Joint Accelerator Performance Workshop

5-8 December 2022

https://indico.cern.ch/event/1194548/
Session 7: Efficiency, reliability & tools across the complex

Many thanks to: Heiko, Nikos, Reyes + Michael, Piotr, Kostas, Ben
Risks of a big common Workshop?

- "Not enough time for detailed discussion"? \(\rightarrow\) Careful session timetables, breaks, speaker discipline, chairperson flexibility

- "Large sections of the audience not involved"? \(\rightarrow\) Hosted at CERN, wide invitation list, time for discussion - please participate!

- "Management presence inhibits free discussion"? \(\rightarrow\) Objective is to identify and develop where to improve, so we all really, really WANT people to be constructively critical and discuss freely

*Try it out this way – and learn from the experience for 2023*
Where should we put our attention?

Automation strategy: the plan

**Batch testing:** first examples

**Quality monitoring & control**
Decide the “how?”

**Equipment auto-resets**
List, simplify, automate complicated measurements

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**Run 3**

**Consolidate LEIR auto-pilot & establish what to generalise** for other machines (e.g. GeOFF on server)

**First results on hysteresis compensation** (start with SPS MBs, MQs)

**Monitor all equipment states**

**24 h test with autonomous injectors & LHC** (*routine operation phase*)

**Sequencer** for access preparation, mode changes, HW commissioning tests

**Use lessons learned for consolidation**

**Reach out to experimental facilities, ISOLDE, AD / ELENA**

Last updated: January 2022
What’s the vision for the future?

How will DATA ANALYTICS be done tomorrow while operating MEGA-STRUCTURES?

#softwareAutomation #onlySolution

...“business as usual” is ending...

- it is important to have a collective **vision**, what we all work towards.
- the **resources** need to follow, to achieve this vision.
- **constraints** are needed throughout, how we work, what we shall / shall not do.
- vital to have a **shield**, allow risks to be taken, defending decisions

Vision → Resources → Constraints → Shield