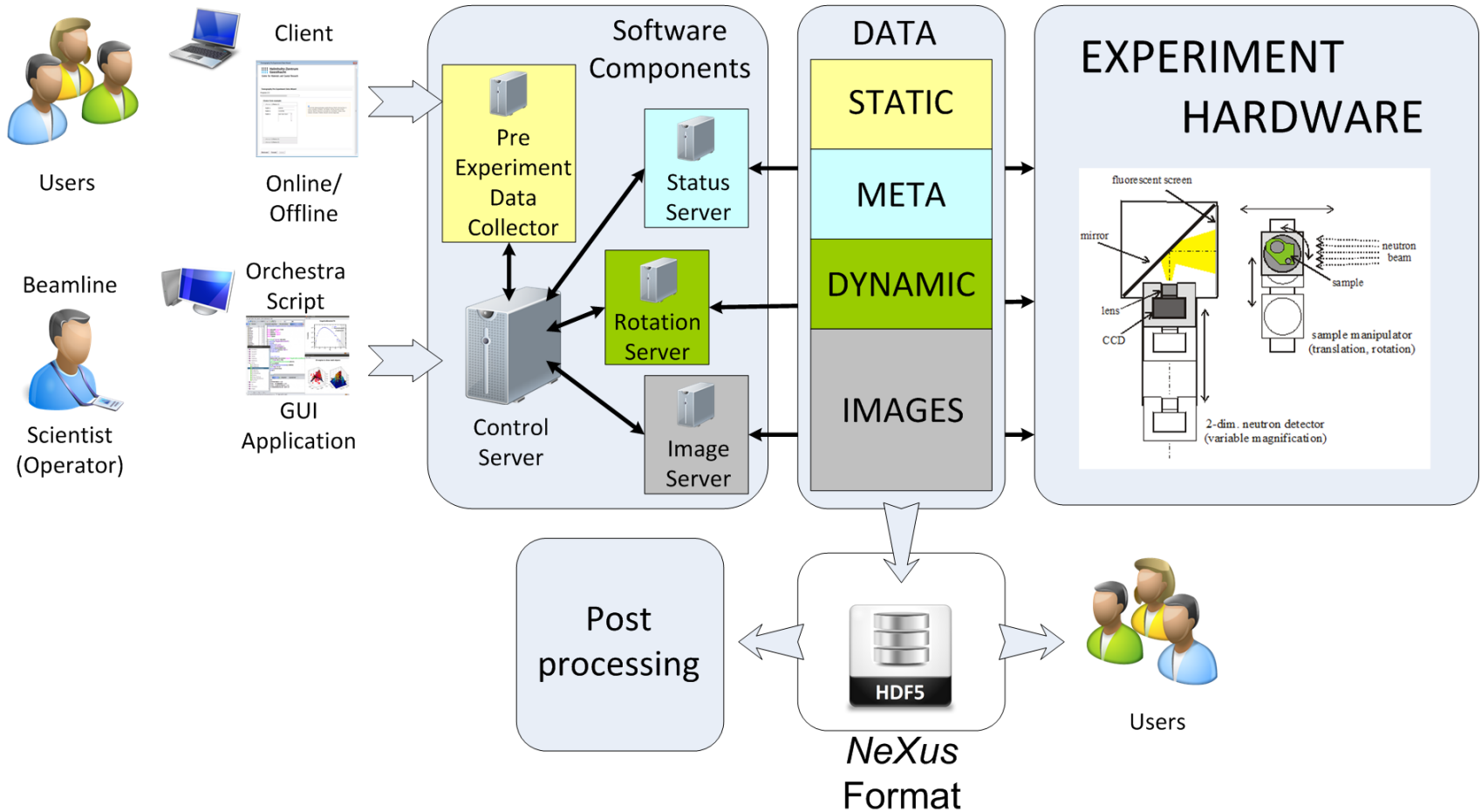


# Integrated Control System Environment (X-Environment) for the High-throughput Tomography

# X-Environment



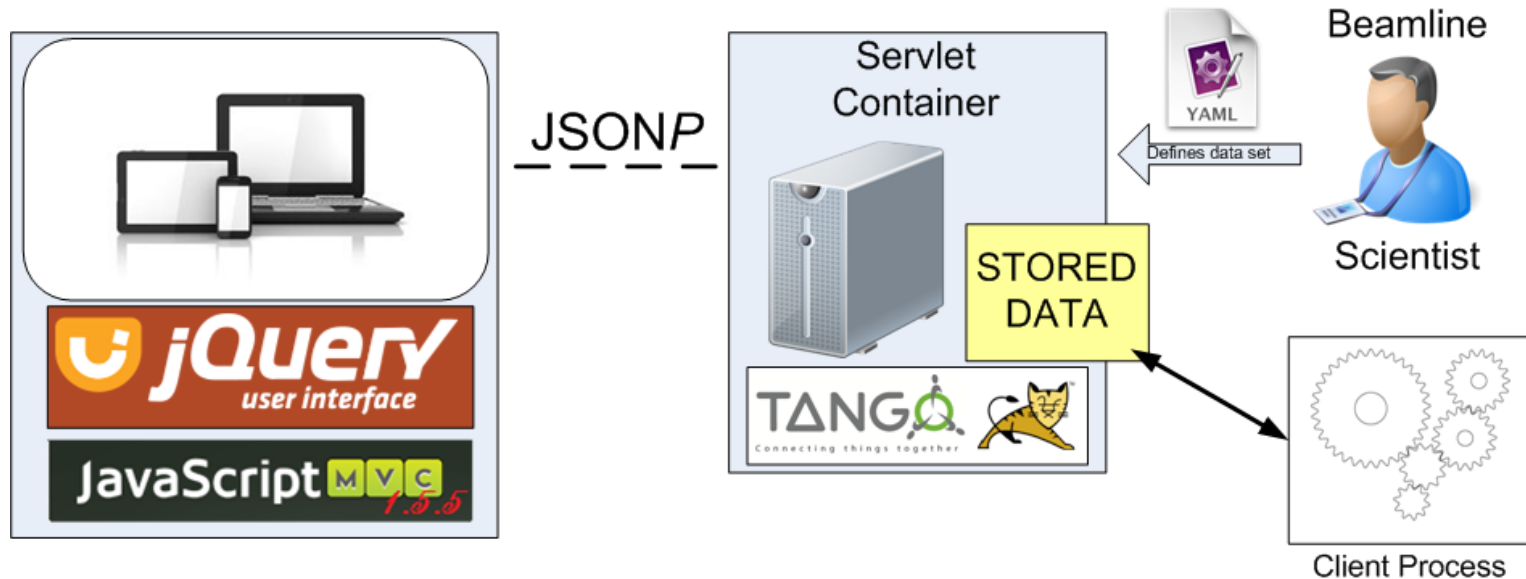
## Why are we using Tango?

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- Open source
- Wide community
- Reliable
- Stable
- Evolves



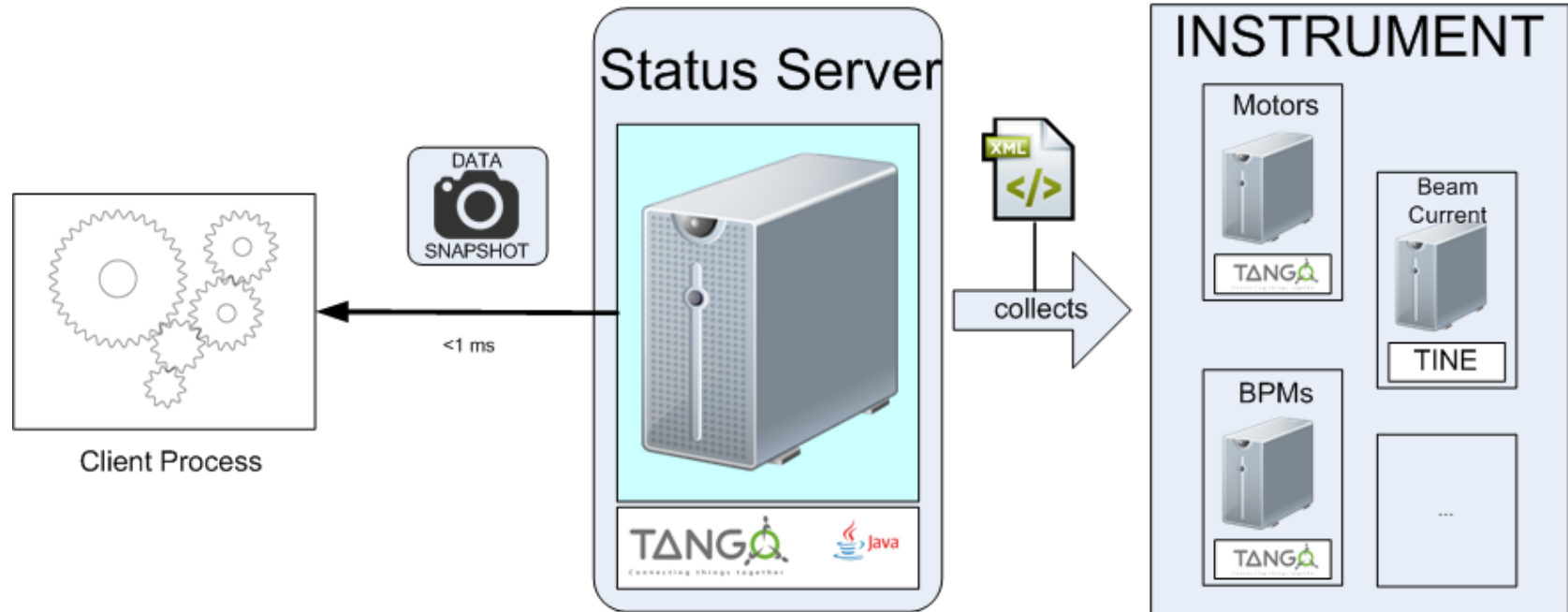
# PreExperiment Data Collector



## FEATURES:

- Customizable on-the-fly view forms defined in YAML
- Different policies are applicable to the view forms: web, web-readonly, tango
- Supports different validations: number, double, string, text, required
- Provides tango access to data
- Offline clients

# Status Server



## FEATURES:

- Forms continuous timeline of the experiment
- Simple configuration, defined in XML
- Values can be obtained through event or polling mechanism
- Different interpolation strategies: last, nearest and linear

# CUDA real-time reconstruction server

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[UNDER CONSTRUCTION]

A C++ Tango server that performs a reconstruction in parallel to the experiment.

FEAUTURES:

- Based on KIT's UFO project.
- Main goal: to give users close to real time reconstruction
- Deal with up to 1000 frames/s (1 frame = 2K x 2K)



# DataFormat Server

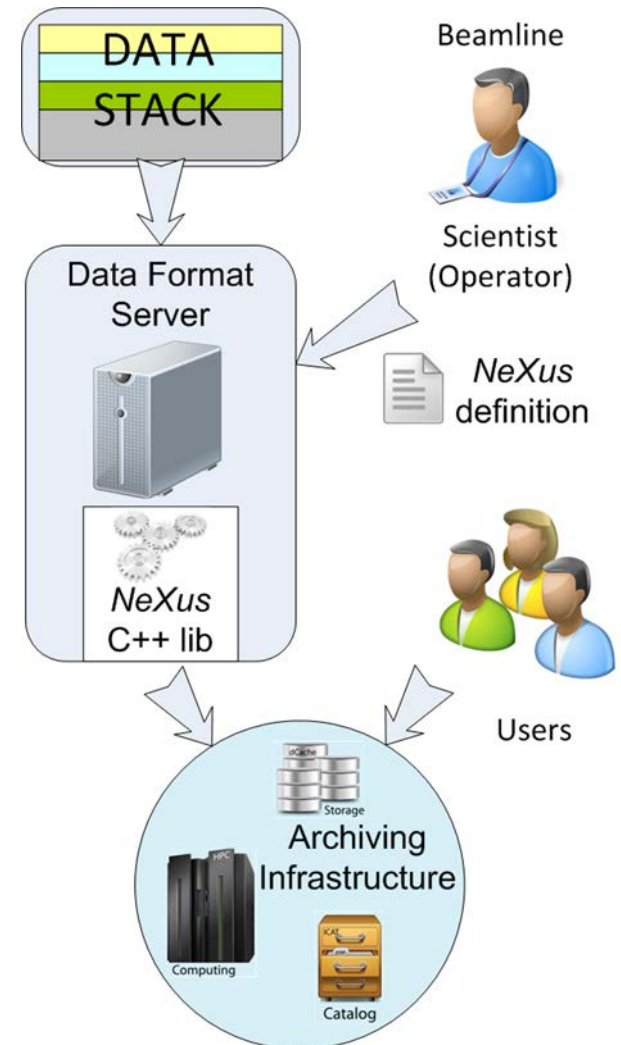
Provides a convenient way for a beam scientist to build a NeXus file structure.

Implementation uses high quality NeXus C++ API developed in DESY.

Finally data is stored in the permanent storage provided the facility (DESY).

## FEATURES:

- High performance guaranteed by backend NeXus API library
- Convenient way to define NeXus structure using YAML
- Integrated NeXus structure validator against official schemes



## Others...

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- IDL2Tango Java bridge
  - TangoAPI library
  - mTango framework (mobile platforms)
  - Misc servers and components
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Thank you!

Questions?

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