

The commissioning workshop of
ESS-J-PARC collaboration
10-12 October 2022

MLF SAFETY

J-PARC MLF / KEK IMSS

Toshiya Otomo





Materials and Life Science Division

Neutron Instrumentation and Promoting Science



R & D on neutron detectors and devices

CROSS
Ibaraki Pref



Operation, maintenance and management of spallation neutron source and quantum beam transfer line and R & D of their related technology

JAEA total 43 members
 22 Staffs
 PD+ Students 15 members
 Technician 3 members
 Officer 3 members
 KEK total 27 members
 12 staffs
 PD+ Students 4+5
 Engineer 6



Introduction and grade-up of common equipment and SEs
Grade-up and application of ³He spin filter



R & D of muon target, beamlines and spectrometers

User support and cutting-edge studies by using muon



MLF consists of several organizations

- ◆ MLF division (JAEA and KEK staff)
 - Neutron Source section
 - Neutron Science section
 - Neutron Instrumentation section
 - Technology Development section
 - Muon section
- ◆ CROSS
- ◆ Ibaraki Prefecture + Ibaraki Univ.

An integrated system is necessary to ensure safety.
Task teams formed across organizations

Task teams



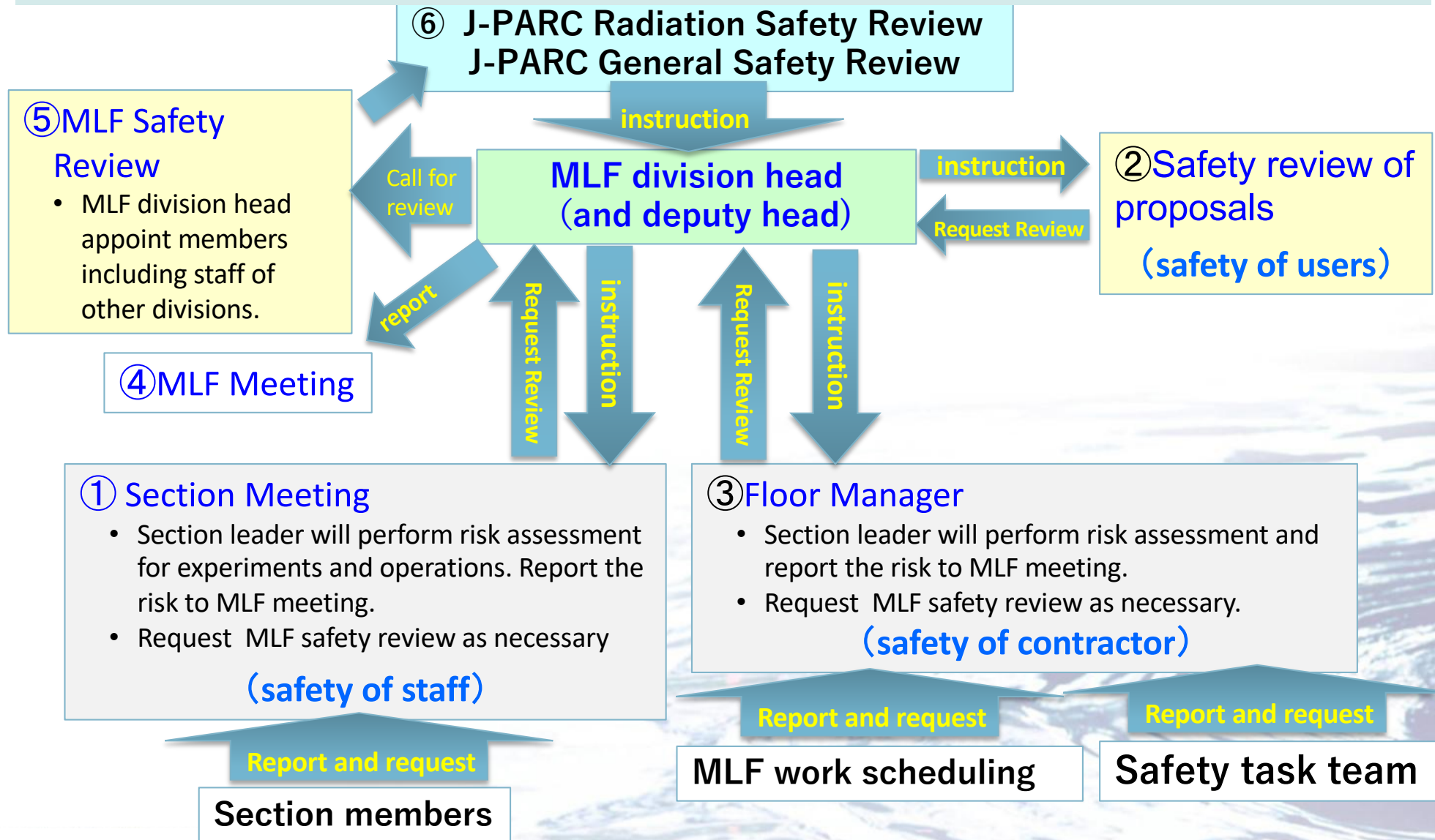
- ◆ Computing Environment
- ◆ Electrical safety
- ◆ Chemical safety
- ◆ Radiation safety
- ◆ Equipment safety
- ◆ Laser safety
- ◆ Gas safety (mainly pressurized gas)

SAFETY IN NORMAL OPERATION



Safety Review system of MLF

- Perform risk assessment with several levels
- MLF division head will request review in J-PARC wide members
- “3H” is common words for risk management (“Hajimete” (first time), “Henkou” (change), “Hisashiburi” (it’s been a while))

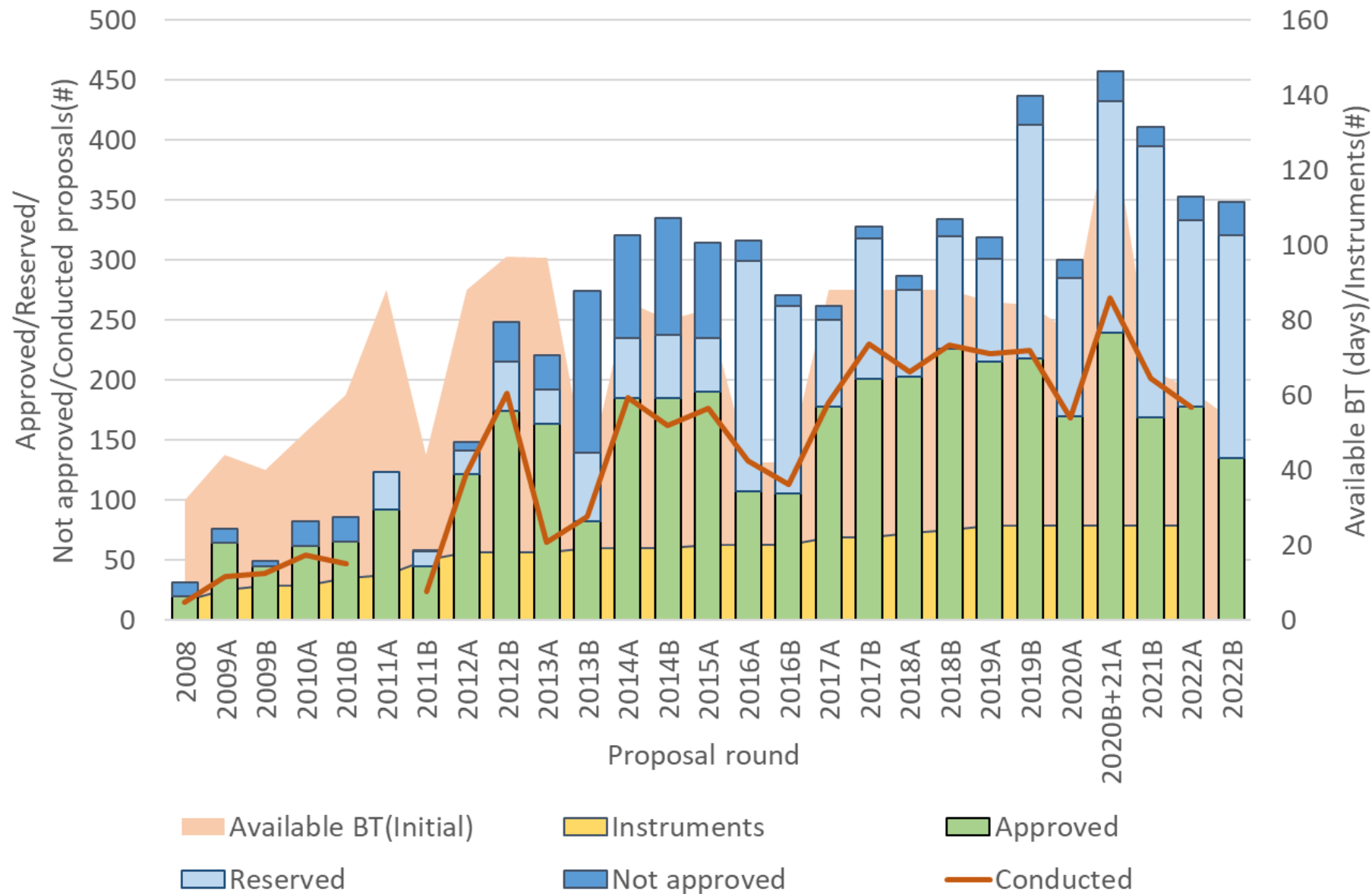




- ◆ Perform risk assessment with several levels and serious risks will be summed up by MLF division head
- ◆ MLF division head will request review in J-PARC wide members
- ◆ “3H” is common words for risk management
 - “Hajimete” (first time)
 - “Henkou” (change)
 - “Hisashiburi” (it’s been a while)

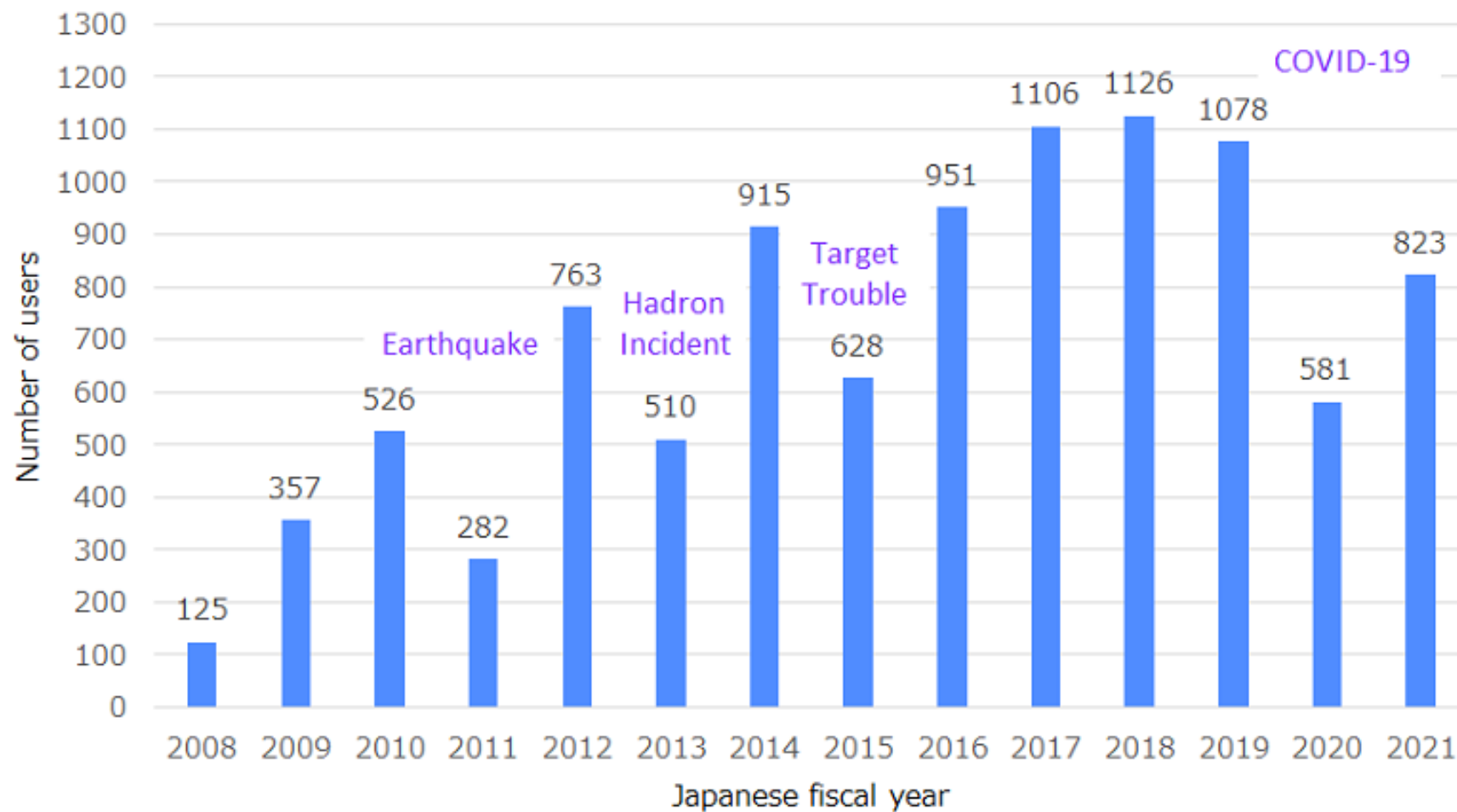
Number of Proposals

J-PARC, MLF



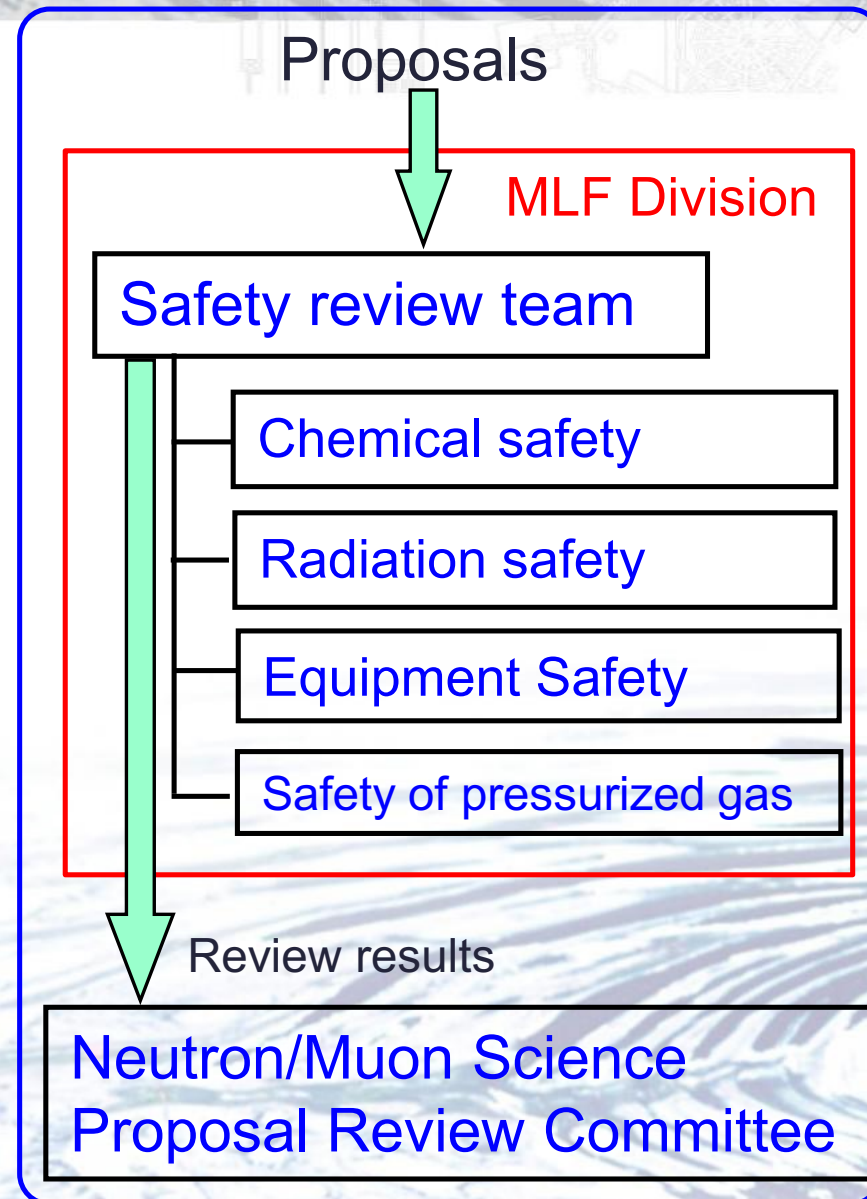
Unique No. of Users of MLF

<https://mlfinfo.jp/ja/aboutmlf/statistics.html>



Safety review of proposals

- ◆ Risk of each proposal will be assessed as well as scientific merit
- ◆ PI of accepted proposal should address identified risks



EMERGENCY OPERATION



Emergency operation

J-PARC, MLF

- ◆ Annual drill of emergency operation
 - Fire
 - Radiation exposure
 - Abnormal release of radioactive materials