DSS (?)

- Basics
- Open (?) Issues
- Questions
Basic Assumptions and Statements

- The report of the AL3WG is still fully valid. It is the task of CSAM to fulfil its requirements. A possible DSS has no task in this context.
- Many ATLAS subdetectors have some safety systems built in (e.g. HW interlocks in Pixel cooling, n-pentane detection for TGC). They are however internal to the subdetector in question.
Basic Assumptions and Statements (cont.)

- The data interchange (LDWIG) between ATLAS and “outside” system (e.g. cooling, ventilation, electricity, TCR, CSAM, LHC accelerator) has to be reliable and performant at the required level. The role of a possible DSS would not be to make up for expected shortcomings.
Possible Open Issues

- **CSAM**, which establishes the LVL3 alarms may have a (too) small number of sensors with the possible consequence:
  - The graininess of detection is (too) coarse
  - A problem could have been detected earlier (at LVL1 or 2)

- **PVSS-II** may not be reliable enough for actions for LVL1 or 2, e.g. because it is not always operational (still >99%), it crashes, it is network-dependant, ... 

- Detection sensors are needed, which can not be attributed to a subdetector.
Parameters to be MEASURED concerning the ATLAS infrastructure (i.e. spanning subdetector boundaries), which may lead to a LVL1/2 alarm

- **Parameters of services at entry point to ATLAS**
  - Cooling water temperature(s)
  - Ventilation
  - Electricity (several)
  - Primary gas supplies

- **UX15 and Detector**
  - Smoke
  - Flammable gas
  - Temperatures
  - Humidity
  - Water leak
  - $O_2$ deficit

- **Racks**
  - Temperature
  - Humidity
  - Smoke
  - Water leak

- **Electronics rooms**
  - Temperature
  - Humidity

- **UPS**
  - Status (several)
Questions

- **Some open issues exist**
  - Do we need/want DSS to address them?
  - Could they be dealt with by a different (existing?) system?

- **How would DSS perform actions?**

- **What would be the relation between DSS and DCS?**

**Make a complete list of the issues**