As-Built Database – is a misnomer
## The last thing we need is another database …

Instead we need 2 things:

➢ The means to access the data with meaningful queries and without needing to know all the details of the way it is stored

➢ The assurance (or a check) that all the data will be available

The second bullet demands an effort, especially from the builders, installers & testers of the LHC …

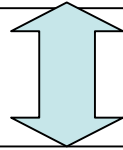Not directly relevant for the discussion – but important before people leave, move on etc …
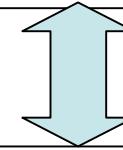
Google type interface?
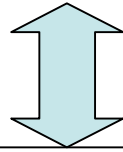
Interface Layer …

**To Pull out the data from across all data sources and present it to the user
Need a Search Engine/ Data Mining system**

AB/CO Configuration DB

Survey & Alignment

Layout Integration (as Installed)

Hardware Commissioning

EDMS/MTF (as Built Hardware)

Cable Database

Powering Database

… etc. etc.

Geometric Database

Magnetic Measurements/ Fidel

Fritz / Endoscope

D7i Maintenance Database

On-line

Logging & Measurement

Post Mortem / Alarms

… etc. etc.

What we might request …Some ideas

➢ **The means to scan the databases based on keywords …**

➢ **The ability to extract all available data about a place, object, zone**

➢ **The ability to extract a set of information over a larger region or globally for the machine**

➢ **The possibility to add time ranges into the query**

➢ **Correlation or distinction between ring 1 and ring 2**

➢ **Correlation or distinction between elements in the tunnel cross section … e.g. The beamline, QRL, Cable trays, electronics racks powering cells etc …**

➢ **…**

For Example …

- Give me everything linked to 'Aperture' in sector 7-8, ring 1
- Give me everything we have within ±10m of Q4.R4
- Find the alignment data for the elements adjacent to the BLM that measured a high level during the Quench on Tuesday
- Is there anything odd about the 20R4?
- etc.

We need to refine these into 'use cases' to demonstrate the kind of information we might require..

We don't need to worry about implementation (for the moment!)

The interface layer will have to be sufficiently clever to understand where to find the data – and allow for new stuff to be added.

A lot is static – and can be analysed by the miner … other stuff is more dynamic.