Our objectives

To finalize and conclude on LS2 in order to prepare LS3

- Close monitoring of LS2 activities, actions and issues to finalize it as best as possible
- Perform REX meetings on the injectors, LHC, other areas as soon as possible
- Launch Working Groups to prepare LS3 divided into:
  - Renewal of contract
  - Software
  - Storage & equipment management
  - LS3 preparation
    - Instrument & methods consolidation
    - MDI area optimization
    - QA & training
Mandates for the WG: software

The WG «Software» will be in charge of:

• Establishing a clear calendar with deliverables and milestones for all the following points.
• Performing a REX for all users on all software + database, detailing what worked well, what needs improvements, and what must be changed.
• Documenting the previous points.
• Presenting them at the SLM open session.
• Identifying, defining and describing the needs of software for the YETS, EYETS, Run3, LS3, LS3+ from the sections
• Studying different possibilities and options to perform the work (sub-contracting, collaborations, through passerelles with other CERN groups, etc.)
• Report the status of studies and work at the open sessions of the SLMs
## WG Responsibilities

<table>
<thead>
<tr>
<th>WG – Responsible per section</th>
<th>APC</th>
<th>ASG</th>
<th>ESA</th>
<th>HPA</th>
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<tbody>
<tr>
<td>Contract renewal</td>
<td>Frédéric (Patrick, Pierre)</td>
<td>Jean-Christophe</td>
<td>Mateusz (Andreas)</td>
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<tr>
<td>Software</td>
<td>Francis (Anne-Valérie)</td>
<td>Camille (Alban, Frédéric)</td>
<td>Pascal (Benoît)</td>
<td>Andreas (Mateusz)</td>
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<td>Storage &amp; equipment manag.</td>
<td>Julien (Alban)</td>
<td>Alex (Pascal)</td>
<td>Michel (Andreas, Mateusz)</td>
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<td>LS3 prep. – consolidation</td>
<td>Francis</td>
<td>Patrick (Pierre, Alban, Julien)</td>
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<td>Vivien (Andreas)</td>
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<td>Frédéric (Patrick, Camille)</td>
<td>Dirk (Antje)</td>
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<td>LS3 prep. – QA &amp; training</td>
<td>Anne-Valérie (Francis)</td>
<td>Frédéric (Patrick, Camille)</td>
<td>Antje (Jean-Christophe)</td>
<td>Andreas (Vivien)</td>
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WG Software

GM Survey Software

Survey field measurements & Remote monitoring and Alignment

Data Acquisition & Field Processing

External DB (MTF, Logging, Layout...)

Data Entry & Processing

Data Storage & Management

Utilities & Interfaces

Data Post-Processing & Analysis

Transformations, adjustments, ...

C++ Libraries (SurveyLib, SUGL, QScintilla, EarthTides, MathisLib...)

Management & Development Tools

GitLab

Confluence

Visual Studio

eclipse

Android Studio

CMake

EDMS

DPS

MartisGUI (Java)

SurveyPad (GI)

SurveyDB Web Interface (Oracle APEX)

MathisGUI

LGC

LHCCBeta

SMART

SMTAPI

FESA Classes (MathLib, LHCC tempting)

MathsCOM (Java)

PL/SQL Packages

CalIDist

LHCCBeta (SCIENCE)

6/24/2021

Francis Klumb | APC – Acquisition, Processing and Data Control
## WG Software

<table>
<thead>
<tr>
<th>Project</th>
<th>C++</th>
<th>Qt</th>
<th>Java</th>
<th>C#</th>
<th>FESSA</th>
<th>Pascal</th>
<th>Visual Basic</th>
<th>JavaScript</th>
<th>HTML+CSS</th>
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Many technologies... for a small team!!
**WG Software**

Practical questions related to WG organization:
- Frequency of the meetings? Participants? Other additional meetings needed for very specific topics? …

**Topics to be discussed in coming meetings (non-exhaustive list!)**
- **LS2 feedbacks** for software developments and their support
  - GEODE (including Low-Beta developments), Survey Database
  - Data Acquisition Software: TSUNAMI, SMART
  - Data Processing Software and GUI: SurveyPad, LGC, CHABA, RABOT,…
- **Future development strategies**: to be discussed -> what's your vision?
  - Data acquisition software: Future of TSUNAMI / SMART? What about better integration of SA?
  - Survey DB re-structuring (changes for new LAYOUT DB, HL-LHC) and new GEODE tools/improvements
  - LGC (FRAMES for full 3D calculations, free adjustments to be improved, performances for monitoring systems,…)
  - SURVEYLIB: make it as a real documented API usable for other GM developments?
  - Better integrate & support other sections developments? (HPA -> FRAS Project, ESA->various calculation tools,…)
  - Technological choices: Keep C++ as the basis of our developments (or migrate for example to Python) ?
  - ….