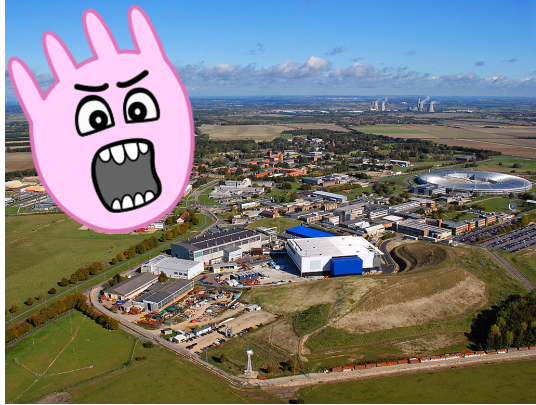


# Streaming at ISIS



Tessella  
ALTRAN GROUP

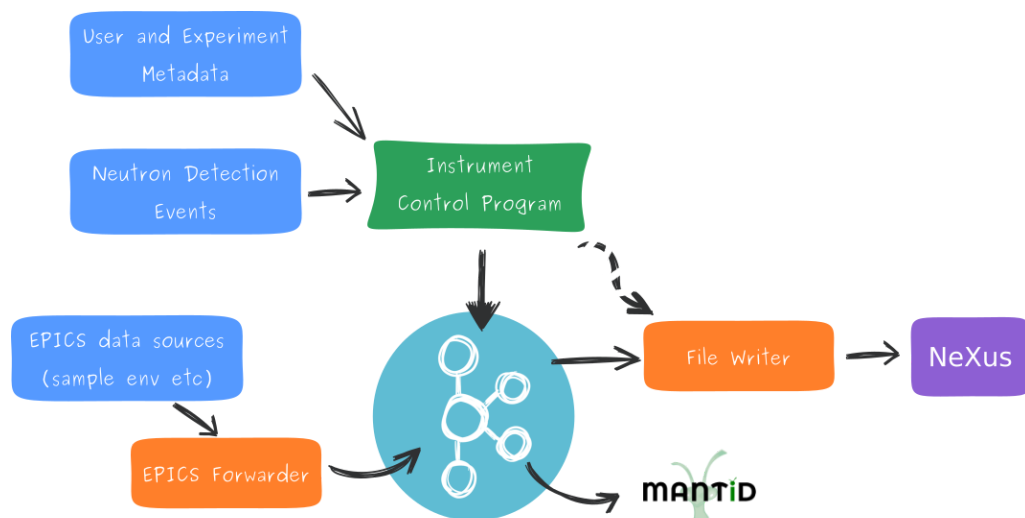


Science & Technology Facilities Council

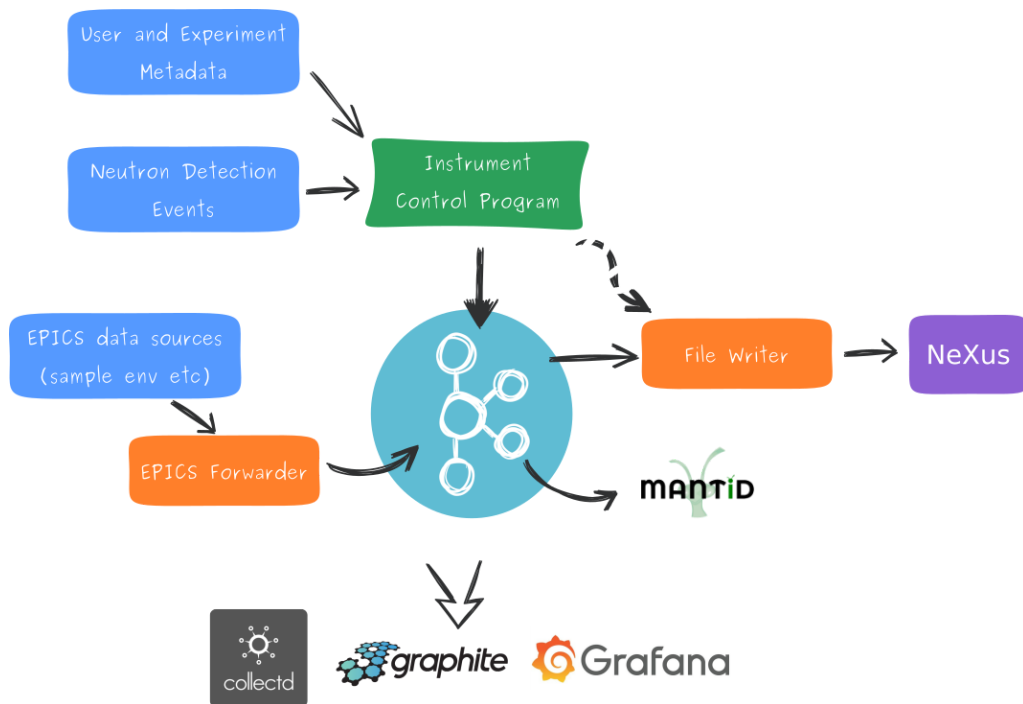


EUROPEAN  
SPALLATION  
SOURCE

# Architecture



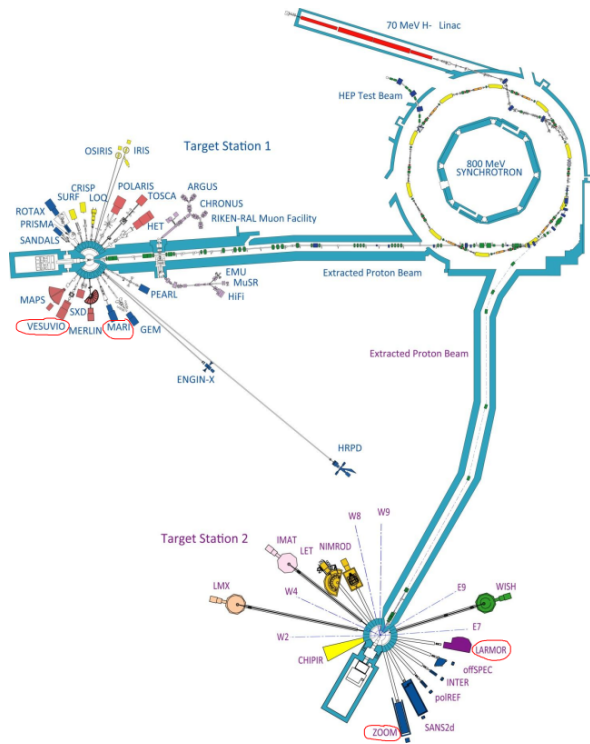
# Architecture



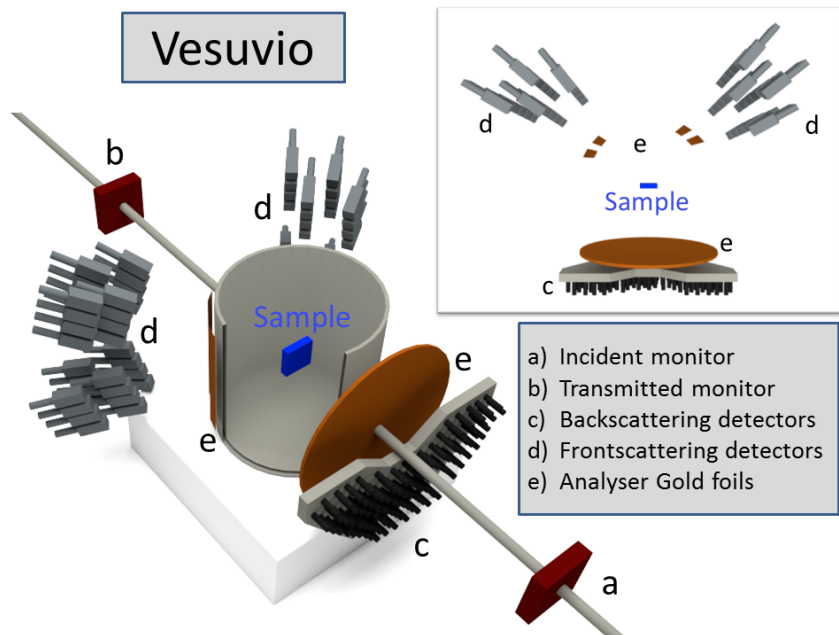
# Deployment

- Single, central Kafka cluster and monitoring stack, deployed using Ansible
- Other software is per beamline
- File Writer not yet deployed

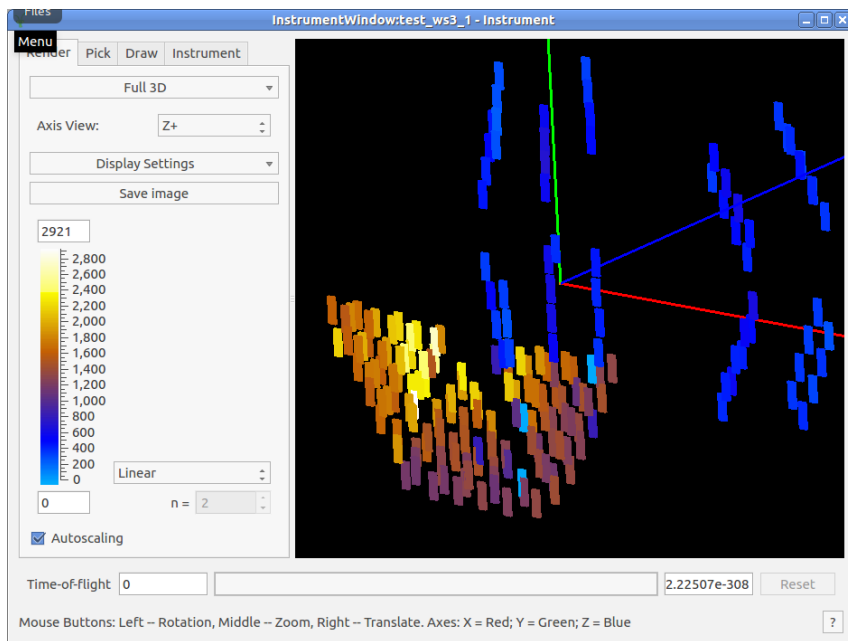
# Instruments



# VESUVIO



# VESUVIO

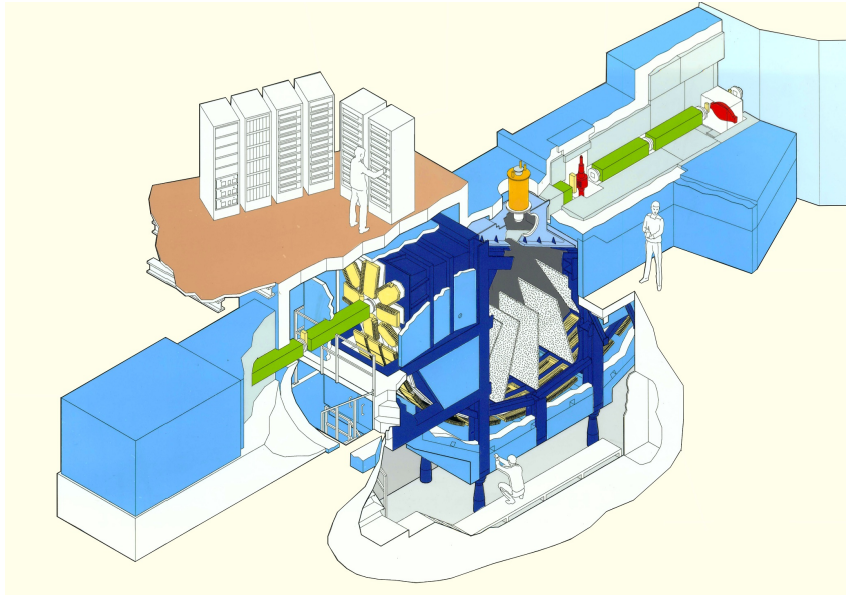


# Feedback

- Using Mantid's Instrument View - Owen will talk more about it.
- Can tell basic things like whether there are neutrons, the sample is in roughly the right place, hasn't fallen off.
  - That is already enough to be useful and save beamtime.



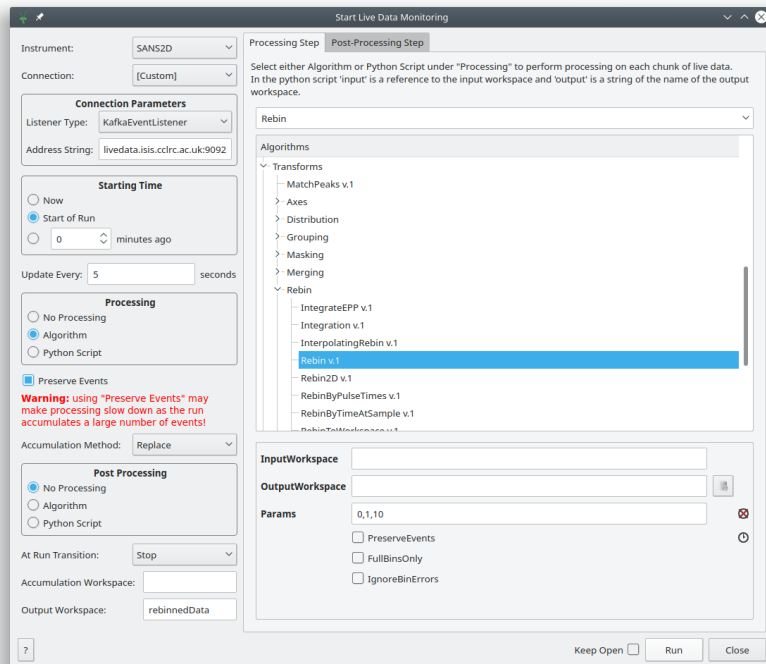
# MARI



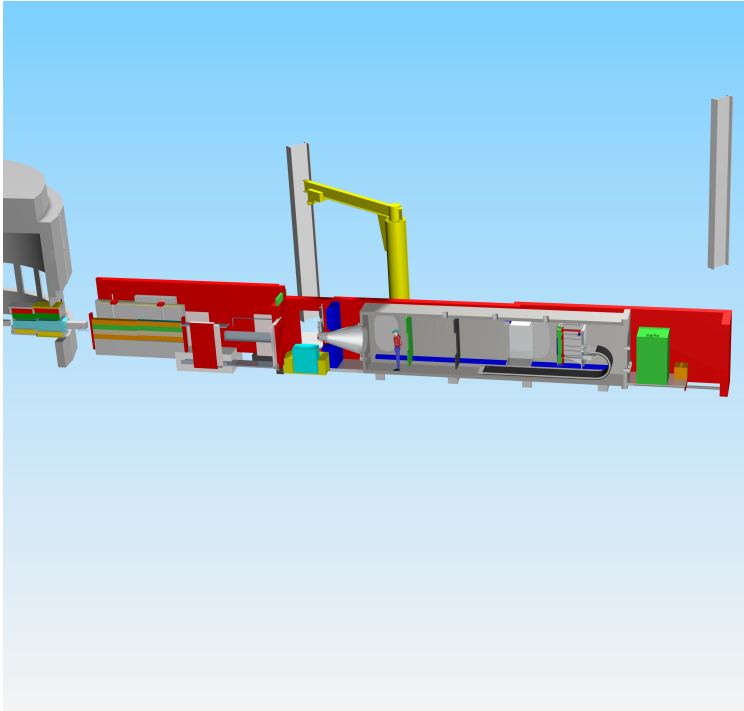
# MARI - Feedback

- Recently gained new detectors
- No *instrument definition file* yet, but could live histogram and view time of flight histograms.

# MARI - Feedback



# ZOOM



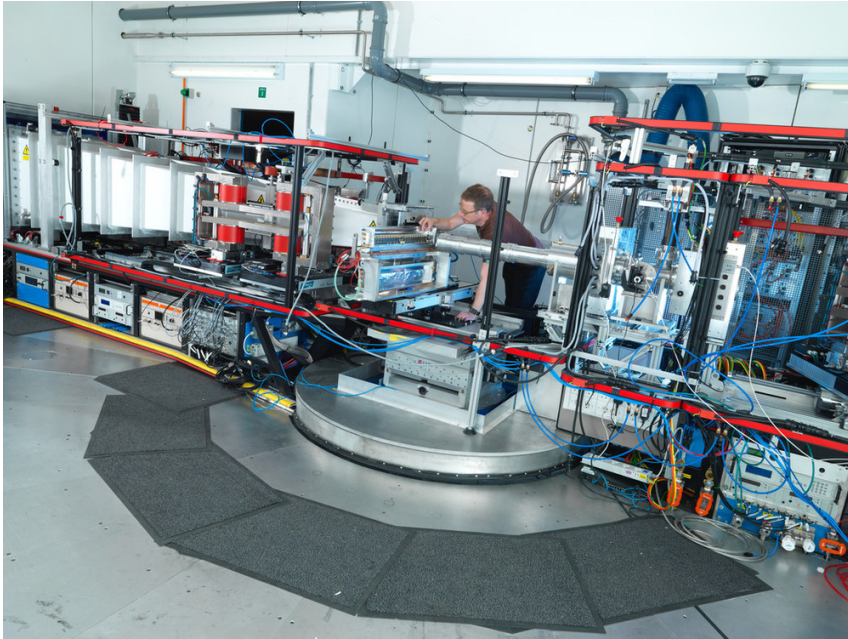
# ZOOM



# ZOOM - Feedback

- New beamline, Instrument View useful for commissioning detector.
- Having the live view in Mantid may be confusing for users, which Window should they use for what?
  - For ESS, Instrument View is in NICOS already.
  - For ISIS, visualisation is being added to IBEX control interface

# LARMOR



# LARMOR - feedback

- Using Instrument View (3D or 2D projections), it has saved beamtime already.
- String type PVs are not forwarded from EPICS -> Solved
- Mantid Live Listener not robust to some parameters changing between experiment runs -> Mostly solved
- Live Listener takes a long time (>15s) to stop -> Not solved yet



# Summary

- Data streaming is running well at ISIS
- Positive feedback from users even just using simple visualisation
- Have already established a feedback loop with instrument scientists

# Next

- Deploy ESS File Writer and compare output files with ICP written files
- Deploy to more beamlines!