

KAGRA Future Planning Committee

2018/12/5

NATIONAL ASTRONOMICAL OBSERVATORY OF JAPAN

YOICHI ASO

Historical Context

- An issue on the “authorized R&D” for the purpose of authorship was raised by Aso at the F2F in May 2018
- A working group proposed to set up a committee called “R&D committee” to do two things:
 1. Formulate a future upgrade plan of KAGRA (produce a white paper)
 2. Coordinate the selection process of “KAGRA project R&D”
- Creation of the R&D committee was approved by KSC at the F2F in August 2018

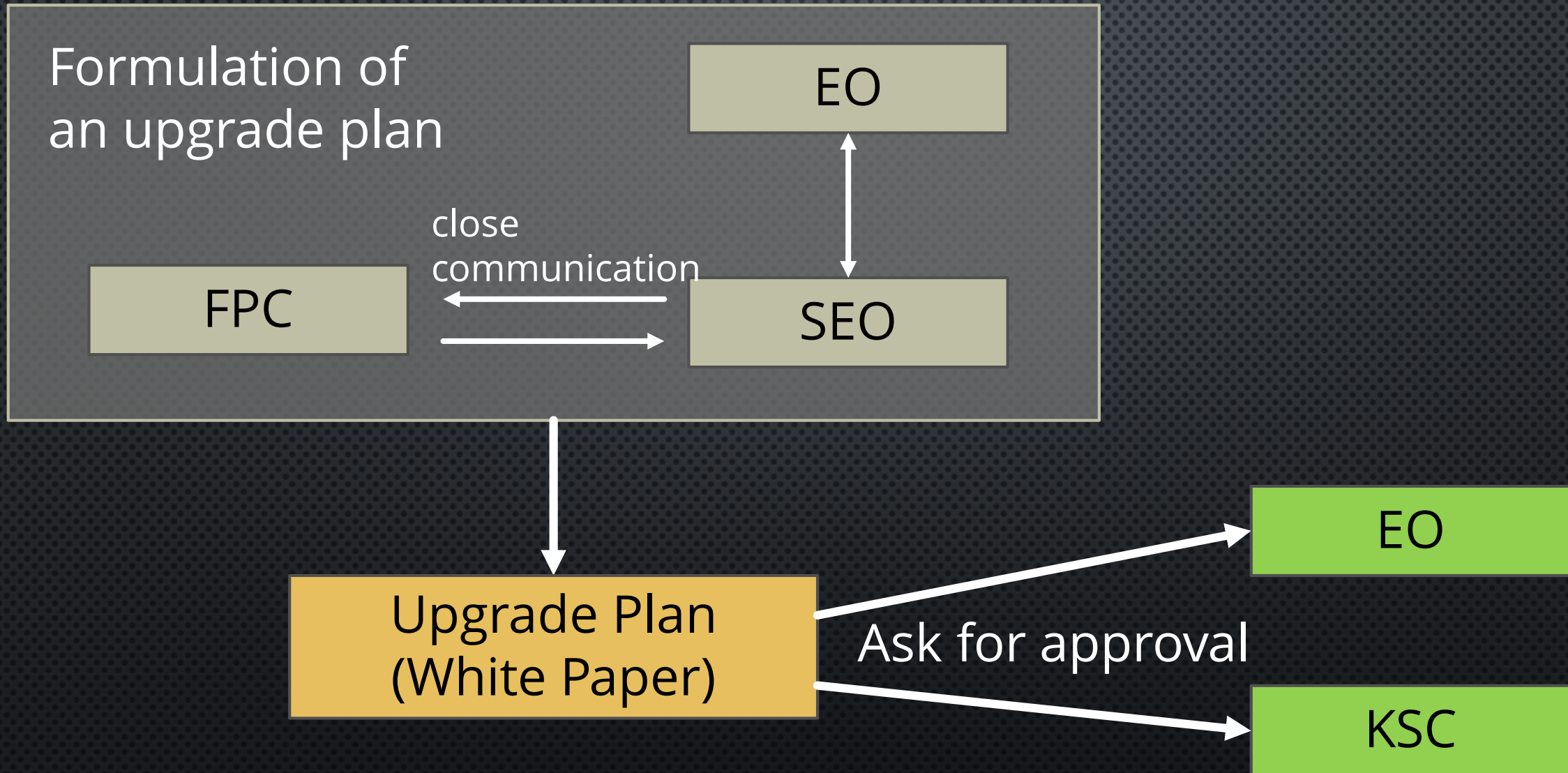
Development after August F2F

- Aso discussed with many people including Kajita-san
- At the KSC telecon on 2018/11/19:
 - Separation of the original “R&D committee” into two committees was proposed:
 1. **Future Planning Committee (FPC)**
 - This committee will organize the discussion and formulation of a future upgrade plan for KAGRA
 2. **R&D committee (RDC)**
 - This committee will coordinate the selection process of “KAGRA project R&D”

What is future planning committee ?

- A committee to organize the work to formulate a realistic upgrade plan for KAGRA
- The committee will be composed of a chair and several members.
- The role of the committee is “**management / coordination**”.
 - This means, actual work (calculations/simulations) can be done by non-committee members.
 - Contributions from the broad collaborators, especially young postdocs and grad. students, are encouraged.
 - FPC will host several sub groups to work on specific fields, such as quantum noise, vibration isolation, cryogenic etc.

Work flow of the FPC



Steps to start the committee

- KSC telecon (done on Nov. 19)
 - Proposal of the committee
 - General discussions
- KSC board called for nomination/self-nomination for the committee members (done)
- Held a satellite meeting on KAGRA upgrade before the F2F meeting.
- KSC board propose a chair and members of the committee before the Dec. F2F
- Establishment of the FPC with proposed chair/members is put to a vote at the KSC session (this session).

Satellite meeting on future upgrade of KAGRA

Program

- Summary of the past discussions (Y. Michimura)
- Contributed talks on technical developments
 - 100kg sapphire (Hirose)
 - Frequency dependent squeezing (Lee)
 - Newtonian noise measurement (Shimoda)
 - TAMA300 filter cavity (Zhao, Wu)
 - EPR entanglement (Somiya)
 - Engineering management (Aso)
- Discussion on how to organize the FPC work

Target schedule for the FPC

- Make a skeleton of the white paper (immediately)
- Present a work in progress white paper at KIW in Feb.
- Present the first draft of the white paper at the F2F in April
- Present the final version of the white paper at the F2F in August

Vote

Do you agree to establish a future planning committee for making a future upgrade plan of KAGRA with the following members ?

- Sadakazu Haino : Chair
- Chunglee Kim
- K. Komori
- Y. Michimura
- M. Leonardi
- A. Nishizawa
- RDC chair