

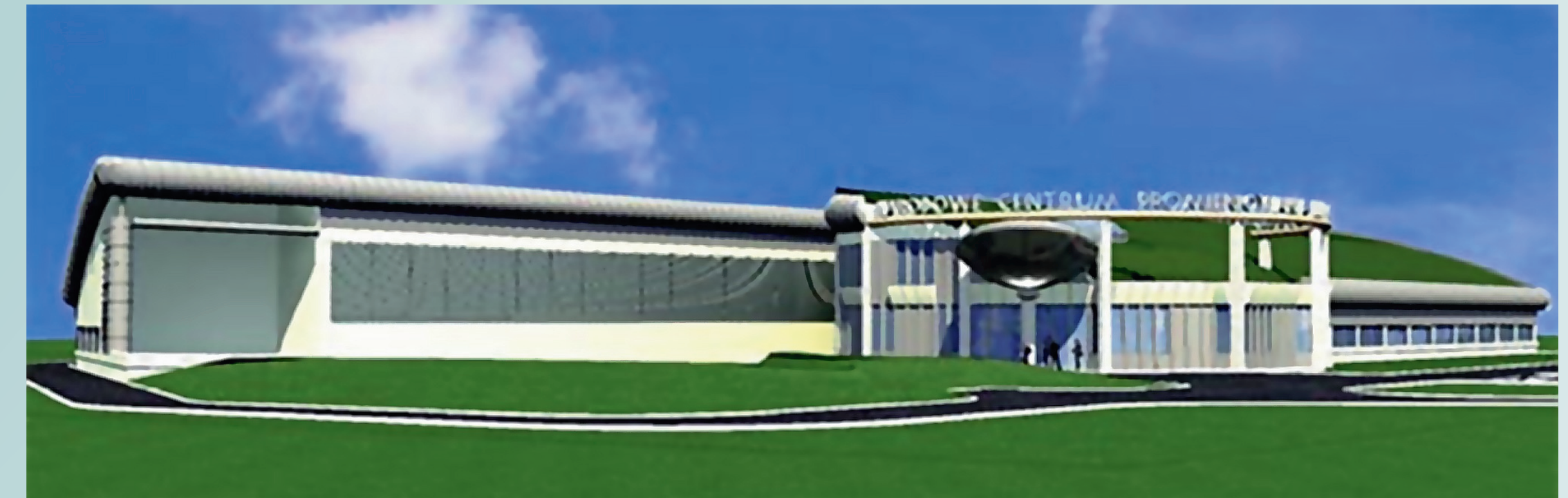
C. J. Bocchetta, P. P. Goryl, K. Krolas, M. Mlynarczyk, R. Nietubyc, M. J. Stankiewicz, P. Tracz, L. Walczak, A. I. Wawrzyniak, Solaris, Krakow, Poland
K. Larsson, D. Spruce, MAX IV Laboratories, Lund, Sweden

Where?



The first synchrotron light source in Poland will be built in Krakow. It will be located at the III Campus of the Jagiellonian University. The project is hosted by the Jagiellonian University and funded with EU regional development funds of 143 MPLN. The ring will be an exact copy of the smaller ring of the MAX IV project. The linac injector will be built with the same components of MAX IV incorporating similar design concepts.

What?



The Solaris building visualization

Impact of the differences to MAX IV

In general, the Solaris control system will be identical to MAX IV. The main goal is to have both systems as similar as possible. If there is any dissimilarity at least the same tools (software, protocols etc.) should be used.

Location difference:

- Network (design, configuration)
- Server and equipment location (installation)
- Cable trays (installation)
- Racks (installation)
- Geographical GUIs (design and development)

Environment difference:

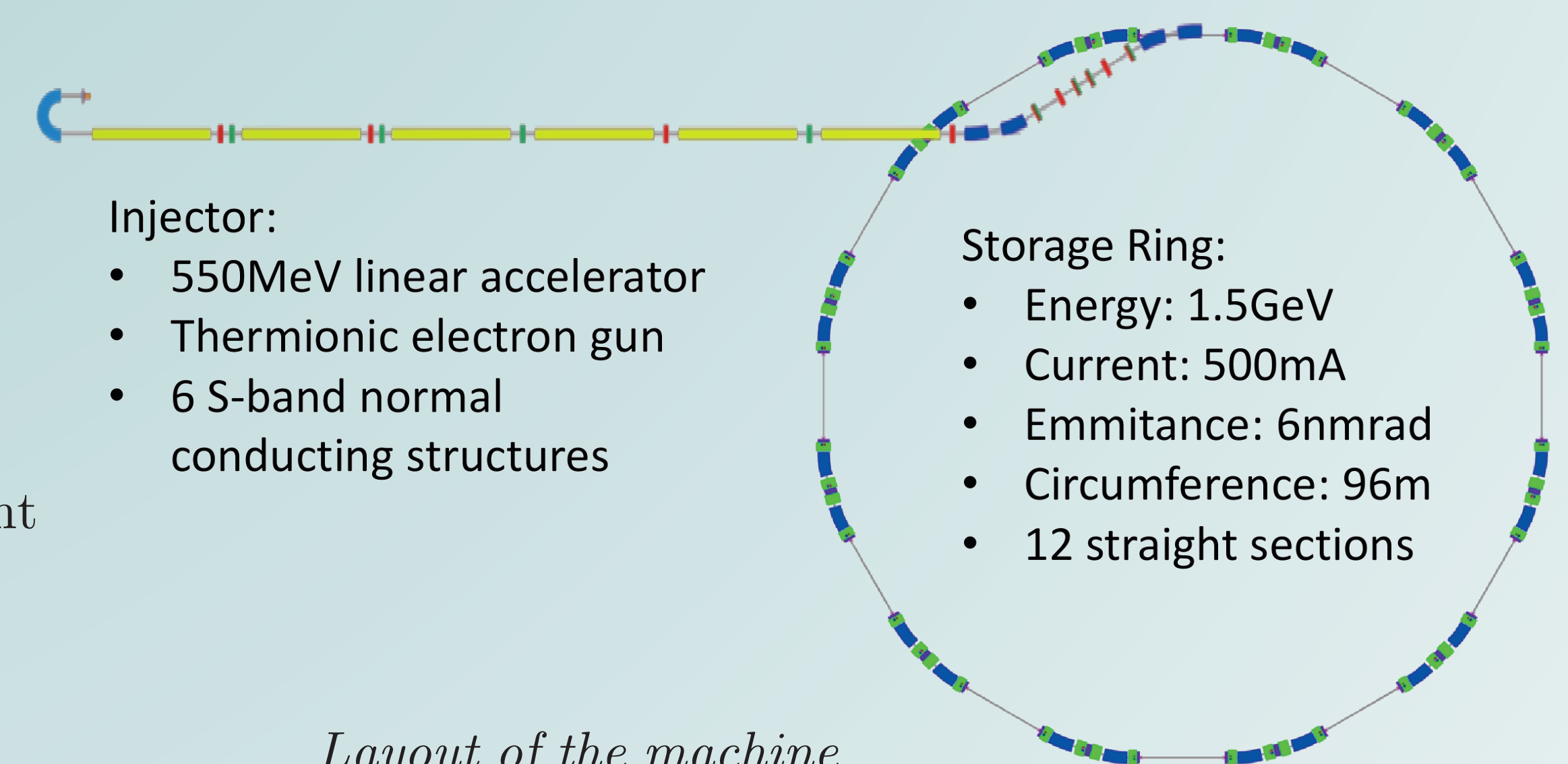
- Staff size (management)
- Office infrastructure and services
- PSS (development, purchase)
- Schedule (management)

Equipment differences:

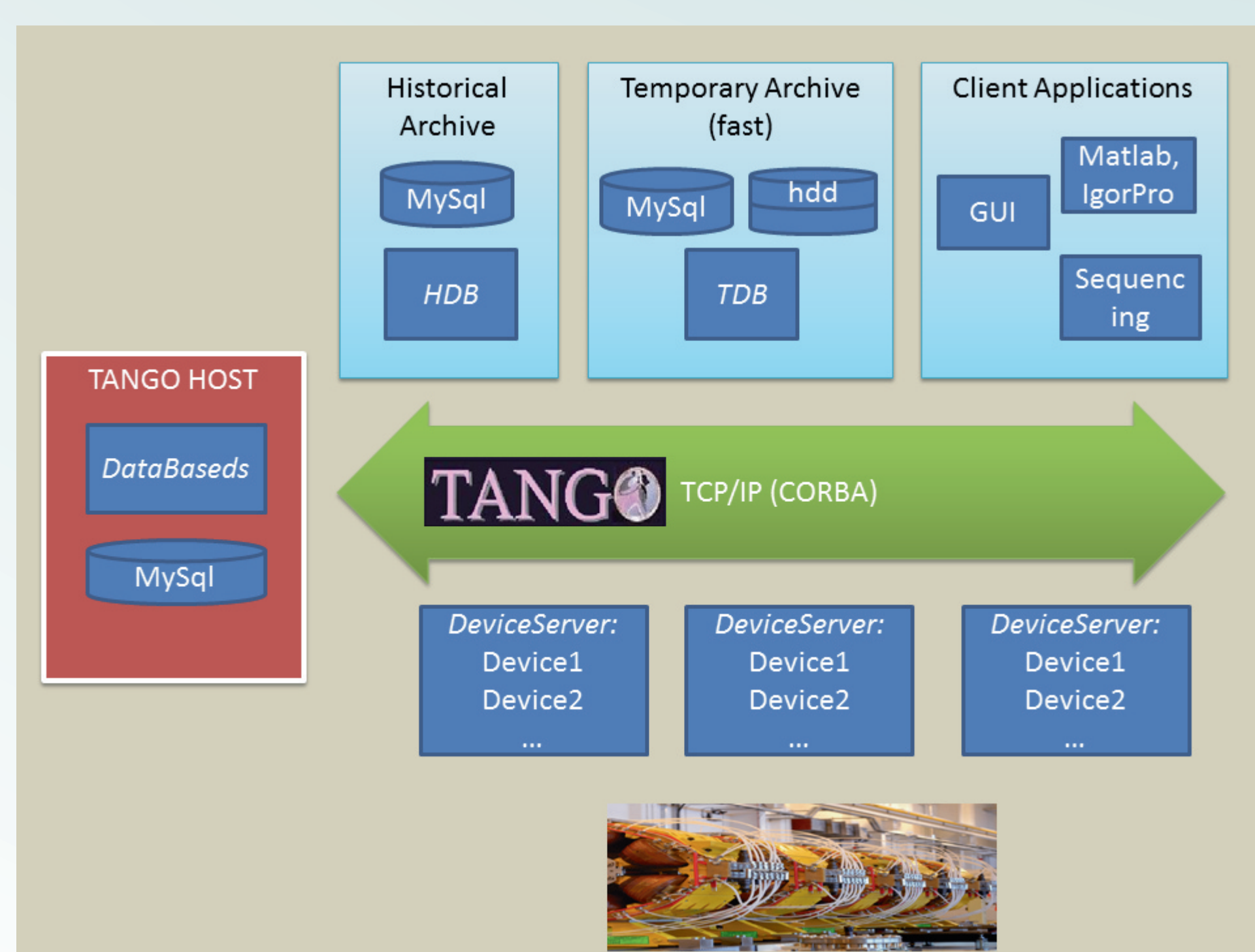
- Beamline (design, development, configuration, installation)
- EPS (configuration, re-development)
- Standard servers and workstation hardware (no impact)

Project scale difference:

- One mode linac operation
- Triggering system (configuration)
- GUIs (simplification, configuration, development)
- No need for Network Reflective Memory or equivalent
- Shorter linac, no bunch compressor
- GUIs (simplification, configuration, development)
- Ramping (development, configuration)
- GUIs (configuration, design, development)
- Operation logic (development, configuration)
- Number of signals
- Less archiving space
- Less network load

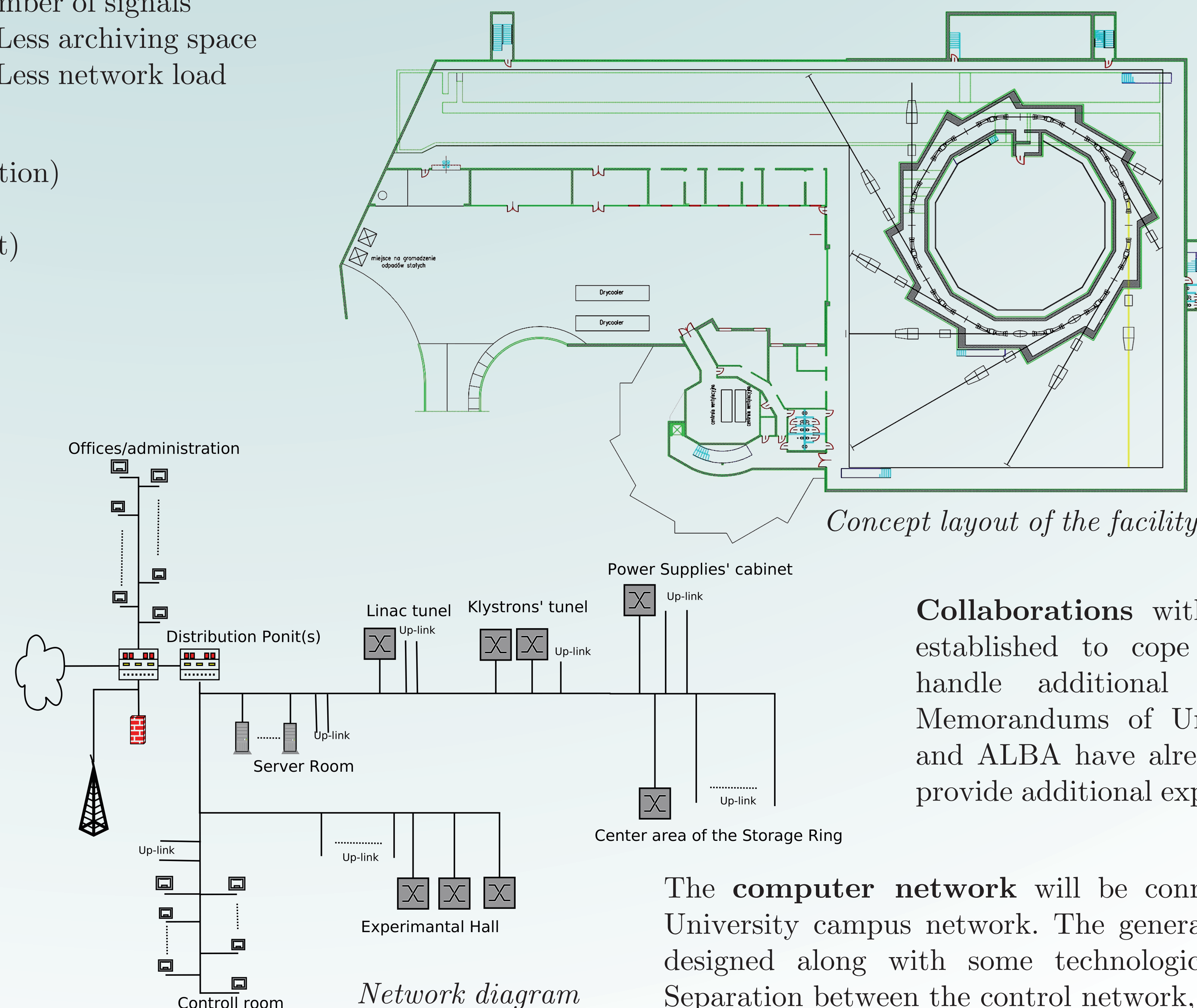


Layout of the machine



The **TANGO** control system has been chosen for the integration layer.

Solaris will rely on tight cooperation between the Jagiellonian and Lund Universities and on collaboration within the TANGO community.



Network diagram

Concept layout of the facility



How?

Collaborations with other institutes will be established to cope with differences and to handle additional work. In this respect Memorandums of Understanding with Elettra and ALBA have already been signed. This will provide additional expertise and support.

The **computer network** will be connected to the Jagiellonian University campus network. The general layout has already been designed along with some technological solutions to be used. Separation between the control network, the office network and the campus network will be implemented with VLANs and an on-site firewall. Additionally, it is planned to use stackable switches in a main distribution point with the office network and control system network connected to separate units.

When?

Solaris Approval: February 2010
Building Tender awarded: March 2011
Ground Breaking: 1st Quarter 2012
Building Ready: Autumn 2013
First Light: Autumn 2014

Schedule impacts

MAX IV and Solaris schedules are compatible in terms of purchasing and installation. Commissioning of the Solaris ring will, however, occur before that of the MAX IV rings. This means that Solaris should actively participate and follow work in Lund in preparation of a rapid systems start-up. In the area of the control system this is especially important in regard to eventual debugging of the system during the commissioning phase.