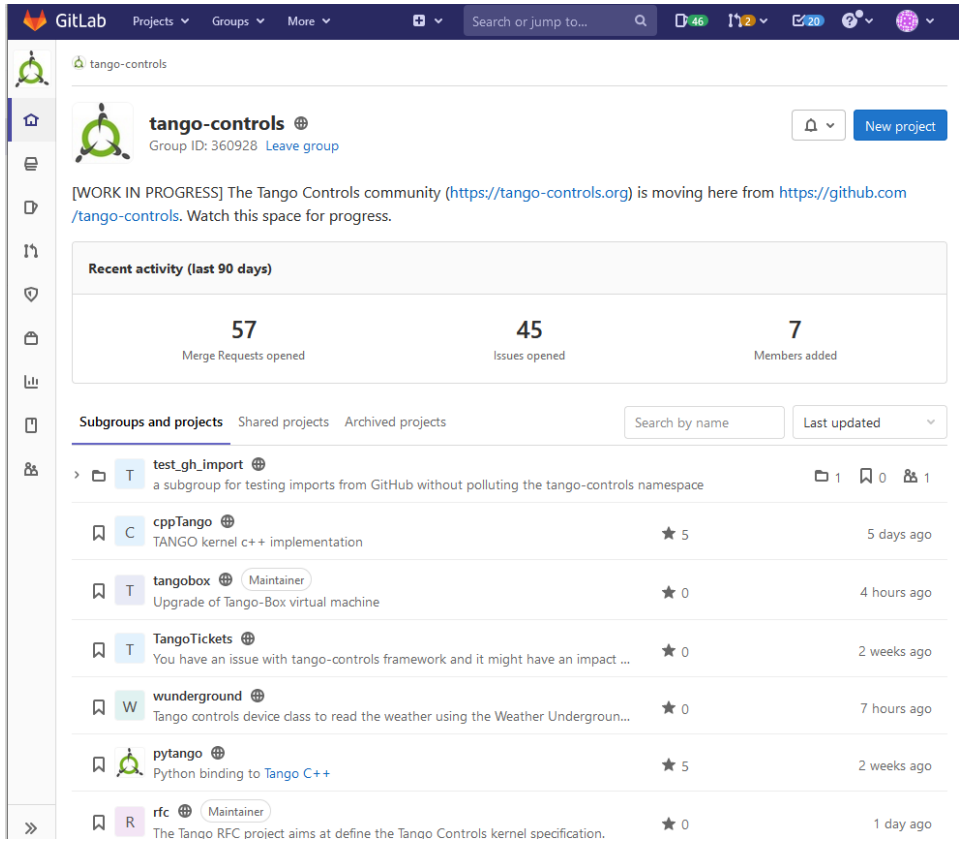
Tango Controls benchmarking tools

(ESRF/Tango Community order, 2018/19)

- S2Innovation has developed a benchmarking suite for Tango Controls
  - Benchmark scripts:
    - Attribute read and write, command execution, event subscription, etc. …
    - Start multiple parallel clients,
    - Produce reports in CSV and ReST formats.
  - Target device servers:
    - Provide interface required by the scripts,
    - Implemented in Python, C++ and Java.
  - Benchmark runner:
    - Reads configuration from a YAML file,
    - Starts device servers and runs the tests
- The source code is available here: https://gitlab.com/tango-controls/sys-tango-benchmark
- There is also an ICALEPCS paper: http://accelconf.web.cern.ch/icalepcs2019/papers/wepha056.pdf

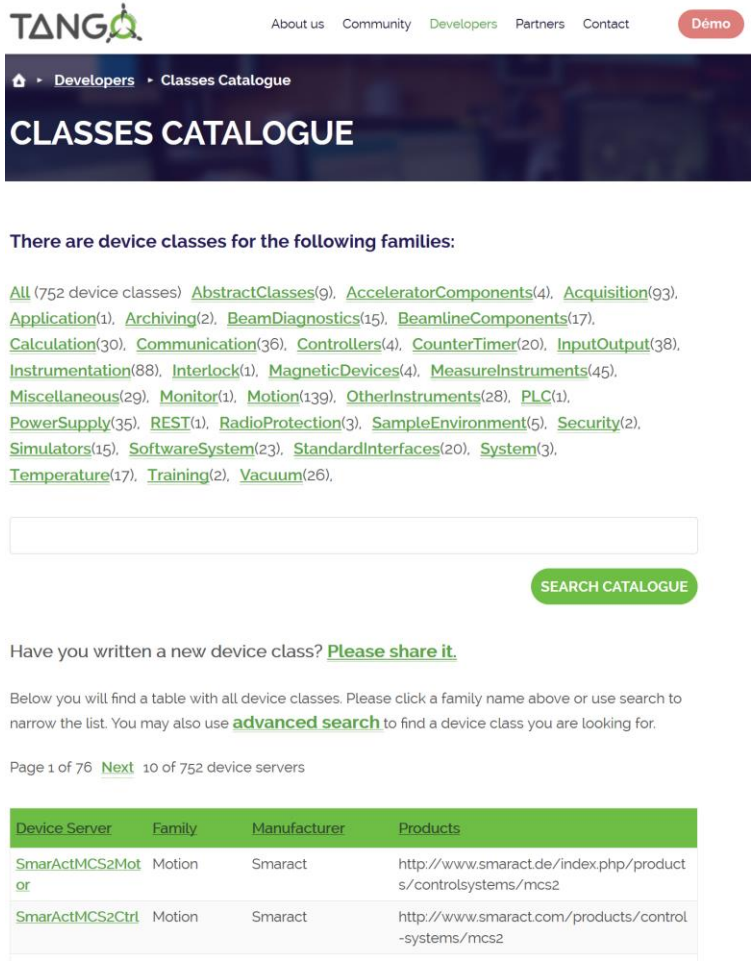
Support for cppTango, PyTango, JTango

(ESRF/Tango Community orders, 2019 -)



- S2Innovation participates in development and maintenance of Tango Controls kernel
- See the following contributions, as an example:

  https://gitlab.com/groups/tango-controls/-/merge_requests?scope=all&utf8=%E2%9C%93&state=all&author_username=mliszcz

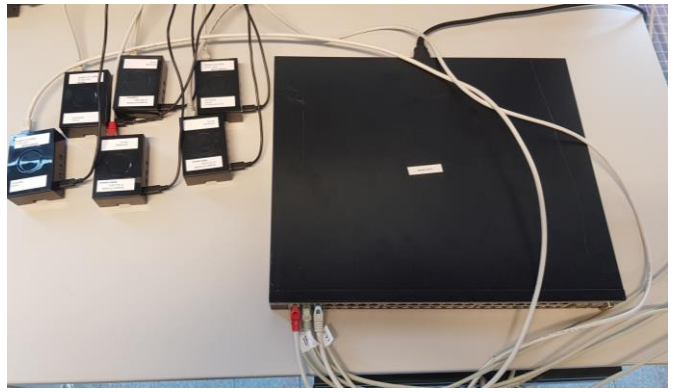


Device Classes Catalogue

(ESRF/Tango Community orders, 2018 -)

- The Catalogue (updates tents and app source code) is maintained by S2Innovation.
- Check the Device Classes Catalogue: https://www.tango-controls.org/developers/dsc/
- Source code: https://gitlab.com/tango-controls/dsc

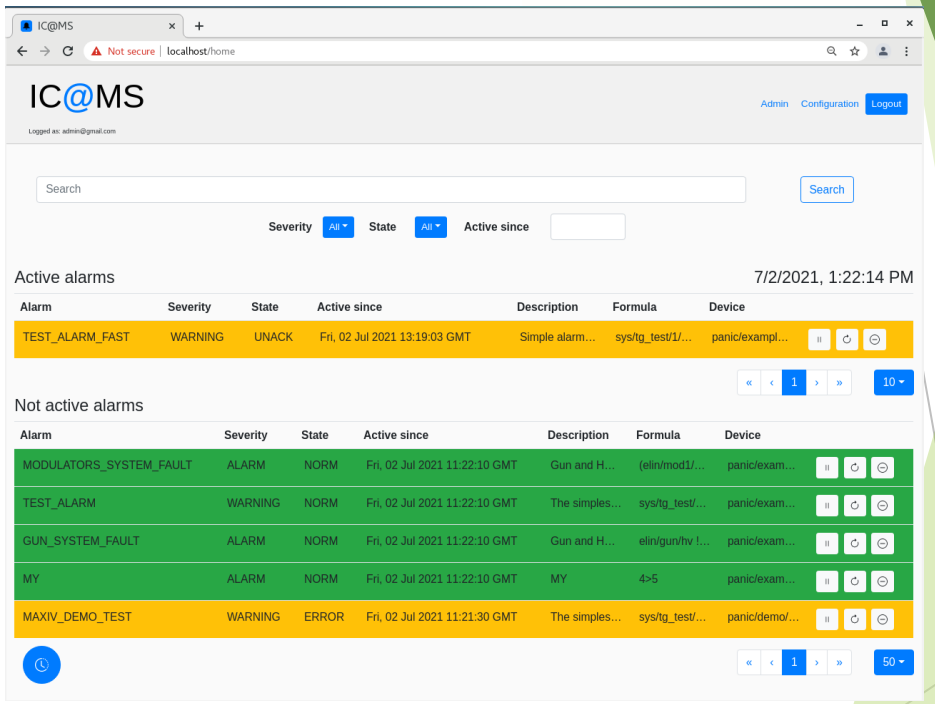
Laser beam diagnostic system for ICFO, Barcelona, Spain, 2020



- Deployment of a distributed Tango Controls system for 6 Raspberry Pi computers:
  - Tango Controls base functionality (Database, Starter, libraries, Astor, Jive),
  - WebJive,
  - Bensikin/SNAP archiving,
  - Network configuration,
- Integration of various devices: cameras, spectrometers, photodiodes, a delay generator inti Tango
  - Development of device servers for Basler cameras, Ophir photodiodes, power meters and Ocean optics spectrometers,
  - Reuse of existing device server for the delay generator
- User interface based on WebJive,
- Few improvements to WebJive pushed to its main repository
- All results are available here: https://gitlab.com/s2innovation-partners/icfo

IC@MS - Integrated, Cloud ready @larm Management System

IC@MS



CLOUD BASED alarm Management System basd on PANIC by ALBA

- Shortened of downtimes,
- Increased company efficiency,
- Reduction of personnel stress:
  - Alarms handling streamlined,
  - Increased situation awareness,
  - Integration of production and infrastructure,
- Non-typical situations monitored thanks to runtime alarming formulas definition

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Our partners in 2020

Our main partners today

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Thank you!

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