

March 2023

Public call for Project Managers (PMs) on **food loss/waste reduction**

Due 12am (noon), Tuesday, May 9, 2023

*** Japan standard time**

Moonshot R&D, Goal 5

Bio-oriented Technology Research Advancement Institution
(BRAIN)

Notes of importance

1. The information available on this slide is for reference purposes, and **the corresponding document in Japanese are authentic.**
2. The call is intended to attract proposals on food loss/waste reduction, involving multiple entities. **A non-Japanese company or university/research institute** wishing to join a proposal is requested to do so **in collaboration with Japanese entity (-ies).**
3. **The representative organization must be a Japanese entity, and the candidate for the project manager (PM candidate) must be affiliated with the representative organization** while the PM candidate may be of any nationality.
4. Refer to the guidelines posted on the BRAIN's official website below for further information on the call and application.

https://www.naro.go.jp/laboratory/brain/english/moon_shot/public_call/pm2023.html

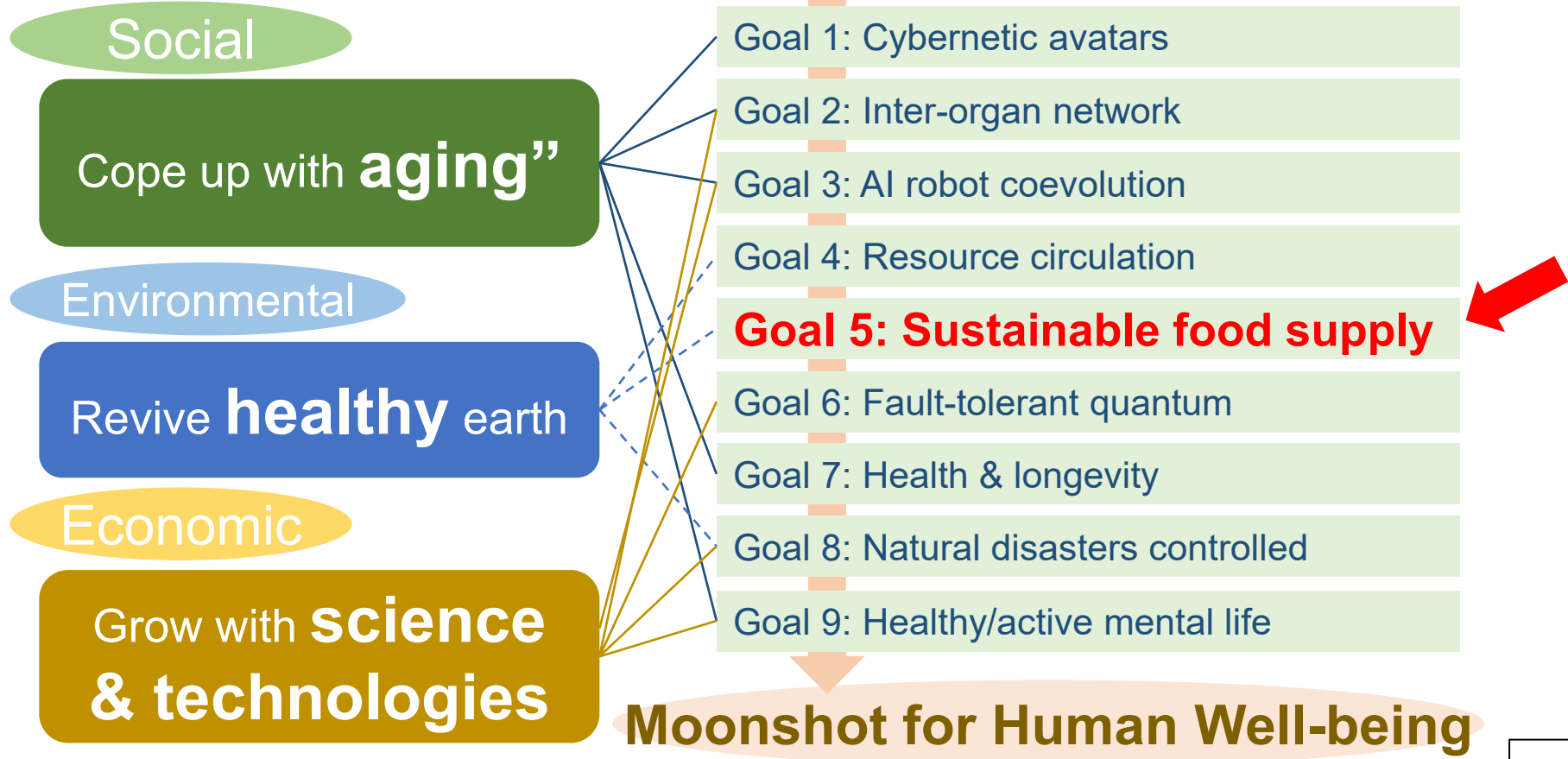
CONTENTS

- 1. Moonshot R&D**
- 2. Goal 5 of Moonshot R&D**
- 3. Public call**
- 4. Application requirements**
- 5. Application process through e-Rad**
- 6. Selection**
- 7. Timeline**
- 8. IPR and other points of importance**
- 9. Contacts**

1. Moonshot R&D

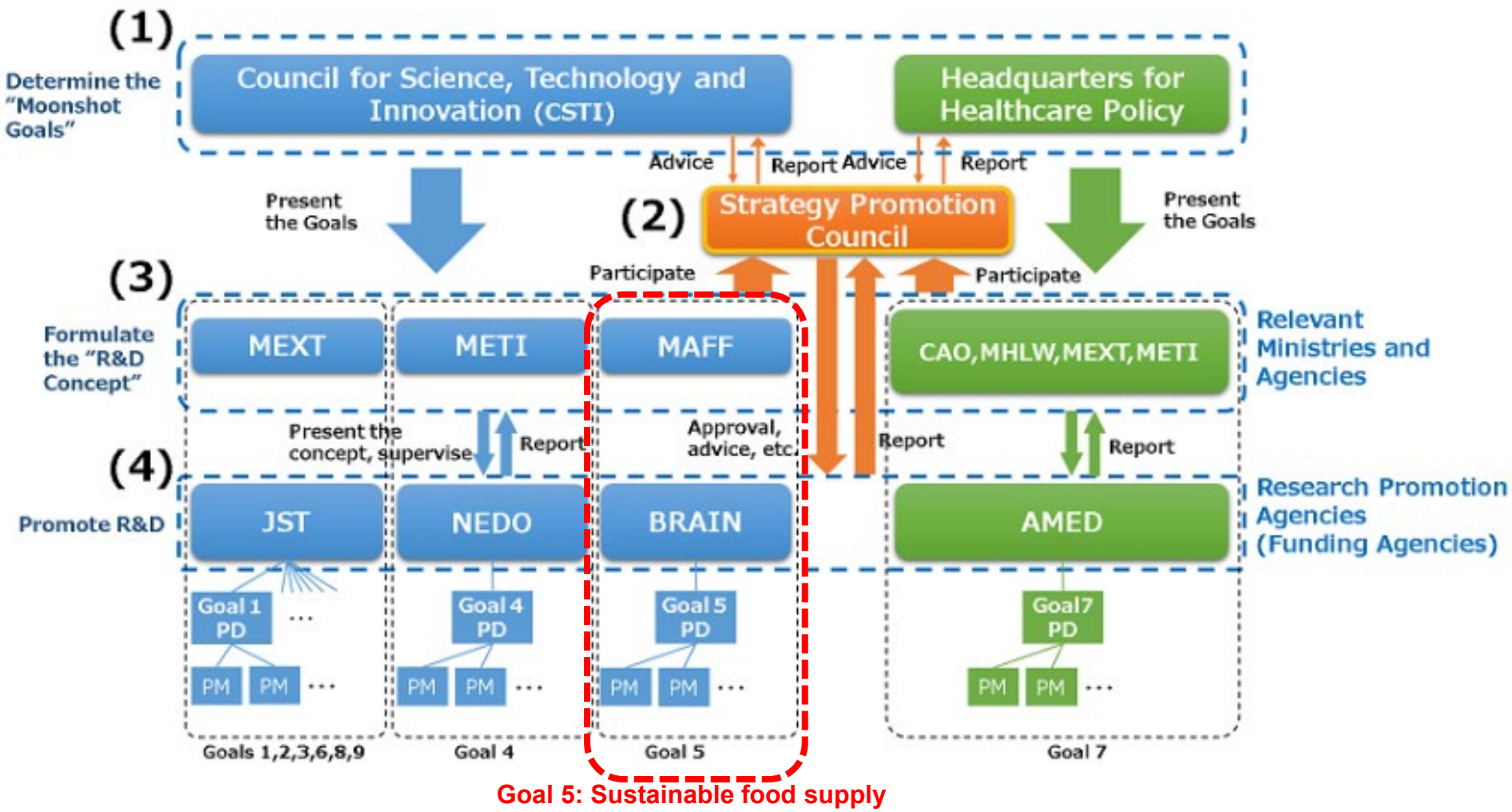
National program setting **ambitious** and **attractive Goals** to promote **challenging research** overcoming critical social issues

Nine Goals adopted in the areas of social, environmental, and economic issues



2. Goal 5 of Moonshot R&D – (1)

Moonshot R&D Framework



Source: Cabinet Office (CAO) official website

2. Goal 5 of Moonshot R&D – (2)

Goal 5

Create industry that enables sustainable global food supply with no overburden nor waste by full use of unutilized biological resources by 2050

Objectives

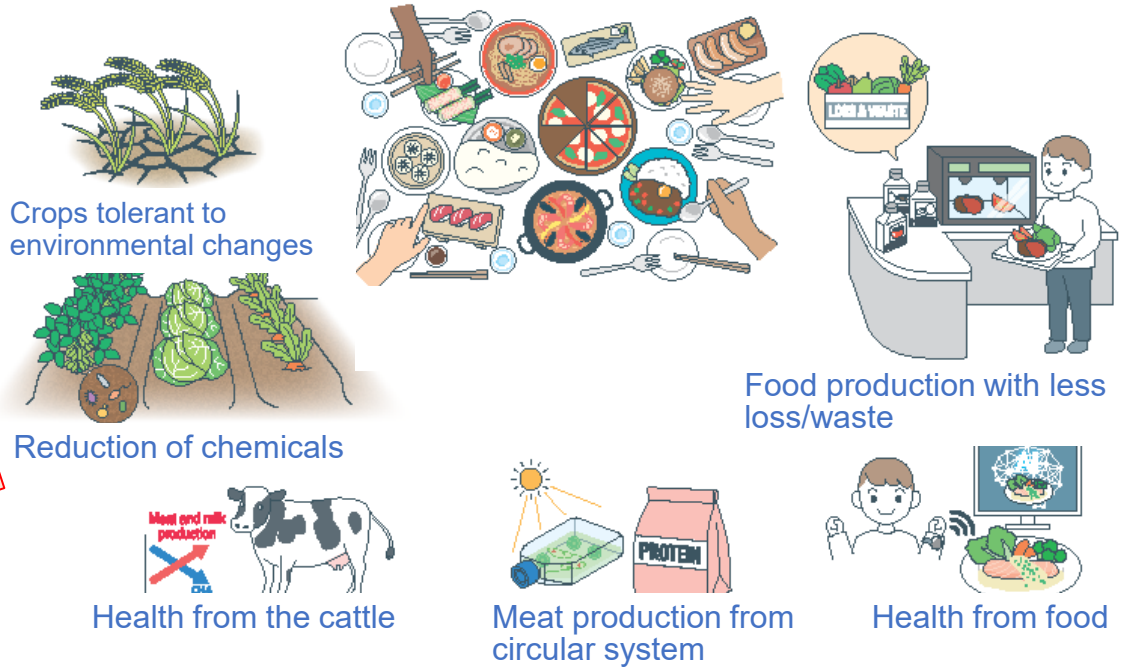
- Develop the circular food production systems by biological measures, e.g., utilizing microbes and insects, by 2050.

Sustainable food supply for 9 billion people

- Develop the solutions for eliminating food loss and waste and for achieving both healthy life and sustainable food consumption by 2050.

Current call

- Evaluate the achievement of the current call through discussion on the EL by 2030, and globally proliferate the outcome by 2050.



2. Goal 5 of Moonshot R&D – (3)



Program Director

Dr. Kazuhiro CHIBA

President, Tokyo University of Agriculture
and Technology (TUAT)

Create industry that enables sustainable global food supply with no overburden nor waste by full use of unutilized biological resources by 2050

Projects under Goal 5

production Food	<ul style="list-style-type: none">• MS501: Faster plant breeding with cyber-physical design• MS502: Improved crop/soil management with enhanced soil microbial functions• MS503: Circular food production with algae and animal cells• MS505: Non-chemical pest controls including laser shooting• MS506: Methane emission reduction of cattle production
consumption Food	<ul style="list-style-type: none">• MS507: Food and feed from insects fed with food wastes• MS510: Development of AI nutrition system• (to be adopted by the current calls)

3. Public call – (1)

Goal 5:

Create industry that enables sustainable global food supply with no overburden nor waste by full use of unutilized biological resources by 2050

Missions of the projects for the call :

Develop the solutions for eliminating food loss and waste and for achieving both healthy life and sustainable food consumption by 2050.

Projects to be funded under the call:

The call is to seek innovative and ambitious R&D proposals:

- aiming to adopt Project Managers to lead the projects,
- addressing the reduction of **food loss/waste** (*),
- with the involvement of a private company(-ies) as a consortium member(s),
- for 650 million yen as total fund available over FY2023-FY2024,

* For this call, the term **"food loss/waste"** indicates the food and agricultural products that are produced but not consumed. They broadly include not only the food wasted throughout the food value chain but also the crops unharvested/left on the field.

3. Public call – (2)

Example ideas include (but are not limited to):

- Research to comprehensively grasp where and how the food loss emerges in macro perspectives,
- Research to establish a social system to lead substantial food loss reduction with full awareness of the issue,
- Research to creatively develop tasty food from “lost/wasted food”,
- Development of innovative technology for processed food production from “lost/wasted food”, and,
- Development of innovative technology for long-term food preservation and storage.

3. Public call – (3)

With the specified requirements, the call is to seek the PMs who will:

- Specify the points of innovation, strength as well as expected new values for the proposal, with the limitations properly recognized of traditional R&D attempts.
- Clarify international benchmark, and identify the issues, the way to overcome and how the proposal is different from and superior to similar method and traditional attempts.
- Develop the framework to promote R&D and business implementation, attracting the investment from industry and other stakeholders.
- Design the scheme to accelerate the business realization, with the needs assumed from the society in the future.

3. Public call– (4)

Framework

Council for Science, Technology and Innovation (CSTI)



Strategy Promotion Council (SPC)

Members: experts (industry, academic), Ministerial officials, & others
Roles: advise/adopt programs and fund allocation, overall supervision

Supervisory Committee

Members: MAFF officials
Roles: i) appoint members of Board of Trustees, ii) endorse evaluation criteria, iii) endorse PD/PM selection, iv) endorse Goal 5 portfolio, v) supervise Goal 5 activities/process based on evaluation results



BRAIN: Funding Agency

Roles: i) open calls, ii) select/appoint PD and PMs, iii) help to decide Goal 5 portfolio, iv) organize external evaluation, v) report evaluation results to MAFF and SPC, vi) help to direct Goal 5



Program Director (PD)

Roles: i) draft Goal 5 portfolio, ii) lead/supervise PMs, iii) review/revise Goal 5 portfolio



•PD advisors
•Round table

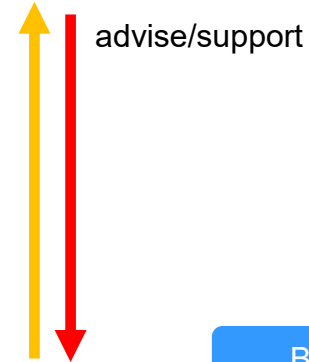


Project Managers (PMs)

Roles: develop/implement R&D projects



report



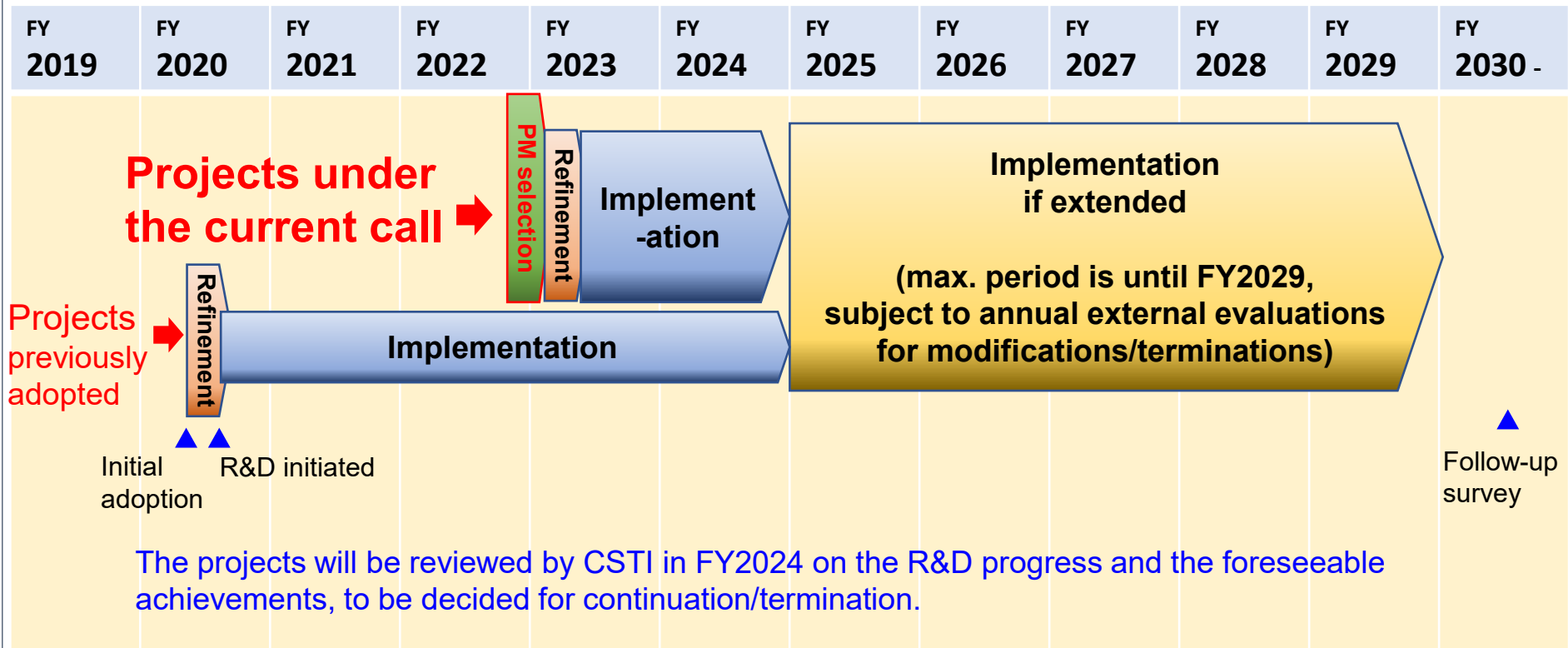
Board of Trustees

Members: external experts
Roles: external evaluation



3. Public call – (5)

Timeline of projects: application/implementation



Project period

- until March 2025 (the end of FY2024) presumably
- will be decided by CSTI before March 2025 for possible extension (max. until FY2029)
- might be modified by annual evaluation results any time (e.g., terminated or shortened)

3. Public call – (5)

Application

- PM candidates should apply to the call through e-Rad system, organizing the overall R&D plan of the research group.

Application forms

- Application forms are available at BRAIN's website, which are to be filled, as indicated in Annex 5 "Project Proposal Plan (Form)":
https://www.naro.go.jp/laboratory/brain/english/moon_shot/public_call/pm2023.html

Notes of importance

- Project period is presumably until March 2025 (FY2024) but might be extended (max. until FY2029) based on the evaluation in FY2024. In developing the project plan, the proposal may assume such extension in advance.
- Scenario description [p.4-5 of Annex 5] should be associated with specific years and targets, covering the period from the present to the year 2050 (Goal 5's target year). The description should clearly/separately indicate: i) the prototypes to be developed by 2030 and ii) the perspectives of business/social implementation by 2050, respectively.
- Milestones [p.6 of Annex 5] should be specified based on the scenario description above (until March 2025). Additional milestones should be described for March 2028 and for March 2030 if the proposal assumes the possible extension.

4. Application requirements – (1)

Representative organizations to which the PMs belong

- To be a research institute with legal personality, such as a private company, national R&D corporation, university, local government, among others.
- To be eligible under the cross-ministerial tender qualification under any of FY2021, FY2022 and FY2023.
- To agree to arrange the contract with BRAIN.
- To have legal personality in Japan and be based in Japan.
- To have (or will have with a firm certainty) an appropriate system to execute appropriate funding operation including separate accounts processing, installing accounts managers, and executing fund management by multiple persons.
- To have the ability and system established to properly conduct and facilitate operations such as dissemination of research outcomes and coordination with the joint research institutes in the Research Group.

Project Managers (PMs)

- Capable of fulfilling all the roles of PMs described in the Application Guidelines.
- Can be of any nationality but they must be based in Japan as PMs.

4. Application requirements – (2)

Research groups (consortium)

- All members must agree to organize the Research Group and conduct joint research.
- Before concluding a contract with BRAIN, the Research Groups is ready to specify the type of formation of consortium out of the three below:
 - **Separated agreement type:** development Consortium Terms and Condition and getting a written consent separately,
 - **Agreement in the joint names type:** exchanging an agreement jointly signed in the Consortium Terms and Condition, or,
 - **Joint research agreement type:** establishment of a joint research institution agreement.
- The Research Group should establish an IPR agreement and an IPR policy within the group, in compliance with the relevant guidelines.
- Financial stability should be ensured for member entities.

4. Application requirements – (3)

Member entities of the Research Group (consortium)

Member entities should:

- have the ability and system to carry out appropriate management and operation for the project, as well as mutual adjustment with relevant organizations.
- (for any foreign entities) have a contact or an agent in Japan with proper capacity of handling administrative work, as necessary.

Collaborators (non-consortium members)

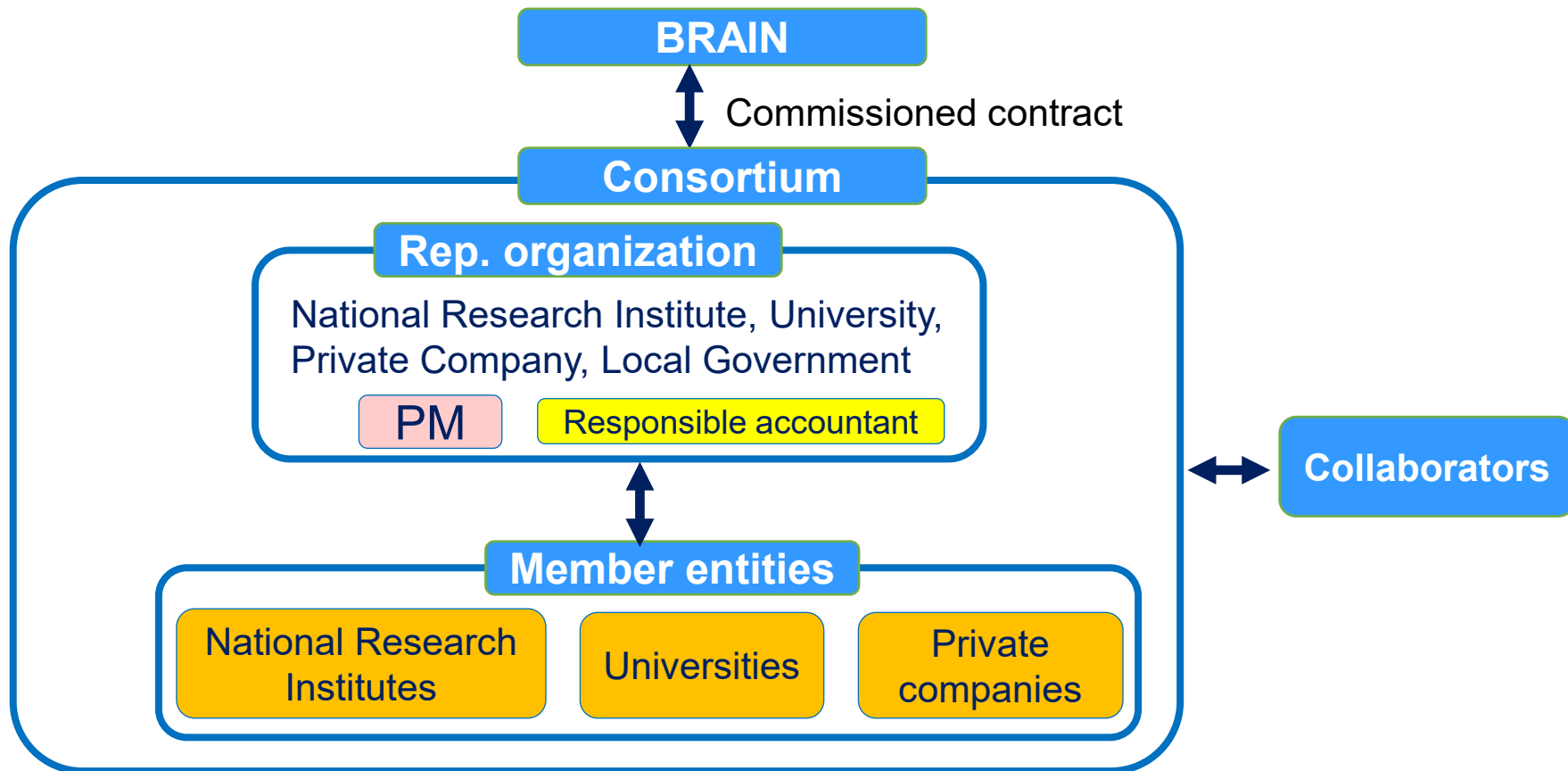
Collaborators have following limitations:

- Research funds may not be allocated directly to collaborators. Necessary expenses will be paid by representative organizations or other member entities (e.g., in the form of subcontract payment, travel expenses and honorarium).
- Collaborators cannot own patents related to the research outcomes. With certain conditions the intellectual property rights can be shared subject to BRAIN's approval.
- Collaborators cannot present alone the research project outcomes while they may do so jointly with the Research Group members.
- Collaborators should agree for confidentiality and/or Intellectual Property Rights Agreements, as established for the Research Group.

4. Application requirements – (4)

Research Group (Consortium)

The composition of the Research Group (consortium) may be reviewed and modified in refining proposals and revising portfolio.



5. Application process with e-Rad

All applications should be done through e-Rad system. No application will be accepted in other ways (e.g., through postal mails, emails nor in paper).

1) Application deadline

- Due Tuesday, May 9, 2023 (noon, Japan Standard Time)



2) e-Rad system registration (if not done previously)

- Registration is needed prior to the use of e-Rad for researchers and for organizations through e-Rad online system: <https://www.e-rad.go.jp/en/>. (see the pull-down menu from “Registrations and Procedures” at the top)
- It should be noted that early actions are essential as it takes a few weeks to complete the registration

3) Application flow

- Download and fill the forms
- Enter the general info as required by e-Rad system
- Upload the PDF file of research plan proposal to e-Rad system
- It is highly suggested that application should be done as early as possible. From the past experiences, the traffic of e-Rad system can be heavier and heavier towards the deadline.

4) Contacts for e-Rad inquiries

- Help desk: +81.3.6631.0622 (in Japanese), weekdays 9-18h (Japan Standard Time)

6. Selection – (1)

Selection process

- PMs will be selected by the Board of Trustees based on the screening criteria. Applicants may be requested to submit additional information, as necessary.
- The screening process is not open for public, and no inquiries are answered regarding the progress.

Specific procedure

1. Screening of application documents

- The Board of Trustees will examine proposals based on the screening criteria.

2. Interview

- The candidates who pass the screening above will be interviewed by the Board of Trustees and reported the result to BRAIN.

3. Finalization of PM Selection

- Supervisory Committee of MAFF will select and approve the PM to be adopted.

6. Selection – (2)

Selection criteria – not exhaustive

- a. The applicant has a broad personal network of relevant national and international researchers and specialized knowledge for the promotion of cutting-edge R&D.
- b. The applicant has management and leadership capabilities to build an optimal R&D system and review the system flexibly according to the progress made.
- c. The proposed goals and content of the Project (referred to as the “Proposed Content”) are based on ambitious ideas, are more challenging and innovative than the conventional ones, and are expected to have a significant impact on the industry and society in the future.
- d. The Proposed Content clearly provides a reasonable success scenario from technological perspectives and in terms of social acceptance including the roles shared between the public and private sectors to achieve the goal set for 2050.
- e. The Proposed Content brings together both national and global top-level R&D capabilities, knowledge and ideas.
- f. The Proposed Content is innovative and challenging and will directly contribute to food loss reduction. In addition, the Research Group will include private company member(s) having a proactive business concept.

6. Selection – (3)

Selection criteria – not exhaustive, continued

- g. The Proposed Content will take up “collective intelligence”, which include the fields of humanitarian/social science to address ELSIs.
- h. Each participating institute has a policy on the management of intellectual property and a management system with departments and officials in charge.
- i. The budget plan for Project is adequately developed without excess or deficiency.
- j. The Proposed Content has a component(s) of start-ups*.
- k. The proposal includes on the participation of many young researchers (under 40)*.
- l. The representative organizations are officially recognized as the entity promoting life-work balance*.

* Declaration of j, k and l will be subject to positively considered at the screening process.

Consideration will be also given to other issues such as transparency and integrity of research, appropriate handling of research outcomes and information management.

6. Selection – (4)

Selection results

- The selection results will be notified to applicants and posted on the BRAIN website (e-Rad registration numbers of the applications).
- The notification may be associated with the points for revisions when necessary.
- The names of selected PMs and representative organizations will be posted on the BRAIN website after the contract arrangement.

7. Timeline – (1)

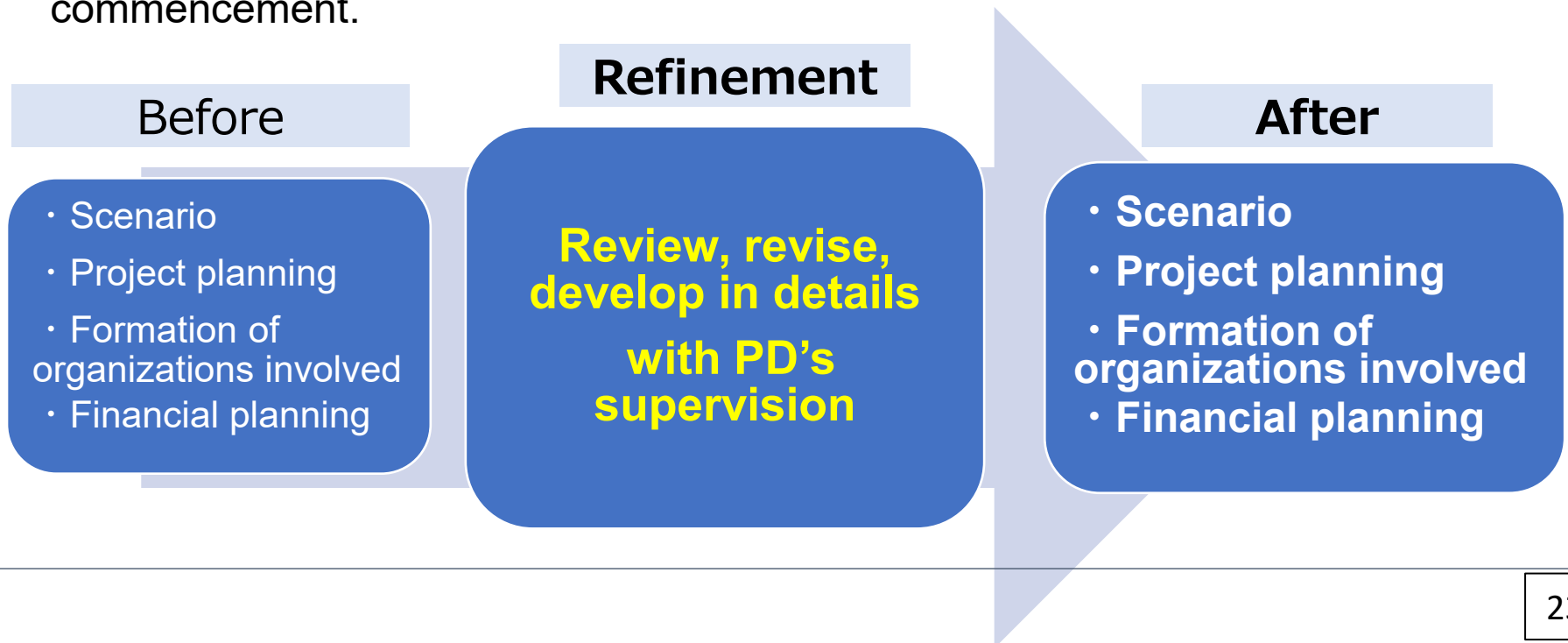


Note: The timeline above is subject to possible changes, which will be posted on the BRAIN website

7. Timeline – (2)

Refinement

- Under the direction of the PD, the adopted PMs will refine (review and embody) the Projects, including scenarios for achieving the MS Goals, project plans, joint research institutes and collaborators (added or removed), and the amount and allocation of research funds.
- Refinement will be followed by portfolio decision, consortium establishment and contract arrangement among other necessities prior to the research commencement.



7. Timeline – (2)

Refinement, continued

Points of consideration in refinement exercise

- the food loss perspectives, e.g., targets to achieve substantial reduction, scenario, plan, framework and others as necessary,
- the business perspectives, e.g., involvement of business entities, collaboration with stakeholders, business implementation,
- the succession and proper use of outcomes from the project previously conducted on food loss reduction; and,
- the plan to address cross cutting issues over the Goal 5, e.g., intellectual properties, data management, international collaboration, ELSIs, mathematical science.

8. IPR and other notes of importance - 1

IPR management

- Intellectual property should be properly managed, based on the MAFF guidance “Policy on Intellectual Property in Agriculture, Forestry and Fisheries Research” (February 2016).
- At the initial stage of research, an agreement must be:
 - developed,
 - agreed within each consortium on the intellectual property, and,
 - reported to BRAIN.
- Open access should be ensured for all the consortium members to the intellectual property obtained within the consortium for early commercialization and business implementation of the research outcomes.
- A policy on acquisition of intellectual property rights must be formulated based on agreement.

IPR management

- Data management is important process, for which further communication will be made in detail after adoption.

9. Contacts

For inquiries, send e-mail to :

seiken-moonshot@ml.affrc.go.jp

Title of the messages:

“Moonshot R&D Goal 5, general inquiry”, for the inquiry in general on the public call

“Moonshot R&D Goal 5, contract arrangement”, for the inquiry specific to contract arrangement

Note: Do **NOT** send messages to Project Director for inquiries on the call.