CB section brainstorming

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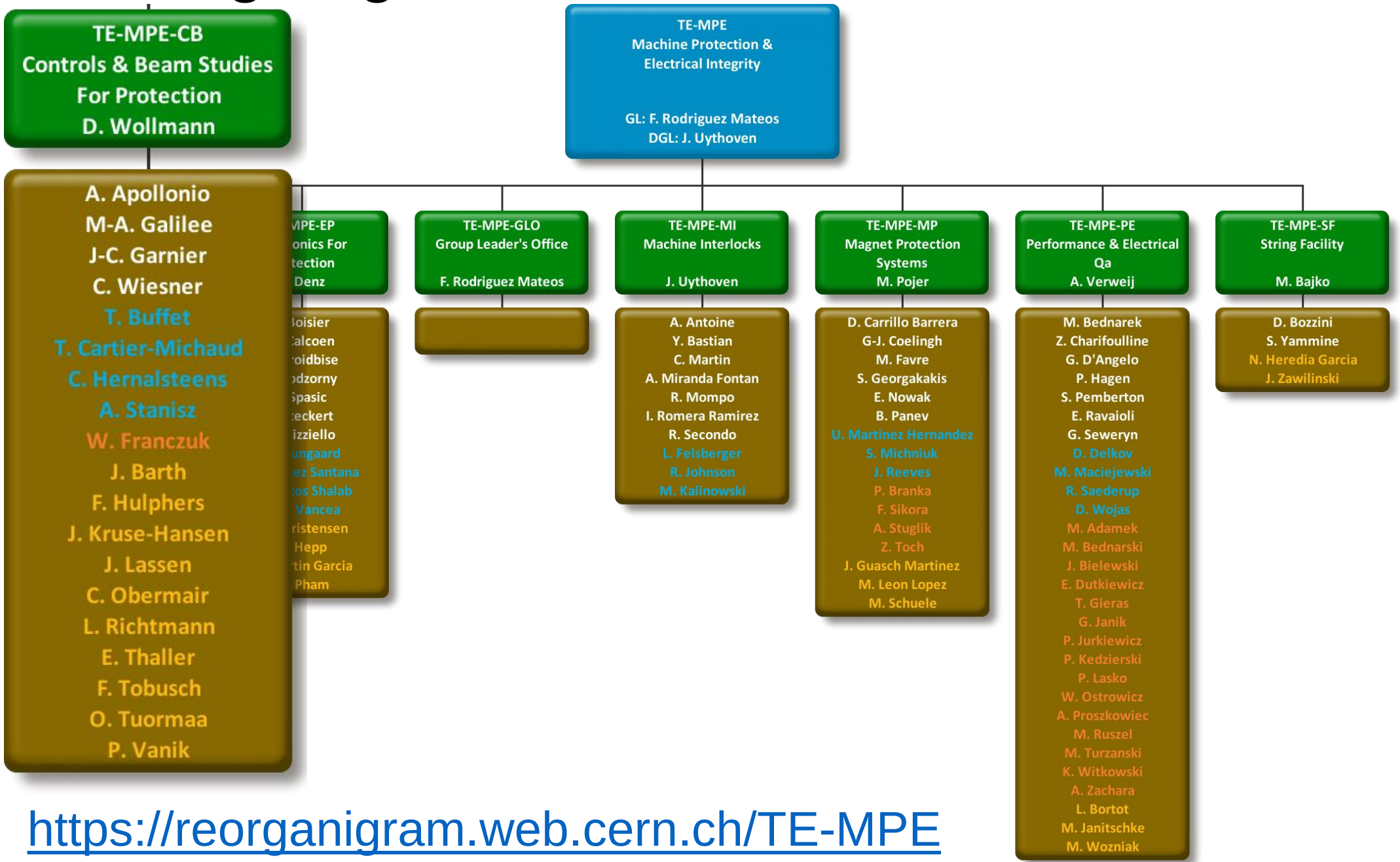
Goals of the meeting

- Getting to know the key players and multipliers of the new CB section? Who is who?
- What are the different teams/people of the new section doing?
- What are their competencies, experience, contacts, involvements?
- What are their tasks and deliverables?
- Discover opportunities and synergies between the different parts of the section
- Which new (joint) projects do we envisage, expect, wish?

This meeting is from us for us. Get involved.

MPE organigram as of 1st Jan 2021



https://reorganigram.web.cern.ch/TE-MPE

Re-cap: Mandate of the CB Section

The **Controls and Beam Studies for Protection** section (**CB**) is a dynamic mix of engineers and physicists with a broad skillset, working in the fields of controls, machine protection systems, beam related failure case studies and reliability and availability studies of accelerator systems for CERN's present and future accelerators. They collaborate closely with equipment and machine protection experts, the operation crews and CERN's controls and IT groups.

- The team is responsible for:
  - Providing and maintaining the frameworks for the **automatic analysis of post-mortem data**, the **automation** of the **hardware commissioning** of the LHC magnet circuits, extending them to **machine protection and other accelerator systems**, where applicable, **assisting the hardware experts and operation teams** during the commissioning of the powering and machine protection systems of the LHC and supporting the operation of the CERN accelerators.
  - Studying **accelerator failure scenarios and their criticality**, including the impact of active accelerator equipment and circuit protection elements on the circulating beams, as well as the consequences of failures beyond design and deriving protection strategies and requirements for machine protection systems for CERN's current and future accelerators.
  - Studying the **impact of foreign particles** interacting with the **charged particle beams** (UFOs) on the detection of beam losses, related protection systems and accelerator availability in the LHC and future high energy accelerators.
  - Studying the **reliability of machine protection systems** and other accelerator equipment for CERN's accelerators, making concrete design recommendations to improve reliability and encouraging a coherent approach for dependability studies, CERN wide.
  - Studying the overall **machine availability of CERN's accelerator complex**, identifying the systems, which have the biggest impact on their availability, extrapolating these results to HL-LHC and future accelerators and proposing strategies to improve machine availability.
  - Operating and maintaining the **MPE testbed** and proposing extensions in collaboration with the involved equipment and software teams.

The CB section is motivated by a common goal which is to help running and designing more reliable and available accelerator systems and avoiding beam induced damage.

Questions to start with

What impresses you at CERN?

Which part of an accelerator would you be?

Interactive process

- The tool of today is MIRO (miro.com)
  - Do you have access?
  - Let’s go … see you in MIRO


CERN